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A Taxonomy of Teacher-Defined Problems in the Education of Mentally Retarded Children Final Report.

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A taxonomy of problems in the environment or evident in student behaviors which impede providing the necessary conditions for pupils to learn was developed by teachers of the educable mentally retarded (EMR) in Wisconsin. Of the teachers, 67% or 487 responded to a request to specify five problems along with their causes and successful and unsuccessful strategies evolved to cope with them. Problem definitions obtained numbered 1,172; a 10% random sample of 117 problems was sorted and categorized by 85 special education teachers and graduate students. First order categorized revealed 30 latent categories, and second order clustering reduced the number to 16: aggressive disrupting behavior (18%), deficits in instructional programing (17%), motivation of pupils (14%), inappropriate affective reactions (7%), hyperactivity and nervousness (7%), reactions to failure (6%), negative home environment (6%), poor personal hygiene (4%), pupil dissatisfaction with being in special classes (4%), perceptual inadequacies (25%), truancy (25%), emerging sex interests (25%), lack of teacher-pupil communication (25%), asocial behavior in multiply handicapped (25%), overdependency (25%), and overimaginative and distorted accounts (2%). Experienced sorters generated significantly more categories and made greater differentiation of the first order categories on the second order grouping. (SN)

FINAL REPORT
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A TAXONOMY OF TEACHER-DEFINED PROBLEMS IN THE EDUCATION OF MENTALLY RETARDED CHILDREN

May, 1967

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

A TAXONOMY OF TEACHER-DEFINED PROBLEMS IN THE EDUCATION OF MENTALLY RETARDED CHILDREN

The Final Report of
U.S. Office of Education Project
"Analysis of Teacher-Defined Problems and
Evolved Coping Strategies in the Education of Handicapped Children"

Project No. 6-8608
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Investigators
John J. Cook and Donald M. Miller

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"When I use a word," said Humpty-Dumpty, "it means just what I chose it to mean -- neither more nor less." "The question is," said Alice, "whether you can make words mean different things." "The question is," said Humpty-Dumpty, "which is to be Master -- that's all."

-Lewis Carroll

CONTENTS

		Page
Acknowledgment		v
Chapter I	Introduction	1
	A. Problem Area	1
	B. Research Objectives	3
	C. Review of the Literature	4
Chapter II	Procedure	7
	A. Research Strategy	7
	B. Source and Type of Data	8
	C. Sorting Procedure	8
	D. Analysis of Data	9
	E. Category	10
Chapter III	Results	11
	A. Respondent Behavior of Teachers	11
	B. Parameters of Sorting Process	15
	C. Group Structure of Teacher-Defined Problems	19
	1. First-Order Categorization	19
	2. Second-Order Categorization	20
Chapter IV	Discussion	34
	A. Perspective on the Results	34
	B. Implications for Education and Extensions of the Present Study	35
Chapter V	Summary	38
References		40
Appendices		41
ERIC Report Resume		80

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Chapter I

INTRODUCTION

A. Problem Area

Successful progr m development in the education of handicapped children requires two elements which are usually conspicuously absent on the local, state or federal scene. These are, first, an adequate definition of problems encountered in the classroom and, secondly, a meaningful priority ranking of these problems. Attempts to do this in compensatory education of the culturally disadvantaged have been attempted under Title I of P.L. 89-10. In addition, Title III of the same law specifically requires such a priority ranking prior to program implementation. However, the problems and the priorities in these cases have typically been defined by administrators or if the teachers have been involved the questions have been couched in such a way as to elicite administrative solutions. The efficacy of such solutions demand an empirical answer. Priorities in special education, while not tackled in a systemized fashion, have also yielded broad spectrum administrative solutions such as reduced class size and more of them, instructional materials centers, more school psychologists to administer IQ tests, etc. Such endeavors cannot be gainsaid. However, a thorough consideration of the field of special education would seem to require problem definition and ranking by the teacher with such problems couched in operational terms. Thus, in conjunction with the broad administrative definitions, such teacher perceived problems could provide a basic framework for a more efficient allocation of the resources available to program development in special education.

When attempting to research a given area, it is oftimes helpful to circumscribe the universe of concern and to conceptualize the modular components of the universe. The following is an attempt to do this in a limited manner with respect to the teacher in the classroom.

It is possible to view the special education teacher interacting with her pupils in a classroom setting as a self-contained system. It is unfortunate, but oftimes true, that input into this system is limited. That is, new ideas and innovative techniques may impinge upon the system, but functional incorporation into the system is the exception rather than the rule. There are a number of ways in which to conceptualize the cause of this problem of resistance to change and novelty. The position taken here is that input into the system is possible only when communication is possible; and communication is greatly facilitated when the sender of the message understands the receiver's perception

of the situation. Within the classroom setting then, it would seem to be of paramount importance to understand the way in which teachers view their situation. Since most new ideas and techniques are aimed at problem solution, it is desirable that the external agent be aware of the manner in which teachers define their problems. It is a truism that humans organize the complexity of their environment into units or categories in order to interact meaningfully with it. It would therefore be of interest to ascertain the categories used by special education teachers in their encounters with the myriad problems encountered in the classroom.

Given the problems, it is of interest to know also what are the perceived cause or causes of these problems. For, the types of solutions evolved would tend to flow rather directly from the perceived cause of the problem. The nature of these solutions or strategies which have been evolved is of interest also. For, if the intent of the input into the systems is to help the teacher with her problems, it would seem desirable to know what strategies are presently being used to cope with the perceived problems. Two reasons can be offered for this. First, it seems a highly desirable strategy to know where a person is before you tell him where he should go. Secondly, and as with the problems, it is highly desirable for communication purposes to know the manner in which the individual or group of individuals conceptualize or categorize these strategies.

Implicit here is the assumption that most special education teachers are in fact coping to a greater or lesser degree with the problems they encounter in the classroom. The key terms here are "coping" and "problem." In the present context a problem is considered to be any behavioral, motivational or physical attribute of the student, any aspect of the administrative milieu or physical plant which the teacher feels interferes with the optimal carrying out of her job. It is assumed that the teacher's job is that of imparting knowledge, of developing skills at whatever rate, and of creating an environment conducive to learning. Coping refers to strategies which the teacher has evolved to circumvent, minimize or otherwise handle the problem so that it does not interfere with her job. The teachers may not be solving all the problems confronting them, nor may they be looking at the situations in such a way as to define as problematic those aspects considered crucial by their academic and administrative superiors. Yet, given a degree of uniqueness in each classroom setting as it is affected by many situational aspects, the question can be raised as to whether the knowing outsider can in fact ask more meaningful questions and in the same situation evolve problem-solving strategies whose efficacy can be demonstrated in fact as well as in theory.

The above thesis can be stated in terms of needs in special education and in terms of the necessary conditions for scientific inquiry. There exists a gap in our knowledge of how teachers of handicapped children perceive the conditions under which they are expected to create a learning climate in the special class. Specifically, what appears to be needed is 1) a classification, taxonomy or nosology of problems encountered in the reality of the classroom environment as defined by

teachers of handicapped children; 2) a taxonomy of perceived causes of these problems and; 3) a taxonomy of strategies which the teachers have evolved to cope with these problems.

Taxonomic endeavors must be considered the sin qua non of scientific inquiry. Eysenck (1952, p.34) has succinctly made this point:

> ....taxonomy, nosology, or classification lies at the very root of scientific progress, and that until taxonomic problems are solved in at least a preliminary way, scientific progress towards answering more complex problems is barred. The history of science illustrates this again and again. Without the work of Ray and Linnaeus biology could not have advanced as it did; Mendeleeff and his periodic table of the elements prepared the way for the fundamental advances in physics which culminated in the splitting of the atom. The importance of taxonomic concepts in the physical sciences is often neglected because they sometimes seem self-evident, and because their discovery frequently precedes recorded history; this hardly affects the argument, however. Measurement is essential to science but before we can measure we must know what it is we want to measure. Qualitative or taxonomic discovery must precede quantitative measurement.

We have defined the universe of concern as taxonomic endeavors related to teacher-defined problems in the school setting, their cause and the strategies evolved to cope with the problems. However, the present study restricts itself to a concern for the mechanics of collection of problems, causes and strategies; implementation of a technique to delineate the latent structure of the problems based on categories developed by the teachers; development of a meaningful taxonomy of teacher-defined problems encountered in attempting to create a learning climate for the educable mentally retarded child, and finally, a delineation of these problem categories in terms of importance to the teacher.

B. Research Objectives

The objectives of the study fell into three phases:

1. Information was sought regarding factors operant in the survey method of obtaining explicit descriptive data. Specifically, teachers were asked to define in operational terms the problems encountered and defined by them, the causes of the problems and the strategies evolved to cope with these problems (see Appendix A for example of form). Given such a task, the concern was to delineate those factors related to responding and not responding.

2. A second objective was to determine the latent structure of the teacher-defined problems. This objective involved two substeps.

    a) Devising a sorting or categorizing procedure for the problems.

b) Determining those characteristics of the sorters which influenced the sorting procedure and incorporating these factors in the Latent Partition Analysis.

3. Finally, an empirically derived taxonomy of teacher-defined problems encountered in educating mentally retarded children was sought, along with a meaningful ranking of the problem categories.

C. Review of the Literature

A number of studies have attempted to describe teacher behavior in the classroom, Havighurst and Neugarten (1957), Flanders (1960), Fishburn (1955) to cite a few. Typically, these studies have been concerned with teacher roles, have dealt with a limited segment of teacher behavior, or the classification schemes have been determined by the investigators. Hence, these studies have but tangential relevance to the present study.

Of more immediate relevance is a study by Rotberg (1967). Rotberg provides a categorization of teacher behaviors in EMR classes which appear effective and ineffective in achieving the goal of "providing an environment that fosters learning and equips mentally retarded children with habits, attitudes and skills commensurate with their capacities in an effort to develop independent living skills and become an effective member of society." The specific behaviors were obtained within the framework of Flanigan's Critical Incident Technique. Observers were teachers, student teachers and supervisors in special classes and principals of the schools in which these classes were housed.

Rotberg (1967) categorized the behavior into the following four major categories with subcategories (percentages in brackets index the frequency of the category behaviors):

1. Techniques for teaching subject matter (45.9%)

   a) Methods of subject presentation
   b) Encourages maximum learner participation
   c) Adapt instruction to learner differences
   d) Changes presentation of subject matter to meet unanticipated circumstances

2. Methods for managing individual behavior in the classroom (36.8%)

   a) Uses punishment
   b) Uses techniques for motivating learner
   c) Reinforces acceptable behaviors
   d) Discusses learner's problems
   e) Ignores unacceptable behavior
   f) Assigns diverting activity
   g) Tells learner what to do
   h) Uses non-verbal actions

3. Plans for learning activities (10.5%)

   a) Plans to meet identified needs of learners
   b) Uses community resources to enrich instruction
   c) Allows learners to assist in class planning

4. Methods for managing group behavior in the classroom (6.8%)

a) Uses punishment
b) Promises reward as a technique of motivation
c) Reinforces desirable behaviors
d) Discusses group behavioral problems with class
e) Ignores inappropriate behavior
f) Provides another activity
g) Tells learners what to do
h) Uses non-verbal actions

The author developed these categories himself and reported interrater agreement among three special educators to be 80%, 84% and 94%. The main relevance of this study to the present one seems to lie in a consideration of the four main categories as problem areas with the sub-categories as solutions to the particular class of problems. Thus, some semblance to these categories was expected in the present study.

Another study, by Miller, et al (1967), has a direct bearing on the present research for methodological and substantive reasons. The sorting procedure, methodology and analysis, Latent Partition Analysis (LPA), used in the present study were developed in the Miller et al study. The sorting procedure was a controlled method of getting sorters to generate mutually exclusive categories of various stimulus items and was applicable to the present study with minimal modification. LPA is explicated mathematically in Wiley (1966), Miller et al (1967), and in Appendix D of this report. Essentially, LPA as a model and a computational proceudre is a technique for identifying and describing the latent, or common, categories underlying a number of manifest categories into which a number of sorters have grouped a pool of items tapping some domain of interest.

Miller et al (1967) posed the question "What kind of categories of teacher-learning behaviors do elementary teachers make when they think about facilitating the learning of pupils in the classroom." The similarity of this problem to that asked by Rotberg is readily apparent. Major differences lie in the question being asked of different groups--special education versus normal elementary teachers; the basic data to be categorized was obtained differently--Rotberg by observation and Miller et al by taped interview; while both developed their categories post priori, Miller did so using teachers whereas Rotberg generated his own; Miller et al use of LPA to objectively delineate the latent structure of the categories was a feature lacking in Rotberg's work.

In spite of these differences and because of the similarity in the basic questions asked, it was informative to consider the end product of Miller et al work. Miller et al had 32 teachers, carefully sampled from the State of Wisconsin, sort 128 content items derived from interviews. LPA revealed 32 latent categories which could be reduced to 18 fairly independent groupings when category confusion or overlap was considered. Following is a listing of the 32 categories labeled by Miller et al:

1) Correlating subjects
2) Visual aids
3) Concrete examples
4) Handling discipline problems
5) Personal relationships
6) Good citizenship
7) Individual attention
8) Specialized teaching techniques in reading
9) Reading organization
10) Variability in teaching approaches
11) Drill
12) Spelling
13) Structure of language
14) Correct English usage
15) Use of tests
16) Readiness techniques
17) Discovery learning
18) Organization of verbal materials
19) Fostering pupil initiative
20) Handwriting objectives
21) Use of phonics
22) Parental assistance
23) Field trips
24) Non-directed activities
25) Reading to the class
26) Encouraging improvement
27) Textbook supplements
28) Organizing class time
29) Reporting
30) Students' interests
31) Sequencing arithmetic
32) Displaying student models

Taking these labels at face value, it would seem that the categories of behaviors might be considered either problems, for example (3) Handling discipline problems, (18) Organization of verbal materials, etc. or solutions, for example (26) Encouraging improvement (19) Fostering pupil initiative, etc.

Both Rotberg's and Miller's work, while related, tended to provide rather vague indications of the outcome of the present study.

A study by Lane (1966) provided the basis for specific hypothesis testing and delineation of a specific sorter variable. Lane (1966) had 49 counselors categorize 123 statements made by a client during a one-half hour interview. Latent Partition Analysis was used to analyse the data. Twenty-nine latent categories were required to exhaust the total group variance. A within group analysis based on three levels of experience of the counselors was also done. This second analysis was a second order clustering of the 29 latent categories as a function of sub-group experience. It was concluded that "these [second order] clusters resulted in the identification of what appeared to be a more refined and homogeneous content organization which was positively associated with the amount of accumulated counseling experience." This study suggests that years of experience in a given professional endeavor differentially influences the manner in which significant events are categorized.

