

AN EXPERIMENTAL STUDY OF SELF-CONCEPT
IN SELECTED SECOND GRADE CHILDREN

by

Mary Annette Giltner

A Thesis Submitted to the Faculty of the
SCHOOL OF HOME ECONOMICS

In Partial Fulfillment of the Requirements
For the Degree of

MASTER OF SCIENCE

In the Graduate College

THE UNIVERSITY OF ARIZONA

1 9 7 0

STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: Mary Annette Giltner

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

Jean Ruley Kearns
Jean Ruley Kearns

Associate Professor of Home Economics

August 12, 1970
Date

ACKNOWLEDGMENTS

The author wishes to express her appreciation and thanks to Dr. Carol Rubow whose suggestions led to Dr. Sadie Mallory; to Dr. Mallory whose help led to the location of the study from which the experimental self-concept instrument was devised; to Mr. Daniel Goitia, principal of Mission Manor Elementary School, who kindly permitted the experimental instrument to be used in his school; to the second grade teachers of Mission Manor School who cooperated in every possible way during the research; to the second graders of Mission Manor School whose charm kept the researcher smiling; to Dr. James Gebert and Dr. Robert Kuehl for their help in the statistical analysis; to Dr. Victor Christopherson for his help and suggestions; and finally, to Dr. Jean Ruley Kearns, who was always available to help, cooperate, suggest, and enlighten.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
LIST OF ILLUSTRATIONS.	vii
ABSTRACT	viii
INTRODUCTION	1
Purpose	3
Hypotheses	3
Definitions	4
Definition of Self-concept.	4
Definition of Significant Other	5
REVIEW OF THE LITERATURE ON SELF-CONCEPT	6
Introduction	6
Self-concept	11
Development of Self-concept	11
Investigations of Self-concept in Children.	12
Self-concept and Academic Achievement.	14
Self-concept and School-related Experiences	15
Self-concept and the Poverty Environment	16
Summary	16
Review of the Work by James Kuethe	17
PROCEDURE	20
Selection of Subjects	20
Sampling	22
Collection of the Data	22
Self-concept Instruments	26
Sociogram	30
Objective Achievement	31
Teacher Evaluation	32
Reliability	33
Validity.	33

TABLE OF CONTENTS--Continued

	Page
RESULTS	35
Hypothesis I	35
Hypothesis IA	35
Hypothesis IB	36
Hypothesis IC	37
Hypothesis ID	39
Hypothesis IE	40
Hypothesis IF	41
Hypothesis II	42
Hypothesis III	44
CONCLUSIONS	45
APPENDIX A: BRIEF TEACHER EVALUATION OF CHILD'S SELF-CONCEPT	50
APPENDIX B: DATA RECORDING SHEET	51
REFERENCES.	52

LIST OF TABLES

Table	Page
1. Characteristics of the Sample	23
2. Reliability of the Instrument	33
3. Comparison of the Self-concept of Male and Female Children in the Sample	36
4. Comparison of the Self-concept of Mexican- American and Anglo Children in the Sample	37
5. Comparison of the Self-concept of Male and Female Mexican-American Children in the Sample	38
6. Comparison of the Self-concept of Male and Female Anglo Children in the Sample	39
7. Comparison of the Self-concept of Male Children in the Sample	40
8. Comparison of the Self-concept of Female Children in the Sample	41
9. Correlations Between Mean Replacement and External Instruments	43
10. Total Mean Measure Replacement for Human Figures and Rectangular Figures	44

LIST OF ILLUSTRATIONS

Figure		Page
1.	Interaction Model	6
2.	Experimental Instrument	29

ABSTRACT

The purpose of this study was to assess and compare the self-concepts of young Mexican-American and Anglo children. A lack of reportedly valid instruments made it necessary to expand the purpose to include adaptation and implementation of an experimental instrument. The experimental instrument consisted of a series of felt figures representing the child and significant others in his environment.

The sample included 40 children randomly selected from an elementary school population of second grade boys and girls who were Mexican-American or Anglo, from blue-collar worker families, and had siblings.

The data from the experimental instrument were correlated with external measures which included a standard achievement test, a sociogram, and a teacher evaluation, all measures reported in the literature to be positively and significantly correlated with the self-concept. The results showed limited significant correlation between the external measures and the experimental instrument. The data were also analyzed to establish if the instrument discriminated on the basis of sex and/or ethnic group, and it was determined that it did not.

Due to the lack of overall significant correlations between the experimental instrument and the external measures and due to the inability of the instrument to discriminate between groups, the experimental instrument was rejected as a measure of self-concept.

INTRODUCTION

The recent national emphasis placed on the importance of providing quality education for the environmentally deprived child has led to an increased interest in the "self" and subsequently to the effect the child's self-concept has on the educational process. This, in turn, has initiated an interest in the effect the educational process has on the self-concept.

Meier, Nimnicht, and McAfee (1968), in a description of the New Nursery School which was designed to serve "environmentally deprived Spanish-surnamed children" (p. 317), stated that "the first requirement in a school for environmentally deprived children . . . must be to help the child develop a positive self-image and the younger the child is, the better" (p. 325). In this school, an influential model among the early childhood education programs designed for the environmentally deprived child, "the entire environment . . . has been organized to foster a positive self-concept" (p. 325).

There appears to be sufficient data to support the contention that the poverty environment has a negative effect on the self-concept of the individual. The data from an in-depth study of 400 Negro and White children conducted by Martin Deutsch in 1960 indicated that children of poverty families have a lower self-concept than children from higher socioeconomic levels. At the same time, his study suggested that, while self-concept is generally lower within the entire poverty sample, Negro children in the sample reflected lower

self-concept than Whites. Pederson and Barrados (1968) also reported that students of low socioeconomic status have lower self-concepts than students of higher socioeconomic status, and Wylie and Hutchins (1967, p. 781) further pointed out that there is a positive association between socioeconomic level and " . . . self-estimated scholastic ability and achievement . . . "

In a study of self-concept in Negro students, Deutsch's (1960) results associated low achievement with negative self-concept. In addition, several studies have indicated a relationship between positive mature self-concept and reading ability (Henderson, Long, and Ziller, 1965; Wattenberg and Clifford, 1964; Bodwin, 1959; Lumpkin, 1959).

Recent studies have also suggested that a child's self-concept is affected by his school-related experiences. Deutsch and associates (1967, p. 35) stated that

school experiences can either reinforce invidious self-concept . . . acquired from the environment or help to develop--or even induce--a negative self-concept. Conversely, they can effect positive self-feelings by providing for concrete achievements and opportunities to function with competence, although initially these experiences must be in the most limited restricted areas.

In a Headstart evaluation study, which dealt with the relationship between self-concept and specific related variables, McDaniel (1967) indicated that the self-concept has a great impact on the success of school experience. After completing his study, Perkins (1958) maintained that the self-concept is a construct which the school should seek to promote and foster in every child.

In her book, The Self-concept, Ruth Wylie (1961) insisted that self-concept studies are important and that further studies with children

are needed. Numerous studies have already been conducted to assess the self-concept of young children; however, there have been many contradictions in the previous findings.

Purpose

The purpose of this study was to assess and compare the self-concepts of young Mexican-American and Anglo children.

In order to do this it was necessary to locate a valid instrument for the assessment. A survey of the literature resulted in the discovery of a number of instruments purportedly designed to assess self-concept in young children and showed validity to be a construct which, consistently, was not reported in relation to self-concept inventories. With the efficacy of the reported documents considered to be doubtful, an experimental instrument was modified from the work of Kuethe (1962a, 1962b), Kuethe and Weingartner (1964), and Norris, Ellsworth, and Claanapp (1968) for this study. The subsidiary purpose, the adaptation and implementation of the experimental instrument, necessarily received greater attention during the research than did the initial purpose.

Hypotheses

For the purposes of the study, the following hypotheses were tested:

- I. Using the experimental instrument with the selected sample, there are no significant differences in the self-concepts of:
 - A. Male and female children.
 - B. Mexican-American and Anglo children.

- C. Male Mexican-American children and female Mexican-American children
 - D. Male Anglo children and female Anglo children.
 - E. Male Mexican-American children and male Anglo children.
 - F. Female Mexican-American children and female Anglo children.
- II. Using the experimental instrument with the selected sample, there are no significant correlations between the measure of self-concept and:
- A. Scores obtained on Stanford Achievement Tests, Primary Battery I, form X, given by classroom teachers in October, 1969.
 - B. Scores obtained on a sociometric measure given by the investigator in May, 1970.
 - C. Scores obtained from classroom teacher's evaluation of self-concept, May, 1970.
- III. Using the experimental instrument with the selected sample, there are no significant differences between the mean measure of replacement for human figures and the mean measure for rectangular figures.

Definitions

Definition of Self-concept

According to Kinch (1963), "the self-concept is that organization of qualities that the individual attributes to himself" (p. 481). He goes on to explain how the individual forms his self-concept and states

that it ". . . emerges from social interaction, and in turn, guides or influences the behavior of that individual" (p. 481). Dreyer and Haupt (1966), after reviewing the literature, concluded that the person comes to view himself as significant others define and evaluate him. The development of the self-concept is further characterized by Miyamoto and Dornbusch (1956): "An individual's self-conception is more closely related to his estimate of the generalized attitude toward him than to the perceived attitude of response of members of a particular group" (p. 403).

