[AN ANALYSIS OF CERTAIN ATTITUDES OF SELECTED ELEMENTARY AND JUNIOR HIGH SCHOOL TEACHERS]

By

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CHAPTER I

INTRODUCTION

1. Purpose.

The basic objective of this study is to contribute to a better understanding of the personality patterns of teachers. To accomplish this objective, answers to the following questions will be sought: Are certain attitudes of more effective teachers significantly different from those of less effective teachers? Can certain attitudes be quantified so as to measure the likelihood that a given teacher, who possesses these attitudes, typifies either more effective or less effective teachers?

Specifically, the purposes of this study are threefold:

a. To develop an experimental inventory which will objectively survey certain attitudes of selected elementary and junior high school teachers.

b. To administer the experimental inventory to a teacher population, and analyze the obtained data to determine whether or not there are significant differences in certain attitudes between

(1) those teachers who are nominated by their respective principals as being the most outstanding in overall teaching effectiveness in relation to their colleagues, and

(2) the balance of the teachers who are not so nominated.

c. To estimate the predictive efficiency of the experimental inventory by determining the correlation between principals' evaluations as to overall teaching ability and total inventory score.

2. Related Studies.

An intensive survey was made of the literature reporting past research accomplished in the area of teacher characteristics for the purpose of obtaining background information and psychological insight relevant to the problem of evaluating teacher attitudes. The study of teacher characteristics as they relate to teacher proficiency has been quite extensive. A summary of investigations in the area of measurement and prediction of teaching proficiency, which was accomplished by A.S. Barr under the auspices of The National Society of College Teachers of Education, indicates that since the turn of the century, some 150 studies have been accomplished in this area.[1] This article notes that despite this large volume of research, the problems which these researches have attempted to solve, such as what a good teacher is like and whether teaching efficiency can be measured and predicted, are still very much with us. A review of the research accomplished in the last decade, particularly in the last five years, reveals that studies in this area of measurement are becoming increasingly more systematic and intensive in nature. These studies have yielded a great deal of objective data, produced a number of improved

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[1] A.S. Barr, "The Measurement and Prediction of Teaching Efficiency: A Summary of Investigations", Journal of Experimental Education, 16:203-283, June, 1948

evaluative instruments, and facilitated the reduction of the larger problems of teacher evaluation into different and specific aspects.

Because teaching is a complex function, a great many factors are active in influencing teaching performance. Therefore, a wide variety and number of instruments have been used by researchers towards determining the relationship of a multiple of personal factors and teaching success. While significant multiple correlations have been obtained between various criteria of teaching ability and test batteries, there is recognition of the need for reducing the number of tests included in these batteries by analyzing their factor content and eliminating overlap. Hellfritzsch has made a significant contribution in this area by undertaking a factor analysis of a number of instruments which past research had shown to have significant correlations with teaching ability.[2] His objective was to determine the common factor loadings of 19 tests which, when placed into a single test battery, showed significant relationships with teaching efficiency. The results of this study indicated that there were four primary factors which were common to these 19 instruments: general information; an attitude factor (consisting chiefly of a positive, sympathetic attitude towards the teaching profession, teaching personnel, and people in general); qualities adjudged

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[2]A.G. Hellfritzsch, "A Factor Analysis of Teaching Ability", Journal of Experimental Education, 14:166-199, December, 1945.

important by supervisors and administrators in evaluating teaching ability; and emotional balance and adjustment.

Another study accomplished by L.H. Mathews proved of great value in obtaining specific leads as to promising materials for inclusion in an experimental inventory of teacher attitudes.[3] Mathews did an item analysis of 11 different instruments which past research experiments had shown were correlated with teaching ability. He computed the percent of significantly discriminating items in each of the 11 instruments for a sample of 57 elementary school teachers in Wisconsin rural schools. It was determined that out of 1,675 items included in these tests, only 68 items possessed significant discriminating power. Many of the items selected for inclusion in the experimental inventory of teacher attitude were constructed on the basis of an analysis of the structure and content of these discriminating items identified by Mathews.

Further orientation and information was obtained from a study carried out by M.E. Barker, wherein significant relationships are reported between teaching efficiency and level of adjustment in the areas of professional growth, emotional situations, and relationships with administrators and pupils.[4]

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[3]L.H. Mathews, "An Item Analysis of Measures of Teaching Ability", Journal of Educational Research, 33:576-580, April, 1940.

[4]M.E. Barker, "Summary of the Relation of Personality Adjustments of Teachers to Their Efficiency in Teaching", Journal of Educational Research, 29:585-88, April, 1936.

Another study carried out by Simon yields data which seem to indicate that undesirable attitudes have direct influence on the success of individuals in the teaching profession.[5] This study indicates that, on the basis of a sample of 1769 teachers who were discharged from their positions by administrators, the most frequent reasons for the dismissal of teachers are, in order, weakness in discipline, lack of cooperation, and lack of personality.

There is a large number of studies in the literature which have both direct and indirect relationship to the problem of this project. As is indicated in the bibliography of this report, the results of these investigations have been periodically summarized, chiefly through the efforts of A.S. Barr, as an assistance to those interested or engaged in research in this area. In this review of related studies, therefore, the discussion has been restricted to those particular investigations which, in general, had the most influence on the thinking and subsequent choice of material which went into the development of this project.

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[5]D.L. Simon, "Personal Reasons for the Dismissal of Teachers in Smaller Schools", Journal of Educational Research, 29:585-88, April, 1936.

CHAPTER II

INSTRUMENT, CRITERION, AND SAMPLE

1. Development of an inventory of teacher attitude.

The initial task in the development of an inventory of teacher attitude was to establish hypotheses as to the kinds of attitudes which would most likely have a significant influence on teaching effectiveness. The first step towards the solution of this problem was to review past research findings to determine which factors were significantly correlated with teaching effectiveness. Such data were analyzed for the purpose of estimating which of the correlated factors were a function of or a reflection of attitude. On the basis of this analysis, it was decided to select item material for inclusion in the experimental inventory in the following areas:

a. Relationships with pupils

b. Relationships with professional personnel

c. Relationships with the teaching profession in general

d. Personal qualities

e. Concepts with regard to aims, objectives, and scope of education

A total of 75 objective-type items in the foregoing areas were incorporated into an experimental booklet of 10 pages

entitled the "Cross-Sectional Inventory of Teacher Opinion."[6] The inventory is organized into five parts. Items are allocated to each part primarily on the basis of item structure and secondarily on the basis of item content. Some of the items have two alternatives and others four and five. It was felt that the items having the same structure should be grouped together to facilitate the answering of the questions and to avoid confusion. The organization of the inventory can be described as follows:

Part I	9 two-choice items pertaining to concepts with regard to aims, objectives, and scope of education
Part II	13 four and five-choice items pertaining to relationships with pupils, professional personnel, and the teaching profession in general
Part III	23 five-choice items pertaining to the same areas as in Part II
Part IV	15 two-choice items pertaining to personal qualities
Part V	15 two-choice items in the areas of professional relationships, and personal qualities

The assignment of some of the items in the inventory to a particular area of measurement was necessarily done on a subjective basis. Although some items were developed and used for the evaluation of attitude in one area, they may be a direct or indirect measurement of attitude in another area as well.

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[6]See appendix, pages 47-56

Once the areas had been established within which items would be developed, a number of sources were used to obtain specific item material. The items contained in Part I and Part II of the inventory were primarily developed on the basis of ideas and information obtained through discussions with a number of teachers and administrators, and personal insight obtained from a review of related studies.[7] Part III of the inventory is primarily composed of item material contributed to this study for further investigation by Carroll Leeds[8] and Paul Harnly.[9] Item material in Part IV of the inventory was incorporated on the basis of research findings reported by Arthur Dodge.[10] The Personnel Research Section, Adjutant General's Office, Department of the Army, has been actively engaged in the development of inventories for the measurement of personal adjustment. The forced-choice items included in Part V of the inventory were selected and adapted for use on the basis of item analysis data obtained in the investigations of this governmental agency.

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[7]See Chapter I, pages 2-5

[8]See appendix, page 66

[9]See appendix, page 67

[10]Arthur F. Dodge, "What are the Personality Traits of the Successful Teacher?", Journal of Applied Psychology, 27:325-37, August, 1943.

Further guidance and data were obtained from A.S. Barr,[11] David G. Ryans,[12] J.S. Orleans,[13] and L.H. Mathews.[14] Such contributions proved most useful in the determination of the item content which might profitably be included in the inventory of teacher attitude.

Once the experimental inventory was constructed and administered to a sample population of teachers, responses to the items would be subsequently analyzed to determine whether teachers in general do differ significantly among one another in certain attitudes, whether the more effective teachers as a group differ significantly in their attitudes from the less effective teachers as a group, and to estimate the efficiency of the selected items in the inventory in predicting teaching performance.

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[11] See appendix, page 68

[12] See appendix, page 64

[13] See appendix, page 65

[14] See appendix, page 69

2. Criterion.

The analysis and validation of items in the experimental inventory was accomplished on the basis of a dichotomized criterion of teaching effectiveness as determined by the evaluations of school principals. The following procedures were used in setting up the criterion:

The sampled teachers were divided into two groups. The one group consisted of those teachers nominated by their respective principals as being the most outstanding in teaching effectiveness. This group was used as a criterion for later evaluating the attitudes of most effective teachers. The other group consisted of those teachers who were not nominated by their respective principals as being the most outstanding in teaching effectiveness. This group was used as a criterion for later evaluating the attitudes of less effective teachers.