Chapter II

PROCEDURE

A. Research Strategy

In a previous section it was argued that there was a need to develop a taxonomy of teacher-defined problems in the area of special education. It was also assumed that considerable value resided in the teachers, not only defining the problems, but also categorizing the problems and providing appropriate labels for the problem categories so generated. The position was taken that such an approach could help to provide a more meaningful dialogue between the teacher in the classroom and change agents in instructional materials centers and federal and state education departments.

Additional concern was expressed regarding the strategies the teachers presently use to solve their problems and the causes they see underlying the problems. These latter two facets were not considered in the present study. Moreover, it is conceivable that differences exist in the way teachers of the various handicapped groups define and categorize their problems. These considerations were not explored in the present study either.

The overall strategy of research had three distinct components--methodological, substantive and functional. The strategy evolved in the present study can be considered a prototype for further taxonomic endeavors with respect to problem causes and solutions to the problems or, indeed, for taxonomic endeavors in related fields.

Methodological. Methodological considerations comprised the major portion of the research effort in the present study and, in turn, had three facets--data collection, sorting procedures and statistical analysis.

Data collection was accomplished using the form in Appendix A. Analysis of respondent behaviors is presented in the Results section.

The sorting task instructions and materials are shown in Appendix C. Procedural considerations pertaining to sorting are discussed in the following section with a delineation of salient parameters indicated in the Results section. The sorting procedures were a modified verson of those developed by Miller et al (1967).

The statistical procedure used in generating the taxonomy of problems is presented in its entirety in Appendix D. Termed Latent Partion Analysis (LPA), this procedure was developed by Wiley (1967). Development of certain extensions of the basic model were accomplished in relation to the present study and the previous work of Miller et al (1967) and Lane (1966).

Substantive. Several alternatives presented themselves in the process of labeling the categories. In general, these alternatives seemed to be definable in terms of the inferential leap one wished to make when presented the written words contained in the teachers' problem definition. The approach used, however, in labeling was to stay as close to the literal content of the problems as possible and incorporating into the label the teachers' own category names insofar as possible.

Functional. The functional component of the research strategy was reducible to a concern for a meaningful priority ranking of the problem categories. That is, given limited resources to tackle the range of problems perceived by the teachers in the education of the retarded, which ones should be tackled first? Problem priorities can be considered along several dimensions, such as, the ease with which they can be solved, their magnitude in terms of impediments to the educational enterprise or simple frequency of occurrence. The present study considers a priority ranking of the problems in terms of frequency of occurrence. It was assumed that such an index would provide administrators and programers with heretofore unavailable clues to program development.

B. Source and Type of Data

A packet containing five Teacher-Problem Specification Sheets and a set of instructions (Appendix A) was mailed or placed in the hands of all special education teachers in the state of Wisconsin. Of the total of 1,068 teachers, 732 were teachers of the Educable Mentally Retarded (EMR). It was the responses of the group of teachers of the EMR which provided the data for the analysis reported in the presented study.

Each teacher was asked to specify in objective terms five problems which they see as interfering with their providing the optimum conditions for pupils to learn. (See Appendix A for a detailed description of the instructions). In addition they were asked to indicate their perceived causes to the problems and the various strategies they had evolved to cope with these problems. They were further asked to indicate which of these strategies they had found effective and which ineffective.

Coded numbers were associated with each packet so that a given teacher's response could be identified. This fact was made quite clear to the respondents. Such a coding was considered necessary as a subsequent phase of the project envisages filming of real-life demonstrations of successful and unsuccessful coping behaviors in association with a specified class of problems.

The basic data of the study, then, consisted of the set of those problems defined by teachers of the EMR.

C. Sorting Procedure

A 10% sample was obtained from the 1,173 problems generated by the teachers of the EMR. Randomness was ensured by randomly selecting 117 teachers from the pool of 303 who had submitted explicit problems; and for each teacher randomly selecting one of the up to five problems submitted. A duplicate item was included as a check on sorter reliability. Thus, the sorting deck consisted of 118 problem items. The teacher-defined problems

used in the sorting task are listed in Appendix B. Eighty-five sorters were used in the study. The sorters were teachers in special education classes or graduate students in special education with varying years of teaching experience. Sorting was done in groups of from 2 to 50 (the graduate students).

The sorting procedure was such that the sorter was forced to generate categories of problems uniquely determined by the individual. That is, each categorization of the set of problems was an independent endeavor. Appendix C presents the written instructions given to each sorter.

The process was essentially one of having the sorter put together any two or more problems which, in the perception of the sorter, are related in some manner. The sorting of the 118 problems was a sequential operation. The sorter first read a problem and assigned a tentative title to the principle idea contained in the problem definition. This tentative title was then written on an index card attached to a sorting board and the problem placed behind the card. The sorter then considered each of the remaining problems in turn and decided if they belonged to groups already designated or if new tentative categories were necessary. The stated titles were modified if the addition of new problems warranted it. Opportunities to review the categories were provided during and after the sort.

D. Analysis of Data

The end product of the sorting procedure for a given sorter was a number of groups of problems, homogeneous within groups from the viewpoint of the sorter and appropriately labeled. A problem x category matrix can be constructed for each sorter with 1's or 0's in the body depending upon whether a problem has or has not been placed in a specific category. These matrices can be used to generate contingency tables indicating the relationships between categories of the 85 sorters. A method, latent partition analysis (Wiley, 1967) was used to analyse these contingency matrices so that the common categorizations of the 85 sorters can be displayed. This method is developed in its entirety in Appendix D. The model as depicted has general applicability to any number of sorters. However, the computer program for the model is at present limited to 150 items. The CDC 3600 at the University of Wisconsin Computing Center was used in the analysis of the data.

The output from the analysis of direct relevance to the study consisted of:

1. A problem x latent category matrix displaying the loading of each problem on each latent category. The magnitude of these loadings determined the first order grouping of the problems into the various categories.

2. A category x category "confusion" matrix was also generated. The coeficients in the body of this table provided an index of the degree to which the item composition of the categories overlapped. Thus, a second or higher order grouping of the categories was possible.

E. Category Labeling

The sorting procedure along with the computer analysis provided a number of categories of problems and the means to generate second-order categories of problems of reduced number. It was apparent that the labeling might range from simple symbolic representation in terms of numerals or letters to sets of highly inferential constructs inbedded in theories of education, psychology, or sociology. An attempt was made to veer in neither of these directions. Rather, the rules abided by in arriving at the various category labels were as follows:

1. The grouping of the problems was meaningful. That is, there was a common element or theme which caused the particular set of problems to fall in the same category. Discussion of the category and a consideration of the differential loading or weighting of the problems in a category (See Appendix E) inevitably resulted in concensus as to definition.

2. In evaluating the individual problems, the teacher's written words were accepted as the basic data, sans inference and sans conjecture as to what they <u>really</u> meant.

3. There was a set of words or phrases couched in the teacher's own language which appropriately described the common elements or theme of a group of problems. The teachers stated labels for the various categories were a main source in arriving at this definition.

An informal reaction panel consisted of two supervisors of MR classes, one administrative intern and one instructional supervisor representing some 20 years of classroom teaching experience. Minimal difficulty was encountered in arriving at agreed-upon labels once the three ground rules had been spelled out.

Chapter III

RESULTS

A. Respondent Behavior of the Teachers

Tables 1 through 3 present the salient characteristics associated with the response patterns of the teachers. Of the 1,068 teachers contacted, 65% responded by filling out the problem definition form or answering the follow-up questionnaire. Of the 690 who responded, 432 of these (63%) supplied the problems and strategies which formed the basis of the present analysis. Table 1 is a tabulation of the reasons given for not filling out the form. Absence of problems and pressures of work were the principle reasons why no response was received from 35% or 378 of the teachers. The principle investigator and other members of the Bureau staff elicited a number of additional reasons why no response was received. Some reacted to the notion that they would be doing a lot of work in order that some person might get his Ph.D. dissertation (the principle investigator had only been on the job a few months when the forms were sent out and was not widely known). Others objected to the coding whereby they could be identified. Related to this was the fear that their principal might obtain what they had written. Others indicated that they were told outright by their supervisor not to fill out the forms or were not given the forms at all.

While our sample was probably not truly representative of all special education teachers in the state of Wisconsin, there was little reason to believe that the problems generated by those sampled were not representative procedures. The sparse evidence available indicated that in the interests of self-protection the teachers were loath to document administrative shortcomings. A few did express themselves candidly in this area however. Thus, problems of an administrative nature should be and were reflected in the category definitions.

Tables 2 and 3 show further aspects of the teachers' response patterns. Teachers of children who are auditorily or visually impaired and in special learning disability classes were least responsive while the teachers of the emotionally disturbed and the physically handicapped were most responsive. The difference in the response percentages was quite large and no explanation can be offered at this time. However, one could construe the degree of responsivity as an index of receptivity to research endeavors; in which case the differential responsivity of the teachers from urban (15,000 or over) and rural areas should be noted. Table 3 shows that the percentage of teachers responding from the rural areas was 72%

Table I

a) Distribution of Responses to Problem Definition of All Special Education Teachers in the State

	Urban*	Rural	Total
1) Responded to initial request	199	182	381
2) Did not respond to form nor follow-up letter	256	122	378
3) Filled out form in response to letter	28	23	51
4) Responded to letter but did not fill out form	155	103	258
Total	638	430	1068

b) Reasons Given for not Responding to Problem Definition Request by All Special Education Teachers in the State

Reason	Urban*	Rural	Total
1) Could not discern any problem	37	20	57
2) Did not understand what was required	5	5	10
3) Pressures of other duties prevented response	59	41	100
4) Indicated they were working on problems but did not return them	14	11	25
5) Ill or deceased	5	5	10
6) Misplaced packet or did not receive it	11	11	22
7) Objected to request, i.e., too lengthy, bothersome, subjective, etc.	11	0	11
8) Recipient not in system, i.e., on leave, retired, teacher unknown	9	4	13
9) Miscellaneous	4	6	10
Total	155	103	258

Table 2

Type of Special Education Teacher in Relation to Response Pattern to Problem Definition Request

	Filled out form or responded to follow-up letter		Did not Respond		Total
	f	%	f	%	f
All groups	690	65	378	35	1,068
Educable Mentally Retarded	487	67	245	33	732
Trainable Mentally Retarded	66	65	36	35	102
Emotionally Disturbed	11	73	4	27	15
Special Learning Disabilities	5	50	5	50	10
Physically Handicapped	39	75	13	25	52
Visually Impaired	29	57	22	43	51
Auditorily Impaired	53	50	53	50	106
Total					1,068

Table 3

Response Pattern in Relation to Urban-Rural Break Out

	Filled out form or responded to follow-up letter		Did not Respond		Total
	f	%	f	%	f
Urban	382	60	256	40	638
Rural	308	72	122	28	430
Total	690		378		1,068

while from the urban areas the percentage was 60%. Thus, insofar as it is possible to generalize from the present study, research endeavors of the survey type should find teachers in the rural areas more receptive than those from the urban areas, and the type of teacher receptive in the order shown in Table 2.

B. Parameters of Sorting Process

An analysis of the sorting process was of importance for several reasons. First, it was important to have knowledge about certain aspects of the sorting process in order that realistic cost and time factor estimates can be made in future studies. Secondly, it was desirable to be able to delineate sorter attributes which influenced the process in order that these influences could be controlled or their effect evaluated. Finally, some indication of sorter consistency was needed.

Table 4 presents summary statistics concerning sorting behavior as manifested by the 85 sorters. Some explanation of this table is required. The number of categories generated from the 117 problem items ranged from 9 to 53 with an average number of 23 categories. Since the minimum number requested was 10 categories, the group as a whole seemed capable of a fairly fine differentiation of the nuances of classroom activity. The time for the sort ranged from one hour and 25 minutes to two hours and 55 minutes with an average of two hours and 18 minutes. This information provides a realistic basis for PERTing or otherwise allocating money and time in future efforts. The average number of items allocated to the categories by each sorter ranged from 6 to 37 with an average range of 16 items. Since each sorter had at least one category in which there was one item, the typical bounds of the range for the average sort would be one to sixteen items per category. Additional information on this topic is provided in the fourth column of Table 4. The mean of the average items per category was six with a range in these averages from two (for the sorters with 52 and 53 categories) to eleven.

Assuming that number of categories generated by the sorters indexed a capacity to discriminate nuances in the school learning milieu, two alternative hypotheses were entertained. Increased years in the classroom could make the teacher either (1) discriminating and sensitive to aspects of the educational environment, or, (2) so satiated with the whole process that broad generalizations only were operant. Table 5 shows the distribution of years of teaching experience of the sorters. Table 6 shows a test of the above hypotheses. The significant ($p < .05$) chi-square suggests that there was a relationship between years of teaching experience and number of categories generated. That is, the greater the experience, the more categories generated. This difference suggested that years of experience might affect the type of latent structure obtained in the analysis of the problems.

As a check on the consistency of the sorters, a duplicate item was randomly placed among the 117 items making, in effect, 118 items that were sorted. Eighty-six percent of the sorters put the repeated items

Table 4

Summary Statistics of
Sorting Behavior of 84 Sorters

	Number of Categories	Sorting Time (Min.)	Range of Items Per Category	Average Items Per Category
Mean	22.7	138.1[1]	16.3	5.9
SD	8.1	30.6	6.1	2.2
Range	9-53	85-175	6-37	2-11

[1]Time based on 23 sorters

Table 5

Distribution of Years of Experience of Sorters

Yrs. of Experience	Total # of Sorters
0	26
1	6
2	12
3	5
4	1
5	4
6	0
7	2
8	3
9	0
10	2
11	2
12	1
13	0
14	2
15	2
16	1
17	3
18	0
19	1
20	2
20 +	10
Total	85

Table 6

Analysis of Relationship Between Years of Teaching Experience and Number of Categories Generated in Sorting Process

Years of Experience	Number of Categories	
	22 and less	More than 22
2 years or less	29	15
More than 2 years	17	24

$X^2 = 3.84$, $p < .05$

in the same category. Only 12 sorters (14%) put the items in different categories. Because of the random assignment of the duplicate item, sorting of the items were independent events, thus 85% of the sorters demonstrating consistency was considered tolerable. Moreover, it seems not unlikely that the sorters while missing agreement with respect to the manifest category, agreed on the latent category in which the item was placed.