Definition of Significant Other

Pederson and Barrados (1968) define a "significant other" as a ". . . person whose opinion is considered worthy of consideration . . ." (p. 3). They go on to illustrate the term with examples of a parent or a teacher as a "significant other."

REVIEW OF THE LITERATURE ON SELF-CONCEPT

Introduction

The following diagram (Fig. 1), which was first proposed by Mead (1934) and presented graphically by Kinch (1963), was used by Pederson and Barrados (1968) to explain the interaction which exists between self and environment in the formation of the self-concept.

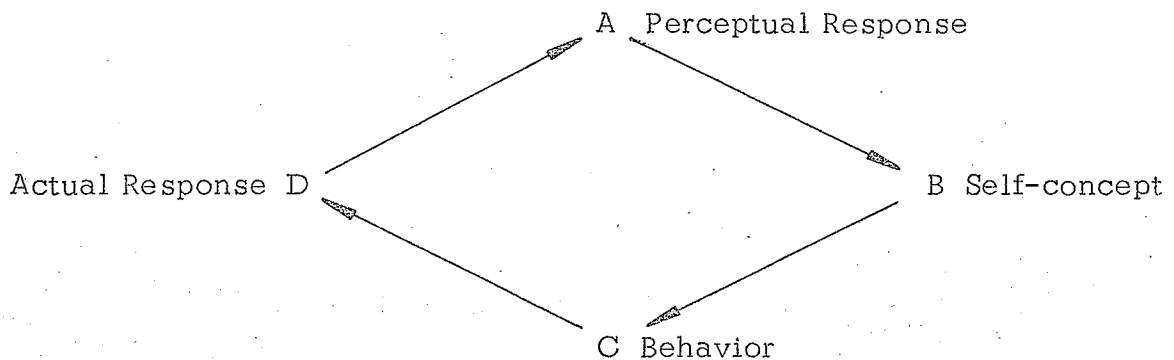


Figure 1. Interaction Model.--After Pederson and Barrados (1968, p. 3)

(A) The individual perceived the response of the individuals he considered important. (B) The self-concept gave impetus to behaviors characteristic of it. (C) The behavior of the individual influenced the responses of the significant others. (D) The actual responses of the significant others were converted into a perceived response. (A) And so on in a circular manner.

Ludwig and Maehr (1967) reported empirical data to support self-concept as being a function of the reaction of significant others. In their study a sample of seventh and eighth grade boys were first tested on their physical self-concept scores. Next they performed simple physical tasks in front of a physical education expert, who in

this case was the significant other. Without regard for actual performances, the expert verbally approved or disapproved the performances. The subjects were then post-tested on their physical self-concept. It was hypothesized that the post-test score would be affected by the evaluation of the significant other. The results supported the contention that self-concept is a ". . . function of the reaction of significant others, and changes in self-concept eventuate in changes in preference and choice" (p. 453).

Various studies, including one by Backman, Secord, and Pierce (1963), have reported substantial evidence to support the assumption of the interactionists (Mead, 1934; Cooley, 1902) that the self is of social origins and modifiable by contacts within the individual's environment. Backman et al. (1963, p. 102) tested the hypothesis "that the greater number of significant other persons who are perceived to define an aspect of self congruently, the greater the resistance to change." The subjects were asked to establish traits they ascribed to themselves and believed five significant others did also. They were then asked to establish traits they ascribed to themselves but believed that significant others did not attribute to them. Using a false personality assessment, the investigators then exerted strong pressure on the subject to change. The investigators reported that greater change occurred in the traits not ascribed by significant others.

In their study of the development of achievement standards in children, Crandall, Karkovsky, and Preston (1960) maintained that standards children employ may be based on their own subjective values or may be based on values reflected from significant others. They reported

that it may be presumed that children who have developed their own standards have more readily incorporated the achievement standard which significant others have held for them and have come to accept these goals as their own.

Although self-concept has been viewed as a basis for most behavior patterns, Wylie (1961) contended that there are few studies to show that the self-concept is the antecedent for consequent behavior. In her book she noted 48 books, 128 publications, and 120 unpublished dissertations and dissertation abstracts on the subject of self-concept. Many of these publications were due to the revival of the study of self which may be credited to the early writings of William James (1890).

Carl Rogers (1951, 1959) has delved into the importance of the self-concept and has indicated that an individual's self-concept has an important effect on his behavior. According to Rogers, an individual's basic need for positive regard develops a need for self-regard. As an individual experiences self-regard, or lack of it, he comes to be his own significant other.

Despite the fact that Rogerian psychology has made some assumptions which are not empirically observable, an effort has been made to develop some operational definitions using the Q-sort technique of Stephensen (1953) as a method for defining and measuring the self-concept. Q-technique basically involves the sorting of a group of statements into a forced distribution along the continuum from statements most like the subject to those least like the subject. Generally a forced distribution is used to assure that the mean and standard deviation of all sortings will be equal and that the distribution will be approximately

normal. There has been some controversy in the literature as to whether a forced distribution represents a valid measuring technique. Jones (1956) has recommended the use of free-sort method as it "preserves the great amount of information that is now lost in the forced distribution methods" (p. 94).

Butler and Haigh (1954), in association with Rogers, developed a Q-sort assessment to be used in therapy. They selected 100 items from statements of patients while in therapy, and they asked the patients to sort these into nine categories ranging from "least like me" to "most like me." Sorting was carried out twice with the patient sorting the items first as he presently viewed himself and second as he would ideally like to be. The difference between the two scores obtained was called the discrepancy score. This sorting procedure was carried out again following completion of therapy, with post-therapy discrepancies reported to be smaller. Many extended forms of the Q-technique have been modeled after the Butler and Haigh sort; however, there has been criticism in the literature of the use of this method with children, because, according to Engel and Raine (1963), it puts too much pressure on the children. The Q-method has also been criticized as one which needs evaluation to be shown as a valid measure of adjustment (Bennett, 1964; Wylie, 1961; Block and Thomas, 1955; Friedman, 1955). In addition, it has been reported that question of Q-sort reliability and validity has rarely been raised (Wittenborn, 1961), and there is need for these constructs to be established (Wylie, 1961).

Combs and Snygg (1959), using the "phenominal field" as the perceptual frame of reference, also attempted to explain human behavior.

They supported the contention that out of an individual's contact with others in his environment, especially significant others, his "phenomenal self" arises. In addition, they indicated that the events in the environment affect an individual only when the individual perceives them to be significant.

Lecky (1945), while explaining an individual's behavior, referred to its function as maintaining inner-consistency of personality. He indicated that while the self is continuously growing and changing, it is also geared to prevent growth and change; moreover, resistance to change of self has been common to all people and has helped to maintain a framework of consistency. Mossman and Ziller (1968, p. 364) pointed out that the self-concept is the "mediating mechanism" for incorporation of experiences into the self.

Earlier in the twentieth century, the interactionists, Mead (1934) and Cooley (1902), made attempts to explain the origin of self. Mead (1934) suggested that the self is of social origins and in reality is the absorption of the attitudes of others toward the individual. He referred to the entire social group which influences the individual. He referred to the entire social group which influences the individual as "generalized other." Cooley (1902) discussed the self in terms of the reflection of significant others or the "looking glass self."

Prior to Cooley, James (1890) also dealt with the "Self." To explain the "Self," James defined a man's "Self" as being ". . . the sum total of all that he can call his . . .," and he divided the history of "Self" into three parts: "(1) Its constituents; (2) The feelings and emotions that arouse--'Self-feelings.' (3) The actions to which they

prompt--'Self-seeking' and 'Self-preservation'" (vol. 1, p. 291-292). James's conceived "Self" had great influence on the behavior of the individual. He indicated that the individual has more than one "Self" and that these "Selves" are in rivalry and conflict with each other. James views "Self-esteem" as a fraction of "success/pretentions" (p. 310). That is, a man who has goals in an established area has a high degree of "Self-esteem" when his success in the area is great. Conversely, if a man had no goals in an area, his "Self-esteem" is not affected by his success or lack of success in that endeavor.

Self-concept

Development of Self-concept

The development of a child's self-concept begins with the relationship between mother and child and is gradually broadened to include additional portions of the environment (Meier et al., 1968). Sullivan (1953) and Gordon (1959) point out that the child's initial reaction to the world is formulated in relation to the behavior of people in his immediate environment toward him. If his physical needs are quickly cared for and if he receives stimulation from warm, loving people, he is likely to perceive that he is of value to merit such consideration. If his needs are not met, he may perceive that he is of little value within his environment. A child is not able to compare himself with others; however, he can observe how significant others treat him (Baughman and Welsh, 1962). Later, as the child comes into contact with other significant figures outside his immediate environment, each individual ". . .

provides him with clues about how people think about him and his kind" (Meier et al., 1968, p. 323).

