# CONSTRUCTION AND VALIDATION OF STUDENT QUESTIONNAIRE MEASURING ATTITUDES TO SELF, SCHOOL AND TEACHER



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# Construction and Validation of Student Questionnaire Measuring Attitudes to Self, School and Teacher

by

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of the requirements for the degree of
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## ABSTRACT

The purpose of this study was to construct a questionnaire to measure the attitudes of the child, age 8 to 12 years, to self, school and teacher and to investigate the reliability and validity of the devised instrument.

The theoretical constructs of the questionnaire were based on self-concept, attitude and self-report theory. The items were devised from a review of self-concept instruments and studies and from consultations with parents, graduate students and educational psychologists. From a pool of 500 items, 80 were chosen with the concurrence of 11 people in the educational psychology field. These items formed the initial questionnaire.

This questionnaire was administered to a sample of 211 students from Grades IV to VII, inclusive, in two selected Newfoundland schools. It was re-administered three weeks later.

Through item analysis and factor analytic studies a final questionnaire was developed. This final version, The Student Self-Attitude Questionnaire, contained 31 items, 15 measuring attitude to self, 9 measuring attitude to school and 7 measuring attitude to teacher.

A questionnaire to rate the teacher's perception of specific student behaviors was designed. Ten students in

each grade in the sample were selected randomly and their teachers were asked to rate each of them individually on the items. Teachers' and students' ratings were correlated and found to be low.

The internal consistency of the questionnaire was comparable to that of other self-concept instruments. The test-retest findings were lower. Factor analysis procedures indicated the presence of construct validity in the study sample. The test-retest reliability and empirical validity findings were low, suggesting the questionnaire would not be applicable for individual diagnosis.

The theoretical constructs, the statistical data, and the reliability and validity studies were comprehensive. The results of the study indicate that the questionnaire is adequate for research purposes.

## ACKNOWLEDGMENTS

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# CHAPTER I

# INTRODUCTION

## Statement of Purpose

The purpose of this study was, first, to devise an instrument to measure the attitudes of the child, age 8 to 12 years, to himself, to school and to his teacher, and second, to conduct a validity and reliability study of the devised instrument.

## Significance of the Project

The ultimate aim of education is to help the child to develop his potential in a realistic manner so that he becomes a well-adjusted and self-accepting person. This aim embodies not only the child's cognitive and academic experiences, but also his affective experiences. His affective experiences include his feelings, emotions, needs and especially his self-concept.

Zirkel (1971) stated that the schools have a fundamental responsibility to enhance the self-concepts of their students.

Wylie (1961) said the words "self-concept" have come into common use to refer to the self as the individual is known to himself. The self is central to man's behavior.

The self-concept, primarily, guides, controls and regulates his performance and action.

Rogers (1951) believed:

> The self-concept or self-structure may be thought of as an organized configuration of perceptions of the self which are admissible to awareness. It is composed of such elements as the perceptions of one's characteristics and abilities; the percepts and concepts of the self in relation to others and to the environment; the value qualities which are perceived as associated with experiences and objects; and goals and ideals which are perceived as having positive or negative valence (p. 136).

One measure of the child's self-concept is obtained by measuring the child's attitudes. Attitude was defined by Anderson and Fishbien (1965) as the evaluative dimension of a concept. By "evaluative" was meant some order of preferability-nonpreferability or a yes-no connotation regarding the object. Krech et al. (1962) defined attitude as an enduring system of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to a social object.

A questionnaire was devised measuring the attitudes of the child to himself, to school and to his teacher based on self-concept theory as reviewed in the literature. The self-concept was defined as the way the individual perceived himself and it was viewed as possessing many facets. The attitude of the child to himself, to school and to his teacher was considered to be part of his total

self-concept. It was assumed that self-concept theory was within the realm of attitude studies. Attitude was considered as not being measured directly but as being inferred from behavior. Attitude to self was defined as the evaluation which the child made and customarily maintained with regard to himself. Attitude to school and to his teacher was defined as how he felt about school and his teacher.

A validity and reliability study was conducted in order to determine the value of the instrument in helping a teacher attain the aims of education previously stated. Hopefully, it will help the teacher help the child; it will be a means of exploring the child's self-concept and it will give the teacher an insight into how the child sees himself and his world. With this knowledge the teacher can work towards changing negative self-concepts in the student if they are present. Purky (1970) considered the prevention of negative self-concepts a vital first step in teaching.

Williams and Cole (1968) believed it was the business of the school to identify children with derogatory self-esteem, to determine the factors that contribute to the negative self-appraisal and to embark on a judicious program to change the negative attitudes.

Staines (1958) conducted a study involving observation, recording and analyzing data from child-teacher and child-child interaction in four elementary classrooms. It was found, among other things, that it was possible to teach so that while aiming at the normal academic program, specific changes were made in the child's self-image. Staines concluded that changes in the child's self-concept do occur as an outcome of the learning situation and that the self must be recognized as an important factor in learning.

It was hoped that the proposed instrument when used by the teacher would aid the teacher to see himself through the child's eyes. The teacher could study some of his own behaviors and assess his own impact on the child.

There appears to be a need in educational research in Newfoundland for such an instrument. In recent years a wide variety of instruments have been used to measure self-concept. Often, the researcher developed his own instruments to test his theories. These instruments may not be checked for validity or reliability, others may be poorly described and still others may not be available for public use. The lack of an adequate description and the difficulty in locating the instruments meant that other researchers were denied access to them. Many of the instruments reported in studies had been used once and then disregarded by other researchers. Thus it is impossible to generalize

across studies. Also, as LaBenne and Greene (1969) stated:

> If there is any value in testing and the use of other research instruments, it is in the stability of the measure and the fact that other researchers using the same instruments can observe the results under the same or varied conditions (p. 111).

If the instrument were demonstrated to be valid and reliable it could be used by a variety of researchers. This would provide a common background in accumulating research data.

There are presently questionnaires available to measure various aspects of the self-concept. However, these questionnaires are usually restricted to one area; as an example, the academic self-concept. The author of this thesis proposes to develop an instrument to cover three areas--the child's attitude to himself, to school and to his teacher.

It was hoped the test analysis would show that the instrument would measure the three areas. Then, three separate measures would be obtained with one questionnaire. This would have a favorable psychological affect on the child as he would not be subjected to a battery of tests. Vernon (1962) indicated that a small number of good items in a test is desirable. Also, in administering an instrument measuring three areas, there would be a saving of time and money.

The purpose of the present study was to design an instrument using sound techniques for item writing and item

selection and, then to perform several analyses to test the instrument's validity and reliability.

# CHAPTER II

## REVIEW OF THE LITERATURE

This chapter summarizes some of the theoretical background and research findings which relate to the development of self-report instruments and instruments measuring attitudes to self. It is divided into five segments as follows: self-theory; self-report theory; attitude theory; theory underlying the construction of items; and instrument construction. The segment which discusses item construction covers three areas: item selection; reliability and validity; and scaling.

### Self-Theory

There is a growing emphasis, in education, placed on the child's perception of himself. Improvement of the child's self-concept is, increasingly, becoming an important objective for teachers, educators and researchers. One aspect of the self-concept which can be studied is self-evaluation. The instrument which was developed measured the child's attitudes to himself, to school and to his teacher.

One of Wylie's (1961) major assertions was that ambiguities in the measuring instruments occur, partially,

because of inadequacies in the theorists' definitions of their terms. The uncertain definitions used in research on the self were reported by Coopersmith (1967) to be the reason for the lack of study of subjective experience.

Combs and Snygg (1959) described the self as the individual's basic frame of reference. It was the central core around which the rest of the perceptual field was organized. The phenomenal self was a product of the individual's experience and producer of whatever new experience of which he was capable. They defined the self-concept as the organization of all that the individual referred to as "I" or "me." It was himself from his own point of view.

Morse (1971) believed that in the self-concept were bound up one's hopes, fears, defenses and self-esteem; it was one's conception of who and what he was. He stated there were various nuances of the total self-concept including the ideal self, the real self and the self-esteem.

Rogers (1951) assigned the self-concept the dominant place in his personality theory. He suggested that the individual's self-image developed out of interaction with the environment and served to guide and maintain personal adjustment.

In describing the beginnings of self-concept, Frymier (1970) stated that:

> Self-concept is learned behavior. No person is born hating himself. No person is born feeling good about himself. An individual's concept of

> self is learned and it is learned in part on the basis of feedback he receives from significant others in his life (p. 36).

Sullivan (1947) believed that the child's self-concept began and developed in an interpersonal setting. Feelings about the self were modified by subsequent experiences. Among the significant people believed to affect the child's feelings about himself were, first, his parents and, later, his teachers.

In summarizing his theory of self-concept, Snyder (1965) postulated that: (1) a child's behavior was guided by his self-concept (how he saw himself in a situation); (2) the self within a situation (as an example, the school) emerged as a result of interaction with significant others; (3) the self-concept was continually emerging as a result of changing expectations and perceived expectations of others in varying situations.

In reviewing the theoretical writings of Fromm (1939), Allport (1955), Jersild (1960), Kinch (1963), Bartocci (1965), and Shavelson, Hubner and Stanton (1976) it was found that their views and descriptions of the self-concept were, in a broad sense, in accord with those of Combs and Snygg, Morse, Rogers, Frymier, Sullivan, and Snyder in that the self-concept was a person's perception of himself, which had developed out of his interpersonal relationships and that it was a major factor influencing the person's behavior. However, when defining self-concept specifically,

theorists emphasized different dimensions of the self-concept.

Shavelson et al. (1976) described the self-concept as being organized, multifaceted, hierarchial, stable, developmental, evaluative and differentiable. They presented a hierarchic organization of self-concept which is reproduced in Figure 1.

The general self-concept was divided into academic and non-academic self-concept. The non-academic was further divided into social, emotional and physical self-concepts.

It was the child's emotional, academic and social self-concepts which were considered in the development of the instrument measuring the attitudes of the child to himself, school and teacher, respectively.

Dimensions of the self-concept theory are discussed in more detail in the segment of this chapter which deals with the theory underlying the construction of the items in the instrument.

Self-Report Theory

Although the self-concept cannot be seen, behavior, which psychologists believe may be dictated by the self-concept can be observed. LaBenne and Greene (1969) stated that the nature of the self-concept was inferred from observable behavior over a period of time, and that the behavior was known to be symptomatic of the self-concept. Combs, Soper and Coursen (1963) also noted that in order to

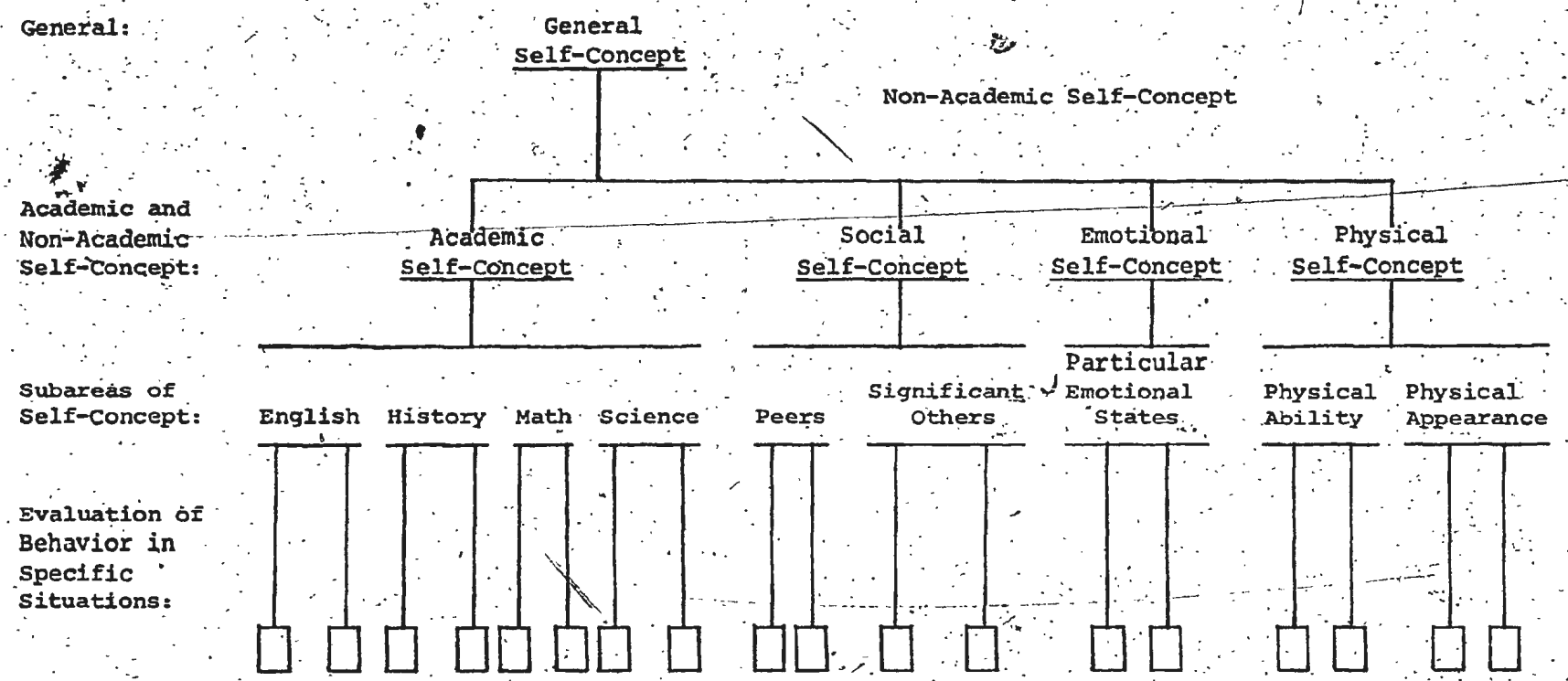


Figure 1. The hierarchic organization of self-concept as presented by Shavelson et al.

study the self-concept its nature must, of necessity, be observed from observations made of the behavior of the subject.