C. Group Structure of Teacher-Defined Problems

Latent partition analysis of the 117 problems which had been categorized by the 85 sorters revealed a latent structure of 30 categories. These 30 categories can be considered to exhaust the universe or space of manifest categories generated by the 85 sorters with these 117 items. The same items sorted by a different group would no doubt reveal a different structure.

Appendix E presents the differential loading or weighting of the 117 items on the 30 categories. The higher the number the greater the weight which in turn reflects the extent that the sorters agreed on the placement of a particular problem item. Consideration of Appendix E reveals that some of the problem items have fairly high loadings on categories other than the one they have been assigned to. Thus among the categories one can expect a certain amount of item overlap or confusion. The extent to which this confusion existed among the categories is indexed in Tables 9, 12 and 15 for the total group, the inexperienced group and experienced group. The index or coeficient of confusion among the categories contained in these tables provided the basis for a second or higher order grouping of the 30 categories.

Separate confusion matrices for the inexperienced and experienced teachers reflects a recognition of Lane's (1967) finding that more experienced counselors had a different latent category structure than inexperienced counselors; and our own finding that experienced and inexperienced teachers generated significantly different numbers of categories when sorting the pool of problem items. The presentation of this part of the Results is broken into two sections. The first section considers the first order categorization of the problem items based on the matrix in Appendix E. The seond or higher order clustering of the original 30 categories as a function of the total, inexperienced and experienced groups comprises the second section.

1. First Order Categorization

Table 7 shows the first order latent category structure of the 117 teacher-defined problems after sorting and LPA of the data. The 30 latent category numbers are arbitrary in the sense of simply being those numbers assigned by the computer routine. The descriptive titles reflect in non-inferential terms the content of the categories which includes the items whose code numbers are indicated on the right hand side of Table 7. Appendix B contains the actual items along with their code numbers arranged in a numerical sequence for easy reference. The computer print-out of the first order analysis in Appendix E has items numbered from 1 to 117 which corresponds to the numerical sequencing of the code numbers. Thus, the computer calls 34-1

(or 341) the first item, one, and 1955-1 (or 19881) the last item, 117. In Appendix B, the number following the dash in the code number refers to the particular problem of the possible five which was randomly chosen for the item pool.

A concern of the study was the meaningful ranking of the problem categories so as to provide some basis for allocation of resources for problem solution. Frequency or prevalence of problem occurrence seemed the most pertinent dimension along which to rank the problems. Table 8 presents such a ranking of the problem categories. Assuming our sampling procedure to be quite representative of the total pool of problems generated by the EMR teachers, then we can say that the most frequent problem encountered is that of (9) Attention-Getting Behavior Which Disturbs Class with a relative frequency of nine. The least frequently encountered problem is that of Profanity (25) with a relative frequency of one. The remaining problem categories fell within the one to nine range. If the problem labels are not self-explanatory, the reader is referred to Table 7 for a list of code numbers identifying the problems items and to Appendix B for the actual problems as submitted by the teachers corresponding to the code number.

2. Second Order Clustering of Problems

As noted previously, a certain amount of item overlap was present in obtaining the 30 problem categories. That is, within the perceptual framework of the sorters, a number of the first order categories seemed to group together. The matrix indexing this grouping for the total sample of sorters is shown in Table 9. In the body of the table are shown the coeficients of confusion or relatedness of the categories. These coeficients are the probabilities that discrimination will occur between items drawn from two categories. A distribution of the coeficients revealed a bimodality at the tail of the distribution. The break in the distribution occurred at a coeficient of .20. In generating the clustering patterns, only coeficients of .20 and above were considered. Other cut-off points, down to .16, were tried but they merely tended to further strengthen the clusters identified by the .20 cut-off, or else included in the cluster an atypical category which made identification and labeling extremely difficult.

As Table 10 demonstrates, the second order clustering reduced the number of categories from 30 to 16. Under the assumption that these 16 categories were quite independent, the labels in Table 11 were easily derived.

The ranking of the second order problem categories in terms of frequency is also shown in Table 11. Such a display allows us to note that our group as a whole generated three problem categories of major significance - Aggressive Disruptive Behavior, Deficits in Instructional Programming and Motivation of Pupils. The remaining 13 categories were of lesser importance in the order shown. The specific first order categories which make up the second order cluster are depicted in Table 10.

Table 7

First order latent category structure of teacher-defined problems based on N of 85 sorters.

Latent Category No.	Descriptive Title	Item Code Number
1	Disobedient Behavior in School Outside of Classroom	05084, 01435
2	Lack of Adequate Instructional Materials	05531, 00925, 01422, 09181, 18361
3	Poor Personal Hygiene	19553, 16211, 12301, 17271, 01615
4	Lack of Pupil Initiative	05963, 00461, 17181, 18951
5	Lack of Confidence	03612, 17531, 03974, 04121
6	Methodological-Curriculum Inadequacies	04151, 01085, 07071, 04101, 04661
7	Emotional Instability	06681, 06831, 04252, 16851, 01361, 18185
8	Perceptual Inadequacies	00451, 00411, 00422
9	Attention-Getting Behavior Which Disturbs Class	14861, 17661, 19641, 13951, 01301 18381, 18091, 04703, 04131
10	Inappropriate Placement of Pupils	11901, 03643, 04111, 10101
11	Truancy	16561, 06971, 04551
12	Hyperactivity	13411, 19881, 00341
13	Lack of Time to Give Individual Attention	16611, 04071, 09991
14	Negative Home Environment	09801, 00984, 15801, 19441, 01113. 03902, 05183
15	Poor Work Habits	09602, 04463, 19464, 07461, 00731
16	Emerging Sex Interests	18101, 15041, 08121
17	Overimaginative and Distorted Accounts	01632, 06951
18	Lack of Teacher-Pupil Communication	01063, 04141, 00875
19	Asocial Behavior in Multiply Handicapped	04523, 07561, 11261
20	Threatening Behavior Toward Others and Their Property	19271, 17481, 15091
21	Pronounced Withdrawal from Classroom Activities	17541, 11441
22	Overdependency	06371, 01353, 19481
23	Behaviors Leading to Rejection by Others	06581, 19501, 04482
24	Pupil Dissatisfaction with Being in Special Classes	06201, 18001, 10671, 10741, 15101
25	Profanity	00623
26	Extreme Nervousness	03981, 08741, 14631, 00391, 03021
27	Lack of Resources for Understanding Problems in Classroom Management	12201, 09811, 06221
28	Inability to Accept Failure	01315, 14601, 06961
29	Inability to Maintain Desired Task Orientation	06531, 05854, 19661, 07121, 18251, 19651, 00961
30	Physical Abuse of Others	09641, 01281, 18371

Table 8

Latent Categories Arranged in Order of Number of Items in Category

Category No.	Label	f
9	Attention-Getting Behavior Which Disturbs Class	9
14	Negative Home Environment	7
29	Inability to Maintain Desired Task Orientation	7
7	Emotional Instability	6
2	Lack of Adequate Instructional Materials	5
3	Poor Personal Hygiene	5
6	Methodological-Curriculum Inadequacies	5
15	Poor Work Habits	5
24	Pupil Dissatisfaction with Being in Special Classes	5
26	Extreme Nervousness	5
4	Lack of Pupil Initiative	4
5	Lack of Confidence	4
10	Inappropriate Placement of Pupils	4
8	Perceptual Inadequacies	3
11	Truancy	3
12	Hyperactivity	3
13	Lack of Time to Give Individual Attention	3
16	Emerging Sex Interests	3
18	Lack of Teacher-Pupil Communication	3
19	Asocial Behavior in Multiply Handicapped	3
20	Threatening Behavior Toward Others and Their Property	3
22	Overdependency	3
23	Behaviors Leading to Rejection by Others	3
27	Lack of Resources for Understanding Problems in Classroom Management	3
28	Inability to Accept Failure	3
30	Physical Abuse of Others	3
1	Disobedient Behavior in School Outside of Classroom	2
17	Overimaginative and Distorted Accounts	2
21	Pronounced Withdrawal from Classroom Activities	2
25	Profanity	1

Table 9

Confusion Matrix for Total Group

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	51	1	2	-0	3	2	2	0	19	4	8	3	2	4	3	6	8	3	6	19	3	2	24	5	16	4	4	3	4	36
2	1	82	2	1	0	17	3	0	0	7	2	-0	20	3	5	1	0	2	0	1	3	2	-0	3	1	0	12	1	3	0
3	2	2	88	3	3	1	-0	2	2	3	5	-0	1	18	2	4	1	1	2	3	3	5	-0	0	7	4	-2	1	0	2
4	-0	1	3	78	9	6	-3	1	4	-0	12	2	3	5	23	1	0	7	0	0	7	16	-2	4	-1	7	4	6	23	1
5	3	0	3	9	30	3	6	1	6	1	5	-1	1	6	4	5	9	5	16	2	10	10	9	17	4	8	2	29	10	2
6	2	17	1	6	3	40	2	5	0	17	1	3	27	2	16	4	-0	12	2	1	1	4	1	7	1	2	24	-1	6	-0
7	2	3	-0	-3	6	2	56	1	9	4	6	13	3	9	-1	8	14	3	13	14	27	11	6	7	3	18	9	9	8	14
8	0	0	2	1	1	5	1	72	1	3	1	18	1	2	4	4	-0	4	5	2	2	4	-1	1	-2	5	3	1	2	1
9	19	0	2	4	6	0	9	1	42	2	8	12	1	4	4	4	19	3	7	18	8	6	21	5	25	12	5	7	9	18
10	4	7	3	-0	1	17	4	3	2	66	-0	4	21	1	7	6	-1	3	3	2	3	3	2	10	4	2	5	-2	6	-1
11	8	2	5	12	5	1	6	1	8	-0	48	-1	1	9	5	3	4	4	7	11	7	6	5	4	4	8	0	3	7	7
12	3	-0	-0	2	-1	3	13	18	12	4	-1	79	3	2	6	6	2	3	2	8	7	3	-1	2	5	22	3	4	12	7
13	2	20	1	3	1	27	3	1	1	21	1	3	59	2	12	4	-0	5	0	0	3	7	-1	6	0	2	20	-1	5	0
14	4	3	18	5	6	2	9	2	4	1	9	2	2	26	2	7	4	3	5	6	9	7	5	4	4	7	3	3	4	3
15	3	5	2	23	4	16	-1	4	4	7	5	6	12	2	36	3	1	12	-0	2	-0	11	1	5	3	5	17	4	12	-2
16	6	1	4	1	5	4	8	4	4	6	3	6	4	7	3	32	3	5	5	7	5	3	11	9	10	5	5	2	4	2
17	6	0	1	0	9	-0	14	-0	19	-1	4	2	-0	4	1	3	64	4	7	16	10	7	12	5	16	9	6	8	7	7
18	3	2	1	7	5	12	3	4	3	3	4	3	5	3	12	5	4	42	4	3	5	4	5	5	5	3	13	3	5	1
19	6	0	2	0	16	2	13	5	7	3	7	2	0	5	-0	5	7	4	33	7	17	5	10	10	8	9	1	13	7	9
20	19	1	3	0	2	1	14	2	18	2	11	8	0	6	2	7	16	3	7	37	9	4	18	4	15	8	6	5	5	23
21	3	3	3	7	10	1	27	2	8	3	7	7	3	9	-0	5	10	5	17	9	49	9	9	6	-1	12	2	10	9	10
22	2	2	5	18	10	4	11	4	6	3	6	3	7	7	11	3	7	4	5	4	9	40	3	5	4	7	5	12	10	5
23	24	-0	-0	-2	9	1	6	-1	21	2	5	-1	-1	5	1	11	12	5	10	18	9	3	55	10	21	4	6	9	5	26
24	5	3	0	4	17	7	7	1	5	10	4	2	6	4	5	9	5	5	10	4	6	5	10	22	5	6	5	13	7	3
25	16	1	7	-1	4	1	3	-2	25	4	4	5	0	4	3	10	16	5	8	15	-1	4	21	5	80	6	4	5	3	8
26	4	0	4	7	8	2	18	5	12	2	8	22	2	7	5	5	9	3	9	8	12	7	4	6	6	26	5	8	11	8
27	4	12	-2	8	2	24	9	3	5	5	0	3	20	3	17	5	6	13	1	6	2	5	6	5	4	5	53	3	6	2
28	3	1	1	6	29	-1	9	1	7	-2	3	4	-1	3	4	2	8	3	13	5	10	12	9	13	5	8	3	41	9	5
29	4	3	0	23	10	6	8	2	9	6	7	12	5	4	12	4	7	5	7	5	9	10	5	7	3	11	6	9	19	35
30	36	0	2	1	2	-0	14	1	18	-1	7	7	0	3	-2	2	7	1	9	23	10	5	26	3	8	8	2	5	5	67

Table 10

Clustering of Latent Problem Categories for Total Group of Sorters (N = 85)

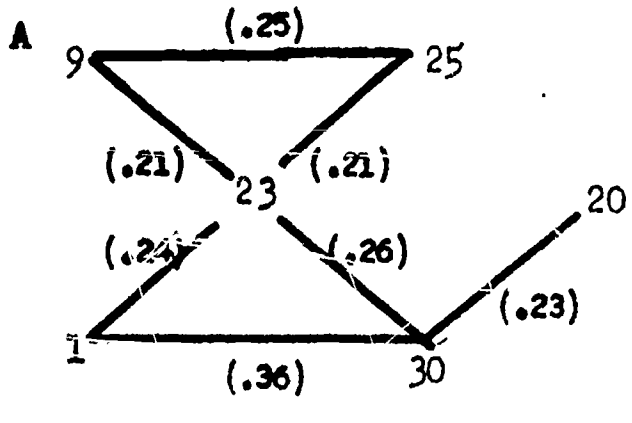
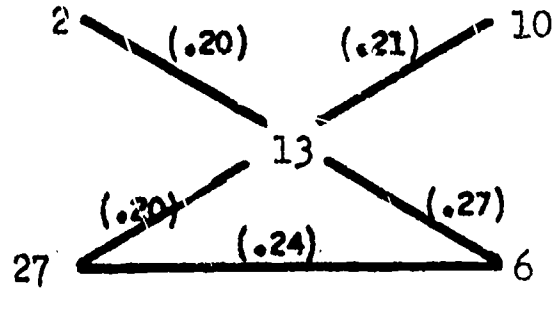
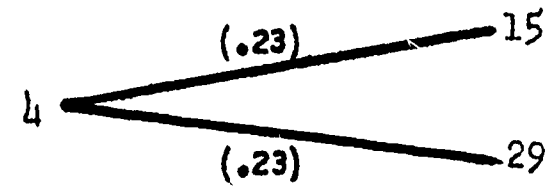
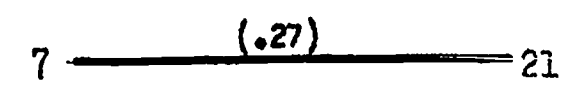
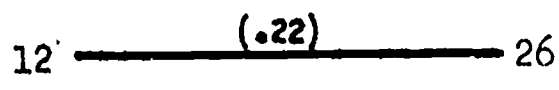
Cluster	Clustering Pattern	Category No.	Label
A		1	Disobedient Behavior in School Outside of Classroom
		9	Attention-Getting Behavior Which Disturbs Class
		20	Threatening Behavior Toward Others and Their Property
		23	Behaviors Leading to Rejection by Others
		25	Profanity
		30	Physical Abuse of Others
B		2	Lack of Adequate Instructional Materials
		6	Methodological-Curriculum Inadequacies
		10	Inappropriate Placement of Pupils
		13	Lack of Time to Give Individual Attention
		27	Lack of Resources for Understanding Problems in Classroom Management
C		4	Lack of Pupil Initiative
		15	Poor Work Habits
		29	Inability to Maintain Desired Task Orientation
D		7	Emotional Instability
		21	Pronounced Withdrawal from Classroom Activities
E		12	Hyperactivity
		26	Extreme Nervousness
F		5	Lack of Confidence
		28	Inability to Accept Failure
g		14	Negative Home Environment
h		3	Poor Personal Hygiene
i		24	Pupil Dissatisfaction with Being in Special Classes
j		8	Perceptual Inadequacies
k		11	Truancy
l		16	Emerging Sex Interests
m		18	Lack of Teacher-Pupil Communication
n		19	Asocial Behavior in Multiply Handicapped
o		22	Overdependency
p		17	Overimaginative and Distorted Accounts

Table 11

Total Group of Sorters' Second Order Clustering of Teacher Defined and Categorized Problems Arranged in Order of Frequency of Problem Composition.

