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PERCEIVED ATTITUDES OF SELF-CONCEPT OF EDUCATIONALLY
DISADVANTAGED VOCATIONAL STUDENTS, VOCATIONAL
STUDENTS, AND ACADEMIC STUDENTS AS MEASURED
BY THE PIERS-HARRIS CHILDREN'S
SELF-CONCEPT SCALE

DISSERTATION

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The problem with which this investigation is concerned is that of determining perceived attitudes of self-concept of educationally disadvantaged students in special vocational environments, other vocational students, and academic students as measured by the Piers-Harris Children's Self-Concept Scale.

The hypotheses formulated to carry out this study included:

1. There is no significant difference in the mean attitude self-concept score of vocational education students, academic students, and educationally disadvantaged students (CVAE) as measured by the Piers-Harris Children's Self-Concept Scale.

2. There is no significant difference in the mean attitude self-concept scores as measured by the Piers-Harris Children's Self-Concept Scale between vocational education students, academic students, and CVAE students and number of

years of placement in a vocational program, academic program and CVAE program.

The Piers-Harris Children's Self-Concept Scale was administered to 311 students from the CVAE, vocational, and academic programs in the Birdville Independent School District, Fort Worth, Texas and Denton Independent School District, Denton, Texas.

The self-concept scores obtained were tested for significance by an analysis of variance. The findings of this study include:

1. CVAE students possess a lower mean attitude self-concept than academic students and vocational students, but not significantly so ($p > .05$).

2. Third-year female CVAE students scored significantly lower ($p < .05$) than any other group of students on the self-concept scale.

The conclusions drawn from the findings of this study were:

1. CVAE students possessed positive self-concepts, although lower than those of academic and vocational students. This lower self-concept was observed in CVAE students regardless of sex, age, or years of placement in the CVAE program.

2. CVAE females with three years of placement in the program had significantly lower self-concepts than any other CVAE, vocational, or academic group.

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CHAPTER I

INTRODUCTION

Currently, the public schools are faced with the dilemma of a rapidly increasing population of the educationally disadvantaged student. Ten per cent of the school population in rural areas are educationally disadvantaged. Suburban schools have 15 to 20 per cent of their enrollment classified as being disadvantaged. The large urban school systems are the ones that are most severely affected with 25 to 75 per cent of their total enrollment in high schools being educationally disadvantaged. Across the United States, schools are being inundated with educationally disadvantaged students (5, p. 594).

In working with the educationally disadvantaged student, improved self-concept has been one of the intended products for the innovative educational programs designed to meet the needs of such students (47, p. 893). These students have been isolated from their peers due to the color of their skin, type and condition of their clothes, family background, or general intelligence. No matter what the reason, this segregation is further enhanced by the curriculum of the public schools. The public school curriculum hastens the decay of the ego of the educationally disadvantaged student.

It reduces their ability to deal successfully with books, ideas, and language. Their general intelligence scores will tend to drop as they advance from grade to grade (15, p. 7).

The characteristics of educationally disadvantaged students can be summed up into four general deficiencies. First, their language achievement is generally different from the rest of the school population in that their vocabulary is limited and their speech habits are not articulate. Second, they tend to have inferior auditory discrimination, visual discrimination, time judgement, number skills and other basic skills due to poor habits of hearing, seeing, and thinking. Third, the educationally disadvantaged are often apathetic concerning formal educational goals. Fourth, they tend to have low self-esteem. Low self-concept undermines their potential for individuality and learning. Low self-concept manifests itself in extremely high or extremely low levels of ambition, fear of failure, low academic motivation, and withdrawal from the "sprit de corps" of the school (4, p. 151). These deficiencies combine together to produce discipline problems for the educationally disadvantaged student.

A recent television series "Welcome Back, Kotter" was based on the antics of a group of educationally disadvantaged students. The "sweathogs" can easily be identified with the Coordinated Vocational Academic Education (CVAE) students in

Texas schools. This situation-comedy provided many laughs for the audience as the "sweathogs" tried to manipulate the school system. Many probably viewed this as just another imaginary story. Yet, the fact remains that there are educationally disadvantaged students in public schools across the nation.

One of the characteristics of the educationally disadvantaged is a low self-concept. The way that an individual feels about himself determines his achievement motivation (3). A goal for working with educationally disadvantaged students is to help in developing self-confidence and respect for self and others (29).

Several states have realized the importance of the school's role in enhancing the self-concept of the educationally disadvantaged vocational student. Mississippi (14), Oklahoma (22), and Virginia (19) have goals directed toward the understanding of self and developing a positive self-concept for their vocational and career education programs.

Texas schools have developed two methods for the vocational education of the educationally disadvantaged student through the Coordinated Vocational Academic Education (CVAE) program. One method is to provide both academic and vocational classes for these students. The educationally disadvantaged are placed in special basic skills classes in

English, history, science, and mathematics as well as their vocational class. This effectively isolates them from the rest of the school population while providing for their educational needs. These basic skills classes are not funded under the Minimum Foundation, but rather are provided through local funding. The second method is to place the educationally disadvantaged in a special vocational class and mainstream them for their basic educational classes. This method allows for special training in a vocational area while providing a way for the educationally disadvantaged student to be a part of the regular school environment. Two types of programs are approved by the Texas Education Agency for this second method. These are: (1) Cooperative Programs where the students attend a special, one-hour vocational class per day and receive on-the-job training, and (2) Pre-Employment Laboratory Programs where the students receive two or three hours of special skill instruction per day in the school. In this second method, the CVAE students may be placed in basic classes for their academic programs.

Neither method of educating the educationally disadvantaged student in Texas schools was developed for the purpose of improving the self-concept of these students. In a survey conducted by James (25), a diversity of opinion between vocational administrators and principals was seen in the effect of placement in a CVAE program on the individual's

self-concept. Thirty-six per cent of the vocational administrators felt that CVAE placement enhanced self-concept and 3 per cent of the vocational administrators felt that it had a negative impact on the student. The principals surveyed had a different opinion of the effect of the CVAE program. Forty-three per cent of the principals felt that the CVAE program enhanced self-concept and 30 per cent felt that it had a negative impact on the student's self-concept. The main difference of opinion lay in the realm of negative impact of being labeled as educationally disadvantaged.

Statement of the Problem

The problem of this study is to determine the perceived attitude self-concept scores of educationally disadvantaged students in special vocational environments, other vocational students, and academic students.

Purpose of the Study

The purpose of this study is to compare the perceived attitude self-concept scores of educationally disadvantaged vocational students with perceived attitudes self-concept scores of vocational students and academic students as measured on the Piers-Harris Children's Self-Concept Scale.

Hypotheses

The following hypotheses were formulated to carry out the purpose of this study.

1. There is no significant difference in the mean attitude self-concept score of vocational education students, academic students, and educationally disadvantaged students (CVAE) as measured by the Piers-Harris Children's Self-Concept Scale.

2. There is no significant difference in the mean attitude self-concept score between male and female students in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

3. There is no significant difference in the mean attitude self-concept score between males and females of different age groups in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

4. There is no significant difference in the mean attitude self-concept scores as measured by the Piers-Harris Children's Self-Concept Scale between vocational education students, academic students, and CVAE students and number of years of placement in a vocational program, academic program, and CVAE program.

5. There is no significant change in the mean attitude self-concept score of vocational education students, academic

students, and CVAE students as measured by the Piers-Harris Children's Self-Concept Scale over a three-month period utilizing an extended Solomon Four-Group Design.

Background and Significance of the Study

The concept of the educationally disadvantaged student apparently had its origin in the 1950's, primarily in New York City. From 1956 to 1962, New York City was the pilot area for several innovative programs such as the Demonstration Guidance Project and the Higher Horizons Program designed to meet the needs of the educationally disadvantaged. The 1960's became the decade of the educationally disadvantaged with the passage of the Economic Opportunity Act of 1964. This Act lead to Operation Head Start, Upward Bound, and the Job Corps. Operation Head Start was a program designed to introduce four-year-old culturally disadvantaged children to school. Upward Bound was a summer enrichment program for the educationally disadvantaged. The Job Corps was designed to give the educationally disadvantaged drop-out student a marketable skill (4, p. 149).

The 1960's also produced the Vocational Education Act of 1963 and the Elementary and Secondary Education Act of 1965. Each of these Acts contained mandatory provisions for the funding of educationally disadvantaged programs in public schools receiving federal funds (4, p. 150). These

Acts focused public attention on helping the educationally disadvantaged student and led to studies being conducted on identifying and how to work with these students.

One major inhibiting factor in dealing with the educationally disadvantaged student is the negative perception that such an individual has of himself. Seligman and his associates conducted standard conditioning experiments with dogs to study differences in types of learners. Even though this experiment used dogs instead of people, the parallels to human learning and to failure-threatened personalities appear to be quite remarkable. Seligman found that dogs which were forced to fail in attempts to escape electric shocks soon became very passive and unresponsive (40, p. 42). Jones feels that this situation is analagous to that of a student who tries hard in the beginning, but who never is rewarded by or for success. After repeated failures, the student learns that the result of any effort is failure (27, p. 3).

In a research study conducted by Rogers in 1974-1975, it was found that academic underachievers (educationally disadvantaged students) did not express low Piers-Harris Self-Concept scores due to unreliable or chance responding on test items. This study was conducted on eighty-nine severe academic underachievers in Nashville, Tennessee. Rogers undertook this project to test Wylie's assumption that the educationally disadvantaged student would score

lower on self-concept scales due to unreliability of responding (39, pp. 556-557).

In summarizing studies presented at the American Personnel and Guidance Association's Convention of 1966, Crites found that there were significant relationships on a test-retest correlation of self-concept scores among disadvantaged students. These studies indicated that self-concept scores may improve through role models in vocational classes (17, p. 200).

Coopersmith and Silverman found that ego development of the educationally disadvantaged child produced successful educational and vocational training. They found that one of the key components to successful educational programs for the educationally disadvantaged students was in the area of teacher acceptance and the providing of a challenging environment (6, p. 491).

Several studies have been conducted showing how self-concept influenced vocational choice. Korman suggests that low-esteem students choose vocations or occupations that are incongruent to their self-concept (28). Healy attempted to find a relation between self-concept, social class, and occupational choice. His findings suggest that low self-esteem reduces congruence in occupational choice and that low-esteem students will pursue similar goals as the high-esteem students (24). Lewis concluded that critical needs

exist for the disadvantaged student in the area of career education opportunities. He feels that the school should make a concerted effort to match vocational training with the interests and aptitudes of the disadvantaged students to enhance their self-concepts and occupational possibilities (30).

Self-concept is a vital force active in the lives of each individual. It plays an important role in success in school. Negative self-concept inhibits student success. Jones suggests that the school curriculum and support services should emphasize the strengths of the educationally disadvantaged and play down their weaknesses so that these students may be successful in the school environment (27).

Lewis, in a study of educationally subnormal boys, found that educationally disadvantaged male students measured themselves against the students in special educational classes rather than the entire school population. This produced a distorted view of self. This distorted perception of self-concept by the educationally subnormal student would crumble when the students entered full-time employment without the benefit of the special classes to brace their self-concept (30, pp. 18-19).

