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ABSTRACT

A two-year evaluation of William Glasser's Schools Without Failure (SWF) program was carried out in the New Castle School District in Pennsylvania. In the first year, ten elementary schools were paired on the basis of size, socioeconomic status, and past achievement of pupils. One school of each pair was randomly assigned to begin teacher-training and implementation of the SWF program; the other school of each pair became a control school, continuing to operate as it had in the past. In the second year of the study, both groups of schools received training in SWF methods and implemented the program. Data were collected and analyses performed to determine whether the effects of two years of the program were greater than the effects of one year, whether the second year of training or the first year produced stronger changes, and how the effects of two years of the program differed from those which would have taken place in schools using a traditional program. Testing and observations were carried out at the beginning and the end of the first year of the study and at the end of the second year in both groups of schools. Measurements were taken of: pupil achievement; pupil, teacher, and parent attitudes; disciplinary referrals to principals; and interactions occurring in classrooms. (Author/JM)

FINAL REPORT

THE EFFECTS OF A SCHOOLS WITHOUT FAILURE PROGRAM UPON CLASSROOM INTERACTION PATTERNS, PUPIL ACHIEVEMENT AND TEACHER, PUPIL AND PARENT ATTITUDES

(Report of a Two-Year Study)

National Institute of Education Project No. 3-0714

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ABSTRACT

A two-year evaluation of William Glasser's Schools Without Failure (SWF) program was carried out in the New Castle School District in Pennsylvania. In the first year 10 elementary schools were paired on the basis of size, socioeconomic status and past achievement of pupils. One school of each pair was randomly assigned to begin teacher-training and implementation of the SWF program; the other school of each pair became a control school, continuing to operate as it had in the past. In the second year of the study both groups of schools received training in SWF methods and implemented the program. Data were collected and analyses performed to determine whether the effects of two years of the program were greater than the effects of one year, whether the second year of training or the first year produced stronger changes and how the effects of two years of the program differed from those which would have taken place in schools using a traditional program.

Testings and observations were carried out at the beginning and the end of the first year of the study and at the end of the second year in both groups of schools. Measurements were taken of pupil achievement, of pupil, teacher and parent attitudes, of disciplinary referrals to principals and of interactions occurring in classrooms.

The results of the study indicated that, by the end of two years, rather major changes had taken place in teacher classroom behaviors. Teachers participating in two years of training were found to question more, to lecture less, to accept pupil ideas more and to praise and criticize less than they had before undergoing training. Disciplinary referrals to principals were reduced greatly; teachers were able to use Reality Therapy to effectively handle most discipline problems by themselves.

Intermediate pupils exposed to the SWF program for two years felt that school and learning were more important than did pupils never exposed to the program. There were indications that primary pupils participating in the SWF program were developing increased confidence in dealing with difficult schoolwork.

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I. STATEMENT OF PROBLEM

In this rapidly changing world and dynamic American society, the school remains a complex institution for socializing the young. Indoctrination into the ways and learning of their elders was perhaps adequate for youth in an earlier, relatively stable society. It appears woefully inadequate today. In response to this problem the educational establishment has been feverishly trying to find ways to cope with the problems caused by an expansion in technological knowledge much exceeding the growth in sociological knowledge.

One of the most popular responses to the problems apparent in current society has been "humanization of education" programs. Among these programs is one that follows the philosophy and procedure outlined by William Glasser in his book, Schools Without Failure. What Glasser advocates can be adapted to almost any school organization or situation. The program involves children in learning to use facts and ideas to make responsible decisions about their educational, social and emotional lives.

The major purpose of the present two-year investigation was to see how the attitudes and behaviors of pupils and teachers were changed by a one-year and by a two-year exposure to the Schools Without Failure program.

II. RELATED STUDIES

When the first-year report on the New Castle Project was submitted (Masters and Laverty, 1974), not much in the way of controlled studies or well-documented data could be found. A major effort by the National Consortium on Humanizing Education has been completed since that time. Aspy and Roebuck (1974) have published a summary of 15 studies performed on a mountain of data collected by the NCHE. Using student achievement tests and self-concept measures, teacher attitude scales and audio-tapes of classroom and faculty meeting interactions from which behavioral observations were abstracted, these studies analyzed the effects on student behavior of training teachers in interpersonal skills. Aspy and Roebuck found significant predictive relationships between principals' interpersonal behavior and teachers' classroom behavior. Where principals differed in their levels of interpersonal functioning, teachers in their schools not only showed different classroom behavior but also reported different perceptions of their working environment and instructional tasks. In addition, prior training of the principal enhanced the teachers' response to interpersonal skills training. Where teachers functioned at high levels of acceptance and responsiveness, students missed fewer days of school and gained in self-concept and achievement. These student gains were more pronounced in the second and third years of the project.

In a study of the Schools Without Failure (SWF) program, Keepes, Engle and Thorne (1971) attempted to assess the effects of SWF in Palo Alto, Calif., School District with the use of a comparison design. Although the project was confounded by implementation problems, such as SWF-trained teachers being in the control school, they did find that the SWF program made pupils more task-oriented and more likely to be involved in work activities, as opposed to socialization, than

the control school pupils. The first year of the present project (Masters and Laverty, 1974) similarly revealed some positive changes in SWF intermediate pupil attitudes toward the importance of doing school assignments and of learning.

Another study of SWF in Imperial Beach, California, (McCormick, 1972) depended almost entirely upon subjective data. Teachers felt students could openly participate in intellectual discussions and discuss school problems as a result of class-meeting training. Landry (1973) evaluated a TV course in SWF techniques. Using an attitude rating scale and follow-up observation, he discovered that experienced teachers (16 or more years) gave a higher rating to the TV course, had more positive attitudes toward class meetings, held more meetings per week and had a better class-meeting performance rating than less experienced teachers. All the correlations between these variables were positive, but not all were significant.

Marc Robert (1971), investigating the role perceptions of teachers in large suburban elementary schools, found that teachers participating in SWF seminars were more oriented toward meeting personality needs of individuals and less threatened by innovation than were nonparticipants. SWF training also helped principals to more accurately assess teachers' role perceptions.

In Riverside, California, Purl and Dawson (1971) surveyed teachers, pupils and principals to determine behavior change as a result of SWF training. They found that most teachers used classroom meetings as a method of involving pupils, thereby improving communication and inducing a feeling of mutual responsibility. Pupils indicated they felt involved, took responsibility for their own behavior and strongly felt that learning to read was important.

Gang (1974) investigated the use of a reality therapy intervention process with individual problem children. In the small sample of two teachers and six pupils, reality therapy methods worked where a good student-teacher relationship was established. On a much larger scale in Madison, Wisconsin, Jensen (1972) measured the attitudes of teachers who received SWF training. He found that teachers at all grade levels who received SWF training were favorably disposed toward the SWF principles and practices, with elementary teachers showing a more positive attitude than secondary or middle-school teachers. These teachers also felt that implementing SWF in the classroom improved teacher-pupil communication and student attitudes.

Butterworth (1971) did pre- and posttesting of teachers' attitudes toward teaching as recommended by Glasser. Using three groups, i.e., beginning SWF teachers, advanced SWF teachers and control teachers, she found that the majority of all three groups showed attitude changes in the direction of becoming more favorable to the Glasser philosophy. However, 80 per cent of the advanced SWF group, 66 per cent of the beginning SWF group and only 60 per cent of the control group changed in a positive direction between pretest and posttest.

It appears that statistically significant differences either were not sought or were not found in most SWF studies. Positive testimonials by participating teachers in favor of SWF philosophy and techniques can be found associated with most trials, but evidence of measurable differences is difficult to find. In general, it might be said that teachers change their attitudes, becoming more favorable toward the Glasser philosophy and program as they become more involved in seminars, class-

room meetings and other SWF program facets. As these teacher attitudes are reflected in classroom behavior, pupils begin to have a better attitude toward school. If the SWF program is to be improved so it more effe[illegible]ets the needs of children, more information about the effects of the program [illegible]ade available.

III. OBJECTIVES

The major objectives of this study, conducted for its second year in grades 1 through 6, were to answer the following questions:

1. Does the Schools Without Failure program significantly affect pupil attitudes toward self and school?

2. Does the Schools Without Failure program significantly affect pupil achievement in basic skills?

3. Does the Schools Without Failure program significantly affect teacher attitudes toward child-centered policies and practices in education, toward the philosophy of William Glasser and toward teaching as a career?

4. Does the Schools Without Failure program significantly affect parental attitudes toward the philosophy of William Glasser?

5. Does the Schools Without Failure program significantly affect classroom cognitive interaction patterns and classroom social-emotional climate?

CHAPTER II

PROCEDURES

I. SAMPLE SELECTION

The study was carried out in New Castle, Pennsylvania, a small city representative of many declining urban areas throughout the United States. The area has experienced considerable outmigration, and approximately 25 per cent of the school population is from economically disadvantaged homes, i.e., families with yearly incomes below $3,000.

In the spring of 1972, 10 of the 11 elementary schools in New Castle were paired on the basis of size, socioeconomic status and achievement test scores from the previous year. From each pair one school was randomly assigned to the experimental treatment group and the other school to the control group.

The total sample consisted of about 150 teachers and 3,500 pupils in grades 1 to 6 of 10 New Castle schools.

II. DESIGN OF THE STUDY

During the first year of the study a Pretest-Posttest Control Group Design (Number 4, Campbell and Stanley, 1966, p. 8) was used. For most analyses control and experimental classes in grades 1 to 3 formed one 2 by 3 factorial design and classes in grades 4 to 6 formed a second 2 by 3 factorial. In a few instances all grades were included in a single analysis, or some other grouping more applicable to the data was used. Classroom means were the unit of analysis.

The design for the second year study is an extension of the first year design, where the control group now receives the experimental treatment and the experimental group receives additional treatment. In the following schematic representation R represents random assignment of groups to experimental treatments, O represents observations or measurements, and X represents exposure of a group to the Schools Without Failure program.

		Fall 1972		Spring 1973		Spring 1974
Group 1	R	O_1	X_1	O_2	X_2	O_3
Group 2	R	O_1		O_2	X_1	O_3

During the first year of the study all teachers from Group 1 schools (experimental group) were trained to implement the SWF program and Group 2 teachers (control group) continued to function in their traditional way. During the second year of the study all Group 2 teachers were trained to implement the SWF program, and Group 1 teachers received additional training in the SWF philosophy and methods as they continued to use the program.

All pupil measures were administered at the beginning of the 1972-73 school year as a pretest, at the end of that school year and again at the end of the 1973-74 school year as a posttest. Observation data were collected five times: (1) pre-

treatment observation in October 1972, (2) first-year posttreatment observation in May 1973, (3) observation of classroom meetings in the Group 1 experimental schools only in April 1973, (4) second-year posttreatment observation in May 1974 and (5) observation of classroom meetings in all schools in April 1974.

III. CONTROL GROUP TREATMENT

The first-year control treatment was an attempt to continue the school organization of previous years. In primary grades this meant a typical self-contained classroom approach, with district-recommended content area and classroom but with each teacher's individual classroom practice. Pupils in grades 4 to 6 had homeroom teachers who taught some content areas, but they moved to the rooms of one or more other teachers for different content areas.

The only control of their activities during the first year was a professional request that control group teachers refrain from studying or implementing the Glasser philosophy during this time period.

During the second year these control teachers received training in the SWF philosophy and strategies and began to implement them in their classrooms.

IV. EXPERIMENTAL TREATMENT I

In-service training in Schools Without Failure methods and classroom implementation of these methods during the training period are the bases of the experimental treatment used with the experimental (Group 1) schools during the 1972-73 school year and with the control (Group 2) schools during 1973-74.

The Schools Without Failure method is based on Glasser's principles of Reality Therapy applied to group situations in schools. As Glasser explains in The Identity Society (1972), school-age children, in contrast to their goal-oriented parents and grandparents, are role-oriented. Unless they achieve a successful identity, they are unwilling to accept and work toward goals for education or life. Glasser states:

> People with successful identities usually behave under stress in ways that cause pain to decrease and later enable them to experience pleasure. . . [They] learn to cope with anger or its civilized derivatives, such as depression and anxiety, quickly and effectively by working to turn the situation toward involvement. . . Failures, on the other hand, usually respond impulsively to anger, often decreasing both their security and their involvement (Glasser, 1972, pp. 55, 58, 59).

Involvement is the fundamental concept of Schools Without Failure. If children have been exposed to continued failure and see themselves as failures, involvement with successful persons and a chance to see themselves succeeding are necessary to help them gain a positive self-concept. After they learn to accept themselves as successful and worthwhile persons, they can learn to work toward goals.

Leadership Team Workshops

Leadership teams, including the principal and staff-selected teachers from each school, formed a training cluster for the workshops. These workshops, conducted by an experienced associate of Dr. Glasser, were intensive two- or three-day training periods separated by five-week intervals. Dr. Glasser's associate presented the theories of Reality Therapy and Schools Without Failure and the various implementation techniques to help the leadership teams plan seminars for their individual faculties.

The leadership workshops provided mutual support and encouragement, as well as information and ideas, by allowing time for discussion of problems which occurred in school seminars and classrooms. New techniques and solutions to problems were tried in the five-week intervals between workshops, and results of these trials were presented to the training cluster, keeping the workshop always related to actual problems within the schools.

Training Seminars

The leadership teams conducted weekly seminars for the entire faculty in their own schools. During the first year of the program all principals were involved in the training and took part in the seminars in the experimental schools. During the second year, when the previous control schools were participating in the program, the principals again were part of the leadership teams for these schools.

At these weekly seminars the Schools Without Failure concepts were presented, ideas for implementation techniques were provided, and discussion of problems was encouraged. After trying the various suggestions in their classrooms, the teachers reported on their successes or problems of the previous week, accepted suggestions for alternate solutions from fellow teachers and received inspiration for continued effort.

The two important phases of Schools Without Failure implemented during the first year of the program in each group were classroom meetings and the Reality Therapy approach to solving disciplinary problems. This implementation, however, led also to fulfillment of the following major objectives of the training seminars:

1. To provide opportunities for principals and teachers to develop a positive, personal philosophy of education so they may develop their own school without failure.

2. To provide ways for building constructive communication networks within the school and between the school and the community.

3. To provide a process for developing classroom skills and procedures that teachers and principals need to implement a success-oriented curriculum.

4. To provide the background for building a school environment in which the staff and the pupils may deal realistically with their problems through the resources at hand.

Classroom Meetings

The Schools Without Failure program involved children in learning to make responsible decisions about their lives. The major technique for accomplishing this

was the holding of nonjudgmental classroom meetings wherein the teacher becomes involved with the children and all children can experience success. These meetings, designed to meet the intellectual, social and emotional needs of each child, were held at least three times a week throughout the school year. As they learned to use them successfully, some teachers held one type of meeting or another every day. Other teachers occasionally allowed unscheduled events to interfere with meetings and held fewer than the required three per week. However, this was the basic route to involvement of pupil with teacher.

Open-ended meetings, the first type introduced, are the easiest for teachers learning the technique to lead. In open-ended meetings, children discussed thought-provoking questions related to their lives or to fantasy situations. The teachers did not look for a single correct answer to a question, but tried to stimulate thoughtful, creative opinions in which children could relate what they knew to the topic. Children of all elementary grade levels became deeply involved in, and intellectually stimulated by, such dialogue.

Educational-diagnostic meetings, introduced to the teachers later in the year and tried in the classroom, always related to something the class had been studying. Children talked about their understanding of a specific topic, its implications and applications to their lives. In addition to stimulating thinking, this type of meeting gave the teacher a quick evaluation of his or her success in presenting a concept to the class. Pupils were never graded or rated in any way on the basis of these meetings, but teachers did use information gained to plan further teaching strategies.

Social problem-solving meetings were cautiously introduced late in the year. In these meetings children offered ideas on actual problems of the class. Teachers who felt comfortable with the class-meeting method were able to try this type of meeting, but others were not ready to face the problems which could arise. Where these were used, the experience of belonging to a working, problem-solving group helped the children learn that they can use their brains to help solve the problems of living in a difficult, sometimes hostile and mysterious world.

Successful operation of class meetings of any type was the major technique used in this study. This method allowed the teacher to become more involved with the pupils, and pupils became more involved with each other. A vital extra was better training in listening. Not only did pupils learn to listen to each other, but teachers began to listen to pupils.

Discipline Practices

The Schools Without Failure approach to discipline is based on logical, natural consequences expressing the reality of the social order; that is, rules which must be learned in order to function adequately. It is concerned with what will happen in the present. Responsibility must be assumed by the individual, not by a teacher or principal who assumes the child's responsibility by applying punishment. The basic method involves a statement from the child of what he or she actually did which was unacceptable behavior, an evaluation by the child of the effect of this behavior on himself or herself and on others, and suggestions by the child for ways to improve subsequent behavior with a commitment to try the better approach. From the teacher or other adult, this method requires a friendly involvement and a willingness to accept any reasonable suggestion for improvement made by the child.

It is a time-consuming teaching process, based on close, sustained involvement, which emphasizes teaching ways to act that will result in more successful behavior. (Glasser, 1972, pp. 107-132)

This method of handling discipline problems was introduced during seminars the second semester of the program. Teachers and principals introduced it into the schools with increasing success as they became more proficient with its use. Teachers asked children to evaluate their own behavior, to make plans for changing in ways that would lead to success, and to make commitments to carry through the plan with the encouragement and support of the involved teacher. Children who had not responded to punishment by improved behavior began to accept a new responsibility and to look intelligently at their own actions and the effects these actions had on others.

V. EXPERIMENTAL TREATMENT II

During the second year of the SWF program the first-year experimental teachers contined to follow Glasser's philosophy in their classrooms. Their leadership teams met for one-day workshops six times throughout the year with a representative from Glasser's Educator Training Center. Each leadership team workshop was followed by a half-day building seminar.

The goals of these workshops and seminars were:

1. To enhance the development and commitment of the previous training in Schools Without Failure.

2. To reinforce concepts and increase skills by sharing experiences in using techniques previously learned.

3. To develop a knowledge of and a commitment to the advanced principles of Schools Without Failure.

4. To develop an in-service procedure using SWF techniques in intergroup relations for implementation of school desegregation.

VI. INSTRUMENTATION

Data gathering devices used in this study included pupil achievement tests and attitude scales, teacher and parent attitude measures, classroom observation schedules, and a form for recording discipline referrals to the school principals. All of the pupil measure were administered in the fall of 1972, in the spring of 1973 and in the spring of 1974. The parent and teacher scales were completed by most participants during the spring of 1972, 1973 and 1974 to provide measures for the same time of year in each case. Observation in a random sample of classes from both experimental and control groups was conducted in regular classes in October of 1972 and May of 1973 and 1974; and classroom meetings were observed in experimental schools in April 1973 and in all schools in April 1974. Principal referral forms were used throughout the second semester of the 1971-72 school year and both semesters of the 1972-73 and 1973-74 school years.

Pupil Attitudes

Attitudes Toward Self. To measure the effects of the SWF program on pupil self-attitudes, the Pictorial Self-Concept Scale (grades 1 to 3) and the Piers-Harris Children's Self-Concept Scale (grades 4 to 6) were used. Both scales were constructed according to Jersild's theoretical definition of self-concept (Jersild, 1952). In a study reported by Bolea, Felker and Barnes (1971) the correlation between scores on these two scales was .42 for a sample of 63 elementary school children.

The Pictorial Self-Concept Scale developed by Bolea, Felker and Barnes (1971) consists of 50 picture cards with simplified line drawings (see Appendix A). A central figure, designated by a star and depicted in various situations, is a male on cards used with boys and a female on cards used with girls. The child sorts the cards into three piles indicating that the starred figure is "like me," "sometimes like me," or "not like me." The authors reported a split-half reliability of .85 when used by 1,813 pupils in grades K to 4. They also reported six studies providing validity evidence (Bolea, Felker and Barnes, 1971).

In the first year of the present study the split-half reliability was computed separately for each of grades 1, 2 and 3, for pretest and posttest, and for experimental and control groups. These coefficients ranged from .72 to .79, with a mean of .75 for all groups.

The Piers-Harris Children's Self-Concept Scale (Appendix A) consistently shows reliability coefficients of .90 or higher according to the test manual. Five studies supporting the validity of the scale are also included in the manual. Reliability coefficients computed in the first year of the present study for pretest and posttest in experimental and control classes for grades 4, 5 and 6 were comparable, ranging from .92 to .94 with a .93 average.

Attitudes Toward School. The 30-item School Attitude Scale was developed to measure children's attitudes toward school. A faces response form was used for primary pupils, and the same scale with a verbal response form was used for intermediate pupils (see Appendix A). Reliability for the faces form averaged .89 for grades 2 and 3 in pretest and for experimental and control groups in grades 1 to 3 for the posttests. Only the 18 items of the instrument which beginning first graders could be expected to understand were given to them for the pretest. The reliability for this short form was .85 (see Appendix A).

The verbal response form of the School Attitude Scale showed a reliability of .91 for grades 4 to 6 on the pretest and averaged .92 for control and experimental classes in each of the three grades on the posttests. The Pennsylvania Educational Quality Assessment Attitude Toward School instrument was also administered in grades 4 to 6. With over 20,000 grade 5 pupils, this instrument had shown a reliability of .75, and the pretest of the present study also showed .75 for the total of all 4th, 5th and 6th graders. For separate experimental and control groups in each of grades 4 to 6, reliability coefficients ranged from .57 to .76 with an average of .66 when computed for these smaller groups on the first-year posttest.

Pupil Achievement

The Stanford Achievement Test battery, 1964 edition, Form W, was administered to pupils in September 1972 and May 1973 and 1974. Only the reading subtests

were administered to grades 1 and 2, but the other grades took the language and arithmetic subtests. Split-half reliabilities for the various Stanford subtests at all levels are .71 or higher, with most showing a reliability greater than .85.

Teacher Attitudes

Three scales measuring various facets of teacher thought were completed by most teachers at the end of the 1971-72 school year. Teachers who were new or who for some reason had not done it completed these in September 1972. Scales from the total group of teachers were scored as the pretest. All teachers completed the scales again in May of 1973 and 1974.

Opinionnaire on Attitudes Toward Education. Lindgren and Patton's "Opinionnaire" (Shaw and Wright, 1967, pp. 80-83) was used as a measure of attitudes toward child-centered education, discipline and the desirability of understanding pupils' behaviors (see Appendix B). The authors reported a split-half reliability of .82 for the scale and several studies supporting its validity. In the first year of the study coefficient alpha reliability was .89 for the pretest and .84 for the posttest.

Satisfaction With Teaching Questionnaire. DiVesta and Merwin's "Attitude Toward Teaching as a Career" (Shaw and Wright, 1967, pp. 73-74) was used as a measure of satisfaction with teaching. In a study by its developers this scale discriminated between students choosing to teach and those choosing other careers. Because the scale was developed for preservice teachers, slight revisions were made in three items for use with New Castle teachers. The revised scale (Appendix B) showed a coefficient alpha reliability of .74 on the pretest and .69 on the first-year posttest.

Philosophy of Glasser Questionnaire. A 15-item scale measuring attitudes toward the philosophy of William Glasser was constructed for use in this study (see Appendix B). This instrument had a coefficient alpha reliability of .77 when administered to New Castle School District teachers both in the spring of 1972 and the spring of 1973. Experts in Glasser's philosophy from the staff of Educator Training Center were consulted to insure content validity during the development of the instrument.

Parental Attitudes

Because the Schools Without Failure approach stresses parental and community involvement, the "Philosophy of Glasser Questionnaire" completed by the teachers was also sent to parents. The parents of pupils in all New Castle elementary schools received the scale in the fall of 1972 and again in the spring of 1973 and 1974. The New Castle School District administration estimated that almost 90 per cent of parents responded. The reliability of parent responses was computed as .64 in the fall of 1972 and .70 for the spring of 1973.

Classroom Observations

In addition to self-report scales and paper and pencil tests, observation of actual classroom verbal interaction was used to assess pupil and teacher behavior change. The Expanded Category System (Amidon, 1970) and the Reciprocal Category System (Ober, Wood and Roberts, 1968) were used by pairs of observers. Both systems require raters to write down, at three-second intervals, number and letter codes representing verbal behavior.

In August 1972 eight experienced elementary teachers were selected and trained in one of the two observation systems. In each case the training was done by a developer of the system, i.e., Edmund Amidon for the Expanded Category System (ECS) and Richard Ober for the Reciprocal Category System (RCS). Review training was held in October 1972 and April 1973 and 1974, immediately preceding the observation periods, to allow the raters to gain actual classroom experience and to run reliability checks through the use of training tapes. The October training tapes and practice observations were of regular classes and the April 1973 tapes and observations were of classroom meetings. In 1974 the training included both regular classes and classroom meetings. (Appendix C shows the two observation schedules.)

A random sample of approximately half the teachers was selected for observation. The sample was stratified so that the number of teachers at each grade level was equal, and the content areas taught were the same for both experimental and control teachers. The teams of two raters observed two normal instructional periods per teacher in October and two in May. During the first year the teams observed two classroom meetings for experimental teachers only during April. In 1974, with all teachers participating in the SWF program, the teams observed two classroom meetings for all teachers in the observation sample groups.

Expanded Category System. In the ECS Amidon (1970) expanded the 10 categories of the Flanders System of Interaction Analysis (Flanders, 1970) so that such details as type of question asked by the teacher, type of praise given, or type of criticism used could be recorded. The raters trained in this system achieved interrater reliability as computed by Scott's method (Scott, 1955) of .85 by the end of the October training session. In April 1973, when coding classroom meeting tapes, they obtained a coefficient of .80. During the April 1974 training session and observation period, reliability checks yielded coefficients ranging from .79 to .90.

Reciprocal Category System. Ober, Wood and Roberts developed the RCS to provide additional pupil categories, allowing the recording of pupil-pupil and teacher-pupil interactions. The raters trained in this system achieved a Scott's coefficient of .79 on the training tape in October and .80 on a classroom-meeting tape in April 1973. During April 1974 training sessions and observation periods, reliability checks yielded coefficients ranging from .83 to .87.

On all observations a team of two raters recorded both systems simultaneously. Each teacher was observed twice in each observation period and the scores were averaged, producing a mean score for the analysis. Although 80 teachers were observed the first year, only 71 were still teaching in the same schools the second year, thus reducing the total number of mean scores in the analysis.

Principal Referral Form

An additional check on the behavior of pupils and staff was a recording of all occasions when pupils were sent to the office for disciplinary problems. Beginning in the second semester of the 1971-72 school year, the principals completed referral cards for each such event, including the child's name and information on what happened, when, who else was involved, and any action taken. Comparisons were made for the 1971-72, the 1972-73 and the 1973-74 school years.

VII. ANALYSIS OF DATA

Questions Answered by the Analyses

As data from the study were analyzed, three major questions were asked:

1. During the two years of the study, did greater changes occur in Group 1 schools than in Group 2 schools?

Since Group 1 schools used the SWF program for two years and Group 2 schools used it for one year, this question was asked to determine if carrying out the program for two years produced any greater changes than did carrying it out for one year. In answering the question 1972 measurements taken in both groups of schools before the Group 1 schools began the program were used as covariates of spring 1974 measurements in univariate and multivariate analyses of covariance. For example, 1974 pupil self-concept scores of the two groups were compared after adjusting them to take into account any self-concept differences existing between the two groups before either group tried the SWF program. The covariance adjustments were carried out in such a way that even though one group might have had higher 1972 self-concept scores than the other, it would be expected that without any program intervention the adjusted 1974 means of the two groups would not differ. If differences were found in these adjusted means they would be assumed to be a function of changes occurring in self-concepts of pupils due to the implementation of the SWF program.

2. During the second year of the study, did greater changes occur in Group 1 schools or in Group 2 schools?

During the 1973-74 school year Group 1 schools were involved in their second year of training and Group 2 schools were participating for the first time. Thus, question 2 helped determine whether greater changes in schools occurred during their first year of use of the SWF program or during the second year of their program, when their proficiency in carrying it out had increased. In answering this question spring 1973 scores of Group 1 and Group 2 schools were used as covariates of their spring 1974 scores in univariate and multivariate analyses of covariance.

3. Over the course of the two years of the study, what changes took place in Group 1 schools which would not have taken place in schools using a traditional program?

Because Group 2 schools decided to adopt the SWF program during the 1973-74 school year, data collected from schools not using the program were available for only one school year. However, because both fall and spring testings were carried out during this one school year, it was possible to approximate the desired situation in the analyses.

By the end of the 1974 school year Group 1 pupils in grades 2 through 6 had participated in two years of the SWF program. In analyzing pupil data it was first asked if Group 1 and Group 2 pupils in grades 2 through 6 typically differed before Group 1 schools began to use the SWF program. Data for these analyses were readily available from the fall 1972 testing.

Since Group 2 schools did not participate in the SWF program during the 1972-73 school year, the data from their spring 1973 testing of pupils in grades 2 through 6 were then compared with spring 1974 data of Group 1 pupils in grades 2 through 6. This, then, provided an approximation to the desired situation of comparing two-year changes in pupils exposed to the SWF program with those of pupils never exposed to it. The same general plan of analysis was followed for teacher data and for parent data. In answering question 3 univariate and multivariate analyses of variance were used.

Data Analysis Strategy

For all analyses of pupil data classroom means were computed. These means entered into the statistical analyses as scores. Approximately 12 Group 1 and 12 Group 2 classrooms were available at each grade level. Because of the problems inherent in interpreting factorial analyses of variance and covariance carried out with unequal numbers of observations in each cell, scores of classrooms or teachers were randomly dropped from an analysis when, for some reason, the numbers of observations available for each cell became unequal.

Since a large number of statistical tests were carried out, it was theoretically possible for a number of statistically significant differences to occur by chance alone. To control for this occurrence the multivariate analyses of variance and covariance were used as "screening devices" whenever possible. In answering question 1 scores of instruments or subtests which measured similar things, e.g., intermediate verbal achievement scores on four subtests, were entered into the same multivariate test to determine if some trend existed in the changes which occurred. If the F value for this test was found significant, it was assumed that because a trend did exist, significant univariate results found for these same measures would be much less likely to be due to chance. On the other hand, if the multivariate F value was not found significant, the number of statistical tests needed would be reduced, since there would be no need to carry out the univariate tests. Similar procedures were used in answering questions 2 and 3.

For all covariance analyses involving one dependent variable, scores on an instrument or subtest acted as the covariate of 1974 scores on the same instrument or subtest. For multivariate analyses of covariance, 1972 or 1973 scores on all measures included in the multivariate test acted jointly as covariates of all 1974 scores on the same instruments. For all statistical tests, both univariate and multivariate, the .05 level of significance was used.

Because of the large number of statistical tests required, space limitations governed the reporting of statistical results. When multivariate tests were carried out, F values for these are reported. For univariate tests following a multivariate test it was possible to include only source tables for tests in which significant differences were found.

Since certain measures were felt to be assessing something unique in and of themselves, it did not make sense to group them with others in overall tests for trend. For these measures only univariate tests were carried out. For these tests it was possible to include only F values for each test and source tables for tests in which significant differences were found. The statistical results just described can be found in the Appendix.

Finally, throughout the Results section, the means computed in statistical tests are reported. Where adjusted means for a measure are reported, these are the means which would be compared in a univariate test, i.e., they are adjusted only for 1972 or 1973 scores on the same measure. In some cases it was not possible to include standard deviations in the tables.

VIII. INFORMAL EVALUATION

In addition to the statistical analyses of tests, questionnaires and other attitude scales, an informal subjective evaluation was conducted among the New Castle elementary teachers and principals during March 1974. The leadership teams of both experimental and control schools each devoted a morning session of their March leadership workshop to an evaluation of the SWF program based on their experiences throughout the time they had worked with SWF. During the afternoon sessions they worked on the formulation of recommendations for further activity.

Using these workshop experiences as a background, the leadership teams conducted half-day evaluation sessions in their own schools. They solicited program evaluations from all staff members. On Friday all leadership team members joined in a final workshop to combine, condense and organize the evaluations into manageable form for publication. These staff opinions were presented to the district school directors with their recommendations for program continuation. The results of this staff evaluation process appear in Appendix D.

CHAPTER III

RESULTS

I. PUPIL ATTITUDES RESULTS

1972-73 Procedures and Results

Educators undergoing training in Schools Without Failure methods are taught ways of making pupils feel both more accepted and more successful in school. During the 1972-73 school year teachers and administrators in Group 1 schools began to use these methods with their pupils; teachers and administrators in Group 2 schools continued to use whatever methods they had found valuable in the past for dealing with their pupils.

To determine whether pupils exposed to the SWF program underwent changes in their feelings about themselves and about school, attitude questionnaires were administered to both Group 1 and Group 2 pupils at the beginning and at the end of the 1972-73 school year. Changes from fall to spring in the attitudes of Group 1 and Group 2 pupils were then compared.

In the primary grades three attitude questionnaires were administered. To assess changes in pupil attitudes toward themselves and toward school the Pictorial Self Concept Scale and the School Attitude Scale were used. In addition, because it was thought that pupils exposed to the SWF program might come to respect the abilities of their classmates more, they were asked to rate each others' ideas through use of a sociometric-type instrument.

In the intermediate grades the Piers-Harris Children's Self Concept Scale, the School Attitude Scale and the Pennsylvania Educational Quality Assessment (EQA) Attitude Toward School Instrument were administered to measure pupil feelings about themselves and about school. Also, two sociometric-type instruments, measuring attitudes toward others and toward the ideas of others, were employed.

Because it was felt that changes in pupil attitudes during the first year of their exposure to the SWF program might be limited to rather specific attitudinal areas, a principal components factor analysis of the primary School Attitude Scale was carried out (see Cooley and Lohnes, 1971 for an explanation of principal components factor analysis). Fall 1972 responses of both Group 1 and Group 2 pupils entered into the analysis. The 30-item School Attitude Scale was found to be made up of the following five factors: I, In-School Talking (5 items), i.e., attitude toward talking to teachers, the principal and classes in school; II, School Climate (6 items), i.e., attitude toward coming to school, being in school, school rules; III, Difficult Schoolwork (9 items), i.e., attitude toward doing schoolwork, toward arithmetic, toward taking tests; IV, Verbal Schoolwork (7 items), i.e., attitude toward reading, science, class discussion; and V, Evaluation, i.e., attitude toward being evaluated by the teacher. Scores were obtained and analyses carried out for these five factors and for the total School Attitude Scale.

In the intermediate grades scores on the Piers-Harris Children's Self Concept Scale were obtained both for the total questionnaire and for the six factors outlined in the test manual provided for the instrument.

In the analyses carried out at the end of the first year of the study changes in attitude of Group 1 pupils were not found to differ from those of Group 2 pupils for any instrument or factor. However, in the primary grades a higher percentage of Group 1 pupils than Group 2 pupils were found to have undergone positive attitude changes for certain items of the School Attitude Scale. These items (numbers 7, 8, 12, 19, 21, 23 and 26) dealt with attitudes toward the principal, toward doing difficult schoolwork, toward school rules and toward being in school. Similarly, in the intermediate grades a higher percentage of Group 1 pupils than Group 2 pupils had undergone positive attitude changes for a number of items. These items (numbers 1, 3, 4, 5, 6 and 7 of the EQA Attitude-Toward School instrument) measured the importance to pupils of doing their schoolwork and of learning. At the end of the first year of the study, then, it appeared that the SWF program had begun to produce some highly important changes in pupil attitudes.

1974 Procedures

In the spring of 1974 the same attitude toward school and self-concept instruments as were used in the first year of the study were administered to pupils in grades 2 through 6. The design of the study did not call for these instruments to be administered to pupils in grade 1. However, it was necessary for pupils in grade 4 to respond to both self-concept instruments. Because in the second year of the study pupils would be rating classmates different from those they rated in the first year, it was decided not to administer the sociometric-type instruments.

As was done the first year, the School Attitude Scale for primary pupils was scored both in terms of the total questionnaire and in terms of five factors. In addition the two attitude toward school instruments for intermediate pupils were factor analyzed (using fall 1972 responses) and scores were obtained for these factors for all three testings.

The 17-item EQA Attitude Toward School instrument was found to contain three meaningful factors, accounting for 35 per cent of the total variance occurring on the items of the instrument. Factor I (8 items) was termed Importance of School, dealing with attitudes toward the importance to pupils of school and of learning; Factor II (4 items), termed Teacher, Talking, dealt with attitudes toward teachers and toward talking in school; and Factor III (5 items), School Climate, measured feelings about being in school.

The 30-item School Attitude Scale contained five factors similar to, but not exactly the same as, those found for primary pupils. These factors accounted for 48.4 per cent of the total variance occurring on the items. Factor I (10 items), School Climate, was similar to Factor III of the EQA instrument; Factor II (5 items) was termed Talking to Others and dealt with feelings about communicating with others in school; Factor III (6 items), Evaluation, contained items measuring feelings about being evaluated in school; Factor IV (3 items), Arithmetic, concerned attitudes toward arithmetic; and Factor V (6 items), measured attitudes toward school learning of a verbal nature.

For both primary and intermediate grades the three major analysis questions were asked (see Analysis of Data, section VII, chapter II). Univariate analysis were used for total scores on each questionnaire. In the primary grades and in the intermediate grades multivariate analyses were performed using scores on the attitude toward school factors. Also, in the intermediate grades scores from the six-factors

of the Piers-Harris Children's Self Concept Scale entered into multivariate analyses. Univariate analyses followed any multivariate test for which a significant F value was found.

1974 Results for Primary Classes

In the primary grades no significant differences were found for any comparison performed. This meant that, for the Pictorial Self Concept Scale, for the School Attitude Scale and for the five factors of this questionnaire: (1) Carrying out the SWF program for two years did not result in greater changes in pupil attitudes than did carrying it out for one year; (2) Neither the second year of use of the SWF program nor the first year produced stronger attitude changes; and (3) Pupils exposed to the program for two years did not differ in attitude from pupils never exposed to the program (see Tables 1 and 2).

In examining these results further, Tables 3 and 4 were constructed. Table 3 shows, for the first and last testings of the study, the percentages of Group 1 and Group 2 pupils who gave positive responses to each item of the School Attitude Scale. A positive response to all items but number 14 was either "Very Happy" or "A Little Happy"; for item 14 a positive response was either "Very Sad" or "A Little Sad."

As shown in Table 3, at all three grade levels in the fall of 1972, a higher percentage of Group 2 pupils than Group 1 pupils gave positive responses to many of the items of the questionnaire. In the first year of the study it was found that by the spring of 1973 Group 1 pupils had overcome these initial differences between the two groups. In this testing a higher percentage of Group 1 pupils than Group 2 pupils were found to have given positive responses to many of the items.

In the spring 1974 testing, differences between Group 1 and Group 2 in the percentages of pupils giving positive responses were found to differ as a function of grade level. For grades 2 and 3 for almost all items for which differences greater than 5 per cent existed between the two groups, these differences favored Group 2 pupils. However, at grade 4 for almost all items of the questionnaire a higher percentage of Group 1 pupils than Group 2 pupils gave positive responses.

In an attempt at determining if there were items of the School Attitude Scale for which participation in the SWF program consistently produced attitude changes, Table 4 was constructed. In this table changes in the percentages of Group 1 pupils giving positive responses to items were compared with those occurring in Group 2 schools. The table was produced both through use of the information contained in Table 3 and through use of other similar information gathered in the study.

The section of the table entitled "Two Years in SWF Program vs. One Year" was constructed using the percentages of Table 3. It provides a comparison from 1972 to 1974 of changes occurring in the percentages of Group 1 and Group 2 pupils giving positive responses. For this section of the table, at grade 2 for item 1 a "-2" is shown. This number was determined in the following way: In Table 3 it can be seen that from 1972 to 1974 the percentage of grade 2 Group 1 pupils giving positive responses changed from 89 to 70, a loss of 19. For grade 2 Group 2 pupils the change for this same question was 86-69, a loss of 17. From 1972 to 1974 Group 1 lost two per cent more pupils than did Group 2 schools (i.e., -19-(-17) = -2). Thus, -2 is listed for this comparison. In the table, then, any positive number indicates that Group 1 schools either lost a lesser percentage or gained a greater percentage

Table 1

Primary Pupil Means on Attitude Questionnaires

	Faces School Attitude Scale							Pictorial Self Concept Scale						
	Fall 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Fall 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
	Mean	SD	Mean	SD	Mean	SD			Mean	SD	Mean	SD	Mean	SD		
	.80	109.34	119.16	8.02	110.32	7.79	109.34	108.97	9.63	3.52	12.41	4.24	15.10	1.37	15.71	15.54
	.92	107.60	118.41	9.07	108.88	6.98	107.60	107.66	10.32	3.38	12.64	2.95	15.01	1.90	15.47	15.38
	21	103.45	113.34	3.24	104.01	4.71	103.45	103.70	13.11	3.97	16.18	1.87	15.07	2.02	14.96	14.53
	45	108.07	109.20	8.06	108.29	6.56	108.07	108.73	13.70	2.55	15.73	2.71	15.81	2.05	15.58	15.38
	53	102.61	105.35	8.31	100.60	6.65	102.61	101.73	13.90	1.72	14.03	1.94	15.55	1.72	15.27	15.56
	27	98.76	104.44	7.50	97.75	6.82	98.76	99.04	14.70	2.45	13.55	2.47	14.61	1.68	14.17	14.75

...oom means in each group at each grade level: Faces = 10, Pictorial = 11.