The best vantage point for understanding behavior, according to Rogers (1951) was from the internal frame of reference of the individual himself. Combs et al. (1963) endorsed this by saying the only class of behaviors that could be used in the study of self-concept was what the subject had to say about himself.

Wylie (1961) stated:

> Self-concept theories explicitly require that we measure a stated class of variables, S's (subject) conscious processes; and, by definition, S's phenomenal fields are private and beyond direct observation by the experimenter (p. 23).

She further stated that in order to index constructs pertaining to the subject's phenomenal fields, the experimenter must use some form of self-report response made by the subject as a basis for his inferences. This self-report behavior had generally taken the form of a verbal response.

LaBenne and Greene (1969) believed that the self-report was probably the most common method used for obtaining a measure of the self-concept. It purported to measure the person's innermost feelings and experiences. The self-report was defined by Combs and Soper (1957) as a behavior, revealing in larger or smaller degree what was going on within the organism.

Rogers (1951), Allport (1955), Sarbin and Rosenberg (1955), and Combs and Snygg (1959) agreed that the self-report was a valuable way to study the self-concept. It provided insights into the self which could be obtained in no other way. However, the self-report measured what the person said he was and not what he was. This is the major problem inherent in the self-report.

Combs (1962) aptly made the distinction between self-concept and self-report. He said that self-concept "is what an individual believes he is." The self-report on the other hand, "is what the subject is ready, willing, able or can be tricked to say he is" (p. 52).

The degree to which the self-report was relied upon as an indicator of self-concept, in the opinion of Combs et al. (1963), depended upon the following factors:

1. The clarity of the individual's awareness.
2. The availability of adequate symbols for expression.
3. The willingness of the individual to cooperate.
4. The social expectancy.
5. The individual's feeling of personal adequacy.
6. His feeling of freedom from threat (p. 494).

Parker (1966) agreed with this reasoning and stated that if these factors interferred with the reliability of the self-report, self-concept studies, using such self-report instrument produced questionable results.

Although it would be desirable to assume that a person's self-report responses were determined by his phenomenal field, it would be naive to take this for granted in Wylie's (1961) opinion. She stated that such responses

were influenced by:

> (a) S's (subject) intent to select what he wishes to reveal to the E (experimenter); (b) S's intent to say that he has attitudes or perceptions which he does not have; (c) S's response habits, particularly those involving introspection and the use of language; (d) a host of situational and methodological factors which may not only induce variations in (a), (b) and (c), but may exert other more superficial influences on the responses obtained (p. 24).

Apart from the personal interview, self-report responses were obtained by two methods--the open-ended essay type report and the self-report inventory. There were advantages and disadvantages to both. In the essay type the individual would be allowed to give a free and unstructured report. This was difficult or impossible to classify or quantify.

Wylie (1961) found that the essays describing one's ideals for one's own conduct were not codable for a number of characteristics on which she had data from other instruments. It was possible to omit important aspects of the self-concept in open-ended self-reports. However, in the self-report inventory restrictions were imposed on the person's report by the selection of the items presented on the instrument.

Wylie further stated, that when a subject's mode of reporting was circumscribed as by any kind of inventory, one had no way of knowing to what extent the external limits imposed by the measuring instrument prevented the subject from giving an accurate report of his conscious cognition

or feelings. Thus, it was of paramount importance that the item content and item form of an instrument be constructed in such a manner as to enable the person to express himself, his feelings and his attitudes about himself as exactly as possible.

Attitude Theory

The writer assumed that self-concept theory is within the realm of attitude studies. Coopersmith (1967) placed self-studies within the general framework of attitude research. Wylie (1961) believed the most commonly studied class of aspects of the phenomenal self to include "self-regarding" attitudes.

Attitude was viewed by Cook and Sellitz (1964) as not being measured directly but by being inferred from behavior. They stated that all definitions of attitude specified that behavior was taken as an indication of attitude. They thought of attitude as:

> . . . an underlying disposition which enters, along with other influences, into the determination of a variety of behaviors toward an object or class of objects, including statements of beliefs and feelings about the object and approach-avoidance actions with respect to it (p. 596).

The enduring component of attitude was emphasized by Freeman (1963) when he described an attitude as a dispositional readiness to respond to certain situations, persons or objects in a consistent manner which had been learned and had become one's typical mode of response.

Edwards (1957) stressed the affective base of the attitude when he defined an attitude as the degree of positive or negative affect associated with some psychological object.

For a brief indication of theory behind attitude measurement, Sherif and Cantril (1947) stated:

> . . . attitudes are inferred from the reactions (verbal or non-verbal) of man. When an individual reacts repeatedly in a characteristic way (positive or negative) in relation to a certain stimulus objective, we infer that he has an established attitude toward that stimulus (p. 29).

All definitions of attitude specified that behavior was taken as an indication of attitude.

## Theory Underlying Construction of Items

In this section the positive and negative attitudes a child had toward himself, the school and the teacher were explored in order to establish a theoretical basis for the construction of the items in the instrument which was developed.

The attitudes toward self were defined in the same manner as attitudes towards other objects. They were like other attitudes in that they had positive and negative connotations and were interwoven with intellectual and motivational processes. The attitude toward self was the evaluation of one's attributes and was one's estimate of self-worth. It was one's self-esteem. Coopersmith (1967) wrote:

> By self-esteem we refer to the evaluation which the individual makes and customarily maintains with regard to himself: it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds toward himself. It is subjective experience which the individual conveys to others by verbal reports and other overt expressive behavior (p. 4).

Persons with low self-esteem possessed negative attitudes toward themselves. They saw themselves as helpless and inferior. Wylie (1957) found that those who looked for psychological help frequently admitted that they suffered from feelings of inadequacy and unworthiness. Fromm (1939) reported that clinicians observed that persons who were plagued by doubts of their worthiness neither gave nor received love, apparently fearing that the exposure that came from intimacy revealed their inadequacies and caused them to be rejected. Consequently, they avoided close relationships and felt isolated.

Coopersmith (1967) pointed out that persons with low self-esteem reported feelings of guilt, shame or depression and concluded that their actual achievements were unimportant. It was stated by Janis (1954) that studies of self-esteem indicated that a person with low self-esteem was less capable of resisting pressures to conform, whereas a person with high self-esteem maintained a fairly constant image of his capabilities and of his distinctness as a person.

Combs (1962) believed that it was people who had negative attitudes, who saw themselves as unliked, unwanted, unworthy, unimportant or unable. He described the person who had a positive view of self as one who expected to be successful, who behaved courageously, was less disturbed about criticism, was free to pay more attention to events outside self, behaved unselfishly and did not have to be concerned if he were conforming.

A persons with high self-esteem possessed positive attitudes toward himself, and being less troubled by fears and self-doubt he moved more directly and realistically toward his personal goal.

As reported by Coopersmith (1967) the following were, presumably the affective, cognitive and behavioral characteristics of those possessing high self-esteem: the individual felt generally valuable and important, worthy of respect and consideration, influencing others, possessing good judgment and a clear understanding of self, enjoying new and challenging tasks and not getting upset when things did not go well right away. The individual believed his work was of high quality and that he was capable of doing worthwhile things in the future.

Rosenberg's (1965) study not only concerned itself with the social class, religious group and family determinants of self-esteem, but also traced some of the psychological and interpersonal correlates of self-esteem. He stated:

> When we speak of high self-esteem, then, we shall simply mean that the individual respects himself, considers himself worthy; he does not necessarily consider himself better than others, but he definitely does not consider himself worse; he does not feel that he is the ultimate in perfection, but on the contrary, recognizes his limitations and expects to grow and improve.
>
> Low self-esteem, on the other hand, implies self-rejection, self-dissatisfaction, self-contempt. The individual lacks respect for the self he observes. The self-picture is disagreeable and he wishes it were otherwise (p. 31).

These research findings on high and low self-esteem gave an understanding of the child's attitude toward self and provided the framework on which the items pertaining to the attitude of the child to himself on the proposed instrument were based.

Many self-report inventories, including Fey's Acceptance of Self and Acceptance of Others Questionnaire (1957), Fitt's Tennessee Self-Concept Scale (1965), Bown's Self-Report Inventory (1967), and Coopersmith's Self-Esteem Inventory (1957) were based on similar constructs. The dominant themes underlying all were that the self-concept was central to man's behavior and that a positive attitude toward self was of major importance in the development of a well-adjusted, self-accepting, integrated individual.

The constructs underlying the items used for the attitude of the child to school, on the devised instrument, were gleaned from innumerable studies found in the literature. Abramson (1968) believed that from a child's point of view, schools were sometimes considered to be the enemy,

distributing failure or defeat to the very children who needed to experience success the most.

Rosenberg (1965) pointed out that the fierce competitiveness of the school system, by which the superior achievement of one child tended to debase the achievement of another, caused widespread feelings of personal inadequacy. Many children gave up early in school feeling that with no attempt there could be little or no humiliation.

A gradual decrease in professed self-regard with age was reported by Morse (1964). He found that for the young child, school was a secure, supporting place with regard to his mental health but as he grew older his confidence diminished. About 40 per cent of the pupils often felt upset at school, and over 40 per cent often became discouraged in school. The results of a study by Dusewicz (1972) indicated that student attitude toward school was a consistent significant predictor in all three achievement areas studied: reading, language and arithmetic.

Purky (1970) stated:

> . . . the child enters school with his psychological bag of tricks packed with all sorts of ideas about himself and his abilities. However, in spite of this tremendous influence of the primary home environment, the school has a great role to play, as we shall see. Next to the home, the school is the single most important force in shaping the child's self-concept (pp. 39-40).

Purky's book, Self-Concept and School Achievement, was of great value in formulating the items pertaining to

the attitude of the child to school. Chapter IV, "The Task of the Teacher," provided the majority of the ideas behind the items on the child's attitude to his teacher. Purky discussed what the teacher believed about himself, what he believed about his students, the attitudes he conveyed, the atmosphere he created, and the sensitivity he developed. In each area, he listed questions for the teacher to ask himself. As an example, some practical questions about respect and warmth for the teacher to ask himself were:

> Do I arrange some time when I can talk quietly alone with each student? Do I notice and comment favorably on the things that are important to the students? (p. 54).

What Purky was saying to the teacher, amongst other things, was that there are six factors: challenge, freedom, respect, warmth, control, and success, which seemed particularly important in creating a classroom atmosphere conducive to developing positive attitudes in the child, to self, to school and to the teacher.

Instruments which were useful in formulating the items on the attitude to the teacher were the Minnesota Teacher Attitude Inventory (1953) and the Truax Relationship Questionnaire (1967). Among the abundance of studies in the literature, the ones done by Davidson and Lang (1960) and Brookover, Erickson and Joiner (1967) were the most helpful. Davidson and Lang (1960) reported that the children's

perceptions of the teachers' feelings toward them correlated positively and significantly with their self-perception. Also, the more positive the children's perceptions of their teacher's feelings, the better were their academic achievement and behavior in class as rated by the teachers.

Brookover et al. (1967), in their comprehensive study of the self-concept of ability and school success concluded:

> The hypothesis that student's perceptions of the evaluations of their academic ability by others (teachers, parents and friends) are associated with self-concepts of academic ability were confirmed (p. 110).

The theory and research findings on self-concept and self-attitudes cited above formed the basis for the development of the instrument to measure the attitude of the child to himself, to school and to his teacher.

## Instrument Construction

### (a) Item Selection

Shaw and Wright (1967) believed that the success or failure of the attempt to develop an attitude scale was dependent upon the collections of items with which the writer started.

Green (1954) stated:

> . . . the investigator should not lose sight of the fact that a scale is made from items. The initial and basic problem of attitude measurement is to assemble a set of carefully worded, insightful items that cover the area in question (p. 365).

Wylie (1961) wrote that it was necessary to "undertake a slow accumulation of information in regard to reliability and construct validity at the item level, if any clear meaning can be attached to one's measures" (p. 322).

Gardner (1975) stressed the importance of developing attitude scales that contained discernible, underlying theoretical constructs. Otherwise, the items were more properly to be included in an opinion survey. He believed the absence of any theoretical rational made attitude scale theory inapplicable and statistical procedures irrelevant.

A small number of good items was believed by Vernon (1962) to be more easily answered and was likely to discriminate better than a long test. No amount of statistical treatment compensated for poverty in initial choice of statements. Wesman (1971) said a test as a whole was no better than the sum of its parts and a good test was one that was composed of well-written items. These statements were applicable for inventories as well as tests.

Edwards (1957) summarized the criteria for editing statements to be used in the construction of attitude inventories. He stated that items that were ambiguous and irrelevant, referred to the past and that were endorsed by almost everyone or no one, should be avoided; also, double negatives and such words as only, nearly and always. The statements should be simple, short and contain only one thought, preferably in the form of a simple statement.

