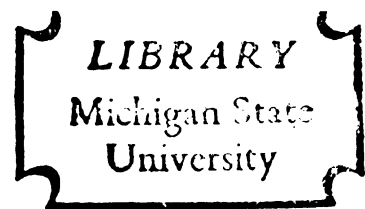


AN ANALYSIS OF TEACHER TASKS
TO ENABLE IDENTIFICATION OF THE
POTENTIAL USE OF AUXILIARY PERSONNEL
IN THE INSTRUCTIONAL PROCESS

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
R. Arden Moon
1969



3 1293 10395 7019



This is to certify that the

thesis entitled

AN ANALYSIS OF TEACHER TASKS
TO ENABLE IDENTIFICATION OF THE
POTENTIAL USE OF AUXILIARY PERSONNEL
IN THE INSTRUCTIONAL PROCESS

presented by

R. ARDEN MOON

has been accepted towards fulfillment
of the requirements for

Ph. D degree in Education


Major professor

Date January 30,

~~APR 20 1970~~ R4

~~JUL 07 1970~~ 25

~~APR 1 1971~~ 13

~~MAY 01 1971~~ 290

~~JUL 12 1971~~ 255

~~JUN 23 1971~~ 173

~~FEB 21 1972~~ 262 44

~~APR 24 1972~~ 273

AN ACT TO AMEND THE
THE SEVENTH SECTION OF THE
THE SEVENTH SECTION OF THE
THE SEVENTH SECTION OF THE

THE SEVENTH SECTION OF THE

THE SEVENTH SECTION OF THE

The seventh section of the
shall remain the same as the original
and of the seventh section of the

1. provide a copy of the original of the seventh section of the
2. authorize the original of the seventh section of the
3. give some notice to the original of the seventh section of the
4. give further direction to the original of the seventh section of the

These accomplishments would provide added tools and techniques for meeting the new and existing challenges facing the total spectrum of education.

ABSTRACT

AN ANALYSIS OF TEACHER TASKS TO ENABLE IDENTIFICATION OF THE POTENTIAL USE OF AUXILIARY PERSONNEL IN THE INSTRUCTIONAL PROCESS

By

R. Arden Moon

Purpose

The purpose of this study was to more clearly and completely delimit the role of a fully certificated teacher. It was the hope of this researcher that information from this study would

1. provide a rationale for the development of support teams of auxiliary personnel;
2. facilitate the evolution of a teacher who would be able to utilize his education to a near maximum;
3. give some general direction to administrative restructuring in regard to the effects of using auxiliary personnel
4. give further direction to teacher education and training programs for auxiliary personnel.

These accomplishments would provide added tools and techniques for meeting the new and unique challenges facing the total spectrum of education.

Problem

This study was designed primarily to identify those tasks which require that unique and specific education which only a fully certificated teacher has received. By identifying those tasks at the teacher end of the continuum it was hoped a differentiation of roles for the teacher and auxiliary personnel could be at least partially established.

Major Question Examined

What tasks would building principals, teachers, teacher aides, college instructors, and nationally recognized experts agree were tasks only a person certified to teach can do?

Secondary Questions Examined

1. On what tasks was there disagreement among the referent groups with respect to the appropriate role of the teachers?
2. Did teachers who have had experience working with teacher aides identify fewer tasks which only a teacher can do?

3. Did teachers who have had experience with team teaching assigned, identify fewer tasks which only a teacher can do?
4. What, if any, relationship was there between age and Coordinator identification of the tasks?
5. Was there any relationship between years of experience and identification of tasks?
6. Did teacher aides identify fewer or more tasks which only a teacher can do than teachers identify?
7. Was there any relationship between the perception of role and the level of schooling?
8. In what tasks, if any, was there agreement that the task chosen from could be done by devices substituted for teachers?
9. What, if any, relationship was there between sex and Schools identification of tasks?
10. What, if any, relationship was there between grade level taught and identification of tasks?

Sample Population

The teachers, aides, and building principals were employees of the Saginaw, Michigan, Public School System and the Bay City, Michigan, Public School System. Random sampling was not used but rather questionnaires were submitted to all the aides

employed in these two systems, the teachers to whom the aides were assigned, and the principals of these buildings. The college instructors included were Michigan State University Student Teaching Coordinators and Directors of the Elementary Intern Centers. The experts were recognized as outstanding in their field, and having experience and/or strong interest in programs using auxiliary personnel.

Instrumentation

A seventy-four item questionnaire was submitted to the referent groups. The items included in the questionnaire were chosen from (a) a time analysis study done in the Bay City, Michigan, Public Schools; (b) the list used in a study by the Detroit Public Schools; (c) and the writer's own observation of tasks carried out in the classroom.

The instrument also asked for a distinction between the feasibility of a non-certificated person doing a task and a machine.

Analysis of Data

Chi square was the statistical tool used. Chi square was used as a test for homogeneity in examining the major question. For

the secondary questions, chi square was used to look for differences, according to the variables examined, on responses to individual tasks.

Conclusions

It was hoped that some small beginning could be made toward constructing a task continuum as a result of this study. The data revealed a clustering of tasks in the following manner. The mean level for that group of tasks is given plus the statistical level used to determine lack of disagreement. There was no significant disagreement among the referent groups except where noted in the left hand margin.

<u>Mean</u>	<u>Task Number</u>	<u>Task</u>
2.00	16.	Do semester or yearly planning of formal curriculum
(5 point scale)	32.	Introducing a math concept to a class
	60.	Constructing tests
Statistical Level	63.	Setting criteria for a subjective test
.01	67.	Conducting parent conferences at school in regard to discipline
	68.	Carrying on research in the school in regard to the effectiveness of a program
	70.	Conducting parent conferences at school in regard to academic performances
Statistical Level	72.	Interpreting research findings
.01	73.	Aiding in the evaluation of intern or student teachers

<u>Mean</u>	<u>Task Number</u>	<u>Task</u>
2.00	12.	Do unit planning
Statistical Level	14.	Initiating innovations in the structure of the subject matter
.01	17.	Daily planning for a subject (continuous)
(Experts in disagreement)	18.	Developing innovations in instructional methodology
	19.	Initiating major curriculum change
	22.	Choosing instructional materials on a long term basis
<u>Mean</u>	23.	Selecting methods of presenting materials and lessons
2.11	39.	Choosing appropriate motivational techniques
(principals only)	61.	Constructing grading scales

<u>Mean</u>	<u>Task Number</u>	<u>Task</u>
2.50	25.	Setting discipline expectations
Statistical Level	27.	Writing programmed materials
.01	30.	Grouping pupils after diagnosis has been made
2.37	44.	Enforcing classroom discipline
(teachers)	45.	Making up daily assignment
	59.	Giving grades on the basis of a subjective test when the criteria are set

<u>Mean</u>	<u>Task Number</u>	<u>Task</u>
2.50	3.	Ordering instructional aids
Statistical Level	10.	Developing instructional aids
.01	13.	Planning for one day in one subject area
(Experts in disagreement)	21.	Choosing instructional materials on a day to day basis
	24.	Establishing classroom routine
	26.	Enforcing discipline
	28.	Diagnosing minor learning difficulties
	29.	Prescribing for correction of minor learning problems

34. Introducing a reading lesson
36. Teaching an art class
38. Conducting penmanship class
42. Individual counseling with pupil
62. Administering tests to evaluate in a subject area
65. Evaluating the citizenship of a pupil
66. Making home visitations to become aware of home needs

<u>Mean</u>	<u>Task Number</u>	<u>Task</u>
2.11 (principals only)	11.	Assuming responsibility for planning bulletin boards
2.16 (teachers, college instructors)	33.	Conducting a reading class
1.89 (teachers)	46.	Conducting reading groups
2.37 (teachers)	56.	Correcting themes

The data indicated that teachers see more tasks for certificated personnel only than do aides. Conversely, the aide sees auxiliary personnel in a more expanded role than do teachers.

There was a slight indication that the female sex tends to identify fewer tasks for only the teacher.

When age of the respondent was examined, the data revealed a tendency for the 21-40 year old age group to see auxiliary

personnel doing more tasks than the older age groups saw them doing.

There seemed to be a definite indication that those with less than a B.A. saw auxiliary personnel doing more tasks; however, the nationally recognized experts were an exception. This could possibly be because most of them were involved in working with auxiliary personnel or directing auxiliary demonstration centers.

The grade level taught by the respondent seemed to have a very small degree of relationship to task identification. There was a slight indication that upper grade teachers saw a broader role for auxiliary personnel. Kindergarten teachers were an exception. They seemed to see a broad role for auxiliary personnel.

When the amount of experience a person had had was examined, there was an indication that those with less than six years of experience saw auxiliary personnel doing more tasks.

Team teaching experience and experience working with aides seemed to have a negligible effect on task identification.

There was some indication that the following tasks could be performed by either non-certificated personnel or machines.

<u>Task Number</u>	<u>Task</u>
31.	Working with a group on drill of basic addition facts
41.	Individual tutoring in subject areas
52.	Conducting drill on math facts
64.	Recording grades on report cards
74.	Maintaining pupil records, such as test scores, grades and health

Implications

1. Teachers need help, and are generally willing for other personnel to help in the classroom. There is opportunity
2. Teacher training must be more concerned with teaching teachers to plan, evaluate, and handle interpersonal relationships and de-emphasize clerical work and similar activities.

Public schools, community colleges and public schools

1. must increase their cooperation if career ladders become available for auxiliary personnel, and proper training is available.
2. available.
3. There is a need for training programs for all concerned.
4. Administrators must be ready to organize and administer a differentiated staff. Professional personnel will become

increasingly involved in procedural decision making as staff levels increase. Negotiations will probably become more involved, not less.

Specific Recommendations

- A. An experimental training program should be established to determine the special training components needed for auxiliary personnel and the teachers working with them. This research should be cooperatively planned and evaluated by public school administrators, teachers, community college instructors, and university personnel. The effect on the learning process should be foremost in consideration.
- B. Community colleges and universities must plan together to enable ease in transfer of credit, and a more flexible policy on admission to facilitate the preparation of auxiliary personnel.
- C. The educational, social, and economic results of the concentrated use of auxiliary and ancillary personnel in a controlled setting should be researched. The variables should be isolated when possible and their effect on changing attitudes, behavior, and life style determined.

Additional Questions for Study

1. What are the advantages of a teacher beginning his training as an auxiliary as opposed to the traditional route of four years on campus with one term of student teaching?
2. Is there a more efficient and meaningful way than task delineation to identify roles within the classroom?
3. How can we identify the intuitive person who can do high level tasks, and how do we make maximum use of him?
4. Why do the personnel with advanced schooling apparently have a more restricted view of the role of auxiliary personnel?

5. What are the financial implications when auxiliary personnel are added?
6. How can administrators best maintain a dynamic equilibrium within the educative framework and still constructively employ indigenous personnel with negative feelings about the school?

Perhaps this study raises more questions than it answered.

If so, that is good. The present crises in education and society present a need for individual moral and intellectual involvement in processes and fewer packages of easy answers.

R. Arden Moon

A THESIS

Submitted to

Michigan State University

In partial fulfillment of the requirements for

the degree of

DOCTOR OF PHILOSOPHY

Department of Administrative and Social Sciences

1968

AN ANALYSIS OF TEACHER TASKS
TO ENABLE IDENTIFICATION OF THE
POTENTIAL USE OF AUXILIARY PERSONNEL
IN THE INSTRUCTIONAL PROCESS

By

R. Arden Moon

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

1969

655835
6-6-69

ACKNOWLEDGMENTS

To Dr. David C. Smith, chairman of the advisory committee, who gave invaluable assistance, guidance and encouragement, special appreciation is expressed.

