A COMPARISON OF THREE MEASURES OF SELF-CONCEPT IN FIVE-YEAR-OLDS

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CHAPTER I

INTRODUCTION

Problem

There is a great deal of emphasis among today's educators on the need for curriculum to contribute to the development of a positive self-concept in children. In view of the current press for accountability it becomes increasingly important to have a measure of this objective if it is to become part of the school curriculum which will be measured as a part of a program of accountability. With enhancement of the self-concept as an objective, teachers and schools should be able to show whether they are helping children to grow in this area.

To be accountable is to be capable of being explained. In the process of accountability, schools must be capable of explaining what they are doing and why as well as showing some degree of success. Colorado's commissioner of education, Donald Woodington (1972) outlines this process as

> establishing goals, setting specific objectives, devising programs to meet the objectives, carrying out the programs, measuring their degree of success, comparing costs and performance under alternative programs, revising and trying again /p. 95/.

Under the provisions of the California state legislature's Stull Bill, "the performance of all certificated personnel shall be evaluated every two years under a uniform, objective system of assessment developed by

each school district /p. 485/" (Bennett, 1974). Assessment of program and/or teacher success ultimately comes to the question of pupil growth. If programs and/or teachers can provide a positive measurement of pupil growth; success is being demonstrated.

The procedure of measuring pupil growth most widely in use is that of testing pupils in the fall and again in the spring to determine the change made while with a given teacher. As reported by Woodington (1972) the former United States commissioner of education, James E. Allen, Jr., saw the push for accountability as inevitable. Allen foresaw a number of important concerns related to accountability. Among these concerns he stressed, "Research is essential to find good, reliable measuring instruments. Unless we develop the capacity to assess the value of one instructional alternative over another, real accountability is impossible /p. 95-96/." There is no one recognized and accepted instrument for assessing the self-concept of young children. Therefore, it seems important to compare measuring devices which are presently available.

There are many problems associated with attempting to measure self-concept, particularly with young children. The short attention span of five-year-old children necessitates an equally short amount of time for administration of measurement devices. Tests at school are generally administered in a group situation. With young children, such as those five-year-olds attending kindergarten, group testing situations should be avoided as stressed by Gotts (1973).

> In nearly all instances, individual administration is essential with young children--to be accomplished in a familiar, comfortable setting and by a supportive, familiar adult who does not feel rushed during the testing. Under these ideal conditions young children can presumably become desensitized to test-taking stress /p. 341/.

When kindergarten children are individually exposed to measuring devices it is generally by an aid or volunteer who is often familiar with the children, but unfamiliar with psychometric techniques.

In addition, Yamamoto (1972) points out that it should be remembered that

> relatively standardized techniques do not necessarily meet the criteria for accepted principles of psychometrics. Crowne and Stephens (1961) cite the following major inadequacies: (1) there are no scientific data establishing the equivalence of assessment procedures used in the various techniques; (2) a clear-cut definition of the variable (self concept) being tested is unavailable; (3) the parameters of the self concept are not sufficiently defined to permit valid sampling, a procedure critical to psychometrics; and (4) it is impossible to determine whether the subject's response is based on a defensive projection or his actual self image. Despite some of the questionable aspects of the techniques used in inferring the self concept, they do provide the teacher with a functional means of evaluating the forces that motivate a given child's behavior /p. 85-86/.

With such evaluation, the concerned teacher can then include in his curriculum some activities and experiences to enhance the self-concept of the children in his class.

Purposes of Study

The general purpose of this study was to investigate measuring devices which are currently available to assess the self-concept of young children. A review of measurement techniques and procedures used in the study of self-concept provided general theoretical concerns of measurement devices. A review of measurement devices reported in the literature provided possible measures appropriate for use with five-year-old children. Three measures of self-concept were then chosen for comparison. The researcher proposed to compare these three measures of self-concept by comparing the scores of a sample of five-year-old

children. In addition, this investigation proposed to compare responses of five-year-old children according to sex with each of the three measures of self-concept.

Hypotheses

The following null hypotheses were examined:

I. The differences in scores on the three tests are no greater than would be expected by chance.

II. There is no significant relationship between the scale scores for each of the following:

   A. A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test.

   B. A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

   C. The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

III. There is no significant relationship between the scale scores for each of the following when sex is controlled:

   A. Scores of girls

      1. A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test.

      2. A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

3. The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

B. Scores of boys

1. A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test.
2. A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?
3. The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

CHAPTER II

REVIEW OF LITERATURE

Essential to the selection of three measurement devices for the present study is an understanding of measurement techniques and procedures which have been used in the study of self-concept. Necessary also, is a review of measurement devices reported in the literature.

General Theoretical Concerns of Measurement Devices

Allan Coller (1971) in "The Assessment of Self-Concept in Early Childhood Education," has reported over fifty measurement devices most often used in measuring self-concept in young children. As described by Coller, measurement devices can be classified in any of the following five general procedural categories: direct observations, behavioral traces, self-reports, projective techniques, and/or any combination. This section will briefly describe each type.

Direct Observational Procedures

There are three types of situations for direct observational procedures; unstructured environments, selected situations, and contrived situations. Unstructured environment refers to a naturalistic setting for the child. He is observed as he moves about freely in his everyday environment, unrestricted by the observer. The observer records in a

detailed sequential narration all the child's actions in response to the situations he encounters.

Selected situations are so called because the observer is interested in seeing the child in a certain situation such as in the classroom. This technique may be concerned with specified sets of variables or dimensions of behavior, but may also be nonspecific. The observer may employ event sampling, where he focuses on the occurrence or absence of specific behaviors, by using a behavior or trait rating scale designed especially to assess only a given set of behavioral dimensions.

Settings designed to assess behaviors in specially designed situations intended to elicit responses of particular interest are referred to as contrived situations. Weick (1968) indicated that the basic reason why an investigator might decide to modify a natural setting is because he cannot afford to wait for something relevant to happen. He further stressed that subtle modification is the key to this technique. In effect the response(s) required of the subject appear to him to be natural to the situation; they are, suggested Weick (1968) "nonreactive," that is, they are "plausible and expected." Typically employed in this method, as well as in selected situations, are simple counts, checklists, and rating scales.

Behavioral Trace Procedures

Behavioral trace procedures are mainly concerned with an examination of the trace, residue, or after-effect produced by a child's past responses and not with the direct observation of evolving behavior. In effect, the child is totally unaware that his behavior is being

observed. It is in this respect that such measures may be treated as unobtrusive or nonreactive measures. There are two major classes of behavioral trace procedures: physical and retrospective.

Physical tracings refers to a class of techniques that entails the examination of changes in physical matter, either caused by the child himself, or caused by others as a matter of procedure. Erosion measures reflect the selective wear on materials such as erasers, clothes and books; accretion measures examine deposited materials such as drawings or quantities of "stars" the child has received. Permanent data such as cumulative records or record cards also provide a type of physical trace.

Retrospective tracings may be manifest and/or cloaked. This technique requires a teacher, parent, peer, or other knowledgeable person to search through his memory of a particular child and to relate that child's behavior. Such reports may be based upon explicit memories or vague impressions. When a manifest technique is used the testing objectives are apparent to the respondent. The testing objectives of cloaked reports are either intentionally or psychometrically disguised. Most techniques that employ the manifest and/or cloaked retrospective reports techniques involve interviewing or rating methods.