Thus, in devising the items for the instrument emphasis was placed on the theoretical constructs underlying the items. Items were selected to reflect clear, well-defined theoretical constructs and were worded simply and concisely.

(b) Reliability and Validity

Measurement must be accurate. An instrument to be useful must provide answers which cover that which it was supposed to measure. Cronbach and Meehl (1955) described a good measuring instrument as possessing three major qualities: validity, reliability and usability. Thorndike (1966) and Lindquist (1966) were among the researchers who considered this statement basic. Thorndike defined reliability as a tendency toward consistency from one set of measurements to another. Bohrnstedt (1970) defined validity as indicating the degree to which an instrument measured the construct which was under investigation.

Summers (1970) stated:

> When we plan to measure attitudes we want an instrument which is insensitive to intelligence, social class, tendencies of the respondent to give socially desirable answers, or anything else except attitudes. The instrument must be valid . . . . An instrument must be consistent in the readings it provides when applied to an object which is unchanged; it must be reliable (pp. 21-22).

In a comprehensive study of instruments measuring the phenomenal self it was noted that the majority of them had reliability studies but few had validity studies and

those with validity studies, other than content validity, were very rare.

LaBenne and Greene (1969) believed:

> Most attempts at measurement rely on introspective self-reflections which lack the advantage of an external criterion. One alternative to this method is the use of trained observers who infer the nature of an individual's self-concept by assessing a series of sample behavior (p. 118).

Combs et al. (1963), when using trained observers, reported no significant relationship between the inferred self-concepts of children obtained from observations of their behavior and the self-reports obtained directly from the children.

Studies conducted to determine the consistency and accuracy of teachers' ratings of student behaviors had conflicting results. Barnard, Zimbardo and Sarason (1968) and Feshback (1969) indicated that teachers were not consistent in their overall ratings of student behaviors. Whereas Miller (1972) and Rubin and Krus (1973) reported fairly high test-retest reliability coefficients for teachers who rated student behaviors. Miller's showed a test-retest reliability of .80 and Rubin and Krus, .50.

Piers (1969) compared results from The Way I Feel About Myself Self-Concept Scale and teacher ratings on self-concept of fourth and sixth graders and found correlations ranged from 0.06 to 0.41.

Gordon (1968) conducted a study using three different measurement methods--behavior observation, projective technique and the How I See Myself Scale--and a variety of traits. The traits measured with the How I See Myself scale differed from those measured by the other two methods. Gordon, in his summary of the data indicated that the correlations, although positive and significant, were low.

The following is a brief summary of the reliability and validity of four instruments which were noted earlier in the literature review.

Bown's Self-Report Inventory had a test-retest reliability coefficient of .84. No formal investigations of construct, predictive or concurrent validity were done. The primary validity testing method was that of contrasted groups.

Coopersmith's Self-Esteem Inventory with a sample of 30 fifth grade children had a test-retest reliability after a five week interval of .88. Content validity was the only validity available.

Fey's Acceptance of Self and Acceptance of Others Questionnaire had no information on construct validity. With third year medical students, a split-half reliability for Acceptance of Self was .84 and with 60 freshman medical students, it was .92.

Fitt's Tennessee Self-Concept Scale had test-retest reliability coefficient of .88. Validation procedures, in addition to content validity were: (I) discrimination between groups; (II) correlation with other personality measures; and (III) personality changes under certain conditions.

Wylie (1961) stated that instruments should be developed with suitable known construct validity for indexing the phenomenal field and particularly the phenomenal self. Researchers should not be content with empirical or face validity for self-report or for other measures they use.

Construct validity is demonstrated by factor analysis. Factor analysis as described by Shavelson et al. (1976) arranged a matrix of correlations into clusters among tests or among items on a test. If the test operated as the design suggested, items measuring, for example, academic self-concept should cluster together and should be distinct from a cluster of items on physical self-concept. Bohrnstedt (1971) postulated that items which correlated higher in another cluster probably belonged in that cluster rather than in the one originally chosen.

Kerlinger and Kaya (1959) believed factor analysis to be a logical validity tool. Gardner (1975) considered factor analysis to be a method for allocating items to

scales, for verifying the uniqueness of the various constructs or for reducing the number of scales when some were shown to be redundant.

The reliability and validity studies of the instrument measuring attitudes of the child to self, school and teacher was an important part of this project.

Scaling

In recent years developments in the construction of scales for attitude measurement occurred. Cooper and McNaugh (1963) briefly described the construction of a Likert-type scale as follows:

> Many statements pertaining to a stimulus object are assembled and administered to a group of subjects who designate strong approval, approval, indecision, disapproval or strong disapproval to each. These are assigned numerical values of 5, 4, 3, 2, 1, respectively. Each subject's scale is scored and a correlation for each item with the total score is computed. Those items which have high correlation are retained (p. 255).

In reviewing the literature it was noted that the Likert scale and the Thurstone and Guttman scales were used with adults in the majority of cases. Coopersmith (1957) used "like me-unlike me" for 8 to 10 year olds. A "yes-no" response, qualified by "usually" was chosen for the proposed instrument. The child was asked to check "Yes" if the statement described how he usually felt, and "No" if not. For children in Grades IV to VII, "yes-no" were considered to be simple, direct concepts and to be easy to

grasp without any ambiguities. There was no specific literature found to support this contention.

A survey of the literature pertinent to test construction and to self-concept measurement has been presented.

# CHAPTER III

## INSTRUMENTATION

The purpose of this chapter is to describe the procedures which were followed in the study. It is organized as follows: general design of the study; instrument development which covers items, scoring, form, and student behavior rating form; the sample; administrative procedures; and item selection which discusses item and factor analyses.

### General Design of the Study

The following is an outline of the steps taken in carrying out the project:

1. An initial questionnaire was constructed to measure the attitudes of the 8 to 12 year old child to self, to school and to the teacher. The items were devised from a review of the literature and from consultations with parents, graduate students and educational psychologists.
2. The questionnaire was administered to students from Grade IV to Grade VII, inclusive, in two selected Newfoundland elementary schools, in May, 1976.
3. Through item discrimination and factor analytic

studies, a final 31-item questionnaire was developed.

4. At the end of May the instrument was administered to the same students to obtain a measure of test-retest reliability.

5. Factor analysis of the final scale was done to demonstrate construct validity.

6. Calculations of coefficients of internal consistency were performed.

7. A questionnaire to rate the teacher's perception of specific student behaviors was designed and was completed by the teachers in May. Comparisons were made with the student questionnaire to explore empirical validity.

## Instrument Development

### (a) Items

In developing the questionnaire, items had to be formulated which would denote a positive or a negative attitude to self, school and teacher. These items were devised from various sources:

1. Through conversations with parents, students, teachers and educational psychologists.
2. Through the perusal of other self-concept measures, some of which have been noted in the literature review.

3. Through the reading of articles and books on self-concept and studies done in this area. These have been also noted in the review of the literature.

From a pool of 500 items, 114 were chosen with the assistance of two professors in the Educational Psychology Department. This list was then given to 11 people, who were either professors or graduate students. The items were rated by them according to the following criteria:

1. Does the item measure the child's attitude?
2. Is the item a measure of a positive or negative attitude?
3. Is the item readable by children in the 9 to 12 age group?

Based on the concurrence of the raters, eliminations and changes were made to the items. Eighty items were retained. These were given to four professors for a final perusal. Items that seemed ambiguous or about which there was disagreement were changed. Attention was not only given to content but also to clarity so that the items could be read and understood by students, age 8 to 9 years.

No verification or lie items were included in the questionnaire as the writer was in accord with I.J. Gordon (1966) that any technique for assessing self-concept must be based on the expectation that the subject will answer truthfully. Also, some lie scales

included in inventories were misleading. An example of this was in Coopersmith's Self-Esteem Inventory (1967) where Item No. 6 stated, "I never worry about anything" (p. 265). The child could feel that he was like that usually and be answering truthfully.

(b) Scoring

The questionnaire asked that each student circle the "Yes" or "No" response that was usually most accurate for him or her. Because the items were worded positively and negatively, either "Yes" or "No" could indicate a positive response. For scoring purposes the positive responses were given a value of one. Students with high scores would tend to have positive attitudes to self, school and their teachers.

(c) Form

Three forms of the questionnaire were printed. In one, the items were placed in a structured manner. The subscales cycled in sequence as follows:

2 positive attitudes toward self
1 negative attitudes toward school
1 positive attitudes toward teacher
2 negative attitudes toward self
1 positive attitudes toward school
1 negative attitudes toward teacher

In the other two forms the items were placed by randomization. This was to offset the influence of the response sets, as discussed in the literature review, on the self-reports of students.

The initial questionnaire (Appendix A) consisted of 80 items, designed to measure three factors: attitudes to self, school and teacher. Each factor may be briefly described as follows:

Attitude Toward Self. This scale had 40 items and it assessed how a student thought he was regarded by others, whether he thought he was capable of doing and saying worthwhile things, how confident he was in himself and whether he liked himself.

Attitude Toward School. This scale had 20 items and it focused on whether the student enjoyed school and was interested in schoolwork.

Attitude Toward the Teacher. This scale had 20 items and it ascertained whether the student felt the teacher was sensitive to him and understood him and liked him and whether the student liked the teacher.

(d) Teacher's Perceptions of Student Behavior Rating Form

To determine whether the student's subjective statements were in agreement with an observer's rating, a

questionnaire for the teachers was devised (Appendix B). This consisted of four questions in each category: self, school and teacher. The questions were selected from the student questionnaire to cover the pertinent areas of the instrument. The behaviors which were rated by the teachers were the same as those rated by the students.

The Sample

The sample consisted of 211 students in Grades IV, V, VI and VII from two schools. The schools were selected on the basis of providing two different samples of rural, Newfoundland students in the 8 to 12 age group.

One school, A, was divided into two sections with two separate buildings, Kindergarten to Grade III and Grade IV to Grade VIII. There were eight teachers in the senior division. The classes were small, 25 to 30 students, most of whom lived in the town.

The other school, B, had an enrolment of 414 students and a staff of 16. The classes were large with an average of 41 students. There were two classes of some grades and some classes had split grades. Some students lived in the town, others were bused in from several outlying villages.

The number of students in each grade, in each school is given in Table 1.

TABLE 1

STUDENT COUNT BY GRADE BY SCHOOL

| Grade | School A No. of Students | School B No. of Students | Total |
|---|---|---|---|
| IV | 26 | 36 | 61 |
| V | 24 | 11 | 35 |
| VI | 26 | 26 | 52 |
| VII | 28 | 35 | 63 |
| | | | 211 |

The writer met with the principal and the grade teachers from each school and the purpose of the study and the procedures were outlined.

Administrative Procedures

The questionnaire was administered by the writer. Attention was given to removing any threats of grades associated with the responses which students made. Students were made to feel that there were no right or wrong answers, but rather that this was a survey of their attitudes to be used for research purposes.

Assurance was given to the students that responses would be kept strictly confidential with no teacher involvement. Marking of the responses was carefully explained with particular emphasis on the fact that they must indicate

how they usually feel.

The three forms were given randomly to the subjects. The students marked their responses on the printed forms. The testing period was of sufficient length so that each student could work at his own comfortable rate. This varied from 12 minutes to 45 minutes.

After the questionnaires were completed by the students and collected, each was scored and recorded.

## Item Selection

### (a) Item Analysis

An item analysis was performed on the 80 original items, after administration and scoring of the tests. Biserial Correlations, difficulty levels, and frequency distributions were obtained (Appendix C).

### (b) Factor Analysis

The 80 item initial questionnaire was subjected to principal component analysis. This procedure was recommended by Cattell (1966) who noted that in an n-variable problem there were usually more than n factors operating (p. 204). Therefore, there were usually more discoverable factors than are actually taken out. It was unlikely then, that in an 80 item questionnaire, only three factors would emerge from a factoring of the correlation matrix.

The instrument had been constructed hypothesizing three major attitudes. If this hypothesis was correct, the first three components would account for variance due to these attitudes. In fact, the first three components accounted for 32.1 per cent of the total variance of the items. The first three components were rotated obliquely using the direct oblimin criterion. The rotated factor structure and item communalities are given in Appendix D.

(c) Final Item Selection

The final item selection proceeded first by an elimination of those items showing poor discrimination in item analysis. Next, the rotated factor matrix was examined and the three factors were tentatively identified as self, school and teacher, depending on the content of the items which loaded higher on the oblique factor structure. Since each factor contained examples of each type of item, it was necessary to eliminate some items even though they had loadings higher than .30. Cattell (1966) noted that this phenomenon occurs frequently when the number of true factors is smaller than the number of factors in the factor space (p. 204). Therefore, still operating under the assumption that the hypothesized constructs were responsible for the variance in the first three components, items were eliminated until only those with both appropriate content and loadings above .30 on the corresponding tentative factor remained.

These items became the final version of the test. The attitude toward self scale contained 15 items, attitude toward school had 9 items, attitude toward teacher had 7 items. A total attitude toward self, school and teacher is a composite of the three scales. The items were placed in the questionnaire by randomization to offset any possible "Response Set" although the form of the original 80-item questionnaire had no significant effect on the student responses. The final items selected, as shown in Table 2, became the 31-item questionnaire which is to be called Student Self-Attitude Questionnaire (SSAQ).