To the other members of the committee--Dr. Clyde Campbell, Dr. George E. ...
Who patiently waited to play
until Daddy finished
the thesis.
It would not permit mentioning the many other people with whom a member of the committee has contributed to this study and the writer's professional life.

A thanks is also due the many people, both national experts, and friends, who have helped in the questionnaire and returned it. ...
friends, and others who have helped in the ...
permit listing each of them.

Finally, a special word of thanks to the author's wife, Lila, for her patience, understanding, and ...
years devoted to the doctoral program.

January, 1969

Dr. David C. Smith

ACKNOWLEDGMENTS

To Dr. David C. Smith, chairman of the advisory committee, who gave invaluable assistance, guidance and encouragement, special appreciation is expressed.

To the other members of the committee--Dr. Clyde Campbell, Dr. George Myers, and Dr. James McKee--appreciation is expressed for their assistance and encouragement. Space would not permit mentioning the many ways and extra time each member of the committee has contributed to this study and the writer's professional life.

A thanks is also due the teachers, principals, aides, national experts, and fellow coordinators who took time to answer the questionnaire and return it. There were many colleagues, friends, and others who deserve a thank you, but space does not permit listing each of them.

Finally, a special kind of thank you is due the writer's wife, Lila, for her patience, encouragement, and faith during the years devoted to the doctoral program.

January, 1969

R. Arden Moon

Chapter	Page
Follow-up	50
Scoring of (HPT) 1988 Questionnaire	
Form	51
TABLE OF CONTENTS	51
Statistical Analysis	52
Phase One	52
Major Problem	52
Secondary Problems	53
Phase Two	53
LIST OF TABLES	vi
LIST OF FIGURES	viii
Chapter	Summary of Written Comments from Respondents
I.	THE PROBLEM AND DEFINITIONS OF TERMS USED
V.	SUMMARY, CONCLUSIONS, AND IMPLICATIONS
IM	The Problem
Background	2
Definition of Terms	8
Cd	Purpose of the Study
Im	Problems to Be Examined
Procedure and Methodology	13
Ad	Procedural Background
Sample Population	14
BIBLIOGRAPHY	Instrument Derivation
Overview of Subsequent Chapters	17
Appendix	Summary
II.	REVIEW OF RELATED LITERATURE
EXPERTS INCLUDED	
Historical Background	18
B. QU	Recent Related Findings
The New Careers Movement	36
C. LE	Staff Differentiation and Role Delineation
The Future	42
D. FOLLOW-UP LETTERS	
III.	RESEARCH DESIGN
The Sample	45
Instrumentation	48

Chapter	Page
Follow-up	50
Scoring of (TDF) Task Discrimination Form	51
Statistical Analysis	52
Phase One	52
Major Problem	52
Secondary Problems	53
Phase Two	53
Summary	54
IV. ANALYSIS OF DATA	55
Summary of Written Comments from Respondents	82
Summary	92
V. SUMMARY, CONCLUSIONS, AND IMPLICATIONS	98
Summary	98
Conclusions	107
Implications	111
Specific Recommendations	117
Additional Questions for Study	117
BIBLIOGRAPHY	119
Appendix	
A. LIST OF NATIONALLY RECOGNIZED EXPERTS INCLUDED IN THE STUDY	123
B. QUESTIONNAIRE	125
C. LETTER OF INTRODUCTION	135
D. FOLLOW-UP LETTER	136

Table		Page
4.12	Tasks with significant difference using grade level taught as the variable	85
4.13	Tasks with significant difference using years of experience as the variable	87

LIST OF TABLES

Table	Types of experience by the respondents	Page
1.1	Population distribution of sample	14
3.1	Percent of questionnaires returned	50
4.1	Teacher tasks using 2.00 mean	62
4.2	Teacher tasks where disagreement among groups exists	64
4.3	Group means for listed tasks	65
4.4	"Teacher Only" tasks using 2.50 mean	67
4.5	Group means indicating points of disagreement among groups	69
4.6	Responses indicating whether the following non-teacher tasks could be done by machines, non-certified personnel, or either	72
4.7	Group means for non-teacher tasks where significant disagreement existed	74
4.8	Number of tasks for teachers only	78
4.9	Tasks with significant difference using sex as the variable	80
4.10	Tasks with significant difference using age as the variable	82
4.11	Tasks with significant difference using level of schooling as the variable	83

Table	Page
4.12 Tasks with significant difference using grade level taught as the variable	85
4.13 Tasks with significant difference using years of experience as the variable	87
4.14 Types of experience by the respondents	88
1.1 Task continuum	11
4.1 Analysis of contingency table (sample section)	37

LIST OF FIGURES

Figure	THE PROBLEM AND DEFINITIONS OF TERMS USED	Page
1.1	Task continuum	11
4.1	Analysis of contingency table (sample section)	57

complex act. Some have described the thing as an act which involves some kind of mystic process which is so situated that it cannot be transmitted, but rather caught, if one happens to be there when the "mantle falls." Others seemed to believe that it could be shared within the sciences and the life of the community, and that no matter how the task is broken down, it could be taught. The master teacher has not emerged.

This suggested a limited number of tasks which could be explored which was to explore and describe what was possible by listing identifiable tasks which could be explored by studies, observations, and teacher activities. The first step was established for what complex task was to be explored. The second and incomplete this approach was to explore what was possible. This was a prerequisite to delineating what was possible in the educational process.

CHAPTER I

THE PROBLEM AND DEFINITIONS OF
TERMS USED

Teaching has always been considered an intricate and complex act. Some have described teaching as an art which involves some kind of mystic process which is so ethereal that it cannot be transmitted, but rather caught, if one happens to be close when the "mantle falls." Others seemed to believe that all could be placed within the sciences and the use of the scientific method. But no matter how the test tubes were rattled, a formula for creating the master teacher has not emerged.

This suggested a limited number of alternatives, one of which was to explore and describe "what is." By assuming this was possible by listing identifiable tasks enumerated from time analysis studies, observations, and teacher feedback instruments, a basis was established for what comprises the teaching act, however inadequate and incomplete this approach may have been. This basic beginning was a prerequisite to delineating and defining new roles within the educational process.

By accepting the above assumption, it was then possible to attempt a differentiation of classroom tasks. This study attempted to place the task into one of two possible categories, either the task could or could not be done competently by only a certificated teacher.

The definitions of teacher, auxiliary, paraprofessional, and aide used for this study are given on subsequent pages.

The Problem

Background

The following statement by Senator Gaylord Nelson of Wisconsin illustrates the urgency and need of exploring the best possible use of auxiliary personnel.

Here in the Congress we receive continual complaints about the way teachers are wasted during a time of critical teacher shortage. They are forced to spend from one-fourth to one-half of their time doing chores which do not require their degree of professional training and experience.¹

The teacher has been asked to carry an increased load. This has come despite affluence, technology, and higher levels of education. Many of our institutions have shed previously accepted responsibilities. The home and family is not the bastion of training that it once was; the Church seems unable to relate dynamically to

¹TEPS Newsletter, National Commission on Teacher Education and Professional Standards, Volume 10, No. 3 (NEA, January 15, 1967), p. 2.

basic moral issues; the community has become a nonentity in some cases because of commuting workers, social isolation and a general "don't get involved attitude" which pervades society. Society's black-snake of social crises and personal peccancy has whipped the school to the precipice of an educational cataclysm.

This atmosphere has spawned many innovations. Educators have searched frantically for that "breath of fresh air" which would signal some alleviation of the myriad of tasks society asks of them. But, as is often the case, the most obvious help was overlooked until circumstances forced the examination of a previously dismissed alternative.

Two principal cultural forces impinged on the school to cause an examination of the use of auxiliary personnel. The first thrust was the shortage of qualified teachers, funds, and facilities.² The second thrust of change was the need to employ thousands of poverty level people.³

² The Fund for the Advancement of Education, A Cooperative Study for the Better Utilization of Teacher Competencies, An Evaluation Report Prepared by an Outside Evaluating Committee, Central Michigan University (Mt. Pleasant, Michigan, 1958).

³ Arthur Pearl and Frank Riessman, New Careers for the Poor: The Nonprofessional in Human Services (New York: The Free Press, 1965).

There is no doubt that the use of auxiliary personnel has become increasingly common across the nation. Michigan alone, in the period from 1953-64, had 106 schools using a total of 1,096 aides.⁴

The National Commission on Teacher Education and Professional Standards (NCTEPS)⁵ chose the topic of Auxiliary Personnel for study during 1967. They were particularly concerned with auxiliary personnel who assisted teachers in instruction.

It was within this framework that the questions were encountered which have not been clearly examined. Most have agreed and accepted the use of auxiliary personnel for clerical aides, library aides, housekeeping aides, noninstructional supervisors, and human relation aides, but there has been no delineation of what instructional assistants can do.

Further study in this area has been encouraged by private foundations, the Elementary Secondary Education Act, Manpower Development and Training Act, the Office of Economic Opportunity, some state funds, and most recently the introduction of the Educational Professions Development Act. The Winnetka, Illinois, Public

⁴Central Michigan University, Total List of Schools That Have Employed Teacher Aides Over a 12 Year Period, 1964. (Mimeographed.)

⁵Auxiliary School Personnel, National Commission on Teacher Education and Professional Standards (NEA, 1967).

Schools received money for a limited project from the U. S. Administration on Aging for use in their program using senior citizens.

A great deal of concern and study has been evident but few have taken the time or effort to put the total picture into focus. It seems some have approached this problem in a backward fashion. Many have asked questions about who will train auxiliary personnel, qualifications and source of supply, before the role has been defined. The definition of the role for auxiliary personnel has been almost impossible because most educators have not admitted the nebulous nature of the teacher's role. Perhaps it would be beneficial to begin by first sorting out those things which can be done only by a teacher and then proceed from that point.

The use of machines and some aspects of the systems approach have been considered for education. This has forced an examination of the need for a definitive role for the teacher.

Dean M. Laux said, "There is evidence that the role of the teacher is changing. But how?"⁶

The use of auxiliary personnel is predicated on the exploration of this question.

⁶Dean M. Laux, "A New Role for Teachers?" Phi Delta Kappan, Vol. 46, No. 6 (February 1965), p. 265.

The Advantages of Using Auxiliary Personnel

The advantages cited for the use of auxiliary personnel has come from the teaching profession itself. Teachers usually depend on the circumstances surrounding their use. However, apparently reacted negatively in early attempts by some districts to ever, there seemed to be four general areas of polarization usually use teacher aides as a financial expedient and to justify large class enrollments. There have been indications that some teachers viewed

The following have been the most commonly accepted areas. (a) The most evident advantage of using auxiliary personnel was to add another adult to the classroom. This makes grouping and individualization more feasible. The learning process has the opportunity for enrichment because of the availability of additional resources. (b) Auxiliary personnel were able to relieve teachers of many clerical and custodial assignments. (c) Personnel indigenous to the neighborhood made possible mutually beneficial interaction between the school and the community. (d) The creation of new roles and career ladders within the school setting provided needed work for poverty level people, where and when this was a need. In some geographic areas it was not necessary to consider creating jobs for poverty level people.