Self-Report Procedures

To learn something about a child's self-concept the examiner need not seek out traces of behavior nor wait for behavior to emerge spontaneously, instead, he may ask the child to describe himself or to report on behaviors that especially interest him. This is, of course, a simplistic assessment notion when one deals with the very young child

(where observation is vital) but it is an extremely useful and economical approach when one attempts to assess the self-concepts of older more responsive children. Instruments that require the respondents to recount their past behavior or to make judgments concerning their selves or their behaviors generally are referred to as self-report measures. Self-report procedures represent the most common class of techniques employed in the assessment of the self-concept.

Most self-report measures are of the psychometric variety: personality inventories or checklists, Q-sorts, semantic differentials, and rating and ranking scales of all types. In addition, questionnaires, interviews, and autobiographical techniques may be employed to collect data.

Self-report techniques include manifest techniques which, in general, assess aspects of the self that they appear to assess, and cloaked techniques which assess dispositions only indirectly related to the particular stimulus situation to which the child responds. The distinction between manifest and cloaked self-reports becomes cloudy when respondents can discern only some of the testing objectives. In such instances, the assignment of instruments to either of these subcategories is somewhat arbitrary.

Close variants of manifest and/or cloaked self-reports are reports on symbolically contrived situations which employ pictorial or other graphic symbols to depict characteristics and/or behavior dispositions the child might be expected to display in real life situations. Coller (1971) feels this variety to be especially useful to assess the self-concept of the younger child. To differentiate this technique from projective procedures, it is essential for the depicted characteristics

and behavior disposition either to be described in detail by the examiner or to be portrayed unambiguously. Conversely, if the situations are vague in theme and incomplete in content they should be considered projective.

Episodic recall is a technique that requires the child to recount (with emphasis on his behavior) some of the events that transpired and involved him either during that day or at an earlier time. There does not appear to be any currently available standardized technique to elicit episodic recall data from children. This, however, does not mean that the technique is not often used. To the contrary, and for obvious reasons, teachers and especially parents rely heavily upon this technique. "What happened?" is a typical question to elicit episodic recall.

Projective Techniques

Lindzey (1961) differentiated between two important meanings of projection: classic and generalized. Classic projection refers to the process of ascribing one's own impulses or qualities to other individuals or objects in the outer world. It is generally believed that this is an unconscious and pathological process.

On the other hand, generalized projection refers to a normal process in which the perceptions and interpretations of the outer world are influenced by the individual's inner cognitive emotional states: the nonphenomenal self. It is the second meaning that Lindzey (1961) argued "Would embrace virtually all of the tests that are commonly considered to be projective devices [p. 38]."

Basically, projective techniques are assumed to be especially

sensitive to covert or unconscious aspects of behavior and thus deemed useful for assessing the nonphenomenal self aspect of the self-concept. It permits or encourages a wide variety of subject responses, is highly multidimensional, and it makes unusually rich or profuse response data with a minimum of subject awareness concerning the purpose of the test. Further it is very often true, according to Lindzey (1961), that the stimulus material presented by the projective test is ambiguous, the test evokes fantasy responses, and there are no correct or incorrect responses to the test.

Cued associations represent techniques that instruct the child to respond to complex stimulus situations with the first word, image, or percept that occurs to him. The stimuli may be verbal, as in the case of word association tests, or symbolic as in the case of inkblot tests.

Cued constructions refer to those instructions that require the child to create or construct a product in response to complex stimulus situations. The stimulus situations are thought to cue responses of a specifiable content area. The focus of cued construction instruments is on the end product itself and not on the behavior of the child as he constructs the product. Typical responses such as storytelling, drawing, or rearranging stimuli, are considered to be more complex than those called for on the association-type measures.

Minimally-induced constructions use only simple instructions and occasional malleable materials to narrow the content-range of the response. Instructions that might be used with this technique might be: "Draw a person," "Tell a story about school," "Make your own face out of paper mache." Drawing instructions are the most popular form.

In some cases the child is presented with an incomplete product

that he is to complete. This technique is referred to as completions. Within the limits of the situation, the child may complete the stimulus in any manner he wishes. This takes the form of sentence completion with older children; drawing completion with younger children.

Another type of projective technique is view of the stimulus through choice and/or ordering. The elicited response represents a highly personal, inferential, value judgment and thus defies absolute external validification. This involves a task such as choosing the "good" child in the picture. In essence, the child is typically asked to choose from a limited number of alternatives the item(s) or arrangement that fits some specified criterion such as correctness, goodness, relevance, attractiveness or likeability.

Finally, those which require children to combine or incorporate stimuli into some kind of novel production are called self-expression techniques. In this procedure, emphasis is upon the manner or style by which the product is created rather than the end product. Providing that massive modification of the natural situation occurs, any direct observational procedure may be employed to obtain basic data. Doll play and play techniques of all varieties as well as role play are used in this procedure.

Combinational Procedures

In one combinational procedure the observer is regarded as the assessment instrument, because he tries to come closer to an accurate understanding of the child's perceptual field. The causes of behavior are sought in the stimuli or forces exerted upon the individual. The investigation of the child's inner life usually must be approached by

an indirect process of inference; that is from careful observation of behavior that occurs under varying conditions, and it should be possible to infer the nature of the child's perceptual field which produced the behavior in the first place. Data are collected through a variety of measurement approaches.

Another type of combinational procedure is known as subjective behavioral comparisons. In this procedure the child's actual behavior is compared with the child's own subjective impressions of that behavior. Typically, self-report measures are employed to assess the child's subjective impressions while direct observational and/or behavioral trace procedures are used to assess the child's actual behavior. This approach has been effective in a number of research studies concerned with investigating the antecedents of the evaluative aspects of self-esteem as reported by Coopersmith (1959).

Reports of Measurement Devices

A search for measurement devices reported in the literature revealed innumerable techniques developed for use with adults and older children. Many of these tests are reviewed by Wylie (1961). However, none appeared to be suitable for use with young children.

The most informative and useful information on specific measurement devices was found in Coller's (1971) review of more than 50 currently available instruments purported to assess the self-concept of young children. Included in his definition of young children are those below the fourth grade. Consequently the majority of the instruments reported were not suitable for the present study of five-year-old children. However, the following four instruments were included in

this review and were considered as possibilities for this study.

A Pictorial Self-Concept Scale
for Children in K-4

Angelo Bolea, Donald Felker, and Margaret Barnes (1967) developed this instrument to reflect Jersild's (1952) categories of the self-concept. A set of 50 cards depicting a cartoon figure, denoted by a star on his clothes, are given to the child. Separate sets were devised for boys and girls. The child is instructed to divide the cards into three groups on the basis of the "star" child being like him, sometimes like him, or not like him.

A panel of eight psychologists and human development specialists determined that, with the exception of "privacy" each of Jersild's (1952) categories of what children said they liked and disliked about themselves was represented to the set of pictures. Bolea (1970) reports this determination was made by the judges sorting the cartoons back into Jersild's categories with no prior knowledge as to which category the particular cartoon was suppose to represent. Some items were revised on the basis of suggestions of these judges. The final pool was reduced to 50 cartoons with each of Jersild's categories represented except "privacy."