Jersild (1952) contends that discovery of self, for a healthy person, continues during the person's entire life. A child's self-concept is not only affected by the actions of significant others but by his perception of their actions and thoughts.

Investigations of Self-concept in Children

Having recognized a lack of research in the area of self-concept in young children, Wylie (1961) pointed out the need for further investigations.

Wattenberg and Clifford (1964), who reported that self-concept scores taken in kindergarten were predictive of progress in reading, used a self-concept assessment devised from tape recordings of children who, while drawing pictures of their families, were also responding to incomplete sentences devised for the task. Typescripts were made from the recordings, and these were classed into "thought units" by raters (p. 463). Two measures of self-concept were obtained for the children. However, the study did not report reliability or validity.

Bennett (1964) was concerned with developing a self-concept Q-sort for elementary age children in order to investigate the relationship between self-concept and academic achievement. She derived her Q-sort items from the adult scales of Butler and Haigh (1954) and Hilden (1954). Bennett concluded that the self-concept is highly correlated with high academic achievement. There was no report of reliability or validity given in the publication.

Another study designed to assess self-concept in elementary age children was conducted by Engel and Raine (1963). The investigators criticized Q-technique and projective tests and consequently used a method called the Where are you game? to measure self-concept. While a reliability measure of + .60 was given, the study did not report any measure of validity.

The Maehr-Haas Physical Self-Test consisted of 30 items which required the subject to rate his self-adequacy on a nine point scale. This test was used as a pre- and post-measure of physical self-concept. It was hypothesized that the verbalization of significant others would affect the self-concept measure. The investigators correlated the results of the tests after significant other had either reinforced or refuted the image initially established by the child (Ludwig and Maehr, 1967; Maehr, Mensing, and Nafsgar, 1962).

Using a Q-technique and obtaining a discrepancy score between self and ideal-self sort, Lipsitt (1958) developed a self-concept scale for fourth, fifth, and sixth grade children and correlated it with the Children's Form of the Manifest Anxiety Scale. Lipsitt indicated that the self-concept score is somewhat more reliable a measure than the discrepancy score. Validity was not reported.

In Perkins' (1958) study, which dealt with fourth and sixth grade children, validity and reliability measures were reported. After using Q-technique and having the children sort for both self and ideal self-concept, Perkins reported reliability of + .65 based on test-retest and validity of 70% based on a correlation of Q-sort and an external

measure of self-concept. The title of the "external measure" was not listed.

Helper's (1955) study sought to relate ". . . S-R theories of verbal learning . . . to the self-concept" (p. 184). The investigator proposed that self-concept is made up of a series of symbolic verbal responses which are related to the individual as identity symbols. These symbols are derived from verbal responses made in the presence of the child by the parents; thus, the ideal-self is made up of self-descriptive terms which the parents have rewarded. Helper hypothesized that the parents' ideal-child concept should be significantly correlated with the ideal-self-concept of the child. His hypothesis was not supported by the data.

As many be gathered from the review of studies designed to measure self-concept in young children, reports of instrument reliability and validity are often omitted. Many studies report the testing instrument without giving appropriate data related to the instrument's ability to actually assess self-concept in young children. Wylie (1961) criticized this lack of established validity in self-concept inventories. Her criticisms were directed at the assessments devised for adults as well as children.

Self-concept and Academic Achievement

There are several studies which have suggested that self-concept has an effect on reading achievement. Wattenberg and Clifford (1964), who studied the relationship between self-concept and beginning reading achievement, found "measures of self-concept taken in kindergarten proved significantly predictive of progress in reading . . ." (p.

461). The measures taken in kindergarten were predictive of reading two and one-half years later.

In general, studies which have investigated prolonged failure in learning to read have found this inability to be associated with "aggression or withdrawal" or aspects of the self-concept (Henderson et al., 1965, p. 114). Bodwin (1959), who studied the relationship between immature self-concepts and reading disabilities, found correlations as high as + .72 at the third grade level and + .62 at the sixth grade level.

Lumpkin's (1959) research dealt with the relationship of self-concept to reading achievement in fifth grade students. His data indicated that those students who were achieving above grade level viewed themselves as liking to read and revealed significantly more positive self-concepts than those students achieving at a lower level.

Lecky (1945) and Brookover (1959) have proposed that a child's deficiencies in school may not result from a lack of ability but from an inadequate concept of self.

Self-concept and School-related Experiences

Through a child's experiences, he develops expectations so that he is able to predict success and failure in conjunction with a given behavior. A child's expectations are acquired; therefore, these expectations can be changed when appropriate learning principles are applied (Sears and Sherman, 1964).

To feel accepted, an individual must experience acceptance. An individual who has developed a socially accepted image is more likely to be a well-adjusted individual; and perhaps the best guarantee we have that an individual will be able to deal with the future is that he

has effectively dealt with the past (Combs, 1962). If initial school-related experiences do not convey a worthy self-image to the child, it is likely that the child's later behaviors will reflect his lack of positive self-concept. ". . . Persons whose experiences have been preponderantly successful should generally tend to express confidence and assurance in both their behavior and perceptions" (Coopersmith, 1959, p. 87-88).

Self-concept and the Poverty Environment

The research by Deutsch and his associates (Deutsch, 1960; Deutsch et al., 1967), which contended that economically deprived children have lower concepts of self than children from higher socioeconomic levels, also pointed out that children from ethnic minority groups within the poverty environment have an even lower self-concept than their White peers. In a recent study, Soares and Soares (1969) indicated that the disadvantaged student may have a considerably higher self-concept when he goes to school with other disadvantaged students. In this school situation he would be insulated from the more advantaged student. These workers reported that this poses additional problems for education in providing experiences to foster positive self-image regardless of the socioeconomic composition of the community and to prepare the "insulated" student to deal effectively with experiences he might encounter upon interaction with peers of higher socioeconomic levels.

Summary

Even a somewhat limited survey of the literature dealing with the self-concept is enough to allow the conclusion that theories of self

differ greatly; however, in the midst of these differences, there seem to be two concepts basic to the current theories of self:

One is that the concept of self is a product of social reaction. More specifically, in line with earlier theorizing that development and change in the concept of self are direct functions of the response of significant others. The second major assumption is that the concept of self has an effect on behavior generally (Ludwig and Maehr, 1967, p. 453-454).

Review of Work by James Kuethe

James Kuethe (1962a, 1962b) and Kuethe and Weingartner (1964), of Johns Hopkins University, investigated the social schemas by which people organize objects and developed a felt-board replacement technique to assess these schemas. Kuethe (1962a, p. 31) pointed out that when a person indicates two objects belong together he has used a plan and that this planned grouping ". . . may be considered, by definition, a social schema." His observation of a number of people using the same schema to organize social responses led to the assumption that "comparable experiences have produced the commonality of response," and he indicated that some responses may be characteristic of the culture and that an individual from the culture who uses ". . . idiosyncratic organization in a situation" most likely has learned the culture's response, but he is prevented by his personal dynamics from following through with it. To assess the social schemas under which people operate, Kuethe used a felt-board replacement technique in a variety of ways with different figures, depending upon the circumstances of the investigation. When the objects to be replaced included human figures and rectangles, he stated (1962b, p. 73-74):

Subjects are relatively accurate when they use the rectangles to reproduce the relative position of either two rectangles or two human figures. Subjects err in placing men and women figures too close together when they use these human figures to reproduce the relative positions of either two rectangles or two human figures. The schema that "people belong together" introduced errors in judgment during the reconstruction of a stimulus display or in the memory of the original display until the time of reconstructions. If subjects originally perceived man and woman figures as closer together than they really were, this would have been revealed when they placed the rectangles where they believed the human figures had been.

The schemas which Kuethe described were discovered by a free-replacement technique and may be shown to distort judgment in a predictable manner. He submitted (1962b, p. 74) that the distortion shows the schemas to be

. . . fundamental patterns of social organization for subjects. The distortion of judgment would not have occurred if the schemas discovered by the free-response were merely the result of subjects attempting to respond the way they believed was "correct" or the way "most people" would respond.

In additional studies, Kuethe (Kuethe and Weingartner, 1964) argued that the physical distance between replaced figures projectively reflects the emotional distance between the people symbolized by the figures. Kuethe (1962b) maintained that adults, when asked to freely place pairs of figures, characteristically placed the adult female figure and the child figure closer together than the adult male figure and the child figure.

After working with normal elementary school boys, Weinstein (1965), of George Peabody College, supported Kuethe's observation. However, in addition, her data showed that emotionally disturbed boys placed child figures farther from the adult female figure than from either peer or adult male figures. Weinstein (1968, p. 257) stated that there were "significant positive correlations . . . between the mother child

schema held by the child and his academic achievement. In Weinstein's investigations, subjects who placed the adult female figure closer to the child than the adult male figure were given a positive score and appeared to have higher academic achievement than those who placed the male figure closer to the child.

Currently, researchers at Peabody College (Norris et al., 1968) have been using Kuethe's technique to assess self-concept in primary school children.