⁷ Garde Bowman and John A. ...
Roles in the American School ...
the Office of Economic Opportunity ...

⁸ Ibid.

Resistance to the Use of Auxiliary Personnel

The major resistance to the use of more auxiliary personnel has come from the teaching profession itself.⁷ Teachers apparently reacted negatively to early attempts by some districts to use teacher aides as a financial expedient and to justify large class enrollments. There have been indications that some teachers viewed a second adult as a spy for the community or administration, or destructive of the teacher's rapport with students. There was concern that parents might begin to believe certificated teachers are an expendable luxury.

The Need for Research

Auxiliary personnel are here to stay. They will be used to an increasing extent. This means some basic issues such as supervision; qualifications and training; pay; administration; and role definition must be resolved.

Demonstration centers for the purpose of studying various methods of utilization of auxiliary personnel have been established by studies recently conducted by the Bank Street College of Education⁸

⁷Garda Bowman and Gordon J. Klopff, New Careers and Roles in the American School, Bank Street College of Education for the Office of Economic Opportunity (September 1967), p. 4.

⁸Ibid.

for the Office of Economic Opportunity. These studies, along with the Bay City, Michigan,⁹ study, have pioneered in the field. Much remains to be done.

This study sought to investigate the area of role definition.

Definition of Terms

Teacher

Teacher referred to a person fully certificated to teach at his appropriate level. A person with provisional certification was not considered a teacher. The amount of experience was not a criterion for designating a person as a teacher.

Anyone who qualifies for certification was considered in the category of teacher even though he may be an administrator, professor, or a member of another group. The student teacher or intern who is finishing his term of clinical experience would have to be considered qualified for certification, assuming he has previously finished the major portion of his education course work.

Auxiliary Personnel

Auxiliary personnel, aide, and paraprofessional were used synonymously. This referred to any person without the unique

⁹Fund for the Advancement of Education, loc. cit.

training necessary for certification. This person may have achieved an equal or advanced educational level as compared to a teacher.

It was not the purpose of this study to categorize the of auxiliary personnel into groups or levels, hence various titles were not used to designate different levels and groups of auxiliary personnel.

Purpose of the Study

The purpose of this study was to more clearly and effectively delimit the role of a fully certificated teacher. It was hoped that information from this study would:

- (1) provide additional support and information for a rationale for the development of support teams of auxiliary personnel;
- (2) facilitate the evolution of a teacher who would be able to utilize his education to a near maximum in meeting the needs of students;
- (3) provide additional information for formulating administrative rationale when auxiliary personnel were used;
- (4) give further direction to teacher education and make recommendations for training auxiliary personnel.

These accomplishments would provide added tools and techniques for meeting the new and unique challenges facing teacher education.

This study was designed to identify those tasks which require that unique and specific education which only a fully certified teacher has received. By identifying those tasks at the top of the continuum it was possible to draw a line of demarcation between teacher and the paraprofessional.

This concept is shown in Figure 1.1 in more detail. Training and education were used to define the upper level for the professional teacher. The tasks, as identified by the profession, at the top, can be done by only a teacher. Task identification is used to mark the upper level for auxiliary personnel. This upper level of tasks for the auxiliary is also determined by the profession. Competency is used to define lower limits for both. The space labelled office code allows for flexibility and professional judgment of adequacy of task training of a particular paraprofessional.

Dr. Ted Ward of Michigan State University and the members of a seminar on Teacher Education were instrumental in formulating many of the thoughts contained in this model.

It was not the purpose of this study to look into the economic aspect of using auxiliary personnel in any depth; however, limited attention was given to this aspect.

This study was concerned primarily with the importance and possibility of using paraprofessionals as part of an instructional

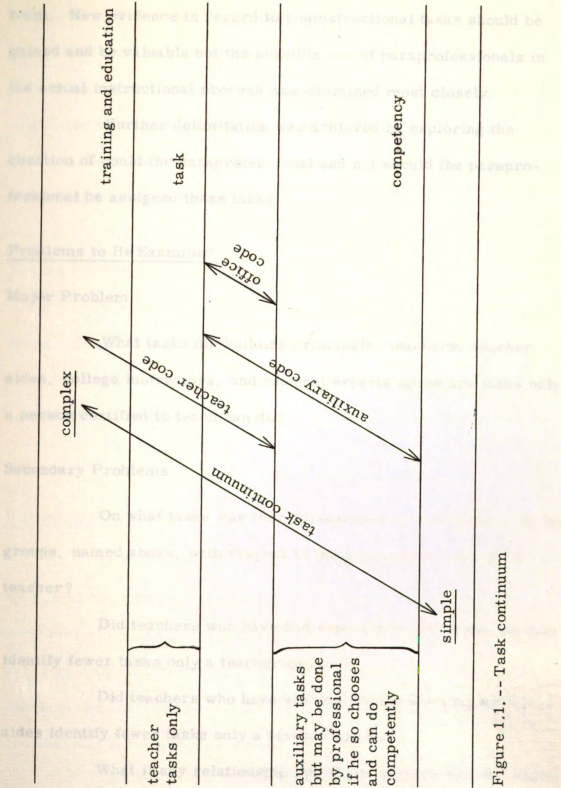


Figure 1.1. -- Task continuum

team. New evidence in regard to noninstructional tasks should be gained and be valuable but the possible use of paraprofessionals in the actual instructional process was examined most closely.

Further delimitation was achieved by exploring the question of could the paraprofessional and not should the paraprofessional be assigned these tasks.

Problems to Be Examined

Major Problem

What tasks did building principals, teachers, teacher aides, college instructors, and national experts agree are tasks only a person certified to teach can do?

Secondary Problems

On what tasks was there disagreement among the referent groups, named above, with respect to the appropriate role of the teacher?

Did teachers who have had experience with team-teaching identify fewer tasks only a teacher can do?

Did teachers who have had experience working with teacher aides identify fewer tasks only a teacher can do?

What if any relationship was there between age and identification of the tasks?

What if any relationship was there between sex and identification of tasks?

What if any relationship was there between grade level taught and identification of tasks?

Was there any relationship between years of experience and identification of tasks?

Did teacher aides identify fewer tasks only a teacher can do than teachers?

Was there any relationship between the referent's perception of his role and his level of schooling?

On what tasks, if any, was there agreement that the task could be done by devices substituted for teachers?

Procedure and Methodology

Procedural Background

One of the most thorough studies of the use of auxiliary personnel was done by the Bank Street College of Education.¹⁰ In their study they administered a 95 item questionnaire to the personnel in 15 demonstration projects. This instrument was designed to compare the aide's perception of his role with the perception the professional had of the aide's role.

¹⁰ Bowman and Klopff, loc. cit.

This study utilized the same type of listing of activities but deleted some and added others, so it contained a higher percentage of instructional tasks.

Instead of looking first at the aide's role, the intention of this study was to look at the teacher's role and isolate it so it would be possible to determine what was appropriate for auxiliary personnel to do.

Sample Population

The questionnaire was given to five referent groups. The groups were certificated teachers, teacher aides, building principals, college student teacher coordinators, intern program directors, and a group of national experts.

The number in each category is as follows:

Table 1.1. -- Population distribution of sample

Item	Bay City	Saginaw	Total
Schools	13	12	25
Principals	11	12	23
Teachers	28	31	59
Aides	28	31	59
College Instructors			25
National Experts			21

Saginaw and Bay City, Michigan were the school systems from which the sample was taken. Saginaw is a city of approximately 98,000 population while Bay City has a population of 54,000. Both cities are considerably industrialized. The schools included in the Saginaw sample are located primarily in the lower income areas, whereas the Bay City sample is more nearly a normal cross-section. It is also of possible importance that the Saginaw aides were part of a recent federally funded project. The Bay City aide program is one of the oldest in the nation. Bay City's program is part of their total normal operation. These differences in circumstances and composition may have had some effect on attitudes of the aides, teachers, and principals concerning their perception of the teacher's role.

The teachers were those who had had an aide during the school year 1967-68.

The aides included in the study were those who worked with the teachers in the sample.

The principals were those who were principals in the buildings from which the sample of teachers and aides was obtained.

The aides in the study represent the total number in the two cities. There was no selection of specific aides.

Michigan State University student teaching coordinators and the staff of the various Michigan State University elementary

intern centers constituted the sample of college instructors not designated as experts.

The national experts were chosen because of their leadership in the study of auxiliary personnel, or their expertise in the area of education and psychology.

Instrument Derivation

The items included in the questionnaire were chosen from (a) a time analysis study done in Bay City, Michigan;¹¹ (b) the list used in a study by the Detroit Public Schools as one of the Bank Street College Study demonstration centers; (c) and the writer's own observation of tasks carried out in the classroom.

The questionnaire sought to distinguish between the feasibility of a non-certified person doing a task and a machine, if the task was not identified as one which could be done by only a certificated teacher.

The data from the questionnaire was summarized and appropriate statistical tools applied. Each task listed in the study was analyzed to determine if it could be done competently only by a teacher. Age, years of experience, sex, level taught, type of experience, and level of schooling are variables which were considered.

¹¹The Fund for the Advancement of Education, loc. cit.

Overview of Subsequent Chapters

In Chapter Two pertinent literature and related studies will be discussed. Design of the study, the instrument, scoring procedures, statistical tools, and statistical information regarding the sample selection will be treated in Chapter Three. Chapter Four will be devoted to analysis of the data which will be summarized, interpreted and the implications for further study sought in Chapter Five.

Summary

This, Chapter One, called attention to the nature of the problem, definition of terms, purpose of the study, questions to be examined, procedure and methodology, and closed with an overview of subsequent chapters.

¹ Frank Riessman, From Poverty to Power (A. Philip Randolph, ed.)

personnel was the availability of new resources through the Office of Economic Opportunity, the Manpower Development Training Act, Title I and Title III of the Elementary and Secondary Education Act, the Nelson-Schneider Amendment to the Poverty Act, and the Javits-Kennedy Act for Impacted Areas, all of which provided federal funds for the employment of low-income nonprofessionals in education.

CHAPTER II

Secondary Education Act, REVIEW OF RELATED LITERATURE

Historical Background

A variety of forces met at the confluence of society, the child, and the public school. The building tides were social, educational, and economic in makeup. It was during the late sixties that the gap between available professional personnel and the expanding needs for school service reached a critical level. The education system needed seven to ten million more teachers in a space of ten years.¹ The role of the teacher became more complex because of new technology, new educational concepts, and a variety of new socio-economic phenomena impinging on all institutions. The gap between school and community; between professional and nonprofessional; between have and have-not almost reached a point of no return. The have-not was helpless to compete in an automated society. Certainly one of the most important thrusts for the use of auxiliary

¹Frank Riessman, New Careers, A Basic Strategy Against Poverty (A. Philip Randolph Educational Fund, 1967), p. 12

personnel was the availability of new resources through the Office of Economic Opportunity, the Manpower Development Training Act, Title I and Title III of the Elementary and Secondary Education Act, the Nelson-Scheuer Amendment to the Poverty Act, and the Javits-Kennedy Act for Impacted Areas, all of which provided federal funds for the employment of low income nonprofessionals in education.

It is well to recall that the training and utilization of low income workers in the public service is not a new phenomenon. During the seventeenth century in England, the Elizabethan Poor Laws included a provision that those unable to find "gainful" employment and dependent upon the state be placed in workhouses and trained to perform "community improvement" work. Although this was probably far from an ideal setting and the work was undoubtedly far removed from dignified or meaningful labor, still the concept of training the unemployed to perform needed public service was apparent.

