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ABSTRACT

This publication examines various aspects of the problem of potential school dropouts and techniques for teaching early career development. Its three sections are concerned with (1) identification and exploration of factors related to potential dropouts; (2) a comparison of the efficacy of treatment of classroom behavior management and group counseling for use with potential dropouts; and (3) differential effects of classroom behavior management and traditional teaching techniques on vocational knowledge and attitudes at fifth and sixth grade levels. For each of these studies introductory material, study methodology and design, a discussion findings and conclusions, and recommendations are included. In addition, extensive tables give statistical information and detailed bibliographies are provided for each study separately. (SES)

A PROGRAM FOR EARLY DETECTION AND ATTITUDINAL REORIENTATION OF POTENTIAL SCHOOL DROPOUTS

I: Evaluation of Strategies Employed in Phases I and II

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A PROGRAM FOR EARLY DETECTION AND ATTITUDINAL REORIENTATION OF POTENTIAL SCHOOL DROPOUTS[1]

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Daniel Lee Randolph

And

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[1]Part of a project funded under Public Law 90-576, Part C, Vocational Education.

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SECTION I

IDENTIFICATION AND EXPLORATION OF FACTORS RELATED TO POTENTIAL DROPOUTS

by

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INTRODUCTION TO THE STUDY

Background

One of the most pressing problems confronting the educational system in America is the excessive dropout rate in the secondary school.[1,2,3] According to S.O. Litchter, approximately 40 per cent of all children in the United States fail to complete high school.[4] O.R. Warner predicts an increase in this percentage.[5] The importance of the school dropout problem is demonstrated by the national attention it has received in the forms of numerous popular articles, allocations of federal

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[1]N. Dean Evans, "How to Conduct a High School Dropout Study," Bulletin of the National Association of Secondary School Principals, XXXVIII (February, 1954), 33.

[2]R.A. and L.M. Tesseneer, "Review of the Literature on School Dropouts," Bulletin of the National Association of Secondary School Principals, XLII (May, 1958), 141.

[3]A. Hugh Livingston, "High-School Graduates and Drop-outs--A New Look at a Presistent Problem," The School Review, LXVI (Summer, 1958), 195.

[4]Solomon O. Lichter, et al. The Drop-outs: A Treatment Study of Intellectually Capable Students Who Drop Out of High School (New York: The Free Press of Glencoe, 1962), p. 2.

[5]O. Ray Warner, "The Scholastic Ability of School Dropouts," School Life, XLVII (October, 1964), 21.

grants, and congressional investigations.[6,7]

Although attention has primarily been directed toward the secondary schools,[8] it is being increasingly recognized that the dropout problem has its genesis in the elementary schools. B.I. Greene states that although a student physically leaves the secondary school, psychologically he has left school while he is still in the elementary grades.[9] Because many of the forces which contribute to the withdrawal of students in later grades are first felt during the early years, the identification of potential dropouts should be initiated at the elementary level.[10] Once the potential dropouts are identified, they can often be motivated and given the assistance they need to continue their education.

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[6]J.C. Gowan and G.D. Demos, eds., The Disadvantaged and Potential Dropout (Springfield, Illinois: Charles C. Thomas, 1966), p. 81.

[7]Lee M. Marsh, "College Dropouts--A Review," The Personnel and Guidance Journals, XLIV, No. 5 (January, 1966),

[8]D.A. Green, "School Drop-Outs - A Matter of Philosophy," Vocational Guidance Quarterly, IX (Winter, 1960-1961), 124-128.

[9]B.I. Greene, "Dropouts and the Elementary School," National Elementary Principal, XLII (November, 1962), 52-54.

[10]A.H. Livingston, "Key to the Dropout Problem: The Elementary School," The Elementary School Journal, LIX (February, 1959), 267-270.

It seems then that identification is the first step in helping potential dropouts to remain in school.[11] G. V. Campbell believes that some dropouts could be identified as early as kindergarten or first grade. Campbell also states that some educators, sociologists, and psychologists strongly believe the seventh grade is the last grade at which dropouts may be salvaged.[12] If this statement is true, then it becomes imperative that potential dropouts be identified, if possible, no later than the sixth grade.

Potential dropouts seem to reflect certain behaviors which may be referred to as identifying clues.[13] This study has attempted to analyze behavioral clues as a means of constructing an instrument which may be utilized in the early identification of potential dropouts.

Statement of the Problem

The problem of the study was to construct an instrument to identify potential school dropouts in the upper elementary grades.

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[11] Jack Kough and R.F. DeHaan, Identifying Children Who Need Help (Chicago: Science Research Associates, 1955), pp. 34-40.

[12] Gene V. Campbell, "A Review of the Drop Out Problem," Peabody Journal of Education, XLIV (September, 1966), 102-109.

[13] Ibid.

Specifically, the study concerned itself with, (a) the development of an instrument (PDI) to be used in the assessment of potential dropout characteristics, and (b) the partial validation of the initial form of the instrument.

Objectives

The purposes of this study were:

1. To collect and categorize characteristics of potential dropouts in such a way that they could be incorporated into a single instrument.

2. To refine the instrument through factor analysis.

3. To establish partial validity for the instruments through: (a) correlation with the Demos D Scale and teacher opinion, and (b) factor analysis.

4. To establish preliminary norms for use in the identification of potential dropouts.

Definition of Terms

Potential Dropout - Pupils who received a raw score of sixty or higher on the Demos D Scale and who were also identified by their teachers as potential school dropouts.

Potential Dropout Instrument - The instrument which was developed in this study, abbreviated hereafter as the PDI. It consists of two sections: first, a section devoted to descriptive background information; and second, a section of behavioral items on which the school behavior of pupils may be rated.

Descriptive Background Information - Information pertaining to socio-economic level of family, educational level of parents, race, whether both parents are in the home, number of schools attended, past grade retentions, attendance and tardiness, level of intelligence, reading level, and past grades

School Behavior - Behavior of pupils in a classroom setting which may be observed and rated.

Delimitations

1. The source of data for factor analysis was limited to the ratings of eighteen public school teachers of their pupils in the upper elementary grades in Forrest County, Mississippi. Each teacher rated approximately fifteen pupils.

2. The face validity of the items in the PDI was determined by the judgement of a committee of fifteen faculty members in the College of Education and Psychology at the University of Southern Mississippi and fifteen elementary school teachers in Forrest County, Mississippi

3. Partial validity analyses were based on the ratings of eighty-eight pupils by three teachers.

Assumptions

In approaching this study, the following assumptions were made:

1. The Demos D Scale has an acceptable degree of validity for discriminating between students who are potential school dropouts and those who will finish high school.

2. The students responded with frankness and honesty to the Demos D. Scale.

3. The teachers were frank and honest in their judgement of each child's potentiality for dropping out of school and in their ratings of the student's behavior.

4. The teachers knew the students in class well enough to reliably rate their behavior.

PROCEDURES

Development of Potential Dropout Instrument

Collection of Items

Items were assembled which could be used in the measurement of behavior and/or characteristics, which have been identified in the literature as being typical of potential school dropouts. All of these items were collected from the literature and/or written based upon characteristics of potential dropouts. The items were then categorized into two major divisions: (1) descriptive background information, and (2) school behavior.

Section I - Descriptive Background Information

Items of a situational or background nature are included in this section of the PDI. The following items are representative of the type of items included: socio-economic level of family, educational level of parents, whether both parents are in the home, number of schools attended, past grade retentions, attendance and tardiness, level of intelligence, reading level, and past grades.

Section II - School Behavior

This section included behavioral items on which teachers could rate their pupils. An attempt was made to include items related to observable and specific behaviors. Some examples of these behavioral items are: acts without thinking, damages or destroys things, plays or stays alone, withdraws, daydreams, stares, disobedient or defiant, pouts or sulks, and has violent outbursts of temper.

Screening and Refinement of Items

Judging Procedure

The first step in the screening procedures was to present a list of the categorized items to a committee of fifteen faculty members of the College of Education and Psychology at the University of Southern Mississippi and fifteen upper elementary school teachers in Forrest County, Mississippi who evaluated each item in terms of its usefulness as an item in an instrument such as the PDI. The judges were also asked to make recommendations as to revisions and/or inclusion of items. The items which received the most favorable evaluations from the committee of judges were presumed to be appropriate and they were included in the research form of the PDI. This procedure provided initial screening and helped to establish the face validity of the items in both sections of the research form of the PDI. This was the only validity established for section one of the PDI, which consists of descriptive background information. Section two,

which consists of behavioral items, underwent a more thorough screening procedure.

Factor Analysis

In order to conduct a factor analysis of the PDI eighteen upper elementary school teachers were asked to rate the behavior of the pupils for whom they had instructional responsibility, using the research form. The teachers who participated were those who volunteered and who seemed to be the most cooperative out of a large group (thirty-five) of teachers in Forrest County, Mississippi elementary schools. Before the teachers were asked to respond to the PDI, they were given an extensive orientation to the instrument and had seven weeks of school in which to become acquainted with their pupils. The eighteen teachers rated a total of 278 pupils.

The ratings which were obtained from the eighteen teachers were then subjected to a factor analysis. In order to derive an estimate of communality, i.e., the amount of variance that a variable shares with at least one other variable, the intercorrelation matrix was subjected to an image analysis.[14] The principal-axis solution was examined in order to determine the number of factors in the instrument and the number which should be rotated. Factors were selected on the basis of the

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[14]Henry F. Kaiser, "Image Analysis," in Problems in Measuring Change, ed. by Chester W. Harris (Milwaukee, Wisconsin: University of Wisconsin Press, 1967), pp. 156-166.

three following criteria: (1) eigenvalues greater than one, (2) the scree test,[15] and (3) interpretability. The principal-axes were rotated using the nonorthogonal oblimin scheme empolying the biquartimin criterion.[16] This means that in the factor analysis, correlation between factors was allowed. The principal-axes were also rotated orthogonally employing the varimax criterion[17] to determine if this soluntion would provide the simplest factor structure.

Partial Validation

The sample used in the partial validation procedures involved three upper elementary school teachers and the eighty-eight pupils for whom they had instructional responsibility. These teachers were selected out of a group of ten teachers in Forrest County, Mississippi elementary schools who did not participate in the first phase of this study. They were selected because they volunteered and seemed to be the most cooperative.

The three teachers were given a refined form of the PDI (thirty-nine items) and were asked to rate their pupils on

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[15] R.B. Cattell, "The Scree Test for the Number of Factors," Multivariate Behavioral Research, I (1966), 245-276.

[16] Wilson H. Guertin and J.P. Bailey, Jr., Introduction to Modern Factor Analysis (Ann Arbor, Michigan: Edwards Brothers, Inc., 1970), pp. 124-126.

[17] Henry F. Kaiser, "The Varimax Criterion for Analytic Rotation in Factor Analysis," Psychometrika, XXIII (1958), 187-200.

these items. The teachers were also asked to respond to a Teacher Opinion Item on which they were to indicate what they felt were the chances of each pupil dropping out of school. This opinion was based upon the following criteria:

1. Below grade level in reading
2. Overall low achievement
3. Overage for grade level
4. Absenteeism
5. From lower socio-economic level

The Demos D Scale was administered to the eighty-eight pupils, and based upon their scores on the Demos D Scale and the teacher's opinion, they were divided into two groups: (1) those who were potential dropouts, and (2) those who were not potential dropouts. The next step in the validation procedures was to calculate the correlation between membership in these two groups and factor scores on the PDI in order to ascertain if they seemed to discriminate between the two groups. A further effort to establish partial validity was to determine the correlations between the PDI and the factors of the Demos D Scale, and the opinion of the teachers.

Reliability

The reliability of the PDI was examined in terms of internal consistency. Coefficients of internal consistency were calculated for each factor of the PDI and for the entire instrument. The correlations of the items with their respective factors and the total instrument were also calculated.

Norms

Preliminary norms for the PDI were established by reporting the means and standard deviations for the potential dropouts, for those who will probably stay in school, and for the total sample.

Instruments

Demos D Scale -- The primary purpose of the Demos D Scale is to determine verbalized opinions which reflect attitudes presumably related to dropping out of school. Four basic attitudinal areas are included in this instrument. These are as follows:

1. Attitudes toward teachers (T)
2. Attitudes toward education (E)
3. Influences by peers or parents (P)
4. School behavior (S)

According to Demos, the validity and reliability of the Demos D Scale are considered to be synonymous, and can be considered to be high since Demos D Scale attitude responses are readily obtained. Face validity and content validity were determined by the use of psychological experts serving as judges of the items. The establishment of mean Demos D Scale Total Score differences, as well as individual Demos D Scale differences between a non-dropout group and a dropout group, is another indication of the validity of the instrument. The Demos D Scale provides information, based upon clinical ex-

periences, which enables one to interpret the total score and the factor scores in terms of probabilities of dropping out of school. This instrument is designed so that anyone with at least a fifth grade reading level can read and understand it. When one's reading ability falls below the fifth grade, the Demos D Scale is read aloud by the examiner and the student responds by circling his responses.[18]

Teacher's Opinion Item -- An item was developed which was based upon some characteristics that might be typical of potential dropouts. The teacher was asked to express his opinion, based upon these characteristics, of the chances of the child's dropping out of school before finishing high school.

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[18]George D. Demos, The Demos D (Dropout) Scale Manual, (Los Angeles, California: Western Psychological Services, 1970), pp. 1-5.

RESULTS

The analysis of the data for this study involved the development and partial validation of the initial form of the PDI. Operations included in the analyses of the data were:

1. Selecting from a pool of items those items which received the most favorable evaluations from a committee of judges.

2. Refining of the instrument through factor analysis.

3. Establishment of partial validity for the PDI through correlation with the Demos D Scale and the teacher's opinion, and factor analysis.

4. Establishment of reliability for the PDI.

5. Establishment of preliminary norms for use in the identification of potential dropouts.

Selection of Items

A pool of items was developed based upon a careful review of the literature related to the identification of potential school dropouts. These items were then divided into two basic categories: (1) descriptive background information, and (2) school behavior.

A committee of judges, composed of fifteen faculty members of the College of Education and Psychology at the University of Southern Mississippi and fifteen upper elementary

school teachers in Forrest County, Mississippi, was given this list of items along with a cover sheet which explained how they were to evaluate each item. The judge's evaluations of each item are shown in Table 1. Items which received a "not valid" rating by at least twenty-five per cent (7) of the judges and fewer than fifteen "definitely valid" ratings were not included in the preliminary form of the PDI. All of the items of section one of the list were considered to be valid by the judges; therefore, it was assumed that face validity was established for section one of the PDI. No further analysis was done with the items of seciton one. Eight of the items (1,2,17,19,43,51,52, and 55) in the second section of the tentative list of items were not considered valid by the judges. The forty-nine remaining items in this section of the PDI, which are referred to as school behavior items, were assumed to possess face validity.

