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A REVIEW

of

"The Use of Selected Technical Language As A Means of Discovering Elementary Teachers' Operational Definitions of Teaching"*

by

Thelma Moore Harmond

An Overview

The Problem: The major purpose of this study was to discover meanings which elementary teachers assign in classroom practice to the specialized language of teaching. Through varied experiences with prospective and in-service teachers, the writer had formed the opinion that many persons, engaged in public school teaching and professional education, had accepted the technical language of teaching because of the familiarity of the words without having had full awareness of the meaning of the language in its specilized sense. Services to teachers could be upgraded, the writer believed, if more knowledge were discovered about the meanings which teaching principles, embodied in technical language, had for teachers as they operated in classroom settings. From this background of thinking, the problem of using selected technical language as a medium for eliciting operational defintions of teaching from teachers evolved.

The Procedure: Investigative procedures involved three categories of activity: devolping and using materials, selecting participants, and obtaining judges. The first step in the development of a data-gathering device was the selection of educational terminology.

Professional literature was the primary source from which technical expressions were obtained. Additional terminology was obtained during contact with persons engaged in teaching. Fifty expressions were compiled, edited, and submitted to a panel of judges who ranked items in terms of frequency of teacher-use and degree of teacher-understanding. The judges worked independently in the selection of items. The twelve most frequently selected were used in the data-gathering instrument called, The Teacher-Incident Form. The Teacher Incident Form was a self-reporting device on which teachers defined the twelve selected expressions* through anecdotal descriptions of teacher-pupil classroom behavior.

For assessment of teacher responses, definitions of the selected items were formulated, and a rating instrument was constructed. Dictionaries of education and research handbooks were utilized for these tasks.

Study participants, fifty-eight in number, were senior-level elementary education majors at Savannah State College, Savannah, Georgia and in-service teachers from three school systems. Table 1 reveals the number of pre-service and in-service participants.

TABLE 1. PRE-SERVICE AND IN-SERVICE PARTICIPANTS

School System or Course	Number of Pre-Service Teachers	Number of In-Service Teachers	
Brunswick-Glynn		10	
Liberty		17	
Savannah-Chatham		13	
Education 429	7		
Student Teaching	11		
Total	18	40	58

Judges who assessed participant responses were college directors of elementary education, professional education teachers, elementary school principals and supervisors. Judges rated responses as highly relevant, somewhat relevant, and irrelevant in terms of response consistency with item definitions.

The Results: From the fifty-eight respondents, a total of 696 responses to the twelve expressions was possible. Of these, judges found 100 to be highly relevant, 368 somewhat relevant, and 89 irrelevant. Responses were omitted for 139 items. Table 2 reveals the frequency of rated responses.

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*The twelve selected expressions were I. Using Teacher-Pupil Planning, II. Meeting the Needs of Children, III. Providing for Individual Differences, IV. Starting Where Children Are, V. Teaching the Whole Child, VI. Developing a Sense of Belonging, VII. Using the Problem-Solving Approach, VIII. Motivating the Child to Learn, IX. Learning by Doing, X. Using the Democratic Process, XI. Improving Human Relationships, XII. Developing Ability to Do Critical Thinking.

TABLE 2. FREQUENCY OF RATED RESPONSES

	RATINGS				
Item	Highly Relevant 3 (f)	Somewhat Relevant 2 (f)	Irrelevant 1 (f)	No Response 0 (f)	Number
I.	13	38	1	6	58
II.	3	38	9	8	58
III.	9	34	9	6	58
IV.	11	30	5	12	58
V.	5	24	9	20	58
VI.	7	36	3	12	58
VII.	7	21	14	16	58
VIII.	10	33	7	8	58
IX.	15	30	6	7	58
X.	6	31	9	12	58
XI.	11	27	5	15	58
XII.	3	26	12	17	58
Total	100	368	89	139	58

As a group, in-service teachers received a greater percentage of highly relevant ratings than did prospective teachers, but this difference, assumed attributable to experience, was not statistically significant.*

For several items, there were statistically significant differences in the meaningfulness of definitions provided by upper grade teachers over primary teachers and from urban teachers over teachers in town and rural systems.