TABLE 2

ITEMS SELECTED FOR STUDENT SELF-ATTITUDE QUESTIONNAIRE

| Attitude to | No. on initial Questionnaire | Items |
|---|---|---|
| Self | 4 | I make new friends easily |
| | 6 | I am liked by most people |
| | 10 | I like myself |
| | 11 | I find it difficult to make new friends |
| | 16 | I think my friends listen to me when I talk |
| | 23 | I feel most people are kind to me |
| | 38 | No one seems to understand me |
| | 43 | I think most people are friendly towards me |
| | 53 | My friends usually find me easy to get along with |
| | 54 | My ideas are not very good |
| | 60 | I like learning new things |
| | 62 | I rarely do anything right |
| | 65 | I like doing new things |
| | 73 | I am happy most of the time |
| | 48 | I like people |
| School | 8 | I like to do my homework |
| | 21 | I would rather be home than in school |
| | 24 | I do not care if I fail |
| | 32 | I hate school |
| | 33 | School is great |
| | 39 | I do my school work with excitement |
| | 64 | I wish I did not have to go to school |
| | 69 | I complain about school many times |
| | 35 | I find it hard to keep my mind on my work in school |
| Teacher | 7 | My teacher makes me feel uncomfortable |
| | 34 | My teacher notices when I am feeling sick or unhappy |
| | 42 | I do not like my teacher |
| | 45 | I am not treated fairly by my teacher |
| | 71 | I feel my teacher listens when I talk |
| | 74 | I think my teacher treats me fairly |
| | 80 | I feel my teacher likes me |

# CHAPTER IV

## RELIABILITY AND VALIDITY STUDIES

An important part of this study was to examine the reliability and validity of the questionnaire. This chapter presents the data.

### Descriptive Statistics

| | |
|---|---|
| Test Mean: | 22.52 |
| Test Variance: | 27.00 |
| Test S.D.: | 5.19 |

The means, standard deviations and correlations of item responses in the 31-item questionnaire are shown in Appendix E.

### Reliability of the Final Questionnaire

Thorndike (1966) defined reliability as the accuracy or precision with which a measure based on one sample of test tasks at one point in time represented performance based on a different sample of the same kind of tasks or a different point of time or both. Accuracy may be expressed by a reliability coefficient or by the standard error of measurement. He defined the reliability coefficient as the correlation coefficient between two equivalent measurements. In this study, the measurements were two applications of the same test.

The test-retest reliability of the 31-item test, over a three week interval with 211 students, was .42. The reliability of the self scale was .29; the school scale, .17; the teacher scale, .29.

The stable rank orderings of students on total scores were indicated by the internal consistency coefficients as measured by the Kuder-Richardson -20 formula. The K.R. -20 for the self scale was .64; the school scale, .56; the teacher scale, .42.

## Validity of the Final Questionnaire

### (a) Content Validity

Content validity was a function of item preparation and selection as discussed previously in Chapter III in the sections on items and item selection.

Three distinct factors, attitudes to self, school and teacher were desired. As previously stated, the attitude toward self focused on how a student thought he was regarded by others, whether he was capable of doing and saying worthwhile things, how confident he was and whether he liked himself. The attitude toward school focused on whether he enjoyed school and was interested in school work. The attitude toward the teacher focused on whether he felt the teacher was sensitive to him and understood him and liked him, and whether he liked the teacher. The items were

developed to correspond to these factors and to probe the student's feelings in these areas.

The 31 item test had 15 items measuring attitudes to self, 9 items measuring attitudes to school, and 7 items measuring attitudes to the teacher.

(b) Empirical Validity

A Teacher Perception of Student Behavior form was prepared, consisting of 12 items, four in each area of self, school and teacher (Appendix B). These items were chosen from the student's attitude questionnaire as being representative of students' feelings.

Ten students in each grade in the sample were selected randomly by the writer. Their teachers were asked to rate each of them individually on the items. There was a total of 7 teachers and 78 students.

The correlation of the final test with the teachers' ratings was .25. The correlation of the attitude to self was .24, the attitude to school was .11, and the attitude to teacher was .10.

The tetrachoric correlations of teacher and student responses for each item are contained in Table 3.

(c) Construct Validity

The process of determining construct validity is fundamentally a process of showing that an hypothesized

TABLE 3

TETRACHORIC CORRELATIONS FOR EACH ITEM FOR TEACHERS' AND STUDENTS' RESPONSES

| Items | Teacher's Question | Tetrachoric r |
|---|---|---|
| 9 | Does this student get upset easily when things go wrong? | -.064 |
| 1 | Does this student think his ideas are good? | .331 |
| 10 | Does this student "like himself"? | -1.0 |
| 43 | Are most people friendly towards this student? | .189 |
| 78 | Does this student like going to school? | .650* |
| 12 | Is this student nervous when he does tests? | .045 |
| 39 | Does this student do his work with excitement? | .173 |
| 35 | Does this student find it difficult to keep his mind on his work when in school? | .158 |
| 74 | Does this student think his teacher treats him fairly? | .244 |
| 80 | Does this student think his teacher likes him? | .677* |
| 36 | Does this student think his teacher is "great"? | .110 |
| 72 | Does this student enjoy seeing his teacher outside of school? | .198 |

*In the self-attitude items none of the tetrachoric correlations were significant and only one each in the school and teacher attitude items was significant.

underlying conceptual structure is present in a set of variables. In this case, the hypothesized structure of the 31-item questionnaire had three correlated factors, one related primarily to the self-attitude items, the second related to the school-attitude item and the third related to the teacher-attitude items. Because of the hypothesized correlated nature of the factors, it was hypothesized further that each item of the scale was related to all of the factors, even though the exact nature of the relationship was not predicted. It was seen that the actual hypothesized model was rather imprecise and would certainly not lend itself well to statistical treatment.

The 31-item questionnaire was factor analyzed using a principal factor procedure, specifying the extraction of three factors. The resulting factor solution and communalities are shown in Table 4.

The next step in the procedure was to plot the position of each item in the three factor space. These plots can be seen in Figures 2, 3, 4. It can readily be seen that three distinct clusters of items emerged as a result of factoring. The plots in Figures 2, 3, and 4, were coded according to the hypothesized scale of the items. The plots obtained strongly suggest that the items clustered according to their hypothesized scales.

In order to provide a numerical description of the factors, the centroid of each hypothesized item cluster was

TABLE 4

UNROTATED FACTOR MATRIX AND COMMUNALITIES FOR FINAL ITEMS

| Item No. | Factor I | Factor II | Factor III | $h^2$ |
|---|---|---|---|---|
| 4 | .42 | -.30 | .16 | .29 |
| 6 | .47 | -.15 | .12 | .26 |
| 7 | .26 | .02 | .29 | .15 |
| 8 | .25 | .17 | .51 | .35 |
| 10 | .24 | -.59 | .20 | .44 |
| 11 | .45 | -.22 | .09 | .26 |
| 16 | .30 | -.45 | .14 | .31 |
| 21 | .30 | -.39 | .38 | .39 |
| 23 | .48 | -.08 | -.07 | .24 |
| 24 | .18 | .49 | .04 | .27 |
| 32 | .65 | -.03 | .20 | .46 |
| 33 | .50 | .48 | .30 | .57 |
| 34 | .32 | .29 | .21 | .23 |
| 35 | .39 | .47 | .43 | .55 |
| 38 | .53 | -.08 | -.07 | .30 |
| 39 | .14 | .50 | .17 | .30 |
| 42 | .26 | .23 | .41 | .29 |
| 43 | .53 | -.08 | -.33 | .40 |
| 45 | .24 | .36 | -.41 | .36 |
| 48 | .30 | -.44 | .39 | .43 |
| 53 | .30 | -.27 | .13 | .18 |
| 54 | .43 | -.16 | .03 | .21 |
| 60 | .57 | -.19 | -.04 | .37 |
| 62 | .49 | .04 | -.18 | .25 |
| 64 | .46 | .15 | .22 | .28 |
| 65 | .23 | -.26 | -.01 | .12 |
| 69 | .53 | .16 | .21 | .34 |
| 71 | .38 | .05 | -.61 | .52 |
| 73 | .48 | -.11 | -.24 | .30 |
| 74 | .41 | .14 | -.32 | .30 |
| 80 | .45 | .06 | -.14 | .23 |

Note: Principal factor solution accounting for 32.1% of total variance.

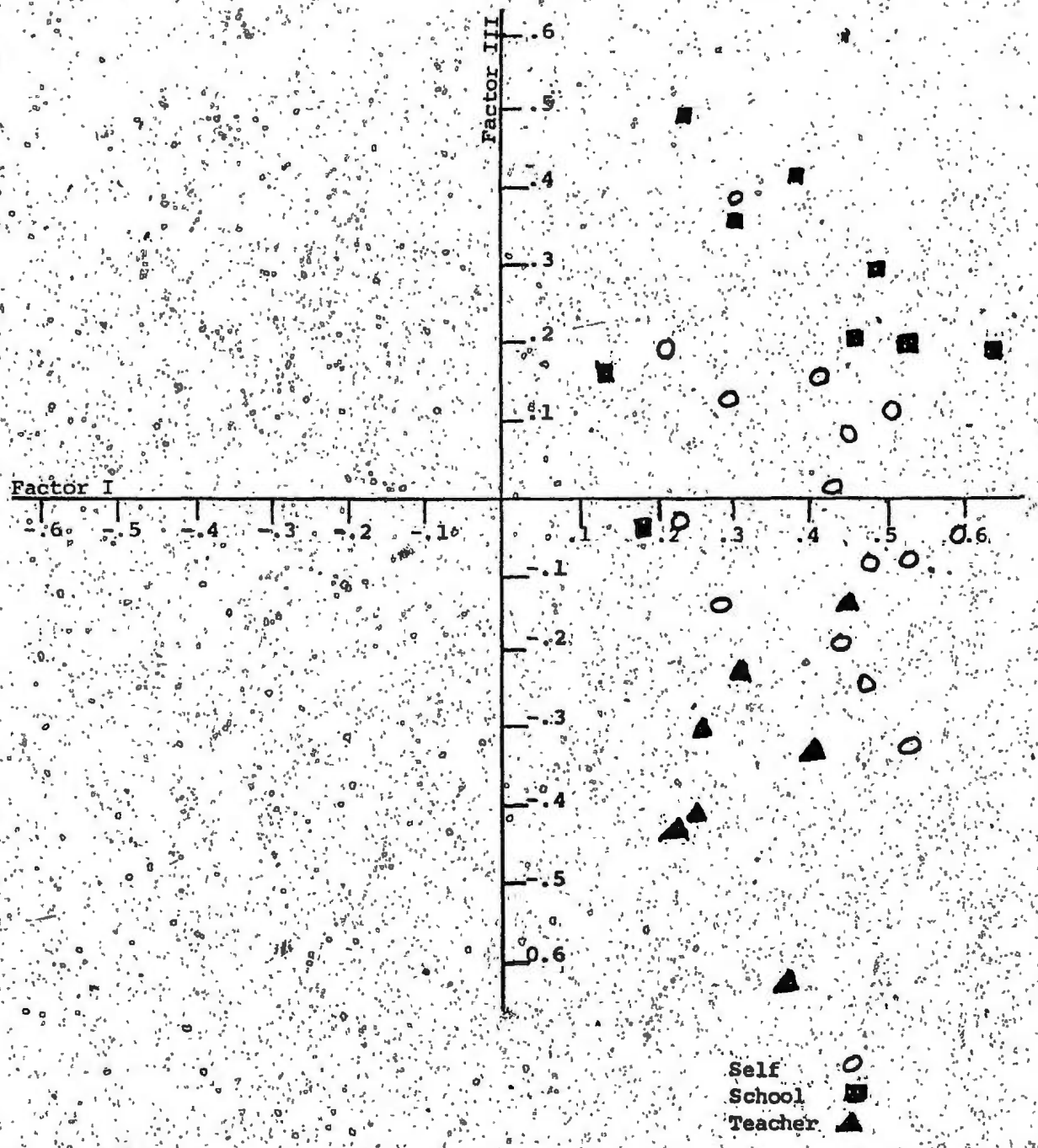


Figure 2. Position of each item of 31-item questionnaire--Student Self-Attitude Questionnaire--in Factor I and III space.