Refining of the Instrument Through Factor Analysis

Ratings of each of the forty-nine items of section two of the PDI were obtained for 278 upper elementary school pupils. The instrument was refined by means of factor analysis. The intercorrelation matrix was subjected to an image analysis in order to derive an estimate of communality, which is the amount of variance that a variable shares with at least one other variable. The principal-axis solution was examined to determine the number of factors in the instrument and how many should be

TABLE 1

JUDGE'S EVALUATIONS OF EACH ITEM

Section One

Item	Definitely Valid	Unsure of Validity	Not Valid	Mean Rating
1a.	25	5	0	1.17
1b.	22	4	4	1.40
1c.	21	5	4	1.43
1d.	20	6	4	1.47
1e.	25	4	1	1.20
1f.	26	2	2	1.20
2.	28	2	0	1.07
3.	21	7	2	1.37
4.	22	8	0	1.27
5.	28	2	0	1.67
6.	26	3	1	1.17
7.	17	8	5	1.60

Section Two

1.	13	9	8	1.83
2.	12	9	9	1.90
3.	12	16	2	1.67
4.	16	7	7	1.70
5.	19	6	5	1.53
6.	13	12	5	1.73

TABLE 1 -- Continued

Item	Definitely Valid	Unsure of Validity	Not Valid	Mean Rating
7.	29	1	0	1.03
8.	24	6	0	1.20
9.	21	8	1	1.33
10.	20	9	1	1.37
11.	22	6	2	1.33
12.	16	12	2	1.53
13.	22	7	1	1.30
14.	20	9	1	1.37
15.	12	13	5	1.77
16.	25	5	0	1.17
17.	13	6	11	1.93
18.	23	6	1	1.27
19.	10	13	7	1.90
20.	18	8	4	1.53
21.	15	10	5	1.67
22.	24	5	1	1.23
23.	21	8	1	1.33
24.	22	7	1	1.30
25.	15	9	6	1.70
26.	20	9	1	1.37
27.	17	12	1	1.47
28.	13	16	1	1.60

TABLE 1 -- Continued

Item	Definitely Valid	Unsure of Validity	Not Valid	Mean Rating
29.	14	14	2	1.60
30.	20	8	2	1.40
31.	18	10	2	1.47
32.	19	11	0	1.37
33.	18	10	2	1.47
34.	16	12	2	1.53
35.	24	4	2	1.27
36.	17	10	3	1.53
37.	14	12	4	1.67
38.	11	13	6	1.83
39.	10	15	5	1.83
40.	13	16	1	1.60
41.	18	4	8	1.67
42.	16	7	7	1.70
43.	12	10	8	1.87
44.	17	12	1	1.47
45.	25	3	2	1.20
46.	19	11	0	1.37
47.	21	8	1	1.33
48.	22	6	2	1.33
49.	20	8	2	1.40
50.	14	14	2	1.60

TABLE 1 -- Continued

Item	Definitely Valid	Unsure of Validity	Not Valid	Mean Rating
51.	14	7	9	1.83
52.	12	10	8	1.87
53.	23	4	3	1.33
54.	13	12	5	1.73
55.	13	4	13	2.00
56.	21	8	1	1.33
57.	24	5	1	1.23

rotated. Five factors were selected for rotation on the basis of: (1) eigenvalues close to or greater than one (see Table 2), (2) the scree test (see Figure 1), and (3) interpretability.

TABLE 2

EIGENVALUES OF PRINCIPAL-AXES ANALYSIS

Factor	Eigenvalue
I	18.66
II	2.65
III	1.96
IV	1.12
V	0.90
VI	0.55
VII	0.55

It was found that sixty-five per cent of the total variation was common and five factors accounted for seventy-nine per cent of the common variance. The results of an orthogonal rotation scheme employing the varimax criterion are reported in this study because the orthogonal rotation provided a simpler and more meaningful factor structure than the non-orthogonal oblimin scheme employing the biquartimin criterion. The rotated orthogonal factor loading for the forty-nine behavioral items on the preliminary form of the PDI are shown in Table 3.

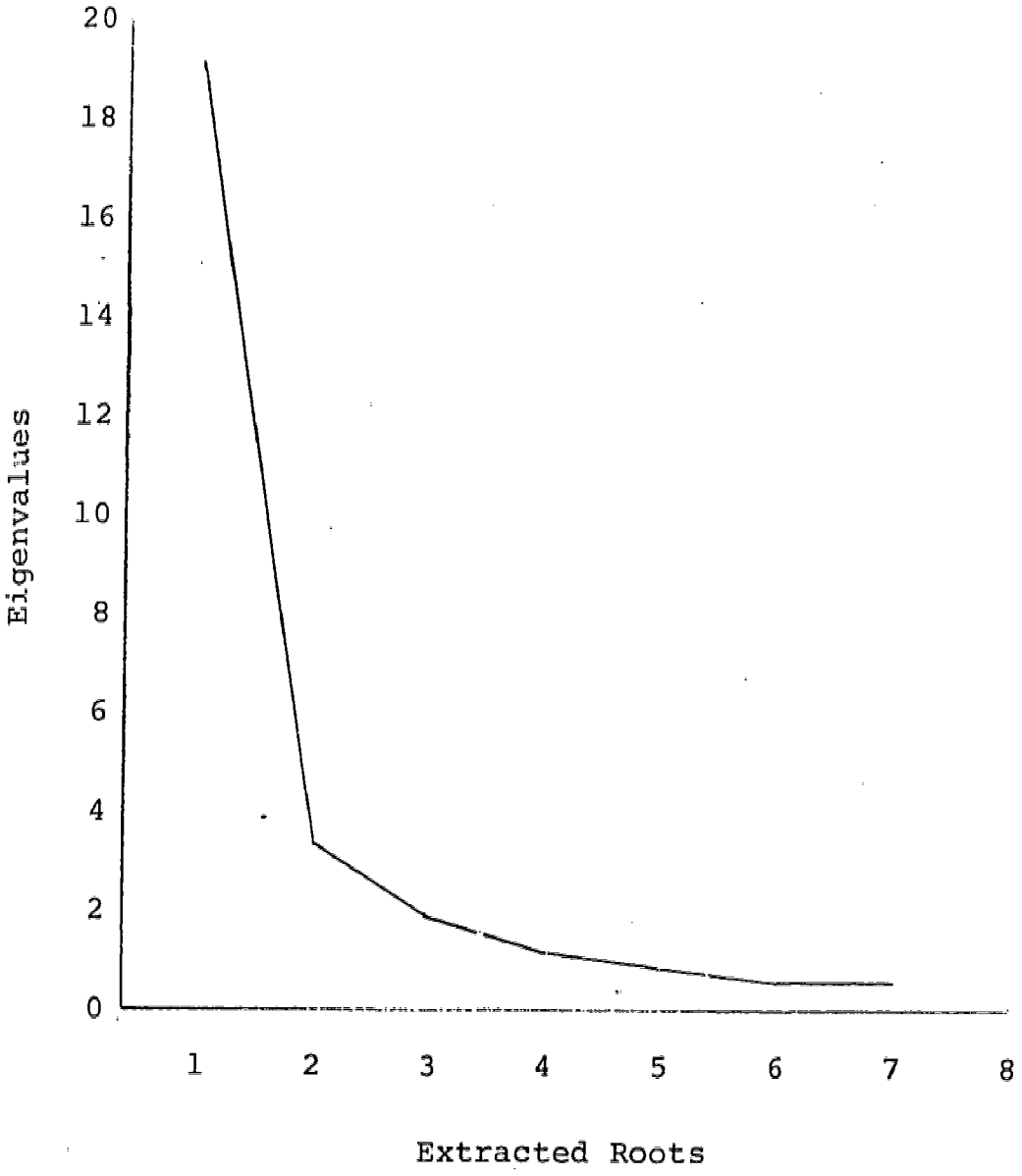

Fig. 1.--Scree Test for the principal-axes solution

TABLE 3

ROTATED ORTHOGONAL FACTOR LOADINGS FOR THE FORTY-NINE BEHAVIORAL ITEMS ON THE PDI

Items	Factor I	II	III	IV	V	h^2
1. Runs around in spite of prohibition	.68	.01	.32	.10	-.07	.58
2. Does not follow directions	.49	.13	.65	-.02	-.07	.68
3. Easily distracted by things around him	.42	.11	.68	.06	-.09	.66
4. Acts without thinking	.51	.12	.62	.05	-.03	.66
5. Gives up almost before he starts	.19	.26	.65	.21	-.13	.58
6. Behavior does not improve with discipline	.66	.04	.28	.09	-.19	.56
7. Damages or destroys things	.39	.26	.13	.28	-.33	.43
8. Vague or confused about things	.11	.30	.55	.08	-.39	.57
9. Seems to get negative reactions from peers	.32	.17	.22	.16	-.68	.67
10. Pushes, bites, hits, paws others	.63	.18	.21	.08	-.35	.60
11. Cannot make or keep friends	.39	.32	.18	.13	-.60	.67
12. Complains that others mistreat him	.46	.06	.26	.21	-.54	.69
13. Wants to change the rules	.46	.11	.18	.49	-.18	.52

TABLE 3 -- Continued

Items	Factor I	II	III	IV	V	h^2
14. Quickly insists he cannot do a thing	.14	.16	.58	.37	-.17	.54
15. Objects or refuses to go to school	.07	.46	.17	.45	-.20	.49
16. Other children make fun of him	.22	.41	.15	.27	-.46	.52
17. Seeks company of younger or older children	.22	.54	.20	.03	-.05	.39
18. Plays or stays alone	.00	.55	.21	.01	-.26	.41
19. Withdraws, daydreams, stares	-.03	.55	.41	.03	-.21	.51
20. Annoys or antagonizes others	.61	.17	.32	.03	-.26	.57
21. Cannot bear to lose	.55	.27	.06	.09	-.18	.42
22. Is excluded from the play of others	.19	.51	.19	.08	-.37	.47
23. Has violent outbursts of temper	.64	.22	.07	.08	-.25	.53
24. Uses profane or obscene language	.44	.31	.07	.24	-.37	.49
25. Slovenly, unkempt appearance, messy	.33	.27	.18	.15	-.38	.38
26. Cries, easily and often	.23	.27	.07	.13	-.39	.30
27. Complains of pain or aches	.19	.33	.12	.24	-.22	.27
28. Destroys the property of others	.38	.32	.04	.27	-.40	.48

TABLE 3 -- Continued

Items	Factor I	II	III	IV	V	h^2
29. Tells lies	.46	.31	.16	.43	-.34	.27
30. Steals things	.41	.30	.08	.56	-.21	.63
31. Speaks of dislike for school	.18	.35	.26	.51	-.04	.48
32. Teases, fights with, or bullies other children	.59	.13	.20	.33	-.27	.59
33. Loud and boisterous	.70	.08	.15	.20	-.11	.57
34. Sucks thumb or fingers	.25	.59	.02	.28	-.09	.50
35. Bites nails or fingers	.25	.66	.00	.19	-.11	.55
36. Stutters or stammers	.10	.49	.14	.22	-.27	.39
37. Does not take part in class activities	.11	.38	.40	.30	-.23	.46
38. Disregards class rules and rountine	.56	.22	.34	.22	-.20	.57
39. Subjected to teasing by peers	.22	.28	.19	.07	-.53	.44
40. Level of achievement below average	.27	.21	.51	.14	-.31	.49
41. Disruptive in the classroom	.66	.07	.37	.07	-.15	.61
42. Careless or lazy about his work	.35	.15	.60	.21	-.17	.58

TABLE 3 -- Continued

Items	Factor					h^2
	I	II	III	IV	V	
43. Disobedient or defiant	.61	.16	.21	.19	-.14	.50
44. Talks back or is disrespectful to teacher	.53	.22	.13	.24	-.08	.41
45. Pouts or sulks	.41	.16	.41	.24	-.18	.45
46. Verbally expersses dislike for school	.23	.22	.27	.46	-.21	.43
47. Does not talk to teachers about difficulty with school	.18	.05	.32	.27	-.15	.23
48. Makes statements such as, "I can't," when confronted with a new or difficult task	.12	.11	.48	.45	-.13	.48
49. Appears miserable or unhappy	.06	.28	.34	.34	-.35	.44

Several things had to be considered in interpreting the five factors and refining the PDI. They were as follows:

1. Limit the number of items to be used in this section of the PDI to about forty.

2. Use items with highest factor loadings

3. Delete items from factors with which they have factor loadings less than .39 in magnitude.

4. Keep to an absolute minimum the number of items appearing on more than one factor.

5. Attempt to have about the same number of items on each factor.

The ten items which had the highest factor loadings on factor I (see Table 4) were found to make up a meaningful factor which was named "Overt Disruptive Behavior." This was a simple factor, that is, not one of these ten items had a factor loading on another factor that even approached their loadings on factor I. This factor was abbreviated ODB.

The second factor was found to consist of basically eight items (see Table 5). These items were those having the highest factor loadings on factor II. One of the items (19) was loaded above the cut off value of .39 on another factor, but it was just .02 above the cut off value and it loaded heavily (.55) on factor II. Inspection of these eight items revealed that there were probably two aspects involved in the factor: (1) insecurity, and (2) withdrawal. Therefore, the factor was labeled the Insecurity-Withdrawal (I-W) factor.

TABLE 4

ITEMS INCLUDED IN FACTOR I (OVERT DIS RUPTIVE BEHAVIOR) AND THEIR FACTOR LOADINGS

Items	Factor Loading
33. Loud and boisterous	.70
1. Runs around in spite of prohibition	.68
41. Disruptive in the classroom	.66
6. Behavior does not improve with discipline	.66
23. Has violent outbursts of temper	.64
10. Pushes, bites, hits, paws others	.63
43. Disobedient or defiant	.61
20. Annoys or antagonizes others	.61
32. Teases, fights with, or bullies other children	.59
38. Disregards class rules and routine	.56

TABLE 5

ITEMS INCLUDED IN FACTOR II (INSECURITY-WITHDRAWAL) AND THEIR FACTOR LOADINGS

Items	Factor Loading
35. Bites nails or fingers	.66
34. Sucks thumb or fingers	.58
18. Plays or stays alone	.55
19. Withdraws, daydreams, stares	.55
17. Seeks company of younger or older children	.54
22. Is excluded from the play of others	.51
36. Stutters or stammers	.49
15. Objects or refuses to go to school	.46

Nine items loaded .48 or higher on factor III (see Table 6). One of the items (48) served double duty by being inability or refusal to do school work, and a feeling of vagueness or confusion on the part of the student. This factor appeared to have something to do with one's goal orientation; therefore, it was entitled Lack of Goal Orientation (LGO).

A fourth factor was loaded with items which appeared to be measuring something in the realm of antisocial behavior (See Table 7). Five items loaded solely on this factor with loadings of .43 or higher, and two items (16,48) loaded on this factor and one other factor with loadings of .45 or greater. These two items served as multipurpose items. The name given to this factor was Antisocial (AS).

Seven items were included in the fifth factor (See Table 8). Six of the seven items loaded .39 or stronger solely on factor V. One item (16) was also used on factor IV. All of these items had a negative loading with this factor and seemed to be measuring some aspect of peer relations. The factor was named Peer Interaction (PI).