Scoring is based on the placement of the card and the weighted value of the card. This procedure was developed using McCandless' (1967) rationale for self-concept. McCandless says that self-concept is composed of two aspects, the individual's rating of himself in the areas and the value of the particular areas. The placement of the card was accepted as the individual's rating of himself in the area. The

value of the areas was determined by the panel of eight psychologists and human development specialists. The panel ranked the 50 cartoon cards according to which items would be of most importance to a child's self-concept on a continuum from positive to negative. The mean ranking of the eight judges was assigned to each card as the weighted value of the card. The reliability of the ranking was tested using the coefficient of concordance. The coefficient was .85 $p < .05$, indicating a measure of construct validity for the test.

Scores are recorded on a scoring sheet. The mean of the scale values of cards in the "like me" column is subtracted from the mean of the scale values of the cards in "not like me" column. A high score means high self-concept; low scores represent a low self-concept.

Coller (1971) reports that artists received specific instructions on the concrete situations the drawings should depict. He states, "So it is assumed that ambiguity was not intended and that this test should be classified as a self-report technique rather than as a projective measure /p. 50/." He further classifies this as a report on symbolically contrived situations.

Bolea, et al. (1971) summarized several studies that employed the Pictorial Self-Concept Scale. In a study by Storm (1968), 91% of a sample of 34 Negro first graders with a distorted race image also had a negative self-image as measured by the PSC. Sun (1968) chose a group of 60 children with positive self-concepts using the PSC. She found this group to be less restricted in their drawing than a comparable group with negative self-concepts. Desrosiers (1968) found that students who have perceptual impairment as measured by the Frostig Test of Visual Perception also had negative self-concepts as measured by the

PSC. Vols (1968) found a predicted increase in PSC scores associated with an increase in differentiation of self-portraits in a study involving 65 children.

Maldari (1972) used the Pictorial Self-Concept Scale to investigate changes in self-concept of first, second, and third grade children enrolled in a first year child study program. Children who were studied directly by teachers were compared with children who were not. Although there were no statistically significant changes between the two groups, changes in the positive direction did occur in the self-concepts of children who were studied directly by teachers.

A significant relationship between a child's positive self-concept as measured by the Pictorial Self-Concept Scale and the use of Dreikursian techniques of child rearing was demonstrated in a study by Warmdahl (1972). Also found was a significant relationship between a child's negative self-concept and his mother's use of child-rearing methods which were judged to be mistaken.

The Children's Self-Social Constructs Tests

Both a preschool (1968) and a primary form (1967a) of this instrument were developed by Barbara Long, Edmund Henderson, and Robert Ziller. Children are presented with a booklet that contains a series of symbolic arrays in which circles represent the self and/or other persons of importance. The child is required to arrange these symbols by selecting a circle to represent the self or some other person from among those presented, by drawing a circle to stand for himself or another, or by pasting a gummed circle that represents the self onto

the page with other symbols. The test is objectively scored and is based upon the relationship of the symbols to one another.

Both forms of the Children's Self-Social Constructs Tests measure self-esteem, social interest, identification with mother, father, teacher, and friend, minority identification and realism to size. These tasks have low visibility, or are felt to be not immediately apparent to the children, and it is assumed that the symbolic arrangements represent social relations in the child's life space. It is also assumed that the particular arrangements contain easily translated common meanings. Therefore, Coller (1971) classifies this as a projective technique of the view of the stimulus through choice and/or ordering class.

The authors have used these tests in several studies of the self-concept of children. They have studied self-concept as related to: achievement in reading (Henderson, Long & Ziller, 1965), originality (Long, Henderson, & Ziller, 1967b), changes during middle childhood (Long, Henderson & Ziller, 1967a), and disadvantaged school beginners (Long & Henderson, 1968, 1970). Nonachieving readers were found to be characterized by a higher degree of dependency than achieving readers. Children classified as high in originality by Torrance's Parallel Lines Test were found to reflect lower esteem, greater dependency, and greater unhappiness than children classified as low in originality. Results reflect that as children in elementary school grow older they grow closer to peers and away from parents and teacher, gain higher self-esteem and more individuation. Results of studies of disadvantaged children show them to be less identified with father and more with mother, of lower self-esteem, and less realistic in relation to

color than children who are not disadvantaged.

Boger and Knight (1969) used the Children's Self-Social Constructs Tests with 39 subjects enrolled in a Head Start program. Results revealed that Afro-Americans scored lower than other subjects; older children tended to score higher than younger; that the closer these children feel to their teacher and father, the more realistic their color choices.

The Preschool Self-Concept Picture Test

Woolner (1966a) developed this instrument as a part of her Doctoral Dissertation primarily for the purpose of providing a preschool teacher with an easily administered and interpreted test that she (he) could use to assess the attitudes that her (his) pupils have toward themselves. She recommends administration at the beginning and again at the end of the school year to help the teacher in planning appropriate experiences and to provide an evaluative measure of her (his) success.

Children are required to select from two pictures the drawing of the child which is "like themselves" and "the one they would like to be," which provides a measure of self- and of ideal self-concept along with the congruency of the two. There are four separate but comparable subsets for Negro and Caucasian boys and girls. Each subset consists of ten plates with paired pictures which illustrate:

1) Dirty versus Clean
2) Active versus Passive
3) Aggressive versus Nonaggressive
4) Afraid versus Unafraid

5) Strong versus Weak

6) Acceptance of male figure versus rejection of male figure

7) Unhappy versus Happy

8) Group rejection versus Group acceptance

9) Sharing versus Not sharing

10) Dependence versus Independence

The pictured characteristics represent ten positive and ten negative characteristics, with sex differences noted for three plates. Woolner (1966b) presents a rationale for the selection of each plate in which she discusses what is considered to be desirable or more appropriate behavior. Coller (1971) reports that in a face validity study the children's descriptions of the plates agreed with the test designer's descriptions. Therefore, he classifies this measure as a self-report technique and places it in the category of reports on symbolically contrived situations.

The rationale for selecting the characteristics which are depicted on the ten plates, as stated by Woolner (1966b) is

> related to the needs, concerns, characteristics and developmental tasks of preschool children, their parents, and teachers. In addition, through the author's personal experience as preschool director and teacher and through her reading in the field of child development, she has found that these characteristics tend to be emphasized by parents and preschool teachers /p. 4/.

The evidence from the use of the Preschool Self-Concept Picture Test revealed the degree of congruence, the degree of acceptance and/or satisfaction the child has with himself, for children who have an adequate self-concept, to be 70% or greater, according to Woolner (1966b). The greater the variation between self- and ideal self-concept, the poorer the self-concept. The degree of congruence for children who

have poor self-concepts is 30% or less.

Woolner (1966a) used 67 middle-class five-year-old subjects for her Doctoral Dissertation. Findings indicated that the five-year-old children involved in this study were able to express attitudes toward themselves, that kindergarten experiences affected children's self- and ideal self-concepts, and that the pictorial method of investigating self-concept held some promise for use in kindergarten classrooms.

As reported by Coller (1971) the Preschool Self-Concept Picture Test was administered to a group of emotionally healthy preschool children and a group of emotionally disturbed preschoolers by Boger and Knight (1969). Results indicated that these two groups of children viewed themselves differently: healthy children perceived themselves to possess more positive characteristics than disturbed children. Congruence between self- and ideal self-concept was 80% to 100% in the emotionally healthy group, but only between 00% to 20% in the disturbed group.

