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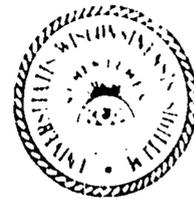
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ABSTRACT

The findings of a preliminary field test of the motivation package, Setting Individual Goals for Learning, are reported. In Phase I of the field test, 58 principals, unit leaders, and teachers showed gains in their knowledge of motivational principles and procedures after participating in a goal-setting in-service training session. To see whether the objectives of the program could be fulfilled in the classroom setting (Phase II), three schools implemented the goal-setting conferences in reading or mathematics. It was found that the teachers were able to implement the procedures described in the motivation package and apply motivational techniques in the conferences. The pupils gained significantly in number of skills attained weekly over the eight-week conference period. Furthermore, with discontinuation of the program, none of the pupils' mean weekly rates of skill attainment regressed to that of the preconference baseline period. (Author)

TECHNICAL REPORT NO. 190

REPORT FROM THE TECHNICAL DEVELOPMENT
SECTION AND THE PROJECT ON
INDIVIDUALLY GUIDED MOTIVATION



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Technical Report No. 190

INDIVIDUAL GOAL-SETTING CONFERENCES

RELATED TO SUBJECT-MATTER LEARNING:

A REPORT ON THE FIELD TEST

By Mary R. Quilling, Thomas J. Fischbach, Kaye H. Rendfrey
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Report from the Technical Development Section and the
Project on Individually Guided Motivation

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Statement of Focus

The Wisconsin Research and Development Center for Cognitive Learning focuses on contributing to a better understanding of cognitive learning by children and youth and to the improvement of related educational practices. The strategy for research and development is comprehensive. It includes basic research to generate new knowledge about the conditions and processes of learning and about the processes of instruction, and the subsequent development of research-based instructional materials, many of which are designed for use by teachers and others for use by students. These materials are tested and refined in school settings. Throughout these operations behavioral scientists, curriculum experts, academic scholars, and school people interact, insuring that the results of the Center activities are based soundly on knowledge of subject matter and cognitive learning and that they are applied to the improvement of educational practice.

This Technical Report is from the Technical Development Section, whose principal function is to identify and invent research and development strategies taking into account current knowledge in the field of statistics and psychometrics, and from the Project on Individually Guided Motivation. The Technical Development Section collaborates in applying such strategies in research and development. The translation of theory into practice and presentations of exemplars of methodology are challenges which the Technical Development Section strives to meet.

Acknowledgements

Although the field test of any Center product is the direct responsibility of the Quality Verification Section, the cooperation and advice of the project staff are essential to the development of the evaluation design and associated reports as well as during the actual implementation of the field test. There are several people who have assumed this critical role of assistance and support to those responsible for this report. The suggestions of Dr. Herbert J. Klausmeier, whose work in motivation is central to the system of Individually Guided Motivation, was of course invaluable. Finally, without the fine cooperation of the principals and staffs of the three schools, neither the study itself nor the excellent results would have been forthcoming. Among those who assumed leadership in the implementation phase are the following: Byron Kopp, Principal, and Clayton Jorgensen, Mathematics Curriculum Chairman, Grantsburg Elementary School, Grantsburg, Wisconsin; Robert Ziegler, Principal, and Lee Siudzinski, Unit Leader, Robinwood Elementary School, Franklin, Wisconsin; and Elaine Johnson, Principal, and Marjorie Born, Unit Leader, Morgan L. Martin School, Green Bay, Wisconsin.

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Abstract

The findings of a preliminary field test of the motivation package, Setting Individual Goals for Learning, are reported. In Phase I of the field test, 58 principals, unit leaders, and teachers showed gains in their knowledge of motivational principles and procedures after participating in a goal-setting in-service training session. To see whether the objectives of the program could be fulfilled in the classroom setting (Phase II), three schools implemented the goal-setting conferences in reading or mathematics. It was found that the teachers were able to implement the procedures described in the motivation package and apply motivational techniques in the conferences. The pupils gained significantly in number of skills attained weekly over the eight-week conference period. Furthermore, with discontinuation of the program, none of the pupils' mean weekly rates of skill attainment regressed to that of the preconference baseline period.

I Introduction

The basic objective of the system of Individually Guided Education (IGE) is to increase educational opportunities for elementary school children.¹ Curriculum components of IGE are objective-based programs to meet the individual needs of each child. In addition to objective-based curricular programs such as the Wisconsin Design for Reading Skill Development, IGE calls for the integration of specific motivational activities as an integral part of the total instructional program. True to the ideal of an IGE system, the motivational activities must be planned to meet the unique motivational needs of each child.

Thus, the Wisconsin Research and Development Center for Cognitive Learning has designed a system of Individually Guided Motivation (IGM) (Klausmeier, Schwenn, & Lamal, 1970) to identify motivational needs, provide a program to meet these needs, and evaluate the success of the program. School-based research has resulted in the development of four packages as components of the IGM system designed to train elementary school personnel in identifying children with low motivation in respect to some desired behavior and in implementing a systematic motivational program:

1. Individual Conferences to Promote Independent Reading
2. Small Group Conferences to Encourage Prosocial Behavior

3. Individual Tutoring of Younger Students by Older Students
4. Setting Individual Goals for Learning

These four packages have in common the use of the conference method in which the motivational techniques of feedback, reinforcement, goal setting, reasoning, and modeling are implemented. Research has shown these methods of increasing motivation to be highly effective.

Research Background

Evidence that the conference technique is effective in increasing achievement in mathematics comes from Kennedy (1968). She found that children who had goal-setting conferences with their teacher performed better than children who did not have conferences. In addition, she noted that specific goals were superior to general, "do-your-best" goals. Gaa (1970) studied the effect of goal-setting conferences on achievement in reading in first through fourth grades. In a three-week period he found significant differences in achievement between students in goal-setting conferences as compared to those in individual conferences not using the goal-setting techniques. In addition, he found that students in the goal-setting conferences learned to set more realistic goals.

These and other research studies led directly to the development of the goal-setting motivation program. Designed to instruct the potential implementer of the program, the package includes a practical paper stating the principles and procedures of the goal-setting conference program

¹Klausmeier, H. J., Quilling, M., Sorenson, J., Way, R., and Glasrud, G. *Individually Guided Education and the Multi-unit Elementary School*. Madison: Wisconsin Research and Development Center for Cognitive Learning, University of Wisconsin, 1971.

and a film demonstrating its application. As a result of being exposed to these materials and spending a few hours doing the necessary planning, teachers should be able to carry out independently a goal-setting conference program to increase motivation. Evidence that teachers can in fact increase their students' achievement level using a motivational package of this type has come from the pilot test and subsequent field test of another package of the IGM system, Individual Conferences to Promote Independent Reading. The purpose of this paper is to report the results of the pilot test of the motivation package, Setting Individual Goals for Learning.