Table 2

Primary Pupil Means on Attitude Toward School Factors

1974 Grade	Group	F_1: In-School Talking					F_2: School Climate					F_3: Difficult Schoolwork				
		Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74
		Mean	Mean	Mean	Comp.	Comp.	Mean	Mean	Mean	Comp.	Comp.	Mean	Mean	Mean	Comp.	Comp.
2	1	19.18	20.08	18.29	18.30	17.86	24.29	23.73	20.35	19.82	19.95	34.80	33.03	29.71	29.09	29.35
	2	19.73	19.36	18.09	18.02	17.90	24.02	23.13	19.92	19.48	19.60	34.68	32.98	29.92	29.33	29.58
3	1	19.41	19.40	17.34	17.25	17.14	23.20	21.35	17.80	17.63	17.73	32.66	31.17	29.96	29.84	30.93
	2	19.73	18.17	18.09	18.02	18.30	22.83	19.84	19.35	19.32	19.49	31.64	29.66	30.27	30.39	30.50
4	1	18.49	18.02	16.95	17.07	17.21	20.78	18.64	17.29	17.95	17.60	28.95	30.47	29.16	29.92	29.25
	2	18.53	17.74	16.91	17.02	17.26	21.19	18.44	17.09	17.61	17.42	30.31	28.77	27.71	28.16	28.11

1974 Grade	Group	F_4: Verbal Schoolwork					F_5: Evaluation				
		Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74
		Mean	Mean	Mean	Comp.	Comp.	Mean	Mean	Mean	Comp.	Comp.
2	1	28.65	29.80	29.62	29.74	29.62	12.60	12.52	12.29	12.29	12.24
	2	28.54	29.96	29.12	29.26	29.11	13.19	13.04	11.82	11.80	11.74
3	1	29.68	29.65	27.53	27.44	27.52	12.88	11.77	11.39	11.38	11.40
	2	30.03	29.61	28.78	28.64	28.78	12.72	11.93	11.79	11.78	11.79
4	1	28.70	27.23	26.26	26.37	26.29	11.67	10.99	10.93	10.97	11.00
	2	29.99	28.33	25.44	25.30	25.45	12.25	11.16	10.59	10.60	10.65

Table 3

Percentages of Pupils Giving Positive Responses to Items of the School Attitude Scale

Item	Grade 2				Grade 3				Grade 4			
	Fall 1972		Spring 1974		Fall 1972		Spring 1974		Fall 1972		Spring 1974	
	Group		Group		Group		Group		Group		Group	
	1	2	1	2	1	2	1	2	1	2	1	2
1	89	86	70	69	85	89	61	69	76	77	66	64
2	66	68	56	58	74	65	58	56	54	63	61	52
3	82	80	81	86	83	89	79	80	79	84	76	69
4			47	53	63	68	48	46	51	54	56	46
5	77	78	66	64	83	79	68	70	75	76	68	68
6	60	59	81	81	65	73	80	84	78	82	63	52
7			21	23	28	28	29	23	23	25	49	40
8	40	49	28	37	44	44	29	33	32	39	35	37
9	68	74	71	71	77	78	59	62	67	74	66	58
10	73	84	65	69	83	79	64	63	58	69	56	49
11			50	47	72	76	40	41	61	65	50	44
12			36	36	52	47	28	33	41	42	45	40
13			70	72	75	85	70	69	68	77	70	72
14			46	44	56	56	37	45	47	52	30	33
15	69	77	57	62	68	73	43	55	57	60	60	50
16			49	53	55	56	55	63	50	56	67	62
17	63	67	46	52	58	59	50	49	44	53	57	51
18			78	76	79	82	68	68	75	83	75	63
19			30	29	42	43	23	19	25	31	28	22
20	84	85	81	75	80	81	69	71	71	78	62	60
21	61	70	54	63	69	66	47	54	52	60	55	54
22			72	68	76	71	58	75	66	72	73	68
23	74	72	56	60	72	72	52	56	64	65	59	50
24	85	80	79	77	88	92	73	62	84	88	68	66
25	74	81	71	79	78	78	66	74	72	67	64	56
26	62	65	27	28	44	51	18	18	30	35	15	14
27	72	70	61	63	70	74	64	66	53	66	72	70
28			69	66	75	77	56	63	62	68	59	51
29			53	62	64	61	55	53	46	59	42	39
30	70	79	57	56	75	76	53	53	63	67	64	59

than did Group 2 schools; similarly, any negative number indicates that the loss or gain in the percentage of pupils giving positive responses favored Group 2 schools. Any positive number in the table, then, can be viewed as an indication of a positive change in attitude occurring as a function of participation in the SWF program.

A similar procedure to that just described was used to construct the section entitled "One Year in SWF Program vs. No Years." The information for this comparison was taken from that compiled during the first year of the study, employing the percentages occurring in the 1972 and 1973 testings.

Finally, the section of Table 4 entitled "Two Years in SWF Program vs. No Years" had to be constructed somewhat differently from the other two sections (since, of course, all schools participating in the study used the SWF program for at least one year). For Group 2 schools changes from 1972 to 1973 in the percentages of grade 2, 3 and 4 pupils giving positive responses were computed. For Group 1 schools differences between the percentages of grade 2, 3 and 4 pupils giving positive responses in 1974 and the percentages of grade 2, 3 and 4 pupils giving positive responses in 1972 were used. Once the changes for Group 2 schools and the differences for Group 1 schools were determined, the numbers appearing in Table 4 were computed in a way similar to that employed for the other two sections of the table.

By referring to Table 4 it can be seen that there were a number of items for which the changes occurring in pupil attitudes favored the use of the SWF program. Among these were numbers 6, 7, 11, 13, 17, 19, 26, 27 and 30. Of these nine items, four are included among those of the Difficult Schoolwork factor. For the other items of this factor somewhat mixed but generally positive results were found. Item 13 deals with learning things by reading a book; this item would appear to be highly related to those of the Difficult Schoolwork factor. Thus, these results indicated that there was a tendency for pupils exposed to the SWF program to feel more confident in dealing with difficult schoolwork than did pupils not exposed to the program.

The positive changes found for Group 1 pupils on items 6 and 30 can be traced to their good feelings about participating in classroom meetings. These items deal with pupil feelings about discussing things with their whole class and about being asked questions by their teachers.

Items 11 and 26 are included on the School Climate factor. It would be expected that some positive change would occur in this area for pupils exposed to the SWF program. Both a more relaxed classroom climate and more positive feelings about dealing with schoolwork would help to produce this.

Items 5, 22 and 25 stand out as ones for which changes in pupil attitudes did not favor the use of the SWF program. These items deal with talking to the teacher, reading out loud and telling classmates about ideas. Items 5 and 25 differ little from items 6 and 30, yet differing results were found for the two pairs. A possible explanation for these differing results is that items 5 and 25 are stated from a different standpoint than are items 6 and 30. In items 5 and 25 the pupil is taking action to talk to the teacher and to give his ideas; in items 6 and 30 the teacher asks for the pupil's viewpoint and the whole class discusses something. It is possible, then, that pupils exposed to the SWF program become more oriented toward acting as a part of a group rather than in a way which would bring attention to themselves. The results found for item 22, dealing with feelings about reading out loud, would tend also to back up this conclusion.

Table 4.

Comparisons Between Changes in the Percentages of Group 1 and Group 2 Pupils Giving Positive Responses (School Attitude Scale)

Item	Factor	Comparison: Two Years in SWF Program vs. No Years[1] — Grade 2	Grade 3	Grade 4	Comparison: One Year in SWF Program vs. No Years[2] — Grade 1	Grade 2	Grade 3	Grade 4	Comparison: Two Years in SWF Program vs. One Year[3] — Grade 2	Grade 3	Grade 4
1	II	-4	-1	6	2	3	0	-7	-2	-4	3
2	III	-8	20	8	-4	-3	14	2	0	-7	18
3	IV	-4	0	-7	3	5	-10	-12	-7	5	12
4	III	-3	13	6		-1	9	-5		7	13
5	I	-6	0	-13	4	3	-4	-15	3	-6	11
6	IV	14	7	13	-1	12	0	11	-1	4	15
7	III	4	7	7		9	10	3		6	11
8	I	2	8	-4	20	15	11	-4	0	-4	5
9	IV	-1	5	1	4	1	-2	-6	6	-2	15
10	V	0	20	-4	3	0	5	-12	7	-3	18
11	II	5	4	6		12	9	-6		3	10
12	III	-4	-2	5		5	7	-5		-10	6
13	IV	7	9	11		6	-4	5		11	7
14	II	7	2	-6		7	0	-9		-8	2
15	I	-3	-10	7	12	4	-8	10	3	-7	13
16	III	-1	0	8		0	-5	0		-7	11
17	III	-5	17	5	1	5	19	-2	-2	2	15
18	IV	2	6	1		4	4	-3		3	20
19	III	5	13	3		5	20	-4		5	12
20	V	4	6	1	2	0	6	-4	7	-1	9
21	II	-11	5	4	17	-1	7	-5	0	-10	9
22	IV	-8	2	-5		-9	10	-13		-22	11
23	II	1	-3	1	4	11	-1	-12	-6	-4	10
24	IV	1	0	7	-1	2	4	-9	-3	15	6
25	I	-1	-7	8	4	-1	-8	-9	-1	-8	9
26	II	10	5	0	-3	17	18	-6	2	7	6
27	III	7	11	11	-1	12	10	3	-4	2	15
28	V	4	7	15		0	-1	6		-5	14
29	III	-9	20	-1		-1	21	-2		-1	16
30	I	-5	1	5	12	9	4	-3	10	1	9

[1](Group 1 differences between 1974 grade 2, 3 and 4 percentages and 1972 grade 2, 3 and 4 percentages) minus (Group 2 changes from 1972 to 1973 for grades 2, 3 and 4 pupils)

[2](Group 1 changes from 1972 to 1973) minus (Group 2 changes from 1972 to 1973)

[3](Group 1 changes from 1972 to 1974) minus (Group 2 changes from 1972 to 1974)

1974 Results for Intermediate Pupils

In the intermediate grades, first of all, it was found that for none of the analyses performed did differences exist between Group 1 and Group 2 scores on the Piers-Harris Children's Self Concept Scale (see Tables 5 and 6).

For the attitude toward school instruments, scores of pupils exposed to the SWF program for two years did not differ from those of pupils exposed for one year. Similarly, for these questionnaires neither the second year of the program nor the first year produced stronger attitude changes (see Tables 6, 7 and 8).

However, in comparing scores of pupils exposed to the SWF program for two years (Group 1, 1974) with those of pupils who never participated in the program (Group 2, 1973), one highly interesting result was uncovered. For the Importance of School factor of the EQA instrument (Factor I) a significant difference was found between the scores of the two groups ($F_{1,60}=60.41$). As shown in Tables 8 and 9 this difference favored Group 1 schools. The difference was of large enough magnitude for a significant difference also to be found for total scores on the EQA instrument ($F_{1,60}=30.94$).

In comparing Group 1 and Group 2 scores on EQA Factor I in the fall of 1972 no significant difference was found. Thus, although pupils from the two groups of schools did not typically differ in their scores on this factor, after two years of participation in the SWF program Group 1 pupils held more positive feelings in this area than did Group 2 pupils never exposed to the program. Also, during the 1973-74 school year when both groups participated in the program, both groups evidenced increases in their mean scores on this factor. This result is especially interesting since attitude toward school scores of a group of pupils typically decrease yearly as these pupils progress from grade to grade.

Therefore, it can be said that intermediate pupils participating in the SWF program did experience changes in attitude. After participating in the program for two years they had come to believe that doing schoolwork and learning were more important than did pupils never exposed to the SWF program.

Table 5

Intermediate Pupil Means on Factors of the Piers-Harris Children's Self Concept Scale

1974 Grade	Group	Behavior Fall 1972 Mean	Behavior Spring 1973 Mean	Behavior Spring 1974 Mean	Behavior Adj. Mean 72-74 Comp.	Behavior Adj. Mean 73-74 Comp.	Intellectual & School Status Fall 1972 Mean	Intellectual & School Status Spring 1973 Mean	Intellectual & School Status Spring 1974 Mean	Intellectual & School Status Adj. Mean 72-74 Comp.	Intellectual & School Status Adj. Mean 73-74 Comp.	Physical Appear. & Attrib. Fall 1972 Mean	Physical Appear. & Attrib. Spring 1973 Mean	Physical Appear. & Attrib. Spring 1974 Mean	Physical Appear. & Attrib. Adj. Mean 72-74 Comp.	Physical Appear. & Attrib. Adj. Mean 73-74 Comp.
5	1	13.40	12.74	13.63	13.64	13.82	11.83	11.31	11.66	11.53	11.77	7.00	7.02	7.57	7.58	7.62
	2	13.25	13.17	13.53	13.62	13.46	11.83	11.66	11.90	11.77	11.78	7.20	7.08	7.21	7.13	7.22
6	1	13.66	13.53	14.14	14.00	13.85	11.33	11.30	12.09	12.26	12.21	6.94	7.06	7.57	7.61	7.59
	2	13.31	12.76	13.84	13.89	14.02	11.45	11.64	12.41	12.50	12.30	6.96	7.22	7.71	7.74	7.64

1974 Grade	Group	Anxiety Fall 1972 Mean	Anxiety Spring 1973 Mean	Anxiety Spring 1974 Mean	Anxiety Adj. Mean 72-74 Comp.	Anxiety Adj. Mean 73-74 Comp.	Popularity Fall 1972 Mean	Popularity Spring 1973 Mean	Popularity Spring 1974 Mean	Popularity Adj. Mean 72-74 Comp.	Popularity Adj. Mean 73-74 Comp.	Happiness & Satisfaction Fall 1972 Mean	Happiness & Satisfaction Spring 1973 Mean	Happiness & Satisfaction Spring 1974 Mean	Happiness & Satisfaction Adj. Mean 72-74 Comp.	Happiness & Satisfaction Adj. Mean 73-74 Comp.
5	1	8.11	7.79	8.36	8.30	8.51	7.80	7.58	7.73	7.80	7.74	7.22	6.82	7.07	7.01	7.06
	2	8.07	8.01	8.24	8.21	8.25	7.72	7.48	7.69	7.72	7.76	7.08	6.62	6.96	6.97	7.04
6	1	8.10	8.19	8.79	8.73	8.69	7.49	7.43	8.09	7.49	8.19	6.95	6.81	7.14	7.20	7.13
	2	7.78	8.12	8.67	8.81	8.61	7.81	7.87	8.53	7.81	8.35	7.13	6.93	7.27	7.25	7.20

Each mean in this table and following tables for intermediate pupils is an average of 11 classroom means.

Table 6

Intermediate Pupil Means on Attitude Questionnaires

1974 Grade	Group	EQA Attitude Toward School: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	School Attitude Scale: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
5	1	64.14	2.99	53.41	7.05	57.12	3.64	56.68	56.95	109.00	5.01	95.67	7.35	94.00	7.36	93.13	93.97
	2	62.10	2.85	51.37	3.62	56.93	2.03	56.93	57.11	107.45	6.23	98.94	5.93	93.81	4.82	93.39	92.63
6	1	59.82	3.24	51.63	4.24	56.96	2.76	57.46	57.10	98.86	7.04	90.35	10.04	93.01	4.90	95.08	94.82
	2	62.35	2.23	53.26	5.08	57.12	3.47	57.07	56.98	108.73	3.95	97.32	9.85	94.04	7.31	93.25	93.43

1974 Grade	Group	Piers-Harris Children's Self Concept: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
5	1	54.74	4.58	52.70	5.78	55.40	3.49	55.18	55.99
	2	54.63	4.09	53.63	5.07	55.10	4.50	54.95	55.07
6	1	54.00	5.80	54.00	6.05	57.03	5.32	57.31	56.76
	2	54.29	5.83	54.03	5.40	57.55	4.26	57.64	57.26

Table 7

Intermediate Pupil Means on School Attitude Scale Factors

1974 Grade	Group	F_1: School Climate					F_2: Talking to Others					F_3: Evaluation				
		Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74
		Mean	Mean	Mean	Comp.	Comp.	Mean	Mean	Mean	Comp.	Comp.	Mean	Mean	Mean	Comp.	Comp.
5	1	34.41	27.83	27.38	27.19	27.42	18.42	16.71	15.45	15.14	15.33	21.73	19.63	19.38	19.27	19.44
	2	34.29	29.95	27.25	27.08	26.97	17.54	16.63	16.02	16.01	15.93	21.64	20.08	19.74	19.66	19.57
6	1	30.13	26.15	26.74	27.27	27.11	16.21	15.56	15.41	15.86	15.66	20.25	18.97	20.04	20.50	20.41
	2	34.30	29.30	27.46	27.28	27.29	17.91	16.50	15.85	15.72	15.80	22.16	20.30	20.09	19.81	19.82

1974 Grade	Group	F_4: Arithmetic					F_5: Verbal Learning				
		Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. Mean 72-74	Adj. Mean 73-74
		Mean	Mean	Mean	Comp.	Comp.	Mean	Mean	Mean	Comp.	Comp.
5	1	11.01	10.26	10.69	10.71	10.68	23.44	21.47	21.11	20.85	21.12
	2	11.19	10.54	9.77	9.71	9.64	22.79	22.21	21.03	21.00	20.80
6	1	10.71	9.80	10.08	10.23	10.26	21.56	20.52	20.74	21.16	21.06
	2	11.31	10.34	10.41	10.30	10.37	23.05	21.80	20.23	20.11	20.14

Table 8

Intermediate Pupil Means on EQA Attitude Toward School Factors

1974 Grade	Group	F_1: Importance of School							F_2: Teacher, Talking						
		Fall 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Fall 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
		Mean	SD	Mean	SD	Mean	SD			Mean	SD	Mean	SD	Mean	SD		
5	1	32.70	1.92	25.58	5.43	30.37	1.63	30.29	30.34	11.79	1.37	10.47	1.32	9.76	1.20	9.47	9.72
	2	31.99	1.69	22.99	3.65	30.13	1.29	30.14	30.20	11.01	0.78	10.94	0.70	9.94	0.59	9.92	9.62
6	1	31.58	1.59	25.45	3.61	29.76	0.95	29.83	29.74	10.13	0.70	10.00	0.46	10.32	0.82	10.59	10.58
	2	32.1	1.51	25.31	4.43	29.63	2.34	29.63	29.61	10.86	0.54	10.27	0.64	10.50	0.65	10.53	10.59

1974 Grade	Group	F_3: School Climate							
		Fall 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
		Mean	SD	Mean	SD	Mean	SD		
5	1	19.65	0.87	17.36	1.46	16.99	1.68	16.84	16.93
	2	19.09	1.24	17.43	1.62	16.86	1.35	16.85	16.76
6	1	18.10	1.93	16.25	1.99	16.89	1.31	17.13	17.23
	2	19.39	0.92	17.67	1.96	17.00	1.22	16.91	16.82

Table 9

1974 Grade 4 Means on Intermediate Attitude Questionnaires

Questionnaire	Group 1	Group 2
EQA Attitude Toward School	59.89	59.09
F_1: Importance of School	31.22	30.70
F_2: Teacher, Talking	10.45	10.57
F_3: School Climate	18.22	17.82
School Attitude Scale	102.57	99.16
F_1: School Climate	31.06	30.10
F_2: Talking to Others	17.35	16.89
F_3: Evaluation	21.07	20.07
F_4: Arithmetic	10.75	10.30
F_5: Verbal Learning	22.35	21.79
Piers-Harris Children's Self Concept Scale	54.28	52.81
F_1: Behavior	13.41	13.01
F_2: Intellectual & School Status	11.29	11.22
F_3: Physical Appearance & Attributes	6.80	6.55
F_4: Anxiety	8.49	8.13
F_5: Popularity	7.51	7.62
F_6: Happiness & Satisfaction	6.97	6.82

II. PUPIL ACHIEVEMENT RESULTS

1972-73 Procedures and Results

Improvements in pupil achievement should occur in schools adopting the Schools Without Failure program. These improvements should result from efforts made to make pupils feel more comfortable in school, more confident of their own abilities and more interested in a relevant curriculum. Thus, improvements in pupil achievement would be expected to be gradual, occurring as a function of changes in the school environment and changes in pupil attitudes.

In the 1972-73 school year the Stanford Achievement Test was administered to both Group 1 and Group 2 pupils in the fall and in the spring. To determine the effects of the SWF program upon the achievement of pupils, changes from fall to spring of Group 1 pupils were compared with those of Group 2 pupils. Grade-equivalent classroom means were computed for those subscales used, including only scores of pupils who participated in both testings. For certain subscales scores from appropriate grade levels were analyzed together in factorial tests. For other subscales it was possible only to include scores from a single grade level in a comparison.

The analyses performed the first year uncovered few differences in the pupil achievement gains of Group 1 and Group 2 schools. Significant differences favoring Group 2 schools on the Arithmetic Computation subscale in grade 5 and on the Social Studies subscale in grade 6 were found. A significant difference favoring Group 1 schools on the Word Study Skills subscale in grades 3 and 4 was also found.

1974 Procedures

The Stanford Achievement Test was again administered to all pupils in Group 1 and Group 2 schools in the spring of 1974. Scores of grade 1 pupils did not enter into the analyses of results since the design of the study did not call for this.

For purposes of analysis, grade-equivalent classroom means were computed. These means included scores of only those pupils who had participated in all three testings of the study and who had spent both years of the study in either a Group 1 school or a Group 2 school. Fall 1972 and spring 1973 classroom means were recomputed to include only scores of the same pupils.

In comparing changes in achievement of Group 1 and Group 2 classes, the three major analysis questions of the study were asked (see Analysis of Data, section VII, Chapter II). In answering questions 1 and 2 only univariate analyses were used. This was because it was believed that changes taking place in Group 1 and Group 2 pupil achievement scores might interact somewhat, i.e., Group 1 pupils might improve more than did Group 2 pupils for certain subscales while Group 2 pupils might improve more for others. However, in answering question 3 multivariate analyses of variance were used for grade 2 and for the verbal subscales for grades 3-6. Univariate analyses followed any multivariate test for which a significant F value was found.

The design for analysis purposes varied for different subscales. An attempt was made to analyze in a factorial design scores from all grade levels taking any one subscale. For most subscales the scores of classes which began in the study as third, fourth and fifth graders were analyzed together in factorial tests to answer questions 1 and 2. In answering question 3 for most subscales the scores of classes in grades

3 to 6 were analyzed together. Factorial designs were also used for the Word Study Skills subtest, grouping classes which began in the study as second and third graders, and for the Arithmetic Applications subscale, grouping classes which began in the study as fourth and fifth graders.

1974 Results

As was found in the first year of the study, Group 1 and Group 2 pupil achievement gains did not differ greatly. Differences were found only for certain verbal subscales.

For classes which began in the study in grades 3 through 5, two-year gains of Group 1 pupils on two subscales were found to be significantly greater than were those of Group 2 pupils. Pupils who participated in the SWF program for two years gained significantly more on the Word Meaning subscale ($F_{1,65}=8.58$) and on the Language subscale ($F_{1,65}=4.12$) than did pupils who participated for one year.

For these same grade levels and for the same two subscales, Group 1 classes gained significantly more from 1973 to 1974 than did Group 2 classes ($F_{1,65}=6.38$; $F_{1,65}=6.62$). Also for classes which began in the study as first graders, Group 1 1973 to 1974 gains on the Word Meaning subscale were significantly greater than were those of Group 2 classes ($F_{1,21}=8.72$). For these subscales and grade levels, then, gains taking place during the second year of use of the SWF program were greater than were those occurring during the first year of its use.

In all other analyses carried out to answer questions 1 and 2 no significant differences were found. In the analyses performed to answer question 3 no significant differences were found for any comparison. Thus, achievement scores of pupils exposed to the SWF program for two years did not differ significantly from those of pupils who never participated in it. The two groups compared were not found to differ significantly in the fall of 1972 when the study began.

In attempting to interpret the significant differences found for questions 1 and 2 the tables of means on the following pages were consulted. For the subscales for which differences were found, two complementary trends appeared to exist between the 1973 and 1974 testings. Group 1 pupils in grade 2 in 1974 scored much higher on the Word Meaning subscale than did Group 1 second grade pupils in 1973; Group 2 second grade pupils in 1974 scored slightly lower in Word Meaning than did Group 2 second grade pupils in 1973. In both Word Meaning and Language Group 1 pupils in grades 5 and 6 in 1974 scored higher than did Group 1 pupils at these same grade levels in 1973; for the same subscales Group 2 pupils in grades 5 and 6 in 1974 scored lower than did Group 2 pupils at the same grade levels in 1973. Thus, during the 1973-74 school year, for the subscales for which differences were found, Group 2 improvements over 1973 scores were coupled with Group 2 decreases over 1973 scores.

It is possible, then, that when the SWF program is begun in a school both teachers and pupils must undergo a period of adjustment to it. Teachers must learn new techniques and may participate in training sessions during times when they would typically be teaching. Pupils also must adjust to changes and this may take time, especially for pupils who have attended more traditional schools for four or five years. After the period of adjustment, however, the results of the study demonstrate that pupils make gains which at least bring them back to their previous levels.

Probably the most interesting achievement results were found for grade 2 Group 1 classes. These pupils were the only ones in the study who participated for two years in the SWF program and who never attended schools where the SWF program was not used. Their scores on all three verbal subscales used were higher than were those of grade 2 pupils in either Group 1 or Group 2 schools in 1973. These results may indicate that pupils who spend their entire elementary school career in SWF schools will, in time, achieve better in verbal areas than will pupils who are never exposed to the program. This possibility should be examined in future studies of the SWF program.

Table 10

Means of 1974 Grade 2 Pupils on the Stanford Achievement Test

Group	No. of Classes	Fall 1972 Early Sch. Ach. Test Total Mean	SD	Word Meaning Spring 1973 Mean	SD	Spring 1974 Mean	SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Paragraph Meaning Spring 1973 Mean	SD	Spring 1974 Mean	SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
1	12	99.64	7.23	2.32	0.58	3.54	0.67	3.51	3.58	2.28	0.69	3.12	0.48	3.09	3.15
2	12	98.29	7.85	2.42	0.38	3.18	0.34	3.20	3.14	2.34	0.38	3.04	0.39	3.07	3.02

Group	No. of Classes	Word Study Skills Spring 1973 Mean	SD	Spring 1974 Mean	SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
1	12	3.20	1.08	4.67	0.96	4.59	4.69
2	12	3.26	0.94	4.34	0.97	4.41	4.32

Table 11

Word Study Skills Means of Pupils in Grades 3 and 4

1974 Grade	Group	No. of Classes	Fall 1972 Mean	SD	Spring 1973 Mean	SD	Spring 1974 Mean	SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
3	1	12	2.79	0.87	4.32	1.09	5.08	0.73	5.[illegible]5	5.37
	2	12	2.89	0.87	4.42	1.38	4.97	1.24	5.55	5.18
4	1	12	4.26	1.05	5.01	0.92	5.30	0.92	4.73	5.05
	2	12	4.38	1.17	5.01	1.32	5.19	1.02	4.52	4.94

Table 12

Means of Pupils in Grades 3 to 6 on Verbal Subscales of the Stanford Achievement Test

1974 Grade	Group	No. of Classes	Word Meaning: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Paragraph Meaning: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
3	1	12	2.29	0.43	3.15	0.55	3.94	0.45	3.99	3.99	2.20	0.56	3.05	0.65	3.79	0.62	3.82	3.80
	2	12	2.38	0.41	3.24	0.40	3.99	0.49	3.95	3.94	2.25	0.45	3.07	0.53	3.84	0.67	3.81	3.82
4	1	12	3.32	0.57	4.00	0.53	4.96	0.68	5.70	5.71	3.22	0.60	3.83	0.54	4.72	0.86	5.64	5.57
	2	12	3.42	0.51	4.17	0.55	4.87	0.77	5.56	5.46	3.20	0.60	3.93	0.70	4.71	0.85	5.61	5.42
5	1	12	4.15	0.47	5.09	0.60	5.44	0.49	5.38	5.19	3.97	0.58	5.05	0.94	5.49	0.77	5.46	5.15
	2	12	4.12	0.72	4.75	0.84	5.07	0.74	5.04	5.13	3.76	0.67	4.52	1.01	5.09	0.83	5.31	5.24
6	1	12	4.75	0.60	5.38	0.71	6.32	0.80	5.64	5.81	4.78	0.72	5.41	0.85	6.28	0.92	5.29	5.61
	2	12	4.78	0.42	5.53	0.53	6.11	0.60	5.40	5.47	4.75	0.58	5.38	0.54	6.15	0.59	5.18	5.50

1974 Grade	Group	No. of Classes	Spelling: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Language: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
3	1	12	--	--	--	--	4.24	0.40	--	--	--	--	--	--	3.80	0.62	--	--
	2	12	--	--	--	--	4.26	0.63	--	--	--	--	--	--	3.79	0.75	--	--
4	1	12	3.19	0.37	4.21	0.46	4.76	0.65	5.61	5.38	2.95	0.43	3.81	0.62	4.41	1.05	5.04	5.08
	2	12	3.17	0.60	4.26	0.67	4.74	0.58	5.61	5.30	2.92	0.42	3.95	0.86	4.47	1.01	5.14	5.00
5	1	12	3.81	0.42	4.76	0.49	5.77	0.61	5.93	5.86	3.40	0.52	4.56	0.91	5.28	0.92	5.31	5.25
	2	12	3.83	0.41	4.49	0.87	5.53	0.94	5.67	5.88	3.40	0.73	4.41	1.30	4.95	0.96	4.98	5.05
6	1	12	4.87	0.72	5.71	0.70	6.34	0.67	5.34	5.55	4.45	0.94	5.16	1.01	6.14	1.00	4.78	5.55
	2	12	4.87	0.48	5.75	0.59	6.39	0.70	5.39	5.56	4.52	0.60	5.26	0.76	5.81	0.75	4.36	5.13

Table 13

Means of Pupils in Grades 3 to 6 on Arithmetic Subscales of the Stanford Achievement Test

1974 Grade	Group	No. of Classes	Arithmetic Computation: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Arithmetic cepts: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
3	1	12	--	--	--	--	3.94	0.32	--	--	--	--	--	--	4.14	0.53	--	--
	2	12	--	--	--	--	4.02	0.53	--	--	--	--	--	--	3.92	0.77	--	--
4	1	12	2.82	0.23	3.78	0.34	4.66	0.57	5.26	5.07	3.07	0.55	4.27	0.49	5.05	0.91	6.06	5.54
	2	12	2.78	0.33	4.10	0.67	4.56	0.69	5.19	4.79	3.00	0.48	4.12	0.70	4.90	1.01	5.98	5.49
5	1	12	3.45	0.19	4.74	0.45	4.96	0.41	4.99	4.83	4.03	0.42	5.16	0.79	5.61	0.54	5.60	5.48
	2	12	3.47	0.41	4.48	0.84	4.86	0.23	4.87	4.88	3.87	0.76	4.84	1.29	5.53	0.52	5.73	5.62
6	1	12	4.16	0.27	4.76	0.42	5.91	0.76	5.29	5.77	5.22	0.47	5.56	0.61	6.18	0.76	5.04	5.78
	2	12	4.21	0.31	5.24	0.54	5.96	0.41	5.31	5.56	5.20	0.37	5.91	0.37	6.51	0.43	5.38	5.87

1974 Grade	Group	No. of Classes	Arithmetic Applications: Fall 1972 Mean	Fall 1972 SD	Spring 1973 Mean	Spring 1973 SD	Spring 1974 Mean	Spring 1974 SD	Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
3	1	12	--	--	--	--	--	--	--	--
	2	12	--	--	--	--	--	--	--	--
4	1	12	--	--	--	--	4.93	0.78	--	--
	2	12	--	--	--	--	4.57	0.65	--	--
5	1	12	3.95	0.46	4.83	0.78	5.29	0.97	5.74	5.49
	2	12	3.77	0.49	4.47	0.92	5.13	0.79	5.82	5.66
6	1	12	4.69	0.74	5.29	1.05	6.25	1.08	5.67	6.02
	2	12	4.68	0.50	5.57	0.60	6.45	0.57	5.89	5.96

Table 14

Science and Social Studies Means of Grade 3 Pupils

Group	No. of Classes	Fall '72		Spring '73		Spring '74	
		Mean	SD	Mean	SD	Mean	SD
1	12	2.88	0.43	3.86	0.66	3.80	0.62
2	12	2.76	0.39	3.78	0.76	3.46	0.53

Table 15

Science and Social Studies Means of Grade 6 Pupils

Group	No. of Classes	Science						Social Studies					
		Fall '72		Spring '73		Spring '74		Fall '72		Spring '73		Spring '74	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	12	5.51	0.58	6.49	0.78	6.44	1.35	5.19	0.50	5.82	0.71	5.76	0.92
2	12	5.80	0.92	6.98	1.26	6.34	0.90	5.22	0.55	6.35	0.97	5.70	0.62

III. TEACHER ATTITUDES RESULTS

1972-73 Procedures and Results

The Schools Without Failure program embodies the philosophy of William Glasser. It would be extremely difficult for teachers or administrators to successfully use SWF methods without agreeing, at least in general, with Dr. Glasser's philosophy.

During the first year of the study it was asked whether the attitudes of Group 1 teachers changed during their first year of training in and implementation of SWF methods. The changes in attitude of these teachers from spring 1972 to spring 1973 were compared with those of Group 2 teachers for the same time period. During the 1972-73 school year Group 2 schools did not implement the SWF program.

Three questionnaires were used to assess teacher attitudes. Two of these, the Opinionnaire on Attitudes Toward Education and the Philosophy of Glasser questionnaire, were scored not only in terms of total scores on all items contained in them but also in terms of two factors obtained through principal components factor analysis. Each factor of a questionnaire was made up of items highly similar to each other in content but different in some ways from the content of the items of the other factor. The purpose of using the factors was to produce scores for teachers in specific, meaningful areas of attitude.

The factors of the 50-item Opinionnaire on Attitudes Toward Education were termed: I, Child-Centeredness (24 items) and II, Rigidity (26 items). High scores obtained by teachers on the Child-Centeredness factor indicated that they held favorable attitudes toward dealing with their pupils as individuals and toward helping pupils understand themselves. Because the entire questionnaire was scored in terms of favorableness toward child-centered policies and practices, high scores on the Rigidity factor reflected disagreement with the need for teachers to use the same authoritarian methods to control all pupils.

The two factors of the 15-item Philosophy of Glasser questionnaire were called: I, Involvement (7 items) and II, Traditionalism (8 items). The Involvement factor was made up of items measuring attitudes toward the value to pupils of feeling accepted by their teachers and of being dealt with in school as individuals capable of responsible behavior. The Traditionalism factor measured attitudes toward traditional elementary school practices, such as giving report card grades, using punishment and memorizing facts. Teachers who obtained high scores on the Involvement factor agreed with the items of this factor; teachers who disagreed with the Traditionalism items obtained high scores on the factor (since the entire questionnaire was scored in terms of agreement with the SWF philosophy). Appendix B shows, for both the Opinionnaire on Attitudes Toward Education and the Philosophy of Glasser questionnaire, the items included on each factor.

In the analyses conducted at the end of the first year of the study it was found that attitudes of both primary and intermediate Group 1 teachers had changed during their first year of use of the SWF program. Changes in attitude of Group 1 primary teachers took place in their total scores on the Philosophy of Glasser questionnaire and on both the Traditionalism factor of the Glasser questionnaire and the Rigidity factor of the Opinionnaire on Attitudes Toward Education. Group 1 primary teachers had become more accepting of the SWF philosophy, less traditional in their attitudes toward education and less rigid in their attitudes toward dealing

with children in school. Changes in attitude of Group 1 intermediate teachers occurred in their total scores on all three questionnaires and on both the Involvement factor of the Glasser questionnaire and the Child-Centeredness factor of the Opinionnaire on Attitudes Toward Education. Thus, they had become more accepting of the SWF philosophy, more child-centered in dealing with pupils and more satisfied with teaching as a career.

1974 Procedures

At the end of the 1974 school year teachers in both Group 1 and Group 2 schools responded to the same three questionnaires as were used during the first year of the study. Since the analyses to be performed for pupil data included only classrooms in grades 2 through 6, an administrative decision was made to include in the attitude testing of teachers only those teaching these grade levels. As was done in the first year of the study, the Opinionnaire on Attitudes Toward Education and the Philosophy of Glasser questionnaire were scored both in terms of total scores and in terms of two factor scores.

In analyzing the teacher attitude data the three major analysis questions were asked (see Analysis of Data, section VII, Chapter II). In answering each question univariate analyses were carried out on total scores for each questionnaire. Also, for each question a multivariate test was used, including the two factors of the Philosophy of Glasser questionnaire and the two factors of the Opinionnaire on Attitudes Toward Education. If the F value for this test was found significant, univariate tests were performed for each factor.

1974 Results for Primary Teachers

In comparing changes in primary teacher attitudes over the course of the entire two years of the study significant differences were found for total scores on the Opinionnaire on Attitudes Toward Education ($F_{1,27}=5.77$) and for scores on the Rigidity factor of the same questionnaire ($F_{1,27}=7.99$). In both comparisons Group 1 teachers, exposed to two years of training, were found to have changed more than did Group 2 teachers, exposed to training only during the 1973-74 school year (see Tables 16 and 18).

For primary teachers neither the first year of training nor the second year produced stronger changes in attitude on any questionnaire or factor. Although the multivariate test including the two factors of the Glasser questionnaire and the two factors of the Opinionnaire on Attitudes Toward Education was found significant for the 1973 to 1974 comparison ($F_{4,21}=2.95$), no univariate test for a factor was found significant (see Tables 17 and 19).

Finally, attitudes of primary teachers exposed to two years of training (Group 1, 1974) were not found to differ from those of primary teachers who had not participated in training (Group 2, 1973). The two groups also were not found to differ significantly on any questionnaire or factor in 1972, when the study began.

1974 Results for Intermediate Teachers

For intermediate teachers, 1972 to 1974 attitude changes of Group 1 teachers were not found to have been greater than were those of Group 2 teachers (see Tables 16 and 20).

However, during the 1973-74 school year, certain attitudes of Group 2 teachers did change more than did those of Group 1 teachers. Significant differences over this time period were found for total scores on the Opinionnaire on Attitudes Toward Education ($F_{1,47}=8.30$) and for the Child-Centeredness factor of the same questionnaire ($F_{1,47}=11.06$). This indicated that in these areas stronger changes occurred during the first year that teachers were exposed to the SWF program than took place during the second year of exposure (see Tables 17 and 21).

As was the case for primary teachers, 1974 attitudes of Group 1 intermediate teachers were not found to differ from those of teachers who had never undergone SWF training (Group 2, 1973). The two groups were not found to differ significantly on any questionnaire or factor in the 1972 testing.

Interpretation of Results

The results obtained for both primary and intermediate teachers appear to be somewhat contradictory. On the one hand, changes were found in the attitudes of teachers exposed to SWF training. On the other, attitudes of teachers exposed to two years of training were not found to differ from those of teachers who never participated in training.

As a means of clarifying the results of the study, Table 22 was constructed. This table shows, for each of the three testings, the mean item score obtained by each group on each questionnaire and factor. In scoring the questionnaires the five response choices available for each item were given values from 1 to 5, with 5 being the most positive attitude possible and 1 being the most negative attitude possible. Thus, a mean of 1.00 in Table 22 would indicate that all teachers included in a group marked the most negative choice for all items of the questionnaire or factor and a mean of 5.00 would indicate that all teachers included in a group marked the most positive choice.

In tracing changes in these item means over the two years of the study it can be seen that, in general, for the questionnaires used the attitudes of Group 2 teachers were somewhat more positive than were those of Group 1 teachers in the first testing of the study. In the second testing in the spring of 1973 the attitudes of Group 1 teachers became more positive while those of Group 2 teachers became less positive. These changes account for the attitude change differences found between the two groups during the first year of the study.

During the second year of the study Group 2 teachers did not experience positive attitude changes similar to those experienced by Group 1 teachers during 1972-73. Instead, their 1974 scores were similar to their 1973 scores. This meant, then, that their scores on the first testing were actually higher than were those they obtained after undergoing training.

During the second year of the study Group 1 primary teachers maintained most of the attitude gains they had experienced in 1972-73. This accounts for the fact that on two of the comparisons performed their two-year changes in attitude were found to be greater than were those of Group 2 teachers.

Group 1 intermediate teachers generally scored somewhat lower in the 1974 testing than they had in 1973. This accounts for the finding that, in two of the 1973 to 1974 comparisons, Group 2 teachers were found to have gained more than did Group 1 teachers.

Probably the most valid way to interpret these results is to state that neither group underwent strong attitude changes. It was found in the 1972 testing that few teachers disagreed initially with the SWF philosophy. This is evidenced by the fact that item means in Table 22 were all above the mid-point of the scale. In fact, in this testing there was almost perfect agreement with the items of the Involvement factor.

As shown in Table 22, throughout the study item means on the Traditionalism factor were lower than were those for any other measure used. These low means were mainly a function of items 2, 5 and 8 of the questionnaire. For each of these items, means for all three testings fell at or below the mid-point of the scale. Thus, although teachers did accept the SWF philosophy, many did not feel that it was harmful to pupils to ask them to memorize facts without understanding how these were relevant to their lives. Similarly, many teachers did not feel that giving grades or using punishment were harmful practices.

Overall, then, it can be said that over the two years of the study teachers exposed to SWF training experienced little change in attitude, as measured by the questionnaires used. The results may indicate two things. First, the SWF philosophy is one which most elementary teachers are willing to accept and that, therefore, few changes in attitude are necessary for most elementary teachers to carry out the program. A second conclusion might be that, whereas changes in attitude are not needed, an acceptance of SWF methods is needed. By the end of their second year of successfully implementing the SWF program, teachers had not become convinced that traditional methods of dealing with pupils were harmful to them. Since this was the case, they must have become convinced of something else, namely that SWF methods worked better than traditional methods.

In short, it may be that most elementary teachers teaching in traditional settings do not need to be convinced of the validity of the Schools Without Failure philosophy. In order to adopt the program, however, they may need to be convinced of the validity of Schools Without Failure methods.