The responses provided evidence of excellent teacher understanding of the language of teaching, limited understanding, misunderstanding, and verbal inadequacy. Despite the probability of other factors, it appears safe to assume that a percentage of response omissions resulted from teacher inability to interpret certain items in terms of classroom behavior. Further study of this assumption seems to be indicated.

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*To determine significance at the 5 per cent and 1 per cent levels, the data were subjected to the X^2 or Chi-Square Test by The Ohio State University Statistics Laboratory. An extension of Fisher's Exact Probability Test, as found in Siegel, *Non-Parametric Statistics* was applied to X^2's that showed significance.

Analysis of the data provided insight into the adequacy of elementary education at Savannah State College. The findings seem to indicate, also, the need for teacher education offerings to be so meaningful that teachers will no longer use technical langauge pretentiously but will develop genuine understanding of the language of teaching.

The Review

Although the major purpose of this study was to discover meanings which elementary teachers assign in practice to the specialized language of teaching, the writer believed that assessment of the findings of the study would (1) reveal clues which Savannah State College might use to evaluate and upgrade its total program of teacher education and (2) provide considerable data for further exploration on teaching. In this section, therefore, the first four chapters of the study are reviewed; possible implications of findings are examined, and recommendations are made in much the same format as they were treated in the fifth and final chapter of the dissertation.

Chapter One

In the first chapter of this investigation it was noted that man has sought during several centuries, either philosophically or functionally, for adequate definition of teaching. Despite this long search, until the present decade there was very limited research on teaching as a total process. In the research which is being currenty reported, the teacher has rarely been an active participant. Rather, he has been observed, or he has been asked to react to the structured instruments of an investigator. This writer believed that valuable insights about teaching could be gained if the nature of perceptions which teachers themselves have about the teaching process could be ascertained.

The writer is employed in a program of teacher education in a state-supported institution located in Savannah, Georgia. Her work at Savannah State College includes teaching students who are preparing to become teachers, supervising student teaching, and working in a variety of situations with public school teachers. In the course of professional communication with prospective and in-service teachers, the writer has had occasion to question the extent to which true communication has gone on, even though she and the individual teacher or group of teachers were using the same "language of teaching". The following anedotes reflect what is sometimes happening when individuals use or listen to language which speaker and listener believe to be mutually understood:

> A parent told the story of her six-year old daughter who announced, after a few days of school, that she did not like her teacher. The parent was naturally concerned and probed into reasons for the dislike. "Because", said the six-year old, "on the first day of school teacher told me to sit 'there' for the present, and she hasn't given me a present yet".

> A very young child, under two years of age, had been introduced to nursery rhymes. He enjoyed the rhythm though the

words meant little in terms of his limited experiences. He had experienced much pleasure with a teddy bear, however, which accounted for his rendition of "Old Mother Hubbard":

"Old Mother Hubbard went to the cupboard
To get her poor dog a bone,
But when she got there,
The cupboard was *a bear*
And so the poor dog had none."

It was highly probable, the writer believed, that many persons in professional education have accepted the technical language of teaching because of the familiarity of the words without having been aware of the meaning of the language in its specialized sense. She believed that the quality of her services to teachers could be improved if she were to discover more about the meanings which teaching principles, couched in specialized language, had for teachers as they operated in classroom settings. From this background of thinking the problem of using selected technical language to elicit from teachers their operational definitions of teaching evolved.

Chapter Two

Literature which appeared to bear some pertinence to this investigation was reviewed in Chapter Two. The literature examined was grouped in three categories: related research, writings on teaching in general, and the language of education.

According to reviewers of educational research, there is a shortage of research on teaching. The writer found that studies related to direct teacher-involvement in defining teaching were virtually non-existent. Therefore, in the related research section of the review of the literature, the writer examined studies which dealt with (1) value in teacher education; (2) professional understandings; (3) the use of varied observational techniques to determine what teachers do, and (4) the use of self-reporting devices for gathering data. It appeared that studies in the preceding categories were related to the present investigation in terms of rationale and possible study approaches to be employed.

Since there was no dearth of articles and books on teaching in general, the writer did not attempt a comprehensive review for this category. Writings around these concerns were examined:

1. The individuality of "quality teaching".
2. Formulas for good teaching.
3. Human relations approaches to teaching.
4. The need for research to provide additional understandings about teaching.