Simpson feels that schools should strive to be flexible and meet the needs of the individual disadvantaged student. She found that affective needs (self-concept) should be met before an educationally disadvantaged student could become

successful in school. Schools that do not meet these affective needs of the educationally disadvantaged will drive these students out of school and they will become dependent upon society for support through welfare programs or other subsistent programs (43).

Bourn evaluated forty-nine educationally disadvantaged students enrolled in basic skills classes in Essex Community College in Maryland to determine the effects of these classes on self-concept. He found that 70 per cent of the students maintained or improved their self-concepts (7). In an earlier study, Bourn evaluated thirty-four students enrolled in basic skills by giving a pre-post test of the Tennessee Self-Concept Scale. He concluded that effective special basic skills classes result in measurable positive growth in self-concept. An added element in both of these studies was that the educationally disadvantaged student raised his grade-point average while improving self-concept (8). A third study by Bourn came to the conclusion that grade-point averages and self-concepts were improved through basic skills classes for the educationally disadvantaged (9).

Handley compared the effects of vocational training on educationally disadvantaged youth. One hundred-fifteen educationally disadvantaged students in vocational programs were compared with ninety-three educationally disadvantaged students not in a vocational class. Each group was administered a Survey of Pupil Opinion, Career Maturity Inventory,

and Work Value Inventory. The educationally disadvantaged vocational group showed more positive attitudes about themselves, their teachers, and to work (23).

One hundred-twenty-one educationally disadvantaged students were administered the Brookover Self-Concept-of Academic-Ability Scale by Olsen. These students were in compensatory education classes. He concluded that special compensatory education classes could positively effect self-concept improvement contributing to academic achievement. The results of this study had one unusual finding--positive effects were seen for female blacks, male blacks, and male whites, but not for female whites (35).

Many educational programs have been implemented to help the educationally disadvantaged. Most of these programs have centered around improving educational skills and acquiring vocational training. Few programs have been examined to determine what effect placement into these programs has on the self-concepts of the educationally disadvantaged student.

This study will seek to accomplish the following:

1. Determine the perceived attitude self-concept scores of educationally disadvantaged students in a CVAE program;

2. Compare the results of the self-concept scores of students in the CVAE program with those of students in

academic programs and vocational programs to provide information as to the educational worth of the CVAE program.

Definition of Terms

Academic Student is a student in an educational program not designed to directly prepare him for an occupation or trade.

Coordinated Vocational Academic Education (CVAE) is a special vocational program in Texas designed to meet the vocational needs of the educationally disadvantaged. In Texas the CVAE academic classes were originally developed to include basic skills classes in math, science, language arts, and social sciences. The CVAE academic classes have since been eliminated from state funding. Therefore, the CVAE program does not include special compensatory classes in basic skills, except when paid for from local funds.

Educationally Disadvantaged Vocational Student is the academic underachiever. These students are generally low in communication skills, irregular in school attendance, lack self confidence, have low self-concept, and are normal or above normal in potential ability. Educationally disadvantaged students are those who have academic or economic disadvantages which prevent them from succeeding in vocational educational programs designed for students without such disadvantages, and who for that reason require specially designed educational programs or related services. The term includes students whose

needs for such programs or services result from poverty, neglect, delinquency, or cultural or linguistic isolation from the community at large. For an individual to be classified as educationally disadvantaged, it is necessary to satisfy both of the following conditions: (a) the person is not succeeding or cannot succeed in a regular program of vocational education and related instruction and (b) the person's disadvantage is a major contributing factor to lack of success.

Mainstreamed involves placing the educationally disadvantaged in classes with the rest of the school population instead of isolating them in special classes.

Piers-Harris Children's Self-Concept Scale is a test designed by Ellen V. Piers and Dale B. Harris to measure the self-concepts of students.

Self-Concept is the view that individuals have of themselves, their abilities, and their own self-worth.

Self-esteem is a term used synonymously with self-concept.

Vocational student is a student in a program designed to provide him knowledge, skills, and attitude necessary for gainful employment in any occupation or trade.

Limitations

The following limitations apply to this study.

1. The study included only students in the Birdville Independent School District, Fort Worth, Texas and Denton

Independent School District, Denton, Texas.

2. The study was limited to only those students enrolled in the CVAE Cooperative or Laboratory classes, vocational classes or academic classes in the Birdville Independent School District and Denton Independent School District.

3. This study was limited to the students who were sophomores, juniors, and seniors and enrolled in high school during the Spring Semester of 1982.

4. This study was limited to only those students who had a signed permission form to be included in the study from a parent, guardian, or themselves if they were over eighteen years old.

5. This study was limited to only those students who voluntarily completed the Piers-Harris Children's Self-Concept Scale.

Basic Assumptions

It was assumed in this study that

1. The sample included all socioeconomic groups of similar proportion as the community;

2. The sample answered the Piers-Harris Children's Self-Concept Scale honestly and frankly;

3. The sample met the general state qualifications for placement into the CVAE program, vocational program, or academic program;

4. The teachers of the CVAE classes and Vocational classes had certified training and followed the general state guidelines for the curriculum to be taught;

5. The sample had the reading proficiency to complete the Piers-Harris Children's Self-Concept Scale.

Procedures for Collection of Data

Instrument.--The Piers-Harris Children's Self-Concept Scale was first used in 1969. Since that date it has been used in over 100 studies. It has been standardized both longitudinally and cross-sectionally. It was designed primarily for research on the development of children's self attitudes and correlates of these attitudes.

The reading level of the instrument is third grade. When the items are read to the subjects, children below the third grade can take the test. The range of the instrument is from those subjects who read on the third grade level to high school seniors.

According to Buross the Piers-Harris Children's Self-Concept Scale is not biased according to sex or grade differences. It can be used with the educationally disadvantaged since care was taken that the scale not correlate unduly with social desirability (12, p. 306).

Piers and Harris found reliability coefficients ranging from .72 to .93. They report that the internal consistency of the scale ranges from .78 to .93 using the Kuder-Richardson

Formula 21. The test-retest reliability for Piers and Harris was found to be .71 to .72, but was as high as .85 on a short-term interval (36, p. 4). Wing obtained a reliability coefficient of .77 on a test-retest study (36, p. 4).

In studies made of the concurrent validity of the Piers-Harris Children's Self-Concept Scale, correlations from nonsignificant to .68 ($p < 0.01$) were found. Mayer found a correlation of .68 ($p < 0.01$) with the Lipsitt Children's Self-Concept Scale. Piers found correlations ranging from .06 to .41 ($p < 0.01$) on rating correspondence studies of peers and teachers. Cox did a similar study as Piers and obtained correlations of .31 ($p < 0.01$) for teacher rating and .43 ($p < 0.01$) for correlation with peer rating (36, p. 7).

The test consists of eighty first-person declarative statements. Half are worded to indicate a positive self-concept and half to indicate a negative self-concept. The subjects answer the statements with a simple "yes" or "no." The test was designed to be unidimensional.

Population.--The population for this study was all high school students in the Birdville Independent School District, Fort Worth, Texas and Denton Independent School District, Denton, Texas.

The CVAE and Vocational students attended one vocational class per day and spent the rest of the school day mainstreamed into academic subjects. CVAE students at

Denton High School were placed in CVAE academic classes for basic skill education. The CVAE students at Haltom High School and Richland High School were placed in either basic academic classes or regular academic classes. The academic students attended four to six classes of mainstreamed classes per day. The subjects ranged in age from fifteen to nineteen. Minorities (ethnic and male or female) were represented in approximately the same proportion as the community.

Selection of the sample.--The sample was selected on the basis of several criteria. First, the CVAE students were all designated as educationally disadvantaged according to the Texas Education Agency guidelines. Second, the students had a signed permission form from the parent or guardian to be included in the study. Third, each student had the opportunity to decline participation in the study. This hopefully accomplished the diminishing of invalid test results. Each of the sample was chosen randomly through the use of tables of random numbers and remained anonymous. Three groups of subjects were chosen--CVAE students, vocational students, and academic students. Between 83 and 122 students were randomly selected for each group. The students were divided into the three groups--CVAE students, vocational students, and academic students--alphabetized

and then randomly selected for participation in the sample.

Research design.--The basic research design was an extended Solomon Four-Group conducted on each of the three categories of subjects. The first measurement was taken in February, 1982. The second administration of the Piers-Harris Children's Self-Concept Scale was in May, 1982. Each of the categories of subjects was divided into two groups. At least 20 per cent of each category took the Piers-Harris Children's Self-Concept Scale in February, 1982 and again in May, 1982. The other part of each category took the Piers-Harris Children's Self-Concept Scale in May, 1982. By this process, the sample was divided into three categories--CVAE students, vocational students, and academic students--and six groups. Three groups, one each from the CVAE students, vocational students, and academic students, took a pretest-posttest administration of the Piers-Harris Children's Self-Concept Scale and the other three groups, one from each category, took a posttest of the research instrument only. Each of the subjects was randomly assigned to his group, based on type of educational program. The study's experimental design is shown in Table I.

TABLE I
EXPERIMENTAL DESIGN OF THE STUDY

GROUP	PRETEST		POSTTEST
CVAE			
1	O ₁	X	O ₂
2		X	O ₃
Vocational			
1	O ₄		O ₅
2			O ₆
Academic			
1	O ₇		O ₈
2			O ₉

In Table I, the pretest represents the February, 1982 test and the May, 1982 test is represented by the posttest. O represents the test observations and X represents the treatment, i.e., CVAE placement.

The test was administered to the participants in small groups of five to twenty students. The directions were read orally to each groups as the students read them silently. Questions were answered about the directions prior to the students completing the Self-Concept Scale.

Experimental variables.--The independent variable was the CVAE class. The dependent variable was the overall score on the Piers-Harris Children's Self-Concept Scale.

Control procedures.--The students enrolled in the general academic and vocational programs at the Birdville Independent School District and Denton Independent School District were designated as the control group for this study. The experimental group were the students enrolled in the CVAE classes in the Birdville Independent School District and Denton Independent School District.

Procedures for Analysis of Data

Testing of the hypotheses.--The data from the Piers-Harris Children's Self-Concept Scale was treated statistically for significance of difference between the mean scores of the control and experimental groups. An analysis of variance was used. The hypotheses was tested at the .05 level of significance.

Reporting of data.--After all data had been tabulated, they were entered into charts and tables for ease of comparison.

Organization for the Remainder of the Study

A review of related literature is presented in Chapter II. Chapter III contains the methodology, while Chapter IV includes an analysis of the data. The summary, conclusions, and recommendation are presented in Chapter V.

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CHAPTER II

REVIEW OF THE LITERATURE

Self-concept is one facet of the personality that is difficult to understand without studying self-concept theories. The purpose of this chapter is to review research that is relevant to self-concept and the educationally disadvantaged student. This chapter is organized into (1) a review of self-concept theories, (2) characteristics of the educationally disadvantaged student, (3) a review of measurement of self-concept, (4) a review of literature similar to the present study, and (5) a summary. The research for this chapter was conducted through an ERIC search, Psychological Abstract search, and the use of the card catalogs at A. M. Willis Jr. Library and Information Science Library, North Texas State University, Denton, Texas.