Cluster Designation		f	%
A	Aggressive Disrupting Behavior	21	18.0
B	Deficits in Instructional Programming	20	17.0
C	Motivation of Pupils	16	14.0
D	Inappropriate Affective Reactions	8	7.0
E	Hyperactivity and Nervousness	8	7.0
F	Reactions to Failure	7	6.0
g	Negative Home Environment	7	6.0
h	Poor Personal Hygiene	5	4.0
i	Pupil Dissatisfaction with Being in Special Classes	5	4.0
j	Perceptual Inadequacies	3	2.5
k	Truancy	3	2.5
l	Emerging Sex Interests	3	2.5
m	Lack of Teacher-Pupil Communication	3	2.5
n	Asocial Behavior in Multiply Handicapped	3	2.5
o	Overdependency	3	2.5
p	Overimaginative and Distorted Accounts	2	2.0
	Total	117	100

The inexperienced group was those sorters who had had two years or less of teaching exprience. The confusion matrix for this group is shown in Table 12. Second order clustering based on the confusion coeficients is shown in Table 13 with the appropriate labels and frequency of occurrence depicted in Table 14. By far the largest problem category as seen by the inexperienced sorters was that of Existing System Deficiencies. This category was so labeled because the nine first order categories involved seemed to have as a common theme situational impediments to adequate teaching left over or not a part of the newcomer's doing. Such first order categories which aptly illustrate this are Inappropriate Placement of Pupils, Lack of Pupil Initiative and Poor Work Habits (previous teachers ineffective in this regard?), Lack of Adequate Instructional Materials, etc. The second order grouping of the inexperienced sorters consisted of a reduction in latent categories from 30 to 12.

The confusion matrix for the experienced sorters is shown in Table 15. The second order clustering pattern and category composition is shown in Table 16. Descriptive labels for the experienced sorters are shown in Table 17. The reduction in categories for the experienced sorters was from 30 to 17.

Effect of Experience on Categorization of Problems

Quantitative and qualitative differences were evident in sorting behavior as a function of experience. Consistent with the finding that inexperienced teachers generated fewer manifest categories, it was also found that they generated fewer (12 to 17) second order clusters than did the experienced group. Thus, we can say that inexperienced teachers generalized more and discriminated less among stimulus items whose content concerned problems encountered and defined by teachers of the EMR.

Examination of the second order clustering as a function of experience revealed a number of similarities and differences. For instance, the following problem categories were similar across both groups:

1) Aggressive Disrupting Behavior--this cluster of problems ranked high for both groups and the first order category composition was identical with one exception. The experienced teachers saw (20) Threatening Behavior Towards Others and Their Property as standing alone as a separate category (Tables 16 and 17). This was an example where rigidly using a confusion coeficient of .20 as the cutoff was inappropriate. For the experienced group's confusion matrix (Table 15) indicates that this item had fairly high coeficients with the other problem categories (.13, .16, .18, .17, .13, .14) in the cluster. Thus, in terms of category content and strength of relationship, we may consider this cluster as identical for both groups.

2) Inappropriate Affective Reactions.

3) Reactions to Failure.

4) Pupil Dissatisfaction with Being in Special Classes.

5) Truancy.

Table 12

Confusion Matrix for Inexperienced Group

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	44	1	2	1	3	1	3	0	17	3	12	3	2	4	2	4	6	3	4	25	3	2	28	6	21	3	5	6	4	36
2	1	85	3	1	1	17	4	0	-0	6	2	0	21	3	4	0	1	3	-0	-0	4	2	0	3	1	0	10	1	2	-0
3	2	3	87	3	4	1	2	1	1	2	4	-1	0	23	3	5	1	2	1	3	5	5	0	0	7	3	-2	1	0	2
4	1	1	3	79	11	6	-1	0	3	-2	10	2	2	6	23	-0	3	6	2	2	8	24	-2	2	-4	9	5	8	23	1
5	3	1	4	11	54	3	3	1	4	3	4	-3	-0	6	3	3	9	5	16	3	7	9	9	18	4	6	4	31	10	0
6	1	17	1	6	3	41	2	6	-0	16	-0	3	28	1	15	3	0	13	2	1	1	4	1	6	-3	3	25	-1	6	0
7	3	4	2	-1	3	2	41	2	8	7	7	12	2	6	1	4	11	3	12	13	22	11	9	7	5	16	5	9	7	14
8	0	0	1	0	1	6	2	70	1	4	1	25	-0	1	3	3	-0	6	7	2	2	3	-1	2	-1	4	6	2	3	-1
9	17	-0	1	3	4	-0	8	1	41	1	8	15	1	4	3	3	14	3	6	19	6	4	19	3	28	12	4	6	8	20
10	3	6	2	-2	3	16	7	4	1	65	-0	7	21	2	7	8	-1	2	4	2	3	4	3	9	3	2	5	-3	7	-0
11	12	2	4	10	4	-0	7	1	8	-0	46	-3	1	8	5	3	5	5	7	13	8	7	6	4	2	7	-1	5	6	8
12	3	0	-1	2	-3	3	12	25	15	7	-3	73	3	1	6	6	3	3	3	8	3	1	0	3	8	19	4	4	12	6
13	2	21	0	2	-0	28	2	-0	1	21	1	3	60	1	11	5	0	3	-1	-1	4	7	-2	6	-2	2	20	-1	5	1
14	4	3	23	6	6	1	6	1	4	2	8	1	1	30	4	6	3	4	5	6	11	8	5	4	0	6	1	3	3	4
15	2	4	3	23	3	15	1	3	3	7	5	6	11	4	38	3	3	14	0	1	0	12	0	5	0	8	21	4	11	-4
16	4	0	5	-0	3	3	4	3	3	8	3	6	5	6	3	30	2	5	5	6	5	2	10	8	9	4	4	1	3	2
17	6	1	1	3	9	0	11	-0	14	-1	5	3	0	3	3	2	60	7	8	13	6	7	9	2	21	9	6	6	8	6
18	3	3	2	6	5	13	3	6	3	2	5	3	3	4	14	5	7	37	4	4	5	6	4	4	3	5	14	3	5	3
19	4	-0	1	2	16	2	12	7	6	4	7	3	-1	5	0	5	4	4	33	7	18	6	9	9	8	7	-2	11	6	8
20	25	-0	3	2	3	1	13	2	19	2	13	8	-1	6	1	6	13	4	7	38	8	5	18	4	18	7	3	5	5	31
21	3	4	5	8	7	1	22	2	6	3	8	3	4	11	0	5	6	5	18	8	48	10	7	5	-7	12	-1	10	9	10
22	2	2	5	24	9	4	11	3	4	4	7	1	7	8	12	2	7	6	6	5	10	36	2	7	5	7	7	7	10	5
23	28	0	0	-2	9	1	9	-1	19	3	6	0	-2	5	0	10	9	4	9	18	7	2	55	8	17	5	8	7	5	31
24	8	3	0	2	18	6	7	2	3	9	4	3	6	4	5	8	2	4	9	4	5	7	8	20	4	6	6	14	7	3
25	21	1	7	-4	4	-3	5	-1	28	3	2	8	-2	0	0	9	21	3	8	18	-7	5	11	4	88	5	6	5	3	7
26	3	0	3	9	6	3	16	4	12	2	7	19	2	6	8	4	9	5	7	7	12	7	5	6	5	23	4	7	11	7
27	5	10	-2	5	4	25	5	6	4	5	-1	4	20	1	21	4	6	14	-2	3	-1	7	8	6	6	4	61	2	6	-0
28	6	1	1	8	31	-1	9	2	6	-3	5	4	-1	3	4	1	6	3	11	5	10	7	7	14	5	7	2	38	9	5
29	4	2	0	23	10	6	7	3	8	7	6	12	5	3	11	3	8	5	6	5	9	10	5	7	3	11	6	9	20	0
30	36	-0	2	1	0	0	14	-1	20	-0	8	6	1	4	-4	2	6	3	8	31	10	5	31	3	7	7	-0	5	6	74

Table 13

Clustering of Latent Problem Categories for the Group of Inexperienced (two years or less teaching) Sorters (N = 44)

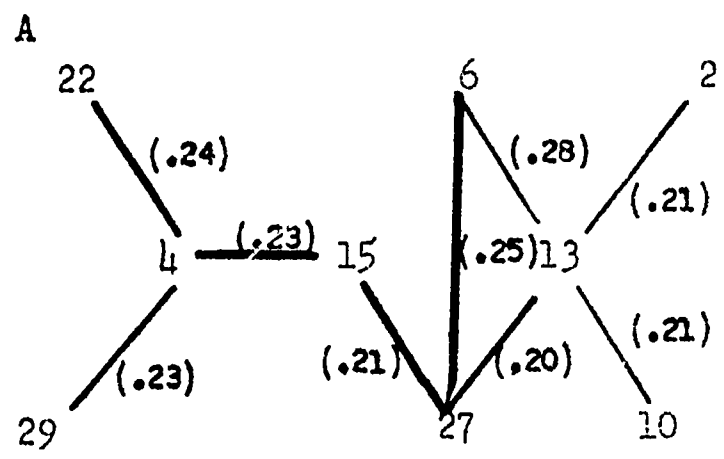
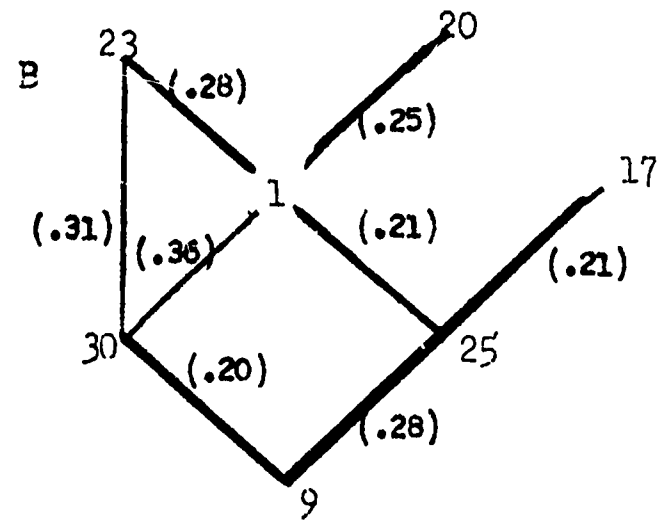
Cluster	Clustering Pattern	Category No.	Label
A		2	Lack of Adequate Instructional Materials
		4	Lack of Pupil Initiative
		6	Methodological-Curriculum Inadequacies
		10	Inappropriate Placement of Pupils
		13	Lack of Time to Give Individual Attention
		15	Poor Work Habits
		22	Overdependency
		27	Lack of Resources for Understanding. Problems in Classroom Management
		29	Inability to Maintain Desired Task Orientation
B		1	Disobedient Behavior in School Outside of Classroom
		9	Attention-Getting Behavior Which Disturbs Class
		17	Overimaginative and Distorted Accounts
		20	Threatening Behavior Toward Others and Their Property
		23	Behaviors Leading to Rejection by Others
		25	Profanity
		30	Physical Abuse of Others
C	3 (.23) 14	3	Poor Personal Hygiene
		14	Negative Home Environment
D	7 (.22) 21	7	Emotional Instability
		21	Pronounced Withdrawal from Classroom
E	5 (.31) 28	5	Lack of Confidence
		28	Inability to Accept Failure
F	8 (.25) 12	8	Perceptual Inadequacies
		12	Hyperactivity
g		24	Pupil Dissatisfaction with Being in Special Classes
h		26	Extreme Nervousness
i		11	Truancy
j		16	Emerging Sex Interests
k		18	Lack of Teacher-Pupil Communication
l		19	Asocial Behavior in Multiply Handicapped

Table 14

Inexperienced[1] Sorters' Second Order Clustering of Teacher Defined and Categorized Problems Arranged in Order of Frequency of Problem Composition.