The Motivation Package: Setting Individual Goals for Learning

The package is designed to aid teachers to implement weekly individual goal-setting conferences in various content areas to increase the student's motivational level and thus his rate of skill mastery. The package includes a practical paper (Rendfrey, Frayer, & Quilling, 1971) designed to explain the program to the adults planning to use goal-setting conferences and a 16-mm film demonstrating the actual conference procedure and the application of the motivational principles incorporated in the conference technique. Through the materials, teachers learn to:

1. select subject-matter areas for goal-setting conferences,
2. develop goal checklists of behavioral objectives in a child's own vocabulary,
3. identify students whose progress in the selected subject matter area suggests a lack of motivation,
4. schedule goal-setting conferences on a regular basis ten minutes weekly in a secluded location,
5. conduct conferences in which the motivational techniques of fo-

cusings attention, goal setting, reinforcement, and feedback are implemented, and

6. evaluate program implementation and effectiveness.

Program Objectives

As described above, the program materials are geared to teachers and adults who work with elementary school children. These adults comprise the instrumental or direct target group for the program. The ultimate or indirect target group consists of children whose motivation is low in some desired area. The anticipated outcomes for the adult target group are two-fold:

1. The adult will demonstrate his understanding of both the motivational techniques and the organizational procedures necessary to implement the program.
2. The adult will apply the motivational techniques and carry out the organizational procedures described in the materials in implementing a program of goal-setting conferences.

The projected outcome for the participating children is as follows:

3. The child will show an increase in the rate of skill mastery as a result of the goal-setting conferences.

Subsequent chapters of this report deal with the design and results of the evaluation of the motivation package. Chapter II describes the questions posed for the field test, the participants, the procedures, and instrumentation. In Chapter III, results and discussion are presented for each of the questions posed. The study is summarized in Chapter IV.

II The Evaluation Plan

Objectives

The initial field test was designed to answer questions concerning the effectiveness of the program in increasing and sustaining high levels of motivation in elementary school children and the usability of the package. While previous research had indicated that the effectiveness of the goal-setting procedure merits its use in elementary schools, the usability and effectiveness of the program as packaged had not been subjected to empirical test. The questions posed for the pilot test were therefore directly related to the three package objectives:

1. How well do adults understand both the motivational techniques and the planning and organizational procedures related to goal-setting conferences after studying the in-service materials?
2. How well do teachers apply the motivational techniques and carry out the procedures described in the materials to implement the goal-setting conference program?
3. How much does the rate of skill mastery change for students participating in the goal-setting conferences?

While the preceding questions were critical for decisions about further development or release of the product, two questions of secondary interest were also posed to add to the research base of the product and to provide additional information to users.

4. Do the effects of the goal-setting conferences, if any, endure after the conferences are discontinued?

5. What are parents' perceptions of program effectiveness in terms of changes they observe in their child's attitude toward school?

Subjects

The evaluation was carried out in two phases. Phase 1, addressed to Question 1, necessitated a larger sample of adults than could be involved in answering the remaining questions. In this phase 58 principals, unit leaders, and teachers attending a conference sponsored by the Wisconsin Research and Development Center participated in a two-hour staff development session.

For Phase 2, three schools implemented the program and contributed data answering the remaining questions. A total of 52 pupils and 10 teachers participated, as indicated in Table 1. Teachers from an intermediate unit of Grantsburg Elementary School in Grantsburg, Wisconsin, selected 12 fourth-year students who had not been performing as well in math as was expected. Twenty fourth- and fifth-grade students who had been meeting individually with their teachers to develop larger sight vocabularies, but who had not been progressing satisfactorily, were identified from a unit of Robinwood School in Franklin, Wisconsin. At Robinwood School, conferences were a part of the regular instructional program. The goal-setting techniques were added to the conferences of the participating students. Using current records along with the Wisconsin Design for Reading Skill Development (WDRSD), 20 third-grade students who had not mastered two objectives since the beginning of the year were identified from a primary unit of Morgan L. Martin School

Table 1. Subjects in the Goal-Setting Conferences Pilot Test

School	Content Area	Unit	Chrono-logical Age	Number of Pupils		Number of Conference Teachers
				In Unit	Chosen for Conference	
Grantsburg Elementary Grantsburg, Wis.	Mathematics	A	9-10	40	12	3
Robinwood Franklin, Wis.	Vocabulary	D	9-11	98	20	5
Morgan L. Martin Green Bay, Wis.	Word Attack Skills	A	8-9	125	20	2

Table 2. Schedule of Activities and Time Allotments for the In-service Program

Activity	Time
Introduction	3 min.
Pretest (30 items)	15 min.
Read Practical Paper, pp. 7-12	15 min.
Discuss preconference planning	5 min.
Discuss motivational principles	5 min.
View film	22 min.
Discuss evaluation of conference procedure	10 min.
Read Practical Paper, pp. 27-31, 24-26	15 min.
Discuss goal checklists	5 min.
Posttest	10 min.

in Green Bay, Wisconsin. Further details regarding each school's implementation are found in the sections of the next chapter dealing specifically with each school.

Procedures and Instrumentation

Phase 1. The Evaluation of the In-service Program

Question 1: How well do adults understand both the motivational techniques and the planning and organizational procedures related to goal-setting conferences after studying the in-service materials?

The two-hour staff development session was designed to be an abridged version of that which might be used in a

school setting. The adults participating in the session viewed most of the film, read portions of the practical paper, and briefly discussed the motivational principles underlying the program. For a detailed outline of the activities and time allotments examine Table 2. To determine whether the materials communicated the necessary information, a 30-item multiple-choice test was used, including questions concerning (a) the planning and organizational procedures necessary to implement the conferences, and (b) the principles on which the goal-setting program is based. This instrument was administered before and after the in-service simulation so that change in scores served, in effect, as the criterion for program success. The test is in Appendix A.

		<u>Data Collection</u>	
		<u>Target Group I</u>	<u>Target Group II</u>
		<u>Teachers</u>	<u>Pupils</u>
4 weeks	Preconference period	Monitored in-service sessions	Baseline data, Achievement scores
<u>Identification of participants</u>			
8 weeks	First implementation period	Tape-recorded conferences On-site visitations	Records of goal attainment
<u>Random assignment of former participants to continue or not</u>			
8 weeks	Second implementation period	Tape-recorded conferences On-site visitations Teacher questionnaire	Records of goal achievement Parent questionnaire

Fig. 1. Schedule of implementation of the goal-setting conference program: Phase 2.

Phase 2. Evaluation of Program Implementation

One or two teachers from each of the cooperating units in the three schools attended a workshop held at the Wisconsin Research and Development Center in January, 1971, where they were briefed concerning the use of the in-service materials and the design of the pilot test. The representatives returned to their schools and conducted an in-service session. At that time plans were made for selecting the content area and conference participants and conducting the conferences.