The sampled teachers were divided into the two criterion groups by asking the principal for each of the participating schools this question:

> "Which 25% of the teachers on your staff, considering overall teaching effectiveness, would you nominate as being the most outstanding in relation to the group as a whole?"

The above question was asked each principal at least a week in advance of the administration of the inventory to allow adequate time for such an evaluation to be made. In the larger schools which had assistant principals, such an

evaluation was accomplished cooperatively by the administrators. In order to avoid bias in the selection of teachers for nomination to each group, no suggestions were offered as to the factors which should be considered by the principals in making their nominations. Further, the principals were not shown a copy of the inventory, nor told what the inventory was designed to measure, until after the nominations were made and the inventory had been administered.

The nominating procedure described above was used to divide the teaching staff for each of the participating schools into two criterion groups: an upper group consisting of 25% of the total teaching staff, and a lower group consisting of the remaining 75% of the total teaching staff. For example, a particular school with a total teaching staff of eight teachers would be divided into an upper group consisting of two teachers nominated as being the most effective, and a lower group consisting of six teachers considered to be less effective.

It was pointed out to each principal that the necessary division of the teaching staff into two groups for the purpose of this research did not imply that the "lower group" did not include some excellent teachers. Because of the point of division established for this research, it was also considered likely that some teachers not nominated for inclusion in the upper group could have been, in fact, outstanding teachers.

The decision to establish a break point at the third quartile (upper 25%) for each school's teaching staff was necessarily an arbitrary one. The rationale for setting this cutting point was based upon conclusions drawn from a review of the literature, and personal experience in the area of personnel measurement. The basic problem was to divide a given population at a cutting point which would, on the whole, satisfactorily differentiate the most effective teachers from the balance of the teaching staff. Past experience with ratings has shown that a more valid and reliable differentiation can be made of those individuals falling within the extreme top and bottom portions of a given distribution than of those individuals falling in the middle portion of that distribution. Therefore, the higher the point of cut established for the teaching population, the better the probability of obtaining the nomination of two groups of teachers who differ significantly with respect to overall teaching effectiveness.

There were other factors which also had to be considered. The cut point had to be set low enough to insure the nomination of enough outstanding teachers to yield a sample adequate for statistical evaluation. On the other hand, setting the cutting point too low would require the nomination of so many teachers for the upper category as to reduce the distinctness of the two groups.

There was another important consideration involved in the problem of dichotomizing the teaching population on the basis of overall teaching effectiveness. This was whether the major portion of teachers significantly differ from one another in their sum total contributions to the teaching job. In view of individual differences, it is likely that a particular teacher who contributes less than many of his colleagues with respect to one particular area of the teaching job might conceivably contribute more in another area. It would seem reasonable to expect that there are but a very few teachers on each staff who can be said to contribute more to the educational process than their colleagues.

In view of the foregoing considerations, it was considered inadvisable to establish criterion groups which were too definitive with respect to teaching effectiveness. For the purposes of this study, therefore, the division of the sampled teacher population was set at a point which would, in general, differentiate the more readily identifiable outstanding teachers from the general teaching population.

3. Sample Population.

A total sample of 133 elementary and junior high school teachers was drawn from the Arlington County public school system, Arlington, Virginia. The Cross-Sectional Inventory of Teacher Opinion was administered to the entire teaching staffs of the following schools in the designated numbers:

School	Upper 25%	Lower 75%	Total 100%
John Marshall Elementary School	5	14	19
Maury Elementary School	2	6	8
Page Elementary School	3	7	10
Cherrydale Elementary School	2	7	9
Woodlawn Elementary School	1	4	5
Monroe Elementary School	3	8	11
Swanson Junior High School	8	22	30
Stratford Junior High School	9	32	41
	33	100	133

The above-named schools which participated in the subject project were chosen on a chance basis from different parts of Arlington County. Since the purpose of this study was to evaluate the attitudes of both elementary and junior high school teachers, it was considered advisable to obtain a relatively equal representation of teachers at both levels. Therefore, the number of elementary and junior high schools which was selected was controlled to obtain a relatively equal ratio of participating elementary and junior high school teachers.

It might be pertinent to note that the Arlington County public schools are located in the suburbs of Washington, D.C. A number of teachers have come to this area with their families during the national defense activities of the last ten years. These teachers may, therefore, be expected to represent a variety of cultural, professional training, and experience backgrounds.

CHAPTER III

PROCEDURES

1. Field Arrangements.

After the experimental inventory of teacher opinion had been developed, the next step was to obtain the cooperation of school personnel for the gathering of attitude data from elementary and junior high school teachers through the administration of the instrument.

The subject project was discussed with the Superintendent of Schools, Arlington County, Virginia, to determine the possibility of obtaining such data from teachers in that school system. In explaining the project, it was noted that the obtained data were to be used solely for the purpose of ascertaining whether the attitudes of those teachers considered to be the most outstanding by their respective principals differ significantly from those held by the general teaching population. The proposed field procedures were, in general, approved. However, since the acquired data were not to be used for individual evaluation, comparison, or for any administrative purpose, it was considered desirable to work out a method of obtaining the data which would assure the cooperating personnel that the acquired data would not be used for such purposes.

The research plan called for the analysis and comparison of data obtained from one group, composed of teachers nominated by their respective principals as being the most outstanding in relation to their colleagues, with a second group composing the balance of the respective teaching staffs. Since the analysis of data was to be on an impersonal and group basis, it was not necessary to know the identity of the individuals who composed the two groups. The only administrative control which was necessary was to keep the data acquired from individuals within one group separate from the data acquired from individuals within the other group.

The following procedures for the collection of data were agreed upon which would be compatible with the requirements of the research design, and consistent with the interests of the cooperating personnel:

Prior to the administration of the Cross-Sectional Inventory of Teacher Opinion to the staff of a particular school, a number of blank answer sheets, equal to the number of teachers selected by the principal for nomination to the upper group, would be identified with a pencilled check mark. The balance of the answer sheets would remain unchecked. At the time the Inventory was to be administered, the principal for each school would distribute the answer sheets to the teachers as they came through the door. In an inconspicuous fashion, the checked answer sheets would

be given to those teachers who were nominated to the upper criterion group, and the unchecked answer sheets would be given to the balance of the teaching staff. The use of this procedure would not only avoid the need for administering the Inventory in a discernibly differential manner to the two groups of teachers, but would also make it unnecessary for the individual teachers to write their names on the answer sheets. Therefore, the principal would be the only individual who knew the identity of the teachers who had been nominated for representation in one of the two criterion groups.

Once the nature and purpose of the research project had been explained, and the above-described field procedures had been established, Superintendent Early expressed his approval and interest in the project by means of a letter to the principals and teachers within the school system requesting that, where possible, the necessary cooperation be extended for the accumulation of the desired data. The administrative and teaching staffs were found to be most interested and cooperative in contributing to the study.

2. Administration of the Cross-Sectional Inventory of Teacher Opinion.

The inventory was administered to the teaching staffs of the participating schools during special sessions specifically arranged for by the principals in cooperation with

their teaching staffs. These sessions were held in the respective school buildings following the close of the regular school day. Each session lasted approximately forty-five minutes.

The Cross-Sectional Inventory of Teacher Opinion is practically self-administering. The subject reads the directions on the front page of the experimental booklet and then proceeds to answer the 75 items. There is no time limit for the instrument, although the majority of the subjects complete the inventory within thirty minutes. The administration of the inventory was standardized as follows:

At the beginning of the session the nature of the study was briefly explained. The teachers were advised that the purpose of the research was to obtain a representative sample of the opinions and attitudes of elementary and junior high school teachers in certain areas having a relationship to education.

The experimental booklets and pencils were then distributed. The answer sheets had already been distributed at the door by the principal to the teachers nominated for each criterion group in accordance with the procedures described earlier in this report.[15] After the subjects had received the proper materials, they were instructed as follows:

> "Read the instructions on the front page of the booklet, but do not turn the page until you are told to do so."

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[15]See Chapter III, pages 16-17

After allowing time for all to read the directions on the front page of the inventory and to ask any questions, the examinees were advised as follows:

> "Now look at your answer sheet (hold up a copy). Most of you will recognize it as a standard IBM answer sheet. If you do not know exactly how to use such an answer sheet, please raise your hand after the administration of the inventory begins and I will explain how to use it."
>
> "Do not write your name on the answer sheet. Since the opinions which I obtain from you will be analyzed on a group basis, rather than an individual basis, it is not necessary for you to note your name."
>
> "Please do not discuss or compare the questions until the end of this session. It is YOUR interpretation of the questions and YOUR choice of response which are important factors in the inventory."
>
> "When you have completed the inventory, please bring your material up to the front of the room and place it on this table."
>
> "Thank you very much for the help you are giving me in obtaining research data."
>
> "You may now begin."

3. Item Analysis.

The answer sheets for the total group of 133 teachers who were administered the Cross-Sectional Inventory of Teacher Opinion were separated into two parts. One part consisted of the 33 answer sheets completed by those teachers who were nominated as being the most outstanding teachers with respect to their colleagues. The other part consisted of 100 answer sheets completed by those teachers who were not nominated for inclusion in the upper group.