To the writer, there appeared to be a fundamental aspect of difference between the literature in teaching through the mid-nineteen fifties and that which has been written since the late nineteen-fifties.

In the former period, teaching was defined and described, and teaching methodology was prescribed with a surety that has not been evident in the writings on teaching during this latter period. There seems to be the general recognition that much more research on teaching is needed.

Regarding the language of teaching, the evidence seems to indicate that educators are very much concerned with meaning. Teaching is viewed by many, B. Othanel Smith among them, as largely a linguistic function. The presently accepted language of teaching is being examined, and there appears to be a growing belief that teacher education must provide the means whereby teachers develop greater understanding of the structure and meaning of language.

Chapter Three

In Chapter Three the methods for conducting the inquiry were described. Three broad categories of activity were engaged in during the conduct of the investigation: (1) development and use of materials; (2) selection of study participants; and (3) obtainment of judging teams.

Three instruments were developed for gathering and assessing data. These were the Teacher-Incident Form, a definition sheet, and a rating scale. The Teacher-Incident Form was the data-gathering device on which study participants made their responses. Judging teams used the definition sheet and ratting scale to assess responses of participants.

Study participants were (1) in-service elementary teachers employed in three school systems within a hundred-mile radius of Savannah State College and (2) prospective elementary teachers enrolled in the last prefield course and in student teaching at Savannah State College. The writer believed that comparative analysis of responses from the in-service and pre-service groups would reveal superiority of responses made by in-service teachers because of their greater experience and training. She also believed that upper grade elementary teachers would make more meaningful responses to items than would primary teachers, but that no significant difference would be noted among responses made by teachers in an urban, a large town, and a rural school system.

The individuals who assessed the responses of the participants were college directors of elementary education, members of college departments of education, elementary school principals and supervisors. These persons had backgrounds of rich personal and professional experience, and they either held doctor's degrees or had studied for at least a year beyond their master's degree programs.

Data from teachers about themselves and assessments of responses by judges were tabulated into a master chart called the Summary Chart. This device was employed as a ready source of data for analysis of the findings.

Chapter Four

Chapter Four was devoted to the report and the interpretation of study findings. Fifty-eight persons—eighteen prospective and forty

in-service teachers — returned data sheets, The Teacher-Incident Forms. There were twelve items on the Teacher-Incident Form, and teachers had been requested to write incidents illustrating the meaning of each item. Judges rated the incidents as highly relevant, somewhat relevant, and irrelevant. A summary of judges' ratings of the incidents submitted by the fifty-eight participants showed that there were 100 highly relevant responses, 368 somewhat relevant responses, and 89 irrelevant responses. For 139 items, no responses were given.

Although in-service teachers, as a group, received a slightly greater number of highly relevant ratings on items than did prospective teachers, analysis of the data did not reveal that the experience of the in-service teachers made a statistically significant difference in their ability to interpret study items more adequately than the pre-service group.

As a group, upper grade teachers excelled primary teachers in the ability to interpret specialized language meaningfully. However, for only one item was this superiority statistically significant.

A comparison of response ratings among teachers working in a rural, a large town, and an urban school system indicated that the urban group reported the largest per cent of highly relevant responses. However, for only two items was there statistical significance.

Possible Implications of Findings

Reports from teachers, termed "anecdotes", and more recently "incidents", have been widely used as sources of information for child study. There is recognition that such reports are often as much the reflection of a teacher's outlook as of a child's behavior, but despite this possible limitation, anecdotal records are considered to be potentially excellent sources of data for child study. Much of their value lies within the fact that they can be consulted again and again.

This writer believed that this type of report, if done by teachers in regard to their classroom behavior, could yield a supply of data which could be used for increased understanding of teacher-perception of the meaning of teaching. She believed that increased understanding of the teacher's interpretation of the teaching role should be the working basis for providing assistance to the teacher toward improvement of his teaching.

Inasmuch as teacher-narratives given as responses to items on the Teacher-Incident Form gave evidence of (1) excellent teacher-understanding of the language of teaching. (2) misunderstanding, (3) limited understanding, and (4) inadequate communication skills, it appears that the nature of understandings which teachers have in regard to meanings of certain technical language can be revealed through the use and analysis of structured self-reports. Omissions of responses to items might be interpreted in several ways, and some of the factors involved may never be known. It is assumed, however, that at least some percentage of omissions resulted from teacher-inability to interpret certain items in terms of classroom behavior. Even if it is assumed that failure to respond sometimes resulted from

teacher indifference, lethargy, or refusal to do what is not administratively commanded, there appear to be fertile fields for exploration and study.