Cluster Designation	Composite Label	f	%
A	Existing System Deficiencies	39	34.0
B	Aggressive Disrupting Behavior	23	20.0
C	Negative Familial Influences	12	10.0
D	Inappropriate Affective Reactions	8	7.0
E	Reactions to Failure	7	6.0
F	Perceptual-motor Difficulties	6	5.0
g[2]	Pupil Dissatisfaction with Being in Special Classes	5	4.0
h	Extreme Nervousness	5	4.0
i	Truancy	3	2.5
j	Emerging Sex Interests	3	2.5
k	Lack of Teacher-Pupil Communicatio...	3	2.5
l	Asocial Behavior in Multiply Handicapped	3	2.5
	Total	117	100

[1]Sorters with two years or less of teaching experience

[2]Lower case letters indicate non-clustering categories

Table 15

Confusion Matrix for Experienced Group

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	59	1	1	-2	3	3	1	0	21	5	4	3	2	4	3	8	11	3	8	13	4	2	19	4	11	5	2	0	4	37
2	1	80	1	2	-0	16	2	0	1	8	2	-1	19	2	7	3	-0	1	0	1	1	2	-1	3	2	0	14	1	3	0
3	1	1	90	2	3	1	-2	3	2	3	5	0	1	12	2	2	-0	0	3	3	1	5	-1	0	7	5	-2	-0	1	3
4	-2	2	2	77	6	7	-4	2	4	1	14	2	5	3	22	2	-3	9	-2	-1	6	13	-2	6	2	5	2	4	23	2
5	3	-0	3	6	45	3	8	0	7	-1	7	1	1	6	4	7	9	5	16	2	12	11	10	15	3	9	-1	26	10	4
6	3	16	1	7	3	40	1	5	1	18	3	4	26	2	17	5	-1	12	3	1	2	3	1	7	5	1	24	-1	6	-1
7	1	2	-2	-4	8	1	70	-1	10	1	5	14	3	12	-3	11	17	3	13	15	33	12	4	7	1	19	13	10	10	14
8	0	0	3	2	0	5	-1	75	1	3	2	10	2	3	5	5	0	3	4	2	2	5	-2	1	-3	6	0	1	1	3
9	21	1	2	4	7	1	10	1	43	2	8	8	1	4	5	5	25	3	7	16	9	8	23	6	22	12	5	8	10	15
10	5	8	3	1	-1	18	1	3	2	67	-0	2	21	1	7	4	-0	4	2	2	3	3	1	12	6	3	5	-2	6	-1
11	4	2	5	14	7	3	5	2	8	-0	51	2	1	10	5	3	3	2	7	10	5	6	5	3	5	8	1	2	8	7
12	3	-1	0	2	1	4	14	10	8	2	2	85	3	3	5	6	1	2	2	8	11	4	-3	1	3	25	3	5	12	9
13	2	19	1	5	1	26	3	2	1	21	1	3	59	2	14	3	-1	6	2	1	2	8	0	6	2	2	20	-0	5	-1
14	4	2	12	3	6	2	12	3	4	1	10	3	2	22	1	7	5	3	5	7	8	6	5	4	7	7	4	4	5	3
15	3	7	2	22	4	17	-3	5	5	7	5	5	14	1	36	4	-0	9	-1	3	-0	10	2	4	5	3	13	5	13	1
16	8	3	2	2	7	5	11	5	5	4	3	6	3	7	4	34	5	6	5	8	6	4	12	9	10	7	7	4	5	2
17	11	-0	-0	-3	9	-1	17	0	25	-0	3	1	-1	5	-0	5	66	0	9	18	15	7	16	8	11	9	5	10	6	8
18	3	1	0	9	3	12	3	3	3	4	2	2	6	3	9	6	0	44	4	2	5	1	5	5	8	1	11	4	5	0
19	8	0	3	-2	16	3	13	4	7	2	7	2	2	5	-1	5	9	4	33	7	15	3	12	11	9	11	3	15	7	9
20	13	1	3	-1	2	1	15	2	16	2	10	8	1	7	3	8	18	2	7	35	9	3	17	4	13	10	8	5	5	14
21	4	1	1	6	12	2	33	2	9	3	5	11	2	8	-0	6	15	5	15	9	46	8	11	7	5	13	5	10	10	10
22	2	2	5	13	11	3	12	5	8	3	6	4	8	6	10	4	7	1	3	3	8	42	3	3	3	7	3	15	9	4
23	19	-1	-1	-2	10	1	4	-2	23	1	5	-3	0	5	2	12	16	5	12	17	11	3	52	11	24	2	3	11	4	21
24	4	3	0	6	15	7	7	1	6	12	3	1	6	4	4	9	8	5	11	4	7	3	11	24	7	5	5	12	8	3
25	11	2	7	2	3	5	1	-3	22	6	5	3	2	7	5	10	11	8	9	13	5	3	24	7	69	6	3	5	4	8
26	5	0	5	5	9	1	19	6	12	3	8	25	2	7	3	7	9	1	11	10	13	7	2	5	6	28	6	10	11	10
27	2	14	-2	2	-1	24	13	0	5	5	1	3	20	4	13	7	5	11	3	8	5	3	3	5	3	6	48	3	6	4
28	0	1	-0	4	26	-1	10	1	8	-2	2	5	-0	4	5	4	10	4	15	5	10	15	11	12	5	10	3	42	9	5
29	4	3	1	23	10	6	10	1	10	6	8	12	5	5	13	5	6	5	7	5	10	9	4	8	4	11	6	9	19	5
30	37	0	3	2	4	-1	14	3	15	-1	7	9	-1	3	1	2	8	0	9	14	10	4	21	3	8	10	4	5	5	60

Table 16

Clustering of Latent Problem Categories for the Group of Experienced (more than two years teaching) Sorters (N = 41)

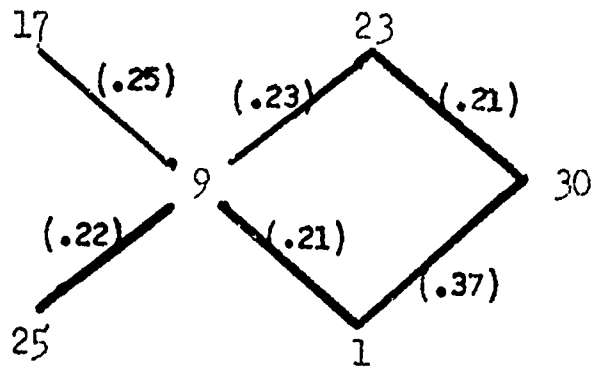
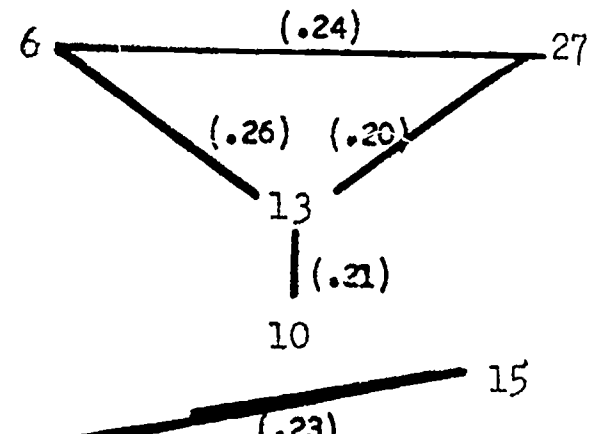
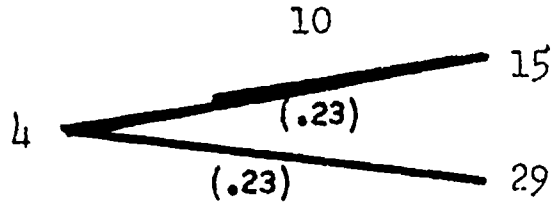
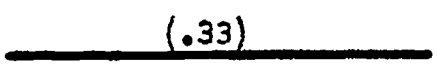
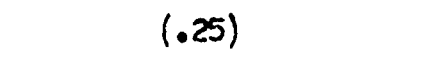
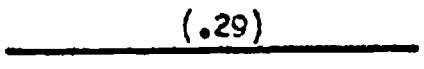
Cluster Designation	Clustering Pattern	Category No.	Label
A		1	Disobedient Behavior in School Outside of Classroom
		9	Attention-Getting Behavior Which Disturbs Class
		17	Overimaginative and Distorted Accounts
		23	Behaviors Leading to Rejection by Others
		25	Profanity
		30	Physical Abuse of Others
C		6	Methodological-Curriculum Inadequacies
		10	Inappropriate Placement of Pupils
		13	Lack of Time to Give Individual Attention
		27	Lack of Resources for Understanding Problem in Classroom Management
B		4	Lack of Pupil Initiative
		15	Poor Work Habits
		29	Inability to Maintain Desired Task Orientation
D		7	Emotional Instability
		21	Pronounced Withdrawal from Classroom Activities
E		26	Hyperactivity
		12	Extreme Nervousness
F		5	Lack of Confidence
		28	Inability to Accept Failure
g		14	Negative Home Environment
h		2	Lack of Adequate Instructional Materials
i		3	Poor Personal Hygiene
j		24	Pupil Dissatisfaction with Being in Special Classes
k		8	Perceptual Inadequacies
l		11	Truancy
m		16	Emerging Sex Interests
n		18	Lack of Teacher-Pupil Communication
o		19	Asocial Behavior in Multiply Handicapped
p		20	Threatening Behavior Toward Others and Their Property
q		22	Overdependency

Table 17

Experienced[1] Sorters' Second Order Clustering of Teacher Defined and Categorized Problems Arranged in Order of Frequency of Problem Composition.

Cluster	Composite Label	f	%
A	Aggressive Disrupting Behavior	20	17.0
B	Motivation of Pupils	16	14.0
C	Shortcomings in Administrative Functioning	15	13.0
D	Hyperactivity and Nervousness	8	7.0
E	Inappropriate Affective Reactions	8	7.0
F	Reactions to Failure	7	6.0
g[2]	Negative Home Environment	7	6.0
h	Lack of Adequate Instructional Materials	5	4.0
i	Poor Personal Hygiene	5	4.0
j	Pupil Dissatisfaction with Being in Special Classes	5	4.0
k	Perceptual Inadequacies	3	2.5
l	Truancy	3	2.5
m	Emerging Sex Interests	3	2.5
n	Lack of Teacher-Pupil Communication	3	2.5
o	Asocial Behavior in Multiply Handicapped	3	2.5
p	Threatening Behavior Toward Others and Their Property	3	2.5
q	Overdependency	3	2.5
	Total	117	99.5

[1]Sorters with more than two years of teaching experience

[2]Lower case letters indicate non-clustering categories

6) Emerging Sex Interests.

7) Lack of Teacher-Pupil Communication.

8) Asocial Behavior in Multiply Handicapped.

Qualitative differences of the following were noted:

1) The highest ranking cluster of the inexperienced sorters was Existing System Deficiencies (Table 14). The experienced group differentiated this cluster into several smaller clusters--Motivation of Pupils, Shortcomings in Administrative Functioning, Lack of Adequate Instructional Materials and Overdependency. This difference was interesting in that it suggested that a newcomer into the field may see many of the problems she encounters as generic to the system she enters. On the other hand the older professional, having "bought" into the system tends to see the system's contribution to her problems as more limited but present nevertheless and including such problems as Methodological Curriculum Inadequacies, Inappropriate Placement of Pupils, Lack of Time to Give Individual Attention and Lack of Resources for Understanding Problems in Classroom Management.

2) The inexperienced clustered both Poor Personal Hygiene and Negative Home Environment together in a group labeled Negative Familial Influences. The experienced, on the other hand, differentiated these two first-order categories.

3) The inexperienced had a second-order cluster, Perceptual Motor Difficulties, in which was included Perceptual Inadequacies and Hyperactivity. In contrast the experienced grouped Hyperactivity and Extreme Nervousness together leaving Perceptual Inadequacies as a separate category into itself.

Chapter IV

DISCUSSION

A. Perspective on the Results

The basic intent of the study was to develop a taxonomy of teacher-defined problems encountered by teachers of the EMR. An additional concern was to generate a meaningful ranking of the problem categories. Respondent behavior to the questionnaire was analysed. Salient parameters of the sorting procedure were delineated.

Thirty problem categories were identified and labeled. These categories cut across all aspects of the educational milieu--from administration to home, from pupil behavior to instructional materials, from affect to perception. In general, it would seem that a fairly exhaustive cataloging of problems (reportable in written form) encountered by teachers of the EMR in Wisconsin has been achieved. Whether these are the same problems that teachers in other states would define is an empirical question. Also, whether this set of problems is identical to those encountered in other special education classes is an open question.

The teacher has described in writing her perceptions of the impediments to her carrying out her job. The next logical question is what can be done to help her surmount these barriers? Since aggressive disrupting behavior looms as the largest problem, training in behavior modification techniques and/or classroom management seems required. Deficits in instructional programming requires administrative solutions such as more and relevant instructional adjuncts, use of paraprofessionals to free the teacher to give more individual attention, etc. The negative home influences which interfere with teaching could be ameliorated by having more home contacts made by social workers or trained lay people. It was apparent that emotionally disturbed children were a major concern. Present emphasis of ED classes is a partial solution to this problem. Other approaches to other classes of problems can easily come to mind. Indeed, an underlying assumption in the present study was that many teachers do in fact have solutions to these problems. Thus, dissemination of these solutions should be a major concern and will require careful attention to the method of display and related explanation.

In the process of collecting the problems we also obtained teacher-defined strategies, both effective and ineffective, which have been evolved to cope with these problems. Thus, it would seem that considerable value resides in classifying these strategies as a function of problem category. For, if externally derived solutions are to have an effect on the system, then some notion of its present state would seem to be required.

The taxonomy of problems as developed was not only teacher defined, but teacher categorized. That is, what we have is the teacher's perception of the major impediments to her effective functioning in the classroom. It would seem that special education directors would be amiss in not considering these categories. For, modifications of, and guidelines to, in-service training and administrative planning would seem to flow directly from the problem categories and their rankings. Also, since the study has shown that experienced and inexperienced teachers categorize the problems somewhat differently, different approaches should be considered for the two groups.

In effect, the finding that the experienced teachers generated more categories than the inexperienced underlines a general principle of comparative semantics noted by Brown (1965). That is, "Cognitive domains [categorical structures] that are close up are more differentiated than are remote domains." "Close up" in this context is taken to mean longer lived in and/or experienced. Since greater differentiation of problems would seem to be a positive attribute in teaching, ways should be considered to speed up this process rather than relying upon the passage of time to accomplish the greater differentiation.

In the review of the literature, it was noted that a study by Rotberg (1966) should have relevance to the present work. Broad taxonomic resemblances in problem categories can be noted such as his broad category of "Methods for managing individual behavior in the classroom" which could encompass such categories as Aggressive disrupting behavior, Inappropriate affective reactions, Hyperactivity and Nervousness, in fact, all categories pertaining to individual pupil behavior in the classroom. However, the most meaningful comparison between the two studies would seem to lie in a comparison of the effective and ineffective behaviors he has found with the effective and ineffective strategies which can be derived from the data obtained in the present study.

B. Implications for Education and Extensions of the Present Study

The implications of the present study for special education at the moment fall into four action-oriented directions:

1) Title VI (P.L. 89-10) state plan for Wisconsin has encorporated the problem categories as a possible direction for state project funding under this law.