PROCEDURE

Prior to initiating the research, it was necessary to receive official approval for the study and to receive permission for the desired sample of second grade children to participate in the research. A letter explaining the study and requesting permission to carry it out was sent to Dr. Pat Henderson, Superintendent of Sunnyside Schools, District #12, Tucson, Arizona. He gave his permission contingent upon the approval of Mr. Daniel Goitia, principal of Mission Manor Elementary School, the proposed site of the investigation. Mr. Goitia subsequently gave his permission and was most helpful in both advising and helping to make arrangements for carrying out the research.

After receiving Mr. Goitia's approval, the investigator held a meeting with the second grade teachers and Mr. Goitia. The study and the procedure to be followed were explained to the teachers. Their comments and suggestions were solicited and used to improve the proposed procedure for explaining the technique to the children.

Selection of Subjects

The criteria for selection were:

1. The children were to be 40 male and female second grade students who had not been previously retained.
2. As the self-concept instrument asked the children to deal with figures representing both a mother and a father, it was deemed necessary to require that the children have both parents

in the home (though it was established that these did not have to be natural parents).

3. The families from which the children came were to be blue collar worker families characteristic of the surrounding community from which the sample was drawn.

Blue-collar occupations common in the area included employment at the copper mines near Tucson, laboring positions in town, trades (carpenter, plumber, etc.), and state and federal employment (including military).

4. The families from which the children came were to have three to seven children, numbers characteristic of families in the surrounding community. For a child to be eligible for the sample, it was not necessary for all the siblings to be living at home.
5. The children were to represent both Mexican-American and Anglo homes. Teachers and significant school personnel were asked to help establish ethnicity. School records were also used. To facilitate ethnic identification, it was established that only children with two known Anglo parents would be termed "Anglo," and only children with two known Mexican-American parents would be termed "Mexican-American." The sample included 40 children, with 20 Anglo and 20 Mexican-American children comprising the 40. Each ethnic group of 20 included 10 girls and 10 boys.

Sampling

A class list of students in each of the five second grades was obtained by the investigator. Students who did not meet the established criteria on the basis of the teacher's knowledge or school records were eliminated. Students who did meet the criteria were numbered in a manner to give each child equal probability of being selected and to facilitate the choice of the desired number of Mexican-American and Anglo children with the appropriate number of males and females in each group. Using the Table of Random Numbers (Edwards, 1967, p. 428-431), 40 students were selected from this population. The characteristics of the sample are given in Table 1.

Collection of the Data

Four children (two Mexican-American and two Anglo) were pre-tested to evaluate the procedure to be used and to determine if there were any apparent language barriers between subject and investigator.

In the child's classroom, the investigator was introduced to the child by his teacher, and the child was told that the investigator wanted to play a "game" with him. The investigator and the child then went to a room designated for the testing. The walk to this room, which was located a short distance from the second grade rooms, provided an opportunity for the investigator to establish initial rapport with the child.

The room designated for the testing was the "kiln" room, a room used to store art materials, some books, and the kiln. This room was chosen because of its availability for the testing period. It was well lit, ventilated, and cooled. Many of the children indicated they

TABLE 1. Characteristics of the Sample

Characteristics	Mexican-American		Anglo	
	Male	Female	Male	Female
<u>Age</u>				
7 yrs-7 yrs. 11 mo.	5	3	3	2
8 yrs-8 yrs. 11 mo.	5	7	6	7
9 yrs-9 yrs. 11 mo.	0	0	1	1
Total	10	10	10	10
<u>Number of Siblings</u>				
2 Siblings	0	1	3	2
3 Siblings	3	2	3	5
4 Siblings	3	5	1	2
5 Siblings	2	2	2	0
6 Siblings	2	0	1	1
Total	10	10	10	10
<u>Father's Occupation</u>				
Copper Mines near Tucson	2	6	2	5
Laboring Positions	6	1	2	2
State or Federal Positions	1	3	3	2
Trades (carpenter, plumber)	1	3	3	2
Total	10	10	10	10

had not previously been in the room. For this reason, a "tour" of the room and its contents was often included prior to testing.

During the testing period, the investigator attempted to maintain an encouraging, nonthreatening tone of voice and dressed in a casual manner which did not distract from the testing.

After the child was acquainted with the room, the investigator asked him a few simple questions about himself, ones which he was able to answer and which were pertinent to the test. He was asked his age, his teacher's name, how many brothers and sisters he had, and to tell something about his brothers and sisters (comparative ages). The information was recorded on a form which was subsequently used to record the linear measures established by the child on the felt-figure replacement test.

The investigator then asked the child to choose a scrap of yellow felt (scraps from preparation of the instrument) and to place it on the dark-gray board (pointing) on the floor. The child discovered that the felt stuck. He was then shown the felt figures he would use during the "game" and was told that the investigator wanted to see how boys and girls looked at things. He was told that the investigator would place the figures on the board a certain distance apart, would remove the figures from the board, and that he was to put them back the same distance apart as they had been originally. The investigator then sat on the floor near the felt-board instrument, and the child sat on the floor on a piece of tape 10 feet from the felt board.

The child was first shown a like-sexed child figure to which he was asked to give his own name. This figure was placed on the

felt-board and then a "significant other," which the child was asked to label as an important person in his life, was placed 20 cm (centroid to centroid) from the child figure. The figures were placed on the boards for a fixed period of time, removed, and then the same technique was used with the next set of figures. After the two sets were demonstrated, the child was asked to replace the figures one set at a time as they originally were. After completing the first two boards, the child was told that he had done a good job so that he would know he had completed the task appropriately. He was then shown a succession of two additional boards until he completed eight boards. At the end of the testing, the child was thanked, told that he had done a good job, and asked to return to his room. The investigator then obtained a linear measure of the distances between the child and "other figure" from each of the boards and recorded the measure on the form originally used for the questions asked the child at the beginning of the testing session.

The felt-board replacement technique required very little verbalization with the child. To determine if there were language barriers, the investigator explained the procedure to the child and asked him to practice once; thus, it was possible to watch the child carry out the verbal directions. In addition, when the child returned to his room, he was asked by his teacher to tell her about the "game," and then she asked if the child had understood how to play the "game." It was determined by observation of the child's performance and the child's verbalization both to the investigator and his teacher that the instrument provided no language barrier. During the pre-test the investigator also

improved the testing technique by establishing a smooth method for handling the boards.

After the pre-testing, the actual research was begun. The procedures established during the pre-testing were maintained during the actual collection of data.

Self-concept Instruments

The literature on the assessment of self-concept appears to have grown every year; however, there are few reports of acceptable techniques to be used with young children. Engel and Raine (1963) criticized the recent use of Q-sort, adjective check lists, and projective techniques with young children. They stated that "there is growing interest in exploring the developmental aspects of the self-concept, yet some of the commonly used methods are not well suited to such explorations in that they place considerable demands on the child" (p. 125). They went on to report that a child's self-concept may be unstable enough to change appreciably in the face of demands for a certain type of performance and concluded:

. . . it is to be expected that scores derived from a simple method of assessing self-concept will be more reliable than scores derived from either projective tests or Q-sorts. The reason for this is that under the stress produced by a projective test or the Q-sort, differential behavior will occur in a group of children.

Henderson et al. (1965, p. 114) criticized various instruments which have been used to assess self-concept in young children.

Many investigations of the self-concept of children have been hampered by the utilization of verbal techniques of measurement. Not only are such instruments as rating scales and Q-sorts highly visible to the child, but they also seem

particularly inappropriate for populations varying widely in age, intelligence, and reading achievement . . .

After concluding that there is a significant relationship between early reading achievements and self-concept, Wattenberg and Clifford (1964) pointed out the importance for checking their results with a variety of techniques and research designs. They stated that "efforts should be made to develop speedier and less costly ways of measuring self-concepts in their several dimensions" (p. 466).

After a review of the instruments cited in the literature, it was necessary to select an instrument for use in this study. The investigator sought to avoid those instruments which had been previously criticized in the literature; because of the age of the children and the use of different ethnic groups, to select an instrument which would allow for minimum verbal reply by the children; and to select an instrument which would provide an enjoyable experience rather than a frightening, stressful situation for the subjects.

The experimental technique developed was adapted from the work of Kuethe (1962a, 1962b) and Kuethe and Weingartner (1964), who used the relative positions individuals assign to felt figures on a felt board as indicators of the social schema under which they are operating. This adapted technique is presently being used to assess self-concept in primary school children by researchers at George Peabody College, Nashville, Tennessee. A preliminary report of the data has been issued by Norris et al. (1968). For the purposes of their study, Norris et al. (1968) employed an adaptation of Kuethe's technique to assess the child's self-concept as a learner.

A child is placed 10 feet away from a flannel board on which two flannel figures have been placed 20 cm. apart (measured centroid to centroid). One figure is always a like-sexed child figure to which the child has been asked to give his name. The other figure varies from one presentation to the next and may be school-related (tablet, book, or crayons) or nonschol-related (wagon or boat). After the child views three paired figures for a fixed period of time, the examiner removes the felt figures from the board, hands them to the child, and asks him to put them back on the board the same distance apart as they were originally. It is hypothesized that children with good self-concepts as learners will underestimate the distance between the child figure and the school-related object. Children with poor self-concept as learners, on the other hand, are expected to replace the child figure and the school-related object further apart than the original cm. No such differential replacement is expected for the nonschool-related objects.