For each of the 75 items in the Cross-Sectional Inventory of Teacher Opinion, the number of teachers in each of the two

groups who selected each alternative was obtained by hand tallying. These frequencies were, in turn, converted into percentages for the respective groups. These data are shown in the appendix of this report.[16]

It was desired to insure that all alternatives which were to be accepted for use in evaluating the differences in attitudes of the two teacher group were discriminating at a level which was indicative of a true difference, and not a difference which could be attributed to chance. Critical ratios were used to evaluate the extent to which a variation in the responses of each group gave evidence of being a true difference. For the purpose of this study, it was decided that no alternative would be accepted for use in evaluating the attitudes of the two groups unless the critical ratio of the percentage differences in response for the two groups was at least 1.5; i.e., the chances were at least 85 out of 100 that the true difference between the percentages was greater than zero.

The item analysis revealed that 35 alternatives, representing 23 items in the 75-item inventory, had critical ratios of 1.54 or higher (Tables 1 and 2). Therefore, only these alternatives were accepted for the evaluation of the attitudes of the more effective and less effective groups of teachers.

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[16]See appendix, pages 60-63

It was statistically determined that the percentage difference in response to a particular alternative between the two teacher groups had to be at least 12% in order to yield a critical ratio of 1.5. Therefore, critical ratios were computed for only those alternatives which the item analysis process showed a percentage difference in response between the two teacher groups at a 12% level or higher.

The computation of critical ratios for the 35 selected alternatives, i.e., those which indicated a percentage difference in response between the two teacher groups at a 12% level or higher, can be illustrated by the analysis of alternative 10-A (See Tables 1 and 2):

Formula: $$\frac{P_1-P_2}{\sqrt{\frac{P_1Q_1}{N_1}+\frac{P_2Q_2}{N_2}}}$$

Alternative 10-A: $P_1 = 33$ $P_2 = 51$ $P_1-P_2 = 18$

$P_1Q_1 = 2211$ $\frac{P_2Q_2}{N_2} = 24.99$

$\frac{P_1Q_1}{N_1} = 67.00$

$$\sqrt{\frac{P_1Q_1}{N_1}+\frac{P_2Q_2}{N_2}} = \sqrt{91.99} = 9.59$$

Critical ratio: $\frac{P_1-P_2}{9.59} = \frac{-.18}{9.59} = -1.88$

The identity and classification of the selected items and corresponding significantly discriminating alternatives are subsequently described. The alternatives marked with a <u>single</u> asterisk (*) are those significantly preferred by

the upper group over the lower group. The alternatives marked with a double asterisk (**) are those significantly preferred by the lower group over the upper group. The alternatives which are not marked with asterisks are those which did not show a significant difference in response between the two groups at a level acceptable for later scoring and evaluation. While the unselected alternatives, i.e., those which are not marked with asterisks, did not discriminate between the two teacher groups to a significant degree as to assure the statistical stability necessary for this study, a review of these alternatives (See percentage data in Table 1) will give the reader an insight into the general preferences of the two groups. Item 18, shown below, will illustrate this point. Sixty percent of the upper group (See Table 1) selected either alternative "A" or "B", in contrast to thirty-nine percent of the lower group. It can be seen, therefore, that the upper group has a more positive attitude towards their respective supervising practice teachers than does the lower group. However, alternative "C" was the only one selected for scoring and evaluation since it was the only one of the five choices which differentiated the two teacher groups at a significantly high enough level.

Relationships with professional personnel:

Item 18. How would you classify the teacher who supervised your practice teaching?

A) Outstanding
B) Superior
**C) Above average
D) Average
E) Did not take practice teaching course

TABLE 1.

Percentage of Response to Selected Items in the Cross-Sectional Inventory of Teacher Opinion by a Population of 133 Virginia Teachers

Item No.	Criterion Group	Item alternatives A	B	C	D	E	Omit
10	Upper	33	57	6	3		
	Lower	51	40	8			1
11	Upper	21	27	42	6		3
	Lower	23	36	26	12	2	1
16	Upper	18	30	36	15		
	Lower	15	24	28	30	1	2
17	Upper	27	54	15	3		
	Lower	25	35	37	2		1
18	Upper	30	30	12	15	12	
	Lower	18	21	27	18	14	2
21	Upper	78	3	12		3	3
	Lower	56	1	28	4	11	
25	Upper		3	9	36	51	
	Lower	2	2	4	53	39	
27	Upper	3	24	3	57	12	
	Lower	14	38	16	29	3	
28	Upper	3	15	3	42	36	
	Lower	22	21	12	40	5	
30	Upper	3	27	6	57	6	
	Lower	5	17	24	46	8	
33	Upper	27	27	21	15	9	
	Lower	30	44	13	12	1	
36	Upper	12	78	3	6		
	Lower	26	66	4	3	1	
38	Upper	3	12	24	51	6	3
	Lower	8	25	19	42	5	1
43	Upper	18	30	9	39	3	
	Lower	10	47	12	27	4	
47	Upper	84	15				
	Lower	70	30				
49	Upper	72	27				1
	Lower	57	41				2
51	Upper	87	12				
	Lower	72	28				
55	Upper	60	39				
	Lower	74	23				3
57	Upper	15	84				
	Lower	27	72				1
68	Upper	69	30				
	Lower	81	16				3
71	Upper	24	72				3
	Lower	37	57				6
72	Upper	63	36				
	Lower	43	57				
75	Upper	63	36				
	Lower	44	55				1

TABLE 2.

Critical Ratios
of
Selected Item Alternatives
On the Cross-Sectional Inventory of Teacher Opinion

Item Number	Item Response	Critical* Ratio	Chances in 100**
10	A	-1.88	94
	B	1.72	91
11	C	1.66	90
16	D	-1.94	95
17	B	1.92	94
	C	-2.80	99
18	C	-2.09	96
21	A	2.51	98
	C	-2.22	97
25	D	-1.75	92
27	B	-1.58	88
	C	-2.75	99
	D	2.87	99
28	A	-3.73	100
	E	3.59	100
30	C	-3.03	100
33	B	-1.85	93
36	A	-1.96	95
38	B	-1.83	93
43	B	-1.81	93
47	A	1.78	92
	B	-1.94	95
49	A	1.62	89
	B	-1.53	87
51	A	2.03	96
	B	-2.22	97
55	B	1.69	90
57	A	-1.57	88
	B	1.54	88
68	B	1.59	89
71	B	1.62	89
72	A	2.05	96
	B	-2.16	97
75	A	1.95	95
	B	-1.95	95

*Negative critical ratios apply to those alternatives chosen significantly more often by the lower group.

**"Chances in 100" column indicates the probability that the differences in response to the respective alternatives by the two teacher groups are "true" differences and not attributable to errors in sampling.

Item 38. School administrators and supervisors tend to interfere too much with the teacher's professional duties.

A) Strongly agree
** B) Agree
C) Undecided
D) Disagree
E) Strongly disagree

Item 43. The actions of principals and supervisors often indicate that they have lost sight of or are unaware of the problems of teachers.

A) Strongly agree
** B) Agree
C) Undecided
D) Disagree
E) Strongly disagree

Item 72. *A) I have frequent contact with the principal
**B) I have occasional contact with the principal

Item 75. *A) My supervisor and principal have been in a position to make a fair and accurate judgment of my abilities
**B) They have not been in a position to make a fair and accurate judgment of my abilities

Relationships with pupils:

Item 11. How many evenings during the school week should pupils of high school age be allowed to go out?

A) None
B) 1
* C) 2
D) 3
E) 4 or more

Item 21. If you were advising a beginning teacher, which of the following aspects of teaching would you say were the most crucial to teaching success?

* A) Good pupil relationships
B) Good teacher relationships
** C) Mastery of subject and teaching methods
D) Good principal and supervisor relationships
E) Confidence and support of parents

Item 25. A teacher should not acknowledge her ignorance of a topic in the presence of her pupils.

A) Strongly agree
B) Agree
C) Undecided
**D) Disagree
E) Strongly disagree

Item 27. To maintain good discipline in the classroom, a teacher needs to be strict.

A) Strongly agree
**B) Agree
**C) Undecided
*D) Disagree
E) Strongly disagree

Item 28. Discipline problems are the teacher's greatest worry.

**A) Strongly agree
B) Agree
C) Undecided
D) Disagree
*E) Strongly disagree

Item 30. Pupils are qualified to make their own choice as to classroom discussions and assignments.

A) Strongly agree
B) Agree
**C) Undecided
D) Disagree
E) Strongly disagree

Item 33. The policy of promoting all pupils automatically each term lowers achievement standards.

A) Strongly agree
**B) Agree
C) Undecided
D) Disagree
E) Strongly disagree

Item 36. The school should help pupils to discover situations in the community which should be improved.

**A) Strongly agree
B) Agree
C) Undecided
D) Disagree
E) Strongly disagree

Item 71. A) I tend to be too aloof from pupils
*B) I tend to be too familiar with pupils

Relationships with the teaching profession in general:

Item 10. How did you stand in your college undergraduate grades?

**A) Top quarter of class
*B) Second quarter of class
C) Third quarter of class
D) Fourth quarter of class

Item 16. In a list of 100 teachers, where would you rank yourself with regard to overall teaching ability?

A) In the top 5%
B) In the top 15%
C) In the top 25%
**D) In the middle
E) In the 25% just below the average

Item 17. What grade did you receive in practice teaching while in college?

A) Did not take practice teaching course
*B) A
**C) B
D) C

Personal qualities:

Item 47. Would you dislike working in some remote location where you would have little opportunity to meet other people?

*A) Yes
**B) No

Item 49. Do you enjoy assuming additional responsibilities?

*A) Yes
**B) No

Item 51. Have you ever solicited money for some worthy cause?