The evaluation was conducted over a 20-week period, from January to May, 1971.

This period was subdivided into a brief baseline period and two 8-week implementation periods.

Data were collected from adults and children at the times indicated in Figure 1. The data were used to answer each of the following questions:

Question 2: How well do teachers apply the motivational techniques and carry out the procedures described in the materials to implement the goal-setting conference program?

Monitoring of program implementation was carried out by on-site visitations, by a teacher questionnaire, and by tape re-

cordings of conferences. The visitations and questionnaire related to the procedural aspects of conference implementation, while the tape recordings were used to analyze the application of motivational principles. Each teacher taped three goal-setting conferences, one of which was randomly selected to be rated by personnel at the Wisconsin Research and Development Center. The evaluation form for rating these taped conferences (see Appendix B) was designed to determine how effectively the motivational principles were implemented in the conference program and to rate the general effectiveness of the conferences.

The on-site visitations and teacher questionnaire (Appendix C) were used to describe each implementation more fully and assess the usability of the program. Questions were asked to determine (a) whether the teachers satisfactorily implemented the requisites of the program, (b) what modifications were perceived as necessary in program materials, and (c) whether the program was realistic in terms of demands on time and instructional personnel.

Questions 3 and 4: How much does the rate of skill mastery change for students participating in the goal-setting conferences? Do the effects of the goal-setting conferences, if any, endure after the conferences are discontinued?

During both the preconference and implementation periods, teachers kept a running record of the skill attainment of children (see Skill Attainment Record in Appendix D). During the preconference period, baseline data were collected for all the students in the unit so that children could be identified who were not performing at the level established as minimally acceptable by the unit. The baseline score was simply the average number of objectives mastered during a week. Similar data were collected

for the two implementation periods during at least one of which students met with a teacher to set weekly goals in the chosen content area. At each conference the students were given an opportunity to demonstrate mastery of the goals set the previous week. After providing feedback and reinforcement concerning goal mastery, the teachers helped the students set realistic goals for the coming week. A comparison of average weekly rate of skill mastery before and during the conferences provided a test of program effectiveness.

After this first implementation period, the participating pupils were randomly divided into two groups, one of which continued the conferences while the other discontinued the conferences. However, each teacher continued to record the skills mastered weekly for students in each of these groups. Durability of program effect was assessed by comparing the continuing and noncontinuing students' performances during the last period, and by comparing each school's rate of skill mastery during the (first) implementation and (second) partial implementation periods.

Question 5: What are parents' perceptions of program effectiveness in terms of changes they observe in their child's attitude toward school?

Two of the schools cooperated in distributing a questionnaire to the parents of the conference participants. For the third school, it was judged that the parents might confuse the goal-setting program with another individual conference program. The parent questionnaire (see Appendix E) was designed to determine if a child had discussed his feelings about the goal-setting conferences with his parents and if there had been any noticeable change in the child's attitude toward school or the particular subject area in which the goal-setting conferences had been held.

III Results and Discussion

The data from the instruments described in the previous chapter were analyzed with respect to the three primary and three secondary questions posed for the field test. Specific information on the analysis for each question posed is provided in the sections that follow.

Phase 1: The Evaluation of the In-service Program

Question 1: How well do adults understand both the motivational techniques and the planning and organizational procedures related to goal-setting conferences after exposure to the in-service materials?

The 30-item multiple-choice test described earlier included 19 items dealing with the planning and organizational procedures necessary to implement the conferences and 11 concerning the theory and principles inherent in the goal-setting program. The test appears in Appendix A with the content, either procedures or principles, of each of the items identified. The mean

gain from pre- to posttest on the section dealing with procedures was 3.05; for the items dealing with theory and principles, the mean gain was 1.09. For both of the sections the mean gain was significant at the .01 level. Summary statistics are presented in Table 3.

Another index of the effectiveness of the materials in communicating information is the percentage of the adults who responded correctly to a certain arbitrarily set number of items. A score of 75% was established as the mastery criterion. The data reveal that 78% of the adults demonstrated mastery of the procedural aspects of the materials while 60% of the adults mastered the theory and principles of the goal-setting program.

These results, however, must be qualified because of characteristics of the instrument used. The pretest administration was the first tryout of the test, and although the overall internal consistency reliability was .74, the reliability for the two subscales was low. Therefore, while we can say with confidence that performance improved from pretest to posttest, interpretation of the mastery data is difficult.

Table 3. Mean Scores and Gains on Two Subscales of the In-service Instrument

Items	Number of Items	Mean Scores		Mean Gain	Statistical Test
		Pretest	Posttest		
Procedures	19	11.71	14.76	3.05	t = 8.50, p < .01
Theory and Principles	11	6.55	7.64	1.09	t = 4.14, p < .01
All items	30	18.26	22.40	4.14	

Table 4. Incidence of Application of Motivational Principles in Goal-Setting Conferences

Motivational Principles	Behavior	% of conferences with behavior implemented
Feedback	1. The child is given an opportunity to evaluate his own progress.	50%
	2. The child is given an opportunity to demonstrate the behaviors learned.	70%
	3. Feedback is provided for each of the goals chosen for the previous week.	80%
Reinforcement	4. The child receives praise at least once during the conference.	90%
Focusing Attention	5. Specific examples are given for the behaviors to be learned.	90%
Goal Setting	6. The child is given sufficient help in selecting goals for the coming week.	40%
	7. The child is given an opportunity to participate in goal setting.	100%

Phase 2: The Evaluation of Program Implementation

Question 2: How well can teachers apply the motivational techniques and carry out the procedures described in the materials to implement the goal-setting conference program?

The application of the motivational principles of feedback, reinforcement, focusing attention, and goal setting described in the materials was monitored by means of tape recordings. Three Center staff members rated a total of ten taped conferences, one from each of the participating teachers. Tapes were rated for occurrence and nonoccurrence of seven specific behaviors. A behavior, such as the teacher's praising of the child, was deemed to have occurred if at

least two of the three raters identified it.

The percentage of the conferences in which each of the seven desired behaviors was observed can be found in Table 4. In all the conferences rated, the child actually participated in goal setting (Behavior 7). Generally, specific examples were given for the behaviors to be learned (Behavior 5), and in only one case was praise not given to the child at least once during the conference (Behavior 4). It is apparent, however, from the data that certain practices (Behaviors 1 and 6) viewed as desirable were not consistently used in the conferences rated.

The assessment of the procedural aspects of the program focused on the following questions: (a) do the teachers satisfactorily implement the basic requi-

sites of the program; (b) are any modifications necessary to assure adequate implementation of the program; and (c) is the program realistic in terms of demands on time and instructional personnel?