The PDI behavioral items were refined through factor analysis from forty-nine items to thirty-nine items. These Thirty-nine items were meaningfully represented by the five factors which were identified. The five factors were:

I. Overt Disruptive Behavior (ODB)

II. Insecurity - Withdrawal (I-W)

III. Lack of Goad Orientation (LGO)

TABLE 6

ITEMS INCLUDED IN FACTOR III (LACK OF GOAL ORIENTATION) AND THEIR FACTOR LOADINGS

	Items	Factor Loading
3.	Easily distracted by things around him	.68
2.	Does not follow directions	.65
5.	Gives up almost before he starts	.65
4.	Acts without thinking	.62
42.	Careless or lazy about his work	.60
14.	Quickly insists he cannot do a thing	.58
8.	Vague or confused about things	.55
40.	Level of achievement below average	.51
48.	Makes statements such as, "I can't," when confronted with a new or difficult task	.48

TABLE 7

ITEMS INCLUDED IN FACTOR IV (ANTISOCIAL)
AND THEIR FACTOR LOADINGS

	Items	Factor Loading
30.	Steals things	.56
31.	Speaks of dislike for school	.51
13.	Wants to change the rules	.49
46.	Verbally expresses dislike for school	.46
48.	Makes statements such as, "I can't," when confronted with a new or difficult task	.45
16.	Other children make fun of him	.45
29.	Tells lies	.43

TABLE 8

ITEMS INCLUDED IN FACTOR V (PEER INTERACTION)
AND THEIR FACTOR LOADINGS

	Items	Factor Loading
9.	Seems to get negative reactions from peers	-.68
11.	Cannot make or keep friends	-.60
12.	Complains that others mistreat him	-.54
39.	Subjected to teasing by peers	-.53
16.	Other children make fun of him	-.46
28.	Destroys the property of others	-.40
26.	Cries, easily and often	-.39

IV. Antisocial (AS)

V. Peer Interaction (PI)

Establishment of Partial Validity for the PDI

First, scores were obtained on the two criteria, the Teacher's Opinion of the chances of each pupil's dropping out of school and the Demos D Scale (four factor scores and total score). The Teacher's Opinion Item asked the teacher to circle one of five responses on a continuum. For data analysis purposes and because of the nature of the five possible responses, the number of categories was reduced to two. The first possible response on the Teacher's Opinion Item, "Little Chance," was considered the only clear-cut positive response, and these responses were scored as zeros, which meant the pupil was not a potential school dropout. The four other possible responses (Some Chance, Even Chance, Strong Chance, Very Strong Chance) were considered to be varying shades of a negative response, and thus scored as ones, which indicated the pupil was a potential school dropout.

Table 9 contains the correlations of the PDI factor and total scores with the Teacher's Opinion Item and the Demos D Scale factor and total scores. All of the correlations between thd PDI scores and the Teacher's Opinion Item were significant beyond the .001 level with magnitudes ranging from .38 to .66. The intercorrelations between the PDI scores and the Demos D Scale scores ranged from -.03 to .38. Seventeen of these thirty intercorrelations were significant beyond the .05 level.

TABLE 9

CORRELATIONS BETWEEN PDI SCORES,
THE TEACHER'S OPINION ITEM AND
DEMOS D SCALE SCORES, N=88

PDI Score	Teacher's Opinion	Demos Factor T	Demos Factor E	Demos Factor P	Demos Factor S	Demos Total Score
Factor I Overt Disruptive Behavior	.49**	.32*	.34*	.30*	.22*	.38**
Factor II Insecurity - Withdrawal	.54**	.32*	.24*	.29*	.23*	.35*
Factor III Lack of Goal Orientation	.66**	.18	.34*	.28*	.25*	.33*
Factor IV Antisocial	.54**	.29*	.18	.33*	.09	.29*
Factor V Peer Interaction	.40**	-.01	.01	.07	.00	.02
Total	.38**	-.03	.09	.04	.04	.04

*Significant at the .05 level
**Significant at the .001 level

The eighty-eight pupils were then divided into two groups on the basis of their Demos D Scale scores and the Teacher's Opinion Item. If a pupil had a total score on the Demos D Scale of sixty or higher and received a 2, 3, 4, or 5 on the Teacher's Opinion Item, he was considered a potential school dropout. A total score of sixty or higher on the Demos D Scale indicated that the child had a greater than even chance of dropping out of school, according to the Demos instrument. There were twenty-eight pupils who met these two criteria and were thus considered potential dropouts. The other sixty pupils were not considered as potential school dropouts. The correlations between membership in one of the groups and scores on the PDI are shown in Table 10. The correlations between factors I, II, III and IV and group membership were of a moderate magnitude and significant beyond the .001 level. Factor V and the total PDI scores had correlations of .16 and .15 with group membership and were not significant.

TABLE 10

CORRELATIONS BETWEEN MEMBERSHIP IN DROPOUT GROUP AND PDI SCORES, N=88

	Factor I	Factor II	Factor III	Factor IV	Factor V	Total
Group Membership	.37*	.40*	.46*	.42*	.16	.15

*Significant at the .001 level

Reliability of PDI

In order to determine the internal consistency of the items of the PDI and its factors, the Alpha Coefficient[19] introduced by L.J. Cronbach was calculated. The Alpha Coefficient is the mean of all possible split-half coefficients, the value expected when two random samples of items from a pool like those in the PDI are correlated, and is also a lower bound for coefficients of equivalence obtained by simultaneous administration of two tests having matched items. Table 11 contains the Alpha Coefficients for the five factors of the PDI and for the entire instrument. The Alpha Coefficients ranged from .90 to .98 for the factors of the PDI. The entire instrument had an Alpha Coeffieicne of .98.

TABLE 11

ALPHA COEFFICIENTS FOR PDI

	Factor I	Factor II	Factor III	Factor IV	Factor V	Total
Alpha	.98	.90	.97	.91	.95	.98

[19] L.J. Cronbach, "Coefficient Alpha and the Internal Structure of Tests," Psychometrika, XVI (1951), 297-334.

Establishment of Preliminary Norms for the PDI

The preliminary norms for the PDI are found in Tables 12-17, which contain the means and standard deviations of the PDI scores for the total sample, the potential dropout group, and the non-potential dropout group.

TABLE 12

MEANS AND STANDARD DEVIATIONS OF PDI FACTOR I SCORES

Group	Mean	Standard Deviation
Total Sample (N=88)	16.46	10.11
Potential Dropout (N=28)	21.96	11.27
Non-potential Dropout (N=60)	13.88	8.36

TABLE 13

MEANS AND STANDARD DEVIATIONS OF PDI FACTOR II SCORES

Group	Mean	Standard Deviation
Total Sample (N=88)	11.27	5.05
Potential Dropout (N=28)	14.25	5.11
Non-potential Dropout (N=60)	9.88	4.37

TABLE 14

MEANS AND STANDARD DEVIATIONS
OF PDI FACTOR III SCORES

Group	Mean	Standard Deviation
Total Sample (N=88)	18.59	12.54
Potential Dropout (N=28)	27.11	9.26
Non-potential Dropout (N=60)	14.62	11.87

TABLE 15

MEANS AND STANDARD DEVIATIONS
OF PDI FACTOR V SCORES

Group	Mean	Standard Deviation
Total Sample (N=88)	10.18	5.12
Potential Dropout (N=28)	13.32	4.81
Non-potential Dropout (N=60)	8.72	4.57

TABLE 16

MEANS AND STANDARD DEVIATIONS
OF PDI FACTOR V SCORES

Group	Mean	Standard Deviation
Total Sample (N=88)	10.92	8.00
Potential Dropout (N=28)	12.75	5.41
Non-potential Dropout (N=60)	10.07	8.83

TABLE 17

MEANS AND STANDARD DEVIATIONS
OF PDI TOTAL SCORES

Group	Mean	Standard Deviation
Total Sample (N=88)	73.57	74.52
Potential Dropout (N=28)	89.75	28.67
Non-potential Dropout (N=60)	66.02	87.07

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Introduction

The purpose of this chapter is to summarize the study, to present a discussion of the results derived from the analyses of data, and to provide recommendations for additional research.

Summary of the Study

The purpose of the present study has been the development and partial validation of an instrument to be utilized in the identification of potential school dropouts. This involved: (1) collecting and categorizing characteristics of potential dropouts in such a way that they could be incorporated into a single instrument, (2) refining the instrument through factor analysis, (3) establishing partial validity for the initial form of the instrument, (4) determining the reliability of the PDI, (5) establishing preliminary norms for use in the identification of potential dropouts.

Thirty judges were asked to evaluate the pool of items which had been collected for the PDI. Based upon the judges' evaluations, all of the items of the first section of the PDI seemed to possess face validity. However, eight of the behavioral items in the second section of the PDI received

poor ratings by the judges and were deleted. The remaining items of the second section (forty-nine items) of the PDI were assumed to possess face validity, and were given to eighteen upper elementary school teachers in Forrest County, Mississippi, to obtain ratings on the behavior of their pupils.

The responses of the teachers on the preliminary forms of the PDI (forty-nine items) were factor analyzed. Based upon these results, the preliminary form of section two of the PDI was refined from forty-nine items to thirty-nine items. The refined form of the PDI (thirty-nine items) was then given to three upper elementary teachers in Forrest County, Mississippi, who rated the behavior of each of their pupils (eighty-eight). The teachers also responded to the Teacher's Opinion Item for each child. The Teacher's Opinion Item was one of the criteria used in the partial validation procedure. The other was the Demos D Scale, which was administered to each of the eighty-eight pupils.

Partial validation was established by calculating the correlations between the scores on the refined form of the PDI and the Teacher's Opinion Item, and the PDI and the Demos D Scale. On the basis of the Demos D Scale total score and the Teacher's Opinion Item, the total sample was divided into two groups: (1) potential school dropouts (twenty-eight), and (2) non-potential school dropouts (sixty). The correlations between group membership and factor scores on the PDI were calculated to determine how well the PDI scores discriminated between the two groups. The Alpha Coefficient was utilized to

examine the internal consistency of the PDI, and the means and standard deviations for the total sample and the two sub-groups on the PDI were reported in Tables 12-17.

Conclusions and Discussion

Findings Relating to Factors

Through factor analysis the research form of the PDI was refined and found to consist of five factors:

I. Overt Disruptive Behavior (ODB)

II. Insecurity - Withdrawal (I-W)

III. Lack of Goal Orientation (LGO)

IV. Antisocial (AS)

V. Peer Interaction (PI)

Studies dealing with the identification of potential dropouts have given ample evidence that factors, such as the five identified above, could be expected to exist in an instrument designed to identify potential school dropouts. Although potential dropouts are not always discipline problems,

they do often exhibit overt disruptive behavior. Factor I (ODB) had the most obvious interpretation of all the factors, and seems to be an important variable to consider in the identification of potential dropouts.

The Insecurity - Withdrawal (I-W) factor, which is factor II, seems to indicate that the potential dropout may experience more feelings of inadequacy than the child who is not a potential dropout. The potential dropout tends to withdraw from the company of his peers and does not participate in school activities. He seems to feel insecure with those of his own age and prefers to play alone.

Factor III (LGO) appears to be measuring the child's "willingness to try." It may be referred to as motivation or goal orientation. It seems that the potential dropout may experience depression which the teacher interprets as indifference toward school in general.

Factor IV (AS) is related to rebellious acts and attitudes, which may be related to delinquency. However, it is probably not that serious. This factor indicates a dislike for school, and the rules that govern one's daily life.

The last factor, factor V (PI), seems to be related to one's peer relations. The interaction of the potential dropout with his peers is of a negative nature. He gets negative reactions from his peers, complains that they mistreat him, and he is subjected to teasing by them.

Findings Relating to Partial Validity

All of the correlations between the scores on the PDI and the Teacher's Opinion Item were significant beyond the .001 level with magnitudes ranging from .38 to .66. These correlations seem to be meaningful and indicate that those things which influence the teacher's opinion of a child's chances of dropping out of school were significantly represented by the items of the PDI. The Lack of Goal Orientation factor of the PDI had the highest correlation with the Teacher's Opinion Item (.66). This seems to mean that the child who lacks motivation and/or a "willingness to try" tends to be identified quicker as a potential dropout by the teacher than the child who may be characterized by some of the other factors of the PDI.

Seventeen of the thirty intercorrelations between the PDI scores and the Demos D Scale scores were significant, but the magnitudes of these coefficients ranges from only .22 to .38. Therefore, it was assumed that the Demos D Scale was measuring something other than what the PDI was measuring, except for a small overlap. The Demos D Scale was designed to measure the attitudes of children based upon their responses to its twenty-nine items. The PDI was designed for teachers to rate their pupils on thirty-nine specific behaviors. This basic difference between the instruments may explain the weak correlations which were obtained. One would expect some overlap between attitudes and behavior, which

was found between these two instruments, but it seems that a stronger correlation should exist between the Demos D Scale and the PDI.

One other step in the validation procedure involved the calculation of the correlation between group membership (dropout and non-dropout groups) and the PDI factor and total scores. These correlations ranged from .37 to .46 for the Overt Disruptive Behavior, Insecurity-Withdrawal, Lack of Goal Orientation, and Antisocial factors and they were significant at the .001 level. This indicates that these four factors discriminated to a moderate degree between the two groups. The Peer Interaction factor and the total score correlations (.16 and .15) with group membership were not significant, and did not seem to discriminate between the two groups.

Findings Relating to Internal Consistency

The reliability of the PDI and its factors was examined in terms of internal consistency using the Alpha Coefficient. The Alpha Coefficients for the five factors ranged from .90 to .98 which seemed to establish a relatively high internal consistency for each factor. The Alpha Coefficient for the entire instrument was .98 which indicated that there may be a common or general factor in the PDI. It could be argued, based upon these Alpha Coefficients, that there may be only one factor in the PDI, however, there was logical and empirical evidence in the factor analysis results to retain

five factors, and the item correlations with their respective factors were higher in every case, except one, than their correlations with the entire instrument. Therefore, it was concluded that more information could be obtained by maintaining the five factors.

Findings Relating to Preliminary Norms

The preliminary norms for the initial form of the PDI were established by reporting the means and standard deviations of the total sample, the potential dropout group, and the non-potential dropout group, on the PDI factor and total scores. The mean scores on factors I,II,III and IV for the potential dropout group and the non-potential dropout group seemed to discriminate sufficiently enough between the two groups to warrant normative usage. Factor V and the total PDI mean scores did not appear to discriminate well enough between the two groups to be utilized as normative data. Any conclusions which may be drawn from the comparison of PDI scores of other upper elementary school children with these two norm groups should be tentative until additional research can be conducted with the PDI.

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SECTION II

A COMPARISON OF THE EFFICACY OF TREATMENTS OF CLASSROOM BEHAVIOR MANAGEMENT AND GROUP COUNSELING FOR USE WITH POTENTIAL DROPOUTS

by

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INTRODUCTION

A considerable amount of research suggests that the reasons for students dropping out of school prior to the completion of a high school program can be traced to their elementary schcol experience. Lichter found that three-fourths of the boys with IQ's of 90 and above who dropped out of high school had academic problems in the elementary school.[1] The elementary school child who does not attain socially acceptable rewards has difficulty meeting the academic and social press of his environment. Cloward and Ohlin support this and add that unless the elementary school child can be helped to learn appropriate behaviors he will probably find ways which are damaging to himself and others in achieving economic and material goals.[2]

Capable students leave school according to Elliott, Voss and Wendling as a result of status deprivation experienced by poor relationships in the academic setting.[3]

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[1]Solomon O. Lichter, The Dropouts, New York: The Free Press of Glencoe, 1962.

[2]Richard A. Cloward and Lloyd E. Ohlia, Delinquency and Opportunity: A Theory of Delinquent, New York: The Free Press of Glencoe, 1962

[3]Delbert S. Elliot, et al, "Capable Dropouts and the Social Milieu of High School," The Journal of Educational Research, XL (1966), 179-185.

Bowman and Matthews noted that poor social adjustment as well as academic failure contributed to reasons for dropping out of school.[4] Many dropouts have the intellectual ability to pursue their formal schooling until the completion of a high school program but fail to make adequate school adjustments. Comments throughout the literature suggest that preventive approaches should be considered at the elementary level.