*A) Yes
**B) No

Item 55. Do you prefer to be out-of-doors for your recreation?

A) Yes
*B) No

Item 57. Do you find it difficult to get rid of a salesman?

**A) Yes
*B) No

Item 68. A) I can explain things clearly
*B) I have a forceful manner

4. Scoring.

The item alternatives shown in Table 2 were incorporated into scoring keys. The 15 alternatives which were chosen significantly more often by the upper teacher group than the lower teacher group were placed into Scoring Stencil "A" and given a positive weight of plus 1. The 20 alternative which were chosen significantly more often by the lower teacher group than the higher teacher group were placed into Scoring Stencil "B" and given a negative weight of minus 1. The unscored alternatives in the Inventory (those which did not adequately discriminate between the higher and lower teacher groups) automatically assumed weights of zero.

Because of the number of responses to be scored, use of differential item weights, assigned on the basis of the size of the critical ratios of the items, was rejected on the grounds that within the range of the responses presented differential weighting would not materially influence total scores. It is to be expected that the correlation between total scores based on differentially weighted items and total scores based on simple unit weighted items would probably be well over .95 with this many items.[17]

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[17]M.W. Richardson, The Combination of Measures. Social Science Research Council Bulletin, No. 48, 1941. Pp. 398-401.

The scoring formula adopted for the experimental inventory was total "rights" as determined by use of Scoring Stencil "A", minus total "wrongs" as determined by Scoring Stencil "B". Since there are 15 positively weighted responses and 20 negatively weighted responses, the highest possible score is plus 15 and the lowest possible score is minus 20. The appropriate responses were punched on IBM scoring stencils designed for use in scoring the IBM answer sheets which were used in the administration of the inventory.

CHAPTER IV

RESULTS AND CONCLUSIONS

RESULTS AND CONCLUSIONS

Processing of the 133 answer sheets completed by the upper and lower groups of teachers in the administration of the Cross-Sectional Inventory of Teacher Opinion provided the following data.

The distribution of scores for the total sample of 133 teachers (Table 3 and Figure 1) is nearly normal, with obtained scores covering most of the possible range from plus 15 to minus 20. An underlying assumption in personnel measurement is that most psychological traits are normally distributed.[18] Therefore, the relatively normal distribution of scores obtained through the administration of the inventory seems to suggest that this instrument is appropriate to the group for which it was designed.

The means and standard deviations obtained for the score distributions of the two teacher groups are as follows:

Upper Group	Lower Group	Total Group
Mean 5.45	Mean -.670	Mean .850
S.D. 3.43	S.D. 3.70	S.D. 4.50

A critical ratio of 8.7 was obtained in a test to determine the significance of the difference between the mean scores of the two groups of teachers. The size of this critical

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[18]Henry E. Garrett, Statistics in Psychology and Education. New York: McGraw-Hill, 1946. Pp. 98-100.

TABLE 3.

Distribution of Scores Attained By
The Population of 133 Virginia Teachers
On the Cross-Sectional Inventory of Teacher Opinion

Score	Criterion Groups				Total	
	Upper 25%		Lower 75%			
	f	%	f	%	f	%
11	2	6			2	2
10	3	9			3	2
9	3	9	1	1	4	3
8	2	6			2	2
7	4	12	4	4	8	6
6	3	9	1	1	4	3
5	1	3	1	1	2	2
4	5	15	5	5	10	8
3	4	12	3	3	7	5
2	2	6	10	10	12	9
1			13	13	13	10
0	3	9	14	14	17	13
-1			12	12	12	9
-2	1	3	5	5	6	5
-3			9	9	9	7
-4			6	6	6	5
-5			4	4	4	3
-6			6	6	6	5
-7			3	3	3	2
-8			2	2	2	2
-9					0	0
-10					0	0
-11			1	1	1	1

PERCENTAGE DISTRIBUTION OF SCORES ATTAINED BY THE TOTAL CRITERION GROUP
(UPPER 25% AND LOWER 75% GROUPS COMBINED)
ON THE CROSS-SECTIONAL INVENTORY OF TEACHER OPINION
FOR A POPULATION OF 133 VIRGINIA TEACHERS

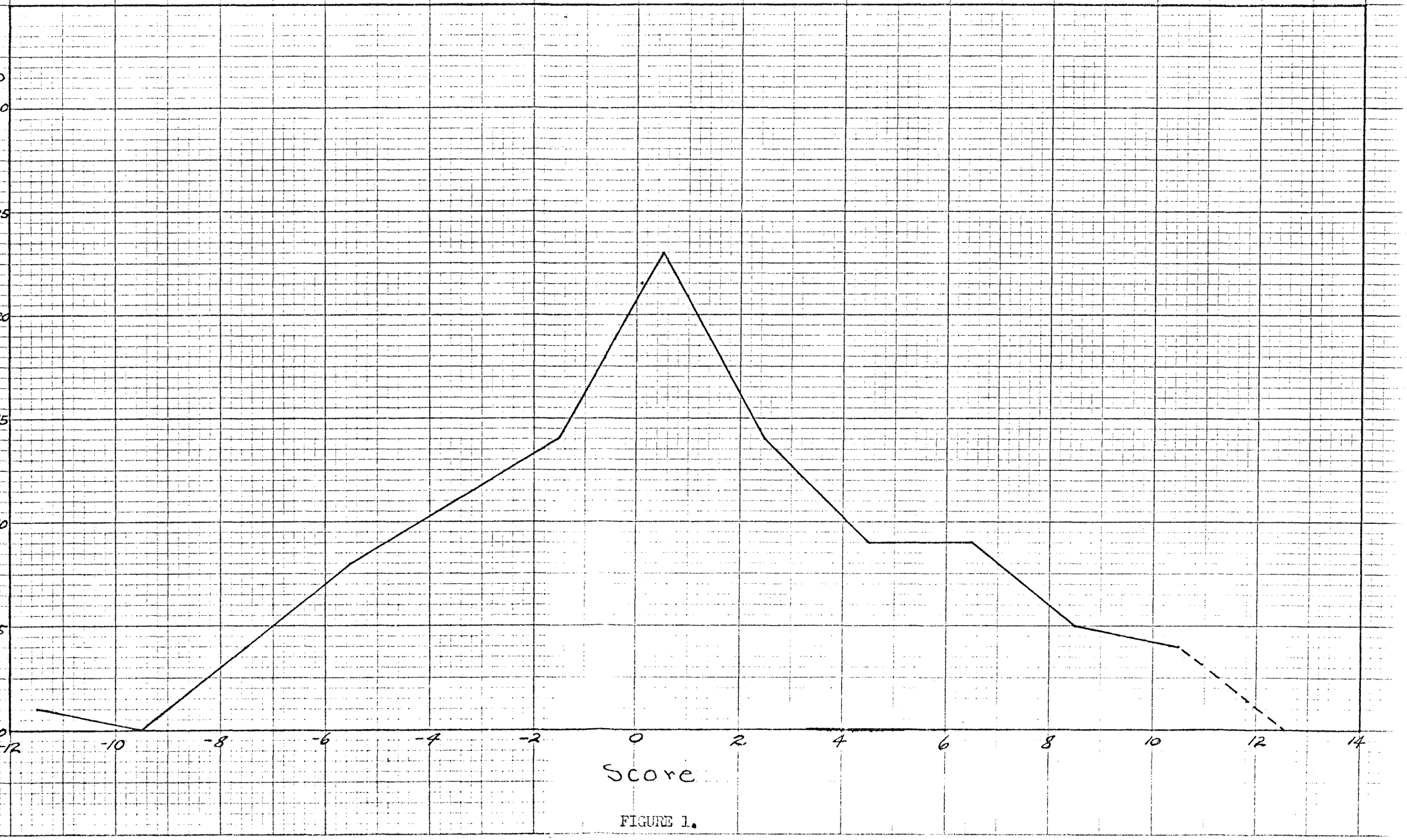


FIGURE 1.

ratio indicates that the probabilities are better than 999 out of 1000 that the obtained difference is a true one and did not arise from errors in sampling.

A review of the score distributions (Table 3 and Figure 1) will show that a score of plus 3 is approximately the optimum point of cut for differentiating teachers with regard to the dichotomized criterion of teaching effectiveness. The efficiency of this point of cut is illustrated by Table 4 which immediately follows.

TABLE 4.