2) Planning for an instructional materials center in Milwaukee under Title III, P.L. 89-10 is considering the problem categories as a possible point of departure in developing the center.

3) The Wisconsin Educational Association meeting in November, 1967, has a sub-meeting of some 400 EMR teachers. Present plans call for breaking these teachers into discussion groups to consider the various problem categories. The various solutions they offer will be recorded and subsequently compared with the strategy analysis of the data from the present study. Ideally the experience variable should be considered in the breakout of the discussion groups.

4) All special education directors in the state will be sent truncated versions of the project report. It is intended that the taxonomy of

problems will provide them with guidelines for in-service activity and also provide them with additional insight into the teacher's perception of impediments to effective functioning.

The extensions of the present study have been alluded to but should be restated here:

1) The 1,400 or so problems from all special education teachers which have not been categorized will have to be sorted into the 30 problem categories which have been identified. This sort will provide us with information relative to the adequacy of the categories to problems generated by other than EMR teachers and it will also give us some indication of the representativeness of our random selection of problems from EMR teachers.

2) Associated with the problem definitions are some 4,500 strategies which the teachers have evolved to cope with the problems. Thus associated with each of the problem categories there can be generated a taxonomy or classification of strategies which the teachers have indicated as being effective and ineffective. The end procedure of this endeavor could be a display similar to that shown in Table 18.

3) The perceived causes of the problems were obtained in the data collection process. An analysis of these would seem to have considerable value for several reasons. Since modes of problem coping should flow in large measure from perceived causes, then effective modification of the former would require an understanding of the latter. Moreover, a limited perusal of the causes has indicated considerable naevite on the part of many teachers. An explication of these causes could serve as a basis for in-service work and as a form of feedback to teacher training institutions.

4) Since it is known who the teachers were who submitted the various problem-stratgy combinations, it is possible to explore in depth any aspect deemed of interest. Thus filmed vignettes can be made depicting desirable problem-strategy combinations which can be used for in-service work and for training purposes in the teacher education institutions. These films could depict the actual situation and teacher, or acted-out versions of it.

5) Related to (4) is the possibility of using the sorting procedure of the problems as a means of communicating to other teachers and to graduate students in the field the problems EMR teachers encounter in the classroom. Such an attempt should result in a greater differentiation of the blocks to effective teaching. Spontaneous reactions of the sorters in this study indicated that they found the task interesting and informative.

Table 18

Illustrative Approach to a Disply of the Problem Categories and the Various Coping Strategies Associated with the Problems

	Latent Problem Categories	Latent Strategy Categories	Effective	%	Ineffective	%
A.	Aggressive Disrupting Behavior	1	xxxxxxxx		xxx	
		2	xxx		xxxxxxx	
		3	xxxxx		xxxxxx	
		4	xxxxx		xxx	
		5	xxxxx		xxxxxxx	
		6	xxx		xxxxxxxx	
		7	xxxxxxxx		x	
		8	xx		xxxxxx	
B.	Deficits in Instructional Programming	1	xx		xxxxxx	
		2	x		xxxx	
		3	xxxx		xx	
		4	xx		xxxxxxx	
		5	xxx		xxx	
		6	x		xxxx	
		7	xxxxxxx		xxxx	
		8	x		x	
C.						
D.						
E.						
F.						
g.						
h.						
i.						
j..						
k.						
l.						
m.						
n.						
o.						
p.						

Chapter V

SUMMARY

The present project had as its purpose the development of a taxonomy of problems defined and categorized by teachers of the EMR in the State of Wisconsin. A problem was defined as "anything in the environment or evident in student behaviors which was seen as an impediment to providing the necessary conditions for pupils to learn. Sixty-seven percent (487) of the teachers of EMR in the state responded to a request to specify five problems along with their causes and the successful and unsuccessful strategies which had been evolved to cope with these problems. A total of 1,172 problem definitions were obtained. A 10% random sample of these problems was sorted by 85 special education teachers and graduate students. The sorting procedure required the sorters to categorize the 117 problems.

A method of analysis termed Latent Partition Analysis was used to determine the common or latent categories underlying the categorizations of the 85 sorters. The analysis revealed a total of 30 latent categories. These categories were labeled relying upon the written content of the problem items and labels specified by the sorters. The 30 categories so generated and ranked in terms of frequency of item composition were:

Attention-Getting Behavior Which Disturbs Class

Negative Home Environment

Inability to Maintain Desired Task Orientation

Emotional Instability

Lack of Adequate Instructional Materials

Poor Personal Hygiene

Methodological-Curriculum Inadequacies

Poor Work Habits

Pupil Dissatisfaction with Being in Special Classes

Extreme Nervousness

Lack of Pupil Initiative

Lack of Confidence

Inappropriate Placement of Pupils

Perceptual Inadequacies

Truancy

Hyperactivity

Lack of Time to Give Individual Attention

Emerging Sex Interests

Lack of Teacher-Pupil Communication

Asocial Behavior in Multiply Handicapped

Threatening Behavior Toward Others and Their Property

Overdependency

Behaviors Leading to Rejection by Others

Lack of Resources for Understanding Problems in Classroom Management

Inability to Accept Failure

Physical Abuse of Others

Disobedient Behavior in School Outside of Classroom

Over-Imaginative and Distorted Accounts

Pronounced Withdrawal from Classroom Activities

Profanity

A second or higher order grouping based on the Latent Partition Analysis reduced the number of categories to 16. Further analysis revealed systematic differences between experienced (more than two years teaching) and inexperienced (two years or less teaching) sorters. Experienced sorters generated significantly more categories at the time of sorting and their second order grouping of the categories indicated a greater differentiation of the first order categories.

The relevance of the problems was indicated in relation to state planning, instructional materials centers, in-service training and the efforts of teacher training institutions. Further directions in the analysis of the problem causes and the evolved coping strategies were noted.

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APPENDIX A

Teacher Problem Survey

1. Instructions used in obtaining problems, causes and strategies
2. Illustrative responses from three teachers

The State of Wisconsin

DEPARTMENT OF PUBLIC INSTRUCTION

MADISON, WISCONSIN

ANGUS B. ROTHWELL
STATE SUPERINTENDENT

BUREAU FOR HANDICAPPED CHILDREN
JOHN W. MELCHER, DIRECTOR
ASSISTANT STATE SUPERINTENDENT
110 NORTH HENRY STREET
MADISON 53703

MEMORANDUM

To: Classroom Teachers

From: John J. Cook, Ph.D., Coordinator
Research Design and Administration

Re: Classification of Teacher-Defined Problems

STATEMENT OF PROJECT

As part of the emerging direction in the research activities of the Bureau for Handicapped Children, an attempt is being made to develop a classification of teacher-defined problems encountered in the teaching of the handicapped student. It is hoped also that a taxonomy or classification of effective and ineffective strategies which have been evolved to cope with the particular problem can be developed. Attention will then be centered on capturing on film the essence of the problems along with the coping strategies which have been found effective and/or ineffective.

A basic assumption in this undertaking is that you, the teacher, have a wealth of experience and understanding that has heretofore gone untapped; that situations encountered in the classroom are being coped with to a greater or lesser degree of adequacy; that the teacher is the only one who is really aware of the day-to-day realities of the classroom situation. The purpose of this undertaking is to bring into focus teacher-defined problems and coping strategies and mold them into a communicable form which can be passed on to you. It is hoped thereby to make your work more meaningful, productive and interesting. It is intended also to offer the findings of this project to interested teacher-training institutions.

The following pages contain a definition of terms and the directions.

DEFINITION OF TERMS

1. Problem

A problem can be considered anything in the environment or evident in student behaviors which you see as an impediment to your providing the necessary conditions for pupils to learn. Thus, things such as a lack of equipment, low morale, overcrowding, certain behaviors of certain children, and specific learning deficits can be considered problems. While it is a truism that once a problem has been solved it ceases to be a problem, at least until encountered the next time when your problem-solving activities reduce it to the inconsequential. We are then concerned with solved as well as unsolved problems or barriers which stand in the way of the adequate performance of your job.

2. Strategies

Strategy as used here has a broad definition. Any material or interpersonal gimmick used, any environmental manipulation or other technique can be considered a strategy, in short, any moves you may have made to reduce or remove the problem. Strategies may have succeeded to a greater or lesser degree. We are interested in the extent to which they have been successful. Strategies may have been tried but to no avail. These we are interested in also.

In a discussion of the type of data we hope to get, several points can be made which may clarify what otherwise may be a fairly muddy situation. Pupil behavior, for instance, is a crucial area and should be considered in some detail. Pupil behaviors which you see as a problem may be manifest as a group phenomenon or demonstrated by the individual pupil. Either way it is important to realize that as we commonly talk about behavior we have in fact organized it into an hierarchial structure. For instance, you may see the following observable behaviors as problems: Continuous movement around in the seat, leaving the room too frequently or letting the eyes wander so that the direction of regard is toward the window instead of into a book. Another teacher might prefer to group these behaviors under the label of "distractibility." We are not saying that there is a right or a wrong way of conceptualizing behavior. It should be pointed out, however, that the level at which the problem is conceptualized determines in large part the nature of the strategy evolved to cope with it.

For instance, in the preceding situation, if the observable behavior of movement in the seat is considered the problem, then coping strategies may range from a note to the mother suggesting she rinse out his underpants better, to lowering the temperature in the classroom. On the other hand, if the teacher conceptualizes the problem as one of distractibility she may cope by assigning the pupil to a barren cubicle. What is really being said here is that the manner in which the problem is conceived determined the hypotheses regarding the causal factor,hence, the coping strategy. We want you to be free to state the problem in your own words yet at the same time differentiating between the observed and the inferential if at all possible. Moreover, if you do use inferential or more abstract terms such as distractible, anxious, aggressive, etc., try, if at all possible, to indicate the groups of observable behaviors

which you feel make up or index the condition. In this paragraph so far we have considered the type of data we hope to get with respect to teacher-defined problems. In narrating your strategies try also to be aware of the observable behavior and the inferred or labeling process which you will be doing with interrelated segments of your own behavior. For instance, an observable strategy is to make the pupil stand in the hall or sit facing the corner or send to the principal. Collectively this might be labeled "disciplining." What specific behaviors that you feel underlie your use of this term should be indicated.

The above illustrations of problems and attendant coping have centered on the adjustment aspect of the educational process. While a degree of conformity or control is necessary before learning will occur, it is also true that some children are unable to learn even though they are in control of themselves and are motivated. Thus, problems defined in terms of inefficient learning or low achievement are of interest also. That is, are there aspects of the pupil's behavior which can be considered problems such as inability to retain sequentially presented material, discrimination, generalization, etc.? It is realized that, in general, a problem cannot be considered as such unless a teacher has certain expectations or aspirations with regard to a particular pupil's capacity in a certain area. Hence, few teachers would expect an educable child to understand the principles involved in "Tchebycheff's inequality" so the inability to attain this understanding would not be considered a problem.

SEE DIRECTIONS ON NEXT PAGE.

DIRECTIONS

1. Consider the past two months and try to think of at least five incidents, situations, circumstances or interpersonal encounters which constituted an impediment or barrier to your optimum functioning as a teacher. These then are the problems we are concerned with. The two-month time span is rather arbitrary and hopefully serves the purpose of helping you to be specific in your problem and strategy descriptions.

2. Attached are five "Teacher Problem Specification Sheets" which, on one side, ask for a problem description, possible causes and for the strategies which you have used to cope with the particular problem. On the other side of the sheet is space for the specification of those strategies which have not worked with the particular problem. Describe only one problem-strategy combination on any one sheet. Be as specific as possible in line with the discussion on the previous page and use the language you feel most aptly describes the behavior or situation.

3. It would be very much appreciated if you could have the task completed and returned within two weeks. Enclosed is a stamped return envelope for your convenience.

Thank you for your cooperation and do not hesitate to contact me if any points regarding this request need clarification.

TEACHER PROBLEM SPECIFICATION SHEET

N.C.

DESCRIBE THE PROBLEM

The students are frustrated and disturbed after the lunch hour which seems too early in the morning.

Time of day problem occurs 11:05 - 11:35

How often does the problem occur? Daily

WHAT DO YOU THINK CAUSES THE PROBLEM?

Improper supervision and the lack of discipline appears to be the cause. A later lunch hour would be more satisfactory.

STRATEGY OR STRATEGIES WHICH YOU HAVE EVOLVED TO COPE WITH PROBLEM

A story and music hour has been provided for relaxation.

The problem has not been completely solved.

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State Dept. Public Instruction
110 N.Henry St.,Madison,Wis.53703

1. Turn to other side of sheet.
2. Use additional blank sheets if necessary but identify with number in upper right-hand corner.

TEACHER PROBLEM SPECIFICATION SHEET

N.C.

DESCRIBE THE PROBLEM

Children become "fighting mad" when called "mentally handicapped" by others on the playground and school bus.

Time of day problem occurs When going to and from school

How often does the problem occur? Frequently

WHAT DO YOU THINK CAUSES THE PROBLEM?

My pupils are smart enough to know they don't merit the name-calling, and the name callers are not smart enough to know the definition established by the American Association on Mental Deficiency excludes from the definition all who are socially adequate, and anybody who is adequate enough to resent the name is most generally socially adequate and therefore not mentally handicapped.

STRATEGY OR STRATEGIES WHICH YOU HAVE EVOLVED TO COPE WITH PROBLEM

The name-callers are to be tested for possible placement in my special room, too— most of them. The few brighter children who are name callers are "counselled and guided."

The children in my room, I calm down, talk to, and get them busy in the school room so they can have respect for their own ability and be aware of their own great progress in learning. I teach them to [illegible] in what they can excel at: table manners, bus and playground deportment, penmanship – dozens of other things, dependability, truthfulness, kindness, good work habits, [illegible] in later life, smart enough not to use tobacco when they are older [illegible] thing

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2. Use additional blank sheets if necessary but identify with number in upper right-hand corner.

TEACHER PROBLEM SPECIFICATION SHEET

(5)

DESCRIBE THE PROBLEM

N.C.

Room too small and Crowded to be Conducive to activities of Crafts of interest to intermediate and Jr. High students

Time of day problem occurs _____

How often does the problem occur? _____

WHAT DO YOU THINK CAUSES THE PROBLEM?

The children who come from the Primary Spec. Ed. class are too immature to be integrated in the Jr. High classes. Thus provision must be made for activities suitable to their M.A.

STRATEGY OR STRATEGIES WHICH YOU HAVE EVOLVED TO COPE WITH PROBLEM

Moved furniture around placing a utility cabinet near the center of the room as an island so to speak - The sewing machine was placed behind it. Thus an area was available for sewing projects for the girls - and a corner provided for a small work bench.