A second implication of findings from this investigation involves possible insights into the adequacy of the program of elementary education at Savannah State College. There were fifty-eight respondents in the present study. Eighteen of them were students enrolled in the Department of Elementary Education at Savannah State Colege, and forty were in-service teachers.

Examination of the Summary Chart data reveals that twenty-eight of the in-service respondents were graduates of the College. This figure represents 70 per cent of the in-service study population. Among the 30 per cent who were not graduates of the College were those (1) who have attended workshops and conferences on the College campus; (2) who have been participants in the program of student teaching, and (3) who have used College facilities and the services of College staff members. Directly and indirectly, therefore, the College has exerted widespread influence upon the teaching population working in the geographical area included in this study. For this reason, it appears apparent that the strengths and weaknesses revealed by participants as they attempted to define teaching through actual or observed practice are, at least, reflections of certain adequacies and inadequancies in the program of teacher education at Savannah State College.

There is possibly a variety of factors implied in the finding that in-service teacher-experience revealed no statistically significant difference in teacher-interpretation of the selected technical language. The writer noted with surprise, as she analyzed findings, that prospective teachers had a higher percentage of highly relevant ratings on their incidents involving teacher-pupil planning, learning by doing, and developing critical thinking then did in-service teachers. The per cent of irrelevant responses to the item on problem-solving was six times greater for in-service teachers than for the pre-service group although the prospective teachers, as a group, had larger percentages of irrelevant responses and omitted responses than did the in-service group.

On the positive side of the "experience ledger", responses of student teachers revealed their understanding of the meaning of teaching language to be superior to that of their pre-student teaching counterparts.

Among the factors which might be examined to determine why in-service teacher experience did not significantly affect teacher-definition of the technical language are those of teacher selection and the quality of in-service education programs.

Conclusions

Implicit, at least, in the present study is the question of whether teachers really understand the language of teaching in terms of classroom operation or whether they merely verbalize phrases which they

have heard applied to the teaching process. Certain results of the study appear to give even greater pertinence to this question.

First of all, of the possible 696 responses which the fifty-eight subjects could have made to the twelve items on the data-gathering device, only 100 were rated as highly relevant. Secondly, the frequent occurance of inappropriate word choices and obvious limitations in interpretation seem to indicate the probability of language disabilities ranging from moderate to severe among a large number of respondents. Examples of the foregoing are such items as:

1. . . . "a strick, rigid atmosphere" . . .
2. "Since a smile costs so little I encourage smiles as a friendly jester."
3. . . . "They are taught now to appreciate the beauty of nature and how to conserve it. When one becomes emotionally disturb, he knows what to do because he has learned how to conquer his emotional probelms."
4. . . . "the teacher helped a group of fourth graders become socially adjusted by providing experience in which the pupils dramatized a short play."

It appears that such responses indicate that teachers have learned words and expressions without always understanding what they signify. According to Bontrager, it is the failure to learn signification which causes "parrot-like reproduction that we are so familiar with today". Bontrager differentiates between the sign and symbol in language development. The sign is meaningless; the symbol stands for something. For example, when one issues a check on a zero bank account, the check is a sign which stands for nothing. He continues:

> The penalty for such use of these particular signs as symbols is usually jailing. This analogy applies to the oral noises we make, which occasionally become symbols and at other times do not; as yet, no penalty is enacted for such a fraud.[1]

Bontrager believes that many methodological practices provide a favorable climate for the growth of verbalism. He states that the prevailing teaching procedures are almost exclusively verbal[2], and this point is made by McGrath in reference to instruction carried on in predominantly Negro colleges and universities. Referring to Negro colleges and universities, McGrath states that "instructional procedures in all institutions should be more diversified to enrich the present dominant use of lectures, recitations, and assigned readings in textbooks".[3]

In view of study findings and authoritative suggestion, the writer makes the recommendations which follow.

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[1]O. R. Bontrager, "Some Possible Origins of the Prevalence of Verbalism," *Elementary English,* XXVIIII (February, 1951), pp. 98, 150.