Fourfold Expectancy Table
Showing Relation of Scores on
the Cross-Sectional Inventory of Teacher Opinion
To Criterion Group Standing

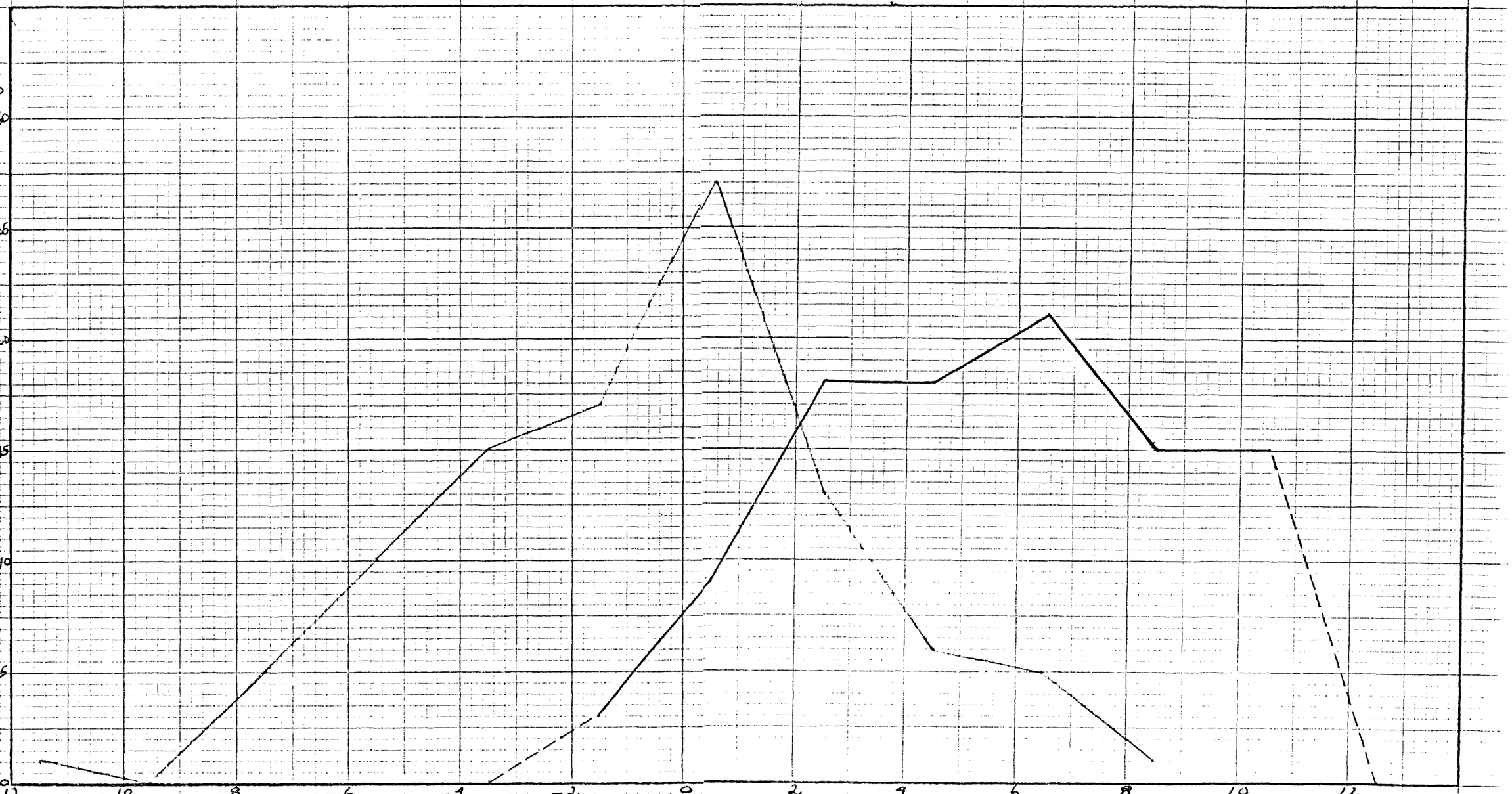
Score	Criterion Groups	
	Lower 75%	Upper 25%
Plus 3 and higher	18	82
Plus 2 and lower	85	15

Table 4 indicates that if a teacher scores plus 3 or higher on the Cross-Sectional Inventory of Teacher Opinion, the chances are 18 in 100 that he will be in the lower criterion group, and 82 in 100 that he will be in the higher criterion group. It further shows that if a teacher scores plus 2 and lower, the chances are 85 in 100 that he will be in the lower group and 15 in 100 that he will be in the higher group.

The raising of the critical score to a level higher than plus 3 would increase the probability that an individual who achieves such a score would fall into the upper group of more effective teachers. In doing so, however, a greater number of individuals in the upper group would fail to achieve such a critical score and would fall into the lower group. The decision as to what cut score to use for a particular instrument when it is used as a selection device would have to be made by the administrator utilizing the instrument. In this connection, it should be noted that the Cross-Sectional Inventory of Teacher Opinion is not recommended for use in its present form as a selection device. It is an experimental instrument which was developed primarily for the purpose of collecting attitude data. Therefore, the data presented in Table 4 should be considered interpretative in nature.

Comparison of the distributions for the upper and lower groups (Table 3 and Figure 2) indicates the effectiveness of the inventory in discriminating these groups on the basis of their attitude responses. A biserial correlation coefficient computed on these data is .80. This is extremely high for such an instrument which was correlated against a criterion which was not of attitude but of teaching effectiveness. It should be noted, however, that this correlation was obtained for the population on which the scor-

PERCENTAGE DISTRIBUTIONS COMPARING THE SCORES ATTAINED BY THE UPPER 25% CRITERION GROUP
WITH THE SCORES ATTAINED BY THE LOWER 75% CRITERION GROUP
ON THE CROSS-SECTIONAL INVENTORY OF TEACHER OPINION
FOR A POPULATION OF 133 VIRGINIA TEACHERS



UPPER GROUP SHOWN IN BLACK
LOWER GROUP SHOWN IN RED
BROKEN LINES ARE PROJECTED

FIGURE 2.

ing key was developed. Previous studies have shown that when a key developed on one population is applied to a second population, a lower correlation is to be expected.[19] Since it can be assumed that the scoring key developed on the population of 133 teachers capitalized on any chance idiosyncrasies which were inherent in that population, it was decided to investigate the size of the correlation on another population.

Supplementary data were subsequently obtained through the administration of the experimental inventory to a sample of 36 elementary and junior high school teachers drawn from the following schools in the state of Maryland:

School	Upper 25%	Lower 75%	Total 100%
Rockville Elementary School Rockville, Maryland	5	15	20
Bladensburg Junior High School Bladensburg, Maryland	4	12	16
	9	27	36

After the Cross-Sectional Inventory of Teacher Opinion was administered to the teaching staffs of the above schools, the answer sheets were scored with the same scoring keys developed on the sample population of 133 teachers obtained from schools in Arlington, Virginia. The distribution of scores for the total sample of 36 teachers (Table 5) is quite normal despite the small number of cases.

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[19] A.K. Kurtz, "A Research Test of the Rorschach Test", Personnel Psychology, 1:4151, Spring 1948.

TABLE 5.

Distribution of Scores Attained By
The Population of 36 Maryland Teachers
On the Cross-Sectional Inventory of Teacher Opinion

Score	Criterion Groups: Upper 25% f	%	Lower 75% f	%	Total f	%
9			2	7.4	2	5.6
8	1	11.1			1	2.8
7			1	3.7	1	2.8
6					0	
5			1	3.7	1	2.8
4	3	33.3	1	3.7	4	11.1
3	1	11.1			1	2.8
2	1	11.1	4	14.8	5	13.9
1	2	22.2	3	11.1	5	13.9
0	1	11.1	2	7.4	3	8.3
-1			3	11.1	3	8.3
-2			3	11.1	3	8.3
-3			1	3.7	1	2.8
-4			3	11.1	3	8.3
-5			1	3.7	1	2.8
-6			2	7.4	2	5.6

A biserial correlation of .43 was obtained on the data shown in Table 5. A critical ratio of 3.0 computed on this correlation shows that the chances are better than 99 in 100 that the correlation is significant. The difference between the correlation of .80, obtained on the original sample of 133 teachers, and the correlation of .43, obtained on the second sample of 36 teachers, can be attributed, in part, to two factors. First, the correlation of .80 was obtained for the same population on which the scoring key was developed. In consequence, a lower correlation could be expected when the key was applied to a second population. Second, the small number of cases in the second population would tend to

yield data which were less reliable than those obtained on the original sample of 133 cases. Therefore, the obtained correlation of .43 on the second sample is considered likely to be an underestimate of the inventory's validity.

The means and standard deviations obtained for the score distributions of the second population (Table 5) are as follows:

Upper Group		Lower Group		Total Group	
Mean	3.00	Mean	.15	Mean	.86
S.D.	.75	S.D.	4.03	S.D.	3.87

A critical ratio of 3.48 was obtained in a test to determine the significance of the difference between the mean scores of the upper and lower groups of Maryland teachers. Therefore, the probabilities are better than 99 out of 100 that the difference between the two groups is a true one.

Finally, the means and sigmas obtained for the total sample of 133 teachers drawn from the state of Virginia and the total sample of 36 teachers drawn from the state of Maryland were compared to determine whether there was any significant difference in performance on the Inventory. The mean score for the sample of 133 teachers was .850, and the mean score for the sample of 36 teachers was .860. This comparability in performance of the two samples is further substantiated by the fact that no significant difference was found between the standard deviations for the two samples. These data seem to suggest that there is no significant difference in the attitudes of the sampled teachers in Virginia and Maryland as measured by the Cross-Sectional Inventory of Teacher Opinion.

With respect to the purposes of this research project, the following conclusions appear justified on the basis of the data obtained in this study:

a. There appear to be significant differences in certain attitudes between those teachers considered to be more effective and those teachers considered to be less effective by their respective school principals.

b. There appears to be a significant correlation between principals' evaluations as to overall teaching ability and total score on selected items in the Cross-Sectional Inventory of Teacher Opinion. This would seem to suggest that perhaps an objective inventory of this type could be utilized as a check on, and possibly a substitute for, rating procedures often used by principals.

In reviewing the responses of more effective and less effective teachers to selected items in the inventory, certain observations seem warranted. The effectiveness of a teacher is apparently influenced by the presence of certain attitudes. There are a great many demands placed upon a teacher in his activities as friend, counselor, and instructor of pupils, and in his membership in a professional group. He must possess personal qualities of a social nature and a positive attitude towards children and professional personnel if he is to contribute optimumly to the educational process. Reference to specific responses of teachers to certain items in the inventory appear to substantiate these conclusions.