Table 16

Teacher Means on Attitude Questionnaires for 1972-74 Comparisons

1974 Grade Taught	Group	No. of Teachers	Opinionnaire on Attitudes Toward Education					Glasser Philosophy					Satisfaction with Teaching				
			Spring '72		Spring '74			Spring '72		Spring '74			Spring '72		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean
2	1	8	182.63	17.57	189.00	18.13	194.37	57.25	6.94	57.13	7.62	58.23	41.00	4.28	43.25	5.01	43.97
	2	8	193.75	34.66	186.25	23.52	183.49	55.13	9.45	55.75	10.55	58.63	43.13	6.88	44.75	3.01	44.61
3	1	8	186.50	13.61	190.50	15.33	193.04	61.38	6.67	61.63	6.99	59.26	42.63	4.03	44.38	4.90	44.44
	2	8	197.00	21.15	189.00	23.10	183.86	60.50	5.83	57.75	9.51	56.12	44.38	3.25	43.25	6.18	42.61
4	1	9	179.44	15.47	177.56	8.62	180.93	55.89	6.03	56.00	9.08	57.61	42.00	3.94	44.11	3.66	44.29
	2	9	187.33	16.31	183.22	14.45	182.39	59.89	8.67	59.00	8.51	57.85	43.00	5.81	42.33	6.34	42.03
5	1	9	189.11	19.67	179.78	17.23	178.00	60.11	4.54	57.89	7.32	56.59	45.00	4.15	43.67	3.94	42.39
	2	9	189.78	8.57	185.33	9.80	183.20	60.33	2.60	58.11	7.32	56.66	40.33	5.15	40.33	4.33	41.32
6	1	9	181.89	10.83	181.22	10.73	183.29	55.44	6.04	55.56	6.15	57.47	41.44	7.04	41.44	5.79	41.89
	2	9	187.11	9.83	183.67	12.98	182.96	57.67	8.67	56.44	8.06	56.83	42.44	7.04	40.67	4.85	40.63

Table 17

Teacher Means on Attitude Questionnaires for 1973-74 Comparisons

1974 Grade Taught	Group	No. of Teachers	Opinionnaire on Attitudes Toward Education					Glasser Philosophy					Satisfaction with Teaching				
			Spring '73		Spring '74			Spring '73		Spring '74			Spring '73		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean
2	1	8	186.38	17.19	189.00	18.13	190.93	58.50	5.71	57.13	7.62	25.26	43.88	2.80	43.25	5.01	43.90
	2	8	190.38	27.74	186.25	23.52	184.75	58.63	7.31	55.75	10.55	23.79	44.88	3.98	44.75	3.01	44.66
3	1	8	191.25	18.09	190.50	15.33	188.25	62.13	9.46	61.63	6.99	26.90	44.63	5.10	44.38	4.90	44.47
	2	8	186.50	12.27	189.00	23.10	190.82	55.25	6.63	57.75	9.51	28.45	45.25	2.60	43.25	6.18	42.89
4	1	9	188.78	14.81	177.56	8.62	175.24	59.33	5.83	56.00	9.08	55.54	44.78	4.00	44.11	3.66	42.68
	2	9	184.44	12.60	183.22	14.45	183.77	57.56	7.67	59.00	8.51	59.73	41.78	5.26	42.33	6.34	43.03
5	1	9	190.78	13.89	179.78	17.23	176.13	62.00	7.35	57.89	7.32	55.66	45.22	4.41	43.67	3.94	41.92
	2	9	181.78	10.95	185.33	9.80	187.65	58.00	6.27	58.11	8.32	58.54	40.22	2.73	40.33	4.33	42.13
6	1	9	184.00	9.19	181.56	10.49	182.40	58.78	3.60	56.11	5.90	56.02	41.78	6.48	42.22	5.74	42.92
	2	9	181.89	10.90	183.67	12.98	185.91	56.22	7.45	56.44	8.06	58.06	42.78	4.84	40.67	4.85	40.65

Table 18

Primary Teacher Means on Attitude Factors for 1972-74 Comparisons

1974 Grade Taught	Group	No. of Classes	Child-Centeredness					Rigidity					Involvement				
			Spring '72		Spring '74			Spring '72		Spring '74			Spring '72		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean
2	1	8	88.75	6.73	89.63	9.74	93.02	93.88	11.32	99.38	9.59	101.38	32.38	2.00	32.88	2.53	32.05
	2	8	96.50	15.43	91.50	10.28	86.05	97.25	19.66	94.75	14.43	94.38	30.63	5.04	29.88	7.57	30.66
3	1	8	92.63	7.42	92.63	9.00	93.10	93.88	7.04	97.88	7.06	99.88	32.25	2.12	34.25	1.04	33.54
	2	8	95.13	12.44	92.25	12.80	90.84	101.88	10.45	96.75	12.61	93.11	33.50	1.93	31.63	4.10	29.76

1974 Grade Taught	Group	No. of Classes	Traditionalism				
			Spring '72		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean
2	1	8	24.88	5.51	24.25	5.65	25.13
	2	8	24.50	5.68	25.88	4.49	26.97
3	1	8	29.13	5.51	27.38	6.46	25.77
	2	8	27.00	4.99	26.13	6.47	25.76

Table 19

Primary Teacher Means on Attitude Factors for 1973-74 Comparisons

1974 Grade Taught	Group	No. of Classes	Child-Centeredness					Rigidity					Involvement				
			Spring '73		Spring '74			Spring '73		Spring '74			Spring '73		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean
2	1	8	90.75	5.50	89.63	9.74	91.21	95.63	12.76	99.38	9.59	99.58	33.25	1.91	32.88	2.53	32.55
	2	8	95.00	13.75	91.50	10.28	89.72	95.38	15.53	94.75	14.43	95.15	32.50	3.12	29.88	7.57	30.01
3	1	8	94.00	9.70	92.63	9.00	91.64	97.25	9.56	97.88	7.06	96.77	33.00	2.62	34.25	1.04	34.08
	2	8	91.25	7.23	92.25	12.80	93.44	95.25	7.21	96.75	12.61	97.25	32.13	2.75	31.63	4.10	32.00

1974 Grade Taught	Group	No. of Classes	Traditionalism				
			Spring '73		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean
2	1	8	25.25	4.13	24.25	5.65	24.73
	2	8	26.13	5.19	25.88	4.49	25.72
3	1	8	29.13	7.75	27.38	6.46	25.03
	2	8	23.13	5.11	26.13	6.47	28.15

Table 20

Intermediate Teacher Means on Attitude Factors for 1972-74 Comparisons

1974 Grade Taught	Group	No. of Classes	Child-Centeredness					Rigidity					Involvement				
			Spring '72		Spring '74			Spring '72		Spring '74			Spring '72		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean
4	1	9	88.89	5.42	84.11	7.13	85.90	90.56	14.63	93.44	11.82	95.01	30.11	2.57	31.44	3.36	32.06
	2	9	95.78	7.31	93.00	6.36	91.21	91.56	9.91	90.22	11.55	91.26	32.56	2.24	31.78	3.53	30.79
5	1	9	94.56	6.65	88.44	7.14	87.29	94.56	16.31	91.33	11.97	90.80	32.22	3.00	30.44	3.28	29.68
	2	9	94.00	3.39	91.56	4.33	90.69	95.78	7.63	93.78	6.91	92.60	31.33	2.96	31.33	2.92	31.15
6	1	9	89.22	7.79	89.89	5.71	91.51	93.22	7.97	91.33	6.25	91.50	29.89	2.85	31.67	3.32	32.43
	2	9	91.56	6.25	89.11	6.19	89.52	95.56	8.31	94.56	7.32	93.50	30.22	4.38	29.89	3.95	30.44

1974 Grade Taught	Group	No. of Classes	Traditionalism				
			Spring '72		Spring '74		
			Mean	SD	Mean	SD	Adj Mean
4	1	9	25.78	4.41	24.56	7.14	25.28
	2	9	27.78	7.48	27.22	5.70	26.96
5	1	9	27.89	4.01	27.44	4.67	27.12
	2	9	29.00	2.00	26.78	5.14	25.91
6	1	9	25.56	5.50	23.89	4.57	24.72
	2	9	27.44	5.79	26.56	5.03	26.45

Table 21

Intermediate Teacher Means on Attitude Factors for 1973-74 Comparisons

1974 Grade Taught	Group	No. of Classes	Child-Centeredness					Rigidity					Involvement				
			Spring '73		Spring '74			Spring '73		Spring '74			Spr '73		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean	Mean	SD	Mean	SD	Adj. Mean
4	1	9	93.22	6.10	84.11	7.14	83.25	95.56	10.94	93.44	11.82	92.26	32.78	2.54	31.44	3.36	30.84
	2	9	93.22	6.87	93.00	6.36	92.14	91.22	10.33	90.22	11.55	92.22	30.00	4.15	31.78	3.53	32.45
5	1	9	95.33	6.91	88.44	7.14	86.63	95.44	8.73	91.33	11.97	90.23	31.56	3.24	30.44	3.28	30.40
	2	9	88.78	7.05	91.56	4.33	92.72	93.00	5.12	93.78	6.91	94.47	31.11	3.02	31.33	2.92	31.50
6	1	9	89.78	5.14	89.67	6.04	90.37	94.22	8.84	91.89	6.33	99.01	32.22	2.82	32.44	3.17	32.09
	2	9	87.67	8.11	89.11	6.19	90.78	94.22	6.22	94.56	7.32	94.35	31.11	1.99	29.89	3.95	30.05

1974 Grade Taught	Group	Classes	Traditionalism				
			Spring '73		Spring '74		
			Mean	SD	Mean	SD	Adj. Mean
4	1	9	26.56	4.69	24.56	7.14	24.94
	2	9	27.56	4.64	27.22	5.70	27.00
5	1	9	30.44	5.57	27.44	4.67	25.45	
	2	9	26.89	3.92	26.78	5.14	26.96
6	1	9	26.56	3.24	23.67	4.66	24.05
	2	9	25.11	7.69	26.56	5.03	27.82

Table 22

Teacher Item Means on Attitude Questionnaires

Grade Level of Pupils	Time of Testing	Questionnaire on Attitude Toward Education			Philosophy of Glasser			Teacher Satisfaction
		Child-centeredness	Rigidity	Total	Involvement	Traditionalism	Total	Total
	1972	3.78	3.61	3.69	4.62	3.38	3.96	3.81
	1973	3.93	3.83	3.91	4.59	3.22	3.86	3.98
Primary	1973	3.85	3.71	3.78	4.73	3.40	4.02	4.02
	1974	3.88	3.67	3.77	4.62	3.08	3.80	4.10
	[illegible]	[illegible]	3.79	3.80	4.80	3.23	3.98	3.98
	1974	3.83	3.68	3.75	4.39	3.25	3.78	4.00
	1972	3.74	3.57	3.67	4.39	3.30	3.81	3.89
	1973	3.81	3.64	3.76	4.48	3.51	3.95	3.81
Intermediate	1973	3.87	3.66	3.76	[illegible]	3.48	4.00	3.99
	1974	3.75	3.57	3.65	4.39	3.32	3.82	3.78
	1973	3.69	3.54	3.59	4.45	3.16	3.77	3.92
	1974	3.80	3.57	3.68	4.43	3.36	3.86	3.74

IV. CLASSROOM INTERACTIONS RESULTS

1972-73 Procedures and Results

Teachers who participate in the Schools Without Failure training program are taught ways of creating a warm emotional climate in their classrooms. They are also taught how to use differing types of questioning techniques to cause pupils to think more in the classroom situation. These methods are used extensively in classroom meetings but, over time, they should come into use more and more in instructional sessions. Teachers who experience success in using SWF methods in classroom meetings would be expected to change certain of the ways in which they teach pupils and respond to them in instructional sessions.

In the first year of the study the Expanded Category System (ECS) and the Reciprocal Category System (RCS) were employed to observe the types of interactions occurring in both classroom meetings and instructional sessions. Approximately one-half of the teachers in both Group 1 and Group 2 schools were observed in fall and spring instructional sessions. Changes observed from fall to spring in Group 1 classroom interactions were compared with those taking place in Group 2 schools. Also, to learn whether classroom meetings held in Group 1 classrooms conformed to the SWF program definition of this technique, spring observations of Group 1 classroom meetings were carried out.

In compiling the data from these observations, percentages of occurrence of each category of the two systems were determined. Because the ECS is an expanded version of the Flanders System (Flanders, 1970) it was possible to add certain of the ECS categories to obtain desired totals. For example, categories 4f, 4c and 4e stand for types of questioning observed. By adding the percentages obtained for these categories the total amount of questioning taking place, category 4 of the Flanders System, was computed.

In analyzing the observation data it was not possible to use normal curve statistics, such as analysis of variance or covariance, unless some transformation of the percentages was carried out (see Mitzel and Rabinowitz, 1953). Therefore, before comparing the changes occurring in Group 1 and Group 2 classroom interactions the percentages were converted, through use of an angular transformation, to values more amenable to normal curve analysis (using Fisher and Yates, 1970, Table X). In the comparisons performed, interaction changes taking place in primary classrooms were analyzed separately from those occurring in intermediate classrooms.

The first-year analyses showed, first of all, that Group 1 classroom meeting interactions differed greatly from instructional session interactions. Teachers talked much more in instructional sessions than they did in classroom meetings. When teachers did talk in classroom meetings it was mainly to ask questions and to accept pupil answers. Teacher classroom-meeting questions were predominantly open-ended, requiring pupils to give speculative and evaluative responses. Conversely, teacher instructional session questions were predominantly fact-memory and convergent, requiring pupils to give answers which could be judged to be right or wrong. In instructional sessions teachers used praise, criticism and lecturing much more than in classroom meetings. Thus, as would be expected, Group 1 teachers became discussion facilitators in classroom meetings, guiding discussions through their use of open-ended questioning and making little attempt to praise or criticize pupils for their responses.

In instructional session analyses it was found that, by the spring, Group 1 teachers had begun to employ certain of their classroom meeting techniques in their teaching. In primary classrooms there was a tendency for Group 1 teachers to use more differing types of questions than they had previously. Their responses to pupils became less judgmental; they used acceptance of pupil ideas more and praise and criticism less than they had before undergoing SWF training. In intermediate classrooms Group 1 teachers also tended to use differing types of questioning to a greater extent than did Group 2 teachers. Intermediate Group 1 pupils were found to talk more than did intermediate Group 2 pupils when asked a question by their teachers. This result was interpreted to indicate that, through their participation in classroom meetings, Group 1 pupils had developed increased confidence in expressing themselves.

1974 Procedures

In the spring of 1974 the same teachers who were observed in the first year of the study were again observed in normal instructional sessions. Both Group 1 and Group 2 teachers were also observed while holding classroom meetings. For all observations both the ECS and the RCS were used.

As was done in the first year of the study the percentages of use observed for each category were converted, through use of an angular transformation, to values amenable to normal curve analysis. The percentages themselves, however, were used when examining differences between classroom meeting and instructional session interactions.

In comparing Group 1 and Group 2 interactions, analyses were carried out using transformed percentages obtained for a variety of categories. The categories for which analyses were carried out were the following ones: (1) Teacher-initiated talk (Flanders categories 4, 5, 6); (2) Types of teacher questioning (ECS categories 4f, 4c, 4d, 4e); (3) Types of teacher responses to pupils (Flanders categories 1, 2, 3, 7); (4) Types of teacher praise (ECS categories 2w, 2P, 2p); (5) Types of teacher criticism (ECS categories 7w, 7P, 7p); (6) Pupil usage of classroom climate categories (RCS categories 11, 12, 18, 19); (7) Types of pupil response (Flanders categories 8, 9); (8) Total teacher talk (Flanders categories 1+2...+7); (9) Total pupil talk (Flanders 8+9); (10) Total pupil-pupil talk (RCS categories 11+12...+19 when directed at another pupil).

For both primary and intermediate comparisons the three major analysis questions were asked (see Analysis of Data, section VII, Chapter II). In answering question 3, multivariate analyses of variance were used for the category groupings in (1) through (6) above. Univariate tests followed any multivariate test for which a significant F value was found. Since it was felt that changes in the usage of the Flanders categories might be confined to specific categories, no attempt was made to group them in multivariate tests in answering questions 1 and 2. However, in answering these questions, multivariate tests were used for the category groupings in (2), (4), (5) and (6) above.

1974 Classroom Meeting Results

Figures 1 through 9 on the following pages were drawn to summarize comparisons between classroom meeting and instructional session interactions for the two years of the study.

As shown in these figures the results uncovered in examining classroom meetings during the first year of the study were replicated in the second year. As

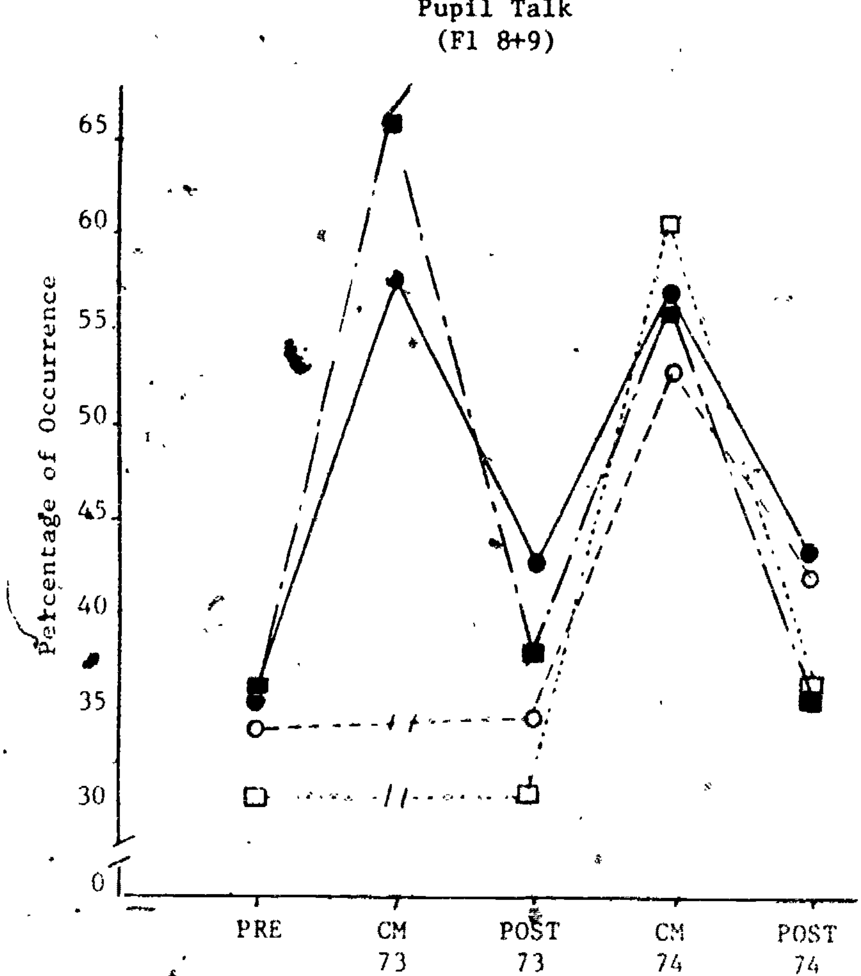
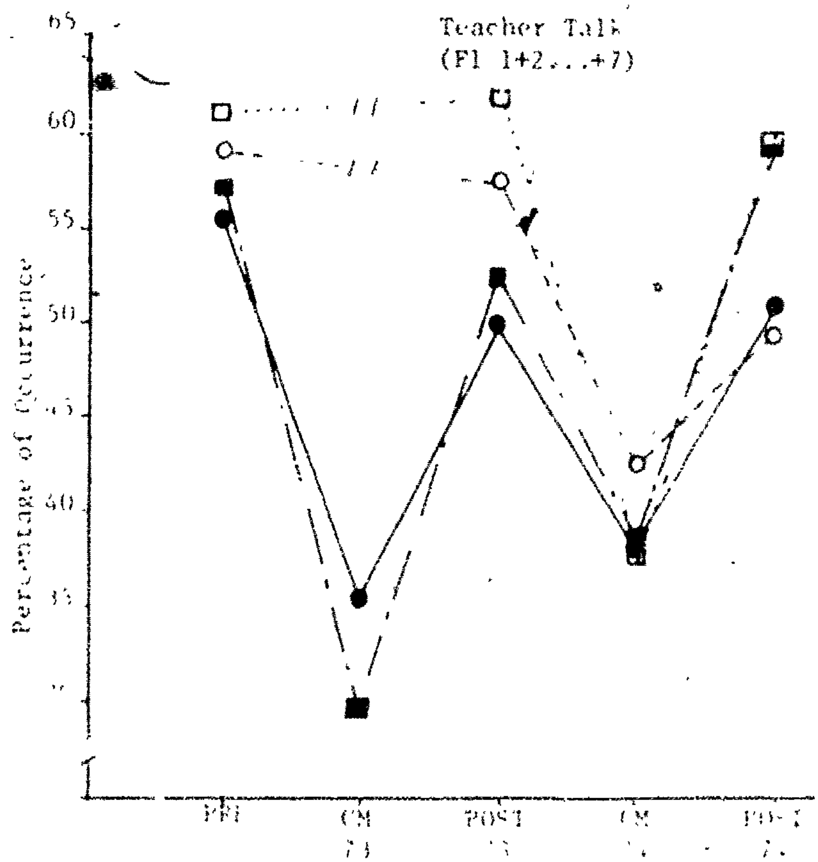


FIGURE 1

Group 1 Group 2

Primary

Intermediate



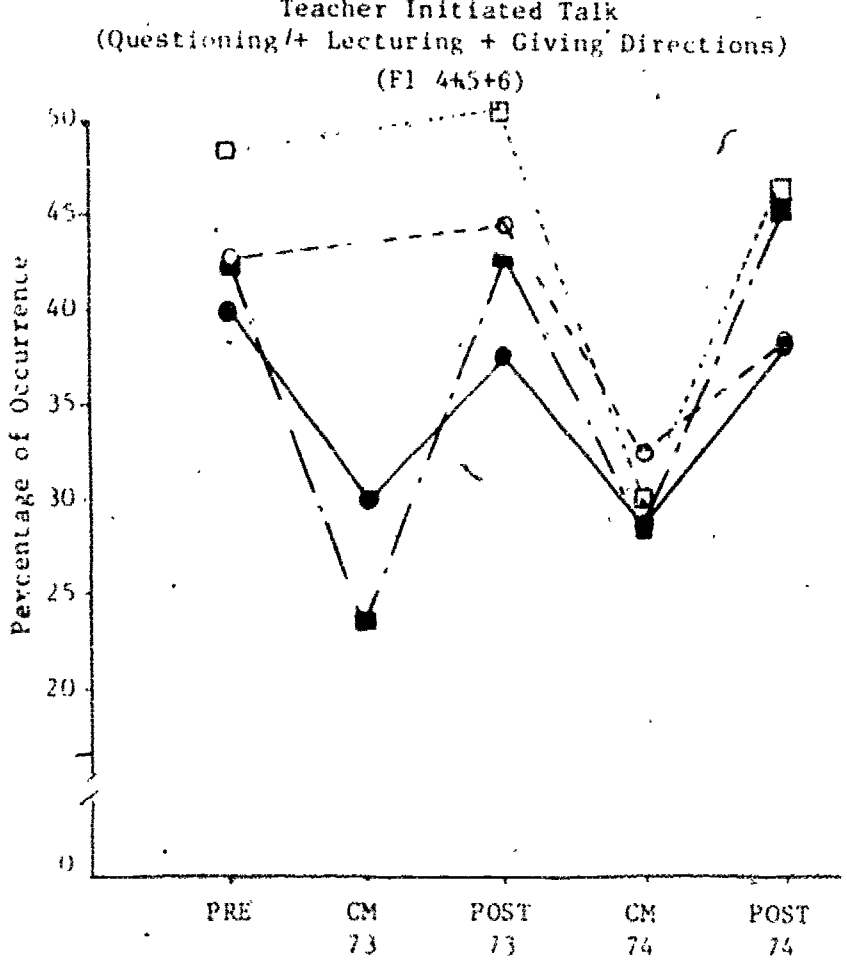
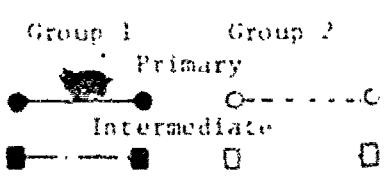


FIGURE 3



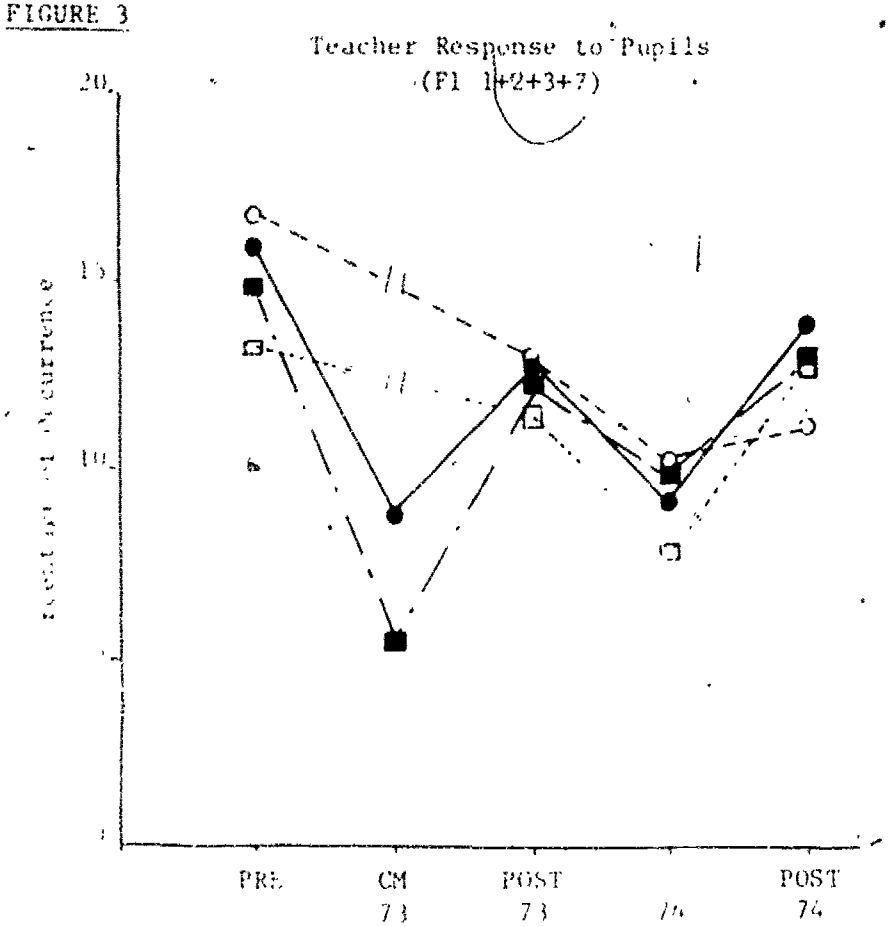
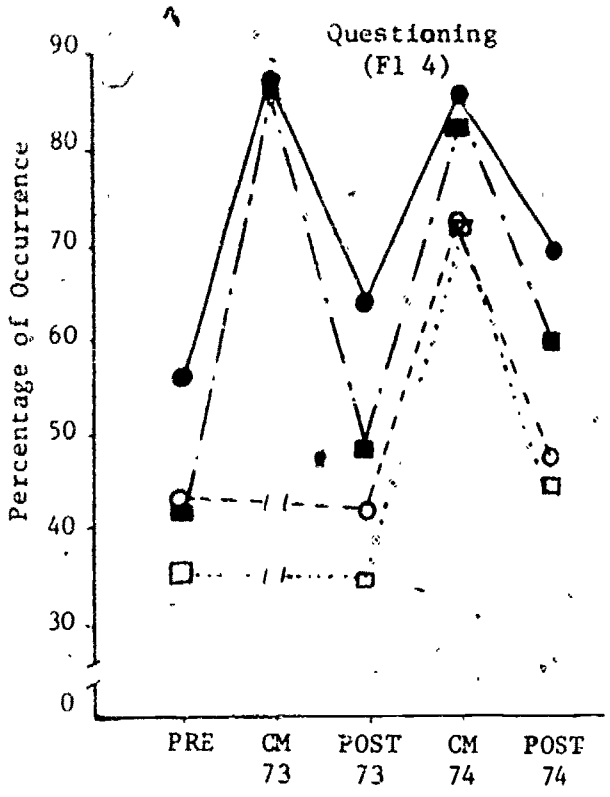
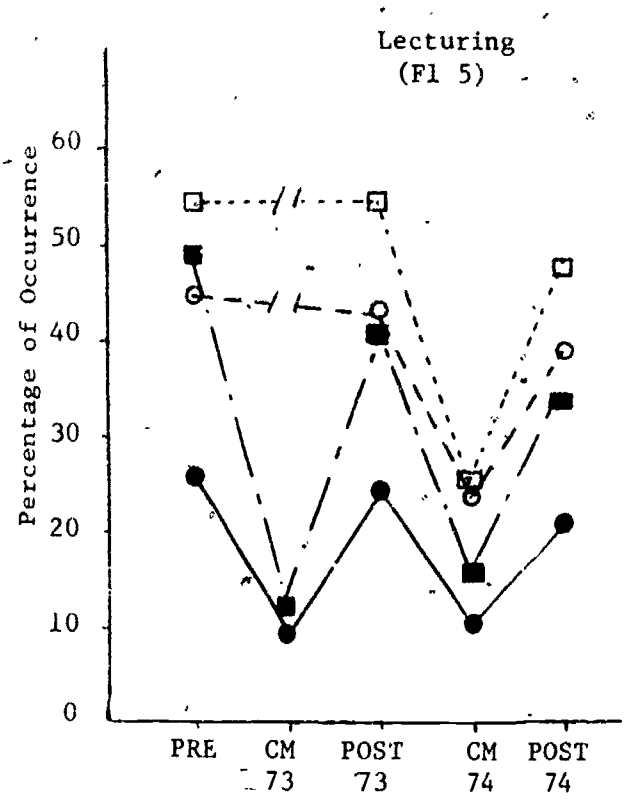
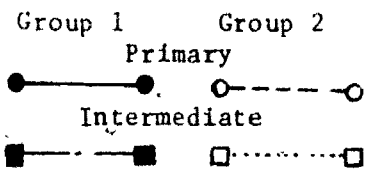


FIGURE 4

Types of Teacher Initiated Talk as a Per Cent
of Total Teacher Initiated Behavior







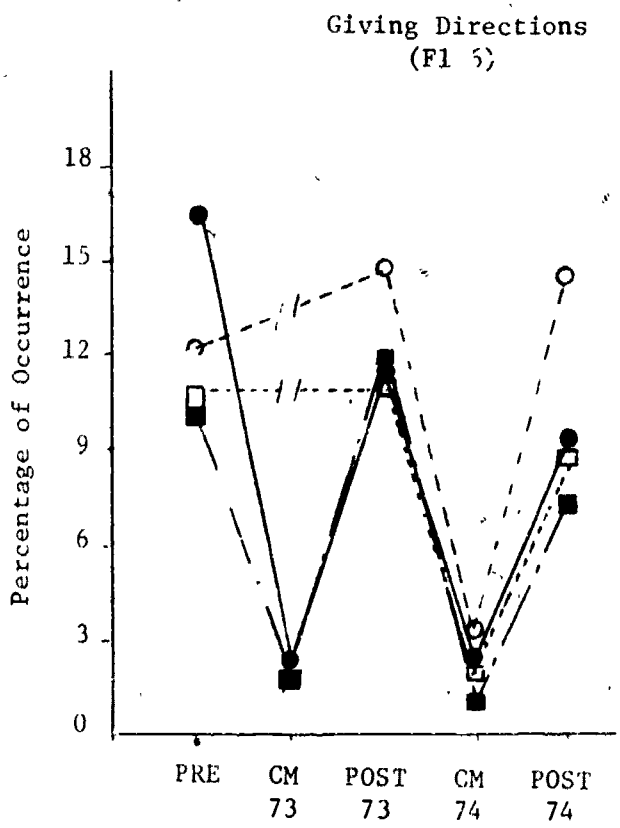


FIGURE 5

Per Cent of Pupil Talk Which Was
Pupil-Pupil Talk
(RCS 11+12...+19 when directed at
another pupil)

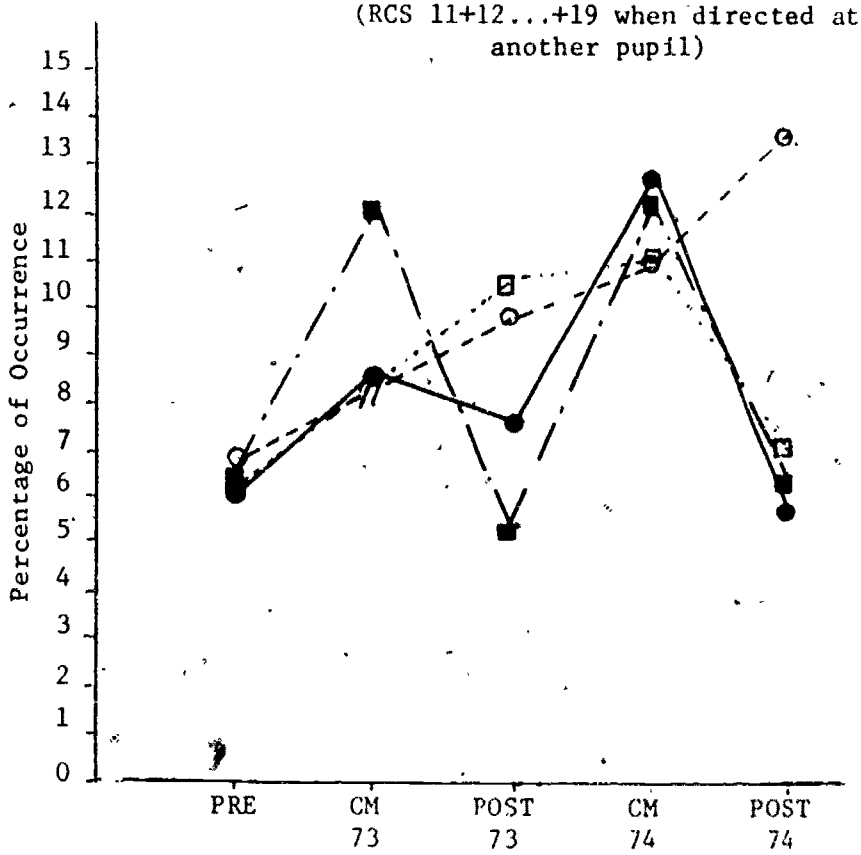


FIGURE 6.

Teacher Questioning Behavior
(Fl 4)

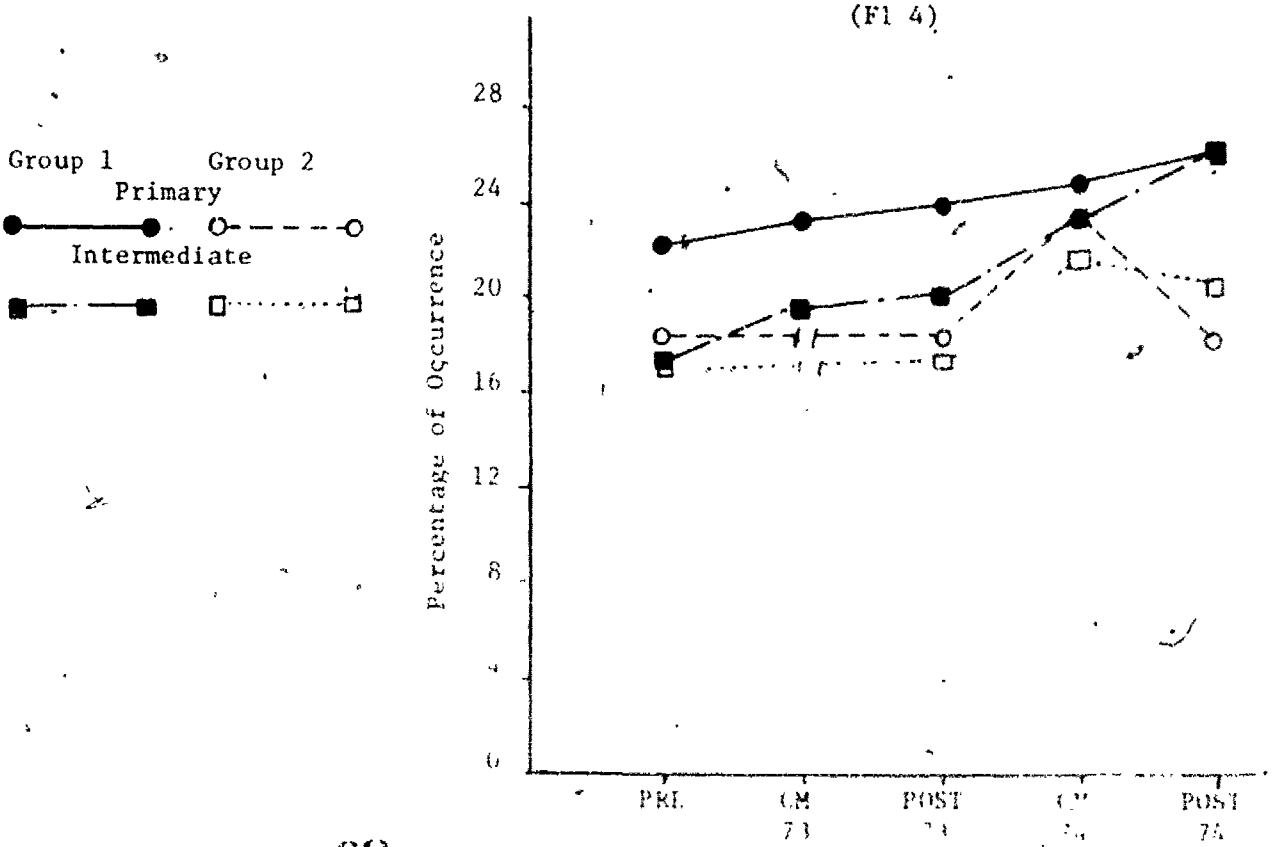
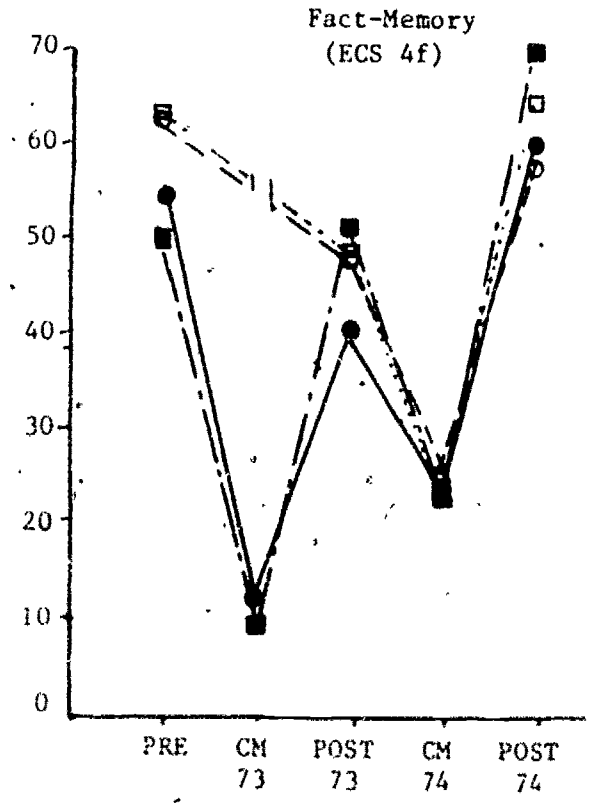
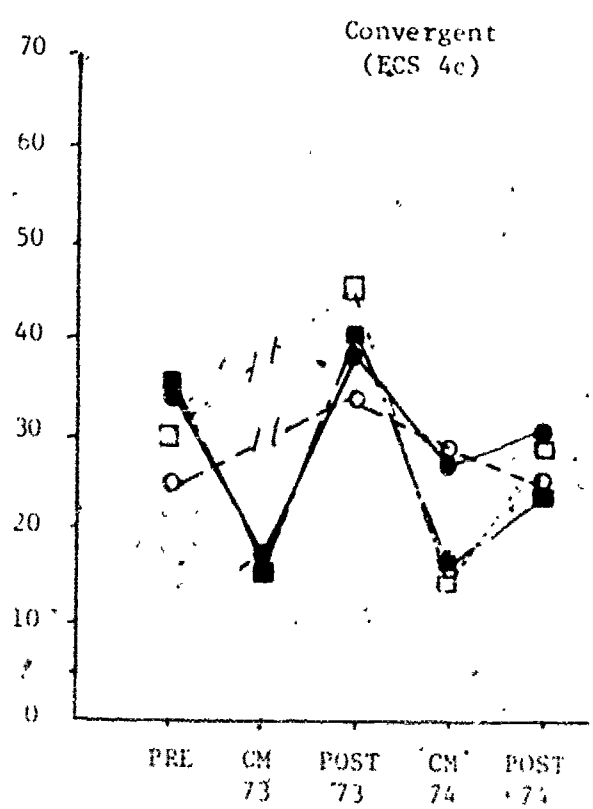
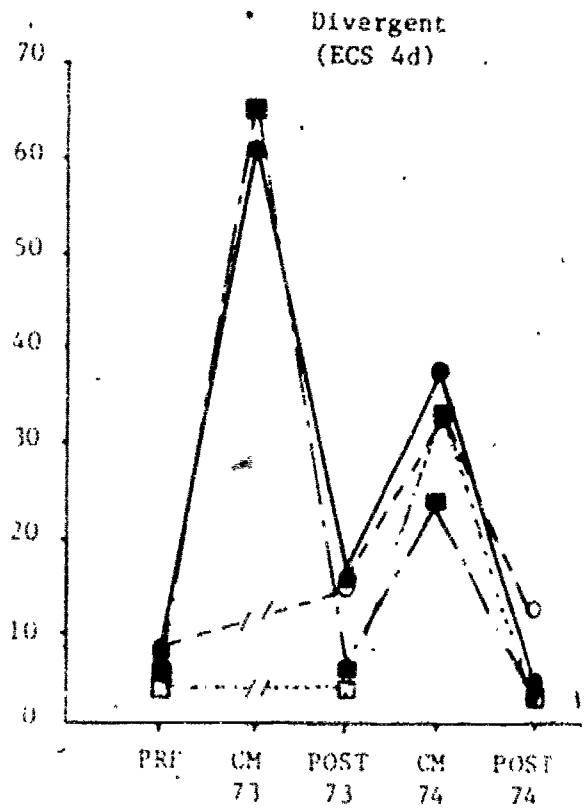


FIGURE 7

Type of Question as Per Cent of
Total Questioning Behavior







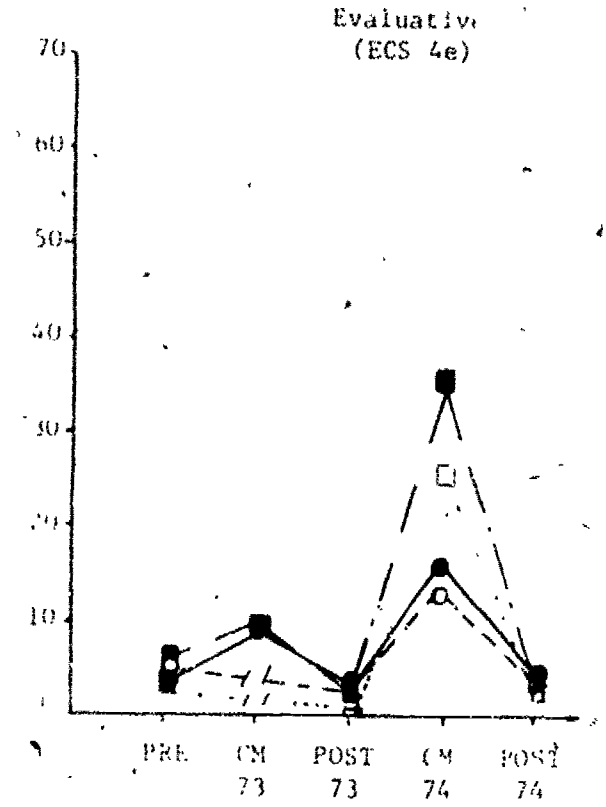


FIGURE 8

Various Responses to Pupils as a Per Cent
of Total Teacher Response Behavior

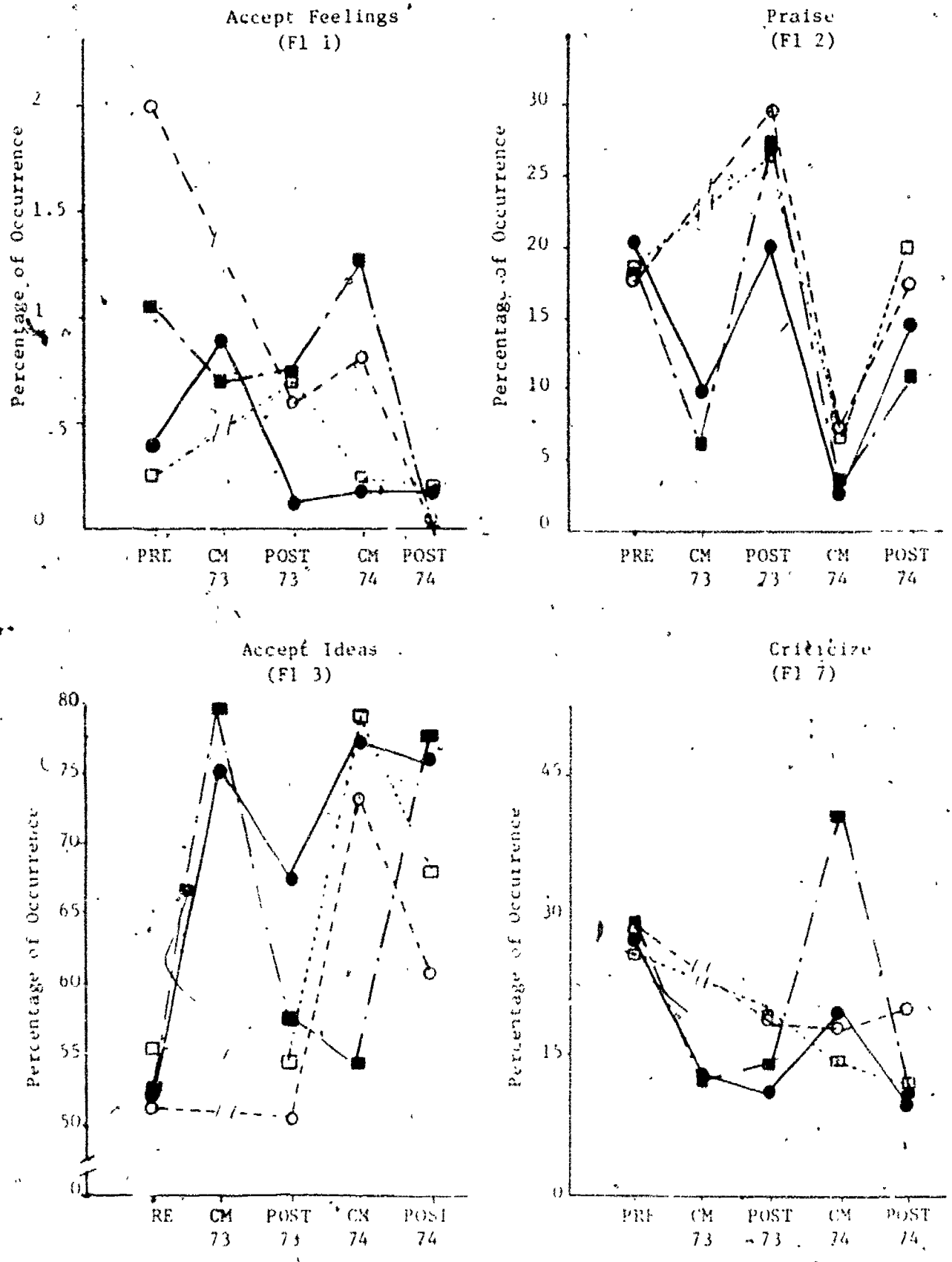


FIGURE 9

was found in the first year for Group 1 schools, teachers in both groups of schools in 1974 acted mainly as discussion facilitators in classroom meetings. They asked open-ended questions and were generally nonjudgmental in responding to pupils. However, there appeared to be some tendency in 1974 intermediate Group 1 classroom meetings for teachers to use more criticism than was found in other observed meetings of the study.