Self-Concept Theories

Self-concept has played a part in most psychological and personality theories. Zachry laid the groundwork for placing the study of self-concept and personality into prominence during the 1940's (62, p. 32). Maslow developed a hierarchy of needs to explain internal and external motivations for behavior. Maslow's Hierarchy of Needs culminated

with a need for self-actualization as a driving force in the development of an individual's personality (35).

Bernard asserted that a central problem of individual behavior and development concerned the way in which an individual regards himself. External physical and social forces influence an individual's behavior. The way that a person feels about how he can cope with these external forces has a great impact on self-concept and personality development (4, p. 29).

Rogers developed a counseling approach that had as its central construct the concept of self. He defined self-concept as an organized pattern of perceptions of the self. He stated that self-concept is composed of perceptions of one's characteristics and abilities, relation of self to others and the environment, values associated with experiences and objects, and goals and ideals (48, p. 136).

Combs contended that self-concept is a social product. Self-concept evolves through the interrelationship and interactions that one individual has with another individual. This relationship with others leads to the development of the majority of one's personality. Combs stated that social interaction and relationships produce human personality. The way that a person feels about himself is directly related to the way that others accept and treat him (11, p. 134).

Glasser advocated the structure of schools being centered around the premise that success and positive rewards

are more potent in the development of a child than are failure and punishment. He felt that excuses for unacceptable behavior on the part of the student should not be accepted. Glasser helped organize an experimental school in California, where it was shown that school is a primary force of feelings of success or failure within the student (22). Jersild came to similar conclusions as Glasser that grades, relationships with peers and teachers, and attitudes about school are instrumental in the development of the self-concept (28). Morse agreed with Glasser and Jersild, when he stated that as the student grows older, the self-concept regarding school adequacy is more likely to decrease than self-concept in other areas (37, p. 195).

Seligman and his associates conducted research on dogs and their responses to forced failure. Dogs were placed in boxes fitted with electrical mats. A light was turned on and then an electrical shock was sent through the mats a few seconds later. The dogs soon learned to jump out of the boxes to avoid the shock, when the light came on. When the dogs were prevented from jumping out of the boxes to avoid the electrical shock, they first responded by howling and frantic jumping in an effort to escape from the boxes. This behavior was soon changed to silent crouching with trembling as the dogs waited for the shock to pass (50, p. 42). Jones compared this behavior pattern to students who become

conditioned to fail in educational situations. Some low students learn that expending any effort in school will usually result in more failure and disappointment. These students, through repeated failure, undergo an internal crouching and become passive as they wait for the failing grades, which they have become conditioned to expect (30, p. 3).

Several researchers concur with the general ideas of Jones. Rouse referred to conditioned helplessness to describe how repeated exposure to failure produces anxiety, which, in turn, lowers self-concept and thereby lessens motivation (49, p. 105). Walker reported that a number of studies have linked achievement and self-concept in direct relationships. Students who do poorly in school generally have a lowered self-concept. Retention of students in school only tends to magnify the effects of failure and further lowers the student's self-concept (59, p. 195).

Lackey stated that research indicates that students, who view themselves as failures in school activities, tend to remain failures in that aspect of school work (33, p. 1). Walker explained that the level of self-concept was extremely important in determining the reaction of a student to success or failure. Students with high self-concepts were less altered by failure and more prone to try again, when faced with failure, than were students with low self-concepts. Students with low self-concepts were distinctly reticent

toward failure (59, pp. 198-9). Fyans expressed a similar point of view by stating that students with higher self-concepts for academic achievement will set higher standards for themselves and that students with low self-concepts will set lower academic standards for themselves (17). Gadzella and Fournet stated that students' self-concepts are directly related to their level of academic perception (18, p. 48).

Combs contended that the lowered self-concept of the educationally disadvantaged student was caused in part by difficulty in reading. Students, who have difficulty in reading, are more likely to avoid reading and thereby eliminate an experience that might enhance their self-concepts. When confronted with reading orally, educationally disadvantaged students are prone to do poorly and thus suffer the ridicule of their peers for being corrected for their reading mistakes by their teachers. All this verifies the student's belief that he is unable to read and further undermines his self-concept (11, p. 669). In a study considering the relationship between self-concept and academic achievement, Quick found that students who perceive that they are failures will probably be treated as failures by their fellow students (45, p. 469).

Brown and Singleton expressed a similar point of view that the educationally disadvantaged students have little

success in English, reading, and spelling (12, p. 43). LeBenne and Greene felt that these conceptions of an inability to learn appear to be self-fulfilling prophecies. Experiences that might alter a student's self-concept are purposely avoided by the educationally disadvantaged student and the low-ability level is perpetuated (51, p. 27).

Academic self-concept is just one division of the total self-concept. Another aspect of self-concept that is of critical importance to all students is that of vocational self-concept. Parsons alluded to this in his Theorms of Vocational Education. According to Parsons, the wise selection of a vocation was in part influenced by a clear understanding of self, aptitudes, abilities, interests, ambitions, resources, and limitations and their causes (41, p. 5).

Since Parsons, several psychological theories of vocational choice have arisen. Foremost of these vocational theories was developed by Super. Super contended that in selecting a career choice, the individual expresses his idea of the type of person he conceives himself to be. In the selection of an occupation, the individual is seeking to implement their self-concept. By pursuing this occupational choice, the individual is striving to achieve self-actualization in a role conceived appropriate to his self-concept (53, pp. 81-82).

Ginzberg developed a vocational theory similar to that of Super. He felt that socioeconomic factors play an important role in the selection of an occupation. Students from higher income families could stay in school longer and therefore make more realistic vocational choices. The educationally disadvantaged students do not stay in school as long as other students either because they do not like school or else they come from lower income families. When the educationally disadvantaged students withdraw from school, their vocational choice is primarily concerned with just getting a job to help support themselves and their families (21, p. 3).

Roe developed a theory of occupational choice that proposes that the family was a primary force in influencing career selection. The personality of the individual as developed through home and family experiences has a direct relationship on occupational selection. The self-concept or way that an individual perceives himself has a direct bearing on his future job selection (47, pp. 213-215).

Hoppock's theory of vocational choice centered around a needs approach. This theory relies on the conclusion that the individual's occupational choice is strengthened through the identification of one's needs and the manner in which certain occupations can fulfill these needs (27, p. 112). Hoppock indicated a direct relationship existed between self-concept and career choice, particularly as they pertained to Super's theory of career development (27, p. 94).

One of the leading personality theorists was John Holland. Holland's theory of vocational choice may be referred to as a typological theory. He maintained that similar personality characteristics are shared by people in the same type of a job--"birds of a feather, flock together" (1, p. 79).

The Educationally Disadvantaged Student

The educationally disadvantaged as a group of students comprise a large percentage of the student population across the United States (3, p. 594). The concept of the educationally disadvantaged student began in the 1950's in New York City. The 1960's became the decade of the educationally disadvantaged student through the passage of federal and state legislation designed to increase the vocational potential of this group of students (1, p. 149).

Passow stated that a child is at a disadvantage in the educational environment, if, because of social or cultural characteristics, he enters the school environment with knowledge, skills and attitudes which impede learning and contribute to a cumulative academic deficit or failure. The social or cultural characteristics that may impede the education of a student include social class, race, ethnic origin, poverty, sex, and geological location. This educational disadvantage may persist throughout school life

and contribute to restricting later economic and social opportunities (42, p. 3).

The educationally disadvantaged student is viewed as a potential school dropout. According to Garner, the educationally disadvantaged student is a potential dropout due to chronic unexcused absences and frequent tardiness. He is two or three years below proper grade level for his age. He has insufficient communication or computational skills for a regular vocational program. He is unable to form responsible relationships within the school or community environment. The educationally disadvantaged student also may exhibit other evidence of failure which might prevent success in a regular vocational program (20, p. 1).

Behrens and Vernon viewed the educationally disadvantaged student as having a negative self-concept and a general dislike of school. They tend to exhibit aggressive tendencies in dealing with other students and failure. This trait often causes the educationally disadvantaged student to become a discipline problem (2, p. 294). Brown and Singleton state that the educationally disadvantaged student is not very different from Learning Disabled students (12, p. 43).

The Texas State Plan for Vocational Education defines the educationally disadvantaged student as a student who has academic, socioeconomic, or other handicaps that prevent

them from succeeding in vocational education or consumer and homemaking programs designed for persons without such handicaps and who for that reason require specially designed educational programs or related services (56, p. 45). Such students may be placed into the Coordinated Vocational Academic Education program. In the CVAE program, the educationally disadvantaged students receive special vocational training and may also receive extra help in the basic skills classes. The CVAE programs have been in existence in Texas schools since 1965 (19, p. 1). CVAE is a combination of vocational and academic instruction for the student who is not succeeding in the traditional academic and vocational programs due to academic, socioeconomic, or other handicaps (44, p. 1).

In order for a student to be placed in a CVAE program, he must be certified under one of six different admissions criteria. He may be behind academically. This may be met by having been retained a grade in school or by having sub-average scores on standardized achievement tests. He may have poor communication skills as indicated through low or failing grades in English, social studies, or mathematics. He may have poor attendance in school or chronic tardiness. He may have a poor self-concept as exhibited by a lack of personal goals or adequate feelings of self-worth. He may have normal capabilities, but have failed classes due to

improper study habits, dislike of school and teachers, or lack of proper guidance and counseling. Finally, he may be a long-time recipient of welfare or on the subsidized school lunch program (56).

Measurement of Self-Concept

The conception of self-esteem is not a new idea in psychology. It has been one of the central themes in exploring human nature since the beginning of this century. Lackey indicated that the measurement and evaluation of the self-concept is a recent development (33, p. 21). This was due to the complexities of the human self-concept and the difficulty in developing reliable test instruments. Zachry began the reemphasis on the self-concept in the 1940's and from his works, others began studying self-concept and developing self-concept scales (4, p. 30).

Wylie reported that over 140 different instruments have been developed to measure the self-concept (100). Most self-concept measurement instruments were developed with the primary goal for research. Self-concepts tend to be relatively stable and therefore subject to relatively little change. The use of self-concept scores in clinical and counseling settings can be useful as part of a test battery, but should not have much significance for the individual alone (43, p. 18).

Fitts developed a self-concept scale utilizing a Likert-type scale. He referred to this instrument as the Tennessee Self-Concept Scale. High scores on this self-concept scale indicate a high self-concept and low scores indicate a low level of self-concept. Five separate categories of self description were incorporated into the Tennessee Self-Concept Scale. These categories ranged from attitudes about physical self, moral-ethical self, family self, personal self, and social self (16).

Piers and Harris developed the Piers-Harris Children's Self-Concept Scale. Like the Tennessee Self-Concept Scale, this instrument was designed to test several factors. These factors include behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction. Unlike the Tennessee Self-Concept Scale, the Piers-Harris Children's Self-Concept Scale utilizes a forced-choice format rather than a multi-choice Likert scale (43).

The Q-Sort Self-Concept Scale was developed by Taylor. A Q-sort technique is used to determine how the individual views himself and describes the way that he would like to be. The individual is asked to arrange both negative and positive statements into eleven categories ranging from "least like me" to "most like me" (89, p. 205).

Most self-concept scales are designed around ways to measure the views that an individual has of himself.