With respect to items in the area of relationships with professional personnel, the less effective teachers felt that

school administrators and supervisors tend to interfere too much with their professional duties, that principals and supervisors are unaware of the problems of teachers, that supervisors and principals are not in a position to make a fair and accurate judgment of their abilities, and that they had only occasional contact with their principals.

In the area of relationships with pupils, the less effective teachers feel that mastery of subject and teaching methods are most important to successful teaching, which is in contrast to the more effective teachers who feel that good pupil relationships are most important to teaching success. The less effective teachers feel most strongly that discipline problems are their greatest worry. The more effective teachers feel just as strongly that they are not.

In the area of personal qualities, evidences that the more effective teachers are more social in nature than the less effective teachers are seen in responses to items asking whether they have solicited money for a social cause, whether they would dislike working in a remote location away from people, and whether they enjoy assuming additional responsibilities. The more effective teachers respond affirmatively to these questions and the less effective teachers respond negatively.

There is another area, more difficult to define, which indicates differences in the attitudes of the more effective and less effective teacher groups. This area has been

classified in this report under the heading of relationships with the teaching profession in general. It was determined that the attitudes of the less effective teachers with respect to their own overall teaching ability correlate with the evaluations of their respective principals. Those teachers considered by their principals as being the most effective rated themselves above the average in overall teaching ability. On the other hand, those teachers who were not nominated by their respective principals as being amongst the most effective rated themselves average in overall teaching ability. This is interesting in view of the fact that the less effective teachers do not tend to consider that their principal and supervisor are in a position to make a fair and accurate judgment of their abilities. In response to a question as to standing in college undergraduate grades, the less effective teacher group indicated that they were in the top quarter of their class, while the more effective teacher group indicated that they were in the second quarter of their class. This may indicate that the less effective teachers are more academically minded than the more effective teachers. There is one other item in this area which seems to warrant special mention. Past research findings indicate a significant correlation between grade received in practice teaching and subsequent teaching success. Data on practice teaching grades for such studies have, in the past, been obtained from college records. It was felt that perhaps such

data could be obtained from the teacher by means of a direct question. In responding to such a question, a greater proportion of the more effective teachers indicated that they had received a grade of "A" in their practice teaching course, while a greater proportion of the less effective teachers indicated that they had received a grade of "B". It is felt that the correlation between practice teaching grade and subsequent teaching effectiveness can be attributed, in part, to attitudes which have an influence on an individual's ability to adjust to the demands of the teaching profession.

In a summary of impressions, trends, and observed needs for further research into teaching ability, A.S. Barr states:

> "Teaching in the modern school involves much more than the guidance of learning activities. It involves many important teacher-pupil relations; teacher-teacher relationships; teacher-administrator relationships; and teacher-community relationships and the many important responsibilities growing out of these. These relationships will limit in a significant respect the teacher's success in a given situation and ultimately affect pupil growth and achievement. So important are these relationships that it would seem desirable to subject them to special investigation."[20]

This study is an exploration in an area which has been receiving increased attention in the measurement and evaluation of teaching effectiveness. Since the by-products of investigations are often more important than their primary outcomes, it is hoped that this research project will provide leads and specific material which will be useful in further investigations of the relationship of teaching effectiveness and teacher attitude.

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[20] A.S. Barr, "The Measurement of Teaching Ability: Impressions, Trends, and Further Research", 14:199-206, December, 1945.

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APPENDIX

INDEX OF APPENDIX ITEMS

CROSS-SECTIONAL INVENTORY OF TEACHER OPINION

DIRECTIONS

This inventory consists of 75 items designed to sample opinions of teachers in different areas of education. Teachers differ in their professional opinions just as do doctors and lawyers in theirs. Therefore, there are no "right" or "wrong" answers. What is wanted is your own frank response to the items in this inventory. Read each item and decide how YOU feel about it. Mark your answers on the separate answer sheet. Do not skip any item - make the BEST choice you can. Do not make any marks on this booklet.

DO NOT OPEN THIS TEST BOOKLET
UNTIL TOLD TO DO SO

PART I

Choose one statement which best applies to each of the following items.

1. Pupil attendance at theatrical photoplays should be

   A) supervised by the high school faculty
   B) influenced by policy issued by a committee of the PTA
   C) with the permission of the parents

2. A course in manual training is desirable because

   A) physical manipulation is intimately connected with mental development
   B) it provides mental relaxation necessary for wholesome growth and development

3. Each high school girl should get training in home economics because

   A) it prepares her for a useful role in family living
   B) it will help her to live a richer life

4. The most important outcome of instruction is

   A) assimilation of large general tendencies toward wholesome conduct
   B) development of sympathetic attitudes toward other people

5. With regard to vocational preparation of pupils,

   A) each high school boy should be encouraged to think of choosing a life work
   B) all Freshman boys should be enrolled in one or the other of the vocational courses

6. The public secondary school exists primarily to

   A) make pupils compatible in matters pertaining to social welfare
   B) develop pupils' special talents for different callings

7. The teacher must have a working knowledge of adjusting the work of the school to individual needs because

   A) practically every pupil has some capacity that can be developed to advantage
   B) school work should be assigned with the special needs of each pupil in view

8. The teacher should have a working knowledge of mental hygiene because

   A) all work and no play retards mental development
   B) only a healthy body can harbor a really healthy intellect

9. The teacher must have a working knowledge of the principle of distributive responsibility because

   A) every pupil should be encouraged to work along lines which lead to social progress
   B) group welfare grows out of the maximum service rendered individually by its members

PART II

For the next series of items, there are four or five suggested choices for each. Select the one which most nearly applies to you.

10. How did you stand in your college undergraduate grades?

   A) Top quarter of class
   B) Second quarter of class
   C) Third quarter of class
   D) Fourth quarter of class

11. How many evenings during the school week should pupils of high school age be allowed to go out?

A) None
B) 1
C) 2
D) 3
E) 4 or more

12. How much of your present pay do you spend on personal recreation?

A) Less than 1%
B) 1% to 5%
C) 6% to 10%
D) 11% to 20%
E) Over 20%

13. Which one of the following do you like most about being a teacher?

A) Opportunity for advancement
B) Intellectual and cultural stimulation of the job
C) Relationships with teachers and pupils
D) Opportunity to show initiative and accept responsibility

14. In order to fulfill your teaching responsibilities, how many evenings during the week do you usually devote to school duties?

A) None
B) 1
C) 2
D) 3 or 4
E) 5 or more

15. Do you feel that the people in the community in which you now teach are as sociable as those in the last community in which you taught?

A) Not as sociable
B) About the same in sociability
C) More sociable
D) I don't know

16. In a list of 100 teachers, where would you rank yourself with regard to overall teaching ability?

A) In the top 5%
B) In the top 15%
C) In the top 25%
D) In the middle
E) In the 25% just below the average

17. What grade did you receive in practice teaching while in college?

A) Did not take practice teaching course
B) A
C) B
D) C

18. How would you classify the teacher who supervised your practice teaching?

A) Outstanding
B) Superior
C) Above average
D) Average
E) Did not take practice teaching course

19. About how many hours a week should pupils study outside of school?

A) None
B) 1 to 2 hours
C) 3 to 4 hours
D) 5 hours, averaging 1 hour per school night

20. With regard to overall teaching ability, how would you classify the teachers in your school as a group?

A) Outstanding
B) Superior
C) Above average
D) Average
E) Below average

21. If you were advising a beginning teacher, which of the following aspects of teaching would you say were the most crucial to teaching success?

A) Good pupil relationships
B) Good teacher relationships
C) Mastery of subject and teaching methods
D) Good principal and supervisor relationships
E) Confidence and support of parents

22. With regard to overall proficiency, how would you classify the principal of your school?

A) Outstanding
B) Superior
C) Above average
D) Average
E) Below average

PART III

Mark the answer sheet as follows with regard to the following items:

Mark in	A	if you strongly agree
Mark in	B	if you agree
Mark in	C	if you are undecided
Mark in	D	if you disagree
Mark in	E	if you strongly disagree

23. Most pupils don't appreciate what a teacher does for them.

24. A teacher should not be expected to sacrifice an evening of recreation in order to visit a child's home.

25. A teacher should not acknowledge her ignorance of a topic in the presence of her pupils.

26. A pupil should not be required to stand when reciting.

27. To maintain good discipline in the classroom, a teacher needs to be strict.

28. Discipline problems are the teacher's greatest worry.

A = Strongly agree
B = Agree
C = Undecided
D = Disagree
E = Strongly disagree

29. Pupils should be taught to respect teachers and the teaching profession.

30. Pupils are qualified to make their own choice as to classroom discussions and assignments.

31. Difficult disciplinary problems usually arise because of ineffective teaching.

32. Pupils can be given too much freedom in school.

33. The policy of promoting all pupils automatically each term lowers achievement standards.

34. Most pupils try to make things easier for teachers.

35. The teacher who is popular with her pupils is a good teacher.

36. The school should help pupils to discover situations in the community which should be improved.

37. Schools controlled by outstanding educational experts in Washington would be better than present local control.

38. School administrators and supervisors tend to interfere too much with the teacher's professional duties.

39. Educational practice should change gradually and only after it is certain that such change is desirable.

40. Parents are primarily interested in having their children learn the fundamentals of reading, writing, and arithmetic.

41. All high school pupils should be given sex instruction under competent well-trained teachers.

42. Considerable use of the library and frequent field trips tend to interfere with classroom activities which are necessary to pupil development.