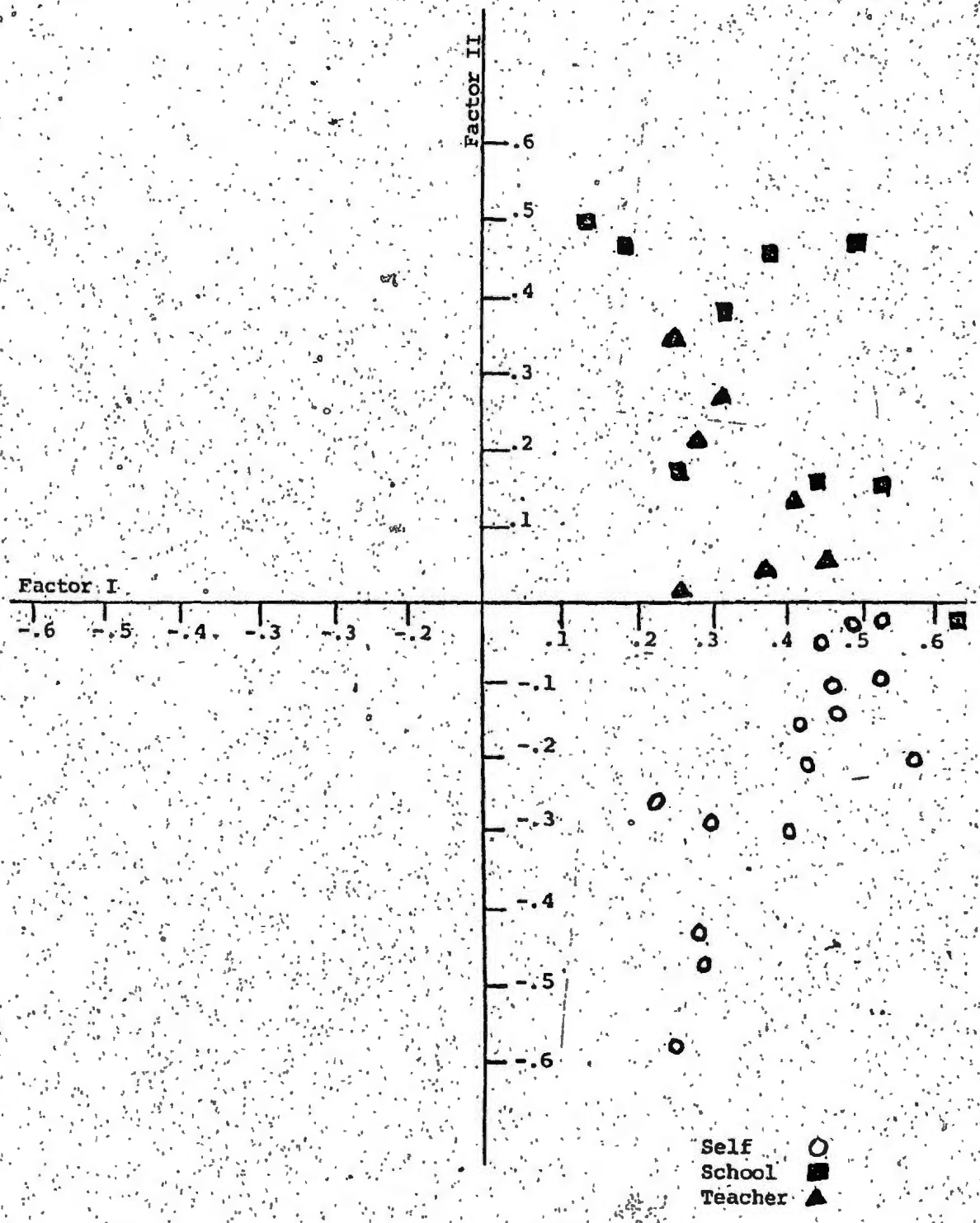


Figure 3. Position of each item of 31-item questionnaire--Student Self-Attitude Questionnaire--in Factor I and II space.

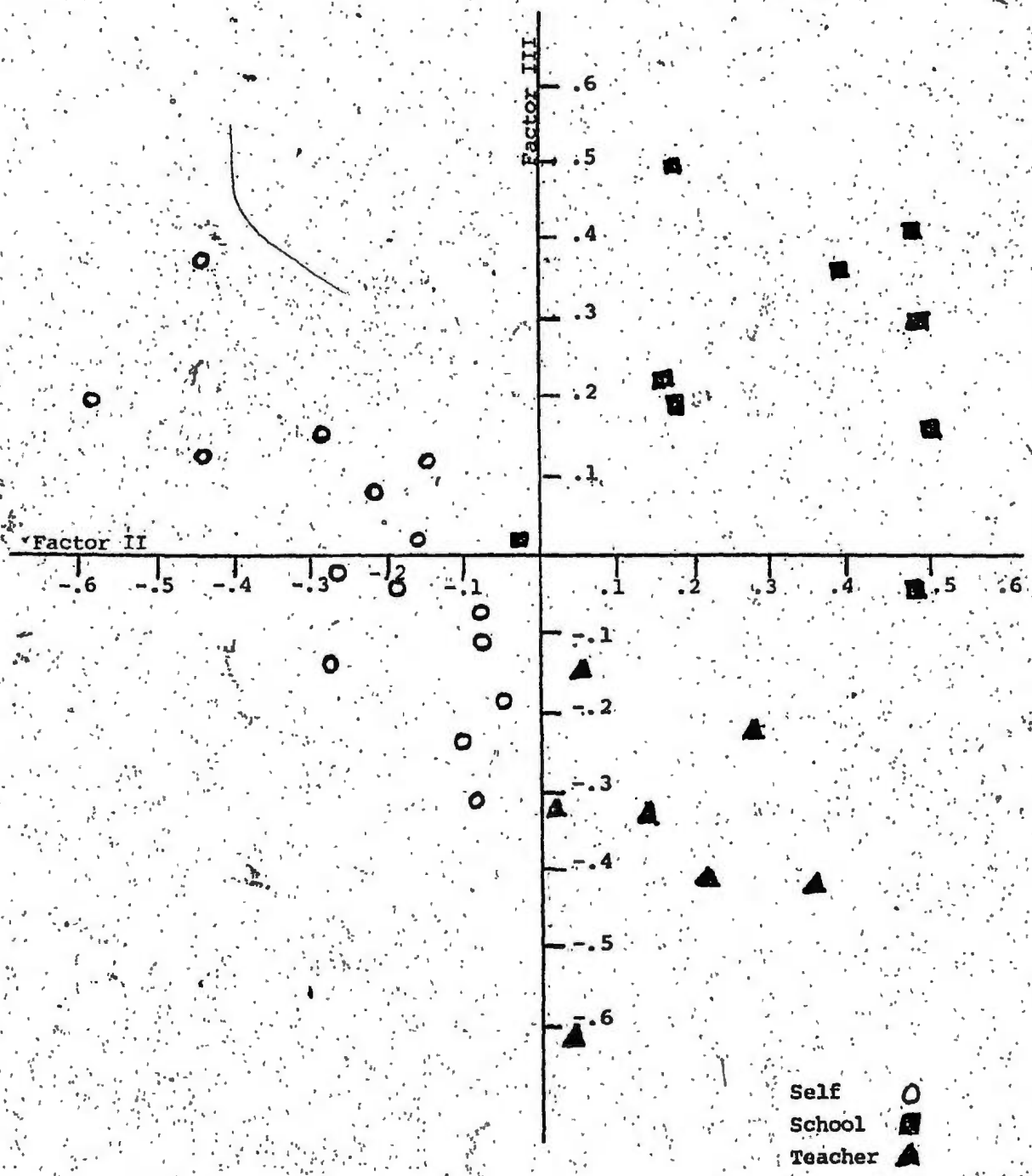


Figure 4. Position of each item in 31-item questionnaire--Student Self-Attitude Questionnaire--in Factor II and Factor III space.

found, using a procedure described by Harmon (1967). These centroids are rotated factor axes. The correlations between factors are given in Table 5. The factor pattern and structure are shown in Tables 6 and 7. They were consistent with the hypothesized structure of each factor.

TABLE 5

PRIMARY FACTOR CORRELATION MATRIX

| | | Factor | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| Factor | 1 | 1.0000 | 0.3955 | 0.4783 |
| | 2 | 0.3955 | 1.0000 | 0.3803 |
| | 3 | 0.4783 | 0.3803 | 1.0000 |

TABLE 6

PRIMARY FACTOR STRUCTURE MATRIX

| Sub-Scale | Item No. in 80-Item Initial Questionnaire | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|---|
| Self | 4 | 0.4590 | 0.2007 | 0.1122 |
| | 6 | 0.4345 | 0.2805 | 0.1979 |
| | 10 | 0.4386 | -0.0385 | -0.1152 |
| | 11 | 0.4442 | 0.2220 | 0.1821 |
| | 16 | 0.4163 | 0.0041 | 0.0077 |
| | 23 | 0.4188 | 0.2498 | 0.3216 |
| | 38 | 0.4704 | 0.2862 | 0.3608 |
| | 43 | 0.4796 | 0.1960 | 0.5078 |
| | 53 | 0.3347 | 0.0323 | 0.1857 |
| | 54 | 0.4089 | 0.2153 | 0.2192 |
| | 60 | 0.5524 | 0.2733 | 0.3442 |
| | 62 | 0.3884 | 0.2136 | 0.3738 |
| | 65 | 0.2777 | 0.0332 | 0.0893 |
| | 73 | 0.4326 | 0.1776 | 0.4065 |
| | 48 | 0.4272 | 0.1382 | -0.1409 |
| School | 8 | 0.1412 | 0.4109 | -0.0558 |
| | 21 | 0.1010 | 0.5187 | 0.0993 |
| | 24 | 0.0327 | 0.3081 | 0.2538 |
| | 32 | 0.5655 | 0.5005 | 0.3113 |
| | 33 | 0.2229 | 0.7171 | 0.2996 |
| | 39 | 0.0738 | 0.3602 | 0.1285 |
| | 64 | 0.3158 | 0.4356 | 0.2227 |
| | 69 | 0.3739 | 0.4937 | 0.2730 |
| | 35 | 0.1336 | 0.6737 | 0.1480 |
| Teacher | 7 | 0.1981 | 0.0728 | 0.3012 |
| | 34 | 0.1503 | 0.2528 | 0.3780 |
| | 42 | 0.1278 | 0.1302 | 0.4310 |
| | 45 | 0.0560 | 0.1690 | 0.4671 |
| | 71 | 0.3026 | 0.0389 | 0.6259 |
| | 74 | 0.2814 | 0.2216 | 0.4691 |
| | 80 | 0.3409 | 0.2735 | 0.3746 |

TABLE 7

PRIMARY FACTOR PATTERN

| Sub-Scale | Item No. in 80-Item Initial Questionnaire | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|---|
| Self | 4 | 0.5096 | 0.0575 | -0.1534 |
| | 6 | 0.4020 | 0.1395 | -0.0474 |
| | 10 | 0.6859 | -0.1651 | -0.3804 |
| | 11 | 0.4442 | 0.0677 | -0.0561 |
| | 16 | 0.5604 | -0.0918 | -0.2254 |
| | 23 | 0.3248 | 0.0680 | 0.1404 |
| | 38 | 0.3630 | 0.0836 | 0.1554 |
| | 43 | 0.3287 | -0.0787 | 0.3805 |
| | 53 | 0.3558 | -0.1337 | 0.0664 |
| | 54 | 0.3776 | 0.0600 | 0.0158 |
| | 60 | 0.4906 | 0.0439 | 0.0928 |
| | 62 | 0.2671 | 0.0168 | 0.2397 |
| | 65 | 0.3275 | -0.0827 | -0.0358 |
| | 73 | 0.3237 | -0.0539 | 0.2722 |
| | 48 | 0.6222 | 0.0689 | -0.4646 |
| School | 8 | 0.0835 | 0.4843 | -0.2799 |
| | 21 | -0.0928 | 0.5854 | -0.0790 |
| | 24 | -0.2882 | 0.3193 | 0.2701 |
| | 32 | 0.4574 | 0.3350 | -0.0301 |
| | 33 | -0.0989 | 0.7298 | 0.0693 |
| | 39 | -0.2966 | 0.4381 | 0.1038 |
| | 64 | 0.1695 | 0.3679 | 0.0017 |
| | 69 | 0.2033 | 0.4050 | 0.0218 |
| | 35 | -0.1273 | 0.7537 | -0.0777 |
| Teacher | 7 | 0.0898 | -0.0713 | 0.2854 |
| | 34 | -0.0803 | 0.1475 | 0.3603 |
| | 42 | -0.0973 | -0.0151 | 0.4833 |
| | 45 | -0.2301 | 0.0473 | 0.5591 |
| | 71 | 0.0738 | -0.2512 | 0.6861 |
| | 74 | 0.0644 | 0.0345 | 0.4253 |
| | 80 | 0.1798 | 0.1083 | 0.2474 |

# CHAPTER V

## CONCLUSIONS AND RECOMMENDATIONS

### Summary

In a previous chapter an attitude was defined as an underlying disposition which enters, along with other influences, into the determination of a variety of behaviors toward an object or group of objects, including statements of beliefs about the object and approach-avoidance actions with respect to it (Cook & Sellitz, 1964).

A person's self-attitude is important in determining other attitudes that he might have, because attitudes are determined through the interaction of the self with others and with the environment. Thus, it was important that the proposed scale to measure attitudes of children sample their feelings about self, the significant others in school--teachers--and the environmental or institutional factors of school. Because of the hypothesized interaction of these factors, they should appear interrelated in the final scale, justifying the use of a single total score.

In the previous chapter, reliability and validity studies conducted on the instrument under development were reported. The data were taken from a sample of 211 students age 8 to 12 years, and can be considered representative of

children in a more rural setting in the Province of Newfoundland. The question of most concern is the generalizability of the reported findings, in particular, those supporting the construct validity of the questionnaire.

Comparison with Other Questionnaires

A major factor in determining the usefulness of the measure is its comparison with other similar instruments, particularly in the area of purpose, item construction and construct validity.

Coopersmith's, Sear's, Gordon's and Piers-Harris' instruments are self-report measures of self-concept and they have been used for comparison because other self-attitude scales in the literature lack reliability and validity studies with the exception of content validity. The Student Self-Attitude Questionnaire (Appendix F) is similar to those instruments in that it is based on self-concept theory.