In our own country the Works Project Administration and the National Youth Administration of the 1930's were based on the same concept and the socio-economic demands of the time.

There can be no doubt regarding the growth of the use of auxiliary personnel when one examines the recent research reports of the National Education Association.²

Their survey listed one midwest school system as using kindergarten aides since the 1930's and three others indicated their programs were begun prior to 1950. Most, however, have been developed since 1960.

A total of 229 school systems participated in the Educational Research Service survey. These systems reported the use of 14,356 volunteer aides and 29,995 paid aides.³

The number and use of aides is growing so rapidly that no one claims to have an accurate accounting. Some estimates are well over the 50,000 mark.⁴

Contrary to the belief of some people, not all programs are begun only because of the availability of federal funds. Over 50 percent of the programs are federally funded, but this leaves a

²American Association of School Administrators and Research Division, Educational Research Service Circular (Washington, D.C.: National Education Association, April 1967).

³Ibid., p. 3.

⁴Mary D. Shipp, "Teacher Aides: A Survey," The National Elementary School Principal, XLVI (May 1967), 33.

surprising number of programs which are supported entirely or at least partially by local public school funds.⁵

One of the first post-depression reports of teacher-aide utilization appeared in 1942.⁶ The "helpers" were hired then because qualified teachers weren't available nor were the funds. The employment of teacher helpers was described as an emergency measure, one which should be followed only when professionals aren't available. Yet, the concluding paragraph of their report would seem to indicate that the utilization of nonprofessionals produces positive effects in its own right and therefore should not be thought of solely as a "stop gap" measure.

The report stated:

In our experience the teacher helper soon becomes a very valuable assistant to the regular home room teacher. The helper becomes quite expert at checking seatwork, supervising the children during their work and study periods, assisting the teacher in many types of project work, . . . taking charge of some drill work and handling small groups in sight reading.

We have found that one teacher can do a thorough job with as many as forty pupils if she has the assistance of a teacher helper for one-half day.⁷

⁵ American Association of School Administrators and Research Division, loc. cit.

⁶ M. J. Greenshields, "Big Timbers' Teacher-Helper Plan," The American School Board Journal, 104: 20, 1942.

⁷ Ibid.

One of the most significant things to note, especially in view of the New Careers⁸ philosophy, is that all the helpers employed were limited in their education to high school graduation.

The modern teacher aide movement seemed to have begun in 1952 in Bay City, Michigan, with a Ford Foundation sponsored project entitled, A Cooperative Study for the Better Utilization of Teacher Competencies.⁹ The employment of teacher-aides was only a part of the project, but it was the portion which received the most attention and even today stands as the primary program regarding their utilization. While Bay City's work with teacher aides has served as a prototype for much of what has followed, it does not directly parallel the current movement since most of the aides employed there had had some college training.

While the preceding programs, from the Elizabethan Poor Laws to the WPA, were primarily concerned with opportunities for the unemployed, the stated reason of the Bay City Plan was to increase teacher effectiveness by freeing teachers from an overload of nonprofessional functions.

⁸The term "New Careers" comes from a book by Arthur Pearl and Frank Riessman entitled New Careers for the Poor: The Nonprofessional in Human Services (New York: The Free Press, 1965).

⁹The Fund for the Advancement of Education, A Cooperative Study for the Better Utilization of Teacher Competencies, A Report Prepared by Central Michigan College (Mount Pleasant, Michigan, 1955).

Central Michigan University and the Director of the Project conducted an "official, impartial" appraisal of the work at Bay City.¹⁰ Six educational specialists including a classroom teacher visited the classrooms involved for two days and submitted separate reports. Their findings seemed to generally agree that aides should not be considered replacements for teachers. Aside from relieving teachers, the group agreed aides were not suitable justification for extra large class size. Beyond this agreement, however, no clear pattern emerged. The Fund for the Advancement of Education (sponsored by the Ford Foundation) was accused of allowing subjective impressions to circulate as absolute fact, while on the other hand there were reports of parents, teachers, and pupils being enthusiastic about the aides.¹¹

The Journal concluded:

Without question . . . we believe . . . the Bay City experiment will prove its worth. We believe that it may have real value as an emergency plan to help relieve over-crowding until we get the needed teachers and classrooms. It will make valuable contributions to teaching. That these contributions may not be as gigantic or as radical even in the areas its proponents are now claiming, is not too important. It is important

¹⁰ Journal of Teacher Education, "A Symposium: The Bay City, Michigan, Experiment--A Cooperative Study for the Better Utilization of Teacher Competencies," Journal of Teacher Education, 7: 100-152, 1956.

¹¹ The Fund for the Advancement of Education, op. cit., p. 30.

that its sponsors lay on the line real proof of what it can do and what it cannot do. We hope to see more, not less, experimenting with it by local school districts.¹²

Scates,¹³ writing several months earlier in the Journal of Teacher Education, ridiculed the program and expressed great concern lest master teachers become administrators removed from the pupils. Such a program, he argued, would not only fail to alleviate the teacher shortage but would, in effect, compound it by removing the best teachers from the pupils. A similar argument has been put forth recently by Wirth.¹⁴

While Scates and many of the other observers of the Bay City plan were concerned about removal of the master teacher from his students as well as increasing class size as a result of the presence of the aides, Faust saw the innovation as a means of putting teachers in step with other professionals. He commented:

In considering possible improvements in the utilization of teaching resources, it is useful to observe that the teaching profession has so far remained outside the professional revolution of the last fifty years, the essence of which has been to increase the effective scope of the professionally competent person by relieving him of tasks not requiring his professional

¹²Journal of Teacher Education, op. cit., p. 151.

¹³D. Scates, "The Prior Meaning of Increases in Teaching Staff," Journal of Teacher Education, 7: 82-88, 1956.

¹⁴A. Wirth, "A New Hierarchy for the Teaching Profession," Changing Education, 1: 3-5, 1967.

wisdom and skill. . . . Moreover an adequate supply of non-professional aides for teachers is at hand. Technological advances in the last few years give many women a good deal of time which might be spent in relieving the teacher of clerical chores, supervising responsibilities and other tasks for which professional training and experience are not required.¹⁵

It is apparent that at this early date there was uncertainty in regard to what tasks should be done by whom. Teacher-tasks were always referred to as belonging in that abstract nebulous group which required the wisdom, training, and experience of a professional. Few tried to say exactly what tasks required this type of person.

Bay City carried out a detailed job analysis as well as time and motion studies. The following eight areas, which were included in their study, were closely allied with instruction; and the changes which occurred, because of having an aide, provided interesting comparisons.

1. The teacher spent over twice as much time on lesson plans when she had an aide. (144% more).
2. She spent more time making assignments. (20% more).
3. Recitation time increased over one full hour each day. (57% more).
4. The teacher herself gave less time to directed study, but the aide supplemented this activity to the degree that more total time was given than previously. (17% more).
5. The teacher gave more time to desk-to-desk help. (27% more). This was also supplemented by the aide, resulting in a 90% increase each day.

¹⁵C. Faust, "Utilization of Teaching Resources in Secondary Schools," California Journal of Secondary Education, 32: 292-294, 1957.

6. The teacher gave more time to pupil counseling than when she didn't have an aide. (80% more).
7. Considerably more time was put in by the teacher in supervision. (41% more). The aides supervised most of the non-instructional activities to the amount of forty-eight minutes each day.
8. The teacher gave ten minutes more time each day to dictation to the group.¹⁶

It is interesting to note that in their final report the outside evaluating committee at Bay City had this to say regarding the role of the aide.

As a result of the finding that no universally agreed upon definition of teaching responsibilities (and, it follows, of no non-teaching responsibilities) can be established, the project found it necessary to withdraw from the position that a teacher aide does not carry some instructional responsibilities. The project would, however, emphasize that the teacher has the main instructional responsibility for optimum use of the aide's capabilities.¹⁷

Other advantages noted in the Bay City Plan were teacher stimulation, the development of teacher leadership, flexibility of operation, and teacher recruitment.

Problems cited by the evaluation committee in the Bay City Plan were:

- a) Professional opposition
- b) Use of the program as a temporary expedient
- c) Legal restrictions
- d) Aide qualifications

¹⁶The Fund for the Advancement of Education, op. cit., p. 17.

¹⁷The Fund for the Advancement of Education, A Cooperative Study for the Better Utilization of Teacher Competencies, A Final Report (Central Michigan University, 1958), p. 18.

- e) Aide supervision
- f) Aide recruitment¹⁸

The Bay City Study was followed by two similar studies financed by the Ford Foundation: The Yale-Fairfield (Connecticut) Study and the Rutgers (New Jersey) Plan. The purpose of these studies was to assist administrators in preserving quality education in the face of severe shortage of professional personnel, the rising costs of education, and the resultant problem of oversized classes. The teaching profession appeared to react negatively on the whole to an employment device which would assign available educational funds to the employment of untrained personnel rather than to the employment of more teachers.

It was apparent from this discussion that the verdict on the use of teacher aides depended primarily upon one's perceived role and previous experiences. There was a great deal of uncertainty, some bitterness and considerable promise expressed. John Deason reviewed fifty-six of the fifty-nine articles on teacher aides appearing in the literature between 1942 and 1957. He notes:

It is perhaps significant that, almost without exception, authors who are involved in some way with a teacher-aide project are favorably impressed, while by and large, those

¹⁸Ibid., pp. 34-36.

who are critical are not connected with any experiment in this field.¹⁹

Deason summarizes the points made by those who are critical:

- a) Justifying larger classes by using teacher-aides constitutes a threat to the welfare of children.
- b) Not all teachers, even good ones, can work with aides.
- c) Measuring results accurately is difficult.
- d) There is a danger of a return to rote learning and the possibility of a departure from facilitating broad learnings.
- e) Dividing the experiences of students into curricular activities and non-curricular activities seems questionable.²⁰

The advocates of the program make these points:

- a) . . . A temporary measure in time of crises.
- b) Possibility of the plan as a teacher recruitment device.
- c) Enrichment of the curriculum through the efforts of outside talent.
- d) Creation of a wholesome atmosphere which encourages wholesome personality development.
- e) Greater involvement of lay citizens in worthwhile activities.
- f) Slightly higher achievement on the part of students in classes with aides.²¹

More recent literature indicated a shift to a more positive view of the use of teacher aides. The field became more inclusive and used such terms as consultant, paraprofessional, auxiliary

¹⁹ John Deason, "What They Say About Teacher Aides," School Executive (December 1957).

²⁰ Ibid., p. 59.

²¹ Ibid., p. 60.

personnel, ancillary personnel, and technicians to label the various levels and role assignments.

One of the best known writers in the area of organizing for instruction is J. Lloyd Trump. Trump²² proposed a restructuring of the teacher function into six distinct categories: professional teacher, paraprofessional assistant, clerk, general aide, community consultant, and staff specialists. (Trump's paraprofessional assistant would probably be a person with college training.) His team approach apparently did not allow for movement up a career ladder but we see some evidence of a plan to integrate the nonprofessional into the overall school design.

Schmitthausler,²³ in his doctoral dissertation, demonstrated that the addition of nonprofessionals helps increase the productivity of the classroom. The teachers were unable to pinpoint specific improvements but felt they were able to accomplish more with an assistant.

²²J. L. Trump, "A Look Ahead in Secondary Education," National Association of Secondary School Principals Bulletin, 42: 5-15, 1958.