43. The actions of principals and supervisors often indicate that they have lost sight of or are unaware of the problems of teachers.

44. The principal should assume responsibility for helping to solve disciplinary problems.

45. Teacher-supervisors in general are often no more proficient in teaching than those they supervise.

PART IV

Answer the following items as objectively as possible.

If your response is YES mark in A on answer sheet
If your response is NO mark in B on answer sheet

46. Are you disturbed if you happen to make some slight social error?

47. Would you dislike working in some remote location where you would have little opportunity to meet other people?

48. Do you greatly dislike speaking or acting in the presence of a large audience?

49. Do you enjoy assuming additional responsibilities?

50. Have you held the position of chairman or leader of a group within recent years?

51. Have you ever solicited money for some worthy cause?

52. Do you often offend others without realizing it at the time?

53. Do you feel that you can speak better than you write?

54. Do you prefer a movie to a dance?

55. Do you prefer to be out-of-doors for your recreation?

56. Are you very talkative at social gatherings?

57. Do you find it difficult to get rid of a salesman?

58. Do you usually face your problems alone without seeking help?

59. Are you usually considered to be indifferent to the opposite sex?

60. Do you avoid asking advice from the principal?

PART V

The following items contain pairs of statements. In each pair, choose the ONE statement which BEST applies to you. Indicate a choice for EVERY pair, even though neither choice applies very well.

61. A) I wish I had more self-confidence.
    B) I wish I had more responsibility.

62. A) I tend to look at the practical side of things.
    B) I tend to look at the humorous side of things.

63. A) I am more interested in what people are thinking.
    B) I am more interested in what people are doing.

64. A) Most teachers have the respect of their pupils.
    B) Most teachers are well-liked by their pupils.

65. A) I am friendly.
    B) I am cheerful.

66. A) To avoid friction, I accept decisions with which I don't agree.
    B) I try to change people around to my point of view.

67. A) I enjoy getting acquainted with most people.
    B) I prefer to spend my time with people I like.

68. A) I can explain things clearly.
    B) I have a forceful manner.

69. A) I pick my friends carefully.
    B) I like to meet new people.

70. A) A sense of humor relaxes discipline.
    B) A sense of humor can aid discipline.

71. A) I tend to be too aloof from pupils.
    B) I tend to be too familiar with pupils.

72. A) I have frequent contact with the principal.
    B) I have occasional contact with the principal.

73. A) I know most of the teaching staff on a personal basis.
    B) I know most of the teaching staff on a professional basis.

74. A) I feel that my education and talents are not fully utilized in the teaching profession.
B) I feel that the teaching profession makes full use of my ability.

75. A) My supervisor and principal have been in a position to make a fair and accurate judgment of my abilities.
B) They have not been in a position to make a fair and accurate judgment of my abilities.

SCORING STENCIL "A"

... opposite each item that is used in the test. The "A" circles are punched when the test is to be scored on the "A" ...
... [illegible] The "B" and "C" circles are punched for the fields of a test which are to be scored on the "B" or "C" control.
... check and punch out circles corresponding both to correct answer spaces and to answer spaces not to be counted either correct or incorrect in the ...
... are counted only in those fields which have one or more correct answer spaces.

SCORING STENCIL "B"

IBM FORM I.T.S. 1000 A 1724

PART

NAME OF TEST

1	A B C D E	31	A B C D E	61	A B C D E	91	A B C D
2	A B C D E	32	A B C D E	62	A B C D E	92	A B C D
3	A B C D E	33	A B C D E	63	A B C D E	93	A B C D
4	A B C D E	34	A B C D E	64	A B C D E	94	A B C D
5	A B C D E	35	A B C D E	65	A B C D E	95	A B C D
6	A B C D E	36	A B C D E	66	A B C D E	96	A B C D
7	A B C D E	37	A B C D E	67	A B C D E	97	A B C D
8	A B C D E	38	A B C D E	68	A B C D E	98	A B C D
9	A B C D E	39	A B C D E	69	A B C D E	99	A B C D
10	A B C D E	40	A B C D E	70	A B C D E	100	A B C D
11	A B C D E	41	A B C D E	71	A B C D E	101	A B C
12	A B C D E	42	A B C D E	72	A B C D E	102	A B C
13	A B C D E	43	A B C D E	73	A B C D E	103	A B C
14	A B C D E	44	A B C D E	74	A B C D E	104	A B C
15	A B C D E	45	A B C D E	75	A B C D E	105	A B C

16	A B C D E	46	A B C D E	76	A B C D E	106	A B C
17	A B C D E	47	A B C D E	77	A B C D E	107	A B C
18	A B C D E	48	A B C D E	78	A B C D E	108	A B C
19	A B C D E	49	A B C D E	79	A B C D E	109	A B C
20	A B C D E	50	A B C D E	80	A B C D E	110	A B C
21	A B C D E	51	A B C D E	81	A B C D E	111	A B C
22	A B C D E	52	A B C D E	82	A B C D E	112	A B C
23	A B C D E	53	A B C D E	83	A B C D E	113	A B C
24	A B C D E	54	A B C D E	84	A B C D E	114	A B C
25	A B C D E	55	A B C D E	85	A B C D E	115	A B C
26	A B C D E	56	A B C D E	86	A B C D E	116	A B C
27	A B C D E	57	A B C D E	87	A B C D E	117	A B C
28	A B C D E	58	A B C D E	88	A B C D E	118	A B C
29	A B C D E	59	A B C D E	89	A B C D E	119	A B C
30	A B C D E	60	A B C D E	90	A B C D E	120	A B C

Tabulation of the percentage of response to the 75 items in the Cross-Sectional Inventory of Teacher Opinion by a sample of 133 Virginia teachers (Upper Group, N33; Lower Group, N100).

Item No.	Criterion Group	Item alternatives A	B	C	D	E	Omit
1	Upper	15	9	75			
	Lower	13	14	71			
2	Upper	51	48				
	Lower	43	57				
3	Upper	60	39				
	Lower	55	45				
4	Upper	72	27				
	Lower	67	33				
5	Upper	93	6				
	Lower	88	10				2
6	Upper	54	45				
	Lower	53	45				2
7	Upper	48	51				
	Lower	43	57				
8	Upper	39	60				
	Lower	28	71				1
9	Upper	33	66				
	Lower	28	72				
10	Upper	33	57	6	3		
	Lower	51	40	8			1
11	Upper	21	27	42	6		3
	Lower	23	36	26	12	2	1
12	Upper	18	51	21	9		
	Lower	19	49	27	5		
13	Upper	0	21	60	18		
	Lower	0	24	49	25	1	1
14	Upper	6	24	24	36	9	
	Lower	11	16	19	45	9	
15	Upper	6	39	30	18		6
	Lower	11	41	29	17		2
16	Upper	18	30	36	15		
	Lower	15	24	28	30	1	2
17	Upper	27	54	15	3		
	Lower	25	35	37	2		1
18	Upper	30	30	12	15	12	
	Lower	18	21	27	18	14	2
19	Upper	15	42	15	27		
	Lower	7	37	20	35		1
20	Upper	12	33	36	18		
	Lower	10	27	45	17		1
21	Upper	78	3	12		3	3
	Lower	56	1	28	4	11	

Item No.	Criterion Group	Item alternatives A	B	C	D	E	Omit
22	Upper	24	30	30	12	3	
	Lower	16	17	38	23	4	1
23	Upper	3	24	12	45	15	
	Lower	12	30	6	45	6	1
24	Upper	21	33		30	15	
	Lower	13	28	8	44	4	3
25	Upper		3	9	36	51	
	Lower	2	2	4	53	39	
26	Upper	9	39	15	21	15	
	Lower	11	45	21	18	5	
27	Upper	3	24	3	57	12	
	Lower	14	38	16	29	3	
28	Upper	3	15	3	42	36	
	Lower	22	21	12	40	5	
29	Upper	45	42	3	6	3	
	Lower	47	41	8	3	1	
30	Upper	3	27	6	57	6	
	Lower	5	17	24	46	8	
31	Upper	12	39	9	27	12	
	Lower	12	34	13	32	9	
32	Upper	39	54	3		3	
	Lower	53	44	1	1	1	
33	Upper	27	27	21	15	9	
	Lower	30	44	13	12	1	
34	Upper	6	30	12	48	3	
	Lower		23	24	46	7	
35	Upper	6	24	27	36	6	
	Lower	7	20	34	33	6	
36	Upper	12	78	3	6		
	Lower	26	66	4	3	1	
37	Upper		3	24	42	30	
	Lower	3	8	22	40	26	1
38	Upper	3	12	24	51	6	3
	Lower	8	25	19	42	5	1
39	Upper	21	57	12	3	6	
	Lower	17	56	12	12	3	
40	Upper	24	42	15	15	3	
	Lower	17	53	13	15	1	1
41	Upper	21	54	9	6	9	
	Lower	27	45	20	5	3	
42	Upper		6	6	57	30	
	Lower	1	11	9	60	19	
43	Upper	18	30	9	39	3	
	Lower	10	47	12	27	4	
44	Upper	18	66	3	9	3	
	Lower	24	58	6	11	1	