Self-report inventories are subject to distortion. Some individuals may deliberately slant their responses in order to present themselves in a favorable light or as socially acceptable. Others may attempt to slant their answers to fake bad as a bid for attention. Most students would tend to fake good. Therefore a very high self-concept score for students may not truly reflect positive self-concepts, but low self-concept scores would truly reflect low self-concept and should be taken seriously (43, pp. 14-15).

The measurement of self-concept is vital in understanding differences in students, factors that influence self-concept, and ways to enhance self-concept. Glock stated that how one views himself is of utmost importance. The individual's self-concept acts as a boundary to define the scope of his actions. Actions or thoughts which may lead to a new self-concept are limited by the perimeter of the self-concept. Self-concept is difficult to change, because it has been developed over a long period of time. Negative self-concept prevents the individual from learning responses which may help him to overcome inferior feelings. A negative self-concept is its own best defender (23, p. 406).

Review of Related Studies

Many studies have been conducted dealing with different phases of self-concept. However, there is a paucity of experimental studies dealing with the self-concept of

educationally disadvantaged students at the secondary level. Few studies could be found that dealt specifically with the self-concept of the educationally disadvantaged vocational student. This section will reflect studies that are closely related to the present investigation.

Enhancing self-concept of the educationally disadvantaged in the classroom.--The school can be a strong force in the formation or change of the self-concept. An individual's self-concept can be modified or changed in certain social interactions in the school setting (58, p. 8). Hafner and Palmer found that the student who is not placed correctly in learning tasks could not develop positive self-concept toward educational tasks, because he is not able to succeed. Such a student often becomes a discipline problem through clowning around and disrupting other students (24, p. 219).

The type of classroom that an educationally disadvantaged student may be placed in can effect the self-concept of these students. More positive self-concepts were developed by educationally disadvantaged students placed in heterogenous classrooms (52, p. 29). Lewis conducted a study of educationally subnormal boys placed in a homogeneous class. He found that educationally disadvantaged students measure themselves against fellow students in the special class rather than against the entire school population. By measuring themselves against other educationally disadvantaged

students, the subjects produced a distorted view of themselves that could have negative effects in their chosen vocations (34, pp. 18-19).

Simpson stated that schools should be flexible in meeting the needs of the educationally disadvantaged student. Schools can only be successful in dealing with educationally disadvantaged students to the extent that they can meet the affective needs of the students. If these self-concept needs are not met through special programs and classes, the educationally disadvantaged student may be driven from the school setting with little of the skills needed for survival (51).

Weinstein and Middlestadt studied the treatment that the classroom teacher provides the educationally disadvantaged students as compared to other academic students. They found that students do perceive some differential treatment by the teacher to high and low achievers. This differential treatment was noted by the students regardless of grade level, sex, or self-concept of academic attainment. They found that the teachers tended to be less patient in waiting for an answer to a question asked of an educationally disadvantaged student than of an academic student (60, p. 429).

Paffrey studied the effects of headteachers' expectations of student achievement and self-concepts. His

findings agree with Weinstein and Middlestadt on the impact of teachers on the self-concept of their students. His results indicate that continuous communication between headteachers and staff and pupils served to enhance or diminish the student's evaluation of himself. Palfrey also found that the headteachers' subjective evaluation of the students had a significant impact on the students' self-concept (40).

Bourn conducted a series of studies of educationally disadvantaged students enrolled in basic skills classes of a community college. These studies were conducted to determine the effects of the basic skills classes on self-concept and scholastic achievement. The educationally disadvantaged students were evaluated on increase of self-concept scores by pre-test and post-test administration of the Tennessee Self-Concept Scale, by an open-ended self-evaluation questionnaire, and by improvement in grade point average. In his first study, Bourn concluded that growth in self-concept was achieved, but was not directly reflected in the student's grade point average. By considering variables such as class load and persistence, he observed a positive growth relationship (7). The second study concluded that an effective basic skills class could result in measurable positive growth in the self-concepts of academically disadvantaged students which could set the stage for student success in school (6). Bourn found in his third study that 70 per cent of the students maintained or improved their

self-concept scores on the Tennessee Self-Concept Scale. He also found that 64 per cent of the students exhibited vocabulary growth and 46 per cent showed gains in reading comprehension (5). Bourn concluded that grade point averages and self-concepts could be enhanced in educationally disadvantaged students through basic skills classes.

Olsen administered the Brookover Self-Concept-of-Academic-Ability Scale to educationally disadvantaged students in compensatory education classes. He concluded that special compensatory classes could positively effect self-concept enhancement contributing to academic achievement (39). Olsen's study concurred with the findings of Bourn on the effects of enhancing self-concept and improving academic grades.

Cooper conducted an investigation on self-concepts and school attitudes of high school students. The purpose of his study was to investigate possible differences in self-concepts of regular students, educationally disadvantaged students, and mainstreamed learning disabled students. The subjects were administered the School Morale Inventory and the Tennessee Self-Concept Scale. Cooper concluded that the regular students and the mainstreamed learning disabled students had significantly higher self-concepts than the educationally disadvantaged students (12).

In a study involving sixth grade students in the North Carolina Advancement School in Winston-Salem, North Carolina, the effectiveness of special classes and counseling techniques on self-concept and other characteristics of the educationally disadvantaged student was demonstrated. Both educationally disadvantaged students and academic students were tested prior to a special four-month counseling and academic treatment program for the educationally disadvantaged students. The educationally disadvantaged students were found to be well below the academic group on achievement, behavior, self-concept, attitudes toward school and school related activities, and the acceptance of responsibility for one's actions and behavior. Following the four-month treatment program, all of the educationally disadvantaged variables approached the norm with some of them exceeding the norm (38).

Self-concept may be effected by several variables. Felice conducted a three-year study to assess the relative contributions of family background and school factors to explain variance of self-concept among high school students. He, also, evaluated the effect of self-concept on subsequent student achievement performances. Seven variables were used as operationalizations. These were (1) family socialization practices, (2) family authority structure, (3) family educational orientation, (4) socioeconomic position,

(5) school contextual factors, (6) achievement and I.Q., and (7) self-concept. Felice concluded that self-concept was a significant determinant of student achievement performance and that family socialization practice exercises a larger effect on self-concept than any other variable. He recommended that the family should be brought into everyday interactional exchanges with the schools to help make the school programs more successful (15).

Valenzuela used the Tennessee Self-Concept Scale to study the relationship between self-concept, intelligence, socioeconomic status, and school achievement among Spanish-American students. His study does not back the findings of Felice. Valenzuela found no proof that self-concept is related in a positive and significant way with I.Q., socioeconomic status, or achievement level as expressed in grade point averages (57).

The educationally disadvantaged students may be equated with school dropouts. When in school, they may instigate discipline problems. If they do dropout of school, they may suffer the "last one hired--first one fired" syndrome, because of their lack of a formal education. Whether these students stay in school or dropout of school, they may become a part of a growing discipline problem. Johnston conducted research on school failure, school attitudes and self-concept in delinquents. He found that school failure affected the

students' self-concept and was shown to significantly be associated with delinquency (29). De Esch studied the effects of group counseling on disruptive students. His findings indicated that group counseling decreased school conflict and enhanced the self-concepts of disruptive students (14).

Enhancing self-concept through vocational programs.--

Several studies have been conducted showing how self-concept may influence vocational choice and how vocational programs may effect self-concept. Helbring examined the relationship between separate dimensions of vocational maturity and different self-concept and identity variables. In his first study, Helbring looked at whether difference in self-concept content corresponded with differences in vocational maturity. His findings indicated that students who view themselves as intelligent, accurate, industrious, well-mannered, and businesslike--indicative of a high self-concept--are the most vocationally mature individuals. In his second study on the relationship between vocational maturity and self-concept, Helbring confirmed his hypothesis that high self-concept students were more certain about and more willing to decide on a vocational choice (26). In a related study, Korman showed that low self-concept students chose vocations or occupations that are incongruent with their self-concept (31).

Differences in the self-concepts of vocational students and academic students have been studied with varying conclusions as to the worth of vocational programs on self-concepts. Feters found that vocational students have a high self-concept of themselves (36, p. 8). Through a semantic differential technique, Ranson showed that students in a career education class developed a positive attitude about themselves and school (46). Rouse found that students who work while attending school often have unrealistic expectations and feel that something is wrong with them, if they cannot perform at the same level as non-working students (49, p. 105). Taylor studied the relationships of the self-concepts of high school seniors in college-bound and work-bound programs. He found that there was no difference in self-concept of the two (55).

Studies of educationally disadvantaged students placed in vocational programs show that self-concept of these students may be enhanced by such school programs. Crites indicated that self-concept scores of educationally disadvantaged students may improve through role models in vocational classes (13, p. 200).

The effects of vocational training on educationally disadvantaged students was studied by Handley. He compared educationally disadvantaged students in a vocational program to educationally disadvantaged students in an academic program.

Handley administered a survey of pupil opinion, the Career Maturity Inventory, and the Work Value Inventory to each group. The educationally disadvantaged vocational group exhibited more positive attitudes about themselves, their teachers, and to work (25).

Clinkscale compared the self-concepts of vocational students in a traditional and a non-traditional occupational work experience program. The non-traditional occupational work experience program included special treatment including counseling, tutoring in remedial education, personal problems discussions, and outside guest speakers. Both groups were administered the Tennessee Self-Concept Scale over a nine-weeks period. He reported significant improvement of self-concepts of students in the non-traditional occupational work experience program (10). In a study similar to Clinkscale's and Handley's, 77 per cent of the educationally disadvantaged students in a vocational education program experience a positive growth in their self-concept (9, p. 5).

Summary

This chapter has presented some of the major viewpoints that exist today in self-concept and career choice theories. These theories may have originated from similar sources, but they have evolved along different channels to explain the development of self-concept.

This chapter, also, discussed the enhancement of self-concept, particularly of educationally disadvantaged students. Two opposing approaches were viewed concerning the type of educational environment most suited and beneficial to the self-concept of the educationally disadvantaged student. One view held that the educationally disadvantaged student would best be served in a heterogeneous program (52). The main proponent of this view was Lewis (34). Simpson (51), Bourn (5, 6, 7), and Weinstein and Middlestadt (60) felt that separate, homogeneous classes were best suited for enhancing the self-concept of the educationally disadvantaged student.

The researcher did not find a consensus of opinion on the effect of vocational programs on the self-concepts of vocational students. Some vocational programs were shown to effect students' self-concept while others did not. Most studies concerned with the self-concepts of the educationally disadvantaged student in separate vocational programs showed that these vocational programs were beneficial to the self-concept.

In researching the literature, few studies were found that focused directly upon comparing the self-concepts of educationally disadvantaged students, vocational students, and academic students or that focused on comparing the effects of these three programs on the self-concepts of

students placed in them. The present investigation differs from all studies reviewed in the literature in two ways. First, none of the studies conducted in the area of self-concept compared educationally disadvantaged students, vocational students, and academic students in one study. Secondly, none of the studies concurrently investigated changes in self-concept of these three groups of students. The present investigation was an attempt to study these two subject areas.