Through close contact between Center and school personnel, it was confirmed that teachers satisfactorily implemented the program requisites: participating in in-service training sessions, selecting subject-matter areas, developing goal checklists, collecting baseline data, identifying participating students, conducting regular goal-setting conferences, and maintaining current records of goal attainment.

Further information on implementation and recommended modifications came from the teacher questionnaire (Appendix C). The teachers suggested such changes in the practical paper as extending the section discussing selection of conference participants and the chapter outlining procedures for evaluating both program implementation and effectiveness. It was suggested that the film should more effectively demonstrate the application of the motivational principles and provide a more realistic example of the conference procedure.

Each school planned and conducted local in-service sessions without assistance from Center personnel. The time spent in this preconference training varied from school to school. In one school, the training included an all-day meeting followed by several short, informal sessions. Another school held eight 30-minute sessions. Though the scheduling varied, the minimum amount of time spent in preconference planning was four hours. All of the teachers indicated that they felt prepared to implement the conference program, though the teachers in Franklin felt that their task was easier since they were already conducting conferences and had only to implement the goal-setting technique.

The time spent by each teacher conducting conferences ranged from one to two hours each week. The number of conferences handled by each teacher per week ranged from four to ten. Most of the teachers scheduled the conferences so that they conducted one or two conferences daily. There seemed to be agreement among the teachers that the number of children participating in goal-setting conferences at any one time would have to be limited since special arrangements usually have to be made in order to find a time free from other class responsibilities. For instance,

a team leader or aide may assume responsibility for a homeroom section while the teacher holds conferences. The conference teachers indicated their feeling that, with the limited number included in the pilot, other time requirements such as record keeping were not unreasonable.

All of the ten participating teachers indicated that they felt the goal-setting conferences were an effective motivational technique. According to one teacher: "The child begins to take on a new area of responsibility; learning becomes a more personal matter." Another teacher stated that the conferences help develop "a feeling of importance and a sense of achievement by reinforcing the student's accomplishments."

Another striking indication of the motivational effect of the conferences was the change in student attitude in situations other than the conference. Eight of the ten conference teachers gave specific examples of times when the students chose to work on their goals during free time or when they set goals in subject areas other than the one in which the conferences were held. Finally, the fact that all three schools opted to continue the conference program in the 1971-72 school year speaks for the staff perceptions of the usability and value of the program.

Question 3: Does the rate of skill mastery increase for students participating in the goal-setting conferences?

As described in the preceding chapter, the data of primary interest regarding the effect of the program on pupils included the average number of skills mastered per week for each student during the preconference period and the two implementation periods. In addition, intelligence test scores were obtained for possible use as covariates. To answer the third question, the null hypothesis was tested that there is no change in rate of skill mastery from the preconference period to the period when conferences and goal setting occur.

Because of differences in program implementation, subject matter, and measurement procedures, the data were analyzed separately by school. First, a change score for each pupil was computed by finding the difference between the average number of skills achieved weekly in the implementation and preconference periods. Preliminary analysis for each school indicated that the change score of a student was not related

Table 5. Summary of Analysis of Change in Average Number of Achievements per Week by School

Statistic or Characteristic	School		
	Grantsburg	Franklin	Green Bay
Subject Area	Mathematics	Vocabulary	Word Attack
Sample Size	12	20	20
Average Change in Average Number of Achievements per Week ^a	2.46	5.16	0.383
Range of Change Scores			
Lowest	0.68	-2.38	0.167
Highest	4.07	9.75	0.625
Standard Deviation for Sample	1.16	3.56	0.12
t-Ratio for Test of Hypothesis of Zero True Change	7.34	6.49	14.21
Significance Level	0.0001	0.0001	0.0001
Degrees of Freedom	11	19	19
IQ (Lorge-Thorndike)			
Mean for Sample	104.7	89.6	83.4
Lowest	93	61	67
Highest	122	105	97

^aUnits used in each school are not comparable.

to his intelligence. Thus, analysis of covariance was unnecessary, and a two-tailed t-test for correlated data (baseline rate and implementation period rate) sufficed as the primary statistical test. In addition, the number of possible achievements was recorded so that the ratio of actual to possible achievements could be computed and the change in this ratio analyzed. Also, the probability of the observed number of positive and negative changes in rate of attaining objectives was computed by applying a binomial probability model assuming an equal probability of each.

In all three cases the nondirectional null hypothesis was rejected. The analysis of the change in ratio yielded substantially the same results as the t-test for change scores; therefore, results for this analysis will not be reported. The probability of chance accounting for so great a number of positive changes in rate of attaining objectives was extremely low for each school. It is clear from the analysis and inspection of the change scores that definite gains occurred in all three schools. These results are summarized in Table 5, and are discussed in more detail separately for each school.

Grantsburg

For Grantsburg, the subject area was mathematics, and each computation or concept objective mastered was counted as one achievement. The scope of a single skill is suggested by the titles "Naming Polygons" or the "Commutative Property of Multiplication."

During the four-week baseline period, the average number of achievements ranged from a low of 0.25 per week to a high of 1.75 per week. The average was 0.83. The implementation period, during which the students attended weekly conferences with goal setting, lasted seven weeks. All subjects increased their average number of achievements per week. The range of achievements was from 1.14 per week to 5.57 while the average was 3.30 per week. The average increase was 2.46 and the gains ranged from 0.68 to 4.07.

The t-ratio of 7.34 ($df = 11$) would be exceeded with probability less than 0.0001 under the null hypothesis of zero change. The probability is 0.00048 of either 12 increases or no increases, assuming the null hypothesis for which an increase occurs with probability 0.5. Thus, both hypotheses must be rejected and it can be con-

cluded with confidence that positive gains occurred during the period of the program.

Franklin

In this case, the subject area was reading, and each new vocabulary word mastered was counted as achievement of an objective. During the four-week baseline period in which conferences but no goal setting occurred, the average number of such achievements per week was 2.41, while the corresponding average during the period with both goal setting and conferences was 7.57. The average change was thus 5.16. The actual change scores ranged from a low of -2.38, a decrease, to 9.75, an increase. Eighteen of the 20 subjects had gains, while two had losses.

The t-ratio for testing the hypothesis that the population mean change is zero is 6.49 ($df = 19$), which is significant at the .0001 level. The hypothesis could be tested using the binomial probability of 18 or more or 2 or fewer positive scores, if the probability of a positive score is assumed to be 0.5. This probability is 0.0004. Thus, it can be inferred that achievements are higher in the period with conferences and goal setting.

Green Bay

While the subject area for both Green Bay and Franklin was reading, the unit of skill mastery was quite different for the two schools. At Green Bay, a skill of the scope suggested by the titles "Short Vowel Sounds" or "Final Consonant Sounds" was counted as one skill mastered. However, six to eight subgoals were written for each skill of this type, and pupils set goals in terms of these more discrete objectives. The reading program (Wisconsin Design for Reading Skill Development), in which the skills are embedded, calls for instruction on a single skill over a three-week period. Typically a student making satisfactory progress masters a skill at least every three weeks for an average weekly attainment of 0.33.