(a) Item Make-Up

A comparison of available sub-scales is shown in Table 8. As can be seen, most instruments tend to have more items covering a broader range of constructs than the one developed in this study.

The Student Self-Attitude Questionnaire differs from the other self-concept measures in that the items were constructed to measure specifically attitudes to self, school and teacher. Some areas measured in other instruments were

TABLE 8

COMPARISON OF INSTRUMENTS MEASURING SELF-CONCEPT WITH THE DEVISED ATTITUDE QUESTIONNAIRE

| Sub-Scales | No. of Items | Internal Consistency | Test-Re-test | Predictive Validity | Construct Validity |
|---|---|---|---|---|---|
| **Instrument: Coopersmith Self-Esteem Inventory (S.E.I.)** | | | | | |
| Peers | 8 | .28 - .82 for first four sub-scales | .88 over 5 week | Unknown | Dyer using multitrait-multimethod analysis found lack of construct validity |
| Parents | 8 | | | | |
| School | 8 | | | | |
| Personal Interests | 26 | | | | |
| Lie | 8 | | | | |
| Total | 58 | | | | |
| **Instrument: Sears Self-Concept Inventory (S.C.I.)** | | | | | |
| Physical Ability | 10 | .56 - .89 for nine sub-scales in revised 48-item scale | .50 for 6 month for total score of revised form | Correlation with teacher and peer ratings suggest interpretations of sub-scale scores as separate facets of self-concept are uncertain | Factor Analysis, using principal components method with varimax rotation, showed clustering on one factor, "generalization." Torshen, imposing Sear's ten-subarea structure and testing the goodness of fit, found separate but correlated factors corresponding to each of the 10 sub-areas |
| Mental Ability | 10 | | | | |
| School Relations with - | | | | | |
| Same Sex | 10 | | | | |
| Opposite Sex | 10 | | | | |
| Teacher | 10 | | | | |
| Work Habits | 10 | | | | |
| Happy Qualities | 10 | | | | |
| Attractive Appearance | 10 | | | | |
| Social Virtues | 10 | | | | |
| School Subjects | 10 | | | | |
| Total | 100 | | | | |

TABLE 8 (Continued)

| Sub-Scales | No. of Items | Internal Consistency | Test-Re-test | Predictive Validity | Construct Validity |
|---|---|---|---|---|---|
| **Instrument: Gordon How I See Myself Scale (H.I.S.M.)** | | | | | |
| Physical-School Physical Appearance | 6 8 | Not reported | .62 - .82 for 2 weeks for total score | Correlations with behavior observation and projective technique were not reported for most of the traits. Gordon indicated that correlations, although positive and significant were generally low. | Yeatts' factor analysis study found items loading on 5 factors with other factors emerging depending on, grade and age. Composition of items within factors sometimes curious and same item may be incorporated into several factors. |
| Interpersonal Adequacy | 17 | | | | |
| Autonomy | 9 | | | | |
| Academic Adequacy | 6 | | | | |
| Physical Adequacy | 4 | | | | |
| Emotions | 4 | | | | |
| Social Factor | 5 | | | | |
| Language Adequacy | 6 | | | | |
| Total | 80 | | | | |
| **Instrument: Piers-Harris Children's Self Concept Scale, The Way I Feel About Myself (W.I.F.A.M.)** | | | | | |
| Behavior | 18 | .78 - .93 for 95 items total score. Reliability coefficients for "cluster scores" are not reported. | .71 - .72 for 95 item for 4 months | Correlation with teacher ratings ranged .06 - .41; with peer ratings .26 - .49 | Factor analysis of 80 items showed 10 factors accounting for 42% of total variance. 6 were large enough to be interpretable. In the absence of some conceptual structure it is uncertain, if observed variables are ones to be expected. Insufficient data to determine whether scores on separate factors have separate interpretation. |
| Intellectual and school status | 18 | | | | |
| Physical Appearance and Attributes | 12 | | | | |
| Anxiety | 13 | | | | |
| Popularity | 12 | | | | |
| Happiness and Satisfaction | 9 | | | | |
| Total (Revised from 95) | 90 | | | | |

TABLE 8 (Continued)

| Sub-Scales | No. of Items | Internal Consistency | Test-Re-test | | Predictive Validity | | Construct Validity |
|---|---|---|---|---|---|---|---|
| Instrument: Brokenshire Student Self-Attitude Questionnaire (S.S.A.Q.)* | | | | | | | |
| Self | 15 | .6427 | .2843) | 3-week interval | .2442) | correlation with teacher ratings on 12 items | Factor analysis procedure indicated presence of construct validity |
| School | 8 | .5615 | .1679) | | .1143) | | |
| Teacher | 7 | .4284 | .2894) | | .0976) | | |
| Total | 31 | .7802 | .4161) | | .2528) | | |

*Comprehensive account of validity and reliability in Chapter IV.

excluded. As an example, there were no items on the questionnaire exploring the student's attitude to home or family. It was felt that such items may be perceived as intruding on privacy, particularly, as one of the aims of the study was to develop an instrument which could be used locally. Neither does the questionnaire include any items related to academic subjects.

In looking at Table 8 it can be seen that the Student Self-Attitude Questionnaire has 31 items as compared to a range of 58 to 100, in the others. Thus, it would not be as time-consuming to administer. Also, the student faced with a shorter questionnaire may be inclined to give more consistent, self-searching answers. Although there were no data to support this statement, many researchers were in agreement that a small number of good items are more easily answered and was likely to discriminate better than a long test (Vernon, 1962; Wesman, 1971).

(b) Construct Validity

While the instrument being developed is weak in not having a cross validated construct validity, a factor analysis procedure has indicated the presence of the construct in the study sample. Furthermore, this construct is the one which was required in the instrument specifications. None of the instruments selected for comparison purposes has this characteristic. Their literature has two faults. Either there

is no reported construct validity for the instrument, or, the instruments' constructs emerge as a result of the factor analysis and thus might be considered exploratory and non-confirmatory of the underlying theoretical structures being measured. The comparison is shown in Table 8.

(c) Reliability

The internal consistencies for sub-scales were not reported by Gordon or Piers-Harris. As seen by Table 8, those reported by Coopersmith and Sears were in the same range as the Student Self-Attitude Questionnaire. Only Piers-Harris reported a total scale internal consistency and this was the same as the Student Self-Attitude Questionnaire. Self-attitudes are not easy factors to measure. Students may be not only unwilling but may be unable to report their private attitudes and feelings. Also, social expectancy, response sets and test rapport can distort the results.

The test-retest reliability over a three-week period is considerably lower than all other instruments except the SCI, as can be seen in Table 8. One factor is almost certainly the fact that the scale under development has a smaller number of items. It also must be remembered that if test-retest studies are to be considered a good indicator of measurement error, the stability of the attitudes being measured must be assumed. In this age group such an assumption would not seem warranted for the attitudes being

measured. At least, day to day fluctuation would be expected, even given an underlying stable trend.

The measures of internal consistency, relating to the reliability at the time of measurement, would appear to be most defensible, even if not sufficient. The theoretical construct needs to be elaborated to include an estimate of its stability before further reliability studies can be interpreted.

(d) Empifical Validity

An external criterion of the attitudes being measured has proved to be elusive. Either no empirical studies of validity for other instruments have been reported, or they have been inconclusive, as can be seen in Table 8. This is true, as well, for the instrument being developed. Correlations between the teacher's rating of the student's behavior and the student's self-report rating are low. This indicates that students and teacher do not respond in the same way to the same stimulus. It would seem to involve the issue raised earlier concerning the proper source of self-information.

It is probably that the items used to describe the behaviors are not equivalent in their connotations to the teachers and the student. "Upset easily" may not connote the same thing for the student as for the teacher. There may be inconsistency in answering on both the part of the teacher and the student. Error is compounded when the degree

of error on the student's part and the degree of error on the teacher's part are both considered.

The teacher may not be assessing the student's true attitudes correctly. His own attitudes could be influencing his perceptions of the student. He could be focusing on a specific incident which could color his assessment of other behaviors. His observations may not describe classroom behavior precisely. On the other hand, the student may not indicate his true attitudes on the self-report measure.

It is difficult to verify that measures of the same variable, observed by two different individuals, using similar instruments are actually measuring the same thing. Another person, attempting to describe someone else's self, can only approximate the "real" self through inferences based on observed behavior (Combs & Soper, 1957). By observing the behavior, the nature of the attitudes is inferred. However, it is only an inference, an approximation.

## Recommendations for the Use of the Questionnaire

In deciding the use to which a measure may be put, a comparison with other instruments suggests that the Student Self-Attitude Questionnaire may provide measurement of constructs which vary from those measured by other instruments. In general, its internal consistency is comparable. It claims the same level of test-retest reliability. It has a shorter format.

The critical consideration would appear to be reliability, and it must be noted that none of the measures being considered have reliabilities generally considered adequate for use with individuals.

One criteria to apply in testing the adequacy of test reliability has been offered by Kelly (1927). He recommended that reliability should be .94 in order to evaluate the level of individual accomplishment. Thus, use of the measure with individuals is not justified. However, with a reliability of .42 and an internal consistency of .78 the measure would appear to be useful to estimate group attitudes toward school at the time of measurement.

Recommendations for Further Research

1. Further reliability studies should be conducted on the Student Self-Attitude Questionnaire.
2. The questionnaire should be given to a different sample of students and the resulting factor structure should be compared with the factor structure of the original sample.
3. A study should be conducted administering the Student Self-Attitude Questionnaire and other self-concept instruments, for example, Coopersmith, Sears, Gordon and Piers-Harris, to the same group of students. A comparison and analysis of the factor structure should be made.

4. A study should be carried out to administer the questionnaire to two different groups, clinically identified with high and low self-concept and to examine the ability of the instrument to discriminate.
5. A study should be conducted to assess the relationship between positive and negative attitudes as measured by the questionnaire and the reporting of such psychomatic indicators of anxiety as trouble getting to sleep, sick headaches, nail biting, palm sweating, and fainting spells.
6. A study of stability over time should be made.
7. Confirmatory factor analysis should be performed using the correlations of the 31 variables which are presented in Appendix E.
8. A study should be carried out to determine on what a teacher bases her judgment when she rates a student's self-attitudes.

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# APPENDIX A

# APPENDIX A

## SELF-ATTITUDE QUESTIONNAIRE

### FORM A

Please fill in the following information:

NAME _____

| | Male | Female |
|---|---|---|
| SEX | _____ | _____ |

AGE _____

SCHOOL _____

GRADE _____

TEACHER'S NAME _____

## Directions

Please mark each statement in the following way:

If the statement describes how you USUALLY feel or think, circle the word YES in the column beside the statement.

If the statement does not describe how you USUALLY feel or think, circle the word NO in the column beside the statement.

There is no right or wrong answer for any statement. The best answer is what you feel is USUALLY true of yourself.

Example:

1. I think my friends listen to me when I talk. Yes No

Circle Yes if the above statement is usually true for you.

Circle No if the above statement is usually not true for you.

1. I feel my ideas are good . . . . . Yes No
2. I am glad I am me . . . . . Yes No
3. I think my teacher smiles a lot . . . . . Yes No
4. I make new friends easily . . . . . Yes No
5. I think I can ask my teacher almost anything . Yes No
6. I am liked by most people . . . . . Yes No
7. My teacher makes me feel uncomfortable . . . . Yes No
8. I like to do my homework . . . . . Yes No
9. I get upset when things go wrong . . . . . Yes No
10. I like myself . . . . . Yes No
11. I find it difficult to make new friends . . . Yes No
12. I am terrified when we have tests . . . . . Yes No
13. I feel that my teacher picks on me in class. . Yes No
14. Many times I feel unhappy . . . . . Yes No
15. School is very boring for me . . . . . Yes No
16. I think my friends listen to me when I talk. . Yes No
17. I feel I cannot trust my teacher . . . . . Yes No
18. I wish I were someone else . . . . . Yes No
19. I can make up my mind easily . . . . . Yes No
20. My teacher really understands me . . . . . Yes No
21. I would rather be home than in school . . . . Yes No
22. I am pleased that I learn a lot in school. . . Yes No
23. I feel most people are kind to me . . . . . Yes No
24. I do not care if I fail . . . . . Yes No
25. I like to see my teacher . . . . . Yes No
26. To me school is like a jail . . . . . Yes No