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CHAPTER III

METHODOLOGY

In this chapter, the methodology employed in this study is described. The subjects tested, a description of the instrument used, the Coordinated Vocational Academic Education (CVAE) program, the methods for gathering the data, and the methods used to analyze the data are detailed. This research is an extended Solomon four-group design described in Reading Statistics and Research (4, pp. 275-280) tested with a one-way analysis of variance as described in Statistical Analysis in Psychology and Education (2, pp. 223-239). This study was conducted within the Birdville Independent School District, Ft. Worth, Texas, and the Denton Independent School District, Denton, Texas, during the spring semester of the 1981-1982 school year.

Subjects

The subjects for this research were students from Richland High School and Haltom High School in the Birdville Independent School District, Ft. Worth, Texas, and from Denton High School in the Denton Independent School District, Denton, Texas. Both of these independent school districts are located within the Fort Worth-Dallas Metroplex. The

subjects were from three educational programs: the Coordinated Vocational Academic Education (CVAE) program for educationally disadvantaged students, vocational program, and academic program. Table II shows the breakdown of these students according to educational program and other demographics studied in the research.

TABLE II
DEMOGRAPHICS STUDIED ACCORDING TO
TYPE OF EDUCATIONAL PROGRAM

Program	Sex		Age			Years			Total
	M	F	16	17	18-19	1	2	3	
CVAE	79	27	17	30	59	37	47	22	106
Vocational	29	54	*6	27	50	53	30	**0	83
Academic	53	69	51	39	32	44	41	37	122
Total	161	150	84	96	131	134	118	59	311

*Vocational students are required to be 16 years old prior to admission in the cooperative vocational program (7, pp. 421-422).

**Vocational students are not allowed to be in a cooperative vocational program other than CVAE for more than two years (7, pp. 421-422).

Table II shows that a total of 311 students were used in the research: 106 were CVAE students, 83 were vocational students, and 122 were academic students. The subjects

ranged in age from sixteen to nineteen years. Minorities were included in the research, but were not listed as a separate demographic, since their numbers were extremely small and any statistic obtained would not be valid.

The CVAE and vocational students attended one vocational class per day and spent the rest of the day mainstreamed into academic subjects or attending basic skills classes. The academic students attended four to six mainstreamed classes per day.

The subjects were selected to be a part of this research on the basis of several criteria. The CVAE students were designated as educationally disadvantaged students according to the Texas Education Agency guidelines (7, pp. 436-437). This designation was made prior to acceptance of any student into the CVAE program. Second, each student had the opportunity to accept or reject participation in the study. Third, each student agreeing to participate in the research had a signed permission form from their parent or guardian or by themselves, if they were eighteen years of age or older.

Control Groups

The students enrolled in the academic and vocational programs at Birdville Independent School District and Denton Independent School District were designated as control groups for this research. Students enrolled in academic

programs were pursuing college preparatory or general educational courses. The students enrolled in vocational classes came from a wide variety of vocational offerings. Some vocational students were in cooperative vocational education, which included on-the-job training at various training stations. Other vocational students were enrolled in a vocational laboratory, where they received hands-on vocational training on job skills in a controlled school environment. The vocational programs represented in this study included

1. Auto Mechanics (Laboratory)
2. Cosmetology (Laboratory)
3. Home Economics Cooperative Education (Cooperative)
4. Industrial Cooperative Training (Cooperative)
5. Marketing and Distributive Education (Cooperative)
6. Pre-Employment Laboratory Education--Child Care
(Laboratory)
7. Vocational Agriculture (Cooperative)
8. Vocational Drafting (Laboratory)
9. Vocational Health Occupations Education (Cooperative)

Experimental Group

The students enrolled in the CVAE programs were designated as the experimental group. The CVAE students were enrolled in either a cooperative program or a laboratory program. The CVAE programs were limited to educationally

disadvantaged students. The CVAE students enrolled in the cooperative vocational program were employed at a wide variety of training stations based on individual student ability and selection. However, most training stations could be classified as low-skill, low-pay type of jobs. The CVAE students enrolled in the laboratory programs were all males studying either small engine repair or building trades.

Description of the Test Instrument

The instrument used to conduct this research was the Piers-Harris Children's Self-Concept Scale. It was developed by Ellen V. Piers and Dale B. Harris in 1969 from a pool of items taken from Jersild's collection of children's statements about what they liked and disliked about themselves. The instrument consists of eighty simple declarative statements that can be answered with a "yes" or "no." It has a third-grade reading level and therefore can be used with students from a wide range of ages from below the third grade to high school. It is relatively quick to administer, because it takes approximately twenty minutes to administer (5, p. 2). The researcher noted that most subjects were able to complete the instrument in approximately ten minutes.

Buros reports that the Piers-Harris Children's Self-Concept Scale was standardized both longitudinally and cross-sectionally. It is not biased according to sex or grade differences. Buros further states that it can be used

with the educationally disadvantaged students, since care was taken that the scale not correlate unduly with social desirability (1, p. 306).

Reliability coefficients ranging from .72 to .93 have been reported on the Piers-Harris Children's Self-Concept Scale. Internal consistency has been measured using the Kuder-Richardson Formula 21 with results being reported of .78 to .93. Test-retest reliability was found by Piers and Harris to be .71 to .72, but was as high as .85 on a short-term interval (5, p. 4).

Wylie made the assumption that the educationally disadvantaged student would score lower on self-concept scales due to unreliability of responding (8). Rogers and Smith tested this assumption by administering the Piers-Harris Children's Self-Concept Scale to eighty-nine educationally disadvantaged students. They concluded that the educationally disadvantaged students did not express low Piers-Harris Children's Self-Concept Scale scores due to unreliable or chance responding on test items (6, pp. 556-557).

Concurrent validity studies have resulted in correlations ranging from nonsignificant to .68 (p .01). Mayer reported a correlation of .68 (p .01) with the Lipsitt Children's Self-Concept Scale. Cox obtained correlations of .31 (p .01) for ratings by teachers and .43 (p .01) for ratings by peers (5, p. 7).

The Piers-Harris Children's Self-Concept Scale was selected for this research for two primary reasons. First, the time for administration was relatively short. This was felt by the researcher to be of importance so that the students would not become bored and confused and mark the tests in a haphazard fashion. Second, the reading level was low so that the educationally disadvantaged students could read and take the tests by themselves.

CVAE Programs in Texas

The CVAE programs have been in existence in Texas schools since 1965. They were developed to provide vocational education for the educationally disadvantaged student (3, p. i). It was designed to enable educationally disadvantaged youth to prepare for gainful employment from vocational education that would otherwise be beyond their capabilities in regular programs or vocational education. It consisted of two distinct components when it was first instituted--an academic component and a vocational component (7, p. 435). However, the academic component is no longer funded by the state. In school districts that offer the CVAE academic component, the monies to provide this component comes from the local education agency's coffers.

The CVAE vocational training component may be conducted in either pre-employment laboratory training or cooperative education training. The student eligibility criteria for

the CVAE programs according to the Texas Education Agency are as follows.

1. Students must be at least 16 years of age at the time of entry into the cooperative education program and 14 years of age at the time of entry into the pre-employment laboratory shop program.

2. Students must be two or more years behind academically or two or more years below normal achievement in two or more academic courses which prevents the student from achieving in regular programs of vocational education.

3. Students must be able to profit from the instruction given in the program and must not be classified as special education students (7, p. 435).

The general characteristics for eligible students considered for placement in the CVAE program are varied. The Texas Education Agency states that eligible students must have one or more of the following characteristics to enter CVAE.

1. Low or underachievers. They are often handicapped academically because of low scholastic ability and/or lack of educational and cultural advantages. Limited in academic progress by two or more grades, they are potential dropouts.

2. Low ability in communication skills. They are at a disadvantage with other students because of low reading ability, lack of creativity, inability to think abstractly, short attention span, and slowness of learning.

3. Irregular in attendance, frequently tardy, and disinterested in school. They feel that they are second-class citizens at school and as a result do not like school, believe they cannot learn, and feel their teacher neither accepts or understands them.

4. Have no personal goal, lack of sense of purpose, lack of self-confidence, and often develop negative self-images. Because there is a lack of opportunity for them at home or in the immediate neighborhood to become acquainted with persons in an occupation of a higher status than those with whom they associate, they may not be motivated to attend school or to want something better.

Standards of the family and neighborhood may discourage them from aspiring to a higher level of achievement or way of life.

5. Normal or above normal in potential ability to achieve satisfactorily in school but have failed courses for various reasons such as dislike of teachers and school, improper attitudes, poor study habits, laziness, poor reading ability, or have been enrolled in courses without adequate guidance and counseling.

6. Are members of families of low-income or long-time recipients of welfare payment or other subsistence. Often children from these families lack money for adequate clothing, food, or for participating in school activities

requiring incidental expenses. These conditions contribute to feelings of insecurity and hopelessness resulting in under achievement in school (7, pp. 436-437).

Procedures for Collecting Data

The subjects in each program area were divided into two groups. The Piers-Harris Children's Self-Concept Scale was administered to one group in February, 1982 and again in May, 1982. The other group was administered the test instrument in May, 1982 only. Table III shows this arrangement.

TABLE III
SUBJECTS TAKING PRE- AND POST-ADMINISTRATION OF
THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE

Program	Pre-Test and Post-Test		Post-Test Only		Total
	M	F	M	F	
CVAE	38	18	41	9	106
Vocational	9	18	20	36	83
Academic	8	21	45	48	122
Total	55	57	106	93	311

Table III shows the number of students in each program taking the pre-test and post-tests of the Piers-Harris Children's Self-Concept Scale. The general feeling of the

CVAE students was that counselors help us, so we should help them. More students in the CVAE program agreed to take the pre-test and post-test administration than did students in the vocational and academic programs. However, enough students in all programs agreed to participate in the study to make the total number of subjects in each program acceptable.

The subjects for each program were selected in similar fashion. All students were identified as to type of program registered in for each high school used in the study. By using a table of random numbers, the subjects were selected from alphabetical lists of the entire population from each program area. Since this study involved vocational programs, academic programs, and vocational programs for the educationally disadvantaged students, the subjects were not placed into each program randomly, but rather were selected randomly after they selected their course of study.

The Piers-Harris Children's Self-Concept Scale was administered to the subjects in groups of five to twenty students at a time. An attempt was made to include subjects from all three program areas to make the administration of the test instrument as universal for all programs as possible.

The directions for the Piers-Harris Children's Self-Concept Scale were changed so that machine-scorable answer sheets could be used. This was done to make the scales easier to score than by hand and to assure the subjects that

the instrument would be scored anonymously. The students were asked not to sign the answer sheet to assure anonymity. The subjects were asked to give their birthdates, sex, age, grade in school, program area taking, and number of years of high school in that program. Two test administrators were used to monitor the tests. The directions for administering the test were printed and read orally to the subjects to provide similar test administration for all subjects.

Methods for Analyzing Data

The data that were gathered from the administration of the Piers-Harris Children's Self-Concept Scale were analyzed statistically through the use of analysis of variance and analysis of covariance techniques. A test of significance was reported for each statistic conducted.

Hypothesis 1. There is no significant difference in the mean attitude self-concept score of vocational education students, academic students, and educationally disadvantaged students (CVAE) as measured by the Piers-Harris Children's Self-Concept Scale. This hypothesis was analyzed with an analysis of variance in three manners: (1) total students in each program were compared with each other, (2) male students in each program were compared with males in other program areas, and (3) female students in each program were compared with females in other programs.