In 1974 pupil-pupil talk in Group 1 meetings made up a greater percentage of total pupil talk than was the case in Group 2 meetings. Since teachers holding classroom meetings strive to stimulate pupil-pupil talk, this result may reflect the increased ability of Group 1 teachers to hold meetings. One surprising result, however, was found for Group 2 primary classrooms. As shown in Figure 6, for these classrooms an average of over 13 per cent of 1974 instructional session pupil talk was pupil-pupil talk, an amount greater than that observed in the classroom meetings of either Group 1 or Group 2 teachers.

1974 Instructional Session Results

In comparing changes taking place from 1972 to 1974 in Group 1 and Group 2 classroom interactions a number of significant differences were found. One major difference uncovered was in the use of questioning by teachers. Primary Group 1 teachers increased more in their use of fact-memory questioning (ECS category 4f) than did Group 2 teachers ($F_{1,23}$=7.58). Intermediate Group 1 teachers increased more than did Group 2 teachers in the total amount of time they spent questioning, as measured by category 4 of the Flanders System ($F_{1,23}$=5.82). Thus, as shown in Tables 23 and 24 teachers who participated in two years of SWF training used questioning more in their classrooms than did teachers who participated in one year of training.

Primary Group 1 teachers were also found to have increased more in their use of acceptance of ideas (Flanders category 3) than did Group 2 teachers ($F_{1,23}$=6.62). In primary classrooms, then, teachers exposed to the SWF program for two years were accepting pupil ideas more often than were teachers who underwent one year of training (see Table 25).

A somewhat confusing result was found in comparing changes from 1972 to 1974 in the amount of pupil-pupil talk taking place in Group 1 and Group 2 primary classrooms. The amount of pupil-pupil talk occurring (RCS 11+12...+19, when directed at another pupil) was found to have increased more in Group 2 classrooms than in Group 1 classrooms ($F_{1,23}$=4.69). This appeared to be a function of large increases from 1973 to 1974 in the amount of Group 2 pupil-pupil talk accompanied by some decrease over the same time period in Group 1 pupil-pupil talk for two grade levels (see Table 30).

In comparing 1973 to 1974 changes in Group 1 and Group 2 interactions it was found that there was some tendency for intermediate teachers participating in their second year of training to increase more in their use of questioning than did teachers being trained for the first time in SWF methods ($F_{1,23}$=4.10, approached significance at the .05 level).

As might be expected from the results described above for pupil-pupil talk, greater increases from 1973 to 1974 in primary pupil-pupil talk were found for Group 2 classrooms than for Group 1 classrooms ($F_{1,23}$=5.20). In the study, then, it was found that in primary instructional sessions pupil-pupil talk increased during the first year of use of the SWF program but levelled off after this.

In comparing the interactions of classrooms where the SWF program was used for two years (Group 1, 1974) with those of classrooms where the program was never used (Group 2, 1973) major differences were uncovered. Table 31 summarizes the percentages of usage observed for the two groups for all categories for which analyses were carried out.

In the primary grades it was found that in SWF classrooms there was more use of questioning ($F_{1,24}=5.70$), particularly fact-memory questioning ($F_{1,24}=7.99$), than in non-SWF classrooms. Conversely, there was more use of lecturing ($F_{1,24}=30.39$) in non-SWF classrooms than in classrooms where the SWF program was being implemented. Primary SWF teachers accepted pupil ideas more ($F_{1,24}=7.33$) than did non-SWF teachers. They used less criticism ($F_{1,24}=8.95$), particularly criticism with public criteria ($F_{1,24}=8.76$), and less praise without a reason being given ($F_{1,24}=5.16$) than did non-SWF teachers. Primary pupils in SWF schools talked more when asked a question by their teachers ($F_{1,24}=6.55$), particularly in response to a fact-memory or convergent question ($F_{1,24}=11.25$).

The results obtained for intermediate classrooms differed little from those described for primary classrooms. Intermediate SWF teachers used more questioning ($F_{1,24}=12.01$), particularly fact-memory questioning ($F_{1,24}=15.96$) and evaluative questioning ($F_{1,24}=9.13$), than did intermediate teachers in non-SWF schools. Non-SWF teachers lectured more ($F_{1,24}=5.61$) than did SWF teachers. In responding to pupils SWF teachers used more acceptance of ideas ($F_{1,24}=7.88$) than did non-SWF teachers. In contrast to this, non-SWF teachers used more praise ($F_{1,24}=8.31$), particularly praise with no criteria ($F_{1,24}=12.30$), than did SWF teachers. Although there was some tendency for non-SWF teachers to use more criticism than did SWF teachers ($F_{1,24}=3.41$), this difference was not found significant.

In comparing interactions occurring in the classrooms of these same teachers in the fall of 1972, only one significant difference was found. Primary Group 2 teachers were found to lecture more ($F_{1,24}=13.31$) than did primary Group 1 teachers. Thus, for this category Group 1 and Group 2 primary teachers differed in the same way both initially and after Group 1 teachers had experienced two years of SWF training.

The results found in the classroom interactions comparisons, then, showed rather convincingly that SWF training had produced changes in instructional session interactions. Certain of these changes occurred during the first year of SWF training; others took two years to occur.

Teachers participating in training held classroom meetings which typified those called for in the program. The changes which took place in their instructional session interactions were ones which made these sessions more like classroom meetings than they were before training occurred. In their instructional sessions these teachers began to lecture less, to question more, to accept pupil ideas more and to praise and criticize less than they had before adopting the SWF program.

Table 23*

Teacher Usage of Questioning, Lecturing and Giving Directions

1974 Grade Taught	Group	Questioning--ECS (4)						Lecturing--ECS (5)						Giving Directions--ECS (6)					
		Fall 1972	Spring			Adj. % 72-74	Adj. % 73-74	Fall 1972	Spring			Adj. % 72-73	Adj. % 73-74	Fall 1972	Spring			Adj. % 72-73	Adj. % 73-74
			1973	1974					1973	1974					1973	1974			
		Mean	Mean	Mean	%	Comp.	Comp.	Mean	Mean	Mean	%	Comp.	Comp.	Mean	Mean	Mean	%	Comp.	Comp.
1	1	28.78	29.50	27.94	22.0	19.4	20.3	18.67	17.50	18.27	9.8	10.8	11.5	12.87	11.32	10.49	3.3	3.4	3.4
	2	24.41	25.38	25.93	19.1	21.7	20.2	31.23	28.37	25.49	18.5	15.3	14.7	13.31	13.08	12.41	4.6	4.6	4.5
2	1	29.19	27.03	31.69	27.6	24.3	27.6	17.74	16.83	12.11	4.4	5.2	5.8	14.60	10.61	9.47	2.2	2.7	2.9
	2	24.12	25.00	23.07	15.4	18.0	16.6	20.38	25.31	18.31	9.9	10.3	8.2	11.55	13.17	12.35	4.6	4.7	4.5
3	1	26.40	30.79	32.40	28.7	29.9	25.9	19.70	17.02	16.25	6.8	8.4	9.6	15.63	11.71	10.85	3.5	3.4	3.6
	2	26.56	24.60	25.94	19.1	19.1	20.8	24.43	22.81	21.26	12.9	12.4	12.4	12.53	14.76	9.44	2.7	2.7	2.5
4	1	24.35	23.52	32.35	28.6	28.6	29.4	25.52	24.30	20.94	12.8	15.1	15.2	12.36	14.12	9.59	2.7	2.7	2.3
	2	23.07	24.50	24.41	17.1	17.8	17.4	31.73	35.08	29.92	24.9	21.0	18.5	13.27	11.86	12.21	4.5	4.0	4.9
5	1	25.85	28.41	28.82	23.2	22.3	21.9	24.09	24.57	24.08	16.7	20.6	19.1	10.06	9.18	9.68	2.8	3.6	4.3
	2	25.30	26.12	27.51	21.3	20.7	21.0	30.68	28.70	22.21	14.3	12.1	13.5	10.67	13.91	9.68	2.8	3.4	2.4
6	1	23.10	27.10	31.34	27.2	27.9	26.3	27.06	23.85	20.76	11.4	13.4	15.3	13.39	13.46	11.86	4.2	3.7	3.9
	2	24.32	22.07	28.31	22.5	22.5	23.8	29.40	29.41	30.44	25.7	26.2	24.1	12.98	14.05	11.57	4.0	3.7	3.5

*In this table and in all those to follow showing classroom interaction means, fall, spring and adjusted spring means were computed with transformed data. However, in each table in the column headed "Adj. %" the adjusted spring means were transformed back into percentages. Each mean in the tables was computed data from five classrooms.

Table 24

Teacher Usage of Types of Questions

1974 Grade Taught	Group	Fact-Memory--ECS (4f)						Convergent--ECS (4c)						Divergent--ECS (4d)						Evaluative--ECS (4e)					
		Fall 1972	Spring			Adj. % 72-74	Adj. % 73-74	Fall 1972	Spring			Adj. % 72-74	Adj. % 73-74	Fall 1972	Spring			Adj. % 72-74	Adj. % 73-74	Fall 1972	Spring			Adj. % 72-74	Adj. % 73-74
		Mean	1973 Mean	1974 Mean	%	Comp.	Comp.	Mean	1973 Mean	1974 Mean	%	Comp.	Comp.	Mean	1973 Mean	1974 Mean	%	Comp.	Comp.	Mean	1973 Mean	1974 Mean	%	Comp.	Comp.
1	1	19 18	16 81	20.06	11 8	11 7	21.2	11.26	14.10	13.41	5.4	6.2	2.2	5.31	4.53	6.91	1.4	1.4	0.7	2.74	3.97	5.05	0.8	0.7	0.
	2	19 53	19.68	17.96	9.5	9 3	11 0	11.05	10.79	14.46	6.2	6.7	3.9	4.19	1.77	3.3-	0.3	0.4	0.4	2.56	1 57	2.25	0.2	0.2	0.
2	1	19 31	17 05	22 [illegible]	14 1	21 9	19 2	17 61	14.90	16.46	8.0	6.2	3.3	5.18	5.41	5.14	0.8	0.8	0.1	3.67	3.65	6.95	1.5	1.5	0.
	2	19.97	18 55	19.23	10.8	10 4	12.8	8 33	13.87	7.35	1.6	2.8	4.0	4.02	4.61	3.45	0.4	0.4	0.3	3.87	1.90	4.20	0.5	0.5	0.
3	1	16.22	17.36	26.74	20.2	21.8	15.3	16.78	12.31	14.02	5.9	4.6	10.0	6.26	1.92	1.45	0.1	0.1	0.1	4.76	2.90	4.45	0.6	0.6	0.
	2	19 46	19.04	18.84	10 4	10.2	[illegible]	13 40	12.26	7.83	1 9	1.8	6.4	5.21	1.74	10.62	3.4	3.4	0.1	4.90	4.35	4.50	0.6	0.6	0.
4	1	15 65	14.30	20 06	11 8	12 0	23.2	18.19	14.28	13.41	5.4	4.6	2.9	9.10	4.92	6.91	1.4	1.4	0.6	4.46	2.31	5.05	0.8	0.8	0.
	2	13.58	15.49	17 96	9.5	10.2	12.3	15.14	15.21	14.46	6.2	6.1	2.9	8.21	3.93	3.38	0.3	0.4	1.4	3.66	0.87	2.25	0.2	0.2	0.
5	1	17.25	19.91	22.02	14.1	13.9	14.1	15.62	17.19	16.46	8.0	7.8	[illegible]	9.79	4.61	5.14	0.8	0.7	0.1	3.16	0.36	6.95	1.5	1.5	0.
	2	19.08	19.52	19 23	10.8	10 3	10.8	8.88	12.71	7.35	1.6	2.4	5.5	7.02	4.52	3.45	0.3	0.5	0.3	4.21	0.51	4.20	0.5	0.5	0
6	1	18.16	17 82	26.74	20 2	19.8	14.3	15 96	16.22	14.02	5.9	5.6	8.7	12.14	6.07	1.45	0.1	0.0	0.1	3.15	4.60	4.45	0.6	0.6	0.
	2	15.90	13.98	18.84	10.4	10.6	17 7	14 00	14.37	7 83	1.9	1.9	6.3	5.58	3.06	10.62	3.4	3.3	0.1	2.13	1.54	4.50	0.6	0.6	0.

Table 25

Teacher Usage of Types of Responses

1974 Code	Acceptance of Feelings--ECS (1)						Praise--ECS (2)						Acceptance of Ideas--ECS (3)						Criticism--ECS (7)					
	Fall	Spring			Adj. %	Adj. %	Fall	Spring			Adj. %	Adj. %	Fall	Spring			Adj. %	Adj. %	Fall	Spring			Adj. %	Adj. %
	1972 Mean	1973 Mean	1974 Mean	%	72-74 Comp.	73-74 Comp.	1972 Mean	1973 Mean	1974 Mean	%	72-74 Comp.	73-74 Comp.	1972 Mean	1973 Mean	1974 Mean	%	72-74 Comp.	73-74 Comp.	1972 Mean	1973 Mean	1974 Mean	%	72-74 Comp.	73-74 Comp.
1	0.36	0.00	0.00	0.00	0.02	0.02	9.63	8.87	8.49	2.2	2.1	2.2	18.46	16.72	16.73	5.3	8.1	7.8	10.42	5.56	4.34	0.6	0.8	1.3
	0.53	0.00	0.00	0.00	0.00	0.00	10.67	10.70	8.69	2.4	2.1	2.2	17.85	17.33	17.19	8.7	8.6	9.4	11.02	8.27	10.22	3.2	0.5	2.7
	0.87	0.46	0.00	0.00	0.02	0.02	10.22	8.25	7.46	1.7	1.8	1.8	14.71	16.91	21.44	13.4	13.5	13.6	9.55	5.53	2.53	0.2	0.5	0.7
	0.52	0.63	0.00	0.00	0.00	0.00	6.58	8.40	6.56	0.4	1.9	0.7	14.98	13.76	11.40	3.3	3.7	3.6	13.77	9.94	7.43	1.7	1.0	0.7
	0.82	0.51	0.67	0.65	0.05	0.05	8.78	7.59	7.03	1.5	1.5	1.6	15.47	16.91	17.62	9.2	8.6	9.2	13.76	8.34	7.75	1.8	0.3	1.4
	0.90	0.23	0.00	0.00	0.00	0.00	10.57	12.63	6.70	1.4	1.1	1.2	16.42	15.40	14.34	6.1	6.3	6.3	11.66	7.67	5.75	1.0	1.0	1.0
	0.00	2.39	0.00	0.00	0.00	0.00	8.12	9.87	6.97	1.5	1.7	1.4	12.08	15.54	18.30	9.9	10.6	9.9	6.28	12.03	6.08	1.1	1.3	1.0
	0.00	0.00	0.00	0.00	0.00	0.00	9.19	8.61	8.35	2.1	2.2	2.2	13.71	14.18	16.11	7.7	7.8	8.0	8.27	11.19	5.36	0.9	1.0	0.9
	0.00	0.00	0.00	0.00	0.00	0.00	11.25	8.02	6.05	1.1	0.9	1.2	15.04	15.30	17.52	9.1	8.8	9.1	6.04	8.59	5.70	1.0	1.2	1.3
	1.36	0.00	0.00	0.00	0.00	0.00	9.93	9.00	8.13	2.0	2.0	2.0	14.38	16.71	16.43	8.0	7.9	7.7	9.79	10.[illegible]	6.72	1.4	1.0	1.5
	0.87	0.00	0.00	0.00	0.00	0.00	10.18	8.28	7.07	1.5	1.4	1.5	15.46	16.26	18.03	9.6	9.0	9.4	7.90	12.26	6.79	1.4	1.3	1.4
	0.00	0.82	1.44	0.26	0.60	0.06	9.58	8.46	8.83	2.4	2.4	2.4	13.41	14.91	17.15	8.7	8.9	8.8	7.97	9.69	6.38	1.2	1.1	1.4

Table 26

Teacher Usage of Types of Praise

1974 Grade Taught	Group	Praise with No Criteria ECS (2w)					Praise with Public Criteria ECS (2P)					Praise with Private Criteria ECS (2p)				
		Fall 1972	Spring 1973	Spring 1974	Adj. % 72-74	Adj. % 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. % 72-74	Adj. % 73-74	Fall 1972	Spring 1973	Spring 1974	Adj. % 72-74	Adj. % 73-74
		Mean	Mean	Mean %	Comp.	Comp.	Mean	Mean	Mean %	Comp.	Comp.	Mean	Mean	Mean %	Comp.	Comp.
1	1	9.10	8.87	5.22 0.8	0.8	0.8	2.23	0.00	2.29	0.2	0.2	0.72	0.00	0.36 0.0	0.02	0.03
	2	10.06	10.53	7.47 1.7	1.6	1.7	2.33	1.96	3.59 0.4	0.4	0.4	0.72	2.34	1.85 0.1	0.08	0.06
2	1	10.08	8.14	7.22 1.6	1.5	1.6	0.00	0.36	1.24 0.1	0.1	0.1	0.51	0.36	0.36 0.0	0.03	0.03
	2	6.18	8.09	4.30 0.6	0.7	0.6	1.53	1.24	1.17 0.1	0.1	0.1	0.00	0.87	0.00 0.0	0.02	0.00
3	1	7.19	7.14	6.69 1.4	1.5	1.4	3.17	1.60	0.51 0.0	0.0	0.0	1.47	0.24	0.51 0.0	0.01	0.02
	2	9.57	12.17	6.45 1.3	1.2	1.2	2.81	2.85	1.50 0.1	0.1	0.1	1.24	0.36	0.36 0.0	0.01	0.03
4	1	9.42	7.81	6.07 1.1	0.8	1.3	2.35	1.17	1.32 0.1	0.1	0.1	0.00	0.72	0.73 0.0	0.08	0.04
	2	7.35	8.72	7.44 1.7	1.7	1.8	2.86	1.98	2.53 0.2	0.2	0.2	0.72	0.00	0.72 0.0	0.05	0.04
5	1	7.72	11.12	4.75 0.7	1.6	0.5	1.53	1.09	2.20 0.2	0.1	0.2	0.00	0.00	0.36 0.0	0.02	0.02
	2	8.50	9.62	7.56 1.7	0.6	1.7	1.87	1.29	2.41 0.2	0.4	0.2	0.36	0.87	0.72 0.0	0.04	0.04
6	1	7.87	9.68	6.07 1.1	1.4	1.1	1.17	2.12	2.49 0.2	0.2	0.2	0.51	0.72	1.32 0.1	0.08	0.07
	2	8.18	9.34	8.29 2.1	1.3	2.1	1.81	1.40	2.62 0.2	0.2	0.2	0.00	0.00	0.00 0.0	0.00	0.00

Table 27

Teacher Usage of Types of Criticism

1974 Grade Taught	Group	Criticizes with No Criteria ECS (7w)					Criticizes with Public Criteria--ECS (7P)					Criticizes with Private Criteria--ECS (7p)				
		Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	%	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.	Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	%	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.	Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	%	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.
1	1	8.34	3.50	1.26	0.1	0.08	0.00	5.06	3.99	3.70	0.4	0.5	1.0	0.36	0.87	0.87	0.1	0.04	0.06
	2	8.77	4.26	3.62	0.4	0.40	0.30	5.60	6.53	8.28	1.1	2.2	2.0	0.87	1.60	1.17	0.1	0.06	0.06
2	1	8.80	2.47	1.51	0.1	0.09	0.10	2.64	4.71	2.26	0.2	0.4	0.4	0.51	0.00	0.51	0.0	0.02	0.07
	2	9.74	4.18	2.08	0.1	0.10	0.08	8.81	8.00	6.47	1.3	0.9	0.8	0.51	2.96	1.74	0.1	0.09	0.04
3	1	10.20	1.40	3.36	0.3	0.30	0.60	7.41	7.88	6.35	1.2	1.0	0.8	2.31	1.75	1.20	0.1	0.09	0.05
	2	8.49	2.76	1.40	0.1	0.08	0.09	7.82	6.82	5.14	0.8	0.6	0.7	1.53	0.72	0.73	0.0	0.05	0.06
4	1	9.48	1.95	2.64	0.2	0.20	0.30	6.03	5.57	5.29	0.9	0.8	0.9	1.39	0.89	0.36	0.0	0.02	0.03
	2	7.52	2.26	1.09	0.1	0.10	0.07	6.86	5.27	5.08	0.8	0.6	0.9	1.75	1.60	0.87	0.1	0.05	0.04
5	1	5.95	2.87	1.68	0.1	0.10	0.10	4.63	5.12	6.18	1.2	1.3	1.3	1.09	0.36	1.32	0.1	0.02	0.09
	2	7.56	4.70	2.11	0.1	0.10	0.09	6.22	8.13	5.84	1.0	0.9	0.8	1.60	0.87	0.36	0.0	0.02	0.03
6	1	9.05	2.93	3.35	0.4	0.30	0.40	5.61	6.51	4.97	0.8	0.7	0.7	3.97	1.83	1.77	0.1	0.02	0.09
	2	8.47	3.93	3.16	0.3	0.30	0.30	3.58	6.34	5.48	0.9	1.2	0.9	0.36	1.53	0.36	0.0	0.03	0.01

Table 28

Pupil Usage of Classroom Climate Categories

[illegible] Group	Pupil Warms the Climate RCS (11)					Pupil Accepts--RCS (12)					Pupil Corrects--RCS (18)				
	Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	%	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.	Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	%	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.	Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	%	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.
	0.00	0.00	0.72	0.04	0.04	0.00	0.00	1.62	0.72	0.04	0.04	0.04	0.51	2.11	2.12	0.1	0.2	0.2
	0.36	2.51	1.32	0.07	0.07	0.05	1.09	1.68	1.32	0.07	0.07	0.07	1.96	1.81	2.41	0.2	0.2	0.3
	0.53	0.81	1.24	0.07	0.07	0.07	0.89	1.75	1.24	0.07	0.07	0.07	1.83	4.30	2.42	0.2	0.2	0.1
	[illegible]	[illegible]	[illegible]	0.06	0.06	0.07	0.36	1.39	1.02	0.06	0.06	0.06	1.45	4.19	1.77	0.1	0.1	0.1
	[illegible]	[illegible]	[illegible]	0.07	0.07	0.07	0.36	0.36	1.17	0.17	0.07	0.08	3.20	2.57	2.17	0.2	0.1	0.2
	[illegible]	[illegible]	[illegible]	0.10	0.10	0.10	0.73	2.61	2.07	2.07	0.10	0.10	2.42	3.72	3.72	0.4	0.4	0.4
	[illegible]	0.36	[illegible]	0.09	0.09	0.10	0.81	0.87	1.53	1.53	0.09	0.09	0.81	1.62	2.79	0.2	0.3	0.3
	[illegible]	[illegible]	[illegible]	0.09	0.09	0.09	0.72	1.45	1.54	1.54	0.08	0.10	1.55	1.75	4.37	0.6	0.6	0.6
	[illegible]	0.53	[illegible]	0.20	0.20	0.20	0.72	0.73	2.32	2.32	0.20	0.20	3.90	1.61	3.69	0.4	0.4	0.5
	[illegible]	[illegible]	[illegible]	0.05	0.05	0.05	1.36	1.02	0.87	0.87	0.06	0.05	0.72	2.92	2.48	0.2	0.2	0.2
	[illegible]	[illegible]	[illegible]	0.05	0.05	[illegible]	0.36	1.54	0.81	0.81	0.05	0.04	2.33	1.75	1.75	0.1	0.1	0.1
	[illegible]	[illegible]	[illegible]	0.10	0.10	0.10	0.81	2.33	2.05	2.05	0.10	0.10	1.90	4.52	2.21	0.2	0.2	0.1

Table 24

[illegible] Usage of Types of Pupil Talk

	Predictable Pupil Talk PPT (9)						Unpredictable Pupil Talk UPT (9)					
	Fall 1972	Spring 1973	Spring 1974		Adj. 72-73	Adj. 73-74	Fall 1972	Spring 1973	Spring 1974		Adj. 72-73	Adj. 73-74
[illegible]	Mean	Mean	Mean		Comp.	Comp.	Mean	Mean	Mean		Comp.	Comp.
[illegible]	[illegible]	30.46	37.83	31.2	31.4	31	11.20	22.[illegible]	14.45	11	13.[illegible]	9
[illegible]	[illegible]	28.86	32.32	28.6	25.3	29.2	11.58	18.25	11.62	[illegible]	3.8	[illegible]
[illegible]	[illegible]	[illegible]	37.41	36.9	37.1	36.2	12.40	19.54	11.7	[illegible]	5.4	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	32.9	36.4	32.4	11.98	13.73	18.2	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	28.96	36.30	33.4	35.7	35.3	14.96	29.91	10.23	3.2	[illegible]	[illegible]
[illegible]	31.29	29.65	29.93	24.9	24.4	24.9	14.51	17.72	19.16	10.8	11.2	[illegible]
[illegible]	31.25	35.63	31.83	27.8	28.3	26.1	13.63	12.57	10.57	3.4	2.9	3.4
[illegible]	29.24	29.14	33.85	31.0	32.8	31.9	10.62	7.82	12.55	4.7	3.8	6.1
[illegible]	36.91	34.22	35.52	33.8	30.5	32.5	11.06	13.98	11.30	3.8	3.9	3.5
[illegible]	32.34	30.45	39.03	39.7	39.5	40.0	8.64	11.00	10.10	3.1	3.4	3.5
[illegible]	31.06	28.65	31.91	27.9	28.6	29.0	12.05	16.31	11.19	3.8	3.6	3.4
[illegible]	31.89	24.45	31.51	27.3	27.4	28.0	10.84	14.66	6.13	1.1	1.2	0.9

Table 30

Pupil Talk, Teacher Talk and Pupil-Pupil Talk

1974 Grade Taught	Group	Pupil Talk--ECS (8+9) Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	Spring 1974 %	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.	Teacher Talk ECS (1+2+3...+7) Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	Spring 1974 %	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.	Pupil-Pupil Talk RCS (11+12+13...+19)* Fall 1972 Mean	Spring 1973 Mean	Spring 1974 Mean	Spring 1974 %	Adj. % 72-74 Comp.	Adj. % 73-74 Comp.
1	1	35.57	40.51	42.13	45.0	45.0	44.6	48.57	45.60	44.18	48.6	49.3	49.1	6.62	9.72	9.12	2.5	2.	2.1
	2	29.93	34.52	34.96	32.8	32.8	33.5	56.66	50.97	51.46	64.6	54.3	59.8	7.71	8.45	10.07	3.1	3.1	3.3
2	1	35.99	43.11	42.02	44.8	44.8	43.9	47.92	42.83	45.90	51.6	53.0	53.1	8.78	11.82	6.96	1.5	1.4	1.2
	2	40.46	34.55	42.72	46.0	46.0	46.7	44.09	47.54	38.66	39.0	44.0	38.8	10.11	9.13	11.97	4.3	4.0	4.4
3	1	37.23	38.73	38.96	39.5	39.5	39.4	48.36	46.80	48.43	56.0	56.9	56.1	8.55	8.20	9.22	2.6	2.5	2.8
	2	35.34	37.61	38.73	39.2	39.1	39.2	50.69	48.58	44.29	48.8	47.5	48.2	6.75	11.33	14.74	6.5	6.7	6.1
4	1	35.76	40.18	35.05	33.0	32.4	29.6	50.57	45.44	50.45	59.5	59.4	62.7	7.29	7.83	6.58	2.3	1.5	1.3
	2	31.7	30.67	37.07	36.3	39.1	40.2	52.22	55.43	50.42	59.4	57.8	55.7	7.31	6.66	10.85	3.5	3.9	3.7
5	1	39.90	39.14	38.48	38.7	34.6	36.0	46.75	48.62	48.79	56.6	60.1	57.7	9.37	7.81	10.40	3.3	2.6	3.3
	2	34.15	33.52	41.80	44.4	45.2	46.1	52.40	52.59	45.94	45.6	49.8	49.9	6.78	7.62	6.81	1.4	1.8	1.5
6	1	34.09	34.49	35.87	34.3	35.1	35.2	49.70	49.54	50.49	61.2	60.2	59.9	8.69	8.13	6.54	1.3	1.1	1.3
	2	34.45	35.66	32.34	28.6	29.1	28.6	51.33	49.27	55.59	68.1	67.3	68.6	8.23	11.60	6.29	1.2	1.1	1.0

*Only when directed at another pupil

Table 31

Group 1 1974 and Group 2 1973 Mean Percentages of Usage of Categories*

	Primary		Intermediate	
	Group 1 1974	Group 2 1973	Group 1 1974	Group 2 1973
Teacher-Initiated Talk				
Questioning (F1-4)	26.61	18.55	26.66	17.37
Lecturing (F1-5)	8.08	19.07	15.40	27.73
Giving Directions (F1-6)	3.49	6.58	3.29	5.61
Teacher Responses to Pupils				
Acceptance of Feelings (F1-1)	0.03	0.08	0.00	0.08
Praise (F1-2)	2.07	3.83	1.50	2.98
Acceptance of Ideas (F1-3)	10.59	6.65	10.34	6.11
Criticism (F1-7)	1.19	2.49	1.36	2.17
Types of Pupil Talk				
Convergent Talk (F1-8)	34.78	22.93	30.30	25.49
Divergent Talk (F1-9)	8.45	11.23	5.51	5.35
Pupil Warms the Climate (RCS-11)	0.09	0.25	0.17	0.13
Pupil Accepts (RCS-12)	0.15	0.25	0.19	0.19
Pupil Corrects (RCS-18)	0.26	0.65	0.42	0.53
Pupil Cools the Climate (RCS-19)	0.00	0.01	0.01	0.01
Types of Teacher Questioning				
Fact-Memory (ECS-4f)	15.99	8.81	18.56	8.49
Convergent (ECS-4c)	8.01	6.20	6.50	8.11
Divergent (ECS-4d)	1.31	2.86	0.94	0.75
Evaluative (ECS-4e)	1.30	0.68	0.64	0.09
Types of Teacher Praise				
With No Criteria (ECS-2w)	1.87	3.55	1.19	2.80
With Public Criteria (ECS-2P)	0.18	0.17	0.23	0.16
With Private Criteria (ECS-2p)	0.03	0.11	0.08	0.02
Types of Teacher Criticism				
With No Criteria (ECS-7w)	0.29	0.57	0.29	0.47
With Public Criteria (ECS-7P)	0.79	1.73	0.93	1.58
With Private Criteria (ECS-7p)	0.11	0.20	0.13	0.11
Overall Amounts of Talk				
Teacher Talk (F1 1+2...+7)	51.99	57.25	58.54	62.06
Pupil Talk (F1 8+9)	43.23	34.17	35.47	30.85
Pupil-Pupil Talk (RCS 11+12+13...+19)**	2.42	3.35	2.29	3.23

*F1 = Flanders System; ECS = Expanded Category System; RCS = Reciprocal Category System

**Only when directed at another pupil.

V. PUPIL DISCIPLINE RESULTS

1972-73 Procedures and Results

A major feature of the Schools Without Failure program is teachers' and administrators' use of Reality Therapy in dealing with pupil discipline. This method teaches pupils to take responsibility for their own behaviors in school and requires them to work with concerned teachers to change inappropriate behaviors. Teachers using the method effectively are expected to be able to handle by themselves most discipline problems taking place in their classrooms. In time pupils exposed to this disciplinary method are expected to cause fewer problems.

In the first year of the study a principal referral card was used to examine the effects of the SWF program upon school discipline problems. During both the second semester of the 1971-72 school year and the entire 1972-73 school year, each time a child was referred to them, principals in both Group 1 and Group 2 schools filled out a card listing the child's name and the reason for referral.

To investigate whether the SWF program produced any changes in the reasons teachers referred pupils to principals, the cards were categorized into seven categories:

1. Physical assault, including fighting, throwing stones or other objects, pushing or tripping, and chasing other children.

2. Verbal abuse, including talking back to the teacher, loud and abusive language, purely verbal threats.

3. Classroom aberrance, including not working, not paying attention, "messing around in class," or in general disturbing teacher and other children.

4. Disobeying school rules, including general disobedience, chewing gum, breaking rules for lunchroom, playground, street crossing, etc.

5. Property violation, including destroying or marking property, stealing, littering.

6. Attendance or tardiness.

7. Miscellaneous, including a variety of other offenses.

In the first year of the study the referral card made possible a comparison of discipline problems occurring in the five Group 1 schools with those occurring in the five Group 2 schools. The results showed fewer disciplinary referrals in Group 1 schools than in Group 2 schools. The percentage of Group 1 pupils referred at least once to their principals (6.8 per cent) was less than that in the Group 2 schools (17.3 per cent). For those pupils referred at least once to their principals, the average number of referrals was less (1.3/pupil) in the Group 1 schools than in the Group 2 schools (1.5/pupil). However, no difference was found between Group 1 schools and Group 2 schools in the reasons for which pupils were referred.

1974 Procedures and Results

During the second year of the study, use of the principal referral card was continued in both Group 1 and Group 2 schools. Analyses similar to those performed during the first year were performed using referral cards from 1973-74.

As a first step in quantifying 1973-74 referrals, the number of pupils referred at least once to their principals was determined for each school. In Group 2 schools, 103 pupils from a total of 1,514 pupils, or 6.8 per cent, were referred to their principals for disciplinary reasons. In Group 1 schools, 105 pupils from a total of 1,637 pupils, or 6.4 per cent, were referred.

Table 32 shows the percentages of referrals during the two years of the study for both groups of schools.

Table 32

Percentages of Pupils Referred at Least Once to Their Principals

	Group 1 Schools	Group 2 Schools
1972-73	6.8	12.3
1973-74	6.4	6.8

As is evident in Table 32, the adoption of the SWF program by the Group 2 schools reduced the percentage of disciplinary referrals in these schools. To determine whether this difference was statistically significant, a z test for the difference between two independent proportions (Ferguson, George A. Statistical Analysis in Psychology and Education, 1966, p. 204) was used. The obtained z value of 5.50 was significant beyond the .C001 level. Thus, in both years of the study schools beginning the SWF program reduced their disciplinary referrals greatly. However, it could not be determined from the data gathered either year whether the reduction was due to fewer discipline problems in SWF schools or to increased effectiveness of SWF teachers in handling discipline problems.

Two other comparisons were made of percentages in Table 32. First, it was asked if, in 1973-74, the percentage of referrals in Group 1 schools differed from that in Group 2 schools. Second, it was asked if the percentage of 1973-74 referrals in Group 1 schools differe from the 1972-73 percentage of referrals in these same schools. The z value obtained for each of these comparisons was 0.44, not significant at the .05 level. Both tests, then, indicated that the percentages of pupils referred for disciplinary reasons were similar for both years.

As was done in analyzing 1972-73 referrals, a 1973-74 compilation was made of how often the same pupil was referred to his or her principal. For those pupils referred, the average number of referrals per pupil in the Group 1 schools was 137/105 = 1.30. For Group 2 schools this average was 117/103 = 1.14. As can be seen in Table 33, although Group 2 schools had a lesser average number of referrals than Group 1 schools, Group 1 schools maintained essentially the same rate of referrals both years.

Table 33

Average Number of Referrals Per Pupil

	Group 1 Schools	Group 2 Schools
1972-73	1.29	1.47
1973-74	1.30	1.14

Finally, as was done with 1972-73 referral cards, the 1973-74 cards were categorized into seven types of referrals. As a means of learning whether the SWF program affected the type of offense for which referrals were made to principals, 1973-74 percentages of referrals falling into each of the seven categories were determined for both Group 1 and Group 2 schools. As shown in Table 34, there appeared to be little difference between Group 1 and Group 2 schools in the type of offense for which referrals were typically made.

Table 34

1973-74 Percentages of Total Referrals for Each Type of Offense

Reason for Referral	Group 1 Schools			Group 2 Schools		
	Fall (N=53)	Spring (N=64)	Total (N=117)	Fall (N=45)	Spring (N=92)	Total (N=137)
Physical Assault	62.3	54.7	58.1	46.7	67.4	60.6
Verbal Assault	18.9	7.8	12.8	8.9	13.0	11.7
Classroom Aberrance	5.7	3.1	4.3	20.0	1.1	7.3
Disobeying Rules	7.5	12.5	10.3	22.2	8.7	13.1
Property Violation	3.8	4.7	4.3	2.2	0.0	0.7
Miscellaneous	1.9	4.7	3.4	0.0	9.8	6.6
Attendance, Tardiness	0.0	12.5	6.8	0.0	0.0	0.0

VI. PARENT ATTITUDES RESULTS

1972-73 Procedures and Results

Schools adopting the Schools Without Failure program must attempt to inform parents about the program and to gather their support for it. Parents are asked to attend meetings to discuss the program and are invited to visit their children's classrooms.