Based on the definition previously cited of self-concept as a reflection of the appraisals of significant others, felt figures (Fig. 2) representing significant others in the child's life were substituted for the school-related objects in the measure developed by Norris et al. (1968). The felt figures representing significant others included mother, father, classroom peers, best friend, siblings (two siblings, presented individually), and a teacher. These figures were viewed by a panel of graduate students in child development and family relations at The University of Arizona prior to use so that class bias, which might have been suggested by apparel and other significant styles, might be avoided. The panel selected figures from the groups shown to them and commented on the changes and improvements they thought should be made.

Based on a study by Weinstein (1965), who used two rectangles, one equal in height to a felt parent figure and one equal in height to the felt figure of the child, rectangles were substituted for the

Figure 2. Experimental Instrument

- | | |
|--|--|
| A. Second Grade Boy Figure | F. Younger Sibling Figures (male and female) |
| B. Second Grade Girl Figure | G. Best Friend Figures (male and female) |
| C. Father Figure | H. Teacher Figure |
| D. Mother Figure | I. Second Grade Peers Figure |
| E. Older Sibling Figures (male and female) | J. Rectangular Figures |

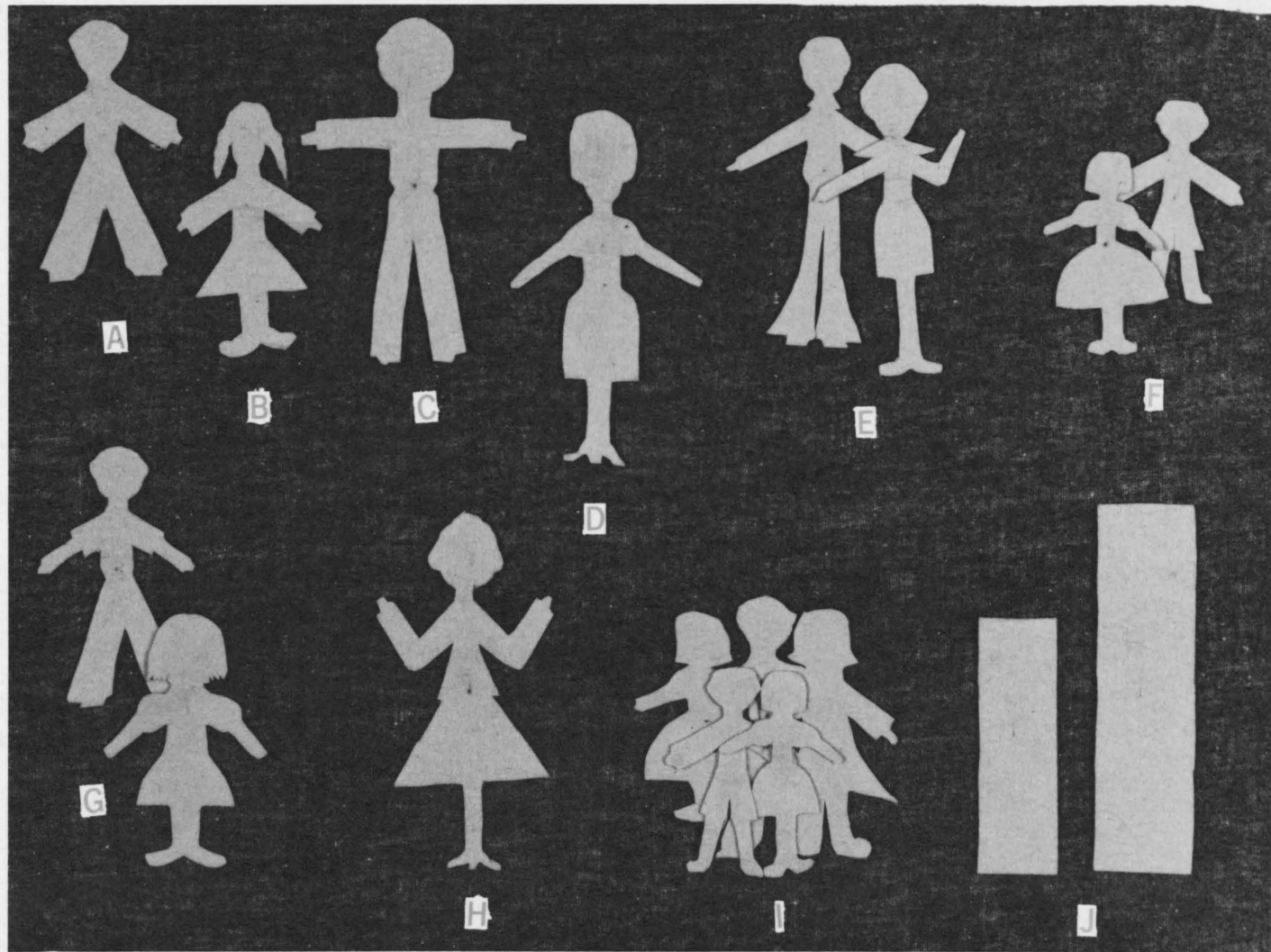


Figure 2. Experimental Instrument

nonschool-related items. Kuethe (1962b) and Kuethe and Weingartner (1964) also used rectangles in studies to explain how the idea that "people belong together" affects replacement of human but not rectangular figures.

The method of presentation of the instrument designed for this study has been discussed to some extent under the heading "Collection of the Data." More specific information about the boards and felt figures is needed at this point. Individual flannel boards were used to allow accurate linear measure to be taken after the child had left the testing room (Weinstein, 1965). The boards and figures which were used were smaller than those used by Kuethe (1962b) but were similar to those used by Weinstein (1965). The felt figures were of yellow felt (Kuethe, 1962a) and measured approximately 7 inches for adult figures, 6 inches for older sibling figures, 5 1/4 inches for second grade figures, and 4 inches for young sibling figures. The boards were covered with dark-gray flannel (Kuethe, 1962b, used dark blue) and measured 25 inches by 18 inches. This size prevented anchoring cues from being obtained from the edges.

Sociogram

In Coopersmith's (1959) study of self-esteem, he correlated the students' assessed self-esteem with a sociometric measure by asking children in the selected fifth and sixth grades being studied which three children in their class they would like most to have as their friends. The information as the total number of times each child was chosen by his classmates was compiled. He reported that

the measure was included on the assumption that the friendship and status of the child among his peers were related to his self-esteem. . . . [the study] indicates a significant tendency for students above and below their class medians in success experiences to be similarly above and below their class medians in self-esteem (p. 89).

However, Coopersmith (1959) submitted that this was not true in all cases. Turner and Vanderlippe (1958) also correlated sociometric ratings with the measures obtained by using the Butler and Haigh (1954) Q-sort to assess self-concept in college students. They reported that high sociometric ratings correlated highly with positive self-concepts. Perkins (1958) also used a sociometric measure derived from the Q-sort he used to assess self-concept.

For the purposes of this study, a sociogram similar to the one used by Coopersmith (1959) was used. While the investigator was obtaining the report of friendships from the children, it was observed that of the 154 second graders questioned, in all but a small number of cases, boys reported boys as friends and girls reported girls. With this in mind, it was determined that the data would be compiled on the basis of the percentage represented by the number of times the child was mentioned by his like-sexed peers in his second grade classroom. For example, if the class were made up of 31 children, 15 girls and 16 boys, and Girl A received 3 votes, her score would be indicated at 20% because 20% of her like-sexed peers mentioned her as a friend.

Objective Achievement

Coopersmith (1959) related the measure obtained on the self-esteem inventory to the Iowa Achievement Test scores for each child. He stated (p. 89), "In light of strong cultural pressures toward academic

achievement, scholastic success and failure may be presumed to influence self-esteem."

For the purposes of this study, the Stanford Achievement Test, Primary Battery I, form X (grade placement scores) was correlated with the results obtained on the self-concept instrument. As the Stanford Achievement Test reported six separate grade placement scores (Word Reading, Paragraph Meaning, Vocabulary, Spelling, Word Study Skills, Arithmetic), an average of the scores was computed to represent objective achievement. The scores used were obtained from tests given October 8, 1969 by the classroom teachers.

Teacher Evaluation

Perkins (1958), from a measure of the teacher's perception of the child's self-image, indicated that the teacher's perception is generally positively and significantly related to the child's expressed self-concept. In Perkins' study, the teacher sorted the Q-technique as she thought the child would. This same approach, the teacher completing the assessment instrument as she thought the child would, was also used by Coopersmith (1959).

The instrument used in this study did not lend itself to completion by the teacher; therefore, a short questionnaire was devised. The questionnaire was based on references from the literature and was designed to yield a numerical score.