(In the near future and enlargement of room may be possible - then the problems may be solved and be advantageous to all children.)

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1. Turn to other side of sheet.
2. Use additional blank sheets if necessary but identify with number in upper right-hand corner.

APPENDIX B

List of Teacher-Defined Problems Used in the Sorting Experiments

34-1 In the two years that I have taught retarded children I feel that Andrew was my biggest problem. Even under medication, there were days when it was almost impossible to control him. He would leave his desk, run around the room striking the other pupils, throw books and papers on the floor and laugh and scream at the top of his voice.

39-1 Cannot sit still when orientation begins in A.M. or after the noon recess bell. Runs fingers through hair--Bits nails--Talks to his neighbors etc.--Very disturbed--Continually drawing cars and autos and trucks.

41-1 Perceptual problem--visual motor coordination needs strong glasses--delay between giving command and carrying out--speech good and vocabulary good--short attention span.

42-2 Many students have difficulty differentiating between right and left.

45-1 Perceptual Problem--depth perception--cannot walk downstairs without tripping, i.e. approprecality. Articulation problem.

46-1 Broad Problem. Lack of interest in a reading class or in reading know how.

62-3 Profane Language.

73-1 Pupils failure to bring necessary equipment to class, specifically pencil and papers.

87-5 Refusal to take part in any class work. No communication.

92-5 Lack of equipment

96-1 Students who come to class--warm a seat--daydream--disturb the class and absorb the heat.

98-4 "I don't feel like working, I lost my books and pencils, I hurt my hand and can't write, my feet hurt, my back hurts," Etc. This 14-year-old-boy's remarks might indicate that he was lazy, but his feelings merely predicated his poor environment.

106-3 Frequent difficulty in communicating with students. This is very apparent in counseling with individual students. We don't speak the same language.

108-5 No well defined Social Studies, Science, Health, Math program for the Jr. High. What are the best methods? What should be taught?

111-3 Acceptance of child by both parents and a true knowledge of the child's problems.

128-1 Pupil A is very aggressive in behavior on the playground. He will kick, bite or hit the children. The other children do not want to play with him.

130-1 The child is inattentive, also tries attention getting in bizarre ways. Wishes to bury head in book and not begin teacher directed activity. When he is like this he seems to be hostile to whole class when told to put book away.

131-5 This almost eleven year old girl will rarely initiate any activity on her own. She will wait and see what her friend does and then do it. If her work does not turn out as well as she would like it to nor as nice as those near her she will tear it up or throw it away or sulk.

135-3 Child cannot work independently.

136-1 Abnormal fear of rain or any stormy weather.

142-2 Lack of storybooks and picture books in the classroom.

143-5 Poor behavior on the playground during the noon hour. This includes fighting, swearing, rough play, and leaving the playground without permission. While this is not a classroom problem, its seriousness and the number of children involved easily makes it the most troublesome problem confronting the school.

161-5 Unkept dirty students with all the attendant odors.

163-2 A student who tells many lies. As a result the Welfare Worker made unnecessary visitation. Speech therapist was excusing this child for untrue reasons. Disturbing the principal with imaginative stories. Annoying many teachers with falsehoods.

302-1 P.M. children are getting more restless.
Would not pin point any situation as a problem.

361-2 This boy can learn but continually says "I can't, I don't know how or I don't feel like it"-It has been his way of escape for years before coming to our school.

364-3 Trainable child in educable class. Cannot dress herself, cannot take care of her bathroom needs, is unable to join physical act. of other children.

390-2 Low morals and no interest in home conditions.

397-4 Lack of confidence socially and academically. Shy, reticent, sad looking, and seldom leading or contributing to class discussions. (Girl)

398-1 Mary is not really a nervous child but would appear so by anyone not knowing why Mary is forever wiggling, pulling, twisting, adjusting, etc. while working and playing. This does hamper her as it slows her down--has to stop to do some adjusting--so is constantly wiggling in her seat at class etc. Its quite annoying to those near her.

407-1 To find time to teach the various skills, understandings and attitudes preparatory to the personal service type employment which individuals with limited learning ability can be expected to engage in.

410-1 Developing an educational program for a brain injured boy without speech.

411-1 What to do with teenagers who are not academically inclined in educable classes and too socially immature to compete in a junior high school situation.

412-1 Music is enjoyed by most people. The slow learner wants to take part in as much musical activity as possible. He must have the music presented to him in such a manner that it sounds right and pleasing to him. Very often he feels inadequate to perform and therefore doesn't want to take part in class activity. Very often he is classed as a non-singer.

413-1 Social incompetency - which leads to rejection by peers in school life. Social incompetency is a major criterion of mental deficiency. It is important that the child be taught to adhere to the basic rules that our culture conforms to as a pattern of social living. He needs to acquire respect for himself and others; learn cooperation, regard for his family, and his rights and responsibilities as a citizen. Not knowing these the results are anti-social behavior, which cause his peers to isolate and reject him.

414-1 Our students have a great deal of difficulty in relating their ideas, thoughts, impressions, and feelings about themselves and the world in which they live. This problem with communication leads to difficulty in school and in the outside world. It is sometimes difficult to teach certain things about science and social studies due to the student's inability to learn concepts and due also to the language barrier.

415-1 How to introduce creative writing to primary children.

425-2 Student seems to be highly emotional and so does not work up to capacity. Is very selfish.

446-3 Getting them to follow directions.

448-2 Bill does not "fit in" with the rest of his class. At times his classmates do not understand him and a few are inclined to laugh at him. He is somewhat of a loner.

452-3 Indian girl--grade 8--sent into special second semester last year. She had polio and is physically handicapped. She cried most of the time--rejected all friendship offered by the girls, refused to do any school work, hated all teachers.

455-1 Marlene is absent several days out each grading period. She never remains in school the full 5 days. She has a severe reading problem--[almost a non-reader but can perform the mechanics of math quite well.]

466-1 Getting children to feel that they have an important part in America as a democracy.

470-3 Two boys who laugh at everything and at nothing. If visitors arrive they laugh at them.

508-4 Disobedience on playgrounds and in halls outside of classroom. (Obedience is quite good in classroom.)

518-3 Rivalry and jealousy between two 11 and 12 year old sisters cause much unhappiness and a problem.

553-1 Lack of equipment. My school lacks the folloiwng equipment: 1. Film Strip machine, 2. Movie machine, 3. Primary print typewriter, 4. Large bulletin board space, 5. Lack of janitor service.

596-3 Lack of initiative in various classes.

585-4 Inattention generally.

620-1 Child has a Binet of about 80. Does not care to work and, therefore, does not perform at his ability level. Has been a discipline problem since he entered school. Is very restless in the room. Interrupts classes due to his craving for attention. Placed in a P.M.R. class fall of 1964. Placed in my P.M.R. class during winter of 1966. This room is located in the building where he attended regular classes. Has been teased by other children for being there. As a result often wants to remain in room during out-door periods.

622-1 No school psychologist proves to be a barrier in adequate performance of my job.

637-1 16 year old boy who recently lost his grandmother (legal guardian). From his test results he should be able to do about 3rd grade work yet it seems as if he hasn't that much ability. He performs at a first grade level. I'm the second Sp. Ed. teacher he's had. The other teacher had a very small enrollment and gave him a lot of individual attention. I find this impossible to do and he won't do a thing without my sitting next to him.

653-1 The child is very disturbing in the classroom. The attention span very very short. Not interested in anything for more than five minutes. Cannot be trusted alone. Sometimes tears his papers into tiny bits. He runs off if not watched continually.

658-1 Quarreling among the older boys in my room. The boys in the regular rooms accept the boy who is a welfare child. His behavior is sometimes quite abnormal and the boys in our room react in quite a hostile manner.

668-1 Emotional disturbed child in the classroom.

683-1 Age 11. Foster Child. Emotionally unreliable, easily upset, can be very domineering with other children, has a speech defect, day dreams a great deal, is able to retain factual material to an uncanny degree for his age, detail work is abhored by him, fair in arithmetic, average in verbal reading, speech defect enters here. but does retain material read, comprehension is excellent.

695-1 Letting the imagination "run wild.' Telling of accidents that never happened.

696-1 Frustration and anger over mistakes made on their papers in Arithmetic, especially, but also in other classes if there were many mistakes.

697-1 Constantly late for school or skips out half days. Talked sassy and smart actually got fresh with students and teachers.

707-1 Difficulty of finding a class project or unit which will hold the interest of children where range in IQ is 50-78 and ages 11-17.

712-1 We have children who range in CA from 7-17 years of age. Getting the ones who weren't having class to settle down and stay at one thing for even 10 or 15 minutes seemed impossible.

746-1 Copying an assignment.

756-1 A boy that has to use a hearing aid that is very withdrawn socially and does not respond to any kindness or help given or shown him.

812-1 Dating: to tell the girl friend about his attending special room.

874-1 The boy is extremely nervous. Bites his nails constantly.

918-1 Not enough reference material in our room (encyclopedia, etc.). We do not have one set of encyclopedias.

960-2 To work until the bell rings.

964-1 Child scratches, bites other children. Usually goes for the eyes.

980-1 Lack of energy to learn. I have 3 children in my room who come each day with very little or no breakfast The history of poor eating habits has already taken its toll.

981-1 Tangental response from children. Example: "David, if you would work a little harder you would be a crackerjack of a speller." David, "Crackerjack? Do you like crackerjack, Mrs. K.? I bought 6 boxes, once for ---. I guess it was 29¢. I got a rocket in one box. Boy, was it a good rocket---" John, from across room, "I got a rocket, too -- was it like mine?"

999-1 Daily Class Schedule. Trying to meet the daily requirements of subjects, and the required number of minutes per subjects, in this Sp. Ed. class of M.R. pupils. C.A. 9-4 -- 12-5; M.A. 6-6 -- 9-5; Observable and instructional reading levels from P. Prim. 1 -- Gr. 4-9. (4 girls; 11 boys.) I.Q. 59 -- 82 as per Pupil Record Folder. (Gr. Expect'cy Levels, Sept. 65 from 1-3 to 3-8 per bulletin #5-50.)

1010-1 Child too large, boy 14 yrs. Feels out of place in room with smaller children. Reads at a primer level. Likes to have others listen to his tall stories (hunting, fishing, etc.). Causes trouble on play ground. Doesn't come in when bell rings.

1067-1 The "7th and 8th grade" youngsters integrate with the regular classroom youngsters in Phy. Ed. They are reluctant to take showers with the group and aren't too happy about Phy. Ed. in general. Most of them do what they can. However, I do have one boy who will stay home on Phy. Ed. days. Sometimes, he sits it out.

1074-1 In more than one instance I have had boys, particularly, who feel they are too high to be in special education, most of the practical things we do they don't need, the rules and social adjustments are not directed at them. Also, their ideas of what kind of job they can do are usually much higher than what they actually will ever be able to do.

1126-1 A girl, 15, cerebral palsy, begins to giggle uncontrollably--or so it seems. This is especially true when there are difficult tasks to do, or when someone does something nice for her like pick up her pencil.

1144-1 This boy came to us from another school system with a record of talking back, disobedience, disrupting classes, never doing any work. He did lack initiative, but he went out of his way to please. He was polite also. He seemed sad most of the time and always deep in thought.

1190-1 The problem is attempting to fit a trainable child into room of Educable Children. He disturbs other children when they are working or he stands looking out the window, calling attention to what he sees.

1220-1 During the ten weeks of the school term, I collect, correct, and keep most of the children's seatwork. The work is kept in a folder for each child. A day before the conference I go through each folder. My problem has been how much should I keep for my own records to later evaluate the child.

1230-1 I had a boy that never washed himself or combed his hair before he came to school. He was nearly 14 years old.

1341-1 Brain damaged pupil who is very hyperactive and talks constantly.

1395-1 Student continually talking without permission which can prove disturbing in a Jr. High situation. The talk is unrelated to school subjects and very often disrupts some class discussion or study.

1460-1 Robert V. -- C.A. -- 11-10
Extremely shy with adults. Tends to be somewhat of a perfectionist. Hangs head as if pouting when mistakes he makes are pointed out to him so he may correct errors. Seems at times disgusted with self for having made mistakes in his work.

1463-1 Wanting to go to health room because headache etc. Many times just getting out of classes.

1486-1 Two boys talk in loud voices drowning out reading class or other activity.

1504-1 I have within my classroom three children--two boys and one girl who are more emotionally disturbed than the others. The girl more often than not causes the boys to become loud, boisterous or sexually aroused. Occasionally the two boys vie for the attention of the girl and become angry at each other. Although they have not come to blows, because they are carefully watched, they do often exchange angry words. This causes a tension to pervade the classroom.

1509-1 Temper tantrums. There seems to be a build-up of emotions and then comes a complete "blow-up" at the least provocation. He uses very vain, vulgar and abusive language. He threatens both life and property.

1510-1 Dissatisfaction if they think they are not being treated as equals.

1580-1 One eleven year old boy, extremely disturbed, who has been constantly pushing for removal from home. He repeatedly has told about his treatment, strife, and unhappiness in his home and had on several occasions signalled suicide. A constant disturbance in the classroom. Incapable of sitting in the classroom. He would run about the room disturbing the other children and the teacher, making it impossible for any teaching to be done with him present in the room. Very difficult to tolerate his hyper-active, negative behavior.

1621-1 Poor grooming.

1656-1 Truancy

1661-1 Shortage of teacher time to spend with individual students to meet their needs. With individual guidance they can learn and work but when left alone, they are too easily distracted.

1685-1 A girl, age 12, came to our room the 2nd nine weeks of school with a hostil attitude toward our room. She had been in 6th grade but was very emotionally upset. So upset she attended school very few days the 1st nine weeks.

1718-1 Lack of interest in school work. No initiative in filling leisure time. Disobedient.

1727-1 Jack was a boy who appeared to be shy and resented going to the lavatory when accompanied by anyone.
One day when his shirt became unbuttoned, I noticed his underwear was very, very soiled. Later on that week I called this to the attention of the physical education director, who in turn showed me his underwear while Jack was taking a shower. It was pathetic to see the condition of his under-garments and his socks.

1748-1 The problem of stealing books.

1753-1 A 15 year old boy I have with a 52 I.Q. has an inferiority complex. Whenever he has difficulty with any work, even though it may be something he is able to do he says, "I'm dumb."

1754-1 The child doesn't seem to be able to tolerate anything or anyone. Sometimes is very depressed. Wants to withdraw or just be left alone to work out his own problem. (Discovered this by noticing one child or another quietly slipping away behind my chart which hangs from a rack)

1766-1 This child seemed to lack a proper attitude when in school room. He liked wasting time doing some annoying action or grunting unusual noises to get other children to laugh and distract them. He felt that he should be center of interest. He liked being unusual at play and his daring gestures didn't help him win other friends on playground.