As evidence of validity and reliability, Woolner (1966b) cites the three studies that follow. The Preschool Self-Concept Picture Test was used with 406 four- and five-year-old boys and girls from California, Florida, Illinois, Texas and Tennessee. The three major socio-economic classes as well as Negro and Caucasian races were represented. A relationship between sex and plate picture choice was demonstrated by the choice of the "afraid" plate by most girls. The author states that the nullification of such an influence is desirable and perhaps this plate should be investigated. It was also concluded that the test does distinguish between age-race groupings within the age and race limits

tested. The author states, however, that no relationship with chronological age, mental age, race, or sex are suggested by the data.

The Preschool Self-Concept Picture Test was administered to a group of emotionally disturbed preschoolers who attended Children's Guild, Inc., Baltimore, Maryland. A professional team composed of a psychologist, a psychiatrist, a social worker and a preschool teacher determined the emotional stability of both groups. In the emotionally healthy group congruence between self- and ideal self-concept was 80% to 100% and 20% to 00% in the disturbed group.

In a study conducted at Memphis State University, one group of children received three exposures to the Preschool Self-Concept Picture Test and the three sets of scores were intercorrelated. All correlations were found to be above .90 except for the correlations between Test 1 and Test 3 on ideal self-concept which was found to be .80.

An adapted version of the Preschool Self-Concept Picture Test was used in a study by Thornton (1967). Results did not lend support to the speculation that lower-class children have significantly lower self-concepts than middle-class children, although the group means indicated trends in this direction.

Data reported by Glenn (1969) using the Preschool Self-Concept Picture Test indicated a trend toward a less congruent self-concept as held by the child in public elementary school as compared to his sibling in preschool. This study also found that it was not true that the low-income children had fewer positive feelings than middle-income children.

The Preschool Self-Concept Picture Test was used in a study by Showers (1970). She concluded that five-year-old kindergarten children

were able to express attitudes toward themselves and that the pictorial method was of value in eliciting these attitudes. The children studied increased their self-concept and ideal self-concept between the beginning and end of kindergarten.

In a study by Holland (1971) educable mentally retarded children attending a special school showed more negative changes in congruence of self-concept as measured by the Preschool Self-Concept Picture Test than educable mentally retarded children attending special classes and regular classes in a regular school. The children attending regular classes showed more positive changes in congruence. Educable mentally retarded children in a special class within a regular school showed greater achievement than those in a special school or a regular classroom.

Hargrove (1973) studied the effects of nursery school experience, race, and sex on the self-concepts of black and white kindergarten children. She found that one or more of the category groups was significantly related to at least one of the four variables of self-concept, congruency, change in self-concept and change in congruency on all but three of the plates.

Woolner (1966b) presents the following as "Institutions using the Preschool Self-Concept Picture Test":

Mrs. Molly M. Shoaf
University of Illinois
Champaign, Illinois

Dr. Marguerite L. Bittner
Southern Illinois University
East St. Louis, Illinois 62201

Dr. Alma W. David
University of Miami
School of Education
Coral Gables, Florida 33124

Dr. Robert P. Boger
Michigan State University
College of Home Economics
East Lansing, Michigan 48823

Mr. Stanley R. Clemes
Mental Research Institute
555 Middlefield Road
Palo Alto, California 84301

Dr. Mary Lane
Nurseries in Cross Cultural Ed
San Francisco State College
San Francisco, California 94132

The Self-Concept and Motivation Inventory:

What Face Would You Wear? (SCAMIN)

This instrument was developed by Norman Milchus, George Farrah and William Reitz in 1967. Coller (1971) referred to this self-report measure as a graphic (picture-type), multiple-choice scale because the child indicates his choice of what is "like me" from pictured faces presented to him on a response sheet. The child responds to questions such as, "What face would you wear if a teacher was telling you what kind of listener you will be?"

The SCAMIN profile scores indicate motivation which is comprised of achievement needs and achievement investment, and self-concept which is comprised of role expectation and self-adequacy. The authors (1968) define achievement needs as the positive regard with which a student perceives the intrinsic and extrinsic rewards of learning and performing in school. Achievement investment is the awareness and concern toward shunning the embarrassment and sanctions which are associated with failure in school. Role expectations indicates the positive acceptance of the aspirations and demands that the student thinks significant others expect of him. Self-adequacy is the positive regard with which a student views his present and future probabilities of success.

Four forms of this instrument are available: the preschool/kindergarten form is for use with children age four to the end of

kindergarten; the early elementary form is used with children in grades one through three; the later elementary form is for third grade children, when the teacher feels that they can sustain interest for 48 questions, through the sixth grade; the secondary form is for use with children in grades seven through twelve. Appropriate answer sheets accompany each form. Children choose from very unhappy, somewhat unhappy, neutral, somewhat happy, or very happy faces the one which represents the face they would wear in response to the questions. The preschool/kindergarten form has only happy, neutral, and sad faces.

In a published price list Milchus (1973) gives a reliability figure for each form, but without explanation of how it was determined. Reliability figures are: preschool/kindergarten form .79; early elementary form .77; later elementary form .83; secondary form .93.

Roth (1969) found that Negro fifth grade students did not show an increase in self-concept, as measured by the SCAMIN, as a result of an integral curriculum. An integral curriculum was defined as inclusion of materials which presented Negroes and information about Negro contributions of the present and past.

The importance of affective variables associated with achievement and prediction of achievement was demonstrated in a study by Nagel (1969) using second through sixth graders. Along with other instruments, the SCAMIN was used to assess these variables.

"The Wayne County Pre-Reading Test (Brake, 1969) and the Self-Concept and Motivation Inventory explained 15, 35, and 28% of Oral Reading, Vocabulary, and Comprehension test scores /p. 38/" in an experimental group of first graders in a study reported by Milchus(1971). Of the SCAMIN subtests achievement investment was the most consistent

predictor with self-concept and achievement needs significant on at least one criterion. A test-retest reliability of .79 for the preschool/kindergarten form and .77 for the early elementary form was reported in this study.

Coller (1971) reports that the Self-Concept and Motivation Inventory has not been sufficiently validated with younger children. He reports, however, that it has been used extensively with older children.

Information in the literature pertaining to specific measurement devices is difficult to obtain. Very few authors include the names of measurement devices in the title of their publications. Therefore, abstracts and other indices are of very little help. In addition, measurement devices used for other than research purposes may not result in publications. Milchus (SCAMIN, 1968) stated, "The schools here use the SCAMIN . . . but I have seen no need to publish. The test has been used in research studies, but I am not always informed or aware of the findings (N. Milchus, personal communication, February 14, 1975)." Many of the uses cited of these devices were provided by the National Clearinghouse for Mental Health Information and the RIC Search System. However, this does not suggest to be a complete review of the uses of these instruments. Sources of descriptions of these instruments may be found in Appendix A.

Summary

The review of literature provided information about measurement techniques and procedures which have been used in the study of self-concept. Measurement devices can be classified in any of the following five general procedural categories: direct observations, behavioral

traces, self-reports, projective techniques, and/or any combination.