Hypothesis 2. There is no significant difference in the mean attitude self-concept score between male and female students in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale. Males from each of the three programs were compared with females from the same educational program using a one-way analysis of variance.

Hypothesis 3. There is no significant difference in the mean attitude self-concept score between males and females of different age groups in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale. Several comparisons utilizing an analysis of variance were used to test this hypothesis. Subjects from each program area were compared with subjects of the same age group in other program areas. This was done with all students of the same age group, males of the same age group, and females of the same age group. Males and females of different age groups were compared with the same gender in each program. Finally, male and female subjects in the same age group and same program were compared.

Hypothesis 4. There is no significant difference in the mean attitude self-concept scores as measured by the Piers-Harris Children's Self-Concept Scale between vocational education students, academic students, and CVAE students and number of years of placement in a vocational program, academic program and CVAE program. Like Hypothesis 3, this

hypothesis was tested statistically in several comparison areas with an analysis of variance. Students in each program were compared with students in other programs according to number of years in each program. This was done with all students, male subjects only, and female students only. Students with similar program experience were compared by sex within each program area. Students were also compared according to the same program, but different program experience and same sex.

Hypothesis 5. There is no significant change in the mean attitude self-concept scores of vocational education students, academic students, and CVAE students as measured by the Piers-Harris Children's Self-Concept Scale over a three-month period utilizing an extended Solomon Four-Group design. The statistic used to analyze this hypothesis was an analysis of covariance. The subjects were compared with subjects from other programs and according to sex. An analysis was also made between pre-test and post-test students and post-test only students to determine if there was any difference in the two groups.

All data gathered from the study was entered into charts discussed in Chapter IV. Each hypotheses was tested at the .05 level of significance.

Summary

This chapter presented the methodology used to gather and analyze the data. Subjects from three educational

programs were administered the Piers-Harris Children's Self-Concept Scale. The mean attitude self-concept scores were then treated statistically to determine if there were any significant differences within and between all three program areas. Chapter IV contains an analysis of the data gathered in this research.

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CHAPTER IV

ANALYSIS OF THE DATA

This chapter contains an analysis of the data gathered in the administration of the Piers-Harris Children's Self-Concept Scale to vocational students, academic students, and Coordinated Vocational Academic Education (CVAE) students. The data was gathered in February and May, 1982 in the Birdville Independent School District and Denton Independent School District. This chapter is organized into: (1) a restatement of the null hypotheses and (2) an analysis of the Piers-Harris Children's Self-Concept Scale scores obtained in the study.

Restatement of the Null Hypotheses

The following hypotheses were formulated to carry out the purpose of this study.

1. There is no significant difference in the mean attitude self-concept score of vocational education students, academic students, and educationally disadvantaged students (CVAE) as measured by the Piers-Harris Children's Self-Concept Scale.

2. There is no significant difference in the mean attitude self-concept score between male and female students

in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

3. There is no significant difference in the mean attitude self-concept score between males and females of different age groups in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

4. There is no significant difference in the mean attitude self-concept scores as measured by the Piers-Harris Children's Self-Concept Scale between vocational education students, academic students, and CVAE students and number of years of placement in a vocational program, academic program, and CVAE program.

5. There is no significant change in the mean attitude self-concept score of vocational education students, academic students, and CVAE students as measured by the Piers-Harris Children's Self-Concept Scale over a three-month period utilizing an extended Solomon Four-Group Design.

Analyses of the Data

The data obtained from the administration of the Piers-Harris Children's Self-Concept Scale were statistically analyzed using an analysis of variance and covariance. The analyses were done according to hypothesis. The following analyses were formulated:

Hypothesis 1: There is no significant difference in the mean attitude self-concept score of vocational education students, academic students, and educationally disadvantaged students (CVAE) as measured by the Piers-Harris Children's Self-Concept Scale. The data obtained from the May, 1982, administration of the Piers-Harris Children's Self-Concept Scale were analyzed by a one-way analysis of variance and a Scheffe multiple range test. Tables IV and V present data showing results of this analysis.

TABLE IV

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN ATTITUDE SCORES OF STUDENTS IN THREE EDUCATIONAL PROGRAMS

PROGRAM	NUMBER	MEAN	STANDARD DEVIATION	STANDARD ERROR	RANGE
CVAE	106	54.99	12.64	1.23	18-77
Vocational	83	57.77	11.95	1.31	16-78
Academic	122	58.45	11.17	1.01	19-78
Total	311	57.09	11.96	.68	16-78

The data in Table IV indicate that the educationally disadvantaged group of students had a lower mean score (54.99) than either the vocational group (57.77) or the academic group (58.45). The range of the scores of the three groups did not vary to any great extent. Educationally disadvantaged students tend to have lower self-concept than

other students (1, p. 151). The results shown in Table IV tend to support this contention.

Behrens and Vernon (2, p. 294) reported that educationally disadvantaged students have a significantly lower self-concept than other students in educational programs. The Texas State Plan for Vocational Education identifies six criteria for a student to be evaluated for prior to admission into the Coordinated Vocational Academic program. One of these criteria is lacking self-confidence and a negative self-image (self-concept) (13, p. 437). When the statistics expressed in Table IV are evaluated by an analysis of variance, a significant difference in self-concepts of vocational, academic, and CVAE students was not found. The data in Table V report this finding.

TABLE V

ANALYSIS OF VARIANCE FOR PIERS-HARRIS CHILDREN'S
SELF-CONCEPT SCALE MEAN ATTITUDE SCORES OF
STUDENTS IN THREE EDUCATIONAL PROGRAMS

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE ESTIMATE
Between Groups	731.50	2	365.75
Within Groups	43595.41	308	141.54
Total	44326.91	310	. . .
F = 2.584		p = 0.0771	

The analysis of variance in Table V points out that there was not a significant difference in mean attitude self-concept scores of vocational, academic and CVAE students. Even though the Scheffe procedure indicated that no two groups were significant at the 0.05 level, it may be interpreted that with $p = 0.0771$, a trend exists indicating that CVAE students have lower self-concepts than academic and vocational students. This supports Taylor's findings that there was no significant difference in college-bound and work-bound students in self-concept (12), yet, points out that there may be lowered self-concept in the educationally disadvantaged students.

Hypothesis 2: There is no significant difference in the mean attitude self-concept scores between male and female students in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

Male students are three years behind female students in emotional and physical maturation. This differential in maturation possibly could effect the development of self-concept. Several comparisons were made testing this hypothesis. The first analysis of variance conducted, compared males in each of the three educational groups. Table VI reports the data used to make this comparison.

TABLE VI
PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF MALES IN THREE
 EDUCATIONAL PROGRAMS

PROGRAM	NUMBER	MEAN	STANDARD DEVIATION	STANDARD ERROR	RANGE
CVAE	78	55.64	12.02	1.36	25-77
Vocational	29	60.41	8.02	1.49	42-72
Academic	55	56.78	10.93	1.47	19-75
Total	162	56.88	11.10	0.87	19-77

$F = 1.981$ $p = 0.14$

The data in Table VI report that the vocational male students had a higher mean score (60.41) than either the CVAE male group (55.64) or academic male group (56.78). This was not statistically significant ($p = 0.14$). No two groups were significantly different at the 0.05 level.

The self-concept scores of female students in the three educational programs were analyzed to determine if there was a significant difference in their mean attitude self-concept scores. The data in Tables VII and VIII present the findings of this comparison.

TABLE VII

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF FEMALES IN THREE
EDUCATIONAL PROGRAMS

PROGRAM	NUMBER	MEAN	STANDARD DEVIATION	STANDARD ERROR	RANGE
CVAE	28	53.18	14.33	2.71	18-72
Vocational	54	56.35	13.46	1.83	16-78
Academic	67	59.82	11.26	1.38	32-78
Total	149	57.32	12.86	1.05	16-78

The differences in the mean scores for the female CVAE students indicate a possible significance. Table VIII is the analysis of variance for female self-concept scores.

TABLE VIII

ANALYSIS OF VARIANCE FOR PIERS-HARRIS CHILDREN'S
SELF-CONCEPT SCALE MEAN ATTITUDE SCORES OF
FEMALES IN THREE EDUCATIONAL PROGRAMS

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	VARIANCE ESTIMATE
Between Groups	949.88	2	474.94
Within Groups	23516.11	146	161.07
Total	24465.98	148	...

F = 2.949

p = 0.0555

The female subjects, when compared together, did not have a significantly different mean attitude self-concept score between the three educational program areas. Table VIII reports that the CVAE females had a lower mean score (53.18) than the vocational females (56.35) and academic females (59.82). These scores, even though nonsignificant, do indicate a trend as shown in Table VIII. The data in Table VIII show by an analysis of variance ($p = 0.0555$) the scores of CVAE females tend to be lower than academic females. No two groups were significantly different at the 0.05 level of acceptance.

The subjects were compared by sex and program to determine if there was a significant difference in the mean attitude self-concept scores between males and females in the same program. The data in Table IX show the comparisons between males and females within the three educational programs.

TABLE IX
PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF MALES AND FEMALES IN
 THREE EDUCATIONAL PROGRAMS

PROGRAM	MEAN SCORE MALES	MEAN SCORE FEMALES	P
CVAE	55.64	53.18	0.3792
Vocational	60.41	53.35	.1409
Academic	56.78	58.45	.1354

The data in Table X show that there is no significant difference in the mean attitude self-concept scores between males and females in any of the three educational programs. The CVAE males and females were more similar in self-concept scores ($p = 0.3792$) than in the other two educational programs. Both the males ($\bar{X} = 55.64$) and females ($\bar{X} = 53.18$) in the educationally disadvantaged (CVAE) program had lower mean attitude self-concept scores than males and females in the vocational and academic programs. The largest difference in mean attitude self-concept scores was seen in the vocational program where the male students had seven points higher on the average than the female vocational students. This, however, was not significant at the 0.05 level.

The results reported in Tables VI through IX indicate that there is no significant difference in the mean attitude self-concept scores between males and females in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale scores. None of the comparisons reported a significant difference at the 0.05 level.

Hypothesis 3: There is no significant difference in the mean attitude self-concept scores between males and females of different age groups in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale. This hypothesis was tested

by twenty-four different comparisons. Several of the comparisons are combined together in each table to make it easier to compare the results.

As a person matures, the self-concept tends to rise. The data in Table X reports a comparison of self-concept scores of different age groups in each of the three educational programs.

TABLE X

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF STUDENTS IN THREE
EDUCATIONAL PROGRAMS BY AGE GROUPS

PROGRAM	18-19 YEAR-OLDS	17 YEAR-OLDS	16 YEAR-OLDS
CVAE	55.17	54.32	55.42
Vocational	58.50	57.37	*53.50
Academic	59.38	60.39	56.22
Total	53.31	57.77	55.80
p	0.1458	0.1890	0.8460

*s = 6

The data in Table X show that the mean attitude self-concept scores for educationally disadvantaged students are lower than those of vocational students and academic students in the eighteen-nineteen year-age group and seventeen year-age group. In the sixteen year-age group, the vocational students have a lower mean attitude self-concept score than

CVAE students. However, there were few vocational subjects (6) in this age group due to the Texas Education Agency age requirement for students in a vocational program (13, pp. 421-422).