[2]*Ibid,* p. 101.

[3]Earl J. McGrath, *The Predominantly Negro Colleges and Universities in Transition,* New York: Bureau of Publications, Teachers College, Columbia University, 1965, p. 166.

Recommendations

1. The writer recommends that courses in all phases of the program for educating teachers at Savannah State College be under-girded with varied, meaningful experiences.

Up to this point, students attending Savannah State College have been members of the American Negro sub-culture and have largely come from a region of the country which lags economically, educationally, and culturally. As members of a sub-culture in a disadvantaged region, they have not been exposed to the types of experiences which develop language competency in listening, speaking, reading, and writing. Therefore, it appears evident that the College should assume responsibility for developing reasonable proficiency in these (and other) skills that the vicious cycle of language inadequacy will not continue to repeat itself. Increased breadth in reading assignments, wider use of visual, auditory, and automated devices, planned trips and personal contacts, more frequent use of verbal illustration by instructors, and increased opportunity for student verbalization are among the possible activities which might lead toward realization of this recommendation.

2. It is recommended that Savannah State College consider a revision of its grading system that students with teaching potential, who need longer than four years for growth toward minimum proficiency standards, would not be academically penalized.

Because the possibilities for a "good" economic life have been limited largely to the Negro's going into the traditional professions and because teaching is one of the easier of these professions to enter, many students who have neither ability for nor genuine interest in teaching enter the teacher education program at Savannah State College. For such students, there is the obvious need for the College to attempt to make its selective admissions program more adequate. On the other hand, there are students with excellent potential for teaching in several ways, who enter or wish to enter teacher education, but they suffer restricting academic deficiencies. It is for this large group of students that the foregoing recommendation is made.

Consideration of this recommendation might mean addition of some such letter as P to the present grading scale of A, B, C, D, F. P (or some such symbol) could stand for progress. This symbol would be administered only if evidence were available to indicate a student's measurable growth toward, but non-attainment of, minimum proficiency during a given quarter. Thus, the prospective teacher could be assisted toward acquirement of needed understandings and skills without the penalty of a D or F on his record.

3. The writer recommends that the College, in addition to the experience-enrichment of courses, provide an enlarged program of extra-class activities and seek ways of encouraging each student to participate in, at least, one such activity.

Culturally deprived college students need exposure to diverse opportunities which will help them compensate for social and esthetic inadequacies.

4. It is recommended that greater emphasis be placed on the study of personality development and exceptionality in the professional courses for teacher education majors, or that courses in these areas (particularly in exceptionality) be offered as guided electives.

In the State of Georgia, teacher education for working with exceptional children is conceived of as graduate work. However, it is recommended that Savannah State College enrich its undergraduate program of teacher education in exceptionality because in this study in-service and prospective teachers revealed limited understandings and misconceptions about individual differences, the teacher's responsibility in meeting needs of pupils, and in specific instances of exceptionality, as emotionally disturbed children. Regarding the challenge for institutions offering teacher education to become aware of needs in this area, Berlin writes:

> The failure of many teachers colleges to recognize the need for new methods to deal with today's problem children continues to handicap teachers. The problems which confront our teachers today need to be realistically understood and assessed by teacher education institutions. They can help their students learn new methods of dealing with their parents. They might also help plan in-service training for teachers designed to help these disturbed and difficult students to learn.[4]

Research Possibilities

Reviewers of studies on teaching are consistent in their statements concerning the need for more research on teaching. Regarding research in teacher education, J. Stanley Ahmann states:

> . . . The greatest shortage in education today is not that of qualified teachers, or adequate buildings, or tax dollars. Instead it is a shortage of facts about the educational process, specifically facts about learning processes, the learner and the teacher.[5]

While Ahmann does not dismiss the value of action research, he believes that through it we tend to solve today's problems tomorrow because action research often stems from a problem which already bears heavily upon education. He sees basic research as usually a better procedure than action research though the line of demarcation between the two is blurred. To Ahmann basic research is that inquiry with a strong theoretical orientation. It is characterized "by a specific theoretical orientation, far-reaching research effort, and the presence of interlocking problems, the solution of which will place us in a position to identify causality"[6]. He gives as an example of basic research the *Exploration in Personality* work done in 1938 by Henry Murray. Growing from Murray's "need-press" theories have been

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[4] I. N. Berlin, "The Atomic Age - The Nonlearning Child - The Parent", *Educational Leadership,* XXI (April, 1964), 447.