Direct observations can be conducted in unstructured environments, where the observer records all the child says or does, or more structured situations where the observer focuses on specific behaviors, or in a contrived environment which is designed to elicit specific responses of particular interest to the observer. Self-report procedures include asking the child to describe himself directly or symbolically as in choosing a picture as a representation of himself. Projective techniques are assumed to be especially sensitive to covert or unconscious aspects of behavior.

A search for measurement devices reported in the literature and reports of studies using these instruments revealed four instruments which were considered as possibilities for this study. Coller (1971) included these instruments in his review of more than 50 currently available instruments purported to assess the self-concept of young children and provided the procedural categories for each. He states that the self-report variety is especially useful with young children.

A Pictorial Self-Concept Scale for Children in K-4 by Bolea, Felker and Barnes (1967) is a self-report technique which consists of 50 cards. The child divides these cards into three groups on the basis of a depicted cartoon figure being "like me," "sometimes like me," or "not like me." The Children's Self-Social Constructs Test by Long, Henderson and Ziller (1968) represents a projective technique in which the child arranges symbols to represent himself or some other person, or draws a symbol to represent himself or another. The Preschool Self-Concept Picture Test by Woolner (1966b) requires children to select from two pictures that one which is "like him" and that which "he would

like to be" and is, therefore, a self-report technique. The Self-Concept and Motivation Inventory: What Face Would You Wear? by Milchus, Farrah and Reitz (1967) is also classified as a self-report technique because the child indicates his choice of what is "like me" from pictured faces on a response sheet. The child responds to questions such as, "What face would you wear if a teacher was telling you what kind of listener you will be?"

CHAPTER III

PROCEDURE

Subjects

The subjects of this study were 72 preschool children, 40 boys and 32 girls ranging in age from four years ten months to five years 11 months at the time of testing. The subjects were limited to children of an age which would be expected in a kindergarten program. These children were attending nursery school programs and day care centers in the Stillwater area: 32 children were in attendance at Kollins Kiddie Kollege; 20 at the Oklahoma State University Preschool Child Development Laboratories; four at Playhouse Nursery and Play School; four at the Presbyterian Church Pre-School; and 12 at Miss Carolyn's Pre-School. Some of these children were attending a half-day kindergarten program also. At each of the centers all children of the appropriate age in attendance were included with the following exceptions. One girl of the appropriate age at Kollins Kiddie Kollege did not speak English and it was, therefore, impossible to conduct testing with her. Also at Kollins Kiddie Kollege was one boy who was unable to complete the testing. He demonstrated an inability to understand the directions of the examiner.

Instruments

Selection of Instruments

The kindergarten teacher is unable to leave her class to administer measurement devices to individuals or small groups. Therefore, it was felt important to examine devices that could be administered by other than a professionally trained examiner; for example, a teacher's aid or volunteer helper. Also desirable were measurement devices which offered a prepared response sheet or a simplified means of recording the data. In addition, a method of scoring was desired which was not complex and did not involve difficult mathematical calculations. Where such calculations were necessary, a consultant available for calculation and interpretation could alleviate such a burden for a teacher.

In order to be used by public schools, the instruments must be available to them. Instruments were eliminated, therefore, if they were not readily available in published form.

Cost of the measurement devices was also considered. An extremely expensive instrument while perhaps having strong validity and reliability, is unlikely to receive widespread use.

The five-year-old child was expected to respond to these measures, therefore, instruments chosen needed to be easy for them to react to and understand. Also desirable were instruments which did not become more work than fun by taking too long or presenting materials uninteresting to five-year-old children.

It was felt that a more accurate comparison could be made of the three instruments if all were administered in one testing session. Therefore, it was necessary to use instruments which were not lengthy

in administration.

The following criteria were used to determine selection of the three instruments for this study:

1) Ease of administration
2) Ease of scoring
3) Availability to public schools
4) Inexpensive
5) Understandable and interesting to five-year-old children
6) Brevity of examination time

The Children's Self-Social Constructs Test met all of the criteria except that it was still in the process of publication at the time of the testing. It was, therefore, eliminated for the purposes of this study. The remaining three tests met all criteria and were selected for use. This study will, therefore, examine A Pictorial Self-Concept Scale for Children in K-4, by Bolea, Felker and Barnes (1971); The Preschool Self-Concept Picture Test, by Woolner (1966b); and the Self-Concept and Motivation Inventory: What Face Would You Wear? by Milchus, Farrah, and Reitz (1967).

Administration of Instruments

The same person served as examiner (E will be used hereafter to represent examiner) for all subjects. During the self-selected activity period of the regular preschool programs E invited each subject (S will be used hereafter to represent subject) individually to accompany her from the playroom to a quiet room where the examination materials were on a table. After arriving in the room, E was seated to the right or left of S both of whom were seated at the table. The E

engaged S in a casual conversation of about one minute's duration to establish rapport.

The Preschool Self-Concept Picture Test by Woolner (1966b) was administered first to all S's. The E stated,

> _____(child's name), we are going to play a game. We are going to pretend you are the boy (girl) in the pictures I will show you. You look at the pictures. Then I will ask you two questions. You point to the picture that answers the question I ask you. Then I will ask you the second question and you point to the picture that answers that question. You may choose either picture you want.

When the E was satisfied that the S understood the directions, she would show the child Plate 1 and ask, "Which boy (girl) are you? This one or that one?" (Pointing to the picture A and then to picture B). After the child responded by pointing to a picture the E asked, "Which boy (girl) would you like to be?" Each time E pointed to picture A and then to picture B. The S's responses were recorded on a prepared answer sheet (for scoring, see Appendix C). The same procedure was then followed on the subsequent plates. The plates were shown in sequence; e.g., Plate 1, then Plate 2, then Plate 3, and so on until responses were recorded for each one. Where more than one child was pictured on the plate, the E would point to the boy (girl) in the striped clothes as she asked the two questions.

No questions related to the pictures were answered by E. When S asked what a child in a picture was doing, the E would ask, "What do you think he is doing?" and would accept whatever description the S offered.

The preschool/kindergarten form of the Self-Concept and Motivation Inventory by Milchus, Farrah and Reitz (1967) was administered next to all S's. See Appendix B for the questions used. The E placed the

answer form on the table in front of S, pointed to a happy face and asked, "What kind of a face is this?" All S's answered, "A happy face." The E would then point to a sad face and ask, "What kind of a face is this?" With few exceptions all S's answered, "A sad face." In the case of exceptions the answer was, "A mad face." In these cases the E conducted a discussion to elicit the response, "A sad face." The E would then point to the neutral face and ask, "What about this face in the middle? It's not really happy (tracing a happy mouth on the face with her finger) or sad (tracing a sad mouth on the face with her finger). This face is like you are many times, when you're not really happy, but you're not really sad. We'll call it a middle face. If it were your birthday and you got lots of presents, which face would you wear? Would you have a happy face, a middle face, or a sad face (pointing to the appropriate face with each statement)?" Without exception, S answered, "A happy face." The E then asked, "What if you fell down and skinned your knee and it really hurt? What face would you wear then? Would you have a happy face, a middle face, or a sad face (pointing again to the appropriate face with each statement)?" With few exceptions S answered, "A sad face." The exceptions involved S's who said it wouldn't hurt them because they were strong, brave, etc. In these cases E asked questions until S chose a sad face. The E then asked, "If you were walking down the street and saw a dog he might come and lick your hand and it might make you happy. But if he jumped on you it could make you sad. If he didn't do anything and you just looked at him, what kind of face would you have? Would you have a happy face, a middle face, or a sad face (pointing to the appropriate face with each statement)?" With few exceptions S answered, "A middle

face." The exceptions involved S's who didn't like dogs or who related a dialogue about dogs. In these cases E asked questions until S chose a middle face.