Item No.	Criterion Group	Item alternatives A	B	C	D	E	Omit
45	Upper	12	51	18	18		
	Lower	13	42	19	24	2	
46	Upper	36	63				
	Lower	30	70				
47	Upper	84	15				
	Lower	70	30				
48	Upper	27	72				
	Lower	32	68				
49	Upper	72	27				
	Lower	57	41				2
50	Upper	87	12				
	Lower	79	20				1
51	Upper	87	12				
	Lower	72	28				
52	Upper	9	90				
	Lower	15	83				2
53	Upper	33	66				
	Lower	37	62				1
54	Upper	45	54				
	Lower	32	66				2
55	Upper	60	39				
	Lower	74	23				3
56	Upper	45	54				
	Lower	51	47				2
57	Upper	15	84				
	Lower	27	72				1
58	Upper	54	45				
	Lower	52	47				1
59	Upper	9	90				
	Lower	9	90				1
60	Upper	9	90				
	Lower	18	81				1
61	Upper	66	33				
	Lower	74	24				2
62	Upper	69	30				
	Lower	62	36				2
63	Upper	48	51				
	Lower	47	53				
64	Upper	63	36				
	Lower	64	36				
65	Upper	81	18				
	Lower	82	16				2
66	Upper	63	36				
	Lower	61	35				4
67	Upper	66	33				
	Lower	67	33				

Item No.	Criterion Group	Item alternatives A	B	C	D	E	Omit
68	Upper	69	30				
	Lower	81	16				3
69	Upper	42	54				3
	Lower	42	57				1
70	Upper	15	84				
	Lower	10	89				1
71	Upper	24	72				
	Lower	37	57				6
72	Upper	63	36				
	Lower	43	57				
73	Upper	45	54				
	Lower	54	46				
74	Upper	51	48				
	Lower	51	47				2
75	Upper	63	36				
	Lower	44	55				1

NOTE: The percentages shown in the above tabulation were computed as follows: The frequencies of response to each alternative for the upper group were multiplied by three to yield a total percentage of 99% for each item. Since there were 100 teachers in the lower group, each frequency was equal to 1%. Therefore, the percentages shown for the lower group are also the frequencies. The frequencies for the upper group can be obtained by dividing the percentage by three.

C O P Y TEACHER CHARACTERISTICS STUDY

A Project of The
AMERICAN COUNCIL ON EDUCATION

University of California
Los Angeles 24, California July 17, 1950

Mr. Neil R. Lovelace
4914 25th Road, North
Arlington, Virginia

Dear Mr. Lovelace:

I am replying, belatedly, to your letter of June 16.

Your research plan for the "Statistical Study into the Personal Characteristics of Elementary School Teachers" interests me very much.

The techniques you plan to employ are not unlike the ones we have used in our Teacher Characteristics Study.

We have prepared no published reports in view of the need of a great deal more cooperation on the part of school systems and teachers. Unfortunately both administrators and teachers fear that the results may in some manner be revealed or used against them. Naturally, we are interested in the project only from the standpoint of the research findings. Nevertheless, we have tried not to publicize the project too much so that the needed cooperation will not be in danger.

I am enclosing a copy of a confidential Progress Report. I shall appreciate it if you will treat the Report as confidential.

Sincerely yours,

/s/ David G. Ryans

DGR:sk
Encl.

C O P Y

The College of the City of New York
COMMITTEE ON COORDINATION OF TEACHER EDUCATION
695 Park Avenue, New York

The City College
Hunter College

Brooklyn College
Queens College

September 26, 1950

Mr. Neil R. Lovelace
4914 25th Road, North
Arlington, Virginia

Dear Mr. Lovelace:

You are quite correct in your characterization of our interest in problems dealing with the rating of teachers. However, to date we have not completed any study or gotten along far enough in any study to be of any help to you. The only bibliography to which I can refer you is the one by Barr, "The Measurement and Prediction of Teaching Efficiency - A Summary of Investigations", appearing as the June 1948 number of The Journal of Experimental Education. There was no point to our repeating the work that he had already done. In view of Barr's work we are waiting for him to come out with an addendum to that bibliography covering studies made during the last two years.

We are running two studies that would be of interest to you. One is the administering of the Rorschach to prospective student teachers and to a comparable group of non-teacher-education majors. Our hope is that we may be able to tie together elements as determined by the Rorschach with teacher effectiveness as measured some time later. The other is an exploratory study involving observations of teachers and interviews with them in an attempt to relate teacher behavior to pupil reaction in the classroom. It is our hope that such exploratory observation may give us hypotheses and leads as a basis for more extensive and formal studies.

I am to be in Washington, according to present plans, next Monday and Tuesday. However, I will be working with MCCR and will not very likely be at the Pentagon unless some special arrangement for that can be made. Perhaps you can come in to have lunch with me on Monday or Tuesday, that is, provided there is not a luncheon arranged for the panel with which I am to work. If you can find out from ARS where to call me you might try to get me Monday morning between 9 and 10. Major Sylvesyer's office in MCCR, which is in Temporary U Building at Constitution and 12th, may be the best bet.

Very truly yours,

/s/ Jacob S. Orleans
Director of Research and
Evaluation

C O P Y

FURMAN UNIVERSITY
Founded 1826
Greenville, South Carolina

January 13, 1951

Department of Psychology

Neil R. Lovelace
Research Psychologist
Personnel Research Section
Room 1C918a, The Pentagon
Washington 25, D.C.

Dear Mr. Lovelace:

In accordance with your request in your letter of January 9, I am sending you a copy of the Minnesota Teacher Attitude Inventory on which I have indicated 15 items with the highest chi-square values. These are probably the 15 choicest items.

Am not certain which form of the Inventory I sent you before. If there is any way I can be of further help, please feel free to write me.

Sincerely yours,

/s/ Carroll H. Leeds
Professor of Psychology

C O P Y

THE WICHITA PUBLIC SCHOOLS
Paul W. Harnly, Director of Secondary Education
428 South Broadway, Wichita, Kan.

January 15, 1951

Mr. Neil R. Lovelace
Research Psychologist
Personnel Research Section
Room 1C918a, The Pentagon
Washington 25, D.C.

Dear Mr. Lovelace:

The instrument to which you refer was part of my doctor's investigation at Stanford. I am enclosing a copy of it.

The original investigation was for the purpose of ascertaining the reaction of high school seniors to a liberal or conservative type of education. An article which gave the results of these findings was published in the October 1939 School Review.

Dr. A.S. Barr, of the University of Wisconsin, expressed a great deal of interest in this instrument as a possibility in predicting success of teachers. Several years ago, when I was teaching in their summer session, he told me that one section of this was one of the most reliable instruments which they were using. I suggest that you write directly to him for information concerning the uses which he has made and any statistical data which he may have. I feel certain that he has selected a smaller group from the eighty which are listed in the enclosed folder.

If there is any further assistance which I can give, I will be happy to render it.

Yours truly,

/s/ Paul W. Harnly
Director of Secondary Education

PWH:lm
Enclosure

C O P Y

THE UNIVERSITY OF WISCONSIN

Madison 6

The School of Education
Department of Education

January 18, 1951

Education Building

Neil R. Lovelace
Research Psychologist
Room 1C918a, The Pentagon
Washington, D.C.

Dear Mr. Lovelace:

I have your letter of January 16. Dr. A.H. Mathews is on the staff of the Milwaukee State Teachers College, Milwaukee, Wisconsin. I am sending him a copy of your letter. I am certain that he will have the information that you desire.

I think you are right on the matter of item analysis. You will, however, secure additional information from the June 1948 issue of the "Journal of Experimental Education." This information is not of the item analysis sort but I think it should indicate the directions in which one may go for profitable findings in this area.

I hope during the coming year to prepare a summary of the some fifty doctoral theses carried out under my direction here at the University of Wisconsin in this field.

I am hoping that this analysis will be of help to you. If there is anything further that I can help you with, please feel free to call upon me.

With kindest regards and best wishes, I am,

Sincerely yours,

/s/ A.S. Barr
Professor of Education

ASB/djk

C O P Y

STATE TEACHERS COLLEGE MILWAUKEE 11, WISC.

January 30, 1951

Mr. Neil R. Lovelace
Research Psychologist
Personnel Research Section
Room 1C918a, The Pentagon
Washington 25, D.C.

Dear Mr. Lovelace:

Dr. A.S. Barr of the University of Wisconsin has forwarded to me your recent letter asking for specific information on the items which were found significant in my dissertation. Attached is a complete listing of these items test by test.

In view of the small number of significant items I am somewhat dubious of the practical value of attempting to combine these in any manner in developing a new test.

If you are interested in a more complete examination of the study, you would be able to secure the thesis on a library loan from the University of Wisconsin Library.

If I can be of any further assistance, feel free to write.

Very truly yours,

/s/ L.H. Mathews, Director
Field Services

LHM'mu
Enc. 1

VITA

Name in full	Neil Richard Lovelace
Permanent address	4914 25th Road, North, Arlington, Virginia
Degree to be conferred; date	Doctor of Education. June 9, 1951
Date of birth	August 15, 1919
Place of birth	Grand Rapids, Michigan
Secondary Education	South High School, Grand Rapids, Michigan

Collegiate Institutions attended	Dates	Degree	Date of Degree
George Washington University, School of Education	1944-48	B.A.	May, 1948
		M.A.	May, 1948

Publications

Lovelace, Neil R., and Frost, John D., Educational Research in the Nation's Capital. Washington, D.C.: Educational Research Bureau, 1948.

Positions held

Research Psychologist, Personnel Research Section, Adjutant General's Office, Department of the Army, 1949 to date

Graduate Assistant, College of Education, University of Maryland, 1948-1949

Research Fellow, School of Education, George Washington University, 1947-1948