There typically is some initial confusion among parents as to what takes place in an SWF school. Parents, hearing the name "Schools Without Failure," may form wrong impressions about what is expected of pupils. They hear that a new form of discipline will be used and worry that their child's school will become too permissive. They hear that pupils sit in circles and talk, and they worry that home problems or subjects they do not feel should be discussed will become topics of conversation. Therefore, if the SWF program is to survive in a school, parents must be informed about it and possibly must change some of their own opinions about what should take place in schools.

During the first year of the study an attempt was made to learn if changes occurred in the attitudes of parents of Group 1 children. In the spring of 1972, before parents became aware of which schools would adopt the SWF program during the next school year, the Philosophy of Glasser questionnaire was sent home to parents of all elementary school pupils. This procedure was repeated in the spring of 1973 to determine if changes in attitude of parents of Group 1 pupils differed from those of parents of Group 2 pupils.

In using the Philosophy of Glasser questionnaire to measure teacher attitudes, a principal components factor analysis, employing 1972 responses, was performed. A similar procedure, using 1972 responses of parents, was carried out. The same two factors were found for both groups of respondents, an Involvement factor and a Traditionalism factor. Therefore, in scoring parent questionnaires both a total score and two-factor scores were obtained.

In order to make the analyses of the study similar for all types of data, classroom means for the parent questionnaire were computed, grouping together scores of parents having children in the same classroom. Attitude scores of those parents who had more than one child in a school entered into the means of all classrooms where one of their children was a class member. Analyses for primary classrooms were carried out separately from those for intermediate classrooms.

For primary classrooms during the first year of the study changes in attitude of parents of Group 1 pupils were not found to differ from those of parents of Group 2 pupils. For intermediate classrooms differences were found. Group 1 parents came to accept the involvement aspect of the SWF philosophy more during the year than they had before the program was begun. Changes in attitude of Group 1 parents were found to differ significantly from those of Group 2 parents both for this factor and for total scores on the questionnaire.

1974 Procedures

In the spring of 1974 the Philosophy of Glasser questionnaire was again sent home to parents of both Group 1 and Group 2 pupils. Because the design of the study did not call for it, the scores of parents of grade 1 pupils were not included

in the analyses. Also discarded were the scores of parents of pupils new to Group 1 schools and the scores of parents of pupils who had transferred either from a Group 1 school to a Group 2 school or from a Group 2 school to a Group 1 school.

It was planned to carry out analyses for the second year of the study in a way similar to that employed in the first year. However, for two schools, the number of 1974 respondents was too small for classroom means to be computed. Therefore, the scores of parents having pupils in the same grade level of a school were grouped together and grade level means were computed both for the total questionnaire and for the two factors of it. In order to make the means for the three testings of the study comparable, 1972 and 1973 means were recomputed, this time in terms of grade levels of pupils. The scores of those parents who had children in more than one grade level entered into the means of each grade level for which one of their children was enrolled.

Univariate analyses answering each of the three major questions of the study were carried out for both primary grade levels and intermediate grade levels (see Analysis of Data, section VII, Chapter II).

1974 Results

For neither primary grade levels nor intermediate grade levels were 1972 to 1974 changes in attitude of Group 1 and Group 2 parents found to differ significantly. This meant that changes in attitude of parents whose children participated in the SWF program for two years were not greater than were those of parents whose children participated for one year.

During the second year of the study neither Group 1 nor Group 2 parent attitudes changed more. Thus, neither the first year of having a child participate in the program nor the second year produced stronger changes in parent attitudes.

In comparing attitude scores of parents whose children had been exposed to the program for two years (Group 1, 1974) with those of parents whose children had never participated in the program (Group 2, 1973) one significant difference was found. On the Involvement factor, scores of parents of primary pupils never exposed to the SWF program were significantly higher ($F_{1,16}=11.91$) than were those of parents of primary pupils who had participated in it for two years (see Table 35). Attitude scores of Group 1 and Group 2 parents were not found to differ significantly in the spring 1972 testing, when no schools had as yet begun the program.

As shown in Table 35 from 1973 to 1974 parents of Group 2 pupils enrolled in certain grade levels did experience some upward trend in their acceptance of the philosophy. However, for all grade levels attitude scores of Group 1 parents declined during this same time period.

Table 36 shows the results obtained for each item of the questionnaire for all parents (Group 1 and Group 2) responding in the first and last testings of the study. Item means could range from 1.00 to 5.00, with 5.00 indicating the highest possible acceptance of the SWF philosophy. If for an item all parents gave the least positive response possible, the mean would be 1.00; if all parents gave the most positive response, the mean would be 5.00. For the columns showing percentages of parents responding positively to each item a positive response to items 2, 5, 6, 8, 9, 10, 12 and 15 was either "Completely Agree" or "Somewhat Agree"; for all other items a positive response was either "Completely Disagree" or "Somewhat Disagree."

Table 35

Parent Means on Glasser Philosophy Questionnaire*

1974 Grade of Child	Group	Involvement										Traditionalism						Total					
		Spring 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Spring 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.	Spring 1972		Spring 1973		Spring 1974		Adj. Mean 72-74 Comp.	Adj. Mean 73-74 Comp.
		Mean	SD	Mean	SD	Mean	SD			Mean	SD	Mean	SD	Mean	SD			Mean	SD	Mean	SD	Mean	SD		
2	1	30.56	1.67	29.95	2.23	28.25	0.60	28.47	28.23	20.21	0.83	20.62	1.23	19.91	0.95	19.80	19.44	50.77	1.80	50.56	3.38	48.16	1.15	47.79	47.88
	2	29.19	1.41	30.00	0.84	29.19	1.75	29.09	29.16	20.36	0.49	20.50	1.20	19.11	0.74	18.94	18.72	49.55	1.61	50.50	1.95	48.30	1.40	48.31	48.04
3	1	29.81	1.36	30.23	1.49	28.74	0.58	28.78	28.71	20.30	1.36	19.67	1.27	19.72	2.26	19.58	19.86	50.11	2.25	49.90	2.73	48.46	2.50	48.29	48.46
	2	29.17	1.55	30.22	0.96	28.32	0.67	28.21	28.29	19.72	1.47	19.51	1.58	19.32	1.02	19.42	19.56	48.88	2.58	49.73	1.96	47.63	0.81	47.86	47.64
4	1	29.81	0.86	29.40	1.02	28.24	1.10	28.28	28.22	19.34	0.89	19.55	0.98	18.55	1.13	18.81	18.77	49.16	1.27	48.95	1.39	46.79	1.50	46.93	47.06
	2	29.23	0.97	29.35	1.09	29.67	0.65	29.58	29.65	19.86	1.47	19.48	0.97	19.71	1.09	19.75	19.97	49.09	2.10	48.83	1.44	49.38	1.34	49.54	49.69
5	1	29.24	0.70	29.83	0.83	27.94	1.75	28.24	28.43	19.20	0.90	19.64	1.01	18.80	0.72	18.85	18.75	48.43	1.15	49.48	0.92	46.74	2.38	46.74	46.73
	2	28.80	0.68	28.52	0.82	28.86	1.16	28.80	28.40	19.20	1.11	19.43	1.39	19.55	1.22	19.60	19.54	48.01	1.47	47.94	1.78	48.41	1.55	48.31	48.42
6	1	29.31	1.31	29.41	1.31	28.31	1.07	29.31	28.50	19.17	0.83	18.95	1.35	18.92	1.35	18.98	18.99	48.48	1.58	48.37	2.55	47.23	1.28	47.24	47.23
	2	29.13	1.11	28.86	1.05	28.64	1.35	29.13	28.43	19.67	1.06	19.39	1.33	19.50	1.29	19.34	19.49	48.79	0.80	48.26	1.18	48.14	1.62	48.23	48.15

*Means were computed in each school for each grade level. Each mean in the table is an average of five school means.

In interpreting the results obtained for parents it can be said, first of all, that major positive attitude changes did not take place. Parents both initially and in the final testing gave highly positive responses to items of the Involvement factor and much less positive responses to most items of the Traditionalism factor. However, over the two years of the study there was some movement away from acceptance of the philosophy by parents of pupils in Group 1 schools.

During both years of the study the SWF program was under attack almost daily by a small but highly vociferous group. Since the program was carried out for two years in Group 1 schools, parents of Group 1 pupils were exposed to more of this attack than were parents of Group 2 pupils. Thus, it would be expected that certain of the Group 1 parents would be influenced by it.

The fact that attitudes did not change greatly overall possibly indicates that the criticism was balanced to a degree by the parental involvement attempts of the schools. It also would appear to indicate that the SWF program can survive in areas where highly traditional attitudes do exist. If the methods of the program can be shown not to be harmful to pupils, this may be all that is necessary.

Table 36

Item Means and Percentages of Parents Responding Positively for Items of the Philosophy of Glasser Questionnaire

Factor	Item	Mean		Percentage of Parents Responding Positively	
		Spring 1972	Spring 1974	Spring 1972	Spring 1974
II	1	2.44	2.61	30	34
II	2	2.65	2.45	37	32
II	3	3.63	3.41	65	58
II	4	1.72	1.95	12	18
II	5	1.81	1.96	16	21
I	6	3.18	3.26	57	62
II	7	2.20	2.10	25	21
II	8	1.89	1.76	17	13
II	9	3.37	3.08	58	49
I	10	4.31	4.11	88	81
I	11	4.34	4.20	85	82
I	12	4.65	4.27	94	84
I	13	4.07	3.94	81	75
I	14	4.37	4.[illegible]	89	82
I	15	4.60	4.43	95	89

VII. CORRELATION RESULTS

Tables 37 through 41 on the following pages show, for each grade level, 1974 correlations among the pupil attitude, pupil achievement and teacher attitude variables measured in the study. Most relationships among the variables contained in these tables appeared to vary as a function of the grade level of pupils. For example, in grade 4 teacher attitude scores correlated in a highly positive way with pupil achievement scores, whereas for other grade levels these correlations were either low in magnitude or negative. One consistent relationship found for all grade levels was that existing between pupil achievement scores and pupil self-concept scores. There were significant positive correlations between these variables in grades 3 through 6; in grade 2, although the correlations were not found significant, they were positive ones.

Table 42 shows those interaction analysis categories found to be significantly correlated with teacher attitude scores in 1974. As can be seen in this table, many more significant relationships were found for primary teachers than for intermediate teachers. For both groups, however, most relationships uncovered were predictable ones. Acceptance of the SWF philosophy by primary teachers tended to go along with the use of questioning and of acceptance of ideas in the classroom situation. There also tended to be less silence and confusion in the classrooms of primary teachers who obtained high scores on the questionnaires. Acceptance of the SWF philosophy by intermediate teachers tended to go along with more pupil talk and with less lecturing by the teacher. The lecturing of intermediate teachers who obtained high scores on the questionnaires tended to be of an orientation nature rather than of a factual nature. Thus, although teacher attitude scores were not found to change a great deal in the study, the attitude scores did tend to relate highly with a number of those categories of behavior which showed changes.

Table 37

1974 Grade 2 Correlations Among Variables*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	F_I: Involvement																
2.	F_{II}: Traditionalism	41															
3.	Glasser Philosophy	84	84														
4	F_I: Child-Centeredness	63	44	64													
5.	F_{II}: Rigidity	38	31	41	60												
6.	Opinionnaire on Education	54	40	56	85	93											
7.	Satisfaction with Teaching	36	18	32	45	01	21										
8.	F_I: In-School Talking	-08	-33	-24	11	03	07	-26									
9.	F_{II}: School Climate	00	03	02	12	10	12	-27	72								
10.	F_{III}: Difficult Schoolwork	-19	-25	-26	-01	06	03	-17	74	72							
11.	F_{IV}: Verbal Schoolwork	-16	-14	-18	01	-22	-14	-17	62	71	53						
12.	F_V: Evaluation	15	-13	01	08	25	20	-24	60	63	60	30					
13.	School Attitude Scale	-09	-17	-15	07	05	07	-26	87	93	88	75	70				
14.	Pictorial Self Concept	43	18	36	58	43	55	05	48	30	30	24	37	38			
15.	Word Meaning	-05	-05	-06	14	21	20	16	-08	-39	-10	-05	-24	-23	20		
16.	Paragraph Meaning	11	02	08	28	24	28	24	-04	-33	-12	-06	-17	-20	36	93	
17.	Word Study Skills	00	-19	-11	09	18	16	06	10	-15	08	06	-04	-01	28	87	86

*Correlations were computed using spring 1974 means from 20 Group 1 and Group 2 classrooms. Decimals were removed to save space. Correlations .43 or greater are significant at beyond the .05 level. Variables: 1-7, Teacher Attitudes; 8-14, Pupil Attitudes; 15-17, Pupil Achievement.

Table 38

1974 Grade 3 Correlations Among Varia les*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21
1.	F_I: Involvement																				
2.	F_{II}: Traditionalism	43																			
3.	Glasser Philosophy	71	94																		
4.	F_I: Child-Centeredness	70	62	75																	
5.	F_{II}: Rigidity	41	66	66	74																
6.	Opinionnaire on Education	59	69	76	93	93															
7.	Satisfaction with Teaching	66	44	59	56	18	40														
8.	F_I: In-School Talking	-06	04	01	08	07	08	10													
9.	F_{II}: School Climate	-03	20	14	25	17	22	09	59												
10.	F_{III}: Difficult Schoolwork	-12	-01	-05	12	20	17	05	50	64											
11.	F_{IV}: Verbal Schoolwork	-14	09	02	04	14	10	-13	70	83	68										
12.	F_V: Evaluation	-11	07	01	09	19	15	18	61	19	45	38									
13.	School Attitude Scale	-11	10	04	17	20	19	06	75	89	87	91	51								
14.	Pictorial Self Concept	-24	-06	-14	-22	-26	-26	00	46	38	39	41	42	49							
15.	Word Meaning	-35	-09	-20	-26	-24	-27	-21	05	04	33	12	09	18	60						
16.	Paragraph Meaning	-46	-31	-41	-30	-33	-34	-20	14	03	28	09	28	18	63	86					
17.	Spelling	-34	-18	-26	-20	-26	-24	-18	04	00	21	10	20	13	54	90	92				
18.	Word Study Skills	-13	-31	-29	-15	-33	-26	-01	17	14	37	20	28	28	62	75	86	84			
19.	Language	-42	-18	-29	-26	-33	-32	-27	11	00	21	08	20	13	65	90	93	89	82		
20.	Arithmetic Computations	-60	-21	-38	-39	-18	-30	-44	-05	08	42	13	01	21	42	85	73	72	55	75	
21.	Arithmetic Concepts	-48	-23	-36	-34	-25	-32	-29	08	11	45	15	15	27	55	89	88	83	80	87	91
22.	Science and Social Studies	-18	16	06	-05	-04	-05	-11	-11	18	41	15	-07	23	38	74	64	61	54	68	66	73

*Correlations were computed using spring 1974 means from 19 Group 1 and Group 2 classrooms. Decimals were removed to save space. Correlations .44 or greater are significant at beyond the .05 level. Variables: 1-7, Teacher Attitudes; 8-14, Pupil Attitudes; 15-22, Pupil Achievement.

Table 19

1975 Grade 4 Correlations Among Variables*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	F_I Involvement																															
2	F_{II} Traditionalism	49																														
3	Glasser Philosophy	77	91																													
4	F_I Child-Centeredness	31	34	37																												
5	F_{II} Rigidity	41	52	36	-12																											
6	Opinionnaire on Education	56	66	71	53	78																										
7	Satisfaction with Teaching	58	30	46	32	41	17																									
8	F_I Importance of School	17	01	07	20	15	25	43																								
9	F_{II} Teacher Talking	-37	-27	-35	01	27	-23	-32	33																							
10	F_{III} School Climate	-10	07	01	-20	05	-09	09	31	04																						
11	FOA Attitude Toward School	-10	-07	-10	02	00	02	17	79	51	68																					
12	F_I School Climate	-13	08	02	-30	18	-03	15	08	-08	83	41																				
13	F_{II} Talking to Teachers	[illegible]	04	10	08	29	30	43	77	16	43	22	22																			
14	F_{III} Evaluation	-18	-18	-20	-34	22	-03	13	04	-11	37	16	66	28																		
15	F_{IV} Arithmetic	-05	10	05	-33	28	03	-10	09	-13	47	23	47	43	47																	
16	F_V Verbal Learning	04	21	19	-23	42	22	32	36	19	55	55	63	68	60	52																
17	School Attitude Scale	[illegible]	06	03	-30	33	10	25	11	00	75	54	87	59	80	41	62															
18	Piers-Harris Self Concept	51	25	40	05	39	37	55	44	-51	26	18	18	49	19	13	22	31														
19	F_I Behavior	13	30	44	12	45	41	56	33	-64	25	04	29	37	36	20	23	16	[illegible]													
20	F_{II} Intellectual and School Status	43	14	28	09	20	23	44	23	-48	21	04	17	41	21	18	27	30	88	79												
21	F_{III} Physical Appearance	52	13	31	-04	29	22	32	26	-33	02	03	-09	39	-11	-02	21	06	78	51	74											
22	F_{IV} Anxiety	44	23	35	09	36	36	46	50	-32	10	21	-08	48	-07	-02	14	10	91	72	70	74										
23	F_V Popularity	31	-01	13	07	25	26	45	60	01	16	[illegible]	-08	59	-04	-08	22	12	74	47	58	68	79									
24	F_{VI} Happiness	18	13	[illegible]	[illegible]	21	13	32	37	-33	24	21	15	38	26	27	[illegible]	30	76	66	62	45	72	67								
25	Word Meaning	51	25	60	07	39	36	61	37	-52	04	02	09	35	10	-02	[illegible]	19	86	80	81	71	69	65	65							
26	Paragraph Meaning	54	37	49	13	44	45	70	23	-49	19	02	10	39	21	14	40	[illegible]	80	78	83	60	60	51	58	90						
27	Spelling	43	32	41	02	41	37	64	12	-49	14	-07	36	23	25	13	34	37	70	70	73	49	48	42	49	84	95					
28	Word Study Skills	60	39	53	20	50	55	63	42	-39	20	19	20	51	10	18	33	33	86	81	82	66	73	70	74	90	91	83				
29	Language	62	50	61	22	54	55	68	21	-54	11	-04	19	31	09	09	26	27	82	80	77	59	64	54	63	90	96	91	93			
30	Arithmetic Computation	45	40	48	-01	48	41	52	15	-66	23	07	36	20	21	11	27	31	71	75	75	53	47	34	48	85	88	68	78	87		
31	Arithmetic Concepts	62	50	62	15	46	49	66	22	-46	[illegible]	04	22	35	06	11	32	29	80	78	77	62	50	50	57	89	93	84	92	[illegible]	85	
32	Arithmetic Applications	56	42	53	03	55	48	68	17	-48	[illegible]	[illegible]	46	35	29	27	45	49	74	76	74	51	49	41	51	91	92	88	96	90	89	93

*Correlations were computed using spring 1975 means from 22 Group 1 and Group 2 classrooms. The [illegible] were removed to [illegible] level. [illegible] or greater are significant at or beyond the .05 level. Variables 1-7, Teacher Attitudes, 8-24, Pupil Attitudes, 25-32, Pupil Achievement

Table 4C

1974 Grade 5 Correlations Among Variables*

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	F_I	Involvement																														
2	F_{II}	Traditionalism	67																													
3	Glasser Philosophy		64	94																												
4	I	Child-Centeredness	56	15	34																											
5	F_{III}	Rigidity	54	16	14	47																										
6	Opinionnaire on Education		69	18	39	77	92																									
	Satisfaction with Teaching		31	15	37	09	-11	-34																								
8	F_I	Importance of School	-05	-15	-12	-05	-17	-14	-2																							
9	F_{II}	Teacher, Talking	11	33	27	-04	-25	-20	3	24																						
10	F_{III}	School Climate	-19	-01	-08	-24	-49	-45	-1	17	29																					
	EQA Attitude Toward School		-08	03	-01	-16	-43	-38	-1	74	64	70																			
12	F_I	School Climate	01	00	00	-28	-49	-48		42	34	69	70																			
13	F_{II}	Talking to Others	02	-09	-03	21	-10	02	-4	21	52	52	52	16																		
14	F_{III}	Evaluation	05	11	10	-17	-31	-29	-02	34	12	72	60	79	12																	
15	F_{IV}	Arithmetic	06	09	08	-06	-02	-04	0	39	-08	41	40	59	-14	67																
16	F_V	Verbal Learning	06	03	04	-05	-18	-15	-4	44	20	73	68	67	39	77	38															
17	School Attitude Scale		05	02	04	-14	-36	-32	-1	48	32	81	80	92	38	90	66	84														
18	Piers-Ha	ris Self Concept	00	-03	-02	08	13	13	-2	-09	-19	19	-03	-21	17	07	-37	29	-06													
19	F_I	Behavior	13	00	05	06	27	22	-2	-16	-40	12	-17	-17	-01	17	-23	26	-05	92												
20	F_{II}	Intellectual and School Status	12	-04	03	15	27	26	-24	11	05	00	08	-29	28	-17	-50	17	-17	83	90											
21	F_{III}	Physical Appearance	-04	12	07	09	16	16	-10	02	11	12	11	-42	44	-20	-37	01	-21	69	69	71										
22	F_{IV}	Anxiety	-11	-13	-14	-05	08	03	-2	-35	-32	03	-30	-33	62	-10	-50	09	-25	82	74	77	46									
23	F_V	Popularity	-04	27	16	04	-16	-09	-1	06	3	32	31	02	29	22	-29	38	13	77	58	66	63	51								
24	F_{VI}	Happiness	00	14	10	-01	-15	-11	06	-36	-32	21	-21	-01	-15	27	-22	16	00	74	38	38	33	70	62							
25	Word Meaning		-05	-02	-03	17	21	23	-3	03	-21	10	-01	-27	04	01	-19	18	-12	77	70	68	61	57	55	50						
26	Paragraph Meaning		12	11	17	21	14	19	-1	02	-21	09	-02	-13	-06	17	-14	25	-02	78	75	60	48	60	61	66	93					
27	Spelling		12	31	27	08	04	07	-20	06	-09	19	06	-04	-05	25	-13	30	05	75	72	52	48	60	69	73	84	93				
28	Language		10	10	11	22	13	19	-20	01	-22	09	-03	-13	-09	14	-12	25	-02	77	72	58	49	59	59	64	92	98	91			
29	Arithmetic Computation		06	-10	-03	27	07	17	-1	16	-35	-08	-07	-02	-15	19	04	20	04	51	47	38	29	35	30	47	58	70	51	72		
30	Arithmetic Concepts		00	-12	-08	09	-06	00	-1	-11	-33	-01	-19	-02	-14	11	-19	08	-05	55	51	38	23	53	30	60	68	77	66	78	81	
31	Arithmetic Applications		08	06	08	14	13	16	-1	-11	-34	-01	-19	-25	-10	05	-29	15	-16	83	81	62	54	70	58	74	88	96	89	95	72	82

*Correlations were computed using spring 1974 means from 20 Group 1 and Group 2 classrooms. Decimals were removed to save space. Correlations .43 or greater are significant at beyond the .05 level. Variables: 1-7, Teacher Attitudes; 8-24, Pupil Attitudes; 25-31, Pupil Achievement.

Table 41

1974 Grade 6 Correlations Among Variables*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1.	F_I: Involvement																																
2.	F_{II}: Traditionalism	34																															
3.	Glasser Philosophy	77	86																														
4.	F_I: Child-Centeredness	73	44	69																													
5.	F_{II}: Rigidity	73	43	64	68																												
6.	Opinionnaire on Education	74	47	72	90	93																											
7.	Satisfaction with Teaching	31	07	21	51	08	31																										
8.	F_I: Importance of School	15	-11	01	-10	05	-02	-10																									
9.	F_{II}: Teacher, Talking	16	-09	03	-24	10	-06	-30	60																								
10.	F_{III}: School Climate	14	-30	-13	-09	13	03	-05	47	69																							
11.	EQA Attitude Toward School	18	-20	-04	-15	10	-02	-15	88	84	81																						
12.	F_I: School Climate	10	-10	-02	-26	11	-07	-52	63	64	62	74																					
13.	F_{II}: Talking to Others	31	-18	05	13	34	27	-11	69	67	67	80	57																				
14.	F_{III}: Evaluation	19	-07	05	06	35	24	-15	59	39	57	63	58	60																			
15.	F_{IV}: Arithmetic	-17	-06	-13	-49	-31	-43	-33	60	37	25	52	64	16	33																		
16.	F_V: Verbal Learning	24	03	15	08	37	26	-18	47	30	56	54	65	48	85	47																	
17.	School Attitude Scale	17	-09	03	-14	22	06	-37	73	61	68	81	92	68	82	65	86																
18.	Piers-Harris Self Concept	13	-20	-06	-25	27	28	10	19	11	48	31	19	48	26	-08	37	30															
19.	F_I: Behavior	39	-06	17	45	34	42	20	15	12	51	31	15	46	27	-23	31	24	88														
20.	F_{II}: Intellec. & Sch. Status	30	-02	15	43	44	48	16	18	10	34	25	16	51	29	-14	36	28	87	72													
21.	F_{III}: Physical Appearance	-02	-24	-17	12	19	17	-06	10	03	39	21	26	42	20	03	44	34	86	61	82												
22	F_{IV}: Anxiety	-07	-33	-26	06	09	08	04	09	-10	23	11	03	27	22	-04	36	19	88	69	68	80											
23	F_V: Popularity	-12	-31	-27	-03	07	03	07	16	19	40	29	06	43	03	07	15	15	83	58	67	77	77										
24	F_{VI}: Happiness	15	11	16	28	38	36	19	08	-09	32	14	15	27	23	-04	38	24	79	79	59	60	72	59									
25.	Word Meaning	-09	-40	-32	00	-24	-14	24	-22	-22	33	-05	-07	-04	16	03	29	07	55	47	38	54	61	48	36								
26.	Paragraph Meaning	08	-13	-04	18	-19	-02	36	-04	-14	32	06	-06	17	14	-05	12	05	58	65	47	39	47	44	49	77							
27	Spelling	13	-05	04	31	-08	14	19	-30	-15	14	-15	-27	14	00	-36	-01	-15	59	68	53	44	50	45	42	63	80						
28	Language	01	-15	-10	16	-26	-07	30	-21	-21	20	-09	-16	03	09	-13	-12	-04	56	62	42	41	54	39	42	84	93	88					
29.	Arithmetic Computation	12	-16	-05	27	-07	10	24	25	15	19	24	10	40	17	-06	-09	12	37	42	45	17	17	23	16	20	57	46	45				
30	Arithmetic Concepts	-12	-12	-15	03	-27	-14	21	-08	06	21	05	-02	23	-19	-23	-33	-17	36	44	31	21	16	31	28	29	68	60	58	71			
31.	Arithmetic Applications	-01	-14	-10	14	-22	-06	29	-13	-06	24	01	-06	13	-08	-14	-14	-08	52	57	45	34	36	40	41	60	87	72	78	72	89		
32.	Social Studies	-07	-26	-22	-03	-34	-22	21	-07	08	50	17	07	16	00	00	02	06	56	61	39	41	40	47	40	74	89	71	83	52	76	90	
33	Science	02	-17	-11	07	-19	-08	20	-20	-10	35	00	-07	10	08	-17	13	01	63	67	46	53	58	46	47	82	88	79	90	38	60	79	86

*Correlations were computed using spring 1974 means from 20 Group 1 and Group 2 classrooms. Decimals were removed to save space. Correlations .43 or greater are significant at beyond the .05 level. Variables: 1-7, Teacher Attitudes; 8-24, Pupil Attitudes; 25-33, Pupil Achievement.

Table 4.

Observation Categories Significantly Correlated with Teacher Attitude Scores*

Grade Level Taught	Attitude Measure	Observation Category and Correlation
Primary	1. F_I: Involvement	ECS-5e (.49); ECS-9d (-.44), FI-9 (-.38); RCS-4 (.51)
	2. F_{II}: Traditionalism	ECS-4c (.51); FI-4 (.46); FI-(1+2...+7) (.49); RCS-3 (.52); RCS-12 (-.53); RCS-(11+12...+19**)(-.50)
	3. Glasser Philosophy	ECS-4c (.57); ECS-8c (.49), ECS-10 (-.46); FI-3 (.45), FI-4 (.50); FI-(1+2...+7) (.51); RCS-3 (.45); RCS-12 (-.55), RCS-(11+12...+19**)(-.49)
	4. F_I: Child-Centeredness	ECS-1r (.50), ECS-4c (.54); ECS-8c (.70), ECS-10c (-.46)
	5. F_{II}: Rigidity	ECS-1r (.47); ECS-2W (.56); ECS-3a (.54); ECS-4c (.54); ECS-8c (.57); ECS-9e (.48); ECS-9I (-.51); ECS-10 (-.50), ECS-10c (-.55); FI-2 (.56); FI-3 (.56); FI-4 (.[illegible]); FI-10 (-.64); FI-(1+2...+7)(.54), RCS-3 (.75); RCS-10 (-.47); RCS-19 (-.51)
	6. Opinionnaire on Education	ECS-1r (.52); ECS-3a (.51), ECS-4c (.63), ECS-8c (.68); ECS-9I (-.46); ECS-10c (-.56), FI-3 (.54); FI-4 (.64); FI-10 (-.54); FI-(1+2...+7)(.52); RCS-3 (.66); RCS-19 (-.51)
	7. Satisfaction with Teaching	ECS-8I (.54); FI-8 (.50); RCS-15 (.51)
Intermediate	1. F_I: Involvement	ECS-5I (-.37), FI-5 (-.37), RCS-6 (-.36)
	2. F_{II}: Traditionalism	RCS-11 (.34)
	3. Glasser Philosophy	ECS-5e (.36), RCS-1 (-.34)
	4. F_I: Child-Centeredness	--
	5. F_{II}: Rigidity	ECS-8c (.38), FI-8 (.50), FI-(8+9)(.42)
	6. Opinionnaire on Education	FI-8 (.44); FI-(8+9)(.37)
	7. Satisfaction with Teaching	ECS-4e (.31), ECS-9e (.47), FI-(8+9)(.46), RCS-1 (-.53)

*ECS = Expanded Category System, RCS = Reciprocal Category System, FI = Flanders System. Correlations were computed using scores of 19 Group 1 and Group 2 primary teachers and 33 Group 1 and Group 2 intermediate teachers. For primary teachers, correlations .46 and greater were significant beyond the .05 level; for intermediate teachers, correlations .34 and greater were significant

**Only when directed at another pupil

CHAPTER IV

DISCUSSION AND CONCLUSIONS

The results of the analyses performed indicate, first of all, that during the two years of the study rather major changes took place in the classroom behaviors of teachers who participated in the Schools Without Failure training program. Teachers learned a new technique for increasing involvement and thinking in their classrooms. This technique, the classroom meeting, was used effectively during both years of the study by teachers participating in training. Teachers began to employ Reality Therapy in dealing with pupil discipline problems. Through use of this method, disciplinary referrals to principals were reduced greatly. Finally, in their instructional sessions teachers departed in a real way from their past methods: They began to question much more and to lecture less; they began to accept pupil ideas more and to praise and criticize less. These changes made their instructional sessions much more like classroom meetings than were similar sessions held by them before their training began.

Neither parent nor teacher attitudes were found to change a great deal. Both groups generally agreed with the involvement aspects of the SWF philosophy before any of the schools involved in the study adopted the SWF program. In contrast to this, over the course of the study both groups held onto their beliefs that traditional methods were not harmful to pupils. Despite a highly negative attack upon the SWF program taking place in their communities, parents did not resist its implementation. Thus, although both teachers and parents did not change certain of their former beliefs about education, teachers implemented new methods and parents permitted these methods to be implemented in their children's schools.

To fully determine the effects of the SWF program upon pupils, a study of much longer than two years' duration would be needed. Many of the changes in teacher classroom behaviors found in the study were not consistent enough to be measurable until the second year of use of the program. It would also be expected that most SWF schools would continue to change each year, possibly becoming involved in carrying out curricular revisions, in altering the grading system or in using peer tutoring. In addition the most important changes taking place in pupil attitudes or behaviors would be ones which would take a longer period of time to occur.

In the study performed, though, there were some indications that the program was having positive effects upon pupil attitudes. Intermediate pupils who participated in the SWF program for two years felt more strongly that school and learning were important than did pupils never exposed to the program. A higher percentage of the primary pupils in schools implementing the program than in schools not using it were found to give positive responses to such attitude toward school items as those dealing with doing schoolwork, with working independently and with doing hard arithmetic problems. These results appeared to indicate that primary pupils exposed to the SWF program were beginning to feel more confident in their abilities to deal with difficult schoolwork than did primary pupils who never participated in the program.

The results obtained in the area of pupil achievement seemed to indicate, first of all, that in the beginning stages of the program some period of adjustment must take place for both pupils and teachers. For two verbal subscales, achievement gains of pupils dropped off somewhat during the first year of the program's use, but

returned to their previous level during the second year. Overall, however, achievement scores of pupils participating in the SWF program for two years were not found to differ from scores of pupils in comparable schools where the program was not as yet implemented. Of especial interest were the achievement scores of grade 2 pupils in schools where the program was used for two years. These pupils scored somewhat higher on all three verbal subscales administered than did grade 2 pupils in either of the two groups of schools tested at the end of the first year of the study. Since the pupils scoring higher were the only ones in the study whose entire school experience took place in an SWF school, it is possible that comparisons in future years could indicate that there is some benefit to pupil achievement in attending an SWF school, particularly where no adjustment from previous methods is required.

Thus, over the course of a two-year time period the SWF training program was found to have produced rather strong changes in the classroom behaviors of teachers. These changes appeared to be having a positive effect upon pupils. It would be expected, then, that the continuance of these same methods would ultimately result in much stronger positive changes in pupil attitudes and behaviors than those uncovered in the two years of the study.

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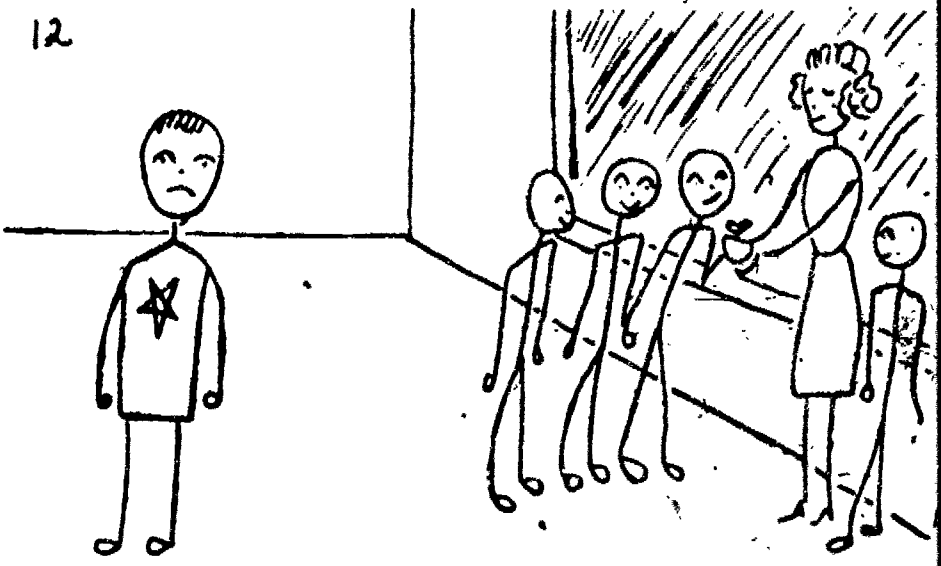
Appendix A

Sample Items from Pictorial Self-Concept Scale

2.

12



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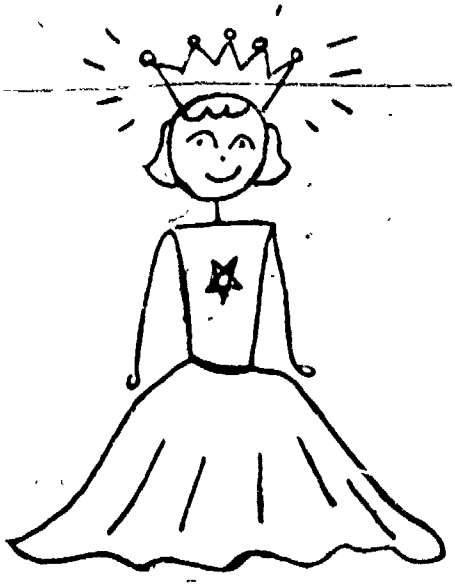

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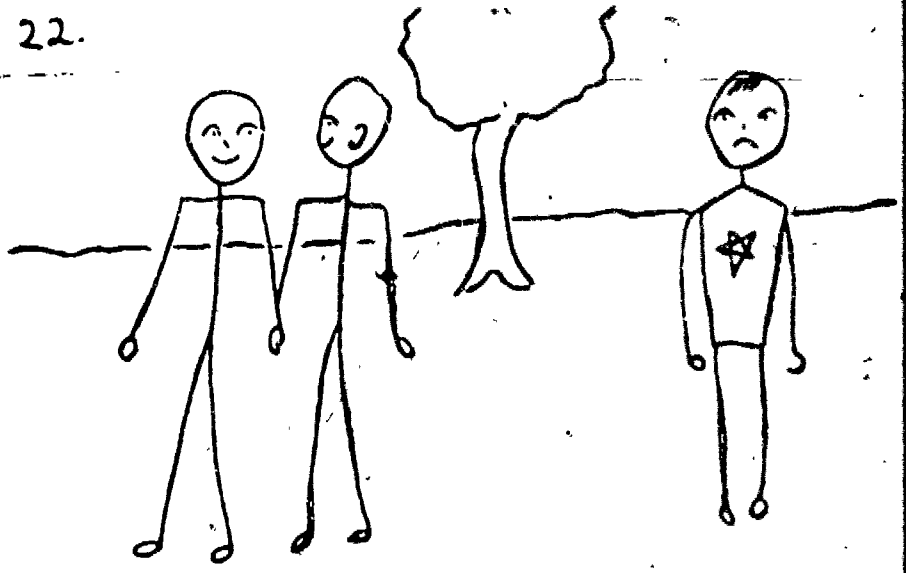

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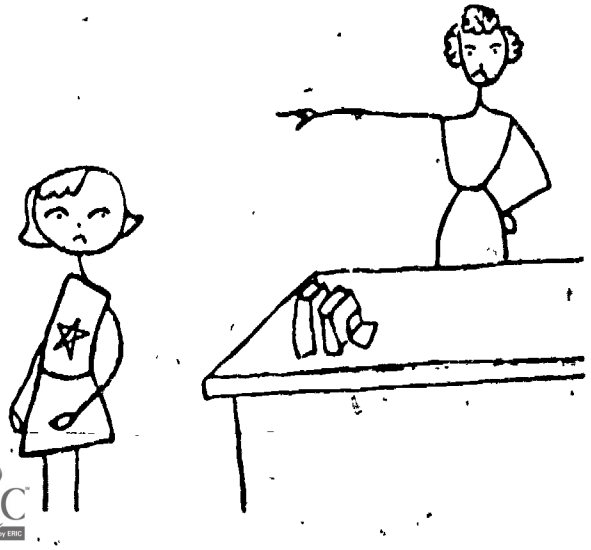

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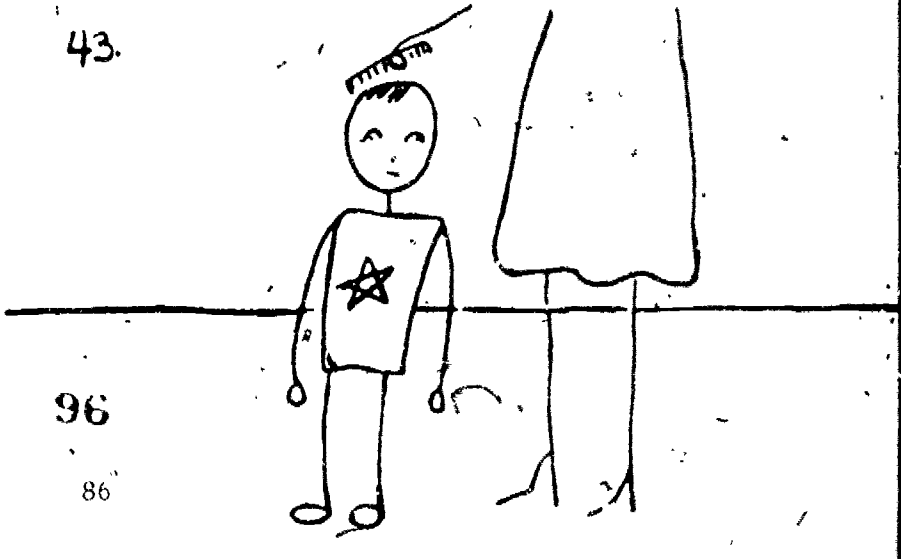


96

Sample Items from Piers-Harris Children's Self-Concept Scale

*My classmates make fun of me . . . . . .yes no

When I grow up I will be an important person . . . . . .yes no

I have good ideas. . . . . .yes no

I have pretty eyes . . . . . .yes no

I am lucky . . . . . .yes no

*When I try to make something, everything goes wrong. . . . .yes no

I can be trusted . . . . . .yes no

I am a good person . . . . . .yes no

*Designates reversed items. For these items a response of "no" was scored "1"; for all other items a response of "yes" was scored "1." Scores on the 80-item instrument could range from 0 to 80.

Sample Items and their Loadings on Factors of the Piers-Harris Children's Self-Concept Scale*

I. Behavior. I do many bad things (.66); I am obedient at home (-.64); I am often in trouble (.60); I think bad thoughts (.55); I can be trusted (-.53).

II. Intellectual and School Status. I am good in my schoolwork (-.66); I am smart (-.63); I am dumb about most things (.56); I am a good reader (-.55); I forget what I learn (.53).

III. Physical Appearance and Attributes. I am goodlooking (-.74); I have a pleasant face (-.61); I have a bad figure (.56); I am strong (-.41); I am a leader in games and sports (-.40).