1800-1 They are reluctant to respond when people (children and adults) make cuttery remarks regarding their slow learning.

1809-1 The same boy also likes to break rules made by the entire class. He participated in breaking our aquarium lately because of disobedience and always refuses to pay the damages.

1810-1 The problem concerns a 15 year old mentally retarded girl who is beginning to become aware of sex and boys.

1818-5 Many children have emotional problems as well as academic. One problem is they have no place to be alone. They have a great desire to have a quiet place as a place to keep a possession safe.

1825-1 A nine year old boy unable to sit down, settle down, and do any school work. All he wanted to do was play with toys and games.

1836-1 Material--Same children in same grade level for so many years--we need fresh material to hold interest of child.

1838-1 I have some students that tease and pester others until they hit at them or shout out their name. This is a big problem and causes much disturbance in the room.

1837-1 D., a fourteen year old boy has become very aggressive out on the playground. This started about six months ago. When any misunderstanding arises, he immediately strikes the person who disagrees with him, if this person is unable to hold his own in a fight. D is short for his age so he doesn't get into trouble with boys larger than he is.

1895-1 This child lacks the desire to learn. He has to be prodded continually. Attertion span seems extremely short. He falls asleep often in the morning and afternoon periods. Uses foul language

1927-1 Steven is a seven year old who gets himself into trouble no matter what he does. He repeats his misdeeds and does not respond to any form of discipline. He sneaks out of the room during school and comes into the building at recess and noon at which times he does the following: steals from children's desks, teacher's desk, other rooms; plays with matches; squirts Elmers Glue on bathroom mirror, throws toys out of the window. Last week he took a five dollar bill from his lunch money envelope. His parents report money missing at home. My class is interrupted constantly because I have to watch him or go and find him. He will not admit to anything he does even when caught in the act.

1944-1 The girl was very depressed and tired upon returning to school on these days.

1946-4 Some people were letting work pile up in their desks while they frittered away their time. Others hurried to get done quickly and had numerous mistakes.

1948-1 Unable to find effective mode of motivation. Believe subject to be capable of much higher academic achievement. Will work only on one-to-one relationship.

1950-1 Picks on other children--complains about others. He is 13 years of age but he "tattles." Can't understand others telling on him. Becomes negative when questioned.

1955-3 Smelly, untidy appearance.

1964-1 Pupil Behavior--One of my little boys seeks attention in many ways that are disruptive to the class and are against my rules set up in the room. Ex. - makes strange noises when I am out of the room (they are to be quiet), pokes children when the class is quiet, and tells everyone he is capable of doing work that is way above his level.

1965-1 Will sit and act busy while in reality he does nothing at all but stare at the clock. When told to get busy he gets a sly smile on his face and acts busy again.

1966-1 Tendency of severely retarded children to choose play activities with no learning value (pushing truck back and forth over and over, sitting holding doll and staring into space, etc.).

1988-1 A hyper-active child who cannot concentrate for any length of time or sit still for longer than a few minutes.

APPENDIX C

Sorting Task Instructions and Materials

Sorter Code Number_____

BUREAU FOR HANDICAPPED CHILDREN

(WISCONSIN STATE DEPARTMENT OF PUBLIC INSTRUCTION)

AND THE UNIVERSITY OF WISCONSIN

TEACHER-PROBLEM PROJECT

GENERAL INFORMATION SHEET

1) Name_____ 2) Sex_____ 3)Age_____

4) Mailing address_____

5) Phone_____

6) Date_____

7) Present position (if applicable)_____

8) School in which class is located (if applicable)_____

_____

9) Years teaching a) EMR_____ b) Total_____

c) Area or specialty Years

_____ _____

_____ _____

_____ _____

10) Undergraduate major_____

11) Graduate:

a) Major_____ # credits in major_____

b) Minor_____ # credits in minor_____

12) Advisor_____

WISCONSIN STATE DEPARTMENT OF PUBLIC INSTRUCTION

AND THE UNIVERSITY OF WISCONSIN

TEACHER-PROBLEM PROJECT

Instructions for Teachers Acting as Sorters*

I. Aim of Project

This project is concerned with:

1. Identifying and categorizing the problems encountered by teachers of handicapped children.

2. We are interested in the manner in which the classroom teacher perceives the problems. Therefore, the statements describing the problems are in the teacher's own language. Moreover, only teachers like yourself will be asked to read the descriptive statements and decide in which way to group them. In this way, communication with teachers about the problems will be within the perceptual framework of the teacher.

Examples of the type of statements you will encounter are:

Problem:	Bad influence on classmates by boys on probation from Wales (State) School for Boys.
Problem:	A ten year old lad, reaching out and stroking someone, preferably hair, but soft dresses, skin, etc. served the same purpose.

II. The Sorting Task

1. Sorting Materials

a. You will be given a set of envelopes each containing 20 statements of the mentioned above.

b. You will have a set of large boards with 36 pockets on each. You will form groups of statements by putting all those which concern the same type of problem in the same pocket on the sorting board.

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* Adapted from the sorting task developed by Miller, et al, Elementary School Teachers' Views of Teaching and Learning, University of Wisconsin, Instructional Research Laboratory: USOE Project No. 5-1015-2-12-1 First Report, 1967

2. Sorting Procedures

a. Read and study the first statement in the envelope.

b. Decide what type of problem the statement concerns.

c. Write a tentative statement of this idea on the first index card on the board.

d. File the statement behind the index card.

e. Repeat steps a - d for each statement in the envelope.

Note: In the case of each new statement, if it concerns the same problem as one which you have previously sorted, put the two together. If not, begin a new group of statements by writing a new tentative title on another index card and filing the statement behind it.

1. A category may consist of one or more statements.

2. If you are at all in doubt as to the sameness of a problem statement in relation to an existing category, then start a new category.

3. What Kind of Groups to Make

a. Kind of groups

If two or more statements concern the same type of problem, put them together. Most important:

> Groups are to be based on whether or not a sentence concerns a given problem category as defined by you, not whether or not the statement reflects a "good" or "bad" problem definition in your estimation. Therefore, if two statements concern the same type of problem and you think one is "good" and the other "bad", you still put them in the same group.

b. Level of groups

We want you to make the finest discriminations between any two statements which you feel are valid. We do not want you to make such fine discriminations that you end up with 118 groups, each of one statement, nor do we want you to make such gross discriminations that you have fewer than 10 groups. In the end you must decide whether two statements concern the same problem, or whether two separate groups are called for.

c. Titling groups of statements

The tentative title you make for a group when you file the first statement in it should be a clue to yourself as to what problem category the statement concerns. This tentative title will be useful to you when deciding whether or not to add statements to the group. During the

course of your work you will likely want to change or refine the tentative title. If you cannot change the title by merely inserting or removing words, draw a line through it and write the new title below. Please do not erase any of your tentative titles.

d. General comments

1. It is possible that you will find a statement which can logically be put in more than one of your groups. In this case put it where you think it goes best--that is, file it according to what you feel is the most important aspect of the statement.

2. If you come to a statement which is difficult to group, set it aside and come back to it later. However, group all the statements in an envelope before going on to the next envelope.

3. The numbers typed and written on the statements do not mean anything as far as your job is concerned.

e. Checking your groupings (Resorting)

1. Minor Resort: At any time during the sorting task you may come across a statement which does not belong where you have previously placed it. You may do one of three things with it:

    1. Place it in another group at once.
    2. Start a new group at once.
    3. Mix it in with the other statements in the envelope which have not yet been sorted and sort again when you come to it.

2. Major Resort: A major resort permits the same shifting of statements and creation of new groups as a minor resort, but requires you to review all of the groups you have made. Follow this general procedure:

    1. Look at all the statements in each group. As you look at these think about whether they "belong together". Remove any statements which you do not think are related to the problem grouping which is reflected in the title of the group.

    2. Regarding those statements removed--either put them into another group on the board, make a new group and give it a tentative title, or put the statements aside to be reconsidered at a later time. As a general rule you should not join all of the statements of two or more groups directly even if they seem very similar.

    3. If a group has more than about ten statements in it, think seriously about splitting it into two or more groups unless you are quite sure that all the statements concern the same aspect of a given problem.

    4. Remember the essence of this work is for you to group statements according to some criteria which seems reasonable to you. We want to remind you not to put statements together unless there is a clear reason in your mind for doing so.

BUREAU FOR HANDICAPPED CHILDREN

(WISCONSIN STATE DEPARTMENT OF PUBLIC INSTRUCTION)

AND THE UNIVERSITY OF WISCONSIN

TEACHER-PROBLEM PROJECT

CATEGORY AND TIME REPORT

Sorter Code Number_____
City_____
Date_____

START OF 1ST PACKET_____

Envelope Number	Time Finished	Total Number of Groups
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
MAJOR RESORT	_____	_____
5	_____	_____
6	_____	_____
MAJOR RESORT	_____	_____

BREAKS

1 for_____ minutes at _____ o'clock

2 for_____ minutes at _____ o'clock

3 for_____ minutes at _____ o'clock

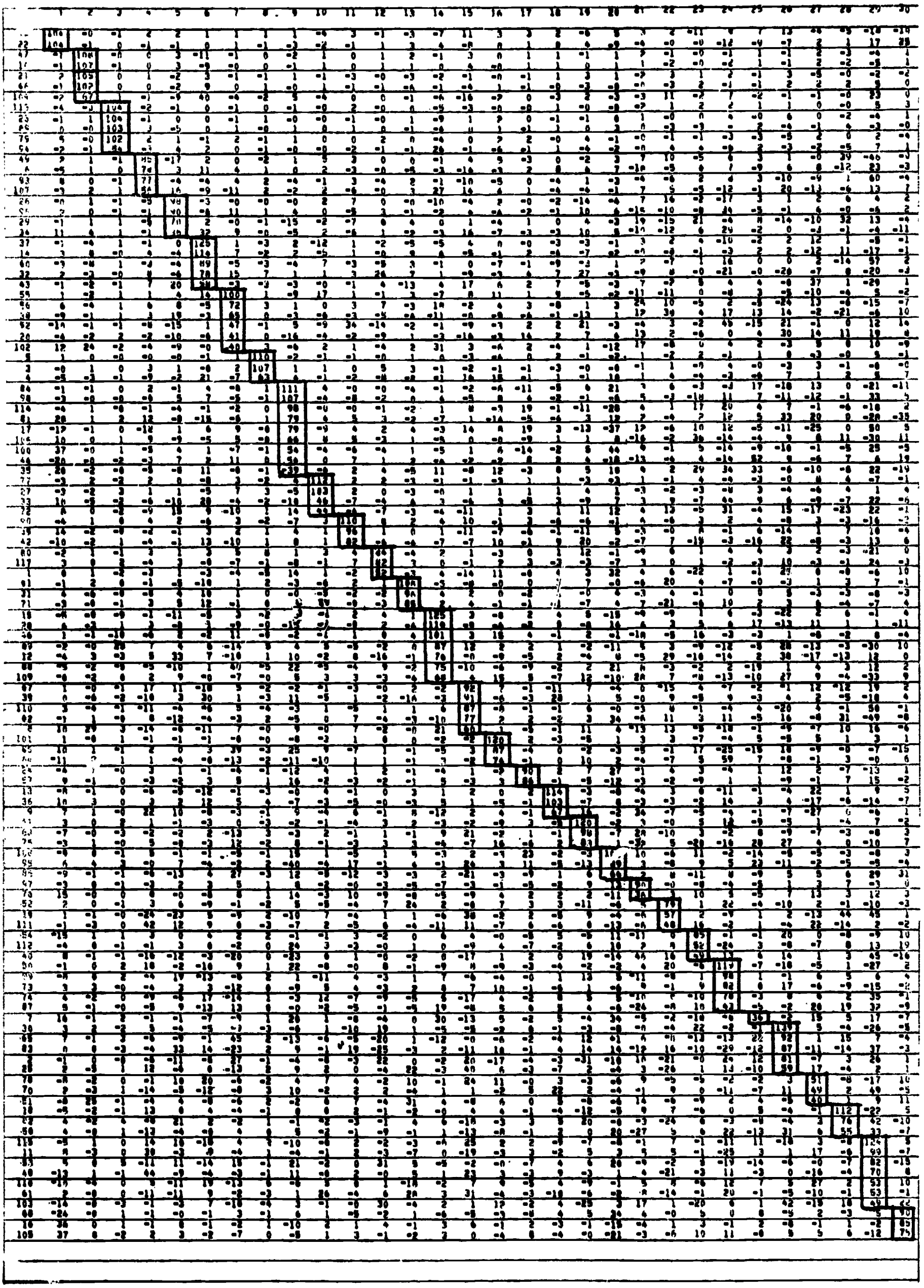
4 for_____ minutes at _____ o'clock

APPENDIX D

Latent Partition Analysis

APPENDIX E

Problem Item by Category Matrix Showing
Loadings of Each Item on Each Category



OE 6000 (REV. 9-66)

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OFFICE OF EDUCATION

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TITLE

A Taxonomy of Teacher-Defined Problems in the Education of Mentally Retarded Children

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ABSTRACT

The present project had as its purpose the development of a taxonomy of problems defined and categorized by teachers of the EMR in the state of Wisconsin. A problem was defined as "anything in the environment or evident in student behaviors which was seen as an impediment to providing the necessary conditions for pupils to learn. Sixty-seven percent (467) of the teachers of EMR in the state responded to a request to specify five problems along with their causes and the successful and unsuccessful strategies which had been evolved to cope with these problems. A total of 1,172 problem definitions were obtained. A 10% random sample of these problems was sorted by 65 special education teachers and graduate students. The sorting procedure required the sorters to categorize the 117 problems.

A method of analysis termed Latent Partition Analysis was used to determine the common or latent categories underlying the categorizations of the 65 sorters. The analysis revealed a total of 30 latent categories. These categories were labeled relying upon the written content of the problem items and labels specified by the sorters.

A second order or higher order grouping based on the Latent Partition Analysis reduced the number of categories to 16. Further analysis revealed systematic differences between experienced (more than two years teaching) and inexperienced (two years or less teaching) sorters. Experienced sorters generated significantly more categories at the time of sorting and their second order grouping of the categories indicated a greater differentiation of the first order categories.

The relevance of the problems was indicated in relation to state planning, instructional materials centers, inservice training and the efforts of teacher training institutions. Further direction in the analysis of the problem causes and the evolved coping strategies were noted.

Figure 3