For this school, records of skill attainment were available from early fall, and the baseline data collected over a 12-week period were therefore used. The criterion established for selection of students was mastery of fewer than two skills during the

12 weeks. During this period, the actual average number of achievements for the selected group of 20 was only 0.65, which amounted to an average per-week achievement level of 0.054. In the eight-week conference and goal-setting period which followed, all 20 students recorded gains in number of achievements. The average gain per week was 0.383 and the range of gains was from 0.167 to 0.625. (Multiplying this number by six or eight to represent the smaller subgoal units would make these gains more comparable to those reported for the other two schools.)

The t-ratio in this case was 14.21, which is significant at the 0.0001 level. It is also apparent that the occurrence of 20 positive rate changes, assuming an equal chance for a positive or negative change, is a rare event. Thus, the hypothesis of no change was rejected in favor of the alternative that gains occurred.

Question 4: Do the effects of the goal-setting conferences, if any, endure after the conferences are discontinued?

After conference and goal setting, the sample in each school was randomly divided into two equal-sized groups. During the subsequent eight-week period, one group continued to attend weekly conferences and set goals, while the control group did not. (At the Franklin school, the control group had conferences but were not asked to set goals.) The purpose of this phase of the study was to determine whether the program had long-term motivational effects on the children, or whether the subjects would regress to former rates of skill attainment either as the novelty wore off or at the termination of the program.

To answer these questions, a change score was computed for each subject to indicate the change in number of achievements per week from the conference and goal-setting period to the next period. The program could be judged to have a positive long-term effect if the following statements were supported by the data: (a) the rate of skill attainment for the group continuing conferences was not higher than that for the control group which had no conferences during the final period; and (b) the mean change in rate of skill attainment for the combined groups was non-negative.

Both statements were tested statistically for each school. Because of the

Table 6. Summary of Data Indicative of Long-Term Effects by School and Group

Statistic or Characteristic	School and Group											
	Grantsburg				Franklin				Green Bay			
	Continuation	Control	Total	Total	Continuation	Control	Total	Total	Continuation	Control	Total	Total
Sample Size	6	6	12	10	10	20	20	20	10	10	20	20
Number Achievements Per Week (average)												
1st eight-week period	3.86	2.74	3.30	6.98	8.18	7.58	7.58	7.58	0.47	0.40	0.44	0.44
2nd eight-week period	4.88	3.10	3.99	7.33	12.47	9.90	9.90	9.90	0.32	0.26	0.29	0.29
Change	1.02	0.37	0.69	0.35	4.30	2.33	2.33	2.33	-0.15	-0.14	-0.14	-0.14
Ranges												
1st eight-week period												
Low	1.43	1.14	1.14	3.63	3.88	3.63	3.63	3.63	0.375	0.250	0.250	0.250
High	5.57	3.70	5.57	10.88	12.25	12.25	12.25	12.25	0.500	0.625	0.625	0.625
2nd eight-week period												
Low	4.00	1.88	1.88	2.50	3.38	2.50	2.50	2.50	0.125	0.125	0.125	0.125
High	6.00	5.38	6.00	10.63	40.13	40.13	40.13	40.13	0.625	0.625	0.625	0.625
Change												
Low	-0.14	-0.71	-0.71	-1.38	-5.00	-5.00	-5.00	-5.00	-0.375	-0.375	-0.375	-0.375
High	2.82	2.38	2.82	2.38	34.63	34.63	34.63	34.63	0.125	0.125	0.125	0.125
t-ratios												
Continuation-Control Contrast												
p		0.99			0.82 ^a					3.25 ^a		
df		0.34			0.43					.005		
Change from 1st to 2nd period for Combined Groups												
p		2.11			1.11 ^a					-5.05 ^a		
df		0.06			0.28					.0001		
		10			17					17		

^aCovariate Number Possible.

small numbers of participants in each school, the tests had low power. A liberal significance level (.10 instead of .05) was established for rejection, so that the tests would have sufficient power to detect real differences of practical importance. Descriptive statistics and inferential test results are summarized in Table 6. In regard to the continuation/control contrast, the changes in number of achievements favored the continuation group in Grantsburg and the control group at Franklin. For Green Bay, the differences between the two groups were negligible. Inferential tests, however, used data adjusted for the number of possible achievements for each pupil in each period in the two instances where available, because preliminary analysis during the second implementation period indicated that rate of skill attainment was positively correlated to the number of opportunities for attainment. In other words, the child mastered a larger number of skills weekly when presented with more chances to master a skill. The covariance adjustment affects the outcome of the statistical test comparing the performance of the two groups in Green Bay; taking into account the possible number of attainments, the proportion of skills attained by the control group is lower than for the group with conferences, and this difference is statistically significant. There is no significant effect at Franklin whether or not covariance adjustment is made. However, much of the lack of difference between the two groups can be attributed to two subjects in the control group who had unusually high achievement rates in the second period. The t-ratio for the two groups, computed without these subjects, is statistically significant and favors the continuation group. Data could not be adjusted for a number of opportunities to attain a skill at Grantsburg and the effect was not significant, although on the average the continuation group attained .65 more skills weekly. Over the three schools, then, there is some evidence that suggests that continuation of conferences facilitates attainment of objectives.

The comparison of performance in the first and second implementation periods yielded positive overall changes in two schools and a negative change in the other.

At Grantsburg, the observed change in rates of skill attainment for both groups was positive, and the mean gain for the entire group was large enough to be statistically significant. It may be inferred that

for this school, the gain in the second period—apparently a continuation of that in the first period—demonstrates the lasting effect of the program.

In Franklin, the rate of skill attainment for both groups also increased in the final period, but the overall change was not large enough to be statistically significant. In other words, the rate of skill attainment was steady from first to second period and for both groups.

In Green Bay, the decrease was statistically significant. However, it should be observed that while some loss did occur for both continuing and control groups during the second eight-week period, the students never regressed to baseline rates of achievement. Figure 2 summarizes the trends over the entire period studied at Green Bay. The difference in rates of achievement between the baseline period and the second eight-week period are clearly quite large for both continuing and noncontinuing students.

The preceding results, while not definitive, suggest that the effects of the conference program do not dissipate greatly over time, and that the strong effects noted in the initial implementation period are not an artifact of the novelty of the procedure.

Question 5: What are parents' perceptions of program effectiveness in terms of changes they observe in their child's attitude toward school?