IV. Anxiety. I cry easily (-.57); I worry a lot (-.57); I am often afraid (-.55); I get nervous when the teacher calls on me (-.54); I am nervous (-.49).

V. Popularity. People pick on me (-.62); I am among the last to be chosen for games (-.61); It is hard for me to make friends (-.56); I have many friends (.55); I feel left out of things (-.49).

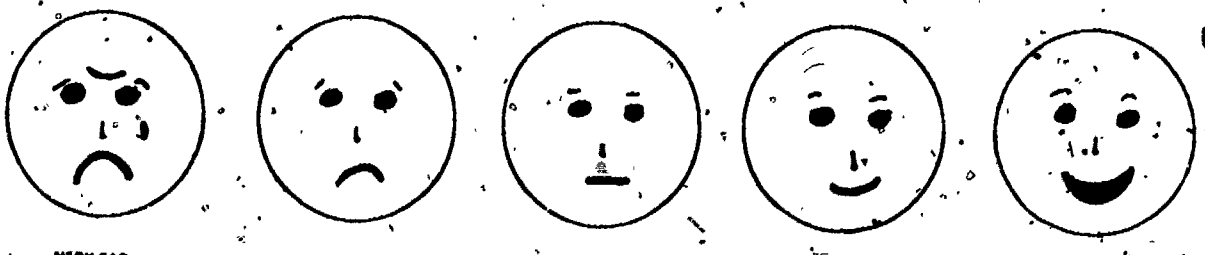
VI. Happiness and Satisfaction. I am a happy person (.65); I am unhappy (-.62); I like being the way I am (.60); I wish I were different (-.57); I am cheerful (.42).

*Taken from (Piers and Harris, 1969, pp. 19-20).

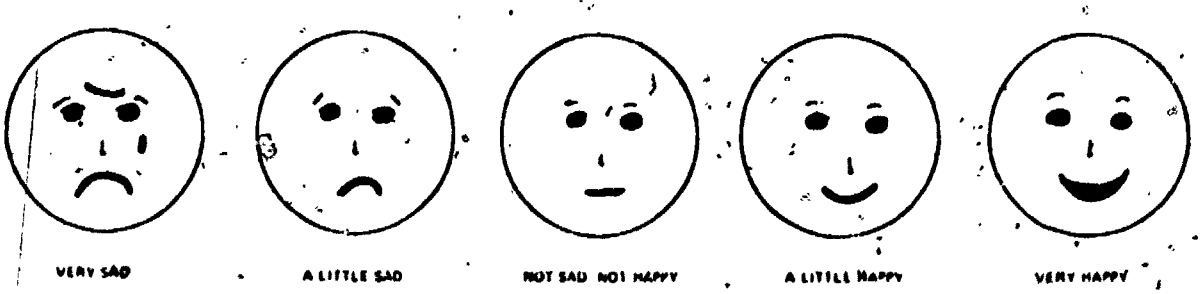
Appendix A (cont'd)

School Attitude Scale (Grades 1-3)*

This is how I feel when I go to the zoo.



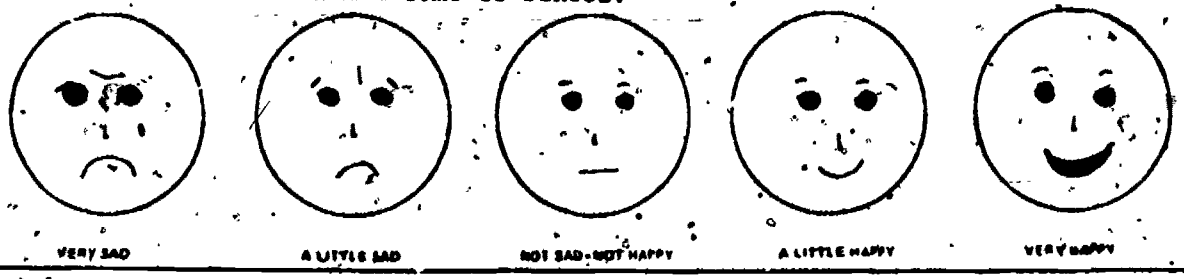
This is how I feel when I go to the doctor.



*For all items but number 14, item scores were the following: Very Happy = 5; A Little Happy = 4; Not Sad Not Happy = 3; A Little Sad = 2; Very Sad = 1. For item 14 the scale was reversed. Scores on the instrument could range from 30 to 150.

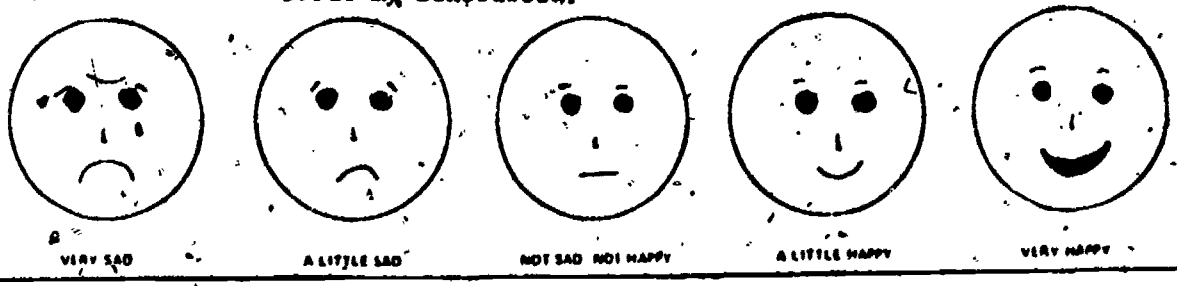
Factor

1. This is how I feel when I come to school.



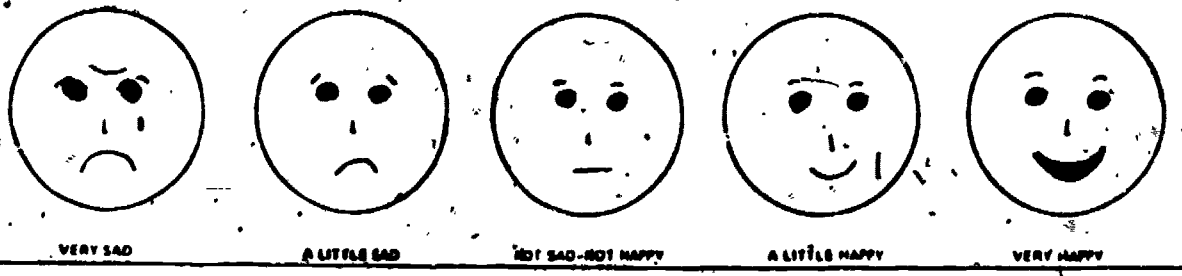
II

2. This is how I feel about my schoolwork.



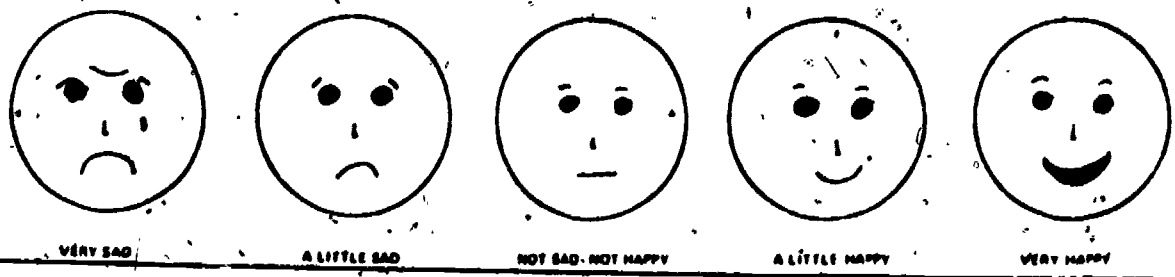
III

3. This is how I feel when we learn to read.



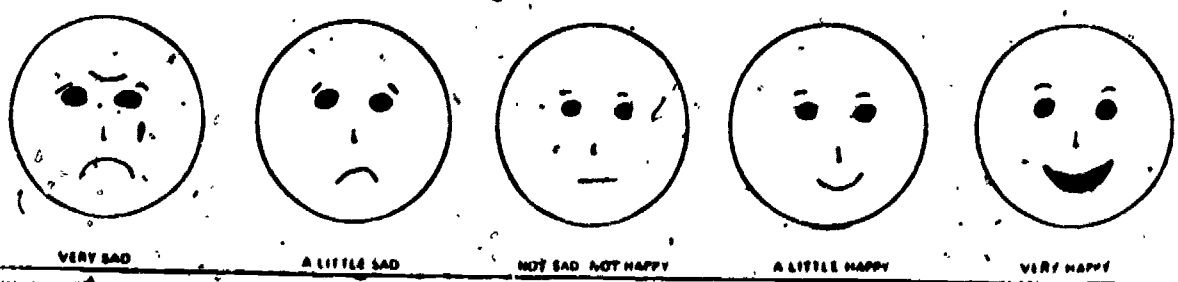
IV

4. This is how I feel when I take a test.



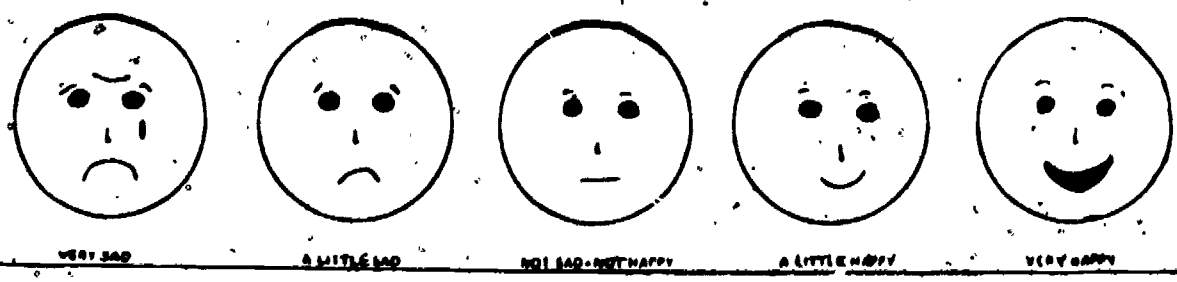
III

5. I feel like this when I talk to my teacher.



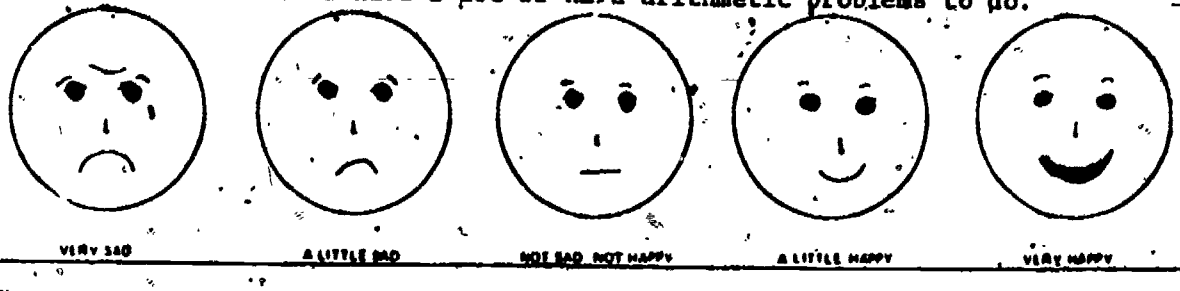
I

6. This is how I feel when our whole class talks about something.



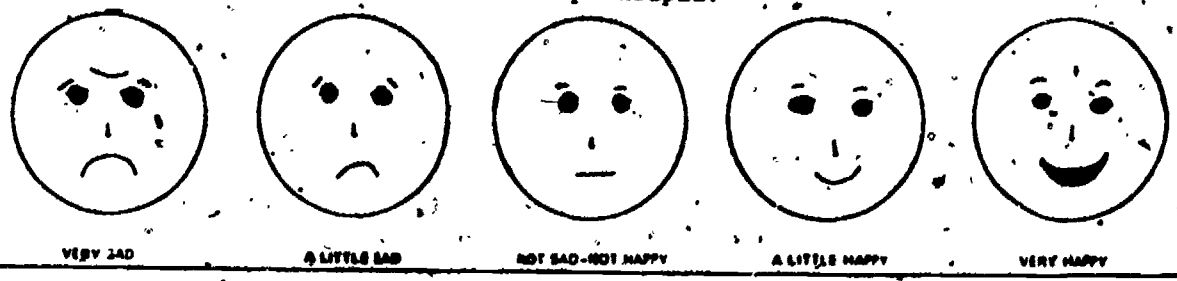
IV

7. I feel like this when I have a lot of hard arithmetic problems to do. Factor



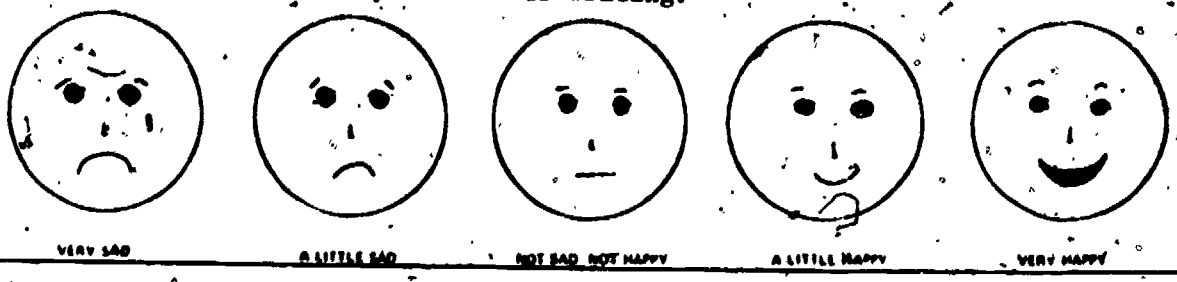
III

8. This is how I feel when I talk to the principal.



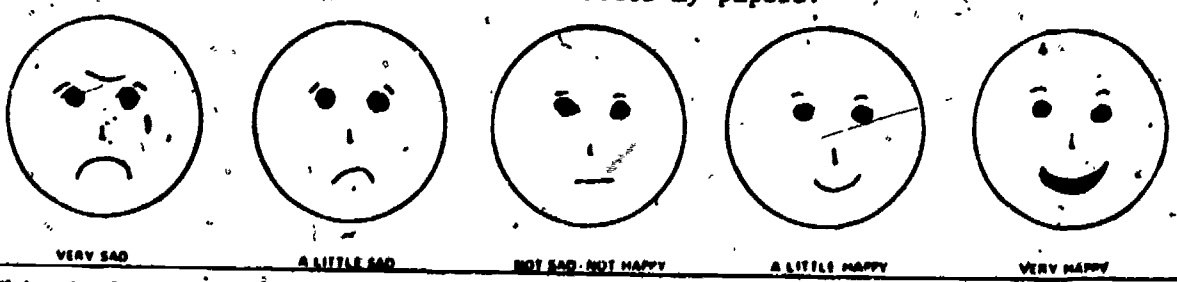
I

9. I feel like this when we practice our writing.



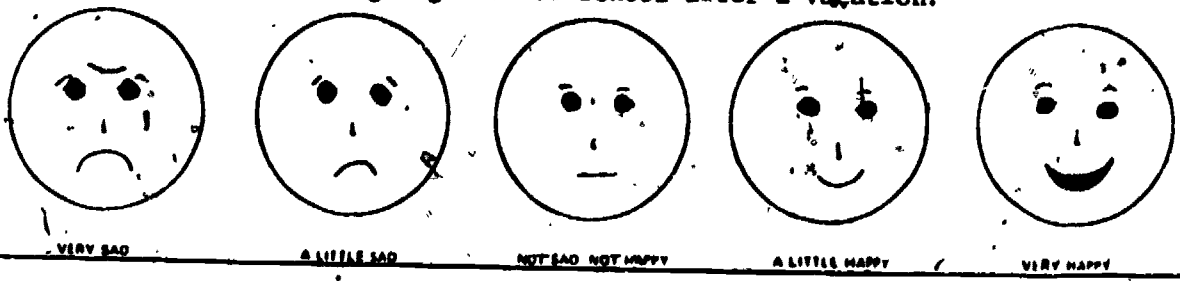
IV

10. This is how I feel when the teacher corrects my papers.



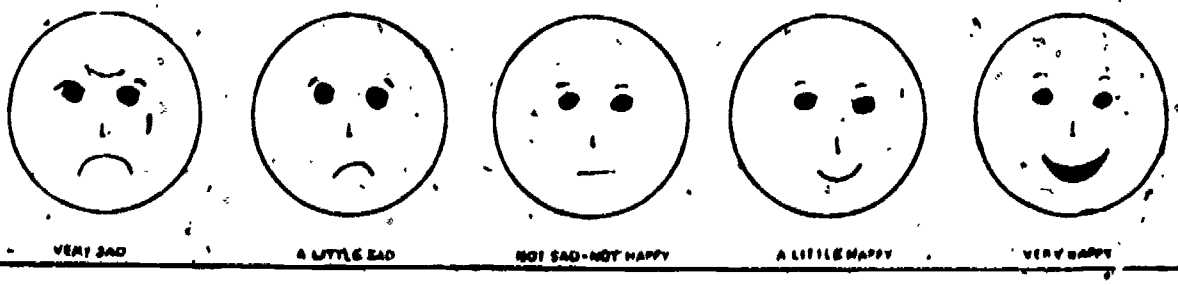
V

11. This is how I feel about going back to school after a vacation.



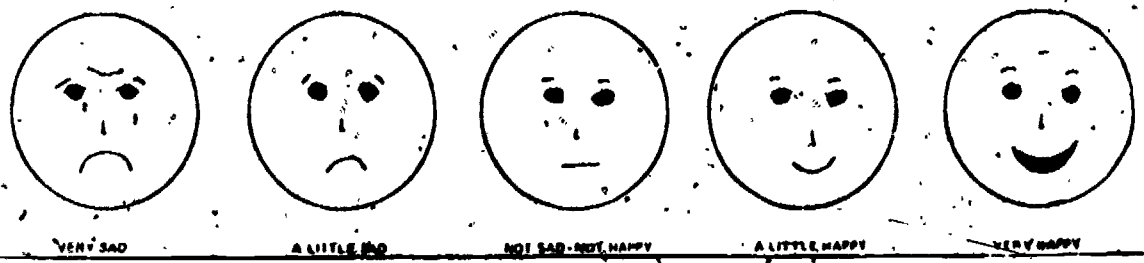
II

12. I feel this way when the teacher tells me to find the answers to my own questions.



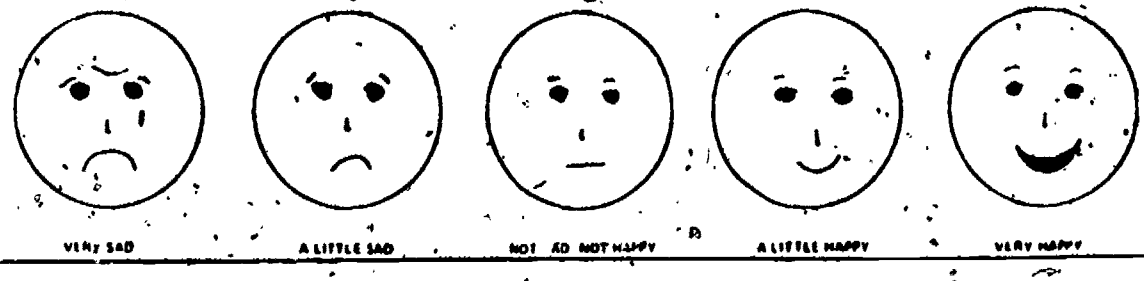
III

13. This is how I feel when I try to learn something by reading a book. Factor



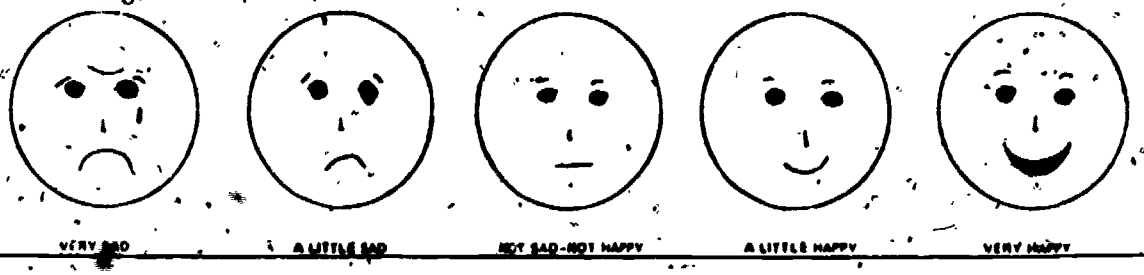
IV

14. This is how I feel on days when I can't go to school.



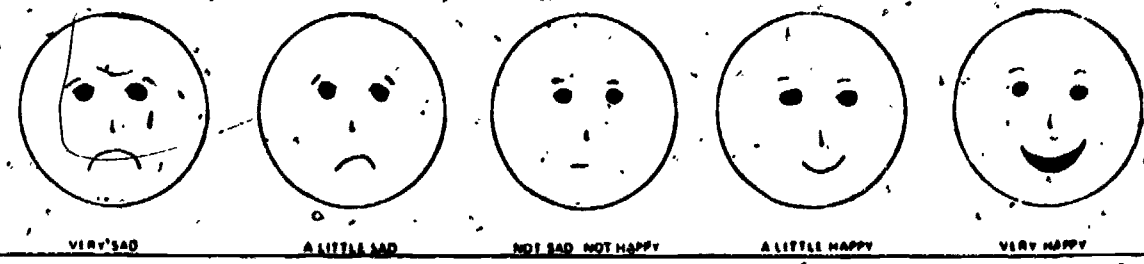
II

15. This is how I feel when the teacher asks me to tell the whole class about something.



I

16. I feel this way when I do arithmetic problems.

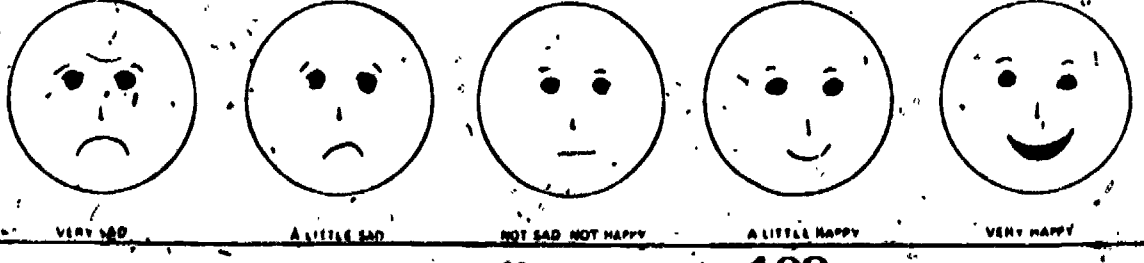


III

17. I feel this way when the teacher tells me to do something all by myself without any help.

III

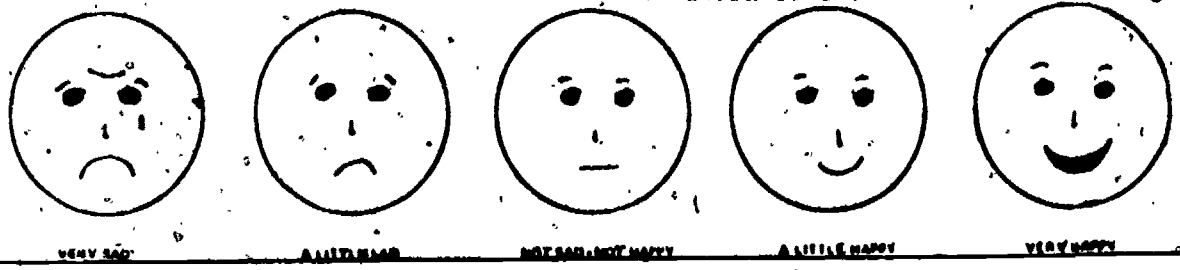
18. This is how I feel when we learn about science.



IV

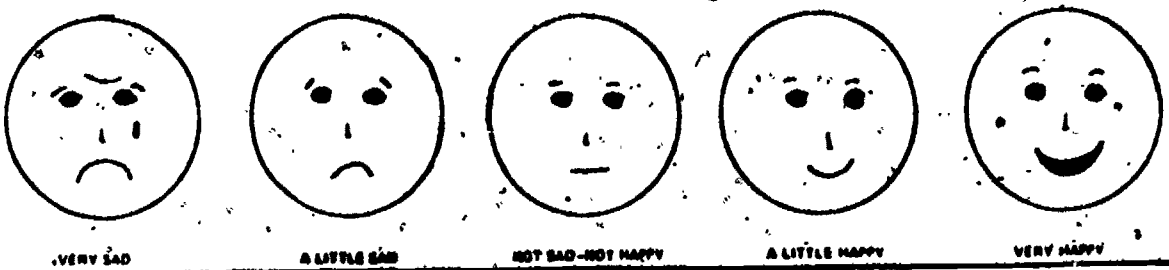
Factor

19. This is how I feel when I have a lot of schoolwork to do.



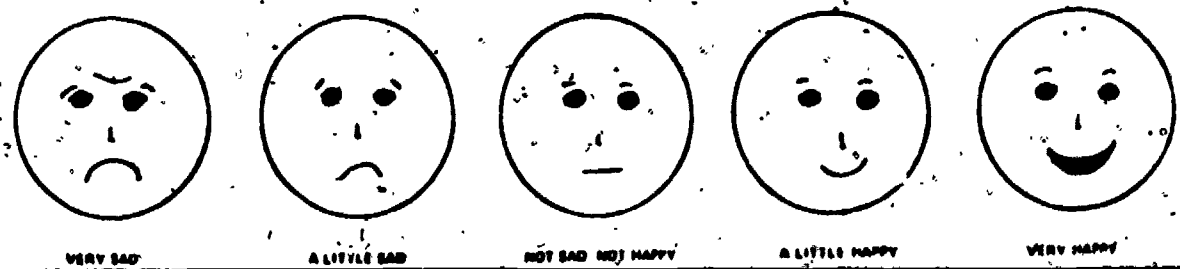
III

20. I feel like this when I find out how I am doing in school.



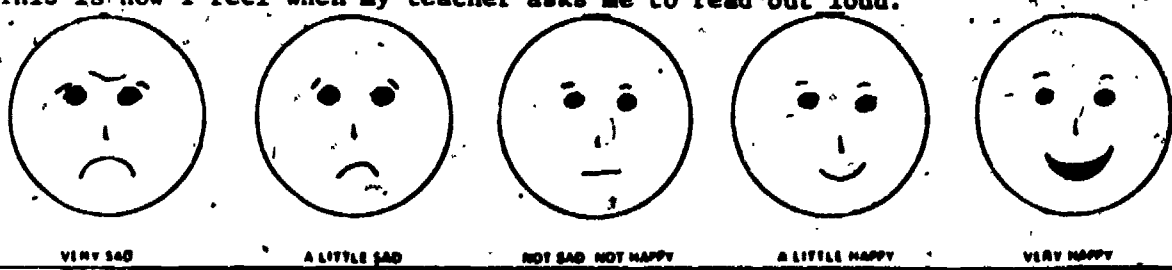
V

21. This is how I feel about school rules.



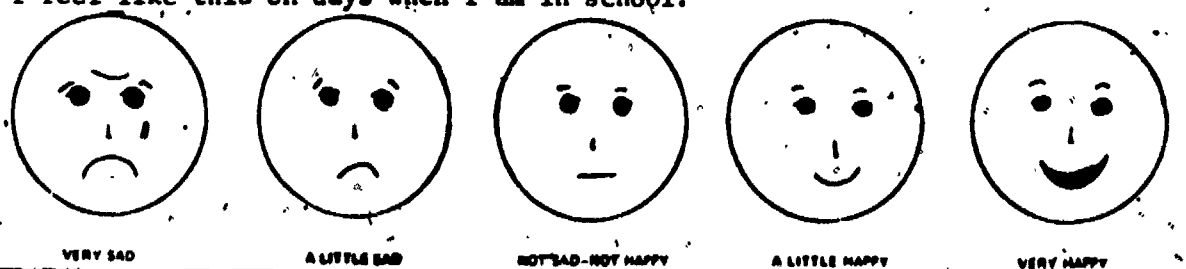
II

22. This is how I feel when my teacher asks me to read out loud.



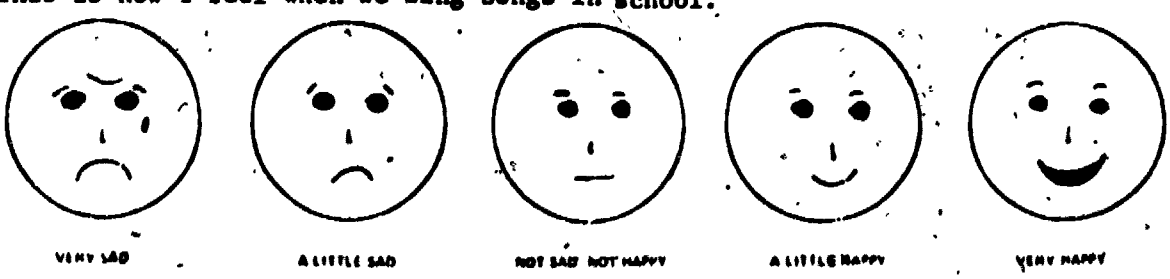
IV

23. I feel like this on days when I am in school.



II

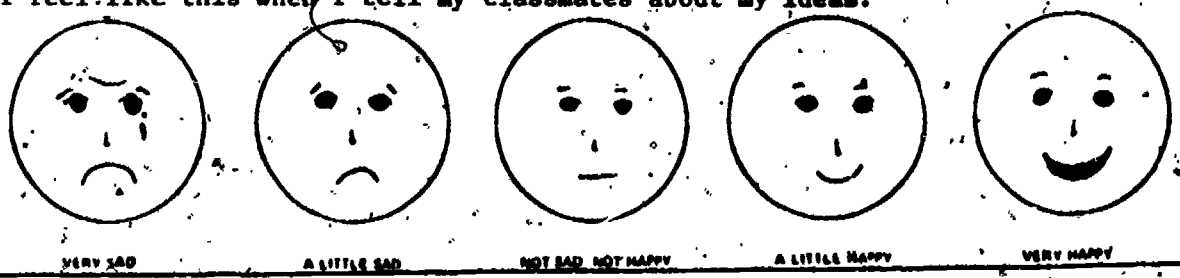
24. This is how I feel when we sing songs in school.



IV

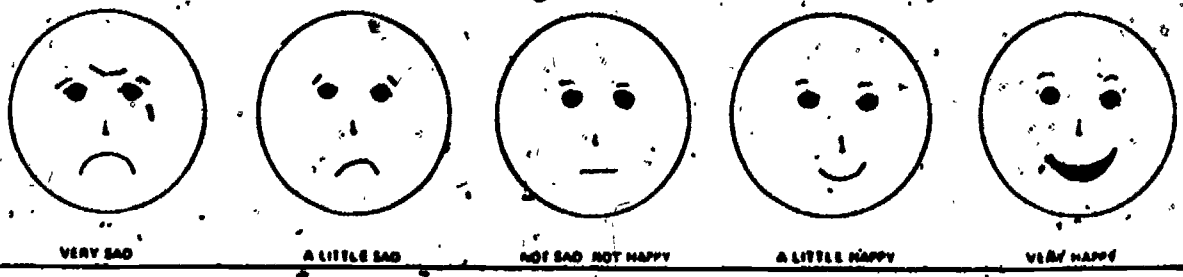
Factor

25. I feel like this when I tell my classmates about my ideas.



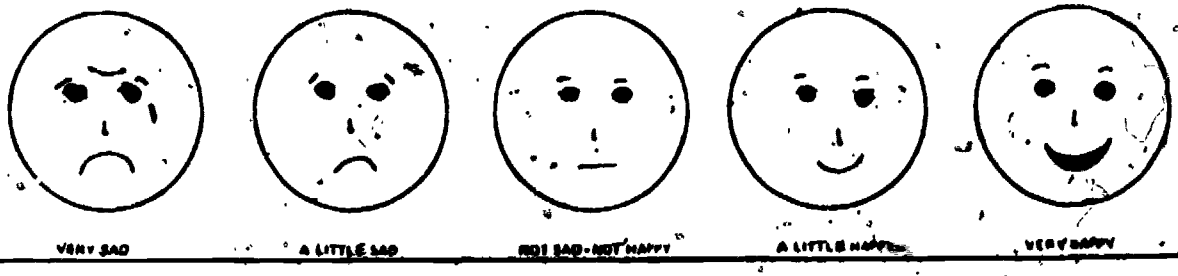
I

26. This is how I would feel if I could go to school the rest of my life.



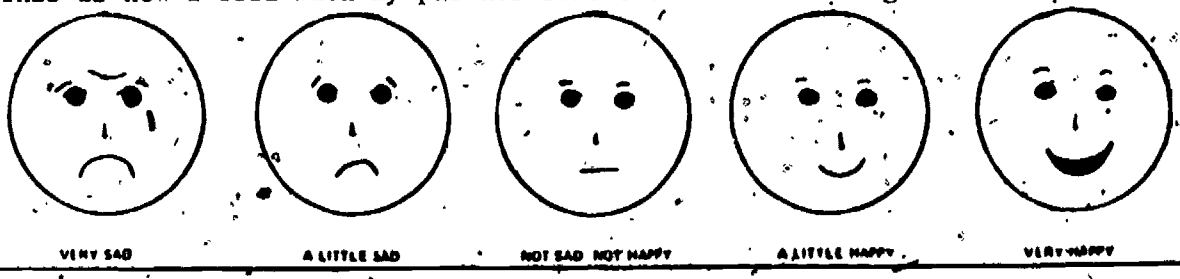
II

27. I feel this way when we learn arithmetic.



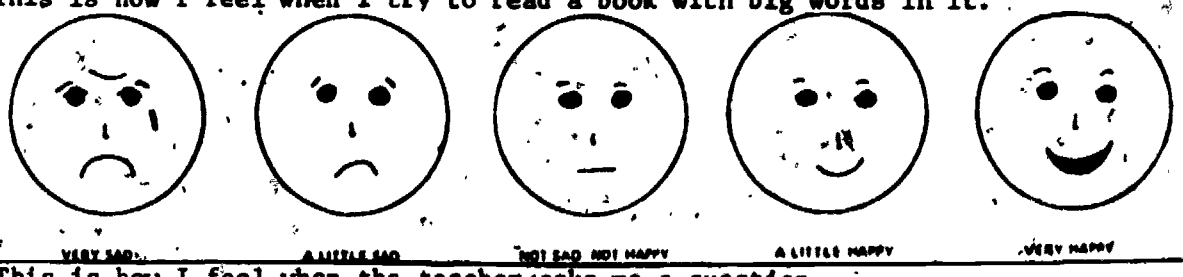
III

28. This is how I feel when my parents find out how I am doing in school.



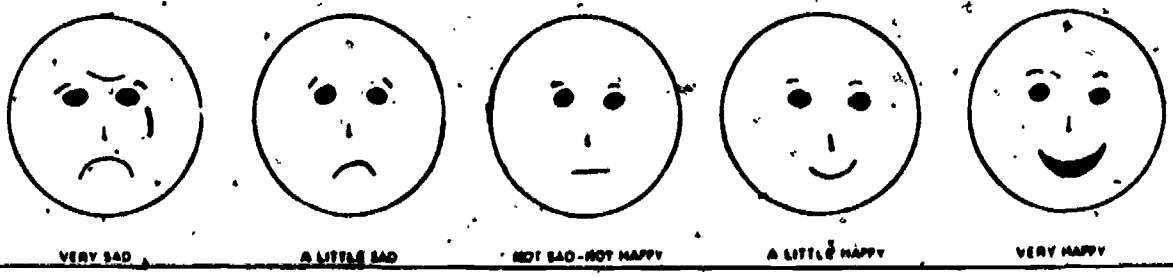
V

29. This is how I feel when I try to read a book with big words in it.



III

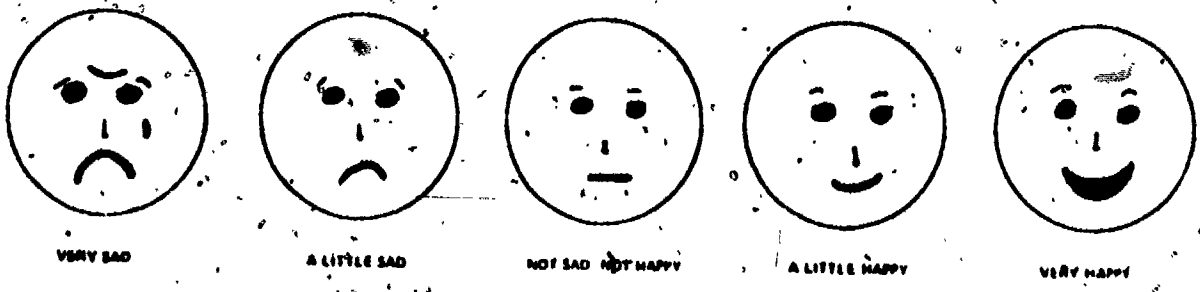
30. This is how I feel when the teacher asks me a question.



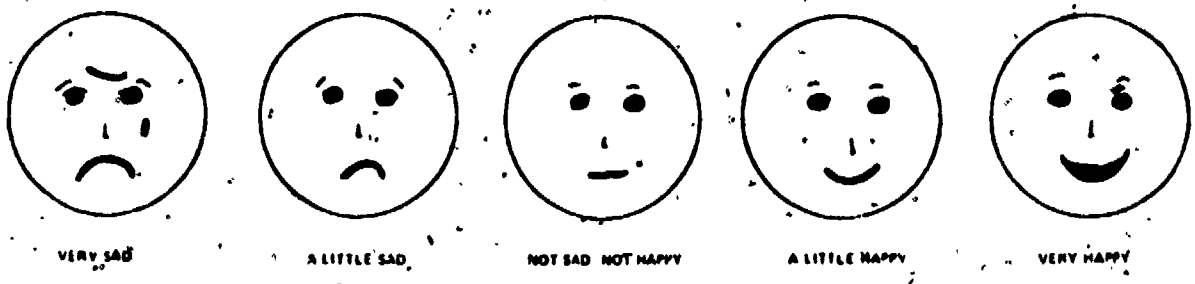
I

School Attitude Scale for Beginning 1st Graders

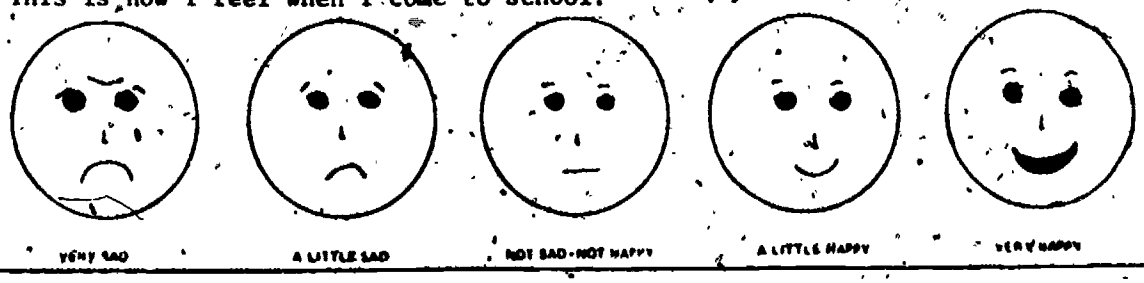
This is how I feel when I go to the zoo.



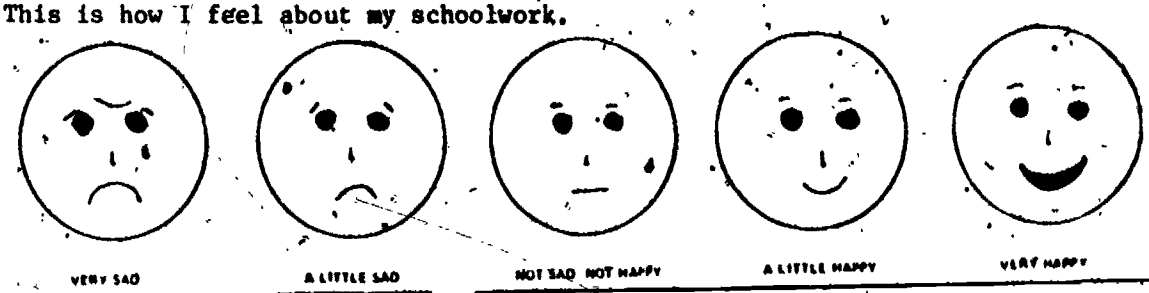
This is how I feel when I go to the doctor.



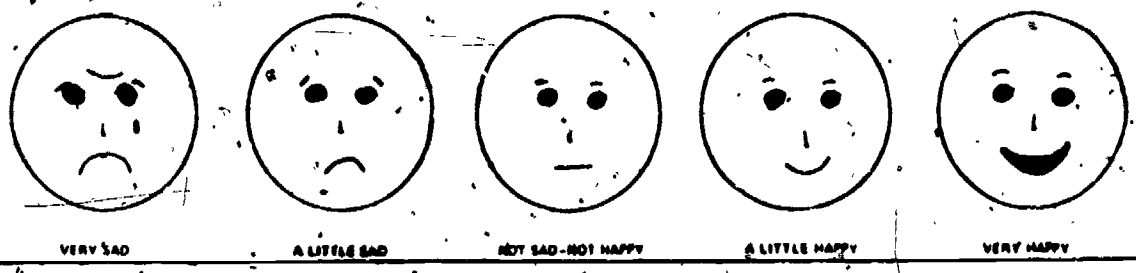
1. This is how I feel when I come to school.