The non-attentive child has the pressure of deteriorating relationships with his teacher and peers. Krumboltz and Goodwin state that a pattern of inattention may increase two ill effects. One is the avoidance of the teacher by the child, which reduces the possibility of receiving needed instruction for classroom tasks. The other effect is extreme emotional arousal which reduces the child's on-task behavior.[5] Bindrau found that under stress the child overlooks necessary cues for performing a task by attending to too many irrelevant cues. The inattentive child therefore may acquire the reputation of a troublemaker. Woody found that well-behaved boys scored significantly higher in both reading achievement and

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[4]Paul H. Bowman and Charles V. Matthews, "Motivations of Youth for Leaving School: U.S. Department of Health, Education and Welfare, Office of Education, Cooperative Research Program, Project No. 200 (Quincy, Illinois: University of Chicago, 1960), p. 45.

[5]John D. Krumboltz and Dwight L. Goodwin, Increasing Task Oriented Behavior: An Experimental Evaluation of Training Teachers in Reinforcement Techniques. U. S. Office of Education, Department of Health, Education and Welfare, 1966 (Contract OE5-85-095), p. 3.

arithmetic than the behavioral problem boys.[6] Thus, it is evident that the degree of deficiency in achievement may correspond to classroom behavioral problems whether social, emotional, or organic.[7]

This study was designed from the point of view of the elementary counselor who assists the teacher to improve learning. Statistical comparison of effectiveness of treatment between classroom behavior management and group counseling will permit assessment of differential approaches.

Statement of the Problem

The problem of this study was expressed by the question: Is there a difference in efficacy of treatment between classroom behavior management and group counseling for use with potential dropouts?

The problem statement was basically concerned with the evaluation of effectiveness of treatment of reinforcement using the teaching strategy of teacher approval/disapproval[8,9]

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[6]Robert H. Woody, Behavioral Problem Children in the Schools (New York: Appleton-Century-Crofts, 1969).

[7]Ibid.

[8]Charles H. Madsen and Clifford K. Madsen, Teaching/Discipline, (Boston: Allyn and Bacon, Inc., 1970).

[9]John D. Krumboltz and Dwight L. Goodwin, Increasing Task Oriented Behavior: An Experimental Evaluation of Training Teachers in Reinforcement Techniques. U.S. Office of Education, Department of Health, Education and Welfare, 1966 (Contract OE5-85-095).

and group counseling[10] to increased on-task behavior, social status, grade-point average and school attendance.

Purpose of the Study

The general purpose of this study was to determine the differential effects of classroom behavior management procedures and group counseling on (1) on-task behavior, (2) social status, (3) grade-point average, and (4) school attendance of identified potential dropouts in the fifth and sixth grades.

In particular, the study was undertaken in order to answer the following questions:

1. Is there a significant difference between classroom behavior management and group counseling on on-task behavior of potential dropouts?

2. Is there a significant difference between classroom behavior management and group counseling on social status of potential dropouts?

3. Is there a significant difference between classroom behavior management and group counseling on grade point average earned by potential dropouts?

4. Is there a significant difference between classroom behavior management and group counseling on school attendance of potential dropouts?

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[10]George M. Gazda, Theories and Methods of Group Counseling in the Schools, (Springfield, Illinois: Charles C. Thomas, Publisher, 1969), p. 9.

Hypotheses

In investigation of the foregoing questions the following hypotheses were tested:

H_1: Classroom behavior management and group counseling techniques have differential effects on on-task behavior.

H_2: Classroom behavior management and group counseling techniques have differential effects upon sociometric status.

H_3: Classroom behavior management and group counseling techniques have differential effects upon achievement.

H_4: Classroom behavior management and group counseling techniques have differential effects upon school attendance.

Definition of Terms

Potential Dropout--The term potential dropout in this study referred to those students who were identified in the fifth and sixth grades of Forrest County, and Hattiesburg, Mississippi, public schools by the Demos D Scale[11] and the Dropout Rating Scale.[12]

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[11] John Curtis Gowan and George D. Demos, The Disadvantaged and Potential Dropout (Springfield, Illinois: Charles C. Thomas, Publisher, 1969).

[12] Ibid.

Group Counseling--In this study, Group Counseling referred to the therapy functions created through the sharing of personal concerns with one's peers and counselor. The focus of the interaction between counselor and group members was permissiveness, orientation to reality, catharsis, mutual trust, acceptance and support.[13] In this respect group counseling may be defined as open discussion of member's concerns, needs and feelings. Group counseling as further defined was growth-centered rather than task-centered. By this definition of group counseling, group leader responses were largely reflective and supportive.

Classroom Behavior Management--For the purpose of this study Classroom Behavior Management is the teaching strategy that involved the implementation of behavior; the details of the strategy are provided in Appendix I.[14] The abbreviation of CBM is hereafter used to indicate Classroom Behavior Management.

Social Status--The term social status for the purpose of this study was considered to be the student's acceptance as seating companions, working companions and playing companions as determined by peer choices.

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[13]George M. Gazda, Theories and Methods of Group Counseling (Springfield, Illinois: Charles C. Thomas, Publisher, 1969).

[14]Charles H. Madsen, "Notes to Teachers," Unpublished and undated papers.

Observation--The term observation referred to classroom behavioral observations concerned with two major behaviors:

1. on-task or appropriate behavior, and
2. off-task or inappropriate behavior.

On-task Behavior--In this study, on-task behavior referred to the student's behavior described as:

(1) Working
(2) Preparing to work
(3) Listening to the teacher. This included information seeking, working at the chalkboard, raising his hand for assistance and entering into the activities determined by the teacher.

Delimitations

The following delimitations were made with regard to this study:

1. This study was limited to selected schools in Forrest County and Hattiesburg, Mississippi which had been designated by school officials as having a high potential dropout ratio.

2. Pupils who had been identified as needing special education services were excluded from this study.

3. This study was limited to those pupils identified by the Demos D Scale and the Dropout Rating Scale as potential dropouts.

DESIGN OF THE STUDY

Introduction

The evidence of the effectiveness of classroom behavior management procedures and group counseling techniques for changing behavior of potential dropouts has yet to be demonstrated in the elementary school classroom. This study was designed to compare the effects of CBM and group counseling for use with potential dropouts. The purpose of this chapter is to describe the source, procedures for data collection and treatment of data.

Sample

The school systems of Forrest County and Hattiesburg, Mississippi, were asked to indicate schools in which they would expect to find a large number of potential dropouts. These schools are listed in Table 1.

From the five selected elementary schools a total number of fifteen fifth and sixth grade teachers were randomly assigned in groups of five to each of the following treatment groups for a period of twelve weeks:

(1) Classroom Behavior Management (CBM)

(2) Group Counseling

(3) Control Group

TABLE 1

ELEMENTARY SCHOOLS WHICH PARTICIPATED IN THE STUDY

School Systems
Forrest County Mississippi School System
North Forrest Attendance Center
South Forrest Attendance Center
Hattiesburg Mississippi School System
Eaton Elementary School
Eureka Elementary School
W. H. Jones Elementary School

From the combined enrollment of 563 pupils, thirty potential dropouts were assigned to each of the three groups making a combined total of ninety subjects. The ninety subjects remained in their assigned classrooms with the other pupils who were not included in the study. The fifteen teachers used the Demos D Scale and the Dropout Rating Scale to identify the potential dropouts in their classroom.

Procedures

Five consultants trained in the CBM method were randomly assigned to the five teachers who were in the CBM group I to develop a classroom management approach. These teachers used the CBM method and received feedback from the consultant based on observation of the thirty potential drop-

outs recorded by the Madsen Observation Method.[15] Five doctoral students in guidance trained by the Madsen Method served as consultants to the five teachers in the CBM group.

The five teachers who were randomly assigned to the Group Counseling group II permitted six potential dropouts to be removed from the classroom one hour per week to receive group counseling (n=30). Five doctoral students in guidance (one counselor per group) trained in attitudinal group counseling served as the counselor for each of the five counseling groups. The counselors participated in three orientation sessions in which positive reinforcement counseling methods were utilized.

The five teachers who were randomly assigned to the Control Group III received no treatment. The thirty potential dropouts in the classes of the five teachers in the control group received no treatment.

Pre-Treatment Procedures

The fifteen teachers in the experimental and control groups administered the Demos D Scale to all pupils in their classes at the beginning of the experimental period. They completed the Dropout Rating Scale on each pupil. The six pupils who had the highest clinical probability of dropping out of school were identified in each of the classrooms of the fifteen teachers.

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[15] Charles H. Madsen and Clifford K. Madsen, Teaching Discipline, 2nd edition, In press.

Treatment Procedures

Group I, Classroom Behavior Management.--The five teachers in the CBM group participated in three one-hour training sessions in which video tapes demonstrating Madsen's classroom management techniques were utilized. The consultants in CBM presented a demonstration lesson on career education one hour each week. The consultants observed the six identified potential dropouts in their routine activities. Observations of on-off task behavior were recorded weekly. The teachers received feedback from the consultants as to the number of times a pupil was on and off tasks during weekly observation periods.

Group II, Group Counseling.--The six identified potential dropouts in the classes of the five teachers who were randomly assigned to the group counseling group participated in group sessions one hour per week. The counselor structured cues that led to consideration of behavior outside of the counseling sessions. The six pupils were observed weekly in their regular classroom activities on-off task behavior was recorded.

Group III, Control Group.-- The five teachers in the control group did not participate in treatment procedures. The six identified potential dropouts in each of the five classes received no treatment other than testing and observations of task behavior.

Data Collection

The following data were collected on September 27, 1971, November 5, 1971 and December 17, 1971.

(1) Observation record[16]

(2) Sociometric status[17]

(3) Grade point average in three basic academic subjects (Language Arts, Arithmetic and Social Studies)

(4) School attendance.

Observations of on-task behavior recorded weekly were summed for each subject. The number of times a subject was on-task assigned by the teacher was recorded in three minute intervals by the observer. Reliability of observers was established by dividing total number of times pairs of observers agreed by total number of times agreed plus total disagreed. Reliability was established at 97 per cent.

Sociometric status was determined by the number of choices each subject received on the sociometric form from his peers. Each choice was given a value of one regardless of the level of choice. The total number of choices were summed for each subject. The sociometric form was completed by each pupil in fifteen classrooms in order to determine social interaction of the subjects with their classmates.

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[16]Norman E. Gronlund, Measurement and Evaluation in Teaching (London: The Macmillan Company, 1969).

[17]Madsen, Teaching/Discipline, In press.

Grade point average was based on the equivalency of: A=4, B=3, C=2, D=1, F=0. The grade points earned in language arts, arithmetic and social studies by each subject were summed. School attendance included days tardy, days present and days absent for the twelve week treatment period. Pupils who were dismissed before the close of the regular school day were regarded as present for the entire day.

Statistical Analysis of Data

Raw scores from each of the measurements of the three groups were treated statistically to obtain means. A two-way analysis of variance was performed on the obtained data for the four variables: on-task behavior sociometric status, grade-point average and school attendance. The stated hypotheses were tested for significance by the use of F ratios at the .05 level of significance. In instances where a significant difference was indicated a simple effect analysis was employed in order to investigate the interaction of the three groups.

Instruments

Four instruments were used to implement selection criteria and to compare the effects of treatment. These consisted of the Demos D Scale, the Dropout Rating Scale, the Student Observation Form and the Sociomatric Form.

Demos D Scale

The Demos D Scale is an attitude scale for the information needed to identify dropouts. It can be read above fifth grade level. Validity and reliability are reported to be "high." The level of reliability is not reported by the authors.[18]

Dropout Rating Scale

The Dropout Rating Scale is a research instrument. The higher the score, the greater the chance of dropout. The scale is based on the following ratings: (1) school attendance, (2) after school work hours, (3) number of siblings in the family, (4) sociological background, (5) reading achievement, (6) grade-point averages, (7) citizenship marks (8) over-age for grade, and (9) number of school systems attended.[19]

Student Observation Form

The Student Observation Form provides information about child behavior described as follows: (1) on-task: this catagory includes verbal and motor behavior that follow the rules of the classroom and are appropriate to the learning situation, (2) verbal off-task: any oral response that breaks the class rules and/or interrupts the learning situation including inappropriate talking, yelling, blurting out, whistling, humming, screaming, singing and laughing, (3) motor off-task:

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[18]John Curtis Gowan and George D. Demos, The Disadvantaged and Potential Dropout (Springfield, Illinois: John C. Thomas, 1966), p. 75.

[19]Ibid., p. 10.

any motor response (large motor or minor motor) that breaks the class rules and/or interrupts the learning situation, (4) gross motor: getting out of seat, turning around at least 90 degrees, running, walking around room and waving arms (5) minor motor: these behaviors are only recorded when attention is not directed to work, (6) other or passive off-task: student is involved in no interaction or in doing nothing when he is expected to be involved.[20]

Reliability of the student observation form concerns the amount of agreement/disagreement concerning various observers when observing the same behaviors at the same time. Total number of agreements divided by the total number of agreements plus disagreements equals percentage reliability.[21]

Sociometric Form

The Sociometric Form measures pupils' peer-group acceptance as seating companions, working companions, and playing companions at the upper elementary school level. Five pupil choices for each activity are used as a measure of social acceptance.[22] Reliability of sociometric choice for test-retest including time intervals varying from two to nine

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[20]Madsen, Teaching Discipline, 2nd ed., still in publication.

[21]Ibid.

[22]Gronlund, Measurement, op. cit.

weeks is reported to range in correlation from .70 to .89 with a median of .76.[23]

Summary

The sample population was chosen from five elementary schools in Forrest County and Hattiesburg, Mississippi, public school system. A total number of fifteen fifth and sixth grade teachers from the five schools were randomly assigned in groups of five to the three treatment groups for twelve weeks, CBM, Group Counseling and Control: Thirty potential dropouts identified by the Demos D Scale and the Dropout Rating Scale were assigned to each of the three groups making a combined total of ninety subjects.

The five teachers who were randomly assigned to Group I had a consultant in classroom behavior management. Five doctoral students in guidance trained by the Madsen method served as the consultants. These five teachers received feed back from the consultants based on observations of the potential dropouts.

The five teachers who were randomly assigned to Group II permitted six potential dropouts to be removed from the classroom one hour per week to receive group counseling. Five doctoral students trained in attitudinal group counseling served as the counselors for each of the five counseling groups.

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[23]Merl E. Bonney, "Sociometric Methods," Encyclopedia of Educational Research, 3rd. ed. (New York: MacMillan Company, 1969).

The five teachers who were randomly assigned to Group III received no treatment. The thirty potential dropouts identified in the classroom of the five teachers in Group III served as the control for the experiment.

Data were collected for the four variables, (1) observation of on-task behavior, (2) sociometric status, (3) grade-point average, and (4) school attendance., pre-treatment, mid-treatment and post-treatment.

A two-way analysis of variance was performed on the obtained data. The five per cent level was accepted as satistically significant.

PRESENTATION OF FINDINGS

Introduction

This chapter presents all findings revealed by statistical analysis. The four hypotheses of the study were listed by data obtained from observation of on-task behavior, sociomatric status indicated by peer choices, grade-point average and attendance records. Additional findings not included in the original hypotheses are also reported.

On-task Behavior

Hypothesis I stated that Classroom Behavior Management and Group Counseling techniques have differential effects on on-task behavior.