A parent questionnaire was distributed in Green Bay and Grantsburg to serve as an indirect measure of the students' attitude toward the goal-setting conferences. The Franklin school did not participate since the teachers were already having individual conferences and felt that it would be difficult for the parents to differentiate between the conferences and the goal-setting technique. Twelve of the questionnaires, 60 percent, were returned from Green Bay where 20 third graders were participating in conferences to develop reading word attack skills. These children seemed to have favorable attitudes toward the conferences. Half of the children had already mentioned the conferences to their parents, and after asking their children about them, nine of the parents indicated that their children's attitudes toward the conferences were positive. Only one child had a negative opinion, and the other two did not have strong feelings either way. Specific

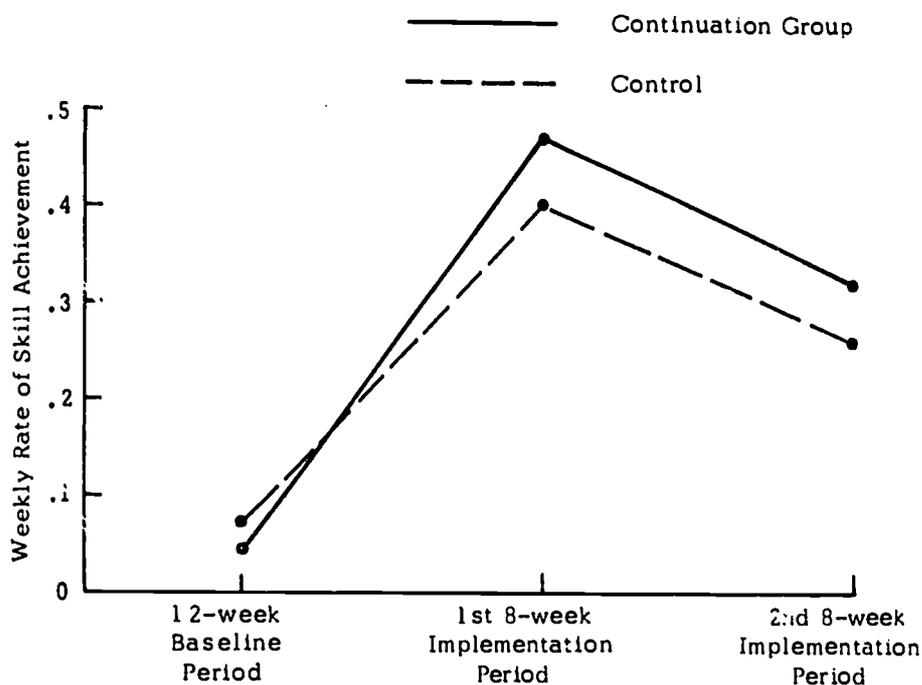


Fig. 2. Long-term effectiveness of the goal-setting conferences in Green Bay

comments reported by the parents indicated that the children especially enjoyed receiving extra attention from a teacher, and that they felt the conferences helped them accomplish more in reading than they had before. All but one of the parents who returned questionnaires had noticed some positive change in their children's attitudes, either in reading or toward school in general. The parents mentioned such changes as more interest in reading skills class, more independent reading at home, improvement in specific skills such as sounding out words, greater confidence, and enthusiasm toward school. Ten of the 12 parents felt that the conferences should be continued; the remaining two were indifferent.

In Grantsburg, where the students were participating in goal-setting conferences in math, 11 of the 12 parent questionnaires were returned. Six of the children had talked previously with their parents about the conferences. Nine of the 11 parents indicated that their children's attitudes were positive, and that they felt the individual help gave them a better understanding of their work in math. Changes in attitude which were noticed included more confidence and interest in math, more initiative taken in doing math homework, and more enthusiasm for school in general. Eight of the parents favored continuing the conferences, two were indifferent, and one opposed continuing the program.

IV Conclusions

The importance of the goal-setting conference field test lies in the fact that it was the first assessment of the quality of the motivation package. The overall purpose of the evaluation was to determine whether the materials as packaged need further development or warrant dissemination. Though minor revisions of segments of the materials are suggested by the results, it is clear that the objectives of the program, both for teacher and pupil target groups, are met.

The evaluation of the in-service materials indicated that, while adults tend to increase their understanding of both motivational techniques and procedures, the instrumentation had shortcomings that prevented full interpretation of the results. It is also apparent from the results described in the last chapter that teachers are able to apply the motivational techniques of feedback, goal setting, focusing attention, and reinforcement in the conference situation and fulfill the requisites for program implementation within the constraints of an ongoing program in a multiunit school. Perhaps the strongest evidence for program usability is that staff in all three schools have opted to continue the systematic goal-setting conference program beyond the termination of the field test and into the next school year. Whether the teachers in the conventionally organized schools would have been able to implement the program successfully is not known, as no such schools participated in the field study.

Several conclusions are evident from the analysis of the data concerning changes in student achievement levels. First, the pilot does provide evidence consistent with the thesis that conferences and goal setting together increase the rate of skill attainment. Despite a lack of uniformity in the

conditions of the study in the three schools, in all cases positive and rather dramatic gains occurred in the periods when conferences and goal setting occurred. Moreover, since large gains occurred at Franklin when only goal setting was added to a program which already included conferences, it would appear that both ingredients are necessary; certainly goal setting contributes to the effectiveness of the conference program. Second, it would appear that these positive results occur for a variety of age groups and a variety of different subject matter areas. Children from age 7 to 12 participated in the program and set goals in arithmetic, word attack, and vocabulary.

In all schools, rate of attainment of pupils for whom conferences were discontinued after eight weeks remained high in relation to the preconference or baseline period. However, most pupils who discontinued conferences tended not to attain quite as many objectives as did those who continued. For two of the three schools, the strong effect of the program was at least maintained for pupils continuing conferences during the last period. In one school, there was some dissipation of the initial effect, but performance did not regress to the baseline level. One might conclude from the study of long-term effects that, while continuation of conferences is beneficial, greater impact would be achieved by rotating the pupils exposed to the program. In other words, instead of continuing conferences for a few pupils over a long period of time, all or most of the original group might be dropped from the program at midyear or some other breaking point, and new pupil participants identified. This recommendation takes into account two facts: (a) that

results are achieved relatively quickly and maintained at a satisfactory level even when conferences are discontinued, and (b) that limited resources are available to carry out the program in most schools.

Parents' perceptions of the effectiveness of the program were generally positive, and many noticed positive changes in the attitude of their child toward school in general or toward the subjects which were discussed in the conferences. Further research would yield additional informa-

tion on the effect of increased motivation on attitude.

Evaluations in the future also might investigate the usability of the program in conventionally organized schools and the feasibility of implementing the program in small-group rather than individual conferences. However, if the slight modifications indicated by the results are made, the product will serve a beneficial purpose and be usable as well. Dissemination of the goal-setting conference program is therefore warranted.