When E was satisfied S understood the three faces, she asked the first question. "What face would you wear if your parents were telling you how you are trying in school?" Each question was repeated. The E then handed a crayon to S and instructed S to color in the nose on the face S had chosen. E also stated, "This is just to help me remember what you chose. It's a very small nose, and I don't care if you stay in the lines or not." The remaining 11 questions were asked by E, with S coloring in the nose of each response. The 11 items for the Self-Concept and Motivation Inventory may be found in Appendix B.

The Pictorial Self-Concept Scale for Children in K-4 by Bolea, Felker and Barnes (1971) was administered last to all S's. The E showed the cards to S and said, "Now we are going to play a card game. I want you to look at the picture on each card. Some cards have more than one person on them, but every card has a boy (girl) on it that has a star on his (her) shirt. Find the boy (girl) in the picture that has a star, look at the whole picture, and tell me if he (she) is doing something like you do." The first card was presented and S was asked to identify (point to) the boy (girl) with the star on his (her) shirt. The E then asked, "Is he (she) doing something like you do?" If S said, "Yes," E asked, "Do you do it most of the time, or some of the time?" The card was put in the appropriate stack of like me most of the time, like me some of the time, or not like me. The E monitored S's choices until one of each category was chosen, or until she was satisfied that S understood the sorting procedure.

The cards were shuffled after each S had completed the sorting procedure and E had recorded the responses. No questions related to the pictures were answered by E. When S asked what a child in a picture was doing, the E would ask, "What do you think he is doing?" The E would accept whatever description S offered.

Scoring

For the Preschool Self-Concept Picture Test by Woolner (1966b) each S was shown 10 sets of paired pictures. For each plate S was asked, "Which boy (girl) are you?" and "Which boy (girl) would you like to be?" The S's response to each question was recorded on an individual answer sheet by placing a check next to the picture designation of A or B for each of the ten pairs. Columns on the answer sheet designate Part I, self-concept; Part II, ideal self-concept; and Part III, congruence.

Each S's response was then scored as either + or - according to Woolner's (1966b) evaluation of the depicted characteristics. See Appendix C for this scoring. Congruency was then determined by comparing the answers in Part I and Part II. If the answers for each plate were the same, regardless of whether they were a + or -, a + was given in the third column. If the answers were different a - was given. The number of +s in each of the three columns was then added and the sum is that S's score for each of the three subtests. Possible scores range from 0 - 10 for each subtest. By adding the three a total sum score range of 0 - 30 is possible.

The Self-Concept and Motivation Inventory: What Face Would You Wear? uses a printed response sheet. Sad, neutral, and happy faces, in

that order, are pictured in six rows, two sets, across the front and the back of the page. Two solid lines separate the two sets in each row and a picture is used to designate each set. When this test is used with group administration, the E says the picture name of each set to help S find the proper response set. Arrows are used to help S follow the proper sequence down the page.

The first 12 items, which appear on the front of the sheet, are used to measure motivation. For scoring the sheet is divided horizontally in the middle with the top half representing achievement needs and the bottom achievement investment. The second 12 items, which appear on the back of the sheet, are used to measure self-concept. For scoring this sheet is also divided horizontally in the middle with the top half representing role expectation items and the bottom self-adequacy items. For this study, only the back of the sheet was used.

For each sad face chosen one point is given S. The neutral face is given two points and the happy face is given three. A score is obtained for each of the two subtests along with the sum of the two which is designated total. A score ranging from 6 - 18 is possible for each subtest, with a possible range of 12 - 36 for the total. The authors (1967) state that, "These highly correlated factors should be combined, producing a single self-concept score /p. 67."

The Pictorial Self-Concept Scale for Children in K-4 consists of 50 cards which the S sorts into three groups. The sorting is on the basis of a cartoon figure denoted by a star on his clothes being like, sometimes like, or not like S.

After the S had sorted the cards and left the room the E recorded the placement of each card by its number. According to the authors

(1971) the, "mean of the scale values of cards in the 'like me' column is subtracted from the mean of the scale values of the cards in the 'not like me' column /p. 223/." For the present study, recorded data were transferred to an IBM 1230 response sheet for each subject. These then were sent to the publisher for scoring.

Collection of Data

The data were collected during November and December of 1974. One child was tested in January of 1975 as he had been absent during the earlier sessions. The children were invited to play the special games during the free play period of their regular nursery schools, and were then escorted to a quiet room nearby. After entering the room the examiner engaged the children in a casual conversation to establish rapport. All three instruments were administered in one session. The total testing time was approximately 25 minutes for each subject.

Treatment of Data

The data were examined through the use of descriptive statistics, including range, mean, variance, and standard deviation for the scores for each test. The raw scores were adjusted in order to have similar scores as a basis for comparisons. To test the hypotheses an analysis of variance and both Pearson r and Spearman rho coefficients of correlation were utilized. In order to test the relationship between tests the scores of the total group (N=72) were used. The sample size combined with the fact that the distribution of scores on each test was judged to approach a normal distribution lead to the conclusion that using the parametric Pearson r would provide a more powerful tool for

analysis than a nonparametric type. However, when comparing responses by sex the Pearson r was not as desirable due to the smaller sample size (N=40, 32), and the nonparametric Spearman rho was used.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this study was to investigate measuring devices which are currently available to assess the self-concept of young children. Three measures of self-concept were chosen from those reported in the literature. Scores of a sample of five-year-old children were compared. In addition, this investigation compared responses of the five-year-old children by sex on each of the three measures of self-concept.

The following null hypotheses were examined:

I. The difference in scores on the three tests are no greater than would be expected by chance.

II. There is no significant relationship between the scale scores for each of the following:

   A. A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test

   B. A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

   C. The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

III. There is no significant relationship between the scale scores for each of the following when sex is controlled:

A. Scores of girls

1. A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test
2. A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?
3. The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

B. Scores of boys

1. A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test
2. A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?
3. The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?

Description of the Data

Each of the three tests used yielded a numerical score. See Appendix D, Table V for raw scores. Since many educators are familiar with the use of mean and standard deviation to describe test results in terms of central tendency, the data were described in such terms before attempting to test hypotheses. The resulting description of the data

may be found in Table I. In addition to describing raw scores, Table I also shows scores adjusted to z-scores. The adjusted scores (z-scores) for each test were also identified in terms of whether they fell within one standard deviation of the mean or more than one standard deviation above or below the mean. On the basis of the findings described in Table I, it was concluded that the test scores approached a normal distribution and, therefore, could be analyzed by using parametric methods when considering the scores of the total group.