Reliability

A measure of reliability was obtained using the test retest method. Seven children were randomly selected from the total sample and were retested two weeks after the initial test. The results of this examination of the reliability of the instrument are given in Table 2.

TABLE 2. Reliability of the Instrument

Variables		
1	Replacement of Mother Figure	+.939**
2	Replacement of Father Figure	+.839**
3	Replacement of Older Sibling Figure	+.793*
4	Replacement of Younger Sibling Figure	+.446
5	Replacement of Peer Figure	+.911**
6	Replacement of Best Friend Figure	+.927**
7	Replacement of Teacher Figure	+.959**
*	Replacement of Rectangular Figure	+.713

*Significant at the 0.05 level.

**Significant at the 0.01 level.

Validity

The assumed validity of this experimental instrument was tentatively based on logical validation, that is, this method is currently being used by researchers at George Peabody College to assess self-concept in young children. After the correlations between the experimental instrument and (1) Standard Achievement Tests, (2) Teacher Evaluation,

and (3) Sociogram are reported in the "Results" of this study, the validity of the instrument will be considered further.

Based on a study by Kuethe and Weingartner (1964), the experimental instrument as an adaptation of Kuethe's technique, was assumed to be a valid method for successfully discriminating between groups. These investigators took a group of known homosexuals and a group of heterosexuals from a prison population. The felt-board replacement method successfully discriminated between the known groups.

RESULTS

The experimental instrument and the method of presentation appeared to be enjoyable for the children. Many of them commented favorably on their experience and reported to their friends that the "game" was fun. This resulted in some disappointment for children who were not selected for retesting to establish reliability and in comments such as "Why does _____ always get to play?"

For the purposes of this study, approximate significant levels of 0.05 or greater will be regarded as significant. To facilitate a clear report of the results, the hypotheses will be restated along with the data.

Hypothesis I

To test hypothesis I an analysis of variance was run on the scores obtained by the children.

Hypothesis IA

Using the experimental instrument with the selected sample, there are no significant differences in the self concept of male and female children.

With the exception of the rectangular figures, the data in Table 3 support this null hypothesis.

TABLE 3. Comparison of the Self-concept of Male and Female Children in the Sample

Figure	Total Mean Replacement for Figures (cm)		F Ratio	Approximate Significance Level
	Males	Females		
Mother	191.35	189.15	0.033	0.87
Father	185.95	190.75	.163	.71
Older Sibling	197.55	192.50	.195	.69
Younger Sibling	186.15	180.45	.165	.87
Peer	210.40	193.80	2.059	.17
Best Friend	188.50	183.15	.197	.69
Teacher	203.85	207.65	.127	.72
Rectangle	<u>180.35</u>	<u>197.30</u>	<u>5.234</u>	<u>.026*</u>
Grand Mean for Figures	193.39	191.06	1.130	0.32

*Significant for the purposes of this study.

Hypothesis IB

Using the experimental instrument with the selected sample, there are no significant differences in the self concept of Mexican-American and Anglo children.

With the exception of the replacement of teacher figure and rectangular figures, the data in Table 4 support this null hypothesis. Replacement of teacher figure shows a significant tendency for Anglo children to place the teacher figure closer to the like-sexed child figure

than for Mexican-American children in their placement of the teacher figure. The significance of this replacement as related to the school-related self-image of the children will be discussed in conjunction with Table 8.

TABLE 4. Comparison of the Self-concept of Mexican-American and Anglo Children in the Sample

Figure	Total Mean Replacement for Figures (cm)		F Ratio	Approximate Significance Level
	Mexican-American	Anglo		
Mother	192.30	188.20	0.116	0.73
Father	199.90	176.80	3.795	.07
Older Sibling	201.10	178.95	3.895	.06
Younger Sibling	193.30	173.30	2.030	.14
Peer	211.60	192.60	2.698	.11
Best Friend	196.05	175.60	2.877	.10
Teacher	224.65	186.85	12.553	.005*
Rectangle	<u>193.95</u>	<u>183.70</u>	<u>1.914</u>	<u>.14</u>
Grand Mean for Figures	198.32	182.72	5.145	0.026*

*Significant for the purposes of this study.

Hypothesis IC

Using the experimental instrument with the selected sample, there are no significant differences in the self-concept of male Mexican-American children and female Mexican-American children.

The data reported in Table 5 show that the experimental instrument yields a score showing significant differences for six out of nine figures when comparing the self-concept of Mexican-American male and female children in the sample. The significant figures indicate that the self-concept of Mexican-American females may be higher than the self-concept of Mexican-American males. These data are sufficient to question the null hypothesis and to call for additional data to determine the status of the hypothesis.

TABLE 5. Comparison of the Self-concept of Male and Female Mexican-American Children in the Sample

Figure	Total Mean Replacement for Figures (cm)		F Ratio	Approximate Significance Level
	Males	Females		
Mother	199.50	183.20	1.835	0.19
Father	202.80	169.10	8.076	.006*
Older Sibling	202.00	173.10	6.630	.016
Younger Sibling	206.60	165.70	8.491	.006*
Peer	229.00	191.80	10.358	.005*
Best Friend	207.90	169.10	10.341	.005*
Teacher	236.50	171.20	7.453	.01*
Rectangle	<u>187.70</u>	<u>173.00</u>	<u>3.936</u>	<u>.06</u>
Grand Mean for Figures	199.87	173.87	8.959	0.005*

*Significant for the purposes of this study.

Hypothesis ID

Using the experimental instrument with the selected sample, there are no significant differences in the self-concept of male Anglo children and female Anglo children.

The data reported in Table 6 support the null hypothesis.

TABLE 6. Comparison of the Self-concept of Male and Female Anglo Children in the Sample

Figures	Total Mean Replacement for Figures (cm)		F Ratio	Approximate Significance Level
	Males	Females		
Mother	185.10	193.20	0.453	0.5
Father	197.00	184.50	1.111	.26
Older Sibling	200.20	184.80	1.882	.19
Younger Sibling	180.00	180.90	.004	.9
Peer	194.20	193.40	.004	.9
Best Friend	184.20	182.10	.030	.87
Teacher	212.80	202.50	.931	.77
Rectangle	<u>200.20</u>	<u>194.40</u>	<u>.612</u>	<u>.46</u>
Grand Mean for Figures	196.77	191.58	0.358	0.58

Hypothesis IE

Using the experimental instrument with the selected sample, there are no significant differences in the self-concept of male Mexican-American children and male Anglo children.

With the exception of replacement of peer figure and teacher figure, the data in Table 7 support the null hypothesis. The peer figure,

TABLE 7. Comparison of the Self-concept of Male Children in the Sample

	Total Mean Replacement for Figures (cm)		F Ratio	Approximate Significance Level
	Mexican-American Males	Anglo Males		
Mother	199.50	185.10	1.432	0.23
Father	202.80	197.00	0.239	.66
Older Sibling	202.00	202.20	.025	.89
Younger Sibling	206.60	180.00	3.591	.07
Peer	229.00	194.20	9.049	.005*
Best Friend	207.90	184.20	3.864	.06
Teacher	236.50	212.80	4.933	.035*
Rectangle	<u>187.70</u>	<u>200.20</u>	<u>2.846</u>	<u>.1</u>
Grand Mean for Figures	199.87	196.77	0.127	0.72

*Significant for the purposes of this study.

which indicated a higher self-concept on the part of Anglo males is difficult to explain on the basis of peer popularity as there seemed to be

many Anglo and many Mexican-American children named in the sociometric measure given the children. The total mean replacement for the teacher figure shows both groups of boys placed themselves at a great distance from their teachers.

Hypothesis IF

Using the experimental instrument with the selected sample, there are no significant differences in the self-concept of female Mexican-American children and female Anglo children.

With the exception of replacement of teacher figure and rectangular figures, the data in Table 8 support the null hypothesis. It is

TABLE 8. Comparison of the Self-concept of Female Children in the Sample

Figure	Total Mean Replacement for Figures (cm)		F Ratio	Approximate Significance Level
	Mexican-American Females	Anglo Females		
Mother	183.20	193.20	0.691	0.44
Father	169.10	184.50	1.686	.21
Older Sibling	173.10	184.80	1.086	.33
Younger Sibling	165.70	180.90	1.172	.29
Peer	191.80	193.40	.019	.9
Best Friend	169.10	182.10	1.162	.23
Teacher	171.20	202.50	8.604	.006*
Rectangle	<u>173.00</u>	<u>194.40</u>	<u>8.342</u>	<u>.007*</u>
Grand Mean for Figures	174.74	188.76	2.607	0.11

*Significant for the purposes of this study.

interesting to note that the replacement of teacher variable shows a higher self-concept for girls than for boys (as reported in Table 7). Table 8 shows a higher self-concept for Mexican-American females than for Anglo females. In Table 4 when all Mexican-American children were compared to all Anglo children, the significance was in the opposite direction, that is, the self-concept of Anglo children was shown to be higher in relation to replacement of teacher figure than the self-concept of Mexican-American children. The contrast in the results indicates that more research would have to be done before the experimental instrument could be said to show higher school-related self-concepts for one group or the other.