²³C. Schmitthausler, "Analysis of Programs Using Nonprofessional Teacher Helpers in Public Elementary School Classrooms" (unpublished doctoral dissertation, University of California, Berkeley, 1966).

Recent Related Findings

More recently, primarily during the sixties, there has been additional impetus given to the use and study of auxiliary personnel. Part of the impetus has come from additional funding by the federal government. The necessity for community-school linkage in the riot torn cities, and a shortage of certificated personnel willing to teach there has forced a re-evaluation of the existing structure. The National Commission on Teacher Education and Professional Standards (NCTEPS) was one group which devoted a full year of study to the use of auxiliary personnel in the schools.

Davies pointed out the priorities in this area.

What should be done?

- a) Teacher-training institutions must help prospective teachers get ready to work with auxiliary personnel.
- b) School districts and junior colleges must start training programs for aides.
- c) Leaders must show this is only one way for more effective staff utilization.
- d) What jobs can aides do, what should be shared and which should be reserved for the qualified professional?
- e) Learn from experience of others.
- f) Lead public to see impact on schools and possibilities for children.²⁴

Although a few are still discussing the question of whether schools will continue to have aides, most have adopted the stance of NCTEPS which states:

²⁴Don Davies, "Editorial," The National Elementary School Principal, 46: 4-5, April 1967.

The question today is not: Are teachers going to have aides? It is: How can aides be selected, trained, and used effectively?²⁵

The rationale for this renewal of interest in the use of auxiliary personnel seemed to possess three salient dimensions. The first was the acceptance that all people have a right to essential human services. The second emphasis was development of the career ladder and appropriate training. The third emphasis was perhaps the most striking and potent. It was the belief that the have-nots should be involved in the solution of their own problems. They became participants in problem solving. This was sometimes referred to as the "consumer as participant" concept.

As a result of the addition of more personnel into the school setting, team organization and school plant design have been areas of recent examination. Savage²⁶ reported on a team-teaching, and team-planning project involving school plant design and innovation in a junior high school. This project was apparently based on a philosophy of how to best meet student needs.

Team rooms were located in the same area. Multi-subject, horizontal teams were developed. An effort was made to achieve a

²⁵ Auxiliary School Personnel, National Commission on Teacher Education and Professional Standards (NEA, 1967).

²⁶ Wilbur Savage, "Teacher Oriented Programs, A Venture into Team Teaching," Associated Public School Systems Yearbook, 1966, p. 8.

balance of experience and inexperienced personnel. Classroom control ability was considered and compatibility was found essential. Paraprofessionals were available for support functions.

The advantages were: teachers learning from each other, exchanging information concerning individual student needs, opportunity to correlate subject matter, and a chance to work with specialists.

A major problem encountered was inadequate time for team-planning. One period per week was insufficient.

This study seemed to reinforce what many others indicated: that the team approach is beneficial but planning must be done carefully to correlate subject material and to delineate the task assignments.

The team approach, including differentiated staffing patterns, encourages the acceptance of the "teacher-leader" concept, which views the teacher as an orchestrator of personnel and materials.

The training of auxiliaries was apparently more successful when carried on as a team involving both professional and non-professionals.

Adequate and proper training is one key to the degree auxiliaries are utilized.

NCTEPS stated:

. . . Preparing teachers to train and use aides may be the best way to initiate widespread employment of auxiliary personnel in effective roles and to overcome the great reluctance of many teachers about working with aides.²⁷

Again, in regard to the team approach, the Bank Street Study had the following recommendation:

1. Team training of administrators, teachers, other professionals, and nonprofessionals, so that the needs of children become more important than the needs for personal achievement and recognition.
2. Application of the team approach simultaneously to the school as a whole and to each class situation . . . in fact the development of "teams within a team," so to speak.²⁸

In reviewing the most recent studies and interviewing those who are participating in pilot projects and established programs, three major developments seemed to be apparent.

- a. More attention is being given to the adult-pupil ratio and less to the teacher-pupil ratio.
- b. There has been an increased awareness of the potential for new jobs within the teaching profession. This has caused the job of teaching to be broken into functional job levels in order to create career ladders.

²⁷NCTEPS, loc. cit.

²⁸Garda W. Bowman and Gordon J. Klopff, New Careers and Roles in the American School, Bank Street College of Education for the Office of Economic Opportunity (September, 1967).

- c. New job levels have created a growing need for task delineation. Adding to the confusion, an abundance of new titles for personnel have been created as tasks are differentiated.

A detailed discussion of these developments follows.

George W. Denmark, dean, School of Education, University of Wisconsin, Milwaukee, points out the seriousness and need for moving ahead in the use of auxiliary personnel.

The job of today's teacher has become virtually unmanageable. Unless something is done to remedy this situation, creative, competent teachers will find themselves hopelessly bogged down in technical and clerical duties which could be performed by others. Or they will be overwhelmed by so many complex and important things to do, that few if any of the tasks will be done well enough to leave them with any sense of accomplishment. Potentially outstanding teachers are growing discouraged over their inability to be educators rather than technicians. And thousands of promising college students are turning away from careers in teaching.²⁹

Because of the magnitude of the task, and certain social phenomena, the job of recruiting teachers for the cities, and specifically the inner city, has become almost impossible. Many large city administrators are looking toward auxiliary personnel to provide more adults per pupil and provide for the needed community-school linkage. There are inner city schools which would be in real danger

²⁹George W. Denmark, "The Teacher and His Staff," National Education Association Journal (December 1966), p. 17.

if it were not for the presence in the school of indigenous personnel with whom the community can identify.

Brunner referred to the importance of a low adult-pupil ratio by pointing out that ". . . if learning for young children is to occur in an atmosphere which encourages individual development, it is important that child-adult ratio be small."³⁰

The concern for creating job opportunities for large numbers of our population has come from a number of people. Marcella Brenner, Principal of the Lone Oak Elementary School in Rockville, Maryland, expresses the concern that many in her profession feel for those who desire to enter the profession but cannot for economic or educational reasons.

Brenner stated:

We desperately need to create job opportunities for large segments of our population. Although automation is only in its infancy, the problem of joblessness is already serious; and unemployment is recognized as one of the major threats of the future. It is critically important to develop new careers for young people and to provide interim employment for others who face long years of training for professional specialties.³¹

³⁰Cathrine Brunner, "A Lap to Sit on and Much More!" Childhood Education (XLIII, September 1963), p. 20.

³¹Marcella Brenner, "The School Technician--A New Career," Innovations for Time to Teach, Department of Classroom Teachers (NEA, 1966), p. 118.

The New Careers Movement

Concern by many, as expressed by Brenner, gave impetus to the idea of New Careers. This concern was added to the feeling expressed by some Negro groups that they must and should control their own destiny. The concept of "consumer participation," as stated earlier, was already part of the philosophy of the utilization of auxiliary personnel.

The principal authors of the New Careers philosophy have been Frank Riessman of New York University and Arthur Pearl of the University of Oregon. The New Careers philosophy is that utilization of the nonprofessional worker can:

- a. Provide millions of new jobs for the unemployed.
- b. Create human service positions which cannot be automated out of existence.
- c. Rehabilitate the poor through meaningful employment.
- d. Provide more and "closer" service for the poor.
- e. Reach the unreached.
- f. Reduce the manpower shortage in education, health, and social work.
- g. Free the professional for more creative and supervisory roles.³²

Proof that this was not merely a "pie-in-the-sky" idea was the speed with which it prompted action. The National Commission on Technology, Automation and Economic Progress has called

³² Frank Riessman, New Careers, A Basic Strategy against Poverty (New York: A. Phillip Randolph Fund, 1967), p. 1.

for the designing of more than five million socially useful subprofessional jobs; the Congress has passed the Scheuer-Nelson Act which provided a down payment of seventy million dollars for moving in this new direction; and political organizations like Americans for Democratic Action have given the new career approach a central position in their program. New Careers centers have been established in a number of major cities, such as Los Angeles, Eugene, Newark, Minneapolis, and New York.

The New Careers program advocates establishing levels for the entry to teaching as follows:

Step 1 -- Aide

Step 2 -- Assistant Teacher

Step 3 -- Associate Teacher

Step 4 -- Intern

Step 5 -- Certificated Teacher

An example of the strong feeling and belief attached to this movement and an indication of its educational potential is given in an excerpt from a speech by Wilfred T. Ussery, National Chairman, CORE, before the House Committee on Education and Labor, July 17, 1967. He said:

The organization of such advocate groups should be based upon their areas of interest. Take for example the field of education. Think of the tremendous impact that the concept of New Careers could have on "quality education" with perhaps

the assignment of a new careerist to every 5 Black children in the Urban Areas of America, the impoverished towns of Appalachia, the poverty-stricken Mexican-American concentrations in southwestern United States, the impacted areas throughout the South and, of course, the Indian reservations throughout the country. This approach is possible, irrespective of the field, be it education, medicine, recreation, public welfare or private organizations.

To the degree that that effort succeeds it will be an indication of the ability of this country to find the means to plug people into a system that now finds ways to exclude people, i.e., racism, technology, cybernation, microminiaturization.³³

Staff Differentiation and Role Delineation

Allen³⁴ advocated a differentiated staff for the school, but his levels were different. Allen seemed to be interested in differentiated functional levels, however he was more concerned with the upper limits than Riessman, and not necessarily looking for new jobs for the unemployed.

Allen explained his staffing as follows:

Senior staff members, for purposes of illustration called Professors and Senior Teachers, would represent no more and usually less than 25 percent of the total staff and could not hold tenure in these positions other than that for which their annual performance qualified them. They might hold tenure, however,

³³Wilfred T. Ussery, A speech given as National Chairman of CORE, before the House Committee on Education and Labor (July 17, 1967).

³⁴Dwight W. Allen, "A Differentiated Staff: Putting Teaching Talent to Work," Occasional Papers by National Commission on Teacher Education and Professional Standards (Washington, D.C.: NEA, December 1967), p. 2.

at the two lower levels, labeled here as Staff Teachers and Associate Teachers.

Despite what the labels might imply, I am not suggesting a new bureaucracy or a hierarchy that gives recognition to an elite. I am suggesting a structure based on levels of responsibility in a teaching organization that takes its overall shape from what needs to be done educationally, now and in the future, in a given school, from what teachers are available and best qualified to be responsible for the tasks identified. This of course, presupposes a differentiation of tasks far beyond what the interchangeable--parts pattern has so far allowed. Considering the number of practical educational innovations now standing in the wings waiting for such an opening, this "new tasks" dimension should not surprise anyone.³⁵

Professor Allen's differentiated staffing pattern and his concern with the "new tasks" dimension forcefully pointed out the third major development stated earlier. It seems likely that auxiliary personnel are going to demand an open door to upward mobility on a career ladder. As this ladder, however it is structured, is developed, the need for task delineation becomes more apparent.

Clement³⁶ pointed out that teachers are not treated like professionals and perhaps one reason they are not is because there is no differentiation among professional, semiprofessional, and paraprofessional levels of teaching tasks.

³⁵Ibid., pp. 2, 3.

³⁶Stanley L. Clement, "More Time for Teaching," National Association of Secondary School Principals Bulletin (December 1962).

Esbenson³⁷ and Stafford³⁸ both reinforce this viewpoint.