When comparing values for p in sixteen, seventeen, and eighteen-nineteen year-olds in the different educational programs, the value for p varies from 0.1458 in the eighteen-nineteen year-olds to 0.8460 for the sixteen year-olds. This may indicate a trend for self-concepts of vocational and academic students to increase with age, while the self-concept for CVAE students remains approximately constant. The data in Table X shows there is no significant difference in mean attitude self-concept scores in students of similar age groups in different educational programs.

Due to an approximately three year differential in physical and emotional maturation between male and female students, it is necessary to compare the three educational programs by sex and years of placement. This should make a better comparative study by removing some variables that affect self-concept. The data in Table XI present the result of comparing the mean attitude self-concept scores of students in the three educational programs by sex.

TABLE XI

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF STUDENTS BASED ON AGE
AND SEX IN THREE EDUCATIONAL PROGRAMS

PROGRAM	18-19 YEAR-OLDS		17 YEAR-OLDS		16 YEAR-OLDS	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
CVAE	56.37	51.94	54.00	55.50	56.00	54.17
Vocational	60.64	56.82	59.71	56.55	*	53.50
Academic	57.62	62.73	59.29	61.17	53.24	57.81
Total	57.77	56.58	56.83	58.64	54.43	56.73
p	0.2335	0.1165	0.3960	0.4707	0.5267	0.5745

*no subjects tested

Table XI presents data showing there is no significant difference in the mean attitude self-concept scores of males and females of similar age groups in different educational programs. The eighteen-nineteen year-old females had the lowest mean attitude self-concept scores (51.94) of any of the seventeen groups represented. Females of this age-group had a p value of 0.1165, which may indicate a trend, even though not significant, for a decreasing self-concept of female educationally disadvantaged students as these students become older. Olsen (10) reported a similar result in white female educationally disadvantaged students. There were no vocational males tested for the sixteen year-age group,

because of Texas Education Agency age criteria for admissions into the vocational program (13, pp. 421-422).

The subjects were compared between the sexes and age groups within the same educational program. Table XII presents data showing the comparisons of male and female students of different age groups within the same educational program.

TABLE XII

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF MALES AND FEMALES OF
DIFFERENT AGE GROUPS IN THREE
EDUCATIONAL PROGRAMS

PROGRAM	18-19 YEARS	17 YEARS	16 YEARS	TOTAL	P
CVAE					
Males	56.00	54.00	56.37	55.64	0.7528
Females	54.17	55.50	51.94	53.18	.8671
Vocational					
Males	59.71	60.64	. . .	60.41	.7965
Females	53.50	56.55	56.82	56.35	.8620
Academic					
Males	53.24	59.29	57.62	56.78	.2488
Females	57.87	61.17	62.73	59.82	.3565

In the comparisons of male and female students of different age groups in the same educational program, no significant difference in the mean attitude self-concept scores. The data in Table XII report values for p ranging from 0.2488 to 0.8671.

The mean attitude self-concept scores were also compared by sex and age groups in similar educational programs to determine if a significant difference exists. The data in Table XIII report the results of these comparisons.

TABLE XIII

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF STUDENTS IN THREE
EDUCATIONAL PROGRAMS BY SEX AND AGE

PROGRAM	MALE	FEMALE	TOTAL	P
CVAE				
18-19 yrs.	56.37	51.94	55.17	0.1995
17 years	54.00	55.50	54.32	.8288
16 years	56.00	54.17	55.42	.7823
Vocational				
18-19 yrs.	60.64	56.82	58.50	.2319
17 years	56.71	56.55	57.37	.5979
16 years	. . .	53.50	53.50	. . .
Academic				
18-19 yrs.	57.62	62.73	59.38	.1547
17 years	59.29	61.67	60.39	.6508
16 years	53.24	57.81	56.22	.1470

According to the data in Table XIII, there was no significant difference between male and female students of the same age group in the CVAE, vocational, and academic programs. P values of 0.1470 to 0.8288 are reported. There is no significant difference in the mean attitude self-concept scores between males and females of different age groups in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

Hypothesis 4: There is no significant difference in the mean attitude self-concept scores as measured by the Piers-Harris Children's Self-Concept Scale between vocational education students, academic students, and CVAE students and number of years of placement in a vocational program, academic program, and CVAE program. Hypothesis 4 was tested by an analysis of variance in twenty-three different comparisons. Several of these comparisons are included in each table for ease in reporting.

Lewis reported that homogeneous placement of the educationally disadvantaged students produced a distorted view of self-concept within these students. He said that such a placement caused the educationally disadvantaged student to have an unreasonably high self-concept that would crumble when the educationally disadvantaged would become part of the work environment (8, pp. 16-20). Most educators are in favor of heterogeneous classes. Such classes would expose all students to varying attitudes, experiences, and abilities

very similar to those expected outside of the educational environment. Homogeneous placement of the educationally disadvantaged has been claimed to have a negative impact on the individuals self-concept through isolating these students from the rest of the school population. Table XIV presents the data used in the comparison of students in the three educational programs with number of years of placement in each program.

TABLE XIV

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF STUDENTS OF DIFFERENT YEARS
OF PLACEMENT IN THREE EDUCATIONAL PROGRAMS

PROGRAM	THREE YERAS	TWO YEARS	ONE YEAR
CVAE	53.65	55.25	55.36
Vocational	*. . .	57.29	57.81
Academic	61.66	58.31	55.69
Total	58.90	56.90	56.44
p	**0.0112	0.4854	0.5344

*Vocational students are prevented by Texas Education Agency guidelines from participating in a cooperative vocational program for more than two years (13, pp. 421-422).

**Significantly different at the 0.05 level.

From the data in Table XIV, one significant difference is indicated. Students who have been in the CVAE program for three years of high school have a significantly lower

($p < .05$) self-concept score than three-year high school academic students. This is contrary to the results obtained by Lewis (8), Bourn (3, 4, 5), Olsen (10), the North Carolina Advancement School (9), Clinkscale (6), and Handley (25). Each of these listed people showed that placement in a special program for the educationally disadvantaged enhanced the students self-concept. According to the data in Table XIV, the other comparisons of one-year and two-year students in academic, vocational, and CVAE programs resulted in no significant differences.

The subjects were compared by sex and years of placement in the three educational environments to determine if there was a significant difference between males and females. The data in Table XV depict the combined results of these comparisons.

TABLE XV

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF MALES AND FEMALES OF
DIFFERENT YEARS OF PLACEMENT IN
THREE EDUCATIONAL PROGRAMS

PROGRAM	THREE YEARS		TWO YEARS		ONE YEAR	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
CVAE	54.60	50.80	56.87	52.13	54.94	57.29
Vocational	. . .	. . .	59.54	56.19	61.13	56.42
Academic	59.58	63.74	55.84	60.35	54.71	56.36
Total	57.38	61.04	57.11	56.75	56.40	56.49
p	0.1760	*0.0426	0.6323	0.2106	0.1848	0.9817

*Significantly different at the .05 level.

Only one group presented in Table XV shows a significant difference ($p < 0.05$). This group is the female CVAE students with three years of placement in the CVAE program compared to three-year high school academic females. Male CVAE and male academic students with three years of placement in their respective programs do not exhibit this same pattern, even though the mean self-concept score for the CVAE males (54.60) is lower than that of the academic males (59.58). These results are similar to Olsen's studies that showed white females in an educationally disadvantaged program had significantly lower self-concept scores than other groups of students (10).

The data in Table XVI show the results of comparisons of the mean self-concept scores based on sex and years of placement in each educational program. This comparison was made to test whether or not there were any significant differences in the mean attitude scores on the Piers-Harris Children's Self-Concept Scale between males or females within the same educational group with varying number of years of placement.

TABLE XVI

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF STUDENTS IN THREE
 EDUCATIONAL PROGRAMS BY SEX AND
 YEARS OF PLACEMENT

PROGRAM	THREE YEARS	TWO YEARS	ONE YEAR	TOTAL	p
CVAE					
Males	54.60	56.87	54.94	55.64	0.7654
Females	50.80	52.13	57.29	53.18	.6867
Vocational					
Males	. . .	59.54	61.13	60.41	.6051
Females	. . .	56.19	56.42	56.35	.9527
Academic					
Males	59.58	55.84	54.71	56.78	.3749
Females	63.74	60.35	56.36	59.82	.0936

According to the data in Table XVI, there is no significant difference in males or females of varying years of placement in a CVAE, vocational, or academic program. The academic females express a trend ($p = 0.0936$) that, even though not significant, does show an increase in self-concept scores with number of years of placement. CVAE females, on the other hand, exhibit a decline in the mean self-concept scores.

Hypothesis 4 was, also, tested by analysis of variance on students according to sex, years of placement, and educational program. Table XVI presents data comparing the results of this.

TABLE XVII

PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN
ATTITUDE SCORES OF STUDENTS BY SEX, YEARS
OF PLACEMENT, AND EDUCATIONAL PROGRAM

PROGRAM	MALE	FEMALE	TOTAL	p
CVAE				
Three Years	54.60	50.80	53.65	0.5793
Two Years	56.87	52.12	55.26	.2223
One Year	54.94	57.29	55.36	.6706
Vocational				
Three Years	. . .	. . .	. . .	. . .
Two Years	59.54	56.19	57.69	.5080
One Year	61.13	56.42	57.81	.1656
Academic				
Three Years	59.58	63.74	61.66	.2059
Two Years	55.84	60.35	58.31	.2310
One Year	54.71	56.35	55.69	.6304

The data in Table XVII indicate that there is no significant difference in the mean attitude self-concept scores between males and females of the same number of years of placement in the same educational program. Data provided in Table XIII and XIV report that there is a significant difference ($p < 0.05$) in the mean attitude self-concept scores as measured by the Piers-Harris Children's Self-Concept Scale between vocational education students and CVAE students with three years of placement in their respective programs.

Hypothesis 5: There is no significant change in the mean attitude self-concept score of vocational education students, academic students, and CVAE students as measured by the Piers-Harris Children's Self-Concept Scale over a three-month period utilizing an extended Solomon Four-Group Design. Three analyses of covariance were conducted to test this hypothesis. Table XVIII presents data showing the total pretest-posttest group results. Data in Table XIX shows the results of males in the pretest-posttest group. The data in Table XX exhibits a comparison of females in the pretest-posttest group.

TABLE XVIII

ANALYSIS OF COVARIANCE OF PIERS-HARRIS CHILDREN'S
SELF-CONCEPT SCALE MEAN ATTITUDE SCORES OF
 STUDENTS IN THREE EDUCATIONAL PROGRAMS

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGN. OF F
Covariates (Pre)	14228.035	1	14228.035	422.384	0.000
Main Effects (Prog)	33.973	2	16.986	.050	.605
Explained	14262.008	3	4754.000	141.131	.000
Residual	3840.102	114	33.685		
Total	18102.109	117	154.719		

The data in Table XVIII shows that the significance for F of the main effects of the analysis of covariance for students in the three educational programs to be 0.605. This is not a significant difference.