When subjected to a two-way analysis of variance the three treatment groups differed significantly on on-task behavior at the .05 level. The effects of the trials were not significant but the interaction between groups and trials was significant at the .05 level. The results of the two-way analysis of variance are shown in Table 2.

The means of the CBM group and the Control group changed significantly as shown in Table 3, which contains the results of a simple effects analysis.

TABLE 2

SUMMARY OF ANALYSIS OF VARIANCE
OF ON-TASK BEHAVIOR

Source	df	ms	F
Between	89	122.09	21.17[a]
Groups	2	1778.24	
Error (G)	87	89.02	
Within	90	48.76	
Trials	1	37.38	1.06
G by T	2	637.24	18.02[b]
Errors (T)	87	35.36	
Total	179		

[a,b]Significant at .05 level

TABLE 3

SIMPLE EFFECTS ANALYSIS OF
OF ON-TASK BEHAVIOR

Source	SS	df	ms	F
T at G_1	843.75	1	843.75	23.86[a]
T at G_2	8.82	1	8.82	.25
T at G_3	459.27	1	459.27	12.99[b]
Error (T)	3076.14	87	35.36	

[a,b]Significant at .05 level.

Figure 1 reveals that the mean of the CBM group increased while the means of the group counseling group did not change meaningfully. The means of the Control group decreased.

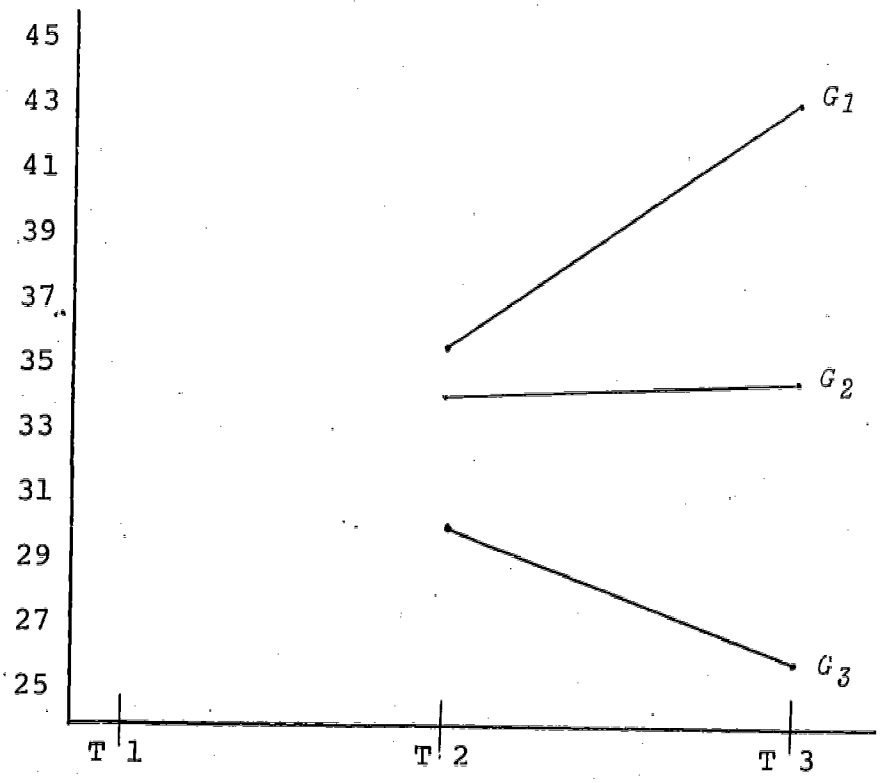

Figure 1.--On-task behavior of treatment groups at Trial 2 and Trial 3.

Sociometric Status

Hypothesis II stated that Classroom Behavior Management and Group Counseling techniques have differential effects upon sociometric status.

A two-way analysis of variance revealed that the sociometric status of the three groups did not differ significantly. However, the effects of the trials were significant at the .05 level. The interaction between groups and trials also was sig-

nificant at the .05 level. The results of the two-way analysis are shown in Table 4.

A simple effects analysis revealed that the means were significant at the .05 level for all three groups. The results are shown in Table 5.

TABLE 4

SUMMARY OF ANALYSIS OF VARIABLES OF SOCIOMETRIC STATUS

Source	df	ms	F
Between	89	19.20	
Groups	2	11.75	0.606
Error (G)	87	19.37	
Within	180	7.86	
Trials	2	204.10	41.435[a]
G by T	4	37.18	7.548[a]
Error (T)	174	4.93	
Total	269		

[a]Significant at .05 level.

TABLE 5

SIMPLE EFFECTS ANALYSIS OF SOCIOMETRIC STATUS

Source	SS	df	ms	F
T at G_1	349.42	2	174.71	35.44[a]
T at G_2	87.20	2	43.60	8.84[a]
T at G_3	120.29	2	60.14	12.20[a]
Error (G)	857.82	174	4.93	

[a]Significant at .05 level.

Figure 2 reveals that the means of the CBM group decreased from Trial 1 to Trial 2. A positive increase was observed from Trial 2 to Trial 3. Group counseling means increased slightly at Trial 1, Trial 2 and Trial 3.

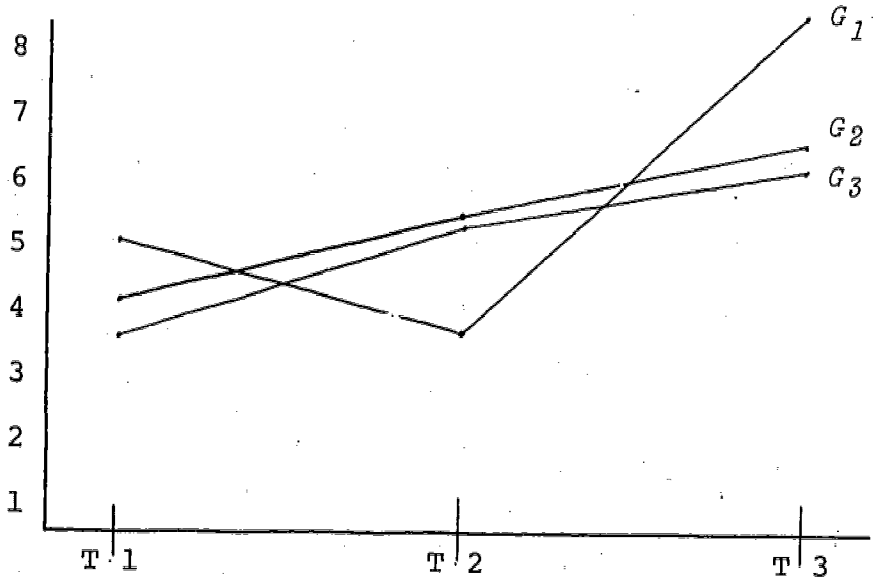

Figure 2.--Sociometric Status of treatment groups at Trial 1, Trial 2 and Trial 3.

The Control group means also showed a slight increase at all three trials.

Grade-Point Average

Hypothesis III stated that Classroom Behavior Management and Group Counseling techniques have differential effects upon achievement.

Grade-point averages of the three groups were subjected to a two way analysis of variance which revealed a significant difference at the .05 level. The effects of thr trials were also significant at the .05 level. However, the interaction

between groups and trials was not significant. The results of the two-way analysis of variance are presented in Table 6.

TABLE 6

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE
GRADE-POINT AVERAGES

Source	df	ms	F
Between	89	14.36	
Groups	2	105.01	8.554[a]
Error (G)	87	12.28	
Within	180	2.14	
Trials	2	14.53	7.471[b]
G by T	4	4.44	2.285
Error (T)	174	1.95	
Total	538		

[a,b]Significant at .05 level

The means of all three groups showed an increase at Trial 1, Trial 2 and Trial 3. Figure 3 reveale this movement.

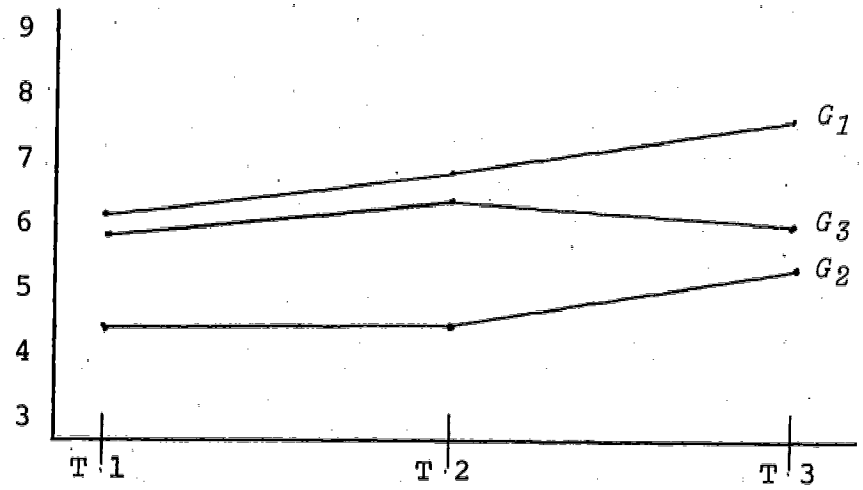

Figure 3.--Grade-point average of treatment groups at Trial 1, Trial 1, Trial 2 and Trial 3.

Scheffe's Test of multiple comparisons revealed that there was a significant difference at the .10 level between the CBM group and the group counseling group on grade-point average. The results are presented in Table 7.

TABLE 7

GROUP COMPARISONS OF GRADE-POINT AVERAGES BY SCHEFFE TEST

Comparisons	Mean Differences	F Ratio
G_1 V_s G_2	2.12	5.50[a]
G_1 V_s G_3	.71	.62
G_2 V_s G_3	-1.41	2.43

[a]Significant at .10 level.

Attendance

Hypothesis IV stated that Classroom Behavior Management and Group Counseling techniques have differential effects upon school attendance.

Attendance data is presented under three sections: days present, days absent and days tardy.

Days Present

A two-way analysis of variance indicated no significant difference in the number of days present of the CBM Group, the Group Counseling Group and the Control Group. The

effects of the trials were not significant. Table 8 contains the results of the two-way analysis.

The means of the three groups did not change meaningfully on the trials. Figure 4 shows the slight changes.

TABLE 8

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF DAYS PRESENT

Source	df	ms	F
Between	89	4.96	
Groups	2	1.20	0.240
Error (G)	87	5.05	
Within	100	1.23	
Trials	2	0.28	0.330
G by T	4	1.77	1.449
Error (T)	176	1.22	
Total	269		

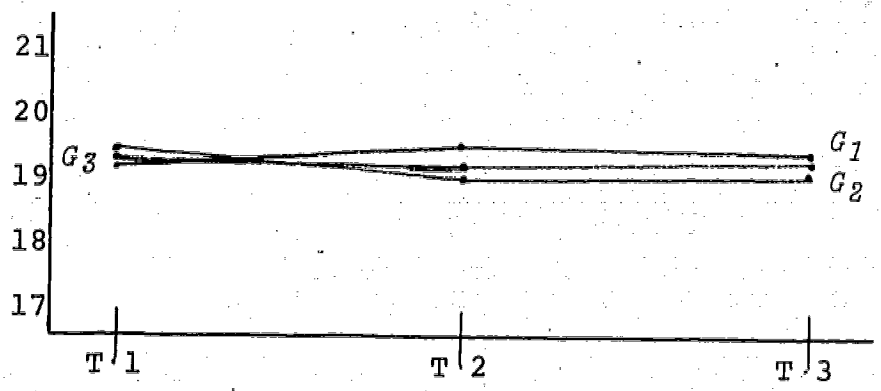

Figure 4.--Days present of treatment groups at Trial 1, Trial 2 and Trial 3.

Days Absent

The three groups did not differ significantly on the number of days absent when subjected to a two-way analysis of variances. The effects of the trials were not significant. Results are shown in Table 9.

Only slight change in the means of the three groups is observed at Trial 1, Trial 2 and Trial 3 in number of days absent. This is shown in Figure 5.

TABLE 9

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF DAYS ABSENT

Source	df	ms	F
Between	89	5.17	
Groups	2	0.34	0.064
Error (G)	87	5.28	
Within	180	1.59	
Trials	2	0.01	0.009
G by T	4	3.31	2.106
Error (T)	174	1.57	
Total	269		

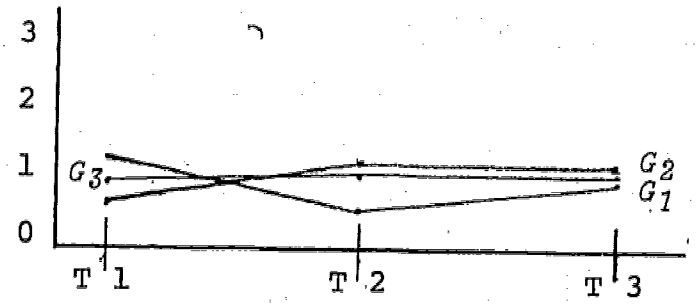

Figure 5.--Days absent of treatment groups at Trial 1, Trial 2 and Trial 3.

Days Tardy

The three groups were not significantly different on the number of days tardy when a two-way analysis of variance was applied. There was a significant difference at the .05 level between the trials. Results are shown in Table 10.

The means of the CBM group and the Group Counseling group showed no change. The Control group means decreased slightly at Trial 2 but increased at Trial 3. Figure 6 shows this slight change.

TABLE 10

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF DAYS TARDY

Source	df	ms	F
Between	89	1.51	
Groups	2	3.74	2.556
Error (G)	87	1.46	
Within	160	9.50	
Trials	2	1.53	3.299[a]
G by T	4	1.45	3.131
Error (T)	174	0.46	
Total	269		

[a]Significant at the .05 level.

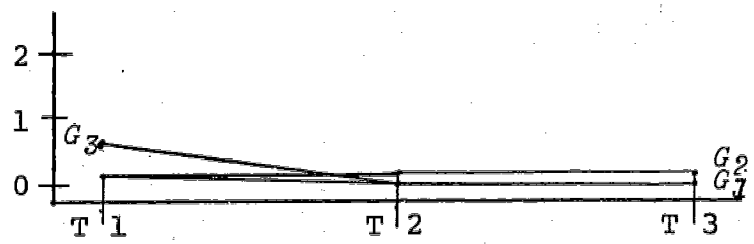

Figure 6.--Days tardy of treatment group at Trial 1, Trial 2 and Trial 3.

In order to investigate the differences between the number of days present and absent and the trials for each treatment group, a Chi Square Test was applied. The number of days present and absent was significantly different at the .05 level from the number expected due to chance at the 3 trials for the CBM group. No significant difference between number of days present and absent was observed for the group counseling group and the control group. The obtaining Chi Square values were, 11.585 for the CBM Group, 5.269 for the Group Co ling Group and 0.543 for the Control Group.

A Chi Square Test was also employed to examine the relationship between the number of days present and absent and the three groups. The number of days present and absent was not significantly different from the number expected due to chance for the three groups. The Chi Square value was 2.142.

In Tables 11, 12 and 13 the means and standard deviations of the three treatment groups on the variable at Trial 1, Trial 2 and Trial 3 are reported. Although data were collected at three trials for the variables, sociometric status, grade-point averages and attendance data were collected at only two trials for on-task behavior. This was due to the lack of opportunity to collect data by the time of the first trial.