[5] J. Stanley Ahmann, *Educational Research Today* ("Association Student Teaching Bulletin No. 20: Research and Professional Experiences in Teacher Education; Cedar Falls, Iowa: AST, 1963), pp. 4-5.

[6] *Ibid,* p. 8.

developed such instruments as the Thematic Apperception Test and the Edwards Personal Preference Schedule. Ahmann believes that "it is possible that this type of research will ultimately allow us to approach the causality problem and hence permit us, within limits, to solve tomorrow's problems today".[7]

Despite the limitations of the present study in terms of diversity of study population, time, money, and research skills, the writer believes that in it are to be found clues for further research. She ventures to suggest those which follow.

1. In educational research, as the investigator analyzes his findings to solve designated problems or to evaluate tentative beliefs, it is not unusual for him to discover that his data have raised pertinent questions to which answers should be sought. The writer suggests that continuation of the present study by a researcher could provide data for increased understanding of teachers and teaching.

2. The twelve items included in the data—gathering device for this study were selected empirically. It appears that a meaningful contribution to knowledge could be made through a study of certain intercorrelations among these items.

3. Although there were similarities in the training and cultural backgrounds of participants in the present study, some of the operational definitions were "rich" in meaning, others were "poor". What kinds of persons wrote "rich" definitions; what kinds wrote "poor" ones? Analysis of available personal and professional data from these two groups might yield information which would help those responsible for teacher education programs to enrich or to revise programs with more accuracy in terms of teacher-needs.

4. Experts are not in agreement about the adequacy of the present language of teaching. One school of thought holds that the language is ambiguous, antiquated, and unsuited to the pace of late twentieth century living. Another believes that the slogan-like-use of teaching language will be reduced if students study the works of John Dewey instead of studying about Dewey. The writer believes that studies centering around the adequancy of presently used teaching language could make a worthwhile contribution to teacher education.

5. Findings from the present study seem to suggest, at certain points, that teachers need to acquire much more facility in language and logic. Current research on teaching appears to indicate that productive teacher behavior in the logical operations "requires the facility of language and knowledge of facts, concepts and prinicples which comprise an area of instruction and the rules and abilities to handle the logical operations".[8]

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[7]*Ibid*, p. 8

[8]Herbort F. LaCrons, *A Proposal for the Revision of the Pre-Service Professional Component of a Program of Teacher Education,* (Washington, D. C.: The American Association of College for Teacher Education, 1964), p. 22.

Research of certain individuals, as B. Othanel Smith, is being included in new content for professional education which attempts to relate language and knowledge with rules and abilities. The writer suggests the need for experimental research with new content as the AACTE proposals[9] or studies independently conceived which stress linguistics and logic to be carried on by those involved in teacher education programs.

6. Participants in this study, particularly in-service teachers, revealed glaring weaknesses in their understanding of "critical thinking" and "problem-solving" either through irrelevant narratives or omissions of responses to these items. There is disagreement among educational writers concerning whether critical thinking can better be taught directly or indirectly. However, the goal of helping pupils to develop ability to do critical thinking remains a constant in educational literature. Persons engaged in teacher education might do well to involve themselves in experiments to help them determine excellent approaches to the development of problem-solving and/or critical thinking skills among prospective and in-service teachers.

7. Values are the large forces which give direction to lives, both personal and professional. They are sometimes called the catalysts which change knowledge and skill into responsible behavior. Expressed American educational values are said to be those representative of a specific class group of Americans. The writer ventures to suggest that a value-study might be attempted with the population participating in this investigation. Meyers and Torrance[10] in a study on creativity concluded that teachers can encourage creative thinking only if their values support creativeness. It appears that research into the values of the respondents to this investigation (or a similar group) might yield a large number of the insights needed to assist teachers in their struggle to give meaning to teaching.

[9]*Ibid.*

[10]R. E. Meyers and E. Paul Torrance, "Can Teachers Encourage Creative Thinking?" *Educational Leadership*, XIX (December, 1961) pp. 156-59.