TABLE XIX

ANALYSIS OF COVARIANCE OF PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN ATTITUDE SCORES OF MALE STUDENTS IN THREE EDUCATIONAL PROGRAMS

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGN. OF F
Covariates (Pre)	6698.250	1	6698.250	208.282	0.000
Main Effects (Prog)	108.305	2	54.152	1.684	.195
Explained	6806.555	3	2268.852	70.550	.000
Residual	1768.773	55	32.160		
Total	8575.328	58	147.850		

TABLE XX

ANALYSIS OF COVARIANCE OF PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE MEAN ATTITUDE SCORES OF FEMALE STUDENTS IN THREE EDUCATIONAL PROGRAMS

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGN. OF F
Covariates (Pre)	7489.055	1	7489.055	214.208	0.000
Main Effects (Prog)	60.633	2	30.316	.867	.426
Explained	7549.688	3	2516.563	71.981	.000
Residual	1922.887	55	34.962		
Total	9472.574	58	163.320		

The data in Tables XIX and XX indicate that there was not a significant change in either males or females in vocational, academic, and CVAE programs over a three-month period. This supports Piers' (11, p. 18) study that self-concepts tend to be relatively stable. An analysis of variance was run between the pretest-posttest group and the posttest only group. No significant difference was found ($p > 0.05$).

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CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This chapter provides a brief description of the purposes and design of the study. The findings are reported, conclusions are drawn, and recommendations are offered.

Background

Two decades ago, the educationally disadvantaged students were virtually nonexistent in the public schools. They were mainly considered to be a problem in the inner schools of large northeastern cities such as New York City. In most areas, the educationally disadvantaged students dropped out of school and became part of the uneducated, unskilled work force. In today's work force, technological training requirements prevent the high school dropout from obtaining a job that is rewarding to the individual's self-esteem and economical needs.

The armed forces at one time were a haven for the educationally disadvantaged student. All he or she had to do was quit school and join the armed forces. The armed services would provide him or her room and board, pay him or her, and offer him or her training in a vocational area. This

is not true in the modern armed services. The Army is the only branch of the armed services that will accept a General Education Diploma (GED) for admissions into their program. All other branches of the armed forces will accept a minimum of a high school diploma for recruitment into their program.

Jobs, that at one time were abundant for the high school dropout, are now made obsolescent through advances in modern technology. Companies and industries are not interested in employees without the education necessary for advancement in their companies. The industries still hire people with little education or technological training, but these employees are offered little hope for advancement and are the first to be laid off during a recession.

This causes a growing number of educationally disadvantaged students to remain in the public schools. Public schools have two basic methods to deal with an increased population of educationally disadvantaged students. They may ignore them and hope that they will somehow fit into the traditional school system, or the public schools may produce innovative academic and vocational training programs to help the educationally disadvantaged students. Federal legislation has mandated that public schools receiving federal monies must follow the second approach in dealing with educationally disadvantaged students. However, some public schools have entered into offering special programs for the

educationally disadvantaged students in less than an enthusiastic manner.

Most programs designed to aid the educationally disadvantaged students are homogeneous in nature. The educationally disadvantaged students are set apart from the rest of the school population in classes viewed as possible contaminants for the academic students. This isolation and segregation of educationally disadvantaged students produces a stigma. The educationally disadvantaged students, to the embarrassment of the public schools, are treated and made to feel like second-class citizens.

Much psychological literature has been written explaining that the healthy psychological individual is one that is self-actualizing and has a positive self-concept. Self-concept has been shown to be of more importance to academic success than intelligence. If public schools are to better meet the needs of the educationally disadvantaged students, it would appear they should learn more about the self-concept of the educationally disadvantaged student. It would, also, appear helpful to find out if current school programs are beneficial to educationally disadvantaged students through self-concept enhancement.

Purpose

This study was designed to compare the perceived attitudes of self-concept of educationally disadvantaged

vocational students with perceived attitudes of self-concept of vocational students and academic students as measured by the Piers-Harris Children's Self-Concept Scale. To fulfill the purpose of this study, the following hypotheses were formulated to serve as guidelines.

1. There is no significant difference in the mean attitude self-concept scores of vocational education students, academic students, and educationally disadvantaged students (CVAE) as measured by the Piers-Harris Children's Self-Concept Scale.

2. There is no significant difference in the mean attitude self-concept score between male and female students in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

3. There is no significant difference in the mean attitude self-concept score between males and females of different age groups in vocational programs, academic programs, and CVAE programs as measured by the Piers-Harris Children's Self-Concept Scale.

4. There is no significant difference in the mean attitude self-concept scores as measured by the Piers-Harris Children's Self-Concept Scale between vocational education students, academic students, and CVAE students and number of years of placement in a vocational program, academic program, and CVAE program.

5. There is no significant change in the mean attitude self-concept score of vocational education students, academic students, and CVAE students as measured by the Piers-Harris Children's Self-Concept Scale over a three-month period utilizing an extended Solomon Four-Group Design.

Review of the Literature

The review of pertinent literature contained in Chapter II of this study revealed that one of the characteristics of an educationally disadvantaged student is a low self-concept. The educationally disadvantaged student is conditioned by failure to expect only failure. Therefore, the learning environment is often excluded from their life-styles. Thus, by ignoring or shunning learning situations, the educationally disadvantaged student perpetuates his low self-concept.

The enhancement of self-concept is possible through special programs involving counseling and extra help in improving communication skills of reading, writing, and spelling and in mathematics. The school can be a strong force in the change of an individual's self-concept--either to enhance self-concept or to diminish self-concept. Schools should be flexible in meeting the needs of the educationally disadvantaged student. Public schools can only be successful in this to the extent that they meet the needs of a positive self-image for the educationally disadvantaged student.

In Texas, there is only one program offered in most public schools for the educationally disadvantaged student--

the Coordinated Vocational Academic Education (CVAE) program. Chapter II reviewed the characteristics of the educationally disadvantaged student, as well as criteria for admission into the CVAE program. The final part of Chapter II dealt with pertinent literature pertaining to theories of self-concept, vocational theories, and the relationship of these to the educationally disadvantaged student as they pertain to this study.

Procedures

Chapter III of the study described the procedures used to study the population of high school students at the selected high schools. Three classifications of students were identified according to the type of educational program enrolled in during the Spring Semester of 1982. Three hundred eleven subjects completed the Piers-Harris Children's Self-Concept Scale. This instrument was used to gather data concerning the self-concepts of vocational students, academic students, and CVAE students.

Data were collected from random samples of students enrolled in each type of educational program. In treating the data, the hypotheses served as a guide. Means, standard deviations, and p values were used to present results from the Piers-Harris Children's Self-Concept Scale. Tables were constructed to compare scores of the students enrolled in vocational programs, academic, and CVAE programs. The

self-concept scores were analyzed statistically by an analysis of variance.

Findings

Using the hypotheses as guidelines, the following were the findings of this study.

1. All groups tested scored within the average range on the Piers-Harris Children's Self-Concept Scale. The CVAE students scored lower on the test instrument than the other two groups, but not significantly lower. The null hypothesis was retained.

2. Both male and female CVAE students scored lower on the Piers-Harris Children's Self-Concept Scale than their counterparts in the vocational and academic programs. They did not, however, score significantly lower than males or females in the academic and vocational programs. The null hypothesis was retained.

3. When the subjects were compared according to age, the CVAE students scored lower than their peers in vocational and academic programs on the Piers-Harris Children's Self-Concept Scale. CVAE males and females scored lower than students of the same age in other educational programs, with the exception of the sixteen year-old male CVAE students. They did not score significantly lower than their counterparts of the same age-group in vocational and academic programs. The null hypothesis was retained.

4. CVAE students with three years of placement in this program scored significantly lower than academic students with three years of placement. The third-year female CVAE students scored significantly lower than third-year academic females. CVAE students of one and two years of placement scored lower than academic and vocational students with the same number of years of placement, but not significantly so. The null hypothesis was rejected.

5. CVAE students had an increase in self-concept scores on the Piers-Harris Children's Self-Concept Scale over a three-month period. Both academic and vocational students, also, had an increase in self-concept scores, but not of as great a magnitude as the CVAE students. None of the groups had a significant change in self-concept scores. The null hypothesis was retained.

Conclusions

On the basis of the findings of this study, the following conclusions were drawn.

1. Overall, CVAE students possessed positive self-concepts, although lower than those of vocational and academic students. This lower self-concept was observed in CVAE students regardless of sex, age, or years of placement in the CVAE program.

2. CVAE females with three years of placement had significantly lower self-concepts than any other group.

3. CVAE enhances the self-concept of the educationally disadvantaged student. Vocational placement and academic placement, also, enhance self-concept, but not to the degree of CVAE placement.

Recommendations

The following recommendations pertaining to the facilitation of the education of the educationally disadvantaged students in public schools were formulated on the basis of the related literature and the findings and conclusions of this study.

1. Special units within the CVAE programs should be designed and implemented to enhance the self-concepts of educationally disadvantaged students.

2. CVAE classes should be structured as much like other vocational programs as possible. Grading systems and classroom instruction should be as similar as possible. This would help eliminate some of the stigma that CVAE placement has had on the educationally disadvantaged students in the past.

3. CVAE students should be accepted in other vocational programs, when they meet the criteria of these programs. Locking CVAE students into one program is not beneficial to their self-concepts.

4. Special programs should be designed and implemented to enhance the self-concepts of educationally disadvantaged

female students. This should especially be implemented where the educationally disadvantaged females remain in the CVAE program over a period of years.

5. A longitudinal study should be conducted to determine the effects of prolonged CVAE placement on the self-concepts of the educationally disadvantaged female.

6. A longitudinal study should be conducted to determine changes that occur in the self-concept of educationally disadvantaged students as they progress through the CVAE program from their first semester of placement to their graduation, transfer, or withdrawal from school.

7. More research needs to be conducted on the self-concept of the educationally disadvantaged students. This research should center around the factors comprising the self-concept of the individual, especially as they relate to the educationally disadvantaged student.

APPENDIX

Dear Parent,

I am conducting some research on the Vocational and Academic programs in the Fort Worth-Dallas Metroplex Area. Part of this study is the administration of a Self-Concept Scale to a representative sample of students in the high schools. Your child was selected to be a part of this study. The Self-Concept Scale will be administered in such a manner that your child's result will be anonymous. I am not interested in individual scores, but rather in group scores.

If you have any questions about this, please call me at (817) 485-1700, ext. 27, or at (817) 281-8519.

Please return this permission form as soon as possible.

Thank you for your help and support in this study.

Sincerely yours,

Randy James
Richland High School
Vocational Counselor

_____ I give my permission for my child to participate in the above described educational research. I understand that the test will be scored anonymously.

_____ I do not give permission for my child to participate in the above described educational research.

Signature of Parent/Guardian

Name of Student

Directions for Conducting Self-Concept Test

We will use machine-scorable answer sheets, instead of the hand-scoring booklets. In the space for your name on the answer sheet, please fill in your birthdate, your age, whether you are male or female, your grade, and type of program you are in (vocational, academic, or CVAE). List the number of years that you have been in this program.

Here are a set of statements. Some of them are true of you, so you will mark the T or A on the answer sheet. Some are not true of you and so you will mark the F or B on the answer sheet. Answer every question, even if some are hard to decide, but do not mark both T and F. Remember, mark the T or A, if the statement is generally like you, or mark the F or B, if the statement is generally not like you. There are no right or wrong answers. Only you can tell me how you feel about yourself, so I hope you will mark the way you really feel inside.

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