Hypothesis II

To test hypothesis II, rank order correlations were obtained between (1) the mean placement of significant others and the Stanford Achievement Tests, Primary Battery I, form X, (2) the mean placement of significant others and the sociometric measure, and (3) the mean placement of significant others and an evaluation by the classroom teachers. To make the correlations meaningful, the replacement values obtained by the children were divided into two groups: (1) those with a mean replacement value over 20 cm and an estimated low self-concept, and (2) those with a mean replacement value under 20 cm and an estimated high self-concept. If the experimental instrument successfully assessed the self-concept of the students, the correlations between the mean replacement over 20 cm and the three external instruments should have been negative, while the correlation between the mean replacement under 20 cm and the three external instruments should have been positive.

For the purposes of reporting the data, hypothesis II will be restated along with the data:

Using the experimental instrument with the selected sample, there are no significant correlations between the measure of self-concept and

- A. Scores obtained on Stanford Achievement Tests, Primary Battery I, form X given by classroom teachers in October, 1969.
- B. Scores obtained on a sociometric measure given by the investigator in May, 1970.
- C. Scores obtained from classroom teacher's evaluation of self-concept, May 1970.

Even though the data in Table 9 show some significant relation-

TABLE 9. Correlations Between Mean Replacement and External Instruments

External Instruments	r. for Mean Replacement Value:	
	Over 20 cm	Under 20 cm
Stanford Achievement Tests, Primary Battery I, form X	- .36	+ .78*
Sociometric Measure	- .78*	- .26
Teacher Evaluation	- .11	- .38

*Significant at the 0.05 level.

ships between the experimental instrument and external instruments, there is not enough significant data to refute the null hypothesis. In addition, two correlation which are negative, according to the hypothesis,

should be positive. This leads to some questions concerning the validity of the instrument.

Hypothesis III

An analysis of variance was run to test hypothesis III:

Using the experimental instrument with the selected sample, there are no significant differences between the mean measure of replacement for human figures and the mean measure for rectangular figures.

The data reported in Table 10 support the null hypothesis.

TABLE 10. Total Mean Measure Replacement for Human Figures and Rectangular Figures

Human Figures	Rectangular Figures	F Ratio	Approximate Significance Level
192.22	188.82	0.646	0.44

Kuethé's (1962a) data showed that there should be greater distortion between the replacement of human figures than between the replacement of rectangular figures.

CONCLUSIONS

A review of the points necessary for an instrument to be considered a valid assessment of self-concept will help in drawing conclusions regarding the experimental instrument adapted for the purposes of this study.

The literature reports that when the self-concept of children from a poverty environment is assessed, White children in that group tend to have a higher self-concept than Negro children in the same group (Deutsch, 1960). It was thought this might be true with Whites (Deutsch's term) and ethnic minorities other than Negroes and with economic levels other than the poverty group. The data from the experimental instrument did not establish this distinction. Due to ethnic group and economic level differences between the children in this study and the children studied by Deutsch, the instrument's inability to discriminate is not in itself sufficient evidence to cause rejection of the validity of the experimental instrument.

The literature also contains studies which suggest that a high positive correlation exists between high self-concept and high scores on achievement tests, sociometric measures, and teacher evaluation. The experimental instrument failed to establish high correlations with these measures. A significant relationship between scores on the experimental instrument and the Stanford Achievement Test was obtained for children with estimated high self-concept, and a significant relationship between the scores on experimental instrument and scores on

the sociometric measure was obtained for children with an estimated low self-concept. The correlations for these two measures were significant for only one estimated level of self-concept (high or low) while for both measures, the opposite correlation did not even approach significance. (See Table 9.) The lack of statistical evidence provides a definite basis for questioning the validity of the experimental instrument.

The lack of + or - correlation between the experimental instrument and teacher evaluation may be explained to some degree by the fact that there were a number of ties with a frequency greater than two in the range of scores obtained. This made it difficult to assign ranks and to obtain a significant rank order correlation. Again, the lack of significance provides a basis for questioning the validity of the instrument.

Kueth's (1962b) research indicated that there is less distortion in the replacement of rectangular figures than in the replacement of human figures. According to Kueth (1962b, p. 73), this is due to the errors introduced by the ". . . schema that 'people belong together.'" He suggested that the distortion occurred during reconstruction and not during perception of the figures. The experimental instrument did not indicate a significant difference between the mean replacement of rectangles and human figures.

The experimental instrument adapted for the purposes of this study from the work of Kueth (1962a, 1962b) and Norris et al. (1968) appears to be a measure which does not effectively assess self-concept in young children; however, the idea that a child's placement of himself in relation to significant others as an estimate of his self-image is in

itself a valid concept, which has recently been investigated and included in an instrument designed to assess self-concept.

Long, Henderson, and Ziller (1967) have published an instrument which asks the children to show how they feel about themselves and "stimulus persons" (comparable to significant others) in their environment. The instrument, Children's Self-social Constructs Tests, has two forms: (1) the Preschool Form (Henderson, Long, and Ziller, 1967) and (2) the Primary Form (Long et al., 1967). In addition to other studies, modified forms of the instrument appeared in the literature in 1965 when the authors sought to assess "Self-social Constructs of Achieving and Nonachieving Readers" and in 1968 when Mossman and Ziller used the technique with adults. In a letter received in June, 1970, Dr. Long of Goucher College mentioned that a revised test manual with reports of reliability and validity for the Children's Self-social Constructs Test would be available soon. Use of the instrument designed by Henderson et al. (1967) (the Primary Form) would not only assess self-concept in terms of individuals important in the child's environment, as was intended with the experimental instrument, but would also be a faster measure of self-concept, as it may be administered to a group of children rather than individually. The Preschool Form is administered individually and takes approximately 10 minutes. Copies of the Preschool Form and the Primary Form were requested in January, 1970, to be evaluated for possible use in this study; however, the instruments were not received until June, 1970, after the study had been completed.

Validity in the assessment of self-concept appears to be a measure which is absent or low in most of the self-concept inventories

(Wylie, 1961). Prior to adapting the experimental instrument, inventories developed after the publication of Wylie's book were solicited. The scales received by the investigator, even though they had been mentioned in a national publication, did not report significant measures of both reliability and validity.

Perhaps a test in itself is not an adequate appraisal of self-concept. McCandless (1961) indicated that there is no way of knowing the "real" self and that the closest estimation of self is to compare statements the individual makes about himself with responses of people who know him well. Homme et al., (1968, p. 433), speaking of self-concept in behavioral terms, said, "When we speak of a self-concept, we may simply be talking about the aggregate of sentences the 'S' says to himself (and others) about himself. Viewed in this light, it becomes a simple matter to install a favorable self-concept: One simply strengthens a class of verbal behavior." Homme and his colleagues demonstrated this strengthening of verbal behavior by sequencing learning experiences so that the child experienced success, praising him for his success by telling him how smart he was, and then sending him to another significant adult in the environment who, upon hearing the child's verbalization of his success, heavily praised the child for his behavior. Homme et al. (1968, p. 431) pointed out that via control of the child's reinforcement contingencies "we have the technology for installing any behavior we want. The problem now is what behaviors do we want installed. We submit that some leading candidates are a pre-school academic repertoire, a favorable self-concept, love, and joy."

The experimental instrument designed for this study did not assess the self-concept adequately. With this in mind, another instrument, Children's Self-social Constructs Test, based on the concept of the importance of significant others in the formation of the child's self-image, has been mentioned as a reportedly valid measure of self-concept; however, before a child's self-concept is estimated, external observations, such as those recommended by McCandless (1961) and Homme et al. (1968), should be included in the construct. Perhaps the greatest clues to an individual's self-concept lie in observations of the person operating within his extended environment. The inclusion of external observations in self-concept assessment would make it difficult to devise a specific numerical score for an individual's self-concept and would also raise the question of reliability of observations. However, reliability could be established on the basis of a correlation of observations of several judges. A specific numerical score in itself is not functionally necessary as an assessment could be used in some manner to indicate to significant individuals how a person's self-concept allows him to deal with his environment and/or what experiences might be beneficial to help him deal more effectively with his environment.

APPENDIX A

BRIEF TEACHER EVALUATION OF CHILD'S SELF-CONCEPT

Child's Name _____

1. After having observed the child interacting with his peers in your classroom and on the playground, how would you rate his general peer relations? (Please circle a number.)

Excellent Poor
5 4 3 2 1

2. When the child undertakes a project which you believe he can successfully complete, what is his personal attitude toward his own ability to succeed?

Highly Confident Very Little Confidence
5 4 3 2 1

3. After having observed the child in his dealings with everyday happenings, how would you view his own attitudes toward himself?

Excellent Poor
5 4 3 2 1

4. Considering the child's experiences in the school, please estimate the personal worth the school is reflecting back to the child.