Table II presents changes in scores by standard deviation on the three tests of self-concept. It may be noted that only 23 (32%) of the children scored in the same standard deviation area on all three of the tests. The scores of 22 of these children fell within one standard deviation of the mean. Only one child scored more than one standard deviation away from the mean on all three tests. On each of the tests, however, a group of children did score more than one standard deviation away from the mean. On the Pictorial Self-Concept Scale for Children in K-4, 9 children's scores were below one standard deviation below the mean and 10 children's scores were more than one standard deviation above the mean, making a total of 19 scores or 26% in the "extreme" areas. On The Self-Concept and Motivation Inventory: What Face Would You Wear? 10 scores were in the lower "extreme" area (more than one standard deviation below the mean) and 16 scores were in the upper "extreme" area (more than one standard deviation above the mean), making a total of 26 scores or 36% in the two "extreme" areas. On the Preschool Self-Concept Picture Test, 11 scores were in the lower "extreme" area and 18 in the upper "extreme" area, making a total of 29 or 40% of the scores beyond one standard deviation above or below

TABLE I

DESCRIPTION OF SCORES

Test	N	Raw Scores			Z-Scores			Plus or Minus 1 S. D. From Mean	
		Mean	Range	S. D.	Mean	Range	S. D.	N	%
PSC[1]	72	56.53	24-80	8.74	0.0	-3.64 - +2.71	1.0	53	74
SCAMIN[2]	72	28.78	20-36	4.57	0.0	-1.92 - +1.58	1.0	46	64
SCAMIN[3]	59	27.19	20-35	3.38					
PS-CPT[4]	72	17.78	10-28	4.01	0.0	-1.94 - +2.55	1.0	43	60

[1] A Pictorial Self-Concept Scale for Children in K-4

[2] The Self-Concept and Motivation Inventory: What Face Would You Wear?

[3] The Self-Concept and Motivation Inventory: What Face Would You Wear? Test manual instructs that scores reflecting "response set" (all one type response) be eliminated.

[4] The Preschool Self-Concept Picture Test

the mean.

TABLE II

CHANGES IN SCORES BY STANDARD DEVIATION
ON THREE TESTS OF SELF-CONCEPT

Group	N	%
Scored more than one S. D. below mean		
on all three tests	0	00
on two of three tests	5	07
on only one of three tests	20*	28
Scored within one S. D. (plus or minus) of mean		
on all three tests	22	31
Scored more than one S. D. above mean		
on one test	19	26
on two of three tests	5	07
on all three tests	1	01

*Nine of the children (13%) scored in a different S. D. area on each test.

In view of the fact that in this sample only 32% of the subjects scored in the same standard deviation area on all three tests, there seems to be great possibility for error if the results of any one test are used for making evaluative judgments of either individual children or of programs. Since a total of 31% of the subjects scored within one standard deviation above or below the mean on all three tests and only 1% of the subjects scored consistently more than one standard deviation from the mean, the question may also be raised as to whether

these tests measure with less preciseness the feelings of the children who have strong positive or strong negative concepts of self.

Hypotheses Testing

Hypothesis I: The difference in scores on the three tests are no greater than would be expected by chance if drawn from the same population. The parametric analysis of variance was used to examine the hypothesis since it had been concluded that the scores approached a normal distribution. Comparing three groups of scores for the same group of subjects does violate the analysis of variance assumption of independence. In interpreting the results, the Greenhouse-Geiser technique of reducing the degrees of freedom in the numerator was used to minimize the influence of lack of independence of the scores.

There was a significant difference in scores on the three tests ($F=7.8$ $df=1, 70$; $p < .01$). It can be concluded, therefore, that the three groups of sample test scores are not drawn from populations having the same means and the same variances. Rejection of the null hypothesis of no difference among the scores supports the implications of the information in Tables I and II that the three tests are not measuring the same variable.

Hypothesis II: There is no significant relationship between the scale scores. Testing of this hypothesis was done by means of the Pearson product-moment correlation and results are shown in Table III. No significant correlation was found between individual scores on the three tests of self-concept. Therefore, an individual child's score on one test does not give an indication of what score he would get on one of the other tests. This low correlation further supports the

TABLE III

CORRELATIONS BETWEEN SCORES ON THREE TESTS OF SELF-CONCEPT

Group of Scores	r*	p
A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test	.15	n.s.
A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?	.10	n.s.
The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?	.02	n.s.

*Pearson product-moment correlation

suggestion that these three tests are not measuring the same dimension of self-concept or that five-year-old children's responses to this kind of test are so unreliable that perhaps it is impossible to make judgements that have predictive value on the basis of these kinds of tests. It has been argued by some that the young child's perceptions of himself are highly fluid and that they change over short periods of time. Some characterize this as a developmental progression from the holding of relatively unstable self perceptions in early childhood, to the appearance of more stable, enduring concepts of self reached in adulthood. While it is unlikely that the child's self-perception actually changed during the testing session, it could be possible that the difference in scores represents a general confusion of feelings the child holds toward himself. The child's level of abstraction may be such that he is unable to deal cognitively with the tasks in these tests. Perhaps he doesn't understand what it means to choose a happy face, or the distinction between doing something "all," "some," or "none" of the time, or choosing a picture to represent himself or what he would like to be like.

Hypothesis III A: There is no significant relationship between girls' scale scores on the three tests of self-concept. No significant difference was found among the individual scores of girls on any of the three tests when examined by the Spearman rank correlation coefficient. The results are presented in Table IV. These results indicate that there is no more than a random, chance occurrence that girls will score the same on one of the tests as on another.

TABLE IV

CORRELATIONS BETWEEN SCORES ON THREE TESTS OF SELF-CONCEPT BY SEX

Group of Scores	rho*	p
Girls		
A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test	.02	n.s.
A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?	-.05	n.s.
The Preschool Self-Concept Picture Test related to the Self-Concept and Motivation Inventory: What Face Would You Wear?	-.16	n.s.
Boys		
A Pictorial Self-Concept Scale for Children in K-4 related to The Preschool Self-Concept Picture Test	.42	.01
A Pictorial Self-Concept Scale for Children in K-4 related to The Self-Concept and Motivation Inventory: What Face Would You Wear?	.31	.05
The Preschool Self-Concept Picture Test related to The Self-Concept and Motivation Inventory: What Face Would You Wear?	.22	n.s.

*Spearman rank correlation coefficient

Hypothesis III B: There is no significant relationship between boys' scale scores on the three tests of self-concept. A positive correlation significant at the .01 level was found between the individual scores of boys on A Pictorial Self-Concept Scale for Children in K-4 and their scores on The Preschool Self-Concept Picture Test. See Table IV for the Spearman rank correlation coefficient results.

Comparison of the boys' scores on A Pictorial Self-Concept Scale for Children in K-4 versus The Self-Concept and Motivation Inventory: What Face Would You Wear? produced a rho of .31 which was significant at the .05 level. No significant relationship was found between the individual scores of boys on The Preschool Self-Concept Picture Test versus The Self-Concept and Motivation Inventory: What Face Would You Wear?

The results of these three tests with this group of subjects do suggest a similarity or relationship among the responses of boys which was not found among the responses of girls. The difference in relationship among scores by sex raises the question of whether the tests are more effective measures for boys at age five than for girls of similar age or whether there is a developmental difference in the way in which self-concept is taking shape for boys and for girls at age five.

If the differences in relationship between scores by sex found in this study are true differences, it is unlikely that the level of abstraction of the test items is a basic cause of a lack of agreement between scores. If it were, results would not be different for girls and boys.