Stafford believed that aides should share in supportive teaching activities rather than only the menial duties. Esbenson cited teacher aides as another instructional aid such as films and community resource people. The expansion of the aide's role is necessary and desirable when the teacher's role is viewed as analytical and prescriptive. The aide's training and personal limitations are the only restrictions.

The Classroom Teachers National Study Conference in 1966 stated that the teacher's job was:

- a. The management of the teaching assignment.
- b. The development of the policies that affect the classroom teacher and the educational program entrusted to his care.
- c. The direction of continuing in-service education programs.³⁹

A list of jobs which can be done by teachers and a list of jobs which can be done by others gives an idea of the two roles. However, no

³⁷Thorward Esbenson, "Should Teacher Aides Be More Than Clerks?" Phi Delta Kappan (Vol. 47, No. 5, January 1966), p. 237.

³⁸Curt Stafford, "Teacher Time Utilization with Teacher Aides," Journal of Educational Research (October 1962), pp. 82-88.

³⁹The Classroom Teacher Speaks on His Supportive Staff, Report of the Classroom Teachers National Study Conference on the Classroom Teacher and His Supportive Staff (Washington, D. C.: NEA, November 25, 26, 1966), p. 11.

schema was presented to determine where new tasks, not listed, should go.

One of the most interesting schemata for differentiated task analysis was one presented by Fine for designing New Careers programs.

. . . Using this strategy, the first step is to determine what needs to be done to achieve a particular objective--let us say, urban planning. This is followed by an examination of the states-of-the-arts involved to establish the technologies and various alternatives available to get the work done. On this basis, it is then possible to move directly into the technical considerations described above, whereby: (1) the work that needs to be done to achieve objectives is clearly delineated; (2) the optional ways in which workers can perform the work are explored; (3) the functional performances of the workers are decided upon in relation to the technologies to be used; (4) the functional performances are then organized into jobs; (5) the jobs are related to each other by delineating experiences which lead to higher functional performance; and (6) curricula are developed that lead to achievement of competencies necessary to promote to each higher functional level.⁴⁰

Schmitthausler, in his doctoral dissertation, also gave his opinion regarding task delineation as follows:

It is the writer's opinion that of the several controversial issues surrounding the introduction of nonprofessional classroom workers to schools, the question of task delineation has the greatest potentiality for resistance; while teachers struggle to retain professional autonomy, they are doubtless faced with the uncomfortable knowledge that they are uncertain

⁴⁰ Sidney A. Fine, Guidelines for the Design of New Careers, A Staff Paper for the W. E. Upjohn Institute for Employment Research, Kalamazoo, Michigan (September 1967), pp. 16, 17.

of just what it is that teachers can do that no one else can do.⁴¹

The Bank Street College Study, which was the most comprehensive study done recently, has the following recommendations concerning role definition and development.

. . . That role specifications of auxiliaries be defined initially, in order to provide a frame of reference for a new set of relationships, thus preventing either underutilization by unconvinced professionals or overutilization by administrators faced with manpower shortages.

. . . That teaching functions be further examined to identify the more complex and highly professional functions which should be performed by a teacher alone, . . .⁴²

The Future

The three recent major developments which have been documented were of course accompanied by a host of peripheral issues. Auxiliary personnel and teacher liability; unionization; professionalization or nonprofessionalism; job titles; institutionalization; training; administrative flexibility; and funding were only a few of the concerns facing those who were working in this area.

There is still a great deal of fear and opposition to the use of auxiliary personnel in the schools. Some local and state TEPS

⁴¹ Schmitthausler, op. cit., p. 35.

⁴² Garda W. Bowman and Gordon J. Klopff, New Careers and Roles in the American School, Bank Street College of Education for the Office of Economic Opportunity (September 1967).

Committees are taking stands regarding auxiliary and ancillary personnel. The entrance gate to the profession is guarded jealously and certificated teachers are hesitant to allow licensing at a level lower than full certification. This seems to be prompted by: (a) a fear of the continued issuance of 90 day permits to teach and a resulting lowering of standards; (b) some concern that the public may misinterpret the use of assistant teachers to mean that certificated teachers are really not needed in each classroom, thus eliminating job slots for teachers; and (c) because of the high cost of education, some may use this as a budget cutting device or to at least hold the line on cost.

Despite these fears and potential pitfalls, more and more teachers, auxiliaries, and parents are coming to agree with the concluding evaluative statement from the Model School Division's Teacher Aide Program, Principals' and Teachers' Advisory Committee:

. . . The introduction of teacher aides into our schools has had a significant effect on the morale and productivity of all concerned--principals, teachers, and children. It is evident that the aides chosen to participate in the TAP program were selected for their personal warmth and interest in children as well as for other strong personal qualifications. The contributions that these aides have already made in the schools are highly valued: by teachers, who are unwinding and beginning to see an end to their weariness, many for the first time in their teaching career; by the children, who now have someone in their school life with time for the little personal attentions often lacking altogether in their lives; and by the principals, whose faculty is generally less frustrated and overburdened with work. In short, we applaud Superintendent Hansen's

statement, made last September, that "Teacher aides are here to stay." Indeed, after this taste of the good life, it would be very difficult to return to the old system.⁴³

The growth of the use of auxiliary personnel in education seemed to be predicated on these basic premises.

1. The needs of boys and girls in the learning process can more nearly be met with the addition of auxiliary personnel to the school setting.
2. Teachers will have an opportunity to be truly professional only when they are relieved of most of the tasks which can be done by someone other than a teacher.
3. Participation in the learning-teaching process by people indigenous to the community provides for valuable interaction between the school and neighborhood.
4. Total community involvement in planning educational programs may add to the social relevance of such planning.
5. It is evident that employment must be provided for a large segment of our population, and one method of doing this is by carefully redefining existing roles into additional functional job levels.

⁴³ TAP: The Teacher Aide Program, A Project of the Model School Division of the Public Schools of the District of Columbia, conducted by the Washington School of Psychiatry (August 1967), pp. 91, 92.

CHAPTER III

RESEARCH DESIGN

The Sample

The sample population included five referent groups. The groups included were elementary building principals, teacher aides, teachers, student teaching coordinators and elementary intern directors, and national experts.

The aides, teachers, and principals were from Bay City, Michigan, and Saginaw, Michigan. Bay City has a population of approximately 54,000, while Saginaw has an approximate population of 98,000.

Bay City is normally considered a rather conservative city with some industry and located in an agricultural area. In former years it was one of the booming lumber towns of the state. It has had an unusual amount of experience using aides. Bay City has used aides for over twenty years in the public schools and the aides are considered a normal part of the school budget and operation.

Saginaw is also located in an agricultural area, but the city is considered to be highly industrialized. It has a large concentration of lower socio-economic class in one section of the city, with many of the typical social problems of the big city ghetto. The problems seem to vary only in intensity from a large city. Saginaw does not have an extensive history of using aides. The aides included in our sample did not have more than one or two years of experience as an aide. The salary for the aides in Saginaw was paid from federal funds.

To the extent that these two cities are typical of other cities this size, generalizations can be made.

The total number of aides used in the elementary schools of both cities was included. There was no random sampling within the two cities but rather the total number of aides available was used. The grade levels were not concentrated at either upper or lower elementary.

The teachers in the sample were those to whom the aides were assigned. The principal of the building where the teacher and aide worked were the principals included in the sample.

Regional student teaching coordinators and elementary intern directors of Michigan State University were used for the sample population of college instructors. These people function as

liaison persons between the university and the public school. They instruct at the college level and supervise students in the public schools. The regions included were statewide and not concentrated in any one area.

The fifth referent group was composed of identified national experts. The criteria used for identifying this group of experts were (a) an interest in the area of staff utilization and more specifically in the use of auxiliary personnel, (b) recognized as an authority in their field of specialization, and/or (c) experience as director of a demonstration center using auxiliary personnel. These experts were not from any one region, but selected throughout the nation. The experts included a research specialist for a private foundation who has worked in the model cities program; a director of extension and an auxiliary training program for a major university; a special consultant and writer for the board of education of a large city; a reading specialist; two leaders in the area of learning theory; a leader in teacher education; a well-known author on the subject of "New Careers"; two department of education chairmen; three directors of auxiliary personnel demonstration centers; three educational psychologists; a national officer of a teacher's organization; head of a state department of public instruction; research assistant for a college of education; and two directors of training programs for auxiliary personnel.

The numerical size of the staff included ranged from a five teacher school to a thirty-three teacher school. The range was well distributed with no concentration of numerically large or small school staffs.

Instrumentation

The instrument used to collect data was a seventy-four item questionnaire. The items listed were specific classroom tasks.

The respondent was asked to mark each item on a five point scale and then respond on a second scale if the item was marked as being done by "other than a teacher." The first page gave instructions for marking the questionnaire and the last page asked for personal data.

The items included were obtained from three sources. The first source was a list of tasks enumerated on a time analysis study done during the Bay City Experiment.¹ The second source was the list used in the "Activity Sheet" for demonstration centers by the Bank Street College of Education study.² The third source was the

¹The Fund for the Advancement of Education, A Cooperative Study for the Better Utilization of Teacher Competencies, A Report of the First Two Years of the Study (Central Michigan University, 1955).

²Garda W. Bowman and Gordon J. Klopff, New Careers and Roles in the American School, Bank Street College of Education for the Office of Economic Opportunity, 1967.

author. The author made an effort to fill in any apparent gaps, avoid needless duplication yet allow for some shades of the same basic task. Those used by the author for additions were developed from numerous classroom visitations.

The instrument was administered to a group of twenty-four student teachers, who were near the end of the term of student teaching, for pretesting. As a result of the pretest procedure, the instrument was further refined.

In an effort to further clarify and validate the instrument it was given to two college instructors. These two men were each from a different university. They proofread the instrument and suggested further refinement.

The questions listed by Scates and Yeomans³ were considered. According to Scates and Yeomans the validity of a questionnaire and its parts may be judged by the following types of evidence:

1. Is the question on the subject?
2. Is the question perfectly clear and unambiguous?
3. Does the question get at something stable, which is typical of the individual or the situation?
4. Does the question pull or have extractive power? Will it be answered by a large enough proportion of respondents to have validity?
5. Do the responses show a reasonable range of variation?

³Douglas E. Scates and Alice V. Yeomans, The Effect of Questionnaire Form on Course Requests of Employed Adults (Washington: American Council on Education, 1950), pp. 4-7.

6. Is the information consistent, in agreement with what is known, and in agreement with expectancy?
7. Is the item sufficiently inclusive?
8. Is there a possibility of obtaining an external criterion to evaluate the questionnaire?⁴

Follow-up

The instrument was mailed in a large envelope with a letter of explanation and a self-addressed, stamped envelope included.

A post card with a handwritten request for a response was sent in a follow-up effort.

Later a complete questionnaire was sent again to those who had not responded in any way. In one case a second detailed letter of explanation was sent.

The percent of response follows:

Table 3.1. -- Percent of questionnaires returned

Group	Number sent	Number returned	Percentage of return
Aides	56	44	79%
Teachers	56	45	80%
Principals	23	17	74%
College Instructors	29	25	86%
Experts	20	10	50%
Totals	184	141	78%

⁴Ibid.

Scoring of (TDF) Task Discrimination Form

The respondents were asked to respond to each item on a five point scale.

A-I believe strongly only a person certified to teach can do this.

B-I believe only a person certified to teach can do this.

C-I am uncertain.

D-I believe a person not certified to teach or devices substituting for teachers can do this.