Summary

In this chapter the findings of the experimental study have been presented. The data obtained from obser-

TABLE 11

MEANS AND STANDARD DEVIATIONS OF CLASSROOM BEHAVIOR MANAGEMENT GROUP AT TRIAL 1, TRIAL 2 and TRIAL 3

	Trial 1		Trial 2		Trial 3	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1. On-task Behavior			35.30	7.381	42.80	5.00
2. Socio-metric Status	5.00	3.41	3.73	3.07	8.40	3.07
3. Grade-Point Average (3 Sub-jects)	6.07	2.40	6.87	2.63	7.47	2.03
4. Attend-ance						
Present	19.13	1.83	19.57	0.96	19.33	1.33
Absent	1.17	2.46	0.43	0.96	0.67	1.33
Tardy	0.10	0.40	0.00	0.00	0.00	0.00

TABLE 12

MEANS AND STANDARD DEVIATIONS OF GROUP COUNSELING GROUP AT TRIAL I, TRIAL 2, AND TRIAL 3

	Trial 1		Trial 2		Trial 3	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1. On-task Behavior			33.50	6.85	34.27	9.22
2. Socio-metric Status	4.07	2.53	5.47	3.28	6.47	3.56
3. Grade-Point Average (3 Sub-jects)	4.40	2.07	4.44	2.48	5.20	0.40
4. Attend-ance						
Present	19.43	1.43	18.93	2.20	19.00	2.34
Absent	0.57	1.43	1.06	2.20	1.00	2.24
Tardy	0.10	0.40	0.133	0.72	0.13	0.72

TABLE 13

MEANS AND STANDARD DEVIATIONS OF CONTROL GROUP AT TRIAL 1, TRIAL 2, AND TRIAL 3

	Trial 1		Trial 2		Trial 3	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1. On-task Behavior			30.93	8.25	25.40	8.14
2. Socio-Metric Status	3.47	2.60	5.23	3.04	6.26	2.89
3. Grade-Point Average (3 Subjects	5.83	2.27	6.40	2.12	6.03	1.92
4. Attendance						
Present	19.27	1.06	19.10	1.19	19.20	1.10
Absent	0.73	1.06	0.90	1.19	0.80	1.100
Tardy	0.53	1.54	0.00	0.00	0.73	1.79

vations of on-task behavior, sociometric status indicated by peer choices, grade-point averages and attendance records were examined by a two-way analysis of variance. Significant interactions between treatment groups and trials for on-task behavior and sociometric status were subjected to a simple effects analysis. When a significant difference among the three treatments was indicated on grade-point average, Scheffe's test for multiple comparison was applied. In order to determing if a relationship existed between the three treatment groups and attendance, a Chi Square test was employed.

The following chapter contains a discussion of the findings, conclusions and recommendations for further research based on the results of this study.

SUMMARY, DISCUSSION OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter includes a summary of the study and a discussion of results of the analysis of the data. Conclusions and recommendations are made based on the results of the study.

Summary of the Study

This study was designed to compare the effects of efficacy of treatment of Classroom Behavior Management and Group Counseling for use with potential dropouts. The general purpose of this study was to determine the differential effects of treatments on (1) on-task behavior, (2) sociometric status, (3) grade-point average and (4) school attendance of identified potential dropouts in the fifth and sixth grade.

The sample population of ninety fifth and sixth grade children was chosen from five elementary schools in Forrest County and Hattiesburg, Mississippi. The subjects were identified by the Demos D Scale and the Dropout Rating Scale and possessing high potential dropout characteristics. Fifteen fifth and sixth grade teachers were randomly assigned ir groups of five to one of three treatment groups: Classroom Behavior Management, Group Counseling and Control. Thereby potential dropouts were assigned to each of the three groups.

Following assignment to groups, treatment was applied for a period of twelve weeks. The five teachers in the CBM group had a consultant in classroom management. The consultants presented a demonstration lesson one hour each week. These teachers utilized the CBM approach in their regular teaching assignment. The consultant recorded weekly observations of the thirty potential dropouts. The observation records proved the feedback each CBM teacher received from the consultant.

The five teachers in the Group Counsleing group permitted the identified potential dropouts to be removed from the classroom one hour each week to receive group counseling. Counseling sessions were unstructured; however, general facilitative approaches were utilized. Positive reinforcement techniques were utilized. The counselors made prodomantly reflective and supportive responses to pupils. The potential dropouts were observed weekly in their routine classroom activities. On-task behavior was recorded.

The five teachers in the control group and the thirty potential dropouts did not participate in treatment procedure. Observations of on-task behavior was recorded weekly for the twelve week period.

Five doctoral students in guidance served as the consultants, counselors and observers for the treatment gro-ps. Their training included Madson's method of Classroom Behavior Management and attitudinal group counseling.

In order to compare the effects of the treatment the following data collecting procedures were followed:

1. Gronlund's Sociometric Form was administered to all pupils in the classrooms of the fifteen participating teachers at Trial 1 (the beginning of the study), Trial 2 (mid-point) and Trial 3 (culmination). The three trial scores from the three groups were compared to determine (a) if differences occurred and (b) the extent to which difference might be attributed to treatment effects.
2. Grade-point averages in three basic subjects were obtained from the teachers at Trial 1, Trial 2 and Trial 3 to determine if differences in earned grades might be attributed to treatment effects.
3. Attendance records of days present, absent and tardy were totaled at Trial 1, Trial 2 and Trial 3 to ascertain if school attendance was significantly affected by treatments.
4. Observations of on-task behavior were indicated the first week of the study. The observations were totaled at Trial 2 and Trial 3 to determine if differences in on-task behavior might be attributed to treatment effects. A two-way analysis of variance was performed on the obtained data. The five per cent level was accepted as statistically significant.

Discussion of Results

Four research hypotheses were formulated regarding the effects of Classroom Behavior Management and Group Counseling for use with potential dropouts. These hypotheses were derived from related research and experiences in the elementary school.

Effects Upon On-task Behavior

Hypothesis I stated that Classroom Behavior Management and Group Counseling techniques have differential effects on on-task behavior.

The findings clearly indicate that the pupils of the five teachers who utilized a Classroom Behavior Management approach increased in on-task behavior. It would appear that the teaching strategy of teacher approval of appropriate behavior contributed to the increase on on-task behavior. It also appeared that Group Counseling did not significantly increase the on-task behavior of potential dropouts. However, in view of these findings that the control group decreased significantly in on-trial behavior, the group counseling treatment may have corrected tendencies of on-task behavior to decrease.

Hypotheses I is accepted based upon the significant mean differences between the CBM group, the Group Counseling group and the Control group.

Effects Upon Sociometric Status

Hypothesis II stated that Classroom Behavior Management and Group Counseling techniques have differential effects upon sociometric status.

The findings indicated that the sociometric status of the three groups changed significantly over the three trials. The sociometric status of the CBM group decreased after six weeks of treatment, but at the termination of treatment the group showed a significant increase while the Group Counseling group and the Control group showed a significant increase at all three trials. Hypothesis II is accepted based on the sufficient differences between the groups and trials.

The decrease in sociometric status at Trial 2 of the potential dropouts who received reinforcement of teacher approval was possibly attributed to changes in peer support due to lack of sufficient time for the pupils to interpret changes in teaching strategy in a social context. The findings imply that the sociometric status of the Group Counseling group and the Control group changed similarly over the twelve weeks of treatment. The traditional teaching approach was utilized with these two groups.

Effects Upon Achievement

Hypothesis III stated that Classroom Behavior Management and Group Counseling techniques have differential effects upon achievement.

The findings clearly indicated a significant difference in grade-point average of the CBM group, Group Counseling group and the Control group. It would appear that when the teaching strategy of teacher approval is used as reinforcement the potential dropout gains in grade-point average.

Group Counseling appeared to have little effect on earned grades of the potential dropout in the fifth and sixth grades. Hypothesis III is accepted based upon the significant mean differences between the CBM group and the Group Counseling group.

Effects Upon School Attendance

Hypothesis IV stated that Classroom Behavior Management and Group Counseling technique have differential effects upon school attendance.

The findings clearly indicated that there was no significant difference in the number of days present and absent of the CBM group, Group Counseling group and the Control group. Although the results of the statistical analysis revealed that the number of days tardy for the Control group was significantly different from the CBM group and the Group Counseling group, the data that contributed to this effect is considered to be an invalid measure due to tardies not being recorded by two of the schools included in the study. Hypothesis IV is not accepted based on no significant differences among the three groups as to number of days present and absent.

Conclusions

Based upon the results of this study, the following conclusions appear warranted:

(1) Classroom Behavior Management procedures and Group Counseling have differential effects on on-task behavior, social status,and grade-point averages of potential dropouts.

(2) When teachers utilize a classroom Behavior Management approach, on-task behavior and grade-point averages of potential dropouts increase.

(3) Classroom Behavior Management teaches students specifically to be on-task, whereas group counseling does not.

The results of this study also imply that when Group Counseling techniques are used with potential dropouts in the fifth and sixth grades, they are viewed consistently more favorably as seating, working and playing companions by their peers. Potential dropouts who are subjected to Classroom Behavior Management procedures may initially decrease in sociometric status. The implication is that pupils who have acquired the image of non-attending assigned tasks may be viewed somewhat suspiciously by their peers when attending behavior develops.

Although a significant statistical change was not observed in the school attendance of the potential dropouts in this study, it is felt that as the pupil began to experience feeling of success associated with the reinforcement

he receives from being on-task and from grade average improvement, the number of days present will increase for the school year. The implication here is that Classroom Behavior Management procedures affect school attendance.

Recommendations

It is recommended that additional studies be made to further compare the effectiveness of Classroom Behavior Management and Group Counseling for use with potential dropouts. The following suggestions are made in regard to future research design:

1. A follow-up study should be undertaken to determine the long-range effects of Classroom Behavior Management procedures and Group Counseling with potential dropouts. It is believed that this would more accurately compare the effects of behavior change.

2. A study should be conducted to investigate the efficacy of behavioral group counseling combined with a Classroom Behavior Management approach for use with potential dropouts.

3. A study should be designed to measure the effects of group counseling with potential dropouts for a longer period of time than was allowed in this study. This would provide more time for change in academic behavior to occur.

4. A study should be designed comparing classroom behavior management and a modeling approach in group counseling

to establish appropriate attention behavior of the potential dropout. This would involve others outside the confines of the classroom in the process of behavior modification.

5. A study should be conducted investigating the effects of Classroom Behavior Management and Group Counseling for use with pupils who are identified by their teacher as potential dropouts.

6. A study should be conducted to investigate the impact of Classroom Behavior Management on the social interaction of potential dropouts.

7. A long range study should be designed to examine the effects of Classroom Behavior Management procedures on school attendance.

8. A variety of techniques for evaluation of group counseling should be developed so that more relevant criteria can be used.

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SECTION III

DIFFERENTIAL EFFECTS OF CLASSROOM BEHAVIOR MANAGEMENT AND TRADITIONAL TEACHING TECHNIQUES ON VOCATIONAL KNOWLEDGE AND ATTITUDES AT FIFTH AND SIXTH GRADE LEVELS

by

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INTRODUCTION

The presentation of career education materials in the public schools has been advocated for the effective utilization of the nation's manpower and for the mental health of the individuals composing our society. However, there appears to be a lack of consensus regarding strategies for implementing career development programs. At the elementary school level, there is a lack of agreement as to what should be taught, how it should be taught, and how its effectiveness might be ascertained.

The importance of adequate dissemination of information is recognized. The early introduction of such information in the elementary grades is becoming more widely practiced. The particular techniques for achieving vocational objectives at this level, however, and even the objectives themselves, offer areas which raise questions as to how one effectively defines these objectives and the techniques and procedures which can best be used in achieving these objectives.

It is recognized that the elementary shcool's task is to instill an attitude of respect and appreciation for people whose work contributes to the effective functioning

and well being of society. There is great need to develop proper curriculum and approaches to the utilization of that curriculum at the elementary level in order to meet the vocational needs of children with social, economic, emotional, physical, physical and cultural handicaps.

Need for the Study

The necessity of equipping students for the world of work has only recently been realized by educators. What once was taught under the title of "vocational education" bears little resemblance to the broader concept of the world of work. It has been pointed out that by 1980, 101 million Americans are expected to be in the national labor force. This is one-sixth more than the eighty-six million in 1970. The development of effective programs for occupational education gains considerable importance in light of this information, and the responsibility for these programs belongs to education as a whole.[1]

In considering the context of the total school curriculum, the vocational aspects of education, or occupational preparation, may be defined as those planned experiences which are designed specifically to prepare the

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[1]"Career Education," College and University Business, LI, No. 6 (December, 1971), 39-44.

learner in two ways--(1) to enter the world of work in a successful manner, and (2) to maintain his productiveness in his work throughout his occupational life. The strategies used by the school to provide opportunities for needed experiences at the elementary level may have an important impact upon the pool of unemployed, underemployed, or dissatisfied workers.[2]

The role of the elementary school in preparing pupils for the world of work is described as follows:

> What is needed now is a developmental system of education. Such a system introduces in the elementary grades awareness of the relationships which exist between schooling and work...In the main the elementary school role is diagnostic and prescriptive. It provides whatever experiences a child may need to make learning real through a continuing examination of how man uses work for self-support, how major occupations employ knowledge, and how productivity is related to a variety of abilities. A major objective of elementary education is to discover the talents of each child and demonstrate their relationships to the world of work.[3]

The process of finding one's place in this world of work, or the selection of a career, has been described as a

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[2]Gerald B. Leighbody, "Vocational Education," New Curriculum Develcpments, Report of ASCD's Commission on Current Curriculum Developments (Washington, D. C.: Association for Supervision and Curriculum Development, 1965), p. 79.

[3]National Committee on Employment of Youth, Development of Programs for the Disadvantaged, p. 22.

"complex human process" involving such things as maturation on the part of the individual in terms of knowledge about himself and his environment, the internalization and integration of acquired knowledge; and then some form of occupationally relevant behavior.[4] The schools can facilitate the student's working through this process, capitalizing on the inherent eagerness and curiosity of youth. What may be labeled as fantasy when young children typically play games in which they act out careers in which they have some knowledge of the function of the worker is in reality an indication of a level of interest.[5]

During the past decade several educators have written about the importance of exposing elementary school children to the realities of the world of work. Ira M. Bank[6] pointed out the need for boys and girls to have experiences which can provide opportunity for vacational inquiry. This allowed young learners to develop a broader base for vocational

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[4]Edward D. Smith, "Vocational Aspects of Elementary School Guidance Programs: Objectives and Activities," Vocational Guidance Quarterly, IV (June, 1970), 273.

[5]Ibid.

[6]Ira M. Bank, "Children Explore Careerland through Vocational Role Models," Vocational Guidance Quarterly, IV (June, 1970), 284-89.

choice. W. B. Barbe and N. F. Chambers[7] indicate that with the developing importance of elementary school guidance, it is necessary that an attempt be made to understand the vocational aspirations of elementary school children. The pressing need for vocational guidance is emphasized by Don Dinkmeyer,[8] who indicates that this facet of education focuses on the encouragement process because it strives to build self-confidence. It is not surprising then to note that G. F. Law declares that vocational guidance needs a regular place in the curriculum. In his opinion, career orientation and guidance have become too important to leave out. He indicates that vocational guidance without vocational education is at best incomplete and tentative.[9] Based upon the realization that this is true, this study to combat the ineffectiveness of vocational education was undertaken.

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[7]W. B. Barbe and N. F. Chambers, "Career Requirements of Gifted Elementary Children and Their Parents," Vocational Guidance Quarterly, XI (Winter, 1963), 137-40.