CHAPTER V

SUMMARY

The purpose of this research was to investigate measuring devices which are currently available to assess the self-concept of young children. Three measures of self-concept were presented to 72 preschool children, 32 girls and 40 boys. The children ranged in age from four years ten months to five years 11 months, and were in attendance at nursery school programs and day care centers in the Stillwater area; some were attending a half-day kindergarten program also.

The Preschool Self-Concept Picture Test (Woolner, 1966b), The Self-Concept and Motivation Inventory: What Face Would You Wear? (Milchus, Farrah & Reitz, 1967) and The Pictorial Self-Concept Scale for Children in K-4 (Bolea, Felker & Barnes, 1971) were administered to all children. Testing was completed in one session with each child.

The data were examined to determine if there existed a difference in scores on the three tests that was greater than would be expected by chance. The data were also analyzed to determine the correlation between the scores on the three tests. An examination was also made concerning the correlation between individual scores on the tests when the variable of sex was controlled.

Findings

The findings of this research were as follows:

1) The three groups of sample test scores are not drawn from populations having the same means and the same variances.
2) A child's score on one test was found to not be predictive of his score on the other tests.
3) There were no significant correlations between the girls' scores on the three tests of self-concept.
4) The scores of boys on A Pictorial Self-Concept Scale for Children in K-4 test were found to be positively correlated with scores on The Preschool Self-Concept Picture Test ($p < .01$) and the Self-Concept and Motivation Inventory: What Face Would You Wear? ($p < .05$) tests. The scores of boys on the Preschool Self-Concept Picture Test and the Self-Concept and Motivation Inventory: What Face Would You Wear? tests did not show a significant correlation.

Discussion

Lack of correlation between individual scores on the three tests of self-concept indicates a need for caution on the part of teachers and administrators who may use such tests as a measure of program and/or teacher success. There appears to be the possibility of misclassifying children on the basis of information supplied by these kinds of tests, and they should not be used as the sole or major criteria for evaluation of progress toward a goal of enhancing self-concept.

Recommendation for Future Research

Because a child's score on one test does not give an indication of

what score he would get on one of the other tests used in this study, an investigation could be undertaken to determine if another group of children would give similar unreliable responses. A test-retest situation, with no attempt to alter the self-concept between the test and retest, might give some insight to whether the scores for a given test are stable over a period of time or whether there is also great variability in a child's responses to the same test. A test-retest situation could also show whether the sex difference found in this study holds up over a period of time.

Different tests should be investigated in the area of self-concept in five-year-olds to see if scores could be obtained that are more closely related in any way. The Children's Self-Social Construct Test is a possibility for such an investigation.

The same tests might be administered to children who are older to identify changes which may occur with age. Older children may have more clearly developed concepts of self and they may also be better equipped cognitively for translating their feelings about self to responses in a testing situation.

The investigator feels that an observational procedure in addition to measurement devices could give much insight to the study of self-concept in young children. Observational records could be compared to test scores. In addition, teacher assessment as compared to test scores could lend insight.

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APPENDIX A

SOURCES OF DESCRIPTIONS OF INSTRUMENTS

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of Instruments

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APPENDIX B

QUESTIONS USED ON THE SCAMIN

Questions used on the SCAMIN

1. What face would you wear if your parents were telling you how you are trying in school?

2. What face would you wear if a teacher was telling you what kind of listener you will be?

3. What face would you wear if the boys and girls in class were going to pick the best workers in the room?

4. What face would you wear when you tell your parents how you feel about being in school?

5. What face would you wear if you were doing your drawing for a teacher?

6. What face would you wear if only the good children could have a party?

7. What face would you wear when you're thinking of how much you'll have grown up by next year?

8. What face would you wear if you had to make a picture of an animal that was hard to draw?

9. What face would you wear if someone was telling you what your class will be like next year?

10. What face would you wear when you think of how good you're doing in kindergarten (nursery school)?

11. What face would you wear if you tried to learn something new with numbers?

12. What face would you wear when you think of all the children in class who like you?

APPENDIX C

SCORING OF THE PRESCHOOL SELF-CONCEPT PICTURE TEST BY WOOLNER

Scoring of the Preschool Self-Concept

Picture Test by Woolner

Plate	Characteristic Depicted		Woolner Evaluation			
			Male		Female	
	A	B	A	B	A	B
1	Dirty	Clean	-	+	-	+
2	Active	Passive	+	-	-	+
3	Aggressive	Nonaggressive	+	-	-	+
4	Afraid	Unafraid	-	+	-	+
5	Strong	Weak	+	-	-	+
6	Acceptance of male figure	Rejection of male figure	+	-	+	-
7	Unhappy	Happy	-	+	-	+
8	Group rejection	Group acceptance	-	+	-	+
9	Sharing	Not sharing	+	-	+	-
10	Dependence	Independence	-	+	-	+

APPENDIX D

RAW SCORES OF THREE MEASURES OF SELF-CONCEPT

TABLE V

RAW SCORES OF THREE MEASURES OF SELF-CONCEPT

Child	PSC[1]	SCAMIN[2]	PS-CPT[3]
1	58.585	32	21
2	57.453	25	20
3	52.141	24	11
4	57.358	23	12
5	41.353	26	14
6	49.103	25	18
7	58.312	25	16
8	65.613	31	22
9	51.550	36	18
10	61.090	26	22
11	59.170	27	14
12	45.578	30	16
13	68.534	20	12
14	51.910	27	10
15	65.233	36	20
16	59.136	36	12
17	60.650	26	24
18	51.220	25	22
19	62.013	36	19
20	63.445	36	16
21	55.700	36	10
22	54.640	33	20
23	58.919	22	14

TABLE V (Continued)

Child	PSC[1]	SCAMIN[2]	PS-CPT[3]
24	53.142	25	18
25	65.403	36	22
26	59.012	27	14
27	56.958	25	16
28	60.014	25	23
29	53.484	34	18
30	61.643	36	20
31	55.910	28	12
32	50.699	26	16
33	55.167	24	16
34	52.939	30	22
35	63.325	27	18
36	56.610	26	24
37	55.372	27	28
38	68.109	20	16
39	52.999	30	18
40	78.486	36	20
41	80.247	31	20
42	47.688	27	14
43	60.062	31	18
44	24.685	36	18
45	55.456	32	16
46	61.840	22	20
47	54.976	25	24

TABLE V (Continued)

Child	PSC[1]	SCAMIN[2]	PS-CPT[3]
48	57.796	28	18
49	47.502	25	22
50	49.973	30	16
51	61.225	36	16
52	45.866	36	18
53	62.540	34	22
54	52.692	33	16
55	61.109	23	22
56	54.332	31	18
57	55.232	27	18
58	54.185	31	22
59	71.117	27	12
60	55.751	27	16
61	58.053	29	14
62	48.878	22	18
63	49.479	28	10
64	68.749	26	24
65	44.491	28	12
66	48.864	25	18
67	60.556	28	18
68	66.740	29	22
69	56.446	34	12
70	69.000	36	18
71	35.989	24	22

TABLE V (Continued)

Child	PSC[1]	SCAMIN[2]	PS-CPT[3]
72	40.413	26	16

[1]A Pictorial Self-Concept Scale for Children in K-4

[2]The Self-Concept and Motivation Inventory: What Face Would You Wear?

[3]The Preschool Self-Concept Picture Test

VITA

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