E-I believe strongly persons not certified to teach or devices substituting for teachers can do this.

In addition to this scale, if D or E was checked, a choice of 1, 2, or 3 on a second scale was checked.

1-Can be done by machines.

2-Non-certified personnel.

3-Either.

An open-ended statement asking for any comments regarding the kinds of tasks teacher aides can most effectively help teachers with was included at the end of the questionnaire. These comments were summarized in chapter IV.

The responses on the TDF were transferred to an IBM scoring sheet. This task was accomplished by only one person as a safeguard against errors in coding and grouping. The data from the IBM scoring were placed into the computer for analysis.

Statistical Analysis

Phase One

The data were analyzed by use of frequency distribution tables and application of the chi square statistical test for significance. Responses from the five referent groups were placed in frequency distribution tables. Chi squares were run for each task using all referent groups.

If there was general agreement among the five groups, the chi square was not significant; but if they did not agree, the chi square was statistically significant. When this occurred the tables were examined to determine the point of disagreement. If the point of disagreement was not apparent, post hoc analysis of that individual task was run.

The preceding analysis was used in exploring the following problems.

Major Problem

What tasks will building principals, teachers, teacher aides, college instructors and experts agree are tasks only a person certified to teach can do?

Secondary Problems

1. On what tasks is there disagreement among the five referent groups with respect to the appropriate role of the teachers?
2. Do teachers who have had experience with team-teaching identify fewer tasks only a teacher can do?
3. Do teachers who have had experience with teacher aides identify fewer tasks only a teacher can do?
4. What if any relationship is there between age and identification of the tasks only a teacher can do?
5. Is there any relationship between years of teaching experience and identification of tasks only a teacher can do?
6. Do teacher aides identify fewer or more tasks which only a teacher can do than teachers?
7. Is there any relationship between the aide's perception of his role and his level of schooling?
8. Is there any relationship between sex and task identification?
9. Is there any relationship between grade level taught and identification of tasks?

Phase Two

The second step in the analysis was a summarization of the comments written in answer to the open-ended statement at the

end of the questionnaire. No conclusions were drawn from these data but they were used only for comparative and descriptive purposes.

Phase Three

The third step was an analysis of the data in the second column of the instrument in an effort to answer this question:

10. On what tasks, if any, is there agreement that the task can be done by devices substituted for teachers?

The method of analysis was frequency distribution and chi square, as had been done for the preceding data.

Summary

This chapter has given an explanation of the procedures used to obtain and analyze the data. The method of obtaining, and a description of the sample was given. The instrument was discussed and the basis for its validity and reliability given. The steps used for follow-up of unreturned questionnaires was enumerated. Scoring procedures and the statistical method used were explained.

Chapter IV will be devoted to an analysis of these data.

CHAPTER IV

ANALYSIS OF DATA

The delineation of the role of a certified teacher and the implicit role for auxiliary personnel was the major relationship analyzed in this study. The identification of tasks which can be done by only a certified teacher served as a basis for the role delineation. Each task was judged by respondents on a five point scale to indicate the degree to which he felt the task belonged in the realm of teaching tasks.

The Task Discrimination Form (TDF) was administered to five referent groups. The method of selecting these groups was outlined in chapter III. The groups included were teacher aides, teachers, principals, college instructors, and nationally recognized experts. The nationally recognized experts selected included a research specialist for a private foundation, a director of extension for a major university who was the director of an experimental auxiliary personnel program, a central office administrator of a large city system who has written training manuals and such for auxiliary programs, an expert in the field of reading, a leader in

teacher education, three major psychologists, head of a state department of instruction, directors of three auxiliary personnel demonstration projects, a national officer of a teachers' organization, one of the major authors in the area of the use of auxiliary personnel in the helping professions, a research assistant for a college of education, two deans of schools of education, and an expert in learning theory. The reader may refer to the Appendices for a list of the experts. The criteria used for selecting the experts were outlined in chapter III.

The major question to be investigated concerned what tasks building principals, teachers, teacher aides, college instructors, and national experts agree are tasks only a person certified to teach can do.

A contingency table was computed for each item on the Task Discrimination Form to facilitate the analysis of data (see Figure 4.1). The information supplied on a contingency table is shown by examining the sample of responses for one group to one task concerning one variable.

Figure 4.1 represents only the data from one group (Teacher Aides) for one task (conducting opening period of day). There were five groups responding to each task. This meant five sections, such as Figure 4.1, for each task. There were ten

Figure 4.1. -- Analysis of contingency table (sample section)

		Code					Total	Mean	Standard Devia- tion
		Strongly believe	Only certified can do	Uncertain	Not certified can do	Strongly believe			
Variable (Down): Group (Aides)		1	2	3	4	5	6		
(5 point scale marked by the respondent to determine degree of belief as to whether the task is a "teacher only" task or not)									
Frequency		3.00	8.00	1.00	31.00	6.00	49.00	3.59	1.10
Percent Across		6.12	16.33	2.04	63.27	12.24	100.00		
Percent Down		18.75	17.39	25.00	45.59	35.29	32.45		
Percent of Total		1.99	5.30	0.66	20.53	3.97	32.45		
Theoretical Frequency		5.19	14.93	1.30	22.07	5.52			
Cell Chi Square		0.93	3.21	0.07	3.62	0.04			

different variables examined for each task. This resulted in a minimum of fifty sections such as Figure 4.1 for each task. In addition to this the data from the five groups were totalled for each task and for each variable.

The frequency on the sample shows that three teacher aides believed strongly only a person certified to teach can conduct opening periods, eight teacher aides believed (but not strongly) only a person certified to teach can do this, one aide was uncertain, thirty-one aides believed a person not certified to teach can conduct opening periods, and six aides believed strongly a person not certified to teach can conduct opening periods. This frequency distribution was computed for all groups.

The percent across category on the Figure shows the percentage of aides marking that column. For example, it is easy to see that over half or 63.27 percent of the aides believed that a person not certified to teach can conduct opening periods, and 12.24 percent believed strongly other than a certificated person could perform this task. It then is easy to see that over 75 percent of the aides believed that this task was not a teacher task.

The percent down represents the aides' percentage of responses when all five groups are included. Thus it is possible to see that of all the responses to this task for this variable, the aides

represent 25 percent of the respondents from all groups marking the uncertain category. If this is correct, it is possible to conclude that for all groups only four respondents marked the uncertain category. Examination of additional data proves this correct.

The percent of the total indicates the percentage of responses for all groups, all columns combined. Since 20.53 percent of all responses are represented by the 31 aides marking column four, the total responses should be approximately 150. Examination of the totals proves this to be true.

The theoretical frequency indicates the distribution that theoretically should occur if the distribution were normal.

The cell chi square shows the relationship between the observed frequency and the theoretical frequency. The chi square indicates whether the disagreement is statistically significant. The degrees of freedom must be considered in determining significance.

The mean response for each group is given, and the standard deviation. The mean response and the standard deviation are also given in the totals for all groups. The mean response for the aides to task 51A is given as 3.59. The mean response for all groups to task 51A was 3.16. It is apparent that the mean for the aides is somewhat greater. This indicates that when compared to the total of all groups, they believe somewhat more strongly that

conducting opening periods can be done by a person not certified to teach.

In addition to the information given for each group as indicated in Figure 4.1, a total for all groups was computed. The pertinent totals were the chi square for all groups, and the mean for all groups. The chi square indicated the significance of disagreement among the groups and the mean was used as a criterion for placing it in the "teacher only" category or leaving it in the "noncertified personnel" category.

The first criterion used to select those tasks appropriate to a certificated person was the mean for all referent groups on that specific task. If the mean was 2.00 or less, the task was considered a task for certificated personnel. The rationale for using 2.00 was to allow a closer examination of tasks near the teacher end of the continuum and to guard somewhat against excluding tasks which were borderline. The use of the 2.00 mean meant that if even one-half of all respondents indicated that they believed the task could be done by only a certificated person, and there was not significant disagreement among the groups, the task was placed in that category.

The second criterion used to discover teacher tasks was the chi square statistic. Chi square analysis was used as a test for homogeneity. If the chi square was significant at the .01 level, the

null hypothesis could be rejected. In other words there was disagreement among the groups at that level. Conversely, if the chi square was not statistically significant at that level, the null hypothesis was not rejected. A nonsignificant chi square did not establish perfect agreement but rather that any disagreement was not significant at the .01 level of rejection. Thus the task was included as a "teacher only" task.

The .01 level of significance was used to gain finer discrimination. The .05 level was not satisfactorily discriminatory. The data revealed a significant chi square for most tasks when the .05 level was used. Since some nonsignificant chi squares were necessary to establish any points of discrimination, the .01 level was chosen. Admittedly this is a high level for social science research, but the results should be more meaningful. An alternative would have been to use the .05 and look for nonsignificant chi squares when using only four or three referent groups. However, this was rejected because our original purpose was to investigate the possibility of agreement among all five groups; and if agreement on a task can be established, it would be more solidly established if agreed on by five rather than three groups.

Using these two criteria, the following tasks were identified as tasks which can be done only by certified personnel.

Table 4. 1. -- Teacher tasks using 2.00 mean

Task Number		Chi Squares (16 degrees of freedom)	Mean	Standard Deviation
16	Semester or yearly planning	25.986	1.38	0.81
32	Introducing math concept	25.473	1.61	0.94
60	Constructing tests	28.670	1.61	0.85
63	Set criteria for subjective tests	28.272	1.61	0.77
67	Parent conferences Re: discipline	20.452	1.72	1.02
68	Program research	27.041	1.96	1.22
70	Parent conferences Re: academic per- formances	30.720	1.62	0.98
72	Interpreting research	17.797	1.79	1.14
73	Evaluation of interns	15.052	1.59	0.99

$\chi^2 > 31$ necessary for significance at .01 level.

Tasks with chi square less than 31 necessary to indicate lack of disagreement (or agreement).

The five referent groups did not demonstrate significant disagreement at the .01 level in choosing the following tasks to be done by only a certificated person.

- 16. Do semester or yearly planning of formal curriculum
- 32. Introducing a math concept to a class
- 60. Constructing tests
- 63. Setting criteria for a subjective test
- 67. Conducting parent conferences at school in regard to discipline
- 68. Carrying on research in the school in regard to the effectiveness of a program
- 70. Conducting parent conferences at school in regard to academic performances
- 72. Interpreting research findings
- 73. Aiding in the evaluation of intern or student teachers

If only the criterion of a minimum of 2.00 is used, the following tasks can be added to "teacher only" tasks. Disregarding the chi square means disregarding the disagreement among the groups at this time. In other words, there was significant disagreement among the groups regarding these tasks but over half the responses were in the "believe strongly" and "believe only a certified person can do these tasks" categories. Since over half the total responses were in these two categories, the mean was 2.00 or under.

A closer examination of the tasks listed in Table 4.2 begins to give data for one of the secondary questions in the study. The question was designed to identify those tasks where there was disagreement among the referent groups with respect to the appropriate role of the teacher.

Table 4.2. -- Teacher tasks where disagreement among groups exists

Task Number		Chi Square (16 degrees of freedom)	Mean	Standard Deviation
12	Unit planning	38.518	1.54	0.88
14	Innovation of subject matter	47.710	1.71	0.89
17	Daily planning	43.865	1.64	1.01
18	Developing innovations in methods	45.396	1.55	0.86
19	Initiating curriculum change	48.200	1.33	0.78
22	Choosing instructional materials	39.446	1.63	0.92
23	Selecting methods	65.359	1.75	1.01
39	Choosing motivation techniques	61.490	1.73	0.98
61	Construction of grade scales	33.531	1.71	0.92

$\chi^2 > 31$ significant at .01 level.