Appendix A
Multiple-Choice Test

Multiple-Choice Test

PRETEST

INDIVIDUAL GOAL-SETTING CONFERENCES TO PROMOTE
SUBJECT MATTER LEARNING

INSTRUCTIONS: Each question has one best answer. Select the best answer and record it on your answer sheet. If you wish to change an answer, erase the incorrect answer completely.

1. To provide feedback, a teacher could
 - A. *point out how well the student is able to identify rhyming words.
 - B. read aloud to the student a poem with many rhyming pairs.
 - C. help the child choose his next goal.
 - D. praise the student for his efforts.

2. Which principle of motivation is best illustrated in the following example?

Teacher: "David, I am pleased that you remembered to work on your goals during the week."

 - A. goal-setting.
 - B. *reinforcing.
 - C. providing feedback.
 - D. keeping records.

3. At the beginning of preconference planning, teachers should
 - A. *collect baseline data.
 - B. announce plan to students.
 - C. announce plan to parents.
 - D. distribute the goal checklists.

4. It is generally suggested that each conference take approximately
 - A. 5 minutes.
 - B. *10 minutes.
 - C. 15 minutes.
 - D. 20 minutes.

5. Later conferences differ from the initial one in that
- A. the student need not be assisted in the selection of goals.
 - B. *feedback and reinforcement are provided.
 - C. providing goal-reminder sheets is less important.
 - D. the teacher does more of the talking.
6. If a child loses his reminder sheet
- A. point out that the rest of the group kept track of their sheets.
 - B. wait until the next conference and give him a new one.
 - C. *devise another technique for helping him to remember his commitment.
 - D. let him know how important his commitment is.
7. Which of the following should not be a major consideration in selecting a student to participate in conferences?
- A. his attitude toward a particular subject.
 - B. *his interest in participating in the conferences.
 - C. his learning potential.
 - D. his achievement profile.
8. The principle of goal-setting should be used in conferences because
- A. it makes students strive for many different goals.
 - B. *it gives the students a feeling of success to reach a goal.
 - C. it is easier for teachers to determine whether students are improving.
 - D. it provides for verbalizations of prosocial values.
9. The conference teacher should provide reinforcement by
- A. telling the student that important people have learned to set and attain goals.
 - B. correcting the student when he makes a mistake.
 - C. helping the student choose appropriate goals for the coming week.
 - D. *approving of the student's rate of skill mastery.
10. The focusing of the student's attention on desired objectives
- A. *is facilitated by defining specific behavioral goals.
 - B. is just as effective regardless of whether general or specific goals are set.
 - C. is accomplished as readily in a large group.
 - D. is not necessary as long as the goal sheet is written in the child's language.
11. Inservice sessions for this program should be provided
- A. every month throughout the school year.
 - B. only if teachers request them.
 - C. *before the conferences are implemented.
 - D. only for principals and unit leaders.

12. The length of time spent in individual conferences for each student
- A. should be recorded.
 - B. should be fixed.
 - C. *averages ten minutes per week.
 - D. averages twenty minutes per week.
13. Baseline data should be collected
- A. to record progress of students during individual conferences.
 - B. after the implementation period to evaluate students' skill mastery during the conferences.
 - C. *for selection of students who need individual conferences.
 - D. to learn which students are ready to go on their own after individual conferences.
14. What motivational technique may take the majority of the total conference time in the early conferences?
- A. modeling
 - B. reinforcement
 - C. feedback
 - D. *goal-setting
15. If a student does not attain all of his goals the teacher should
- A. remind him of the importance of keeping his word.
 - B. *consider the difficulty of the goals.
 - C. be sure that this is indicated in the records.
 - D. help him choose new goals for the next week.
16. As a result of the individual conferences a student should
- A. learn to be more attentive in class.
 - B. learn without group instruction.
 - C. *learn to be more self-directed.
 - D. learn to be more punctual.
17. The purpose of giving the student an opportunity to choose an appropriate level of skill mastery
- A. is to create interest in the goal-setting process.
 - B. is to give the student more freedom of choice.
 - C. *is to allow for the reward of even partial accomplishment.
 - D. is to make the selection of goals easier.
18. The goal-setting portion of the follow-up conferences proceeds exactly as in the initial conferences with the exception that
- A. the students do not need guidance.
 - B. the students already have chosen their goals.
 - C. *the goal-setting checklists may cover additional materials.
 - D. the students are not expected to choose a degree of mastery for each skill.

19. It is crucial that the conferences are viewed by the student as
- A. an important commitment.
 - B. a special privilege.
 - C. *a rewarding experience.
 - D. a requirement.
20. Which one of the following examples best illustrates the principle of feedback?
- A. *"You've mastered 6 goals so far this month, Michael."
 - B. "By next week, do you think that you can learn to identify an antonym from a list of words when you are given a word in a sentence?"
 - C. "Mark, do you think that you will be able to master that goal once in a while or most of the time?"
 - D. "That's good, Ann. Multiplication is a short form of addition."
21. In conducting individual goal-setting conferences, teachers should
- A. concentrate on skill improvement rather than attitude.
 - B. *reinforce positive attitudes as well as achievement.
 - C. expect a measurable increase in test scores.
 - D. expect failure to increase motivation in subsequent tasks.
22. Conferences generally should be held
- A. regularly, once a month.
 - B. *regularly, once a week.
 - C. whenever a child wants to demonstrate skill mastery.
 - D. when the teacher wants to determine how a child is progressing.
23. Students who do not seem to be benefiting from the conferences over an extended period of time
- A. *should be replaced to provide time for others.
 - B. should be scheduled for additional conferences.
 - C. should be given new goal checklists.
 - D. should be reprimanded for not honoring their commitment.
24. A student may show he has developed independence from adults in connection with motivation by
- A. attending to the teacher when required.
 - B. beginning tasks promptly.
 - C. persisting at tasks until completed.
 - D. *working on school-related activities outside school hours.
25. Students should be chosen for conferences if they
- A. are performing below grade level.
 - B. have been absent from school a great deal.
 - C. *will profit maximally.
 - D. are not ready to progress with the group.

26. The evaluation process should include
- A. conference procedures.
 - B. conference effectiveness.
 - C. *both conference procedures and effectiveness.
 - D. only students who are not showing progress.
27. One criterion for choosing a particular content area is that
- A. students enjoy that subject.
 - B. the teachers in that subject area have had experience conducting conferences.
 - C. students in the past have found the particular area to be difficult.
 - D. *students are not progressing in that subject as expected.
28. Which of the following statements could best serve as a behavioral goal for a particular student?
- A. By next week, I will learn how to use the dictionary.
 - B. *By the next conference, I will be able to put words such as straits, strand, and strange in alphabetical order.
 - C. By next week, I will understand how to use a table of contents.
 - D. By the next conference, I will know how to use a road map.
29. Which of the following objectives is written in the most specific behavioral terms?
- A. The child will know how to multiply.
 - B. The child will learn to read orally without making too many word substitutions.
 - C. The child will understand the relationship between multiplication and repeated addition.
 - D. *The child will be able to divide into syllables a list of two-syllable words such as bubble, trouble, or table.
30. Which of the following is not a guideline for writing goal checklists?
- A. The goals should be written in the language of the students.
 - B. *Each goal should be inclusive enough so that the list does not become unwieldy.
 - C. Each goal should be written in behavioral terms.
 - D. The goals should be listed in the order of difficulty.