[8]Don Dinkmeyer, "Elementary School Guidance and the Classroom Teacher," Elementary Guidance and Counseling, I, No. 17 (1967), 48-50.

[9]G. F. Law, "Regular Place for Guidance," American Vocational Journal, XLIV (March, 1969), 27-28.

Statement of the Problem

The problem of this study is expressed in the following question: In teaching career development at the fifth-grade and sixth-grade levels, what are the differential effects of the Classroom Behavior Management approach and the Traditional Classroom Teaching approach upon vocational subject matter knowledge and vocational attitudes?

More specifically, this study was undertaken in order to accomplish the following objectives:

1. to determine the effects of the Classroom Behavior Management Teaching approach and the Traditional Teaching approach on vocational attitude
2. to determine the effects of the Classroom Behavior Management Teaching approach and the Traditional Teaching approach on vocational subject matter knowledge

Statement of Hypotheses

In order to determine the objectives, the following hypotheses were formulated:

H_1: Classroom Behavior Management approach and the Traditional Teaching approach have differential effects upon vocational attitudes.

H_2: Classroom Behavior Management approach and the Traditional Teaching approach have differential effects on vocational subject matter knowledge.

Definitions

Classroom Behavior Management

Classroom Behavior Management as used herein refers to a teaching strategy involving the implementation of certain behaviors on the part of the students.[10] It is based on clearly stated classroom rules, approval for appropriate classroom behavior, ignoring inappropriate behavior whenever possible, and disapproval strong enough to accomplish what is needed when used.

Traditional Teaching

Traditional Teaching as used herein refers to a lectured method used in conjunction with a question and answer period.

Regular Teacher

The regular teacher as referred to in the study indicates the permanent instructor in the classroom.

Classroom Behavior Management Consultant

The Classroom Behavior Management consultant as used herein refers to any one of the five doctoral students from the University of Southern Mississippi Department of

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[10] Charles H. Madsen, Jr. and Clifford K. Madsen, Teaching/Discipline: Behavioral Principles Toward a Positive Approach (Boston: Allyn and Bacon, Inc., 1971), pp. 17-22.

Guidance who taught a lesson series entitled "The World of Work," using the Classroom Behavior Management technique and who consulted with the regular teacher regarding this technique.

Career Educator

The career educator as used herein refers to any one of the five doctoral students from the University of Southern Mississippi Department of Guidance who taught the lesson series "The World of Work," utilizing the Traditional Teaching approach.

Assumptions

In measuring the differential effects of the two treatments on vocational subject matter, the following assumptions were made:

(1) The sample was representative of the population from which it was drawn.

(2) There were no significant differences in age, intelligence, achievement or attitudes of each group.

Delimitations

The sample was limited to selected fifth-grade and sixth-grade children with lower socio-economic backgrounds in the city of Hattiesburg and in Forrest County, Mississippi.

METHODOLOGY

The purpose of this chapter is to discuss the procedures and methodology followed in this study. For clarity in presentation, the chapter is divided into the following sections:

1. Selection of groups
2. Consultant and teacher training programs
3. Treatment procedures with groups
4. Instruments
5. Statistical analysis of the data

Selection of Groups

The population

The sample utilized in this study came from a population of fifth-grade and sixth-grade classes in which a majority of the children were of lower socio-economic backgrounds. Schools to be included in this study were selected by the administrations of the Hattiesburg and Forrest County, Mississippi, school systems prior to the opening of school in September, 1971.

As soon as school began, the principals from the individual schools were contacted and permission was received to hold conferences with all fifth-grade and

sixth-grade teachers in order to determine which of them would be utilized in the study. The teachers were selected on the basis of their cooperation and interest. From these conferences a total of thirty-nine teachers were so identified.

The sample group

From the identified groups of thirty-nine fifth-grade and sixth-grade teachers, fifteen were randomly assigned to three groups, five to a group. These groups were as follows:

1. Classroom Behavior Management (E_1)
2. Traditional Classroom Instruction (E_2)
3. Control (C)

The two experimental groups were designated as E_1 and E_2, respectively, and the third group was identified as C. Table 1 illustrates the group designation and composition.

TABLE 1

ILLUSTRATION OF GROUP DESIGNATION AND COMPOSITION

Groups	E_1	E_2	C
Composition	Five classes 5th and 6th grades	Five classes 5th and 6th grades	Five classes 5th and 6th grades

Specifically, the three groups were composed as follows:

1. Group E_1 was composed of three sixth-grade and two fifth-grade classes. Mean enrollment of the classes was twenty-eight.

2. Group E_2 was composed of two sixth-grade and three fifth-grade classes. Mean enrollment of the classes was twenty-four.

3. Group C was composed of three sixth-grade and two fifth-grade classes. Mean enrollment of the classes was twenty-four.

Due to the periodic fluctuation of class enrollment, the number of students in each class varied from day to day throughout the study. This is the reason for reporting class means rather than totals. Table 2 indicated group composition.

TABLE 2

COMPOSITION OF GROUPS IN THE STUDY

Groups	Composition	Mean Enrollment of Classes
E_1	three 6th grades two 5th grades	28
E_2	two 6th grades three 5th grades	24
C	three 6th grades two 5th grades	24

Consultant and Teacher Training Programs

Training the consultants

Beginning June 1, 1971, a series of training lessons in Classroom Behavior Management technique was initiated for five doctoral students from the University of Southern Mississippi Department of Guidance. This training was based on a particular teaching technique as developed by Dr. Charles Madsen of Florida State University. The training was under the supervision of Dr. Daniel Lee Randolph, of the University of Southern Mississippi Guidance Department. Training sessions consisted of a series of lectures and discussions supplemented by video tapes containing demonstrations of the Classroom Behavior Management approach. During this training period, the group prepared a series of ten lessons which were adapted from a guide developed by the Oklahoma State Department of Education.[11] These lessons were titled "The World of Work" and were later used as the basis for the Classroom Behavior Management and Traditional Teaching classroom presentations for this study.

Each of the five trained doctoral students functioned in two capacities--as a consultant and as a career educator--

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[11]Department of Vocational Technical Education, A Guide for Developmental Vocational Guidance (Oklahoma City: The Oklahoma State Department of Education, 1968).

and was assigned to work for a ten-week period with two teachers, one from Group E_1 and one from Group E_2. It was the responsibility of each doctoral student, when serving as a consultant, to teach one lesson per week from "The World of Work" series to the assigned class in Group E_1, using the Classroom Behavior Management technique and consulting with the teacher regarding this technique. It was also the responsibility of each of the doctoral students, when serving as a career educator, to teach one lesson a week to a class assigned to Group E_2, using the Traditional Teaching approach.

Training the teachers

One Classroom Behavior Management consultant was assigned to each of the five teachers whose classes were assigned to Group E_1. It was the responsibility of the consultant to train the teacher in the Classroom Behavior Management technique, using all the materials gathered during the summer. Consultants and teachers worked during free hours of the school day in an attempt to refrain from infringing on the off hours of the teachers. The consultants took all training materials to the teachers, including complete video units for presentation of the tapes. The training period for the teachers was three weeks.

These five teachers in Group E_1 observed the Classroom Behavior Management technique as demonstrated by the consultant assigned to them. The consultant presented

one lesson per week for ten weeks from the "World of Work" series in career development. The teacher was expected to utilize the same technique in her instruction, beginning with the first lesson taught by the consultant and continuing throughout the treatment period. The consultant worked with the teacher during this time, meeting at least once a week in order to provide encouragement and continued interest.

The teachers whose classes were selected for Groups E_2 and C were given no special training and were not involved in any consulting operations. Each career educator taught the lesson series on "The World of Work" to his assigned class in Group E_2; Group C did not receive the lessons.

Treatment Procedures with Groups

Group E_1 - Classroom Behavior Management

From October 4 to December 9, 1971, the five Classroom Behavior Management consultants presented a series of ten lessons in career development to Group E_1. Lesson time consisted of approximately forty-five minutes. During this presentation the consultant modeled the Classroom Behavior Management technique for the teacher, who observed the procedure closely. At the conclusion of the weekly lesson by the consultant, the teacher resumed her teaching role,

utilizing the Classroom Behavior Management technique with her regular instruction. The consultant remained in the classroom to observe the teacher's use of the technique and provide feedback regarding use of the technique. The consultants provided the teachers an increasingly strong critique as the study progressed.

Group E_2 - Traditional Classroom Instruction

From October 4 to December 9, 1971, each of the career educators was assigned to each of these classes in Group E_2 to present weekly lessons in career development, using the Traditional Teaching approach. The career educators used the lecture and discussion methods to instruct.

Group C - Control

There was no presentation of the lesson series "The World of Work" to the five classes assigned to Group C. While the teachers had no contact with the doctoral students, who acted as consultants and career educators, they were informed that their classes were a part of the Control Group.

Table 3 illustrates group treatment and procedure.

TABLE 3

ILLUSTRATION OF GROUP TREATMENT AND PROCEDURE

Groups	E_1	E_2	C
Treatment	Classroom Behavior Management Consultant services	Traditional Classroom Instruction	None
Procedure	1 lesson on career development weekly by consultant	1 lesson on career development weekly by career educator	None

Instruments

The instruments utilized in this study to measure attitude and achievement were the Crites Vocational Development Inventory and the Career Development Achievement Test. The Crites instrument was selected because of the thoroughness of its construction, its application to the specific age groups in the study, and its proven usefulness in the measurement of attitudes in other studies.[12] The achievement instrument was empirically developed for this study, based on the lesson materials covered and the students being tested.

[12] John O. Crites, The Maturity of Vocational Attitudes in Adolescence (Washington, D. C.: American Personnel and Guidance Association, 1971).

The Crites Vocational Development Inventory (VDI)

The Vocational Development Inventory developed by John O. Crites was designed to elicit the attitudinal or dispositional response tendencies in vocational maturity. These tendencies are nonintellective in nature but may mediate both choice behaviors and choice aptitudes.[13]

The attitude test of the VDI was developed by both empirical and rational processes. A rational approach advocated by Flanagan[14] was used to develop a pool of 1,000 items concerned with the following phases of adolescent experiences: (1) involvement in the process of vocational choice, (2) orientation toward the problem of vocational choice, (3) independence in decision making, (4) concepts of vocational choice, and (5) preferences for factors in vocational choice.[15]

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[13]John O. Crites, "Measurement of Vocational Maturity in Adolescence," Psychological Monographs, LXXXIX, No. 2 (1965), 7.

[14]John C. Flanagan, "The Use of Comprehensive Rationales in Test Development," Educational and Psychological Measurement, XI (1951), 151-55.

[15]John O. Crites and Ira J. Semler, "Adjustment, Educational Achievement, and Vocational Maturity as Dimensions of Development in Adolescence," Journal of Counseling Psychology, XIV, No. 6 (1967), 81.

Fifty items were selected for an empirical basis for the final test. An item was selected for inclusion in the final form if the mean score of the item was monotonically related to grade level when given to a sample of 3,000 students attending classes in the fifth through the twelfth grades. A true-false format was adopted because it produced better item discrimination than a Likert type of rating scale.

Studies of the attitude scale indicate that its internal consistency is in the .60's and .70's, and its test-retest stability over a period of one year is .71.[16]

The Career Development Achievement Test (CDAT)

The Career Development Achievement Test was constructed to measure subject matter knowledge in relation to the lessons taught in career development. A group of fifty multiple choice questions was initially formulated from the lesson series. These questions, along with the lesson series, were then judged by a panel of five qualified judges from the University of Southern Mississippi Department of Guidance, Department of Curriculum and Instruction, and the University Reading Clinic. The judges were asked to consider the test items on the basis of three criteria:

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[16] Ibid.

throughness of the questions, efficiency of the questions, and vocabulary level. Each judge made numerous corrections and contributions to the instrument in writing. As a result of their judgments, five of the test items were dropped entirely. A final reading and approval by those judges who indicated a desire to do so was completed. When this was done, the instrument was then judged to have a sufficient level of both face and content validity.

Realiability for the CDAT was established in two ways. The instrument was administered to two fifth-grade and two sixth-grade classes from the same population as the three groups in the study. An alpha internal consistency coefficient was calculated at .82.[17] Two weeks later the instrument was given to the same group of students, providing a test-retest coefficient of reliability which was calculated at .92.

Following the second administration of the instrument, five of the test items which showed either negative corelation to the rest of the test or were too high or low in degree of difficulty were deleted. For this particular test, questions answered correctly by 90 per cent or more of

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[17] L. J. Cronbach, "Coefficient Alpha and the Internal Structure of Tests," in Principles of Educational and Psychological Measurement, ed. by William A. Mehrens and Robert L. Ebel (Chicago: Rand McNally and Co., 1967), pp. 132-67.

the students were judged to be too easy; questions answered correctly by 30 per cent or less of the students were judged too difficult. The final form of the test consisted of forty items.

Statistical Analysis of Data

During the week of December 13-19, 1971, the students in the fifteen classrooms comprising the three groups took the VDI and the CDAT. Data obtained in the study were treated in the following manner:

1. The results obtained on the Vocational Development Inventory were analyzed to determine what effect, if any, occurred due to the treatment of the groups. E_1, E_2, and C groups were analyzed for treatment effects by use of an analysis of variance design adapted for computer analysis by D. L. Veldman.[18] Further statistical treatment included a Scheffé test to determine which group was causing significance.[19]

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[18]D. L. Veldman, Fortran Programming for the Behavioral Sciences (Chicago: Holt, Rinehart and Winston, 1967), pp. 246-49.

[19]George A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill, 1959), pp. 295-97.

2. The results of the Career Development Achievement Test were analyzed to determine what effect, if any, occurred due to the treatment of the groups. E_1, E_2, and C groups were analyzed to assess treatment effects by use of an analysis of variance design adapted for computer analysis by D. L. Veldman. Further statistical treatment included a Scheffé test to determine which group was causing significance.

A sequence of procedures of the entire research design is presented in Table 4.

TABLE 4

SEQUENCE OF PROCEDURES

Dates	June 1 - Oct. 4, 1971	Oct. 4 - Dec. 9, 1971	Dec. 11 - Dec. 17, 1971
Procedures	Training of consultants Defining the population Selection of sample groups Training teachers in Group E_1	Presentation of lesson Series to Group E_1 using Classroom Behavior Management Presentation of lesson series to Group E_2 using Traditional Teaching approach	Testing of all three groups with the CDAT[a] and the VDI[b]

[a]Career Development Achievement Test

[b]Vocational Development Inventory

RESULTS

The experimental procedure of this study involved comparison between classes which were taught a lesson series on career development using the Classroom Behavior Management technique, classes which were instructed in a lesson series on career development using a Traditional Teaching approach, and classes which received no treatment. There were five randomly selected classes in each of the three groups. Each group was tested with an attitude and achievement scale at the conclusion of the ten-week treatment period. Analysis of the data involved:

1. analysis of variance of differences in posttest results obtained from the attitude scale administered to the experimental and control groups

2. analysis of variance of the differences in post-test results obtained from the achievement scale administered to the experimental and control groups

3. use of the Scheffé Test to locate differences, when significant.

Effects Upon Vocational Attitudes

In Hypothesis 1 it was stated that the Classroom Behavior Management approach and the Traditional Teaching

approach have differential effects on vocational attitudes. In order to investigate this hypothesis, a one-way analysis of variance was calculated. The analysis indicated a significant difference among the three groups beyond the .05 level (Table 6).