27. I am hard to get along with . . . . . Yes No

28. I feel happy because my teacher likes me. . . Yes No

29. I think my teacher does not like me . . . . . Yes No

30. My school is a nice place to be . . . . . Yes No

31. I am not sure of myself . . . . . Yes No

32. I hate school . . . . . Yes No

33. School is great . . . . . Yes No

34. My teacher notices when I am feeling sick or unhappy . . . . . Yes No

35. I find it hard to keep my mind on my work in school . . . . . Yes No

36. My teacher is great . . . . . Yes No

37. I am proud of my school work . . . . . Yes No

38. No one seems to understand me . . . . . Yes No

39. I do my school work with excitement . . . . . Yes No

40. It bothers me if my friends talk about me behind my back . . . . . Yes No

41. I think I do as well in my school work as my friends . . . . . Yes No

42. I do not like my teacher . . . . . Yes No

43. I think most people are friendly towards me . . . . . Yes No

44. My teacher does not know how I feel . . . . . Yes No

45. I am not treated fairly by my teacher . . . . Yes No

46. It is always my fault when something goes wrong . . . . . Yes No

47. It is easy for me to make up my mind . . . . Yes No

48. I like people . . . . . Yes No

49. I only go to school because my parents make me go . . . . . Yes No

50. I change my mind often . . . . . Yes No

51. I am proud of my school . . . . . Yes No

52. My teacher is usually not very interested in what I say . . . . . Yes No

53. My friends usually find me easy to get along with . . . . . Yes No

54. My ideas are not very good . . . . . Yes No

55. My feelings are easily hurt . . . . . Yes No

56. I worry about what people think of me . . . . Yes No

57. At times I think I am no good at all . . . . Yes No

58. I feel good when teachers ask me questions in class . . . . . Yes No

59. I do my school work just to get it over with . . . . . Yes No

60. I like learning new things . . . . . Yes No

61. It often seems that I have no fun . . . . . Yes No

62. I rarely do anything right . . . . . Yes No

63. I dislike having to do things that are expected of me . . . . . Yes No

64. I wish I did not have to go to school . . . Yes No

65. I like doing new things . . . . . Yes No

66. I think I am as smart as most people in school . . . . . Yes No

67. My teacher does not really care if I get my work right . . . . . Yes No

68. I am not able to do many of the things I would like to do . . . . . Yes No

69. I complain about school many times . . . . . Yes No

70. My friends trust me . . . . . Yes No

71. I feel my teacher listens when I talk . . . . . Yes No

72. I enjoy seeing my teacher outside of school . . Yes No

73. I am happy most of the time . . . . . Yes No

74. I think my teacher treats me fairly when I do something wrong . . . . . Yes No

75. At times I think I am no good at all . . . . . Yes No

76. I do my school work as well as I can do it . . Yes No

77. Most times, I am sure of myself . . . . . Yes No

78. Most times, I like going to school . . . . . Yes No

79. I try to get good marks in all my school subjects . . . . . Yes No

80. I feel my teacher likes me . . . . . Yes No

Note 1: The response which is underlined in each item denotes a positive attitude.

Note 2: Items related to

self: 1, 2, 4, 6, 9, 10, 11, 12, 14, 16, 18, 19, 23, 27, 31, 37, 38, 40, 43, 46, 47, 48, 50, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 65, 66, 68, 70, 73, 75, 77.

school: 8, 15, 21, 22, 24, 26, 30, 32, 33, 35, 39, 41, 49, 51, 59, 64, 69, 76, 78, 79.

teacher: 3, 5, 7, 13, 17, 20, 25, 28, 29, 34, 36, 42, 44, 45, 52, 67, 71, 72, 74, 80.

# APPENDIX B

# APPENDIX B

## Teacher Perception of Student Behavior Rating Form

Teacher_____ Student_____ Grade_____

Please mark each question in the following manner:

If the question indicates the way in which you perceive how the student usually behaves or feels, circle the word YES in the column beside the question. If not, circle NO.

| | | |
|---|---|---|
| 1. Does this student get upset easily when things go wrong? | Yes | No |
| 2. Does this student think his ideas are good? | Yes | No |
| 3. Does this student "like himself"? | Yes | No |
| 4. Are most people friendly towards this student? | Yes | No |

Comments:

| | | |
|---|---|---|
| 5. Does this student like going to school? | Yes | No |
| 6. Is this student nervous when he does tests? | Yes | No |
| 7. Does this student do his school work with excitement? | Yes | No |
| 8. Does this student find it difficult to keep his mind on his work when in school? | Yes | No |

Comments:

| | | |
|---|---|---|
| 9. Does this student think his teacher treats him fairly? When he does something wrong? | Yes | No |
| 10. Does this student think his teacher likes him? | Yes | No |

11. Does this student think his teacher is "great"? Yes No

12. Does this student enjoy seeing his teacher outside of school? Yes No

Comments:

# APPENDIX C

# APPENDIX C

## Item Discrimination Data for 80 Item Initial Questionnaire

| Item No. | % No | # Yes | Biserial r |
|---|---|---|---|
| 1 | 29.81 | 70.19 | .351 |
| 2 | 6.64 | 93.36 | .549 |
| 3 | 18.01 | 81.99 | .567 |
| 4 | 27.96 | 72.04 | .529 |
| 5 | 30.81 | 69.19 | .334 |
| 6 | 26.67 | 73.33 | .605 |
| 7 | 28.23 | 71.77 | .323 |
| 8 | 30.62 | 69.38 | .338 |
| 9 | 39.42 | 60.58 | .383 |
| 10 | 24.76 | 75.24 | .333 |
| 11 | 25.84 | 74.16 | .519 |
| 12 | 35.41 | 64.59 | .376 |
| 13 | 19.52 | 80.48 | .454 |
| 14 | 46.45 | 53.55 | .250 |
| 15 | 36.19 | 63.81 | .552 |
| 16 | 26.54 | 73.46 | .301 |
| 17 | 18.18 | 81.82 | .423 |
| 18 | 13.74 | 86.26 | .317 |
| 19 | 27.49 | 72.51 | .357 |
| 20 | 17.62 | 82.38 | .544 |
| 21 | 18.75 | 81.25 | .405 |
| 22 | 29.05 | 70.95 | .319 |
| 23 | 23.44 | 76.56 | .604 |
| 24 | 26.67 | 73.33 | .346 |
| 25 | 32.06 | 67.94 | .536 |
| 26 | 40.48 | 59.52 | .441 |
| 27 | 28.37 | 71.63 | .361 |
| 28 | 49.05 | 50.95 | .229 |
| 29 | 24.64 | 75.36 | .472 |
| 30 | 24.76 | 75.24 | .392 |
| 31 | 32.23 | 67.77 | .388 |
| 32 | 28.57 | 71.43 | .730 |
| 33 | 18.57 | 81.43 | .604 |
| 34 | 27.14 | 72.86 | .423 |
| 35 | 20.38 | 79.62 | .607 |
| 36 | 17.54 | 82.46 | .664 |
| 37 | 19.52 | 80.48 | .806 |
| 38 | 32.23 | 67.77 | .608 |
| 39 | 32.86 | 67.14 | .325 |
| 40 | 48.34 | 51.66 | .330 |
| 41 | 32.86 | 67.14 | .463 |

Item Discrimination Data (Continued)

| Item No. | % No | # Yes | Biserial r |
|---|---|---|---|
| 42 | 33.81 | 66.19 | .336 |
| 43 | 29.19 | 70.81 | .526 |
| 44 | 40.19 | 59.81 | .321 |
| 45 | 27.75 | 72.25 | .367 |
| 46 | 21.90 | 78.10 | .377 |
| 47 | 39.52 | 60.48 | .355 |
| 48 | 12.86 | 80.14 | .260 |
| 49 | 24.64 | 75.36 | .731 |
| 50 | 29.38 | 70.62 | .300 |
| 51 | 23.70 | 76.30 | .564 |
| 52 | 23.81 | 76.19 | .519 |
| 53 | 27.14 | 72.86 | .331 |
| 54 | 49.52 | 50.48 | .436 |
| 55 | 26.07 | 73.93 | .325 |
| 56 | 43.13 | 56.87 | .257 |
| 57 | 49.52 | 50.48 | .310 |
| 58 | 30.43 | 69.57 | .647 |
| 59 | 29.86 | 70.14 | .628 |
| 60 | 32.70 | 67.30 | .654 |
| 61 | 18.96 | 81.04 | .553 |
| 62 | 32.06 | 67.94 | .551 |
| 63 | 33.33 | 66.67 | .406 |
| 64 | 29.19 | 70.81 | .581 |
| 65 | 23.08 | 76.92 | .302 |
| 66 | 23.92 | 76.08 | .428 |
| 67 | 37.14 | 62.86 | .201 |
| 68 | 31.25 | 68.75 | .537 |
| 69 | 31.43 | 68.57 | .656 |
| 70 | 22.38 | 77.62 | .640 |
| 71 | 23.44 | 76.56 | .474 |
| 72 | 27.62 | 72.38 | .630 |
| 73 | 19.62 | 80.38 | .509 |
| 74 | 25.59 | 74.41 | .518 |
| 75 | 37.50 | 62.50 | .444 |
| 76 | 34.45 | 65.55 | .568 |
| 77 | 27.62 | 72.38 | .496 |
| 78 | 30.58 | 69.42 | .482 |
| 79 | 18.84 | 81.16 | .266 |
| 80 | 15.17 | 84.83 | .632 |

Note 1: Data based on sample size of 211 students.

# APPENDIX D

# APPENDIX D

## Rotated Factor Structure of 80 Item Initial Questionnaire

| Item No. | Factor I | Factor II | Factor III | $h^2$ |
|---|---|---|---|---|
| 1 | - .02 | .08 | - .45* | .24 |
| 2 | .01 | - .07 | - .14 | .02 |
| 3 | .26 | - .41* | - .12 | .21 |
| 4 | .42* | - .18 | .04 | .20 |
| 5 | - .18 | - .38* | - .27 | .25 |
| 6 | .43* | - .33* | - .12 | .26 |
| 7 | .08 | .02 | - .30* | .10 |
| 8 | .19 | - .37* | - .05 | .16 |
| 9 | .00 | - .43* | - .30* | .23 |
| 10 | .51* | .04 | .09 | .29 |
| 11 | .41* | - .19 | - .14 | .19 |
| 12 | .25 | - .39* | .01 | .20 |
| 13 | .46* | .07 | - .07 | .23 |
| 14 | .04 | - .15 | .09 | .04 |
| 15 | .20 | - .14 | - .51* | .28 |
| 16 | .44* | - .05 | .07 | .21 |
| 17 | .15 | - .34* | - .05 | .13 |
| 18 | .27 | .01 | .06 | .08 |
| 19 | - .04 | - .44* | - .08 | .20 |
| 20 | .19 | - .44* | - .13 | .21 |
| 21 | .03 | - .49* | - .17 | .24 |
| 22 | .36* | .15 | - .27 | .24 |
| 23 | .36* | - .14 | - .21 | .16 |
| 24 | - .13 | - .36* | - .26 | .21 |
| 25 | .53* | - .26 | - .11 | .32 |
| 26 | .46* | - .00 | - .22 | .25 |
| 27 | .06 | - .01 | - .45* | .21 |
| 28 | .18 | .18 | - .06 | .08 |
| 29 | .29 | - .16 | - .21 | .13 |
| 30 | .16 | - .26 | - .10 | .09 |
| 31 | .04 | - .51* | - .08 | .26 |
| 32 | .46* | - .39* | - .26 | .36 |
| 33 | .15 | - .61* | - .39* | .45 |
| 34 | .05 | - .19 | - .42* | .19 |
| 35 | .07 | - .60* | - .15 | .35 |
| 36 | .34* | - .29 | - .26 | .21 |
| 37 | .33* | - .28 | - .54* | .38 |
| 38 | .36* | - .18 | - .29 | .19 |

Rotated Factor Structure (Continued)

| Item No. | Factor I | Factor II | Factor III | $h^2$ |
|---|---|---|---|---|
| 39 | - .13 | - .41* | - .18 | .21 |
| 40 | .19 | - .24 | - .04 | .08 |
| 41 | .43* | - .17 | - .28 | .24 |
| 42 | .07 | - .12 | - .36* | .13 |
| 43 | .32* | - .11 | - .34* | .19 |
| 44 | .21 | - .18 | .05 | .09 |
| 45 | - .19 | - .20 | - .32* | .18 |
| 46 | - .04 | .02 | - .50* | .28 |
| 47 | .10 | - .37* | .20 | .23 |
| 48 | .54* | - .05 | .25 | .40 |
| 49 | .35* | - .31* | - .60* | .45 |
| 50 | - .07 | - .55* | .04 | .35 |
| 51 | .05 | - .30* | - .49* | .28 |
| 52 | .15 | - .27 | - .32* | .15 |
| 53 | .31* | .05 | - .21 | .14 |
| 54 | .36* | - .17 | - .09 | .14 |
| 55 | - .03 | - .37* | - .07 | .15 |
| 56 | - .23 | - .27 | - .15 | .16 |
| 57 | .12 | - .26 | .10 | .10 |
| 58 | .31* | - .38* | - .28 | .24 |
| 59 | .38* | - .25 | - .44* | .31 |
| 60 | .50* | - .12 | - .34* | .32 |
| 61 | .13 | - .43* | - .18 | .20 |
| 62 | .34* | - .26 | - .16 | .17 |
| 63 | .03 | - .17 | - .53* | .28 |
| 64 | .22 | - .36* | - .25 | .18 |
| 65 | .34* | .03 | - .03 | .12 |
| 66 | - .05 | - .20 | - .37* | .15 |
| 67 | .19 | - .10 | - .02 | .04 |
| 68 | .05 | - .65* | - .21 | .43 |
| 69 | .35* | - .45* | - .29 | .39 |
| 70 | .25 | - .30* | - .24 | .16 |
| 71 | .12 | .07 | - .56* | .35 |
| 72 | .45* | - .20 | - .36* | .30 |
| 73 | .32* | - .10 | - .19 | .13 |
| 74 | .23 | - .13 | - .46* | .25 |
| 75 | - .06 | - .48* | - .20 | .26 |
| 76 | .55* | - .04 | - .14 | .31 |
| 77 | .26 | - .10 | - .19 | .09 |
| 78 | .08 | - .15 | - .53* | .28 |
| 79 | .27 | .09 | .06 | .10 |
| 80 | .28 | - .17 | - .39* | .21 |

*Factor loadings > .30.