* Correct answer

Underlined items are procedural; nonunderlined items deal with principles.

POST TEST
INDIVIDUAL GOAL-SETTING CONFERENCES TO PROMOTE
SUBJECT MATTER LEARNING

INSTRUCTIONS: Each question has one best answer. Select the best answer and record it on your answer sheet. If you wish to change an answer, erase the incorrect answer completely.

1. As a result of the individual conferences a student should
 - A. learn to be more attentive in class.
 - B. learn without group instruction.
 - C. *learn to be more self-directed.
 - D. learn to be more punctual.

2. The length of time spent in individual conferences for each student
 - A. should be recorded.
 - B. should be fixed.
 - C. *averages ten minutes per week.
 - D. averages twenty minutes per week.

3. Conferences generally should be held
 - A. regularly, once a month.
 - B. *regularly, once a week.
 - C. whenever a child wants to demonstrate skill mastery.
 - D. when the teacher wants to determine how a child is progressing.

4. The goal-setting portion of the follow-up conferences proceeds exactly as in the initial conferences with the exception that
 - A. the students do not need guidance.
 - B. the students already have chosen their goals.
 - C. *the goal-setting checklists may cover additional materials.
 - D. the students are not expected to choose a degree of mastery for each skill.

5. Students should be chosen for conferences if they
- A. are performing below grade level.
 - B. have been absent from school a great deal.
 - C. *will profit maximally.
 - D. are not ready to progress with the group.
6. At the beginning of preconference planning, teachers should
- A. *collect baseline data.
 - B. announce plan to students.
 - C. announce plan to parents.
 - D. distribute the goal checklists.
7. Which one of the following examples best illustrates the principle of feedback?
- A. *"You've mastered 6 goals so far this month, Michael."
 - B. "By next week, do you think that you can learn to identify an antonym from a list of words when you are given a word in a sentence?"
 - C. "Mark, do you think that you will be able to master that goal once in a while or most of the time?"
 - D. "That's good, Ann. Multiplication is a short form of addition."
8. To provide feedback, a teacher could
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 - B. reinforcement
 - C. feedback
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 - C. persisting at tasks until completed.
 - D. *working on school related activities outside school hours.

* Correct answer

Underlined items are procedural; nonunderlined items deal with principles.

Appendix B
Evaluation Form for Rating Taped Conferences

EVALUATION FORM FOR RATING TAPED CONFERENCES

Check each behavior you observe at least once in the taped conference.

Feedback

1. Is the child given an opportunity to evaluate his own progress? _____
2. Is the child given an opportunity to demonstrate the behaviors learned? _____
3. Is feedback provided for each of the goals chosen for the previous week? _____

Reinforcement

4. Does the child receive praise at least once during the conference? _____

Focusing of the Student's Attention on Desired Objectives

5. Are specific examples given for the behaviors to be learned? _____

Goal-Setting

6. Is the child given sufficient help in selecting goals for the coming week? _____
7. Is the child given an opportunity to participate in the goal-setting? _____

Appendix C
Questionnaire for Teachers Involved
in the Goal-Setting Conferences

QUESTIONNAIRE FOR TEACHERS INVOLVED IN THE
GOAL-SETTING CONFERENCES

1. How many inservice training meetings were held? How long were these meetings?
2. Do you feel that you were adequately prepared to start the conferences?
3. Which aspect of the training program did you find most helpful in preparing you to conduct effective conferences?
_____ practical paper
_____ film
_____ discussion
4. Do you feel that any of the following areas were not adequately explained in the inservice materials? _____ If so, indicate this by checking the appropriate topics.
_____ research background of conferences
_____ motivational principles
_____ conference procedures
_____ conference scheduling
_____ selection of students
_____ preparing behavioral objectives
_____ writing goal checklists
_____ record-keeping
_____ evaluating program effectiveness
_____ self-evaluation of program implementation
_____ self-evaluation of conference procedures
5. What additional suggestions do you have for extending or deleting sections of the practical paper?
6. Do you feel that the conference procedures and motivational procedures were adequately demonstrated in the film? _____yes _____no
What suggestions do you have for improving the film?
7. In what subject area did you implement the goal-setting conferences?

8. How did you select the students who participated in the conferences ?

9. Do you feel that the conferences are an effective motivational technique ?
____yes ____no Explain:

10. Have you noticed a change in the students' level of motivation at any time other than in the conference situation? ____yes ____no. If so, specify.

11. What problems have you noted in implementing the conference program ?

12. Do you feel that the conference program should be continued in your school either in its present form or with modification? ____yes ____no. If you feel it should be modified, what are your suggestions ?

13. What was the average length of the conference period ?

14. How many conferences did you hold daily or weekly ?

15. What adaptations were necessary in order to implement the program in your school ?

16. How were you freed so that you could conduct conferences ?

17. Were you able to hold conferences weekly for each student in the program ?

18. Do you feel that your meeting place was adequate ?

19. Did the same person conduct the conferences for each child throughout the conference period ?

20. Did you use a goal checklist written in the language of the students ? ____
Did you give each student a copy to use as a reminder ? ____ If not, did you use another technique ? ____ If so, describe.

21. Do you feel that the time spent on record keeping was unreasonable?

22. Do you feel that any of the positive effects of the conferences continued after half of the students discontinued the conferences?

Appendix D
Record of Skill Attainment Form

Appendix E
Parent Questionnaire

Parent Questionnaire

INDIVIDUAL GOAL-SETTING CONFERENCES TO PROMOTE
SUBJECT MATTER LEARNING

Please respond to the following questions and have your child return this form to the teacher with whom he is having conferences.

1. Were you already aware that your child was participating in individual goal-setting conferences? _____
If so, from whom did you learn of this?
2. If your child has previously discussed the conferences with you, was his attitude enthusiastic, indifferent, or negative? _____
If your child has not previously mentioned the goal-setting conferences, ask him to discuss them with you before answering the next question.
3. List any specific comments made by your child concerning the goal-setting conferences that will give us an indication of his attitude toward them. (e.g. "I enjoy meeting alone with my teacher.")
4. Have you noticed any changes in your child's performance or attitude toward learning math skills since the program started in February?
If so, specify. (e.g. grades, teacher comments, interest, etc.)
5. What is your child's attitude toward school in general?

Have you noticed a change in attitude since the conferences began in February?

If so, explain.
6. Do you feel that the goal-setting conferences should be continued?

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