Great Worth Very Little Worth
5 4 3 2 1

APPENDIX B

DATA RECORDING SHEET

Name _____

Teacher _____

Age _____

Number of Brothers and Sisters _____

Sex of Older _____

Sex of Younger _____

Ethnic _____

Measurements:

Mother _____

Father _____

Older Sibs _____

Younger Sibs _____

Peers _____

Best Friend _____

Teacher _____

Rectangle _____

Sociogram Score _____

Stanford Achievement Score _____

Teacher Evaluation Score _____

REFERENCES

- Backman, Carl, Paul Secord and Jerry Pierce
1963 "Resistance to change in the self-concept as a function of consensus among significant others." *Sociometry* 26:102-111.
- Baughman, E. E. and G. G. Welsh
1962 *Personality: A Behavioral Science*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- Bennett, Virginia
1964 "Development of a self-concept Q-sort for use with elementary age school children." *Journal of School Psychology* 3:19-25.
- Block, Jack and Hobart Thomas
1955 "Is satisfaction with self a measure of adjustment?" *Journal of Abnormal and Social Psychology* 51:254-259.
- Bodwin, R. F.
1959 "The relationship between immature self-concept and certain educational disabilities." *Dissertation Abstracts* 19:1645-1646.
- Brookover, W. B.
1959 "A social psychological conception of classroom learning." *School and Society* 87:84-87.
- Butler, J. M. and G. V. Haigh
1954 "Changes in the relation between self-concepts and ideal-concepts subsequent upon client-centered counseling." Pp. 55-75 in C. R. Rogers and R. F. Dymond (eds.), *Psychotherapy and Personality Change*. Chicago: The University of Chicago Press.
- Combs, A. W.
1962 "A perceptual view of the adequate personality." *Perceiving, Behaving, Becoming: A New Focus for Education*. Washington, D.C.: Association for Supervision and Curriculum Development, National Education Association.
- Combs, A. W. and D. Snygg
1959 *Individual Behavior*. New York: Harper and Row, Publishers.
- Cooley, C. H.
1902 *Human Nature and the Social Order*. New York: Scribners.
- Coopersmith, Stanley
1959 "A method for determining types of self-esteem." *Journal of Abnormal and Social Psychology* 59:87-94.

- Crandall, V. J., W. Karkovsky and A. Preston
 1960 "A conceptual formulation for some research on children's development." *Child Development* 31:787-797.
- Deutsch, Martin
 1960 "Minority group and class status as related to social and personality factors in scholastic achievement." Monograph #2. Society for Applied Anthropology.
- Deutsch, Martin and associates
 1967 *The Disadvantaged Child*. New York: Basic Books.
- Dreyer, A. S. and Dorothy Haupt
 1966 "Self evaluation in young children." *Journal of Genetic Psychology* 108:185-197.
- Edwards, A. L.
 1967 *Statistical Methods*. New York: Holt, Rinehart, and Winston, Inc.
- Engel, Mary and W. J. Raine
 1963 "A method for the measurement of the self-concept in children of the 3rd grade." *Journal of Genetic Psychology* 102:124-137.
- Friedman, I.
 1955 "Phenomenal, ideal, and projected conceptions of self." *Journal of Abnormal and Social Psychology* 51:611-615.
- Gordon, Ira
 1959 *Children's View of Themselves*. Washington, D.C.: Association for Childhood Education International.
- Helper, M. M.
 1955 "Learning theory and the self-concept." *Journal of Abnormal and Social Psychology* 51:184-194.
- Henderson, E. H., Barbara Long and Robert Ziller
 1965 "Self-social constructs of achieving and nonachieving readers." *The Reading Teacher* 19:114-118.
- Henderson, E. H., Barbara Long and Robert Ziller
 1967 "Children's Self-social Constructs Test, Preschool Form." Newark, Delaware: University of Delaware.
- Hilden, A. H.
 1954 "Manual for Q-sorts and random sets of personal concepts." Mimeographed. St. Louis, Missouri: Washington University.
- Homme, Lloyd, P. C. de Baca, Lon Cottingham and Angela Homme
 1968 "What behavioral engineering is." *Psychological Record* 18:425-434.

- James, William
1890 Principles of Psychology. New York: Holt and Co.
- Jersild, A. T.
1952 In Search of Self. New York: Bureau of Publications, Teachers College, Columbia University.
- Jones, Austin
1956 "Distribution of traits in current Q-sort methodology." Journal of Abnormal and Social Psychology 35:90-95.
- Kinch, John
1963 "A formalized theory of self-concept." American Journal of Sociology 68:481-486.
- Kuethé, J. L.
1962a "Social schemas." Journal of Abnormal and Social Psychology 64:31-38.
- Kuethé, J. L.
1962b "Social schemas and the reconstruction of social object displays from memory." Journal of Abnormal and Social Psychology 65:71-74.
- Kuethé, J. L. and Herbert Weingartner
1964 "Male-female schemata of homosexual and nonhomosexual penitentiary inmates." Journal of Personality 32:23-31.
- Lecky, P.
1945 Self-consistency: A Theory of Personality. New York: Island Press.
- Lipsitt, Lewis
1958 "A self-concept scale for children and its relationship to the 'Children's Form of the Manifest Anxiety Scale.'" Child Development 29:463-472.
- Long, Barbara, Edmund Henderson and Robert Ziller.
1967 "Children's Self-Social Constructs Test, Primary Form." Newark, Delaware: University of Delaware.
- Ludwig, D. J. and Martin Maehr
1967 "Changes in self-concept and stated behavioral preferences." Child Development 38:453-467.
- Lumpkin, D. D.
1959 "Relationship of self-concept to achievement in reading." Dissertation Abstracts 20:204-205.
- McCandless, B. R.
1961 Children and Adolescents. New York: Holt, Rinehart, and Winston.

McDaniel, E. L.

- 1967 "Relationship between self-concept and specific variables in a low income culturally different population." Final Report on Headstart Evaluation and Research: 1966-1967. ERIC microfiche copy, University of Arizona Library.

Maehr, M. L., J. Mensing and S. Nafsger

- 1962 "Concept of self and the reaction of others." *Sociometry* 25: 353-357.

Mead, G. H.

- 1934 *Mind, Self and Society*. Chicago: University of Chicago Press.

Meier, John, Glen Nimnicht and Oralie McAfee

- 1968 "An autotelic responsive environment nursery school for deprived children." Pp. 299-398 in Jerome Hellmuth (ed.) *Disadvantaged Child*, Vol. 2. Seattle, Washington: Special Child Publications, Inc.

Miyamoto, S. F. and S. M. Dornbusch

- 1956 "A test of interactionist hypothesis of self-conception." *American Journal of Sociology* 61:399-403.

Mossman, B. M. III and R. C. Ziller

- 1968 "Self-esteem and consistency of social behavior." *Journal of Abnormal Psychology* 73:363-367.

Norris, R. C., Randolph Ellsworth and Douglas Claanapp

- 1968 "Development of a measure of self-concept in primary school children." Mimeographed, unpublished partial data report. Nashville, Tennessee: George Peabody College for Teachers.

Pederson, E. and M. Barrados

- 1968 "Social class, role models, significant others, and the level of educational aspiration." U.S. Department of Health, Education, and Welfare, paper presented to the Sixth Canadian Conference on Education, June 1968. ERIC microfiche copy, University of Arizona.

Perkins, H. V.

- 1958 "Teacher and peers perceptions of children's self concepts." *Child Development* 29:203-220.

Rogers, C. R.

- 1951 *Client Centered Therapy*. Boston: Houghton Mifflin Co.

Rogers, C. R.

- 1959 "A theory of therapy, personality, and interpersonal relationships as developed in the client centered framework. Pp. 184-256 in S. Kock (ed.) *Psychology, a Study of a Science*, Vol. 3. New York: McGraw-Hill Book Co.

- Sears, Pauline and V. S. Sherman
1964 In Pursuit of Self Esteem. Belmont, California: Wadsworth Publishing Company
- Soares, A. T. and L. M. Soares
1969 "Self-perceptions of culturally disadvantaged children." American Education Research Journal 6:31-45.
- Stephensen, William
1953 The Study of Behavior: Q-Technique and Its Methodology. Chicago: The University of Chicago Press.
- Sullivan, H. S.
1953 The interpersonal Theory of Psychiatry. New York: Norton.
- Turner, R. H. and R. H. Vanderlippe
1958 "Self-ideal congruence as an index of adjustment." Journal of Abnormal and Social Psychology 57:202-206.
- Wattenberg, William and Clare Clifford
1964 "Relationship of self-concepts to beginning achievement in reading." Child Development 35:461-467.
- Weinstein, Laura
1965 "Social schemata of emotionally disturbed boys." Journal of Abnormal Psychology 70:453-465.
- Weinstein, Laura
1968 "The mother-child schema anxiety, and academic achievement in elementary school boys." Child Development 39:257-264.
- Wittenborn, J. R.
1961 "Contributions and current status of Q-methodology." Psychological Bulletin 58:132-142.
- Wylie, R. C.
1961 The Self-concept. Lincoln, Nebraska: University of Nebraska Press.
- Wylie, R. C. and E. B. Hutchins
1967 "School work-ability estimates and aspiration as a function of socioeconomic level, race, and sex." Psychological Reports 21:781-808.