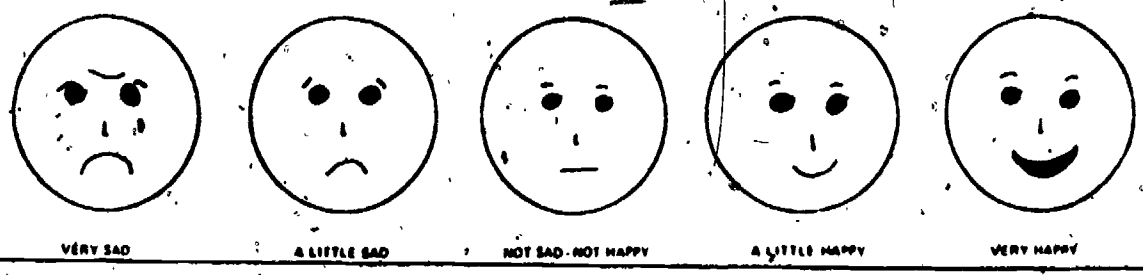
2. This is how I feel about my schoolwork.



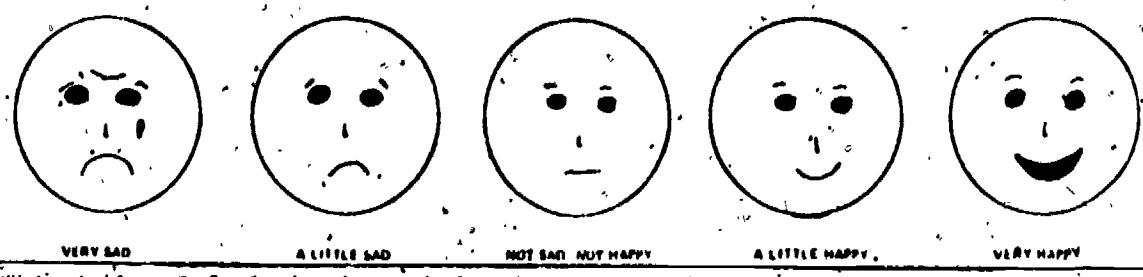
3. This is how I feel when we lea... to read.



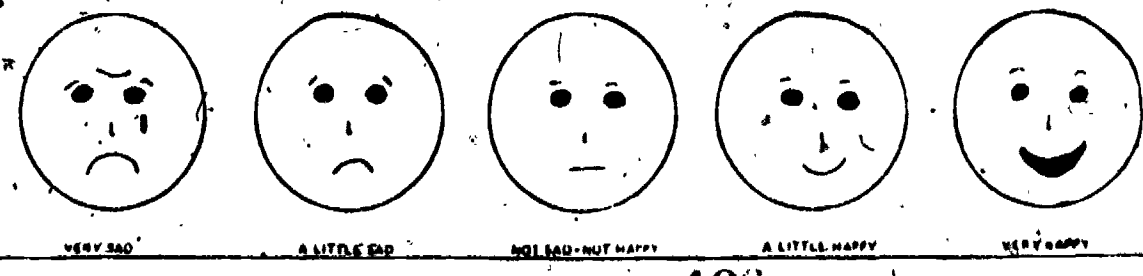
4. This is how I feel when we sing songs in school.



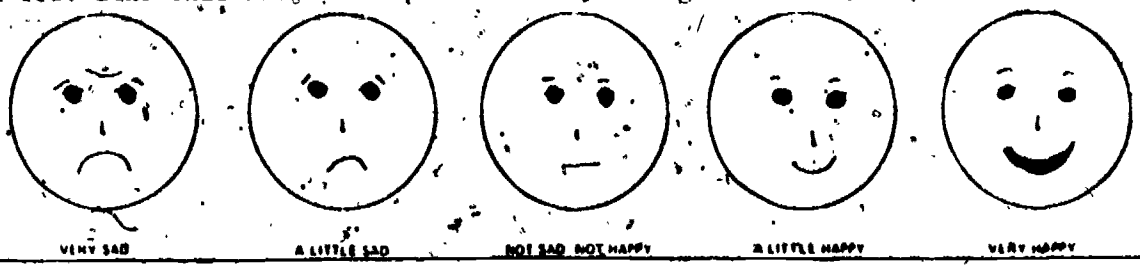
5. I feel like this when I talk to my teacher.



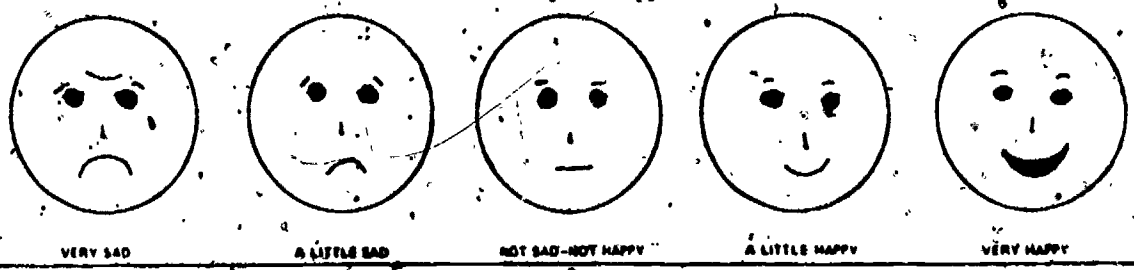
6. This is how I feel when our whole class talks about something.



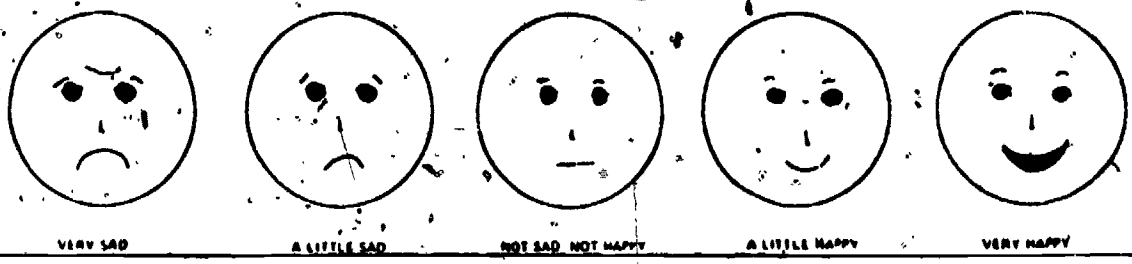
7. I feel like this when I find out how I am doing in school.



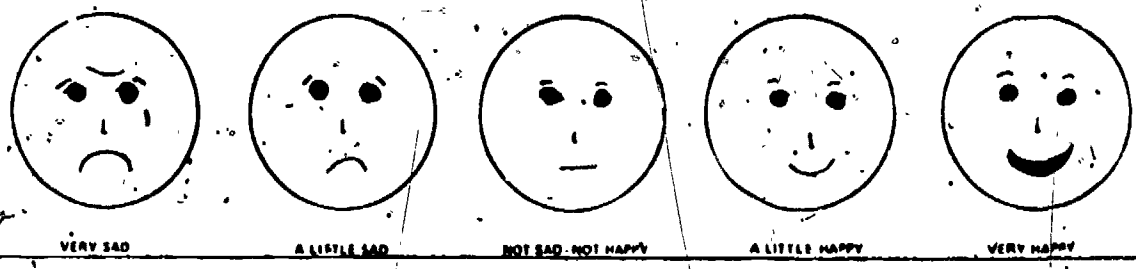
8. This is how I feel when I talk to the principal.



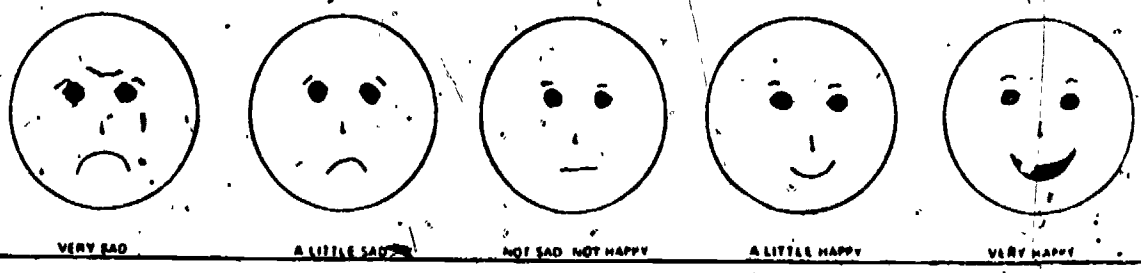
9. I feel like this when we practice our writing.



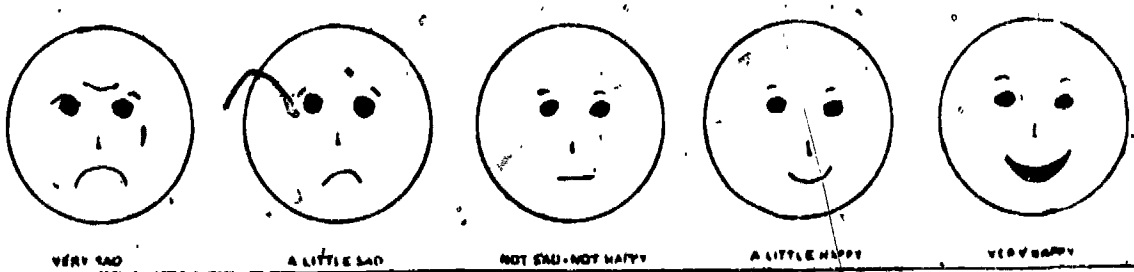
10. This is how I feel when the teacher corrects my papers.



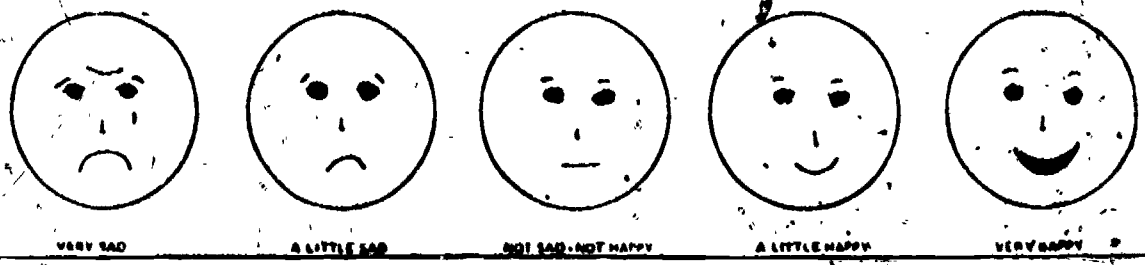
11. I feel like this on days when I am in school.



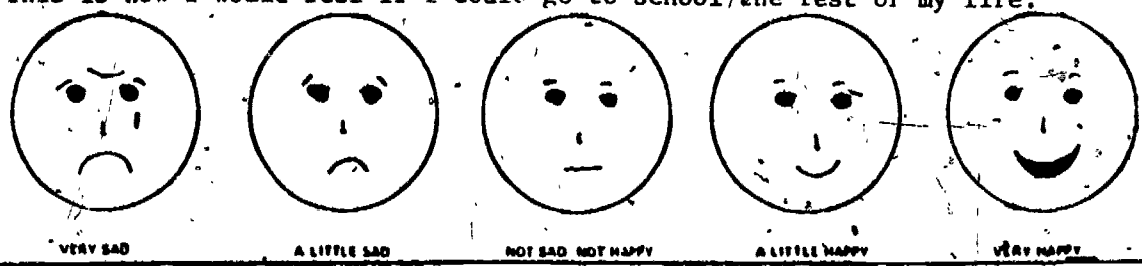
12. This is how I feel about school rules.



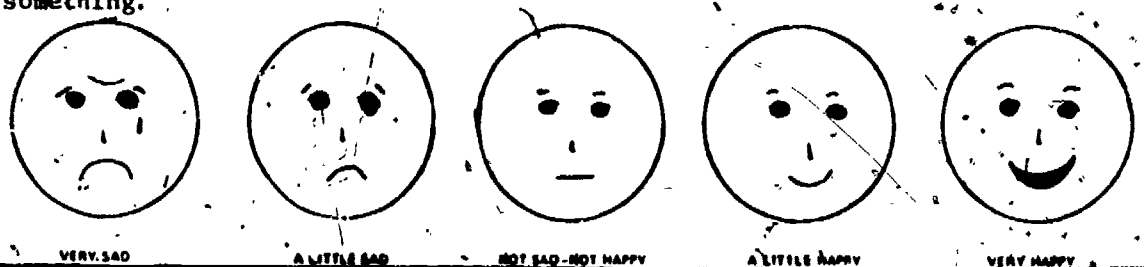
13. I feel like this when I tell my classmates about my ideas.



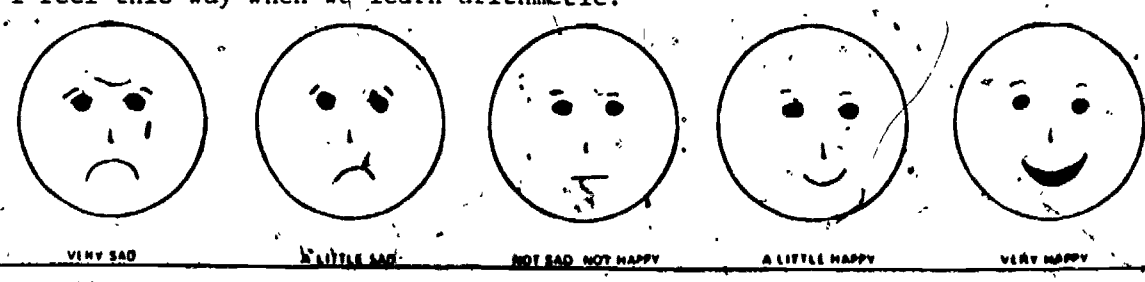
14. This is how I would feel if I could go to school/the rest of my life.



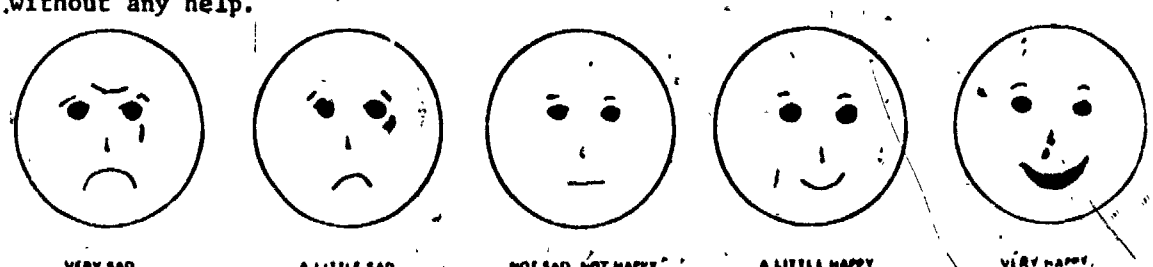
15. This is how I feel when the teacher asks me to tell the whole class about something.



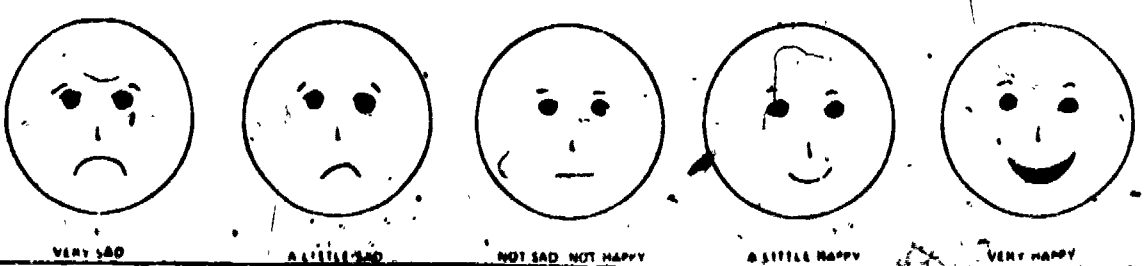
16. I feel this way when we learn arithmetic.



17. I feel this way when the teacher tells me to do something all by myself without any help.



18. This is how I feel when the teacher asks me a question.



Pennsylvania Educational Quality Assessment
Attitude Toward School Instrument *

DIRECTIONS: L ...e space which best tells how you feel.

						Factor
					I cannot say	
					It's very important	
					It's quite important	
					It's somewhat important	
					It's not important	
HOW IMPORTANT IS IT TO YOU TO:						
1. Do your homework well?	(N)	(S)	(Q)	(V)	(?)	I
2. Recite or report before the class? . . .	(N)	(S)	(Q)	(V)	(?)	I
3. Do practice problems or drill?	(N)	(S)	(Q)	(V)	(?)	I
4. Write a report on an assigned subject? .	(N)	(S)	(Q)	(V)	(?)	I
5. Prepare for an exam or tests?	(N)	(S)	(Q)	(V)	(?)	I
6. Read a book on a brand new subject? . . .	(N)	(S)	(Q)	(V)	(?)	I
7. Join a group to learn something new? . .	(N)	(S)	(Q)	(V)	(?)	I
					Almost never	
					Seldom	
					Sometimes	
					Often	
					Almost always	
8. I like to begin a new topic in class . .	(A)	(B)	(C)	(D)	(E)	I
9. I like to discuss my schoolwork with a friend	(A)	(B)	(C)	(D)	(E)	II
10. I like to talk with my teachers about my ideas	(A)	(B)	(C)	(D)	(E)	II
11. I like school.	(A)	(B)	(C)	(D)	(E)	III
12. Teachers help us when we need help . . .	(A)	(B)	(C)	(D)	(E)	III
13. School is a good place to make friends .	(A)	(B)	(C)	(D)	(E)	III
14. Our school building is nice to be in . .	(A)	(B)	(C)	(D)	(E)	III
15. My teacher uses my ideas	(A)	(B)	(C)	(D)	(E)	II
16. I like to get back to school after vacation	(A)	(B)	(C)	(D)	(E)	III
17. Our classes take field trips	(A)	(B)	(C)	(D)	(E)	II

*For items 1-7, item scores were the following: It's very important = 5; It's quite important = 4; It's somewhat important = 3; I cannot say = 2; It's not important = 1. For items 8-17, item scores were the following: Almost always = 5; Often = 4; Sometimes = 3; Seldom = 2; Almost never = 1. Scores on the instrument could range from 17 to 85.

School Attitude Scale (Grades 4-6)*

DIRECTIONS: Circle the group of words which best tells how you feel.

		Factor
1.	How do you feel about coming to school?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
2.	How do you feel about doing school work?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
3.	How do you feel about reading?	V
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
4.	How do you feel when you take a test?	III
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
5.	How do you feel about talking to your teacher?	II
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
6.	How do you feel about discussing things with your whole class?	II
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
7.	How do you feel about trying to solve hard arithmetic problems?	IV
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
8.	How do you feel about talking to your principal?	II
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
9.	How do you feel about practicing your handwriting?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
10.	How do you feel when your teacher corrects your papers?	III
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	

*Scored similarly to the Primary School Attitude Scale. Scores on the instrument could range from 30 to 150.

DIRECTIONS: Circle the group of words which best tells how you feel.

		Factor
11.	How do you feel when you go back to school after a vacation?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
12.	How do you feel when your teacher tells you to find the answers to your own questions?	III
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
13.	How do you feel about trying to learn something by reading a book?	V
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
14.	How do you feel on days when you can't go to school?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
15.	How do you feel about speaking to your whole class?	II
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
16.	How do you feel about doing arithmetic problems?	IV
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
17.	How do you feel when your teacher tells you to do something all by yourself?	III
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
18.	How do you feel about learning science?	V
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
19.	How do you feel when you have a lot of school work to do?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
20.	How do you feel when you find out how you are doing in school?	III
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	

DIRECTIONS: Circle the group of words which best tells how you feel.

		Factor
21.	How do you feel about school rules?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
22.	How do you feel about reading out loud?	V
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
23.	How do you feel when you are in school?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
24.	How do you feel about singing songs in school?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
25.	How do you feel about telling your classmates about your ideas?	II
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
26.	How would you feel about going to school the rest of your life?	I
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
27.	How do you feel about learning arithmetic?	IV
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
28.	How do you feel when your parents find out how you are doing in school?	III
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
29.	How do you feel about trying to read a book with difficult words in it?	V
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	
30.	How do you feel when your teacher asks you a question?	V
	Don't like it at all / Don't like it much / Not sure / It's O.K. / Like it a lot	

Appendix 3

Opinionnaire on Attitudes Toward Education

Below are a number of statements about which teachers may have different opinions. Please indicate what your opinion of each statement is by circling the appropriate number after each statement.

Factor			Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I	1.	Boys and girls who are delinquent are, when all is said and done, basically good.	1	2	3	4	5
I	2.	If boys and girls are to do an adequate job of learning in school, their needs for love must be met.	1	2	3	4	5
II	* 3.	It is appropriate for teachers to require an additional assignment from a pupil who misbehaves in class	1	2	3	4	5
I	4.	How a student feels about what he learns is as important as what he learns	1	2	3	4	5
II	* 5.	The way to handle a pupil who tells lies is to threaten to punish him.	1	2	3	4	5
II	* 6.	The high school pupil who is not interested in having dates should be commended.	1	2	3	4	5
I	7.	Education has failed unless it has helped boys and girls to understand and to express their own feelings and experiences.	1	2	3	4	5
II	* 8.	You should tell a child who masturbates that it leads to ruined health.	1	2	3	4	5
I	9.	The classroom experiences that are the most helpful to boys and girls are the ones wherein they can express themselves creatively.	1	2	3	4	5
II	* 10.	All children should be encouraged to aim at the highest academic goals.	1	2	3	4	5
II	* 11.	The child who bites his nails should be shamed. .	1	2	3	4	5
II	* 12.	Children outgrow early emotional experiences as they do shoes and clothes	1	2	3	4	5
I	13.	What boys and girls become as adults is more closely related to the experiences they have with each other than it is to mastery of specific subject matter	1	2	3	4	5

Factor			Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I	14.	It is more important for students to learn to work together cooperatively than it is for them to learn how to compete.	1	2	3	4	5
II	*15.	Some pupils are just naturally stubborn	1	2	3	4	5
I	16.	Students should be permitted to disagree with the teacher	1	2	3	4	5
II	*17.	It is better for a girl to be shy and timid than "boy crazy".	1	2	3	4	5
I	18.	Boys and girls should learn that most of life's problems have several possible solutions and not just one "correct" one.	1	2	3	4	5
II	*19.	The first signs of delinquency in a pupil should be received by a tightening of discipline and more restrictions	1	2	3	4	5
II	*20.	The newer methods of education tend to standardize children's behavior	1	2	3	4	5
I	21.	Most boys and girls who present extreme cases of "problem behavior" are doing the best they can to get along with other people	1	2	3	4	5
II	*22.	An activity to be educationally valuable should train reasoning and memory in general	1	2	3	4	5
I	23.	It is more important for a child to have faith in himself than it is for him to be obedient. . . .	1	2	3	4	5
I	24.	Being grouped according to ability damages the self-confidence of many boys and girls.	1	2	3	4	5
II	*25.	Criticism of children by teachers is more effective for obtaining the desired behavior than criticism of children by others of their own age	1	2	3	4	5
I	26.	All questions a student asks should be recognized and considered	1	2	3	4	5
II	*27.	The pupil who isn't making good grades should be told to study harder	1	2	3	4	5
II	*28.	Children should not be permitted to talk without the permission of the teacher	1	2	3	4	5

Factor			Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I	29.	A student who will not do his work should be helped in every way possible.	1	2	3	4	5
II	30.	Boys and girls in the elementary school should be promoted regardless of whether they have completed the work for their grade or not	1	2	3	4	5
II	*31.	The teacher should lower grades for misconduct in class.	1	2	3	4	5
I	32.	A teacher should permit a great deal of latitude in the way he permits boys and girls to address him.	1	2	3	4	5
II	*33.	It is a good idea to tell a pupil that he can succeed in any type of work if he works hard. . . .	1	2	3	4	5
I	34.	Students will tolerate errors and even occasional injustices in a teacher who, they feel, likes and understands them.	1	2	3	4	5
I	35.	A teacher should accept the deficiencies and shortcomings of a student, as well as his good points. .	1	2	3	4	5
II	*36.	Each time a pupil lies his punishment should be increased	1	2	3	4	5
I	37.	Boys and girls can learn proper discipline only if they are given sufficient freedom.	1	2	3	4	5
II	*38.	If a teacher keeps school conditions exactly the same and gives all pupils an equal opportunity to respond, he has done all he can do	1	2	3	4	5
II	*39.	If a child constantly performs for attention, the teacher should see to it that he gets no attention.	1	2	3	4	5
II	*40.	Dishonesty is a more serious personality characteristic than unsocialness.	1	2	3	4	5
I	41.	A great deal of misbehavior problem behavior results from fear and guilt	1	2	3	4	5
II	*42.	The teacher's first responsibility in all cases of misconduct is to locate and punish the offender.	1	2	3	4	5
I	43.	It is better for boys and girls to talk about the things that bother them than to try to forget them.	1	2	3	4	5
II	*44.	Most pupils need some of the natural meanness taken out of them	1	2	3	4	5

Factor			Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I	45.	It is more important for boys and girls to be liked and accepted by their friends than it is for them to get along with their teachers.	1	2	3	4	5
I	46.	Teachers should answer children's questions about sex frankly and, if possible, without show of embarrassment	1	2	3	4	5
II	* 47.	When a pupil obeys all the rules of the school, one can be sure he is developing moral character. . . .	1	2	3	4	5
I	48.	When a teacher is told something in confidence by a child, he should keep the matter just as confidential as though it were entrusted to him by an adult	1	2	3	4	5
II	* 49.	Since a person memorizes best during childhood, that period should be regarded as a time to store up facts for later use.	1	2	3	4	5
I	50.	Students should play a very active part in formulating the rules for the classroom and the school	1	2	3	4	5

* Designates reversed items. For these items a response of Strongly Disagree was scored 5, Disagree = 4, Undecided = 3, Agree = 2, Strongly Agree = 1. For all other items, Strongly Agree = 5, Agree = 4, etc. Scores on the instrument could range from 50 to 250.

Appendix B (cont'd)

Satisfaction With Teaching Questionnaire

Below are a number of statements about which teachers may have different opinions. Please indicate what your opinion of each statement is by circling the appropriate number after each statement.

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	Teaching is about the best job that I can think of.	1	2	3	4	5
2.	There are a lot of advantages to teaching	1	2	3	4	5
*3.	I don't care for my work as a teacher	1	2	3	4	5
4.	Teaching would be a wonderful occupation for anyone	1	2	3	4	5
*5.	Teaching may be all right for some people but not for me.	1	2	3	4	5
*6.	I am not convinced of the importance of teaching as a permanent career	1	2	3	4	5
*7.	Teaching, as a career, is not worth the sacrifice of going to college, the long hours of work and the low pay	1	2	3	4	5
8.	I really enjoy teaching	1	2	3	4	5
9.	Teaching is as good a job as any.	1	2	3	4	5
10.	There are more advantages than disadvantages to teaching as a career.	1	2	3	4	5
11.	I would be willing to take any job related to teaching.	1	2	3	4	5

*Designates reversed items. For these items a response of Strongly Disagree was scored 5, Disagree = 4, Undecided = 3, Agree = 2, Strongly Agree = 1. For all other items, Strongly Agree = 5, Agree = 4, etc. Scores on the instrument could range from 11 to 55.

Philosophy of Glasser Questionnaire

DIRECTIONS

The opinfonnaire has 15 statements. Below each statement are five groups of words to show how you feel about the statement. After carefully reading each statement, circle the group of words which best show how you feel about it. Even though some of the statements may look exactly alike, there are differences. Please be sure to circle one group of words for each and every one of the following 15 statements.

Factor						
II	*1.	It is necessary for elementary school pupils to memorize many facts and ideas, even if they do not understand how these things are important to their lives.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
II	2.	Asking elementary school pupils to memorize many facts and ideas without understanding how these things are important to their lives is harmful to the pupils.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
II	*3.	It is more valuable for elementary school pupils to spend class time storing up facts for future use than it is for them to think about and discuss issues which have more than one possible solution.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
II	*4.	When an elementary school pupil misbehaves in class, it is necessary for the teacher to use such types of punishment as scolding, giving extra work, standing in the corner, and keeping the child in.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
II	5.	Punishing elementary school pupils by scolding, giving extra work, standing in the corner, and keeping the child in is harmful to the pupils.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
I	6.	When an elementary school child misbehaves in class, it is valuable for the child to help decide what to do about his misbehavior.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree

Factor						
II	*7.	Giving elementary school children grades (A, B, C, D, E) on their report cards is <u>necessary</u>.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
II	8.	Giving elementary school children grades (A, B, C, D, E) on their report cards is <u>harmful to the pupils</u>.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
II	9.	There are other ways of reporting elementary school pupils' progress to their parents which are <u>more valuable</u> than report card grades.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
I	10.	In today's world, if elementary school pupils are to learn to the best of their abilities, it is <u>necessary</u> for teachers to deal with their pupils' needs for love and self-worth.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
I	*11.	<u>It will be harmful</u> to elementary school pupils' learning if teachers try to deal with their pupils' needs for love and self-worth.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
I	12.	It is <u>valuable</u> for elementary school teachers and pupils to take part in open and honest class discussions in which pupils know that their opinions are as important as their teachers' opinions.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
I	*13.	Since elementary school pupils are too young to solve their own problems, it is <u>not necessary</u> for teachers to involve their pupils in solving problems which occur in their classes and school.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
I	*14.	Since elementary school pupils are too young to solve their own problems, <u>it will be harmful</u> for teachers to involve their pupils in solving problems which occur in their classes and school.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree
I	15.	It is <u>valuable</u> for elementary school pupils to join with their teachers in working out solutions to problems which occur in their classes and school.				
		Completely Agree	Somewhat Agree	Cannot Decide	Somewhat Disagree	Completely Disagree

*Designates reversed items. For these items a response of Completely Disagree was scored 5, Somewhat Disagree = 4, Cannot Decide = 3, Somewhat Agree = 2, Completely Agree = 1. For all other items, Completely Agree = 5, Somewhat Agree = 4, etc. Scores on the instrument could range from 15 to 75.

Appendix C

Summary of Categories for the Expanded Category System

Category 1 -- Accepts Student Feelings

1a -- Acknowledges feelings. The teacher simply acknowledges the presence of some feeling in the classroom; she may identify the feeling by name.

1c -- Clarifies feelings. The teacher attempts to relate the feeling he observes to a probable cause.

1r -- Refers to similar feelings of others. The teacher indicates that the feeling he observes is natural or normal by referring to similar feelings that he has, or that people in general have, in like circumstances.

Category 2 -- Praises

2w -- Praises with no criteria. The teacher tells the student he is right or that what he has done is good, but gives no reason for the positive evaluation.

2P -- Praises with public criteria. The teacher praises the student and gives a reason for the positive evaluation that is publicly verifiable and acceptable. An accepted authority, like the dictionary, may be used as the criterion for evaluating factual matters.

2p -- Praises with private criteria. The teacher praises the student and explains that the praise is based on her private (nonauthoritative) standards or opinions. Statements in this subcategory communicate the teacher's preferences.

Category 3 -- Accepts Student Ideas

3a -- Acknowledges ideas. The teacher acknowledges a student contribution by simple reflection or a word such as "okay." No evaluation of the student's contribution is included in statements in this subcategory.

3c -- Clarifies ideas. The teacher goes beyond simple acknowledgment of the student's contribution by restating the student's idea or speculating on its implications.

3s -- Summarizes ideas. The teacher acknowledges contributions of several students by enumerating them or organizing them into a coherent sequence.

Category 4 -- Asks Questions

4f -- Asks factual questions. The teacher asks for a simple factual response. Questions in this category require recall rather than problem-solving or opinion-giving.

4c -- Asks convergent questions. The teacher asks the student to compare or contrast, to relate two or more things in a significant manner, or to follow some formal procedure for solving problems, such as a mathematical formula.

4d -- Asks divergent questions. The teacher asks the child to predict, to develop hypotheses, or to speculate on outcomes of actions in a hypothetical situation that does not permit evaluation of student responses as right or wrong.

4e -- Asks evaluative questions. The teacher asks students for their evaluation of an idea or an event as better or worse, more or less appropriate, and the like. Evaluation of student response as right or wrong is precluded by the nature of the question.

Category 5 -- Lectures

5f -- Factual lecture. The teacher communicates factual information or subject-matter content.

5m -- Motivational lecture. The teacher attempts to communicate enthusiasm or excitement about subject matter to children or in some other way arouse interest through the use of lecture statements.

5o -- Orientation lecture. The teacher describes the procedure for approaching subject matter or presents some framework for what the class has been doing or will do.

5p -- Personal opinion lecture. The teacher provides personal opinions or evaluations of ideas or procedures.

Category 6 -- Gives Directions

6c -- Gives cognitive directions. The teacher asks children to do a task primarily cognitive rather than overtly physical, such as writing the answer to a problem on the board.

6m -- Gives managerial directions. The teacher directs the student or students to perform a physical maneuver, such as moving chairs.

Category 7 -- Criticizes

7w -- Criticizes with no criteria. The teacher criticizes with no explanation of the reason for the criticism.

7P -- Criticizes with public criteria. The teacher criticizes a student and explains the criticism in terms of public standards for evaluation.

7p -- Criticizes with private criteria. The teacher criticizes a student and explains the criticism in terms of his personal preferences or aversions.

Category 8 -- Predictable Student Talk

8f -- Factual student talk. The student gives factual information, usually in response to a teacher question classified as 4f.

8c -- Convergent student talk. The student makes a statement involving use of facts in a specified process, such as following a formula or contrasting events, usually in response to a teacher question classified as 4c.

Category 9 -- Unpredictable Student Talk

9d -- Divergent student response. The student speculates or hypothesizes on how things might be (or might have been) under given circumstances, usually in response to a teacher question classified as 4d.

9e -- Evaluative student response. The student gives his evaluation of an idea or event as better or worse, more or less appropriate, etc., usually in response to a teacher question classified as 4e.

9i -- Student-initiated talk. The student makes an unsolicited comment.

Category 10 -- Silence or Confusion

10s -- Silence. There is a period of at least three seconds in which no one is talking.

10c -- Confusion. There is a period of at least three seconds in which more than one person is talking, and it is not possible to hear what a single person is saying.

Appendix C (cont'd)

Summary of Categories for the Reciprocal Category System

Category Number Assigned to Party 1[1]	Description of Verbal Behavior	Category Number Assigned to Party 2[2]
1.	"WARMS" (INFORMALIZES) THE CLIMATE: Tends to open up and/or eliminate the tension of the situation; praises or encourages the action, behavior, comments, ideas and/or contributions of another; jokes that release tension not at the expense of others; accepts and clarifies the feeling tone of another in a friendly manner (feelings may be positive or negative; predicting or recalling the feelings of another are included).	11
2.	ACCEPTS: Accepts the action, behavior, comments, ideas and/or contributions of another; positive reinforcement of these.	12
3.	AMPLIFIES THE CONTRIBUTIONS OF ANOTHER: Asks for clarification of, builds on, and/or develops the action, behavior, comments, ideas and/or contributions of another.	13
4.	ELICITS: Asks a question or requests information about the content subject, or procedure being considered with the intent that another should answer (respond).	14
5.	RESPONDS: Gives direct answer or response to questions or requests for information that are inititated by another; includes answers to one's own questions.	15
6.	INITIATES: Presents facts, information and/or opinion concerning the content, subject, or procedures being considered that are self-initiated; expresses one's own ideas; lectures (includes rhetorical questions--not intended to be answered).	16
7.	DIRECTS: Gives directions, instructions, orders and/or assignments to which another is expected to comply.	17
8.	CORRECTS: Tells another that his answer or behavior is inappropriate or incorrect.	18
9.	"OOLS" (FORMALIZES) THE CLIMATE: Makes statements intended to modify the behavior of another from an inappropriate to an appropriate pattern; may tend to create a certain amount of tension (i.e., bawling out someone, exercising authority in order to gain or maintain control of the situation, rejecting or criticizing the opinion or judgment of another).	19
10.	SILENCE: Pauses, short periods of silence.	
	CONFUSION: Periods of confusion in which communication cannot be understood.	20

[1]Category numbers assigned to Teacher Talk when used in classroom situation.
[2]Category numbers assigned to Student Talk when used in classroom situation.

Appendix D

Elementary Staff Evaluation

The leadership teams of the experimental and control schools participated in a process of evaluation of the SWF program, based upon their experience and involvement in the program. After separate team workshops and staff seminars in each building, the combined leadership teams produced the following combined report.

I. Success-Oriented Philosophy and Program

A. What spin-off have you observed in your school as a direct or indirect result of the SWF program?

--Teacher to teacher awareness
--Better understanding of children
--More caring atmosphere
--A new awareness concerning teaching techniques and their implementation, e.g., educational diagnostic classroom meeting, brainstorming, more relevant questioning strategies.
--Experimental schools have experienced a loss of faculty cohesiveness during the second year due to fewer in-school seminars, structured programs.
--Problems are brought to the fore and solution is attempted.
--Students take initiative in helping solve classroom problems.
--Increased self-confidence fostered in children.
--Some students with academic problems seem to gain more respect and acceptance from others as a result of class meetings.
--Lack of interest in program--teachers and students and public coupled with misunderstanding of the program.

B. What effect has the SWF program had on curriculum in general?

--Teachers are less textbook-oriented. (relevancy)
--No great positive movement in curriculum--yet to be done.
--More student involvement in discussion of subjects such as science and social studies.
--Revision needed in some areas, e.g., intermediate grade scheduling.

C. What effect has the SWF program had on teacher attitudes and philosophy?

--Frustration due to inadequacies like physical layout, pupil and parental attitudes and teacher training.
--Reinforced and stimulated many teachers' self-evaluations.
--Teachers are more tolerant with peers and students--greater degree of openness about problems.
--Many teachers have done more outside reading and professional self-upgrading.
--Teachers are more aware of success practices.

II. Communications

A. Teacher-Parent

--Communication is present but should be improved.
--Parents do seem to be more aware that they have a responsibility to help children.

--Teachers made every effort to communicate with parents who were unhappy with the program. Parents were asked to visit the schools, but response was poor.
--With few exceptions, parents permitted their children to participate fully in the program.
--Some teachers felt there was no noticeable improvement.

B. Student-Teacher

--Students feel more free to communicate with teachers. They think of their teachers as people.
--It appears easier for teachers to discover the needs and interests of students. There is more interaction between student and teacher.
--The classroom atmosphere is more relaxed.
--Children get to know teachers from other grades.
--Some teachers feel children have become too verbal as a result of the SWF program. Others feel this is merely a trend of the times.

C. Teacher-Administrator

--We feel that the program has helped build a better rapport between the teacher and principal. It creates an opportunity to get together.
--In most instances teacher-administrator communications above the level of principal was not noticeably changed.

D. Teacher-Teacher

--Seminars have given teachers the opportunity to know and appreciate each other. The program gives teachers planned time to meet and discuss problems and share ideas.
--The program also gives teachers a chance to exchange ideas with faculty of other schools.

E. Student-Student

--Some children have become more aware of other children's feelings.
--More improvement in respect and consideration for others was observed in the primary grades than in the intermediate grades, perhaps because small children more readily accept change.

F. Administration-Public

--The public should have been made more aware of the nature of the SWF program before its inception. Such words as humanizing and experimenting were not properly understood by the public.

III. Developing Responsible Behavior

A. The consensus of the opinions is that student-student relations show improvement. Communications are better. Students show more consideration of others and are more tolerant of others. Children are aware of other students' problems, etc. The shy and slow children are willing to participate more. Many schools felt little carry-over outside of classroom meetings.

B. The consensus of the opinions is that teacher-student relations is overwhelmingly positive. Students and teachers regard each other as people. There is more of a willingness to share ideas, events and problems. Teachers take more time to listen to children.

C. Student behavior in class and building--reactions at this point are mixed.

Positive: Students respond to rules they have helped to make. Some students are showing more responsibility for their behavior.

Negative: Unchanneled freedom can lead to disorder (depending on the teacher).

IV. Create Relevance, Involvement, Thinking

A. Class Meetings

--Furniture in all schools has not been conducive to the circle meetings.
--The success of meetings depends on the enthusiasm, interest, topics and background of both student and teacher.
--Students become less fearful of expressing ideas and their self-concept has been improved.
--Special Services personnel have experienced some difficulty in fulfilling their responsibility in scheduling their class meetings.
--The degree of involvement increases with the length of time involved in the program.
--More improved teacher-pupil relationship. Acceptance by students of others' opinions, concerns and the ability to improve listening skills has been noticed.
--More critical thoughts lead to creative thinking.
--Involvement is the key to the class meeting.
--Strengths and weaknesses can be recognized through educational diagnostic meetings.
--A friendlier atmosphere creates self-confidence in speaking.
--Increased involvement produces responsibility in individuals.
--Some teachers and children have shown resistance to the program.
--Teacher-student relationships have been enhanced. Some teachers are more aware of alternatives in solving problems and dealing with discipline. From this awareness stems a greater application of these methods.

B. School performance of children (classroom, objective tests, etc.)

--Some areas of discussion that arose within the circle were later researched by individual students.
--Some individual students are noticeably achieving more success, although it is too soon to see evidence of improvement in all areas.
--Class work has improved as a result of asking more relevant, thinking-type questions.

V. Educator Training Center In-Service Process for Professional Growth

A. In-service program (What did we learn about setting these up? Use of SWF techniques with staff to bring about desired changes, etc.)

--The circle establishes good eye contact and is a stimulus for discussion. It creates a starting point for thinking.
--Small groups are very effective establishing the use of varied opinions.
--Small groups are also effective as part of a staff process. It helps to develop cooperative group thinking.
--The technique of using a leadership team is a good one. Using the same amount of time, the traditional staff meeting would not have effected the same amount or kind of change in the building. This is mostly because the seminar technique of using the individual, small group, and large group approach encourages more participation from all members of the staff.
--The SWF seminar techniques are adaptable for many other educational purposes such as curriculum study groups, departmental meetings, staff meetings, etc. It is a good technique to use in bringing about professional growth.
--Whole content matter has not been stressed, the involvement of the staff in the meetings has stimulated many teachers to become more interested in their specific subject area and education in general.
--As a result of the program, there has been a noticeable change of atmosphere in the building seen in such things as a friendlier, more cooperative atmosphere There is a better sense of communications among all school segments, parents and community. Therefore, seminars have been very valuable for the teachers.