# APPENDIX E

# APPENDIX E

## THE MEANS STANDARD DEVIATIONS AND CORRELATIONS OF ITEM RESPONSES IN THE 31-ITEM QUESTIONNAIRE

(a) Means and Standard Deviations of Item Responses:

| | Item | Mean | Standard Deviation |
|---|---|---|---|
| Self | 4 | .720 | .450 |
| | 6 | .733 | .443 |
| | 10 | .752 | .433 |
| | 11 | .742 | .439 |
| | 16 | .735 | .443 |
| | 23 | .766 | .425 |
| | 38 | .678 | .469 |
| | 43 | .708 | .456 |
| | 53 | .729 | .446 |
| | 54 | .505 | .501 |
| | 60 | .673 | .470 |
| | 62 | .679 | .468 |
| | 65 | .769 | .422 |
| | 73 | .804 | .398 |
| | 48 | .871 | .336 |
| School | 8 | .694 | .462 |
| | 21 | .813 | .391 |
| | 24 | .733 | .443 |
| | 32 | .714 | .453 |
| | 33 | .814 | .390 |
| | 39 | .671 | .471 |
| | 64 | .708 | .456 |
| | 69 | .686 | .465 |
| | 35 | .796 | .404 |
| Teacher | 7 | .718 | .451 |
| | 34 | .729 | .446 |
| | 42 | .662 | .474 |
| | 45 | .723 | .449 |
| | 71 | .766 | .425 |
| | 74 | .744 | .437 |
| | 80 | .844 | .364 |

Note: Written items corresponding to numbered items found in Table 2, p. 40.

(b) Correlation Coefficients of Item Responses:

| Item | 4 | 6 | 10 | 11 | 16 | 23 | 38 | 43 | 53 | 54 | 60 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 1.000 | .270 | .280 | .415 | .200 | .230 | .180 | .166 | .119 | .270 | .241 |
| 6 | | 1.000 | .202 | .293 | .123 | .208 | .211 | .116 | .171 | .160 | .158 |
| 10 | | | 1.000 | .215 | .178 | .098 | .075 | .148 | .244 | .075 | .186 |
| 11 | | | | 1.000 | .144 | .255 | .116 | .130 | .135 | .165 | .150 |
| 16 | | | | | 1.000 | .175 | .229 | .070 | .051 | .221 | .199 |
| 23 | | | | | | 1.000 | .194 | .271 | .174 | .188 | .260 |
| 38 | | | | | | | 1.000 | .311 | .035 | .251 | .362 |
| 43 | | | | | | | | 1.000 | .117 | .150 | .303 |
| 53 | | | | | | | | | 1.000 | .106 | .257 |
| 54 | | | | | | | | | | 1.000 | .260 |
| 60 | | | | | | | | | | | 1.000 |
| 62 | | | | | | | | | | | |
| 65 | | | | | | | | | | | |
| 73 | | | | | | | | | | | |
| 48 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 21 | | | | | | | | | | | |
| 24 | | | | | | | | | | | |
| 32 | | | | | | | | | | | |
| 33 | | | | | | | | | | | |
| 39 | | | | | | | | | | | |
| 64 | | | | | | | | | | | |
| 69 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 34 | | | | | | | | | | | |
| 42 | | | | | | | | | | | |
| 45 | | | | | | | | | | | |
| 71 | | | | | | | | | | | |
| 74 | | | | | | | | | | | |
| 80 | | | | | | | | | | | |



1 OF

| 53 | 54 | 60 | 62 | 65 | 73 | 48 | 8 | 21 | 24 | 32 | 33 | 39 | 64 | 69 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 119 | .270 | .241 | .170 | .041 | .124 | .145 | .075 | .080 | .030 | .317 | .110 | .031 | .166 | .132 |
| 171 | .160 | .158 | .123 | .110 | .162 | .223 | .049 | .102 | .122 | .229 | .182 | .035 | .165 | .085 |
| 244 | .075 | .186 | .157 | .157 | .139 | .279 | .153 | -.104 | -.173 | .181 | -.015 | -.098 | .083 | .093 |
| 135 | .165 | .150 | .169 | .024 | .119 | .146 | .087 | .050 | -.013 | .202 | .165 | .102 | .131 | .052 |
| 051 | .221 | .199 | .133 | .163 | .088 | .224 | -.020 | .014 | -.071 | .270 | -.062 | -.101 | .118 | .087 |
| 174 | .188 | .260 | .158 | .029 | .052 | .026 | .029 | .087 | .072 | .205 | .256 | .048 | .105 | .240 |
| 035 | .251 | .362 | .209 | .178 | .280 | .164 | .055 | .112 | .135 | .404 | .141 | .021 | .190 | .219 |
| 117 | .150 | .303 | .240 | .161 | .404 | .034 | -.036 | -.069 | .045 | .251 | .123 | .009 | .202 | .219 |
| 000 | .106 | .257 | .107 | .073 | -.075 | .052 | .081 | -.099 | .024 | .086 | -.045 | -.110 | .054 | .069 |
|  | 1.000 | .260 | .261 | .105 | .022 | .105 | -.004 | -.048 | .074 | .263 | -.023 | -.000 | .129 | .123 |
|  |  | 1.000 | .150 | .257 | .120 | .065 | .174 | .002 | .060 | .366 | .057 | .014 | .243 | .203 |
|  |  |  | 1.000 | .089 | .206 | .133 | -.081 | .135 | .077 | .289 | .149 | .061 | .037 | .217 |
|  |  |  |  | 1.000 | .135 | .127 | .077 | -.063 | .020 | .103 | -.060 | .087 | .084 | .097 |
|  |  |  |  |  | 1.000 | .251 | -.039 | -.018 | .004 | .144 | .136 | .041 | .260 | .344 |
|  |  |  |  |  |  | 1.000 | .085 | .039 | -.198 | .261 | .006 | -.149 | .192 | .169 |
|  |  |  |  |  |  |  | 1.000 | .266 | .103 | .129 | .240 | .180 | .211 | .219 |
|  |  |  |  |  |  |  |  | 1.000 | .080 | .364 | .442 | .084 | .136 | .244 |
|  |  |  |  |  |  |  |  |  | 1.000 | .101 | .154 | .204 | .069 | .062 |
|  |  |  |  |  |  |  |  |  |  | 1.000 | .300 | .027 | .291 | .298 |
|  |  |  |  |  |  |  |  |  |  |  | 1.000 | .238 | .367 | .309 |
|  |  |  |  |  |  |  |  |  |  |  |  | 1.000 | .197 | .180 |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 1.000 | .274 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1.000 |

| 24 | 32 | 33 | 39 | 64 | 69 | 35 | 7 | 34 | 42 | 45 | 71 | 74 | 80 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| .030 | .317 | .110 | .031 | .166 | .132 | .052 | .039 | .054 | .068 | -.050 | .010 | .095 | .183 |
| .122 | .229 | .182 | .035 | .165 | .085 | .201 | .131 | .066 | -.010 | .065 | .053 | .064 | .291 |
| -.173 | .181 | -.015 | -.098 | .083 | .093 | -.045 | .063 | -.117 | -.039 | -.081 | -.027 | -.035 | .099 |
| -.013 | .202 | .165 | .102 | .131 | .052 | .051 | .028 | .030 | .066 | .095 | .090 | .176 | .253 |
| -.071 | .270 | -.062 | -.101 | .118 | .087 | -.064 | -.019 | -.023 | -.090 | -.110 | .003 | .041 | .048 |
| .072 | .205 | .256 | .048 | .105 | .240 | .054 | .046 | .208 | -.054 | .131 | .064 | .275 | .142 |
| .135 | .404 | .141 | .021 | .190 | .219 | .130 | .100 | .065 | .151 | .062 | .159 | .130 | .135 |
| .045 | .251 | .123 | .009 | .202 | .219 | .064 | .186 | .108 | .183 | .202 | .288 | .198 | .902 |
| .024 | .086 | -.045 | -.110 | .054 | .069 | .009 | .051 | .066 | .083 | -.008 | .208 | .082 | .218 |
| .074 | .263 | -.023 | -.000 | .129 | .123 | .111 | .096 | .127 | .054 | .044 | .113 | .049 | .099 |
| .060 | .366 | .057 | .014 | .243 | .203 | .099 | .170 | .127 | .100 | -.014 | .146 | .286 | .211 |
| .077 | .289 | .149 | .061 | .037 | .217 | .065 | .074 | .114 | .141 | .220 | .175 | .118 | .144 |
| -.020 | .103 | -.060 | .087 | .084 | .097 | -.026 | -.033 | .013 | -.035 | .026 | .111 | .046 | .162 |
| .003 | .144 | .136 | .041 | .260 | .344 | .047 | -.070 | .103 | .128 | .164 | .301 | .231 | .085 |
| -.198 | .261 | .006 | -.149 | .192 | .169 | .057 | .015 | -.172 | -.032 | -.208 | -.112 | -.125 | .084 |
| .103 | .129 | .240 | .180 | .211 | .219 | .366 | .002 | .041 | -.056 | -.015 | -.045 | -.101 | .025 |
| .080 | .364 | .442 | .084 | .136 | .244 | .288 | -.027 | .023 | -.005 | .047 | -.025 | .115 | .117 |
| 1.000 | .101 | .154 | .204 | .069 | .062 | .228 | -.015 | .268 | .074 | .284 | .007 | -.010 | .097 |
| | 1.000 | .300 | .027 | .291 | .298 | .185 | .125 | .141 | .043 | .061 | .098 | .118 | .229 |
| | | 1.000 | .238 | .367 | .309 | .425 | -.049 | .148 | .097 | .141 | -.005 | .167 | .119 |
| | | | 1.000 | .197 | .180 | .208 | -.023 | .148 | .034 | .071 | -.030 | .052 | .072 |
| | | | | 1.000 | .274 | .230 | .005 | -.011 | .145 | .083 | .065 | .182 | .065 |
| | | | | | 1.000 | .328 | .129 | .169 | .063 | .050 | .067 | .103 | .179 |
| | | | | | | 1.000 | .049 | .168 | .012 | .063 | -.046 | .108 | .215 |
| | | | | | | | 1.000 | .168 | .012 | .001 | .136 | .099 | .151 |
| | | | | | | | | 1.000 | -.008 | .137 | .208 | .131 | .097 |
| | | | | | | | | | 1.000 | .253 | .276 | .210 | .148 |
| | | | | | | | | | | 1.000 | .261 | .179 | .100 |
| | | | | | | | | | | | 1.000 | .249 | .291 |
| | | | | | | | | | | | | 1.000 | .237 |
| | | | | | | | | | | | | | 1.000 |

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# APPENDIX F

# APPENDIX F

## STUDENT SELF-ATTITUDE QUESTIONNAIRE

Please fill in the following information:

NAME _____

| | Male | Female |
|---|---|---|
| SEX | _____ | _____ |

AGE _____

SCHOOL _____

GRADE _____

TEACHER'S NAME _____

## DIRECTIONS

This is a questionnaire about your own feelings.

Please mark each statement in the following way:

If the statement describes how you USUALLY feel or think circle the word YES in the column beside the statement.

If the statement does not describe how you USUALLY feel or think circle the word NO in the column beside the statement.

There is no right or wrong answer for any statement. The best answer is what you feel is USUALLY of yourself.

EXAMPLE:

1. I think my friends listen to me when I talk. Yes No

Circle Yes if the above statement is usually true for you.

Circle No if the above statement is usually not true for you.

1. I am liked by most people . . . . . Yes No
2. I find it difficult to make new friends . . . . Yes No
3. I am not treated fairly by my teacher . . . . . Yes No
4. I rarely do anything right . . . . . Yes No
5. I do my school work with excitement . . . . . Yes No
6. I do not care if I fail . . . . . Yes No
7. I complain about school many times . . . . . Yes No
8. I think most people are friendly towards me . . Yes No
9. I like myself . . . . . Yes No
10. I feel my teacher listens when I talk . . . . . Yes No
11. I think my friends listen to me when I talk . . Yes No
12. My friends usually find me easy to get along with . . . . . Yes No
13. My teacher makes me feel uncomfortable . . . . Yes No
14. I hate school . . . . . Yes No
15. I like people . . . . . Yes No
16. No one seems to understand me . . . . . Yes No
17. I find it hard to keep my mind on my work in school . . . . . Yes No
18. I do not like my teacher . . . . . Yes No
19. I wish I did not have to go to school . . . . . Yes No
20. My ideas are not very good . . . . . Yes No
21. I make new friends easily . . . . . Yes No
22. I like doing new things . . . . . Yes No
23. I am happy most of the time . . . . . Yes No
24. I like to do my homework . . . . . Yes No

25. I think my teacher treats me fairly when I do something wrong . . . . . Yes No

26. I would rather be home than in school . . . . . Yes No

27. I feel most people are kind to me . . . . . Yes No

28. I like learning new things . . . . . Yes No

29. School is great . . . . . Yes No

30. I feel my teacher likes me . . . . . Yes No

31. My teacher notices when I am feeling sick or unhappy . . . . . Yes No