TABLE 6

SUMMARY OF ANALYSIS OF VARIANCE OF ATTITUDE SCORES

Source	Sum of Squares	DF	MS	F
Between	891.063	2	445.531	19.388[a]
Within	7353.625	320	22.980	
Total	8244.687	322		

[a]Significant beyond .05 level

A comparison of the means of the three groups revealed that Group E_1 had the highest mean score of the three groups. Group C had the second highest mean score, followed by Group E_2. The mean, variance, and standard deviation of the three groups are reported in Table 7.

In order to determine which treatment(s) resulted in a significant improvement in attitude, the Scheffé Test was computed. The findings indicate that each of the three groups was significantly different from the two other groups at the .05 level. An investigation of the Scheffé Test indicated the greatest difference to be between Groups E_1

TABLE 7

SUMMARY OF THE MEAN, VARIANCE, AND STANDARD DEVIATION OF ATTITUDE SCORES OF THE THREE GROUPS

Group	Mean	Variance	S.D.	N
E_1	24.267	22.397	4.733	131
E_2	20.402	25.733	5.073	107
C	22.106	20.405	4.517	85

A histogram of the group means is provided in Figure 1.

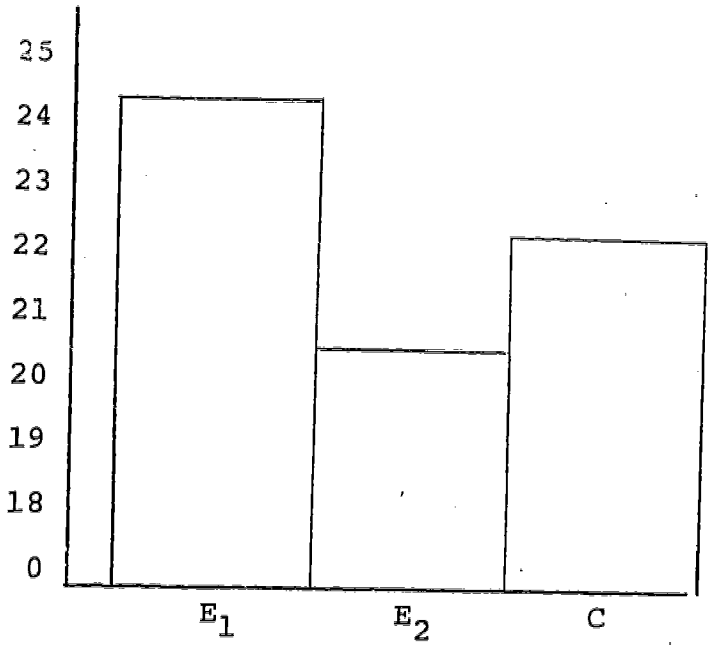

Fig. 1.--Group mean scale of attitude scores

and E_2. This difference was 2.865 points. Groups E_1 and C showed a difference of 2.161 points, while a comparison of Groups E_2 and C produced a minus 1.704 points. All of the group comparisons in the Scheffé are shown in Table 8.

TABLE 8

SCHEFFÉ TEST ON ATTITUDE SCORES OF GROUPS E_1, E_2 AND C (THE THREE GROUPS)

Groups	Difference	F
1-2	3.865	38.291[a]
1-3	2.161	10.479[a]
2-3	1.704	5.986[a]

[a]Significant at .05 level

In terms of the first hypothesis, the results indicated that the Classroom Behavior Management approach and the Traditional Teaching approach do have significant differential effects on vocational attitude. The data on this particular study show the Classroom Behavior Management approach to have a positive influence on attitude toward the world of work, while the Traditional Teaching approach produced lower attitude scores in relation to both Groups E_1 and C.

Effects Upon Vocational Achievement

In Hypothesis 2 it was stated that the Classroom Behavior Management approach and the Traditional Teaching approach have differential effects on vocational subject matter knowledge. In order to investigate this hypothesis, a one-way analysis of variance was calculated to determine whether there was an effect as a result of treatment. The analysis, as presented in Table 9, indicated a significant difference between the three groups beyond the .05 level.

TABLE 9

SUMMARY OF ANALYSIS OF VARIANCE
OF ACHIEVEMENT SCORES

Source	Sum of Squares	DF	MS	F
Between	3943.062	2	1971.531	36.561[a]
Within	17255.937	320	53.925	
Total	21199.000	322		

[a]Significant beyond the .05 level

A comparison of the means of the three groups indicated that Group E_1 had a higher mean score of 26.293. This was followed by Group E_2 with a mean of 20.757, and Group C with a mean of 18.376 out of a possible forty points. The mean, variance, and standard deviation of the three groups of achievement scores are reported in Table 10.

TABLE 10

SUMMARY OF THE MEAN, VARIANCE AND STANDARD DEVIATION OF ACHIEVEMENT SCORES OF THE THREE GROUPS

Group	Mean	Variance	SD	N
E_1	26.573	64.293	8.018	131
E_2	20.752	44.299	6.656	107
C	18.376	50.023	7.073	85

A histogram of the group means is provided in Figure 2.

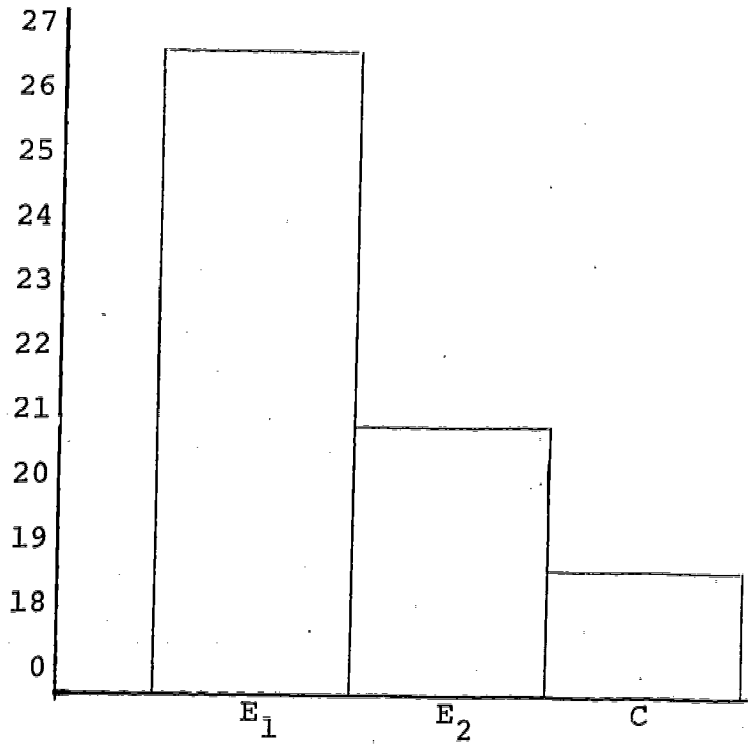

Fig.2--Group mean scale of achievement scores

A Scheffé Test was calculated to determine which treatment(s) resulted in a significant improvement in achievement. Results of the Scheffe Test indicate that the groups were significantly different from each other at the .05 level. An examination of the Scheffe Test revealed that the greatest difference was between Groups E_1 and C. Groups E_1 and E_2 had the next greatest difference, and Groups E_2 and C had the smallest difference. Table 11 indicates the results of the Scheffe Test.

TABLE 11

SCHEFFÉ TEST ON ACHIEVEMENT SCORES OF GROUPS E_1, E_2 AND C

Groups	Difference	F
1-2	5.816	36.937[a]
1-3	9.196	64.218[a]
2-3	2.381	4.978[a]

[a]Significant at the .05 level

In terms of the second hypothesis, these results indicated that the Classroom Behavior Management approach and the Traditional Teaching approach do have differential effects on vocational subject matter knowledge. The data for this study indicated that the use of the Classroom

Behavior Management approach resulted in a significant gain, as did the Traditional Teaching approach.

Summary

Results of the study support the hypotheses that the two teaching approaches involving the sample groups have differential effects on both vocational attitude and subject matter knowledge. All groups in both treatments were significantly different from each other. The attitude scores indicated that while the Classroom Behavior Management approach improved attitude, the Traditional Teaching approach produced lower scores than either Groups E_1 or C. In measuring achievement, those classes which were taught using the Classroom Behavior Management approach scored higher than the classes taught in a traditional manner. Those in E_1 and E_2 scored higher than those in the Control group.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to summarize the study, to discuss the meaning of the findings, and to present some conclusions derived from the analysis of data. Finally, some recommendations based upon this research will be presented.

Summary of the Study

This study was designed to investigate the effects, if any, the Classroom Behavior Management approach and the Traditional Classroom Teaching approach had on attitudes and subject matter knowledge in the presentation of lessons in career development at the fifth-grade and sixth-grade levels. The basic objectives were:

1. to determine the differential effects of the Classroom Behavior Management approach and the Traditional teaching approach on vocational attitude

2. to determine the differential effects of the Classroom Behavior Management approach and the Traditional Teaching approach on vocational subject matter knowledge.

Description of Groups

The subjects of the investigation were thirty-nine fifth-grade and sixth-grade classes in which a majority of the children were of lower socio-economic backgrounds. Schools included in this study were selected by the administrations of the Hattiesburg and Forrest County, Mississippi, school systems. The selection of classes was based on teacher cooperation and interest. Teachers were assigned randomly to two experimental groups and one control group. Five teachers were assigned to each group. The groups were designated as Experimental 1 (E_1), Experimental 2 (E_2), and Control (C).

The Group Treatments

Five trained doctoral students from the University of Southern Mississippi were assigned to work for a ten-week period with two teachers, one from Group E_1, and one from Group E_2. Acting as consultants to Group E_1, and as career educators to Group E_2, the doctoral students taught the lesson series, "The World of Work", to the two experimental groups designated in this study. The Classroom Behavior Management approach was used for Group E_1; the Traditional Teaching approach was used for Group E_2. Group C did not receive the lesson series.

Classroom Behavior Management is based on clearly stated classroom rules, approval for appropriate classroom behavior, ignoring inappropriate behavior whenever possible, and disapproval to the degree demanded to accomplish needed change. This approach is based on the premise that students of lower socio-economic background are reinforced by social approval as well as academic approval and are motivated to seek more approval. Using this teaching approach, the consultants taught one lesson per week to classes in Group E_1. The regular classroom teacher, having been trained in the technique, was asked to utilize the technique throughout the study.

The career educators taught one lesson per week to classes in Group E_2. As presented by the career educators, Traditional classroom instruction consisted of a lecture method used in conjunction with a question and answer period. It did not involve any particular emphasis on positive reinforcement.

The Statistical Treatment

At the conclusion of the lesson series, the Vocational Development Inventory and the Career Development Achievement Test were administered to each of the three groups. Group scores from these tests were compared to determine the differential effects of the Classroom Behavior Management approach and the Traditional Teaching approach on vocational attitudes and vocational subject matter knowledge.

Conclusions

The purpose of the study was to determine the differential effects of two teaching methods on attitude and achievement in the presentation of career development subject matter at the fifth-grade and sixth-grade levels. The conclusions and implications drawn from the analyses of the data are discussed in respect to the two hypotheses of the study.

Differential effects of teaching techniques on vocational attitudes

In Hypothesis 1 it was stated that the Classroom Behavior Management approach and the Traditional Teaching approach have differential effects upon vocational attitude. Data relating to this hypothesis showed that the Classroom Behavior Management technique as a means of improving attitude toward career development was effective on the

sample group. From observation of the study, it appeared that those students who received Classroom Behavior Management instruction tended to improve in a significant way in involvement in the process of occupational choice, orientation toward the problem of vocational choice, independence in decision making, and concepts of vocational choice.

Based upon the significant mean differences observed when comparing the experimental and control groups on the Vocational Development Inventory, it seems reasonable to conclude that members of the group in which the Classroom Behavior Management technique was utilized displayed a better attitude in dealing with vocational decisions than those children who were taught by more traditional methods or who were not taught at all. This would indicate that students in the study responded to behavior reinforcement with more positive attitudes.

It is interesting to note also that the Traditional method of instruction in career development, which involved a presentation of material with no positive reinforcement, resulted in significantly lower attitude scores in relation to Group C, which had no treatment whatsoever. In terms of this study, then, the Traditional Teaching method appeared to have a negative effect when compared with the two other groups.

While the study indicates significance in the treatment effect on attitudes, in view of the findings, one must consider the question of practicality in planning for implementation of these treatments. It would seem that the close group mean scores in attitude, although significantly different from one another, should be considered from this viewpoint. When one considers the amount of concentrated effort required to implement the Classroom Behavior Management approach in relation to the two-point gain in mean score of Group E_1 over the Control group, the practicality of using the approach has to be questioned. It should be remembered, however, that aside from any gain in attitude scores, the Classroom Behavior Management approach is designed to have other effects on the students. Its use in the classroom to minimize behavioral disruptions, create more positive self-concepts of the learners, and to ultimately create within the student a self-motivating desire to learn were not measured in this study, but may provide ample justification for the use of this technique in the classroom.

Another consideration would be from the standpoint of the total number of students involved. It whould be pointed out that a large number such as the one in the study (322) would tend to aid in gaining significance at the .05 level. However, the results of all calculations proved

significance beyond the .00001 level, indicating a strong influence of treatment effect for even the large number included in this study.

It should also be pointed out that the attitude scale consisted of a total of fifty items. A two-point difference in mean scores is equivalent to 4 per cent of the total score and might be considered quite significant. It could be concluded then, that the question of practicality would depend on the use of the study and its applicability to a particular classroom situation.

Differential effects of teaching techniques on vocational achievement

In Hypothesis 2 it was stated that Classroom Behavior Management approach and the Traditional Teaching approach have differential effects on vocational subject matter knowledge. Data relating to this study indicated as much as eight points difference in the mean scores of the three groups, with the highest score coming from the Classroom Behavior Management group. While this gives impetus to stressing the use of the Classroom Behavior Management technique as a means of achieving significant gains in vocational subject matter knowledge, it is important to stress, also, that the group taught by the Traditional method also showed significant gain in mean score over the Control group, which received no instruction. For the purpose of this study, the

Classroom Behavior Management technique emerged as the most effective method of achieving subject matter knowledge.

From a point of practicality, one must consider the population of this study as it might relate to, or have influence upon, vocational achievement. The Classroom Behavior Management technique, in this study involving fifth-grade and sixth-grade students from low socio-economic backgrounds, proved to be the most effective approach. Positive reinforcement seems to be particularly meaningful to this group, and this could account for the higher mean scores of Group E_1.

Summary

The results of this study suggest that an organized presentation of lessons in career development can be effective in bringing about greater understanding of content and in developing desirable vocational attitudes. The method which proved to be most effective in this study was the Classroom Behavior Management technique. While the Traditional Teaching method did bring higher mean scores on achievement, it appeared to have a negative effect on vocational attitudes, as the Control group scored higher on this scale.

Recommendations for Further Research

It would appear that on the basis of the findings of this study, the following recommendations are appropriate:

1. that further studies be designed to develop a stronger pre-training program for the teachers, using the Classroom Behavior Management technique.

2. that further studies be designed to provide additional evidence of the reliability and validity of the achievement test developed for use in this study.

3. that a similar study be conducted using the pretest and posttest methods of gathering data.

4. that a study in relation to attitude and achievement in career development be considered involving the comparison of children from predominantly lower socio-economic areas with children of predominantly higher socio-economic areas.

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