Criticism

--Success practices were over-used in some schools.
--Some control schools felt the meetings were too lengthy and too often; whereas, the experimental schools felt there weren't enough meetings the second year to maintain continuity of the program.
--The tapes and films were of a poor quality, and at times became too boring and too many.

B. What effect has this process had on teaching styles, techniques. methods and goals?

--There is evidence of adaptability and classroom management. Child participation creates more responsible behavior, such as the making of classroom procedures and rules.
--There is evidence reported of greater use of all kinds of thinking-type questions in the room.
--There is a greater awareness and teacher understanding of the needs of the individual or total child.
--This program utilizes the processes of involvement.
--A feeling of self-worth among the teachers and the students is established.
--New approaches have been used for solving behavior problems.
--There has been a stimulation of professional growth through the use of in-service programs, professional books, resource material, etc.
--Many staff and building problems are being resolved through this SWF approach.
--Goals have been established by the SWF program to help the child develop creative thinking and to prepare them for life experiences.

Leadership Team Recommendations

As part of their summarizing effort, the experimental and control leadership teams produced a series of recommendations concerning the following school year. This document included both general and specific recommendations for changes in curriculum and classroom practices. The general message of their recommendations was that the SWF program should be continued. They recommended further use of classroom meetings, release time for teacher seminars and workshops, establishment of an in-service SWF program for new teachers, substitutes and special service personnel, maintenance of open communication and use of reality therapy concepts of discipline and success practices.

Recommendations of Superintendent of Schools

He recommended that, in consideration of the importance of the program objectives and basically positive evaluation of the elementary staff, the SWF program should continue for the 1974-75 school year within the following parameters:

1. Continue to promote the success-oriented philosophy.
2. Continue to utilize the organization and structure developed by the program for continued in-service and curriculum work.
3. Continue to encourage classroom interaction and critical thinking through the use of the class meeting. (Reassert that the privacy of the individual and the individual's family has always been safeguarded in our school system and is to continue.)
4. Continue to invite and welcome parents into the schools as the major approach to good school-community relations and explore new methods to enhance the public relations program of the school district.

Table 43

F Values for Primary Pupil Attitudes Comparisons

Instrument	Analyses of Covariance: 1972 to 1974 — Group (1vs.2) df_1	df_2	F	Grade (1vs.2vs.3) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F	1973 to 1974 — Group (1vs.2) df_1	df_2	F	Grade (1vs,2vs.3) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F
Univ. Tests																		
Pictorial Self Concept	1	59	0.32	2	59	1.11	2	59	1.41	1	59	0.01	2	59	0.41	2	59	1.40
School Attitude Scale	1	53	0.04	2	53	4.91*	2	53	2.21	1	53	0.04	2	53	5.08**	2	53	1.92
Mult. Tests																		
Sch. Att. Scale Factors	5	45	1.01	10	90	2.22*	10	90	0.95	5	45	0.99	10	90	2.95**	10	90	1.33

Instrument	Analyses of Variance: Fall 1972 — Group (1vs.2) df_1	df_2	F	Grade (2vs.3) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F	Group 1 1974 vs. Group 2 1973 — Group (1vs.2) df_1	df_2	F	Grade (2vs.3) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F
Univ. Tests																		
Pictorial Self Concept	1	40	0.65	1	40	1.16	1	40	0.02	1	40	0.22	1	40	3.43	1	40	1.72
School Attitude Scale	1	40	0.65	1	40	11.68**	1	40	0.80	1	40	0.02	1	40	2.63	1	40	0.10
Mult. Tests																		
Sch. Att. Scale Factors	5	36	1.77	5	36	4.61**	5	36	1.02	5	36	0.58	5	36	3.85**	5	36	0.33

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 44

F Values for Intermediate Pupil Attitudes Comparisons

Instrument	Analyses of Covariance: 1972 to 1974 Group (1vs.2) df_1	df_2	F	Grade (4vs.5) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F	1973 to 1974 Group (1vs.2) df_1	df_2	F	Grade (4vs.5) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F
Univ. Tests																		
Piers-Harris Self Concept	1	39	0.00	1	39	7.51**	1	39	0.10	1	39	0.07	1	39	3.90	1	39	0.90
EQA Attitude to School	1	39	0.00	1	39	0.21	1	39	0.10	1	39	0.00	1	39	0.00	1	39	0.01
School Attitude Scale	1	39	0.16	1	39	0.21	1	39	0.25	1	39	0.60	1	39	0.23	1	39	0.00
Mult. Tests																		
Piers-Harris Factors	6	29	1.67	6	29	0.89	6	29	1.62	6	29	1.37	6	29	2.18	6	29	0.41
Att. to Sch. Factors	8	25	0.92	8	25	3.62**	8	25	0.88	8	25	0.94	8	25	4.82**	8	25	1.73

Instrument	Analyses of Variance: Fall 1972 Group (1vs.2) df_1	df_2	F	Grade (4vs.5vs.6) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F	Group 1 1974 vs. Group 2 1973 Group (1vs.2) df_1	df_2	F	Grade (4vs.5vs.6) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F
Univ. Tests																		
Piers-Harris Self Concept	1	60	0.01	2	60	1.96	2	60	0.04	1	60	0.01	2	60	2.05	2	60	0.08
EQA Attitude to School	1	60	0.01	2	60	3.56*	2	60	3.38*	1	60	30.94**	2	60	0.36	2	60	2.74
School Attitude Scale	1	60	3.31	2	60	5.91**	2	60	5.85**	1	60	0.47	2	60	6.88**	2	60	1.97
Mult. Tests																		
Piers-Harris Factors	6	55	1.09	12	110	1.82	12	110	0.63	6	55	1.69	12	110	2.05*	12	110	1.17
Att. to Sch. Factors	8	53	1.53	16	106	2.51**	16	106	1.97*	8	53	11.90**	16	106	4.67**	16	106	1.30
Univ. Tests after Mult. Test																		
EQA: F_I	1	60	0.02	2	60	0.65	2	60	0.85	1	60	60.41**	2	60	0.15	2	60	2.66
EQA: F_{II}	1	60	0.00	2	60	6.38**	2	60	4.26*	1	60	3.92	2	60	3.38*	2	60	0.09
EQA: F_{III}	1	60	0.29	2	60	2.55	2	60	2.64	1	60	0.01	2	60	2.08	2	60	1.27
School Att: F_I	1	60	4.89*	2	60	8.54**	2	60	4.49*	1	60	1.18	2	60	8.27**	2	60	1.75
School Att: F_{II}	1	60	0.47	2	60	4.26*	2	60	6.18**	1	60	0.91	2	60	5.29**	2	60	2.28
School Att: F_{III}	1	60	2.98	2	60	2.71	2	60	5.64*	1	60	0.03	2	60	2.11	2	60	2.98
School Att: F_{IV}	1	60	0.09	2	60	0.17	2	60	2.32	1	60	0.22	2	60	0.61	2	60	0.78
School Att: F_V	1	60	1.23	2	60	2.97	2	60	3.29*	1	60	1.45	2	60	7.52**	2	60	0.65

*Signifitcant at beyond the .05 level; **Significant at beyond the .01 level

Table 45

Intermediate Pupil Attitudes Source Tables
for Comparisons Found Significant

Fall 1972

School Attitude Scale: F_I

Source	SS	df	MS	F
Treatment	30.75	1	30.75	4.89*
Grade	107.25	2	53.63	8.54**
Treatment x Grade	56.44	2	28.22	4.49*
Within	376.94	60	6.28	
Total	571.38	65		

Group 1 1974 vs. Group 2 1973

EQA Attitude Toward School

Source	SS	df	MS	F
Treatment	478.32	1	478.32	30.94**
Grade	11.13	2	5.57	0.36
Treatment x Grade	84.63	2	42.32	2.74
Within	927.56	60	15.46	
Total	1,501.64	65		

EQA Attitude Toward School: F_I

Source	SS	df	MS	F
Treatment	564.45	1	564.45	60.41**
Grade	2.84	2	1.42	0.15
Treatment x Grade	49.69	2	24.85	2.66
Within	560.60	60	9.34	
Total	1,177.58	65		

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 46

F Values for Pupil Achievement Test Comparisons

Analyses for Pupils in Grades 1 and 2 in 1974

Subscale	Analyses of Covariance: 1972 to 1974, Grade 1 df_1	df_2	F	1972 to 1974, Grade 2 df_1	df_2	F	1973 to 1974, Grade 1 df_1	df_2	F	1973 to 1974, Grade 2 df_1	df_2	F
Univ. Tests												
Word Meaning	1	21	2.90	1	21	0.17	1	21	8.72*	1	21	0.26
Paragraph Meaning	1	21	0.04	1	21	0.01	1	21	2.21	1	21	0.05
Word Study Skills	1	21	0.66	--	--	--	1	21	3.12	--	--	--

Grade 2 Analyses of Variance

Subscale	Fall 1972 df	df_2	F	Group 1 1974 vs. Group 2 1973 df_1	df_2	F
Mult. Tests						
Word Meaning--Paragraph Meaning Word Study Skills	3	20	0.37	3	18	0.42

Analyses for Pupils in Grades 3 and 4 in 1974 on the Word Study Skills Subscale

Subscale	Group (1vs.2) df_1	df_2	F	Grade (3vs.4) df_1	df_2	F	Inter. (Grp. by Grd.) df_1	df_2	F
Analyses of Covariance									
1972 to 1974	1	43	1.72	1	43	26.19**	1	43	0.00
1973 to 1974	1	43	1.82	1	43	6.23*	1	43	0.12
Analyses of Variance									
Fall 1972	1	44	0.02	1	44	0.57	1	44	0.32
Group 1 1974 vs. Group 2 1973	1	40	2.81	1	40	0.01	1	40	0.27

*Significant at beyond the .05 level
**Significant at beyond the .01 level.

Table 46 (cont'd)

Covariance Analyses for Six Subscales for Pupils in Grades 4-6 in 1974

Subscale	1972 to 1974									1973 to 1974								
	Group (1vs.2)			Grade (4vs.5vs.6)			Inter (Grp. by Grd.)			Group (1vs.2)			Grade (4vs.5vs.6)			Inter. (Grp. by Grd.)		
	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F
Univ. Tests																		
Word Meaning	1	65	8.58**	2	65	8.54**	2	65	0.21	1	65	6.38*	2	65	12.13**	2	65	0.87
Paragraph Meaning	1	65	1.94	2	65	5.23**	2	65	0.23	1	65	0.47	2	65	7.37**	2	65	0.78
Spelling	1	65	0.70	2	65	6.50**	2	65	1.22	1	65	0.03	2	65	13.64**	2	65	0.12
Language	1	65	4.12*	2	65	6.44**	2	65	2.24	1	65	6.62*	2	65	2.72	2	65	1.27
Arith. Computation	1	65	0.29	2	65	3.98*	2	65	0.12	1	65	2.04	2	65	19.51**	2	65	0.82
Arith. Concepts	1	65	1.17	2	65	3.68*	2	65	1.05	1	65	0.26	2	65	1.81	2	65	0.23

Analyses of Variance for Six Subscales for Pupils in Grades 3-6 in 1974

Subscale	Fall 1972									Group 1 1974 vs. Group 2 1973								
	Group (1vs.2)			Grade (3vs.4vs.5vs.6)			Inter. (Grp. by Grd.)			Group (1vs.2)			Grade (3vs.4vs.5vs.6)			(Grp. by Grd.)		
	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F
Univ. Tests																		
Arith. Computation	1	72	0.01	3	72	169.82**	3	72	0.08	1	72	1.28	3	72	50.30**	3	72	0.73
Arith. Concepts	1	72	0.01	3	72	140.60**	3	72	0.59	1	72	0.81	3	72	40.01**	3	72	1.11
Mult. Tests																		
Word Meaning-Para. Meaning-- Spelling-- Language	4	85	0.67	12	225	16.66**	12	225	0.82	4	77	0.34	12	204	13.91**	12	204	1.20

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 46 (con't'd)

Analyses for Pupils in Grades 5 and 6 in 1974 on the Arithmetic Applications Subscale

	Group (1vs.2)			Grade (5vs.6)			Inter. (Grp. by Grd.)		
	df_1	df_2	F	df_1	df_2	F	df_1	df_2	F
Analyses of Covariance									
1972 to 1974	1	43	1.42	1	43	0.00	1	43	0.35
1973 to 1974	1	43	0.27	1	43	12.20**	1	43	1.03
Analyses of Variance									
Fall 1972	1	36	0.17	1	36	57.63**	1	36	0.47
Group 1 1974 vs. Group 2 1973	1	36	2.95	1	36	29.77**	1	36	0.78

Analyses of Variance for Pupils in Grades 3 and 6 in 1974 on Science and Social Studies Subscales

		Fall 1972			Group 1 1974 vs. Group 2 1973		
Subscale	Grade	df_1	df_2	F	df_1	df_2	F
Sci. & Soc. Studies	3	1	22	0.54	1	22	0.09
Science	6	1	22	0.86	1	22	1.00
Social Studies	6	1	22	0.01	1	22	2.34

**Significant at beyond the .01 level

Table 47

Pupil Achievement Source Tables for Comparisons Found Significant

1972 to 1974

Word Meaning (Grades 4-6)

Source	SS'	df	MS'	F
Treatment	1.20	1	1.20	8.58**
Grade	2.39	2	1.20	8.54**
Treatment x Grade	0.06	2	0.03	0.21
Within	9.08	65	.14	
Total	12.73	70		

Table 47 (cont'd)

Language (Grades 4-6)

Source	SS'	df	MS'	F
Treatment	0.84	1	0.84	4.12*
Grade	2.63	2	1.32	6.44**
Treatment x Grade	0.92	2	0.46	2.24
Within	13.31	65	0.20	
Total	17.70	70		

1973 to 1974

Word Meaning (Grade 2)

Source	SS'	df	MS'	F
Treatment	1.18	1	1.18	8.72*
Within	2.83	21	0.13	
Total	4.01	22		

Word Meaning (Grades 4-6)

Source	SS'	df	MS'	F
Treatment	0.87	1	0.87	6.38*
Grade	3.29	2	1.65	12.13**
Treatment x Grade	0.24	2	0.12	0.87
Within	8.81	65	0.14	
Total	13.21	70		

Language (Grades 4-6)

Source	SS'	df	MS'	F
Treatment	0.97	1	0.97	6.62*
Grade	0.80	2	0.40	2.72
Treatment x Grade	0.37	2	0.19	1.27
Within	9.52	65	0.15	
Total	11.66	70		

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 48

F Values for Teacher Attitudes Comparisons

Instrument	Analyses of Covariance[1]											
	1972 to 1974						1973 to 1974					
	Primary			Intermediate			Primary			Intermediate		
	Group (1vs.2)	Grade (2vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5 vs.6)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (2vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5 vs.6)	Inter. (Grp. by Grd.)
Univ. Tests												
Glasser Phil.	0.36	0.09	0.62	0.00	0.13	0.02	0.00	1.78	0.39	2.79	0.04	0.12
Opin. on Ed.	5.77*	0.01	0.04	0.54	0.27	0.33	0.19	0.16	1.12	8.39*	1.00	0.76
Satis. with Teach.	0.13	0.22	0.58	1.85	1.00	0.10	0.08	0.17	0.65	0.31	0.43	0.71
Mult. Tests												
4 Att. Factors	2.97*	0.34	0.28	2.32	0.91	2.09*	2.95*	0.50	0.49	4.62*	0.71	1.47
Univ. Tests after Mult. Test												
Glasser: F_I	4.15	0.05	0.84	0.62	0.78	1.92	2.26	1.33	0.02	0.06	0.26	1.81
Glasser: F_{II}	0.27	0.02	0.27	0.30	0.16	0.54	1.86	0.87	0.48	3.81	0.02	0.30
Opin. on Ed: F_I	1.72	0.16	0.13	2.24	0.64	2.24	0.00	0.61	0.37	11.06**	1.19	2.75
Opin. on Ed: F_{II}	7.99*	0.34	0.00	0.00	0.15	0.80	0.77	0.02	1.19	1.27	0.06	0.39

[1]Degrees of freedom

Univariate-Primary: Grp. = 1,27; Grd. = 1,27; Inter. = 1,27
Intermediate: Grp. = 1,47; Grd. = 2,47; Inter. = 2,47

Multivariate-Primary: Grp. = 4,21; Grd. = 4,21; Inter. = 4,21
Intermediate: Grp. = 4,41; Grd. = 8,82; Inter. = 8,82

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 48 (cont'd)

Instrument	Analyses of Variance[2]											
	Fall 1972						Group 1 1974 vs. Group 2 1973					
	Primary			Intermediate			Primary			Intermediate		
	Group (1vs.2)	Grade (2vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5 vs.6)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (2vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5 vs.6)	Inter. (Grp. by Grd.)
Univ. Tests												
Glasser Phil.	0.33	3.34	0.06	1.49	1.48	0.38	0.93	0.05	2.43	0.15	0.35	0.04
Opin. on Ed.	1.75	0.19	0.00	1.44	0.95	0.30	0.04	0.03	0.15	0.92	0.02	0.32
Satis. with Teach.	1.30	0.72	0.01	0.33	0.08	1.50	0.70	0.25	0.06	1.47	0.25	1.39
Mult. Tests												
4 Att. Factors	1.68	1.26	2.05	0.75	0.81	0.58	1.45	0.22	1.17	0.89	0.42	1.38

[2]Degrees of Freedom

Univariate-Primary: Grp. = 1,28; Grd. = 1,28; Inter. = 1,28
Intermediate: Grp. = 1,48; Grd. = 2,48; Inter. = 2,48

Multivariate-Primary: Grp. = 4,25; Grd. = 4,25; Inter. = 4,25
Intermediate: Grp. = 4,45; Grd. = 8,90; Inter. = 8,90

Table 49

Teacher Attitudes Source Tables for Comparisons Found Significant

1972 to 1974

Opinionnaire on Attitudes Toward Education (Primary)

Source	SS'	df	MS'	F
Treatment	757.00	1	757.00	5.77*
Grade	1.00	1	1.00	0.01
Treatment rade	5.00	1	5.00	0.04
Within	3,543.00	27	13.12	
Total	4,306.00	30		

Opinionnaire on Attitudes Toward Education: F_{II}: (Primary

Source	SS'	df	MS'	F
Treatment	359.82	1	359.82	7.99*
Grade	15.13	1	15.13	0.34
Treatment x Grade	0.07	1	0.07	0.00
Within	1,216.56	27	45.05	
Total	1,591.58	30		

1973 to 1974

Opinionnaire on Attitudes Toward Education (Intermediate)

Source	SS'	df	MS'	F
Treatment	794.00	1	794.00	8.30*
Grade	192.00	2	96.00	1.00
Treatment x Grade	146.00	2	73.00	0.76
Within	4,495.00	47	95.63	
Total	5,627.00	52		

Opinionnaire on Attitudes Toward Education: F_{I}: (Intermediate)

Source	SS'	df	MS'	F
Treatment	337.69	1	337.69	11.06**
Grade	72.94	2	36.47	1.19
Treatment x Grade	168.06	2	84.03	2.75
Within	1,434.69	47	30.52	
Total	2,013.38	52		

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 50

F Values for Classroom Interactions Comparisons[1]

Category	1972 to 1974 Analyses of Covariance						1973 to 1974 Analyses of Covariance					
	Primary			Intermediate			Primary			Intermediate		
	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)
Univ. Tests												
F1 (1)	2.56	1.52	0.13	3.83	3.19	1.75	1.01	1.91	0.06	2.51	2.47	2.04
F1 (2)	0.34	0.59	0.09	1.98	0.18	0.09	0.19	0.93	0.41	2.73	0.52	0.18
F1 (3)	6.62*	0.07	3.41	0.69	0.08	0.06	3.60	0.25	3.68*	0.77	0.17	0.35
F1 (4)	2.35	0.58	1.64	5.82*	0.71	1.22	2.78	0.35	1.13	4.10	0.66	1.91
F1 (5)	2.02	1.10	0.05	0.73	0.27	4.25*	0.67	2.08	0.00	0.33	0.38	1.62
F1 (6)	0.80	0.31	0.73	0.15	0.06	0.29	0.20	0.37	0.87	0.01	0.07	2.13
F1 (7)	3.48	2.26	2.05	0.00	0.56	0.04	0.27	2.80	1.23	0.23	0.04	0.01
F1 (8)	1.63	0.99	0.39	1.12	1.18	0.56	0.96	0.29	0.26	1.05	1.65	0.42
F1 (1)	0.20	0.04	2.02	0.06	0.38	0.61	0.83	0.23	2.28	0.01	1.08	0.80
Teacher Talk	0.93	0.23	0.93	0.25	3.16	2.97	0.56	1.94	2.42	0.37	4.13	3.12
Pupil Talk	0.80	0.86	0.89	1.02	1.62	2.00	1.06	1.04	1.03	1.52	2.32	2.39
Pupil-Pupil Talk	4.69*	0.98	0.78	0.45	1.86	1.39	5.20*	0.94	0.61	0.00	1.16	2.10
Mult. Tests												
ECS (2W-2P-2p)	0.28	1.26	0.97	0.90	0.13	0.72	0.91	1.32	0.37	2.59	0.41	0.36
ECS (4f-4c-4d-4e)	2.96*	0.69	1.48	1.90	1.70	0.71	1.74	0.67	1.33	1.74	1.70	0.33
ECS (7W-7P-7p)	0.48	0.45	0.72	0.48	1.03	0.62	0.45	0.73	0.77	1.38	0.78	0.68
RCS (11-12-18-19)	0.94	0.66	1.70	0.94	0.66	1.70	0.80	0.36	0.44	0.59	0.62	1.04
Univ. Tests after Mult. Test												
ECS (4f)	7.58*	2.15	1.57	--	--	--	--	--	--	--	--	--
ECS (4c)	0.80	0.78	0.32	--	--	--	--	--	--	--	--	--
ECS (4d)	0.61	0.17	3.77*	--	--	--	--	--	--	--	--	--
ECS (4e)	1.57	0.50	0.40	--	--	--	--	--	--	--	--	--

*Significant at beyond the .05 level

[1]For all univariate tests the degrees of freedom for Group were 1 and 23 and for both Grade and Interaction they were 2 and 23. For multivariate tests involving 4 categories the degrees of freedom for Group were 4 and 17 and for both Grade and Interaction they were 8 and 34. For multivariate tests involving 3 categories the degrees of freedom for Group were 3 and 19 and those for Grade and Interaction were 6 and 38.

Table 50 (con't)

F Values for Classroom Interactions Comparisons[2]

	Fall 1972 Analyses of Variance						Group 1 1974 vs. Group 2 1973 Anal. of Variance					
	Primary			Intermediate			Primary			Intermediate		
	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)
Univ. Tests												
F1 (8)	0.10	2.03	2.10	0.66	1.22	0.44	11.25**	0.90	0.04	1.50	0.33	0.09
F1 (9)	0.02	0.64	0.00	0.93	0.34	0.05	0.22	0.63	0.49	0.00	0.43	0.30
Teacher Talk	1.32	3.99	3.24	1.58	0.20	0.32	1.75	0.23	0.87	0.76	0.40	0.43
Pupil Talk	0.27	2.67	2.27	1.53	0.64	0.51	6.55*	0.00	0.93	1.37	0.55	0.30
Pupil-Pupil Talk	0.04	1.74	0.91	0.94	0.43	0.58	0.65	0.77	0.40	0.17	0.72	1.46
Mult. Tests												
F1 (1-2-3-7)	1.28	1.07	0.77	0.27	0.88	1.02	6.76**	0.62	1.55	4.27*	0.98	0.98
F1 (4-5-6)	6.37**	1.61	2.24	0.95	0.37	0.10	13.40**	1.00	0.93	4.68*	0.36	0.53
ECS (2W-2P-2p)	0.29	0.90	0.95	0.32	0.32	0.88	3.11*	0.89	1.41	4.56*	0.11	0.72
ECS (4f-4c-4d-4e)	1.02	0.47	0.50	0.73	0.71	0.25	5.32**	0.75	0.50	9.30**	0.56	1.61
ECS (7W-7P-7p)	1.48	0.75	1.02	0.16	0.56	0.85	3.07*	1.03	0.99	1.23	1.05	1.23
RCS (11-12-18-19)	0.36	1.04	0.81	0.50	0.37	0.98	0.29	1.35	1.22	0.21	0.27	1.53

*Significant at beyond the .05 level
**Significant at beyond the .01 level

[2]For all univariate tests the degrees of freedom for Group were 1 and 24 and for both Grade and Interaction they were 2 and 24. For multivariate tests involving 4 categories the degrees of freedom for Group were 4 and 21 and for both Grade and Interaction they were 8 and 42. For multivariate tests involving 3 categories the degrees of freedom for Group were 3 and 22 and those for Grade and Interaction were 6 and 44.

Table 50 (cont'd)

F Values for Classroom Interactions Comparisons[2]

	Fall 1972 Analyses of Variance						Group 1 1974 vs. Group 2 1973 Anal.					Variance
	Primary			Intermediate			Primary			Intermedi.		
	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Group by Grade)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Gro by Grade)
Univ. Tests After Mult. Test												
F1 (1)	--	--	--	--	--	--	0.35	0.15	0.29	3.82	3.82*	3.82*
F1 (2)	--	--	--	--	--	--	3.67	0.61	0.83	8.31**	0.04	0.26
F1 (3)	--	--	--	--	--	--	7.33*	0.62	1.40	7.88**	0.01	0.11
F1 (7)	--	--	--	--	--	--	8.95*	0.57	3.05	3.41	0.92	1.41
F1 (4)	3.78	0.00	1.06	--	--	--	5.70*	0.25	0.45	12.01**	0.27	1.09
F1 (5)	13.31**	3.49	2.75	--	--	--	30.39**	2.47	1.13	5.61*	0.19	0.51
F1 (6)	0.94	0.11	0.35	--	--	--	2.74	0.18	0.04	2.70	0.54	0.14
ECS (2W)	--	--	--	--	--	--	5.16*	0.53	0.77	12.38**	0.09	0.42
ECS (2P)	--	--	--	--	--	--	1.13	0.67	1.78	0.35	0.06	0.58
ECS (2p)	--	--	--	--	--	--	3.50	1.80	2.27	1.41	0.19	1.57
ECS (4f)	--	--	--	--	--	--	7.99**	1.35	0.91	15.96**	1.15	0.89
ECS (4c)	--	--	--	--	--	--	0.44	0.11	0.95	0.11	0.63	0.70
ECS (4d)	--	--	--	--	--	--	1.08	1.02	0.14	0.28	0.42	0.42
ECS (4e)	--	--	--	--	--	--	2.48	0.94	0.09	9.13**	0.45	1.69
ECS (7W)	--	--	--	--	--	--	3.15	0.04	1.46	--	--	--
ECS (7P)	--	--	--	--	--	--	8.76**	0.92	2.25	--	--	--
ECS (7p)	--	--	--	--	--	--	1.82	0.46	1.63	--	--	--

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 51

Classroom Interactions Source Tables for Comparisons Found Significant

1972 to 1974

Flanders Category 3 (Primary)

Source	SS'	df	MS'	F
Treatment	138.92	1	138.92	6.62*
Grade	3.04	2	1.52	0.07
Treatment x Grade	143.30	2	71.65	3.41
Within	482.71	23	20.99	
Total	767.97	28		

Pupil-Pupil Talk (Primary)

Source	SS'	df	MS'	F
Treatment	107.50	1	107.50	4.69*
Grade	44.86	2	22.43	0.98
Treatment x Grade	35.77	2	17.89	0.78
Within	527.25	23	22.92	
Total	715.38	28		

ECS Category 4f (Primary)

Source	SS'	df	MS'	F
Treatment	171.98	1	171.98	7.58*
Grade	97.75	2	48.88	2.15
Treatment x Grade	71.42	2	35.71	1.57
Within	521.71	23	22.68	
Total	862.86	28		

Flanders Category 4 (Intermediate)

Source	SS'	df	MS'	F
Treatment	120.46	1	120.46	5.82*
Grade	29.46	2	14.73	0.71
Treatment x Grade	50.43	2	25.22	1.22
Within	476.18	23	20.70	
Total	676.53	28		

*Significant at beyond the .05 level

Table 51 (cont'd)

1973 to 1974

Pupil-Pupil Talk (Primary)

Source	SS'	df	MS'	F
Treatment	114.38	1	114.38	5.20*
Grade	41.44	2	20.72	0.94
Treatment x Grade	26.97	2	13.49	0.61
Within	505.52	23	21.98	
Total	688.31	28		

Fall 1972

Flanders Category 5 (Primary)

Source	SS	df	MS	F
Treatment	330.67	1	330.67	13.31**
Grade	173.58	2	86.79	3.49
Treatment x Grade	136.77	2	68.39	2.75
Within	596.29	24	24.85	
Total	1,237.31	29		

Group 1 1974 vs. Group 2 1973

Flanders Category 8 (Primary)

Source	SS	df	MS	F
Treatment	449.60	1	449.60	11.25**
Grade	72.07	2	36.04	0.90
Treatment x Grade	3.08	2	1.54	0.04
Within	959.00	24	39.96	
Total	1,483.75	29		

Pupil Talk (Primary)

Source	SS	df	MS	F
Treatment	224.83	1	224.83	6.55*
Grade	0.01	2	0.01	0.00
Treatment x Grade	63.96	2	31.98	0.93
Within	823.49	24	34.31	
Total	1,112.29	29		

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 51 (cont'd)

Flanders Category 3 (Primary)

Source	SS	df	MS	F
Treatment	126.03	1	126.03	7.33*
Grade	21.51	2	10.76	0.62
Treatment x Grade	48.12	2	24.06	1.40
Within	412.93	24	17.21	
Total	608.59	29		

Flanders Category 7 (Primary)

Source	SS	df	MS	F
Treatment	104.68	1	104.68	8.95*
Grade	13.33	2	6.67	0.57
Treatment x Grade	71.25	2	35.63	3.05
Within	280.67	24	11.69	
Total	469.93	29		

Flanders Category 4 (Primary)

Source	SS	df	MS	F
Treatment	242.24	1	242.24	5.70*
Grade	20.91	2	10.46	0.25
Treatment x Grade	38.17	2	19.09	0.45
Within	1,020.86	24	42.54	
Total	1,322.18	29		

Flanders Category 5 (Primary)

Source	SS	df	MS	F
Treatment	742.71	1	742.71	30.39**
Grade	120.90	2	60.45	2.47
Treatment x Grade	55.05	2	27.53	1.13
Within	586.56	24	24.44	
Total	1,505.22	29		

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 51 (cont'd)

ECS Category 2W (Primary)

Source	SS	df	MS	F
Treatment	104.20	1	104.20	5.16*
Grade	21.26	2	10.63	0.53
Treatment x Grade	31.28	2	15.64	0.77
Within	484.87	24	20.20	
Total	641.61	29		

ECS Category 4f (Primary)

Source	SS	df	MS	F
Treatment	342.04	1	342.04	7.99**
Grade	115.72	2	57.86	1.35
Treatment x Grade	78.24	2	39.12	0.91
Within	1,028.05	24	42.84	
Total	1,564.05	29		

ECS Category 7P (Primary)

Source	SS	df	MS	F
Treatment	67.95	1	67.95	8.76**
Grade	14.29	2	7.15	0.92
Treatment x Grade	34.84	2	17.42	2.25
Within	186.13	24	7.76	
Total	303.21	29		

Flanders Category 2 (Intermediate)

Source	SS	df	MS	F
Treatment	61.90	1	61.90	8.31**
Grade	0.62	2	0.31	0.04
Treatment x Grade	3.91	2	1.96	0.26
Within	178.83	24	7.45	
Total	245.26	29		

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 51 (cont'd)

Flanders Category 3 (Intermediate)

Source	SS	df	MS	F
Treatment	127.06	1	127.06	7.88**
Grade	0.46	2	0.23	0.01
Treatment x Grade	3.55	2	1.78	0.11
Within	387.04	24	16.13	
Total	518.11	29		

Flanders Category 4 (Intermediate)

Source	SS	df	MS	F
Treatment	327.74	1	327.74	12.01**
Grade	14.84	2	7.42	0.27
Treatment x Grade	59.70	2	29.85	1.09
Within	654.79	24	27.28	
Total	1,057.07	29		

Flanders Category 5 (Intermediate)

Source	SS	df	MS	F
Treatment	625.83	1	625.83	5.61*
Grade	42.81	2	21.41	0.19
Treatment x Grade	114.03	2	57.02	0.51
Within	2,679.52	24	111.64	
Total	3,462.19	29		

ECS Category 2W (Intermediate)

Source	SS	df	MS	F
Treatment	97.02	1	97.02	12.30**
Grade	1.38	2	0.69	0.09
Treatment x Grade	6.63	2	3.32	0.42
Within	189.32	24	7.89	
Total	294.35	29		

*Significant at beyond the .05 level
**Significant at beyond the .01 level

Table 51 (cont'd)

ECS Gategory 4f (Intermediate)

Source	SS	df	MS	F
Treatment	569.57	1	569.57	15.96**
Grade	82.22	2	41.11	1.15
Treatment x Grade	63.34	2	31.67	0.89
Within	856.30	24	35.68	
Total	1,571.43	29		

ECS Category 4e (Intermediate)

Source	SS	df	MS	F
Treatment	49.58	1	49.58	9.13**
Grade	4.91	2	2.46	0.45
Treatment x Grade	18.31	2	9.16	1.69
Within	130.30	24	5.43	
Total	203.10	29		

**Significant at beyond the .01 level

Table 52.

F Values for Parent Attitudes Comparisons

Instrument	Analyses of Covariance[1]											
	1972 to 1974						1973 to 1974					
	Primary			Intermediate			Primary			Intermediate		
	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (1vs.2 vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5)	Inter. (Grp. by Grd.)
Univ. Tests												
Glasser Phil.	2.77	0.05	2.85	2.56	0.07	0.13	1.81	0.25	4.13*	2.41	0.02	0.22
Glasser: F_I	1.40	0.51	2.30	0.57	0.15	0.15	2.95	0.42	2.15	0.01	0.01	0.01
Glasser: F_{II}	0.00	0.07	1.35	1.19	0.02	0.15	0.03	0.81	2.32	1.48	0.04	0.07

[1]Degrees of freedom

Primary: Grp. = 1,23; Grd. = 2,23; Inter. = 2,23

Intermed.: Grp. = 1,15; Grd. = 1,15; Inter. = 1,15

*Significant at beyond the .05 level

Table 52 (cont'd)

Instrument	Analyses of Variance[2]											
	Fall 1972						Group 1 1974 vs. Group 2 1973					
	Primary			Intermediate			Primary			Intermediate		
	Group (1vs.2)	Grade (2vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5 vs.6)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (2vs.3)	Inter. (Grp. by Grd.)	Group (1vs.2)	Grade (4vs.5 vs.6)	Inter. (Grp. by Grd.)
Univ. Tests												
Glasser Phil.	0.47	0.16	0.37	0.09	0.39	0.33	1.39	0.14	0.53	3.18	0.02	0.16
Glasser: F_I	1.27	0.00	0.00	0.26	1.03	0.16	11.91**	0.26	3.26	3.03	0.43	0.29
Glasser: F_{II}	0.00	0.48	0.86	0.77	0.21	0.18	0.22	0.02	0.01	0.72	0.22	0.71

[2]Degrees of freedom

Primary: Grp. = 1,16; Grd. = 1,16; Inter. = 1,16

Intermed.: Grp. = 1,24; Grd. = 2,24; Inter. = 2,24

Table 53

Parent Attitudes Source Table for Comparison Found Significant

Group 1 1974 vs. Group 2 1973

Philosophy of Glasser: F_I (Primary)

Source	SS	df	MS	F
Treatment	8.34	1	8.34	11.91**
Grade	0.18	1	0.18	0.26
Treatment x Grade	2.28	1	2.28	3.26
Within	11.21	16	.70	
Total	22.01	19		

**Significant at beyond the .01 level

Appendix F

Table 54

Rotated Factor Solution for the "Faces" School Attitude Scale*

Item	Loadings of Items on Factors				
	I	II	III	IV	V
1	.24	.56	.09	.19	.19
2	.21	.29	.37	.03	.21
3	-.23	.17	.26	.50	.31
4	.34	.15	.42	.01	.13
5	.56	.13	.18	.01	.04
6	.03	-.06	.04	.59	.10
7	.09	.06	.70	.08	.03
8	.49	-.03	.28	-.10	.19
9	.18	.30	.23	.35	.08
10	.29	.14	.24	.04	.44
11	.11	.68	.18	.09	.06
12	.32	.06	.42	.32	.06
13	.15	.16	.26	.36	.23
14	.01	.75	.06	-.01	.08
15	.48	.24	.09	.20	.14
16	.06	.17	.69	.12	.06
17	.23	.06	.54	.10	.20
18	.25	.14	.15	.52	-.04
19	.10	.31	.62	.08	.02
20	.10	.08	.02	.15	.75
21	.27	.31	.26	.20	.19
22	.30	.26	.21	.39	.20
23	.20	.67	.23	.21	.13
24	.15	.39	-.07	.48	-.05
25	.62	.09	-.02	.27	.12
26	.09	.61	.32	.03	-.02
27	.08	.25	.53	.29	.14
28	.18	.10	.13	.07	.75
29	.13	.02	.33	.32	.31
30	.56	.21	.17	.24	.11

*In obtaining scores for pupils on the five factors, in all cases an item was included on the factor for which its loading was highest.

Table 55

Rotated Factor Solution for the Intermediate School Attitude Scale*

Item	Loadings of Items on Factors				
	I	II	III	IV	V
1	.68	.15	.11	.26	.27
2	.51	.13	.23	.38	.23
3	.28	.09	.11	.06	.69
4	.29	.01	.36	.30	.27
5	.19	.51	.17	.06	.14
6	.15	.74	.04	.08	.15
7	.19	.10	.27	.69	.02
8	.28	.35	.26	.00	.06
9	.48	.15	.00	.11	.31
10	.13	.10	.58	.21	.10
11	.68	.11	.12	.19	.21
12	.32	.21	.37	.16	.14
13	.25	.15	.21	.12	.59
14	.67	.07	.04	.10	.07
15	.14	.73	.10	.08	.15
16	.19	.08	.16	.84	.08
17	.22	.14	.49	.09	.19
18	.04	.16	-.01	.07	.54
19	.56	.06	.29	.30	.08
20	.05	.14	.70	.12	.12
21	.51	.15	.30	.01	.19
22	.14	.14	.21	.01	0
23	.56	.19	.15	.31	.28
24	.48	.20	.01	.01	.10
25	.10	.70	.17	.08	.15
26	.61	.08	.20	.06	-.04
27	.11	.09	.12	.82	.14
28	.09	.12	.75	.12	.09
29	.14	.09	.37	.04	.45
30	.09	.32	.32	.22	.41

*In obtaining scores for pupils on the five factors, in all cases an item was included on the factor for which its loading was highest

Table 56

Rotated Factor Solution for the EQA Attitude Toward School Instrument*

Item	Loadings of Items on Factors		
	I	II	III
1	.51	.14	.22
2	.47	.17	.10
3	.52	.13	.06
4	.58	-.07	.18
5	.60	-.02	.04
6	.51	.14	.15
7	.45	.15	.16
8	.27	.26	.23
9	.14	.43	.06
10	.16	.65	.06
11	.13	.19	.78
12	.28	-.13	.40
13	.16	-.04	.38
14	.17	.09	.69
15	.07	.59	.11
16	.06	.25	.73
17	-.01	.60	-.03

*In obtaining scores for pupils on the three factors, in all cases an item was included on the factor for which its loading was highest.

Appendix G

Table 57

Rotated Factor Solution for the Glasser Philosophy Questionnaire Using Teacher Responses

Item	Loadings of Items on Factors	
	I	II
1	-.05	.53
2	-.17	.51
3	.16	.34
4	.42	.39
5	.21	.56
6	.57	.22
7	.20	.63
8	-.02	.67
9	.30	.59
10	.67	.23
11	.72	.09
12	.56	.15
13	.63	.05
14	.69	-.05
15	.70	.05

*In obtaining scores for teachers on the factors, for all but item 4 an item was included on the factor for which its loading was highest. Item 4 was placed in Factor II since its content resembled most that of Factor II items and since, in a Likert analysis, it was found to correlate more highly with scores on Factor II than with scores on Factor I.

Table 58

Rotated Factor Solution for the Opinionnaire on Attitudes Toward Education*

Item	Loadings of Items on Factors I	II
1	.42	.10
2	.59	.06
3	.24	.36
4	.50	.08
5	.26	.50
6	.24	.25
7	.57	.05
8	.22	.33
9	.55	.06
10	-.12	.48
11	.31	.38
12	.12	.42
13	.47	.21
14	.45	.14
15	.15	.34
16	.39	.20
17	.12	.38
18	.50	.12
19	.18	.56
20	.03	.30
21	.23	.05
22	-.03	.32
23	.33	.21
24	.30	.15
25	.19	.35
26	.45	.03
27	.05	.47
28	.24	.45
29	.52	.14
30	.15	.16
31	.29	.37
32	.13	.09
33	-.10	.50
34	.43	.07
35	.61	.12
36	.30	.53
37	.44	.18
38	.12	.41
39	.22	.41
40	.21	.42
41	.44	.06
42	.25	.59
43	.55	.17
44	.15	.51
45	.30	-.01
46	.43	.19
47	.02	.63
48	.44	.17
49	.10	.52
50	.61	.18

*In obtaining scores for teachers on the two factors, in all cases an item was included on the factor for which its loading was higher.

Table 59

Rotated Factor Solution for the Glasser Philosophy Questionnaire Using Parent Responses*

Item	Loadings of Items on Factors	
	I	II
1	.01	.42
2	-.08	.35
3	.29	.23
4	-.10	.59
5	-.20	.61
6	.33	.28
7	.17	.66
8	.05	.72
9	.19	.58
10	.52	.05
11	.60	-.07
12	.53	-.03
13	.69	.00
14	.71	-.10
15	.65	-.03

*In obtaining scores for parents on the factors, for all but item 3 an item was included on the factor for which its loading was highest. Item 3 was placed in Factor II since its content resembled most that of Factor II and since, in a Likert analysis it was found to correlate more highly with scores on Factor II than with scores on Factor I.