When the mean response for each group was examined it was evident which group disagreed on each task in the previous list. These data may be found in Table 4.3.

Table 4.3. -- Group means for listed tasks

Task Number		Aide	Teacher	Principal	College Instructor	National Expert
12	Unit planning	1.75	1.33	1.47	1.26	2.27
14	Initiate innovations	1.81	1.70	1.68	1.37	2.18
17	Daily planning	1.89	1.35	1.44	1.41	2.64
18	Develop methods	1.52	1.38	1.58	1.48	2.45
19	Major changes in curriculum	1.39	1.15	1.26	1.22	2.18
22	Choosing materials	1.60	1.60	1.37	1.63	2.36
23	Presentation methods	1.96	1.49	1.58	1.54	2.82
39	Choosing motivation techniques	1.79	1.50	1.74	1.44	3.09
61	Construct grading scales	1.71	1.61	1.74	1.59	2.40

The group which was in obvious disagreement was the group of experts. Other than the experts there was apparently no significant disagreement among the groups. The aides tended to be a few points closer to the 2.00 mean but did not differ greatly from the other three (excluding experts).

It can be said then that, except for the experts, the groups did not disagree that the following tasks are also teacher tasks, when we use 2.00 for establishing significance.

- 12. Do unit planning
- 14. Initiating innovations in the structure of the subject matter
- 17. Daily planning for a subject (continuous)
- 18. Developing innovations in instructional methodology
- 19. Initiating major curriculum change
- 22. Choosing instructional materials on a long term basis
- 23. Selecting methods of presenting materials and lessons
- 39. Choosing appropriate motivational techniques
- 61. Constructing grading scales

When the arbitrary division point was moved to the 2.50 mean rather than the 2.00 mean, still more tasks were added to the teacher's role and it was possible to examine points of disagreement among the groups. By examining the tasks using a 2.50 mean it was possible to begin thinking of a possible task continuum such as was suggested in chapter I.

The five referent groups did not significantly disagree, at the .01 level of rejection, that the following tasks can be done by only a certificated person. This was when the mean was moved to 2.50 on a 5 point scale to increase the opportunity for further discrimination.

Table 4.4. -- "Teacher Only" tasks using 2.50 mean

Task Number		Chi Square (16 degrees of freedom)	Mean	Standard Deviation
25	Discipline expectations	21.013	2.02	1.24
27	Writing material	25.371	2.21	1.32
30	Grouping pupils	31.664	2.05	1.21
44	Enforcing routine	29.227	2.45	1.34
45	Reading groups	24.269	2.09	1.13
59	Correcting themes	11.915	2.45	1.18

$\chi^2 > 31$ significant at .01 level.

Using 2.50 as the mean to establish significance between tasks for certificated personnel and tasks for auxiliary personnel, the following items can be added to our previous list. There was no significant disagreement among the five referent groups, at the .01 level of rejection, that the following tasks could be done by only certificated personnel.

- 25. Setting discipline expectations
- 27. Writing programmed materials
- 30. Grouping pupils after diagnosis has been made
- 44. Enforcing classroom discipline
- 45. Making up daily assignment
- 59. Giving grades on the basis of a subjective test when the criteria are set

It was possible, when not looking for agreement among the groups, to disregard the chi square values. By comparing the group means it was possible to see the points of disagreement among the groups.

When this list is examined it seems apparent that the experts are the group which was most in disagreement. However, it is important to identify some other points. The aides tended to have a larger mean than the other three groups. The teachers tended to be the most conservative. Although these tendencies exist, the amount of disagreement among the four groups (excluding experts) was not significant at the .01 level.

Using a mean of 2.50 as the arbitrary point of significance, it was possible to say that, except for the experts, the groups did not significantly disagree that the following tasks are also teacher tasks.

- 3. Ordering instructional aids
- 10. Developing instructional aids
- 13. Planning for one day in one subject area
- 21. Choosing instructional materials on a day to day basis
- 24. Establishing classroom routine
- 26. Enforcing discipline
- 28. Diagnosing minor learning difficulties
- 29. Prescribing for correction of minor learning problems
- 34. Introducing a reading lesson
- 36. Teaching an art class
- 38. Conducting penmanship class
- 42. Individual counseling with pupil
- 62. Administering tests to evaluate in a subject area
- 65. Evaluating the citizenship of a pupil
- 66. Making home visitations to become aware of home needs

Table 4.5. -- Group means indicating points of disagreement among groups

Task Number		Aide	Teacher	Principal	College Instructor	National Expert
3	Ordering aids	2.69	1.74	2.63	2.74	3.91
10	Developing aids	2.54	1.85	2.37	2.11	3.45
13	Planning for one day in one subject area	2.56	1.96	1.74	1.81	3.18
21	Choosing instructional materials	2.38	2.04	1.95	1.85	3.27
24	Establish routine	2.15	1.92	1.79	1.89	2.82
26	Enforce discipline	2.67	2.04	2.42	2.42	3.18
28	Diagnose learning difficulties	2.40	1.96	2.53	2.07	3.36
29	Correct minor learning problems	1.98	1.87	2.16	1.88	3.00
34	Introduce reading lesson	2.69	1.60	1.74	1.70	2.73
36	Teach art class	2.17	2.40	2.26	1.96	3.64
38	Conduct penmanship class	2.40	2.28	2.00	2.56	3.27
42	Individual counseling	2.36	1.81	2.47	1.89	3.55
62	Administer tests	2.00	1.87	2.42	3.07	4.40
65	Evaluate citizenship	2.40	2.13	2.32	1.74	2.89
66	Make home visits	2.43	2.15	1.84	1.93	4.00

When the remaining tasks (those with a mean of over 2.50) were examined, there was not significant disagreement, at the .01 level of rejection, among the five groups regarding the following tasks. Since the 2.50 mean dichotomizes the responses into "teacher tasks" and "non-teacher tasks," these remaining tasks, with a mean of over 2.50 and no significant disagreement among the groups, would be "non-teacher tasks."

- 4. Shelving instructional materials
- 6. Adjusting classroom heat, light and other physical needs
- 7. Operating audio visual equipment
- 15. Carrying out short-term field trips in connection with class instruction
- 20. Participating in group planning in the classroom
- 31. Working with a group on drill of basic addition facts
- 37. Instructing a physical education class
- 40. Conducting spelling class
- 43. Enforcing classroom routine
- 48. Supervising recess
- 69. Acting as truant officer
- 71. Conducting after school interest groups, such as flower arranging, leather work, etc.

Another secondary question which had been asked originally was: "On what tasks, if any, is there agreement that the task can be done by devices substituted for teachers?" Using the preceding list of tasks, it was possible to look for agreement. This list was used because these tasks represented those which had no significant disagreement, at the .01 level, among all five groups and with a mean

greater than 2.50. In other words, these were "non-teacher" tasks and had the potential for being identified as a task which could be done by a device substituted for a teacher. This is not to say that there are not other tasks which would be designated as auxiliary tasks, but in those remaining cases there was significant disagreement among the groups as to whether the task was or was not a "non-teacher" task.

Table 4.6 gives the chi square, mean and degrees of freedom for those tasks which did not have significant disagreement and a mean greater than 2.50 (regarding teacher-nonteacher tasks). These data identified whether the task could be done by (1) machine; (2) noncertified personnel, and (3) either.

Task number 31 (working with a group on drill of basic addition facts) is the only one where there was significant disagreement. The group means for this task were as follows:

Aide	2.26
Teacher	2.21
Principal	2.18
College Instructor	2.46
Experts	2.88

A comparison of the means indicate the experts generally agree that this task could be done by either a non-certified person or a machine. According to the data, when using only the tasks where there is no

Table 4.6. -- Responses indicating whether the following non-teacher tasks could be done by machines, non-certified personnel, or either

Task Number		Chi Square	Mean	Degrees of Freedom	Chi Square*
4	Shelving materials	15.151	2.06	8	20.1
6	Adjusting heat, etc.	9.632	2.15	8	20.1
7	Operate audio visual equipment	18.971	2.08	8	20.1
15	Field trips	2.256	2.08	4	13.3
20	Group planning	9.224	2.05	4	13.3
31	Drill addition	24.647	2.31	8	20.1
37	Instruct physical education	3.207	2.13	4	13.3
40	Conduct spelling	3.347	2.18	4	13.3
43	Enforce routine	3.482	2.03	4	13.3
48	Supervise recess	2.748	2.05	4	13.3
69	Acting as truant officer	4.865	2.04	4	13.3
71	Conducting after school interest groups	2.249	2.03	4	13.3

*Chi square necessary for significance at .01 level given in last column.

significant disagreement among the group means for non-teacher tasks, task 31 is the only one which has one group indicating that it could be done by either a machine or a non-certified person. Again, the reader is reminded that as the remaining tasks were analyzed, more tasks, where there was significant disagreement on group means, had significant data indicating it could be done by either machine or non-certified personnel.

Since there was disagreement among the groups regarding the remaining tasks, it was necessary to more closely examine the mean for each group on each task. This information is given in Table 4.7.

By examining this table it is possible to establish where the groups disagree regarding "teacher only" or "non-teacher" tasks. The points of disagreement which are important to this study occur on tasks 11, 33, 46, and 56. On these tasks there is evidence that one or more groups see the task as one which only a certificated person can do. On task 11 the principals have a mean of 2.11. This would place it under the 2.50 criterion previously explained. The teachers and college instructors both have a 2.16 mean on task 33. The 1.89 mean on task 46 for the teacher group meets the criterion. On task 56 it is the teacher group again with a mean of 2.37, which would place it in the "teacher only" category.

Table 4.7. -- Group means for non-teacher tasks where significant disagreement existed

Task Number		Aide	Teacher
1	Decide seat arrangements	3.35	2.55
2	Prepare bulletin boards	4.10	3.92
5	Construct aids	3.46	3.79
8	Service equipment	3.49	3.85
9	Arrange furniture	4.04	3.54
11	Plan bulletin boards	3.60	2.67
33	Conduct reading class	3.46	2.16
35	Conduct "for fun" music lesson	3.54	3.06
41	Individual tutoring	3.63	3.09
46	Conduct reading groups	3.21	1.89
47	Supervise study time	3.73	3.43
49	Desk helping students	4.00	3.40
50	Writing lessons on board	3.81	3.43
51	Conduct opening period	3.59	2.89
52	Conduct drill on math	3.00	3.62
53	Lead intramural sports	3.00	2.96
54	Monitor class in machines	3.43	3.28
55	Carry on spelling drill	3.92	3.72
56	Correct themes	2.61	2.37
57	Correct arithmetic papers	4.02	3.63
58	Give grades on objective test when scale is set	3.45	3.28
64	Record grades on cards	3.92	3.49
74	Maintain pupil records (test scores, grades, health)	3.83	3.74

Table 4.7. -- Continued

Principal	College Instructor	National Experts	All Groups Combined	Mean for Machine; Non-certified Personnel; Either Responses
2.32	2.70	3.73	2.89	2.15
3.95	4.15	4.90	4.09	2.04
3.89	3.96	4.64	3.79	2.11
4.11	4.41	4.91	3.95	2.09
3.47	3.78	4.73	3.82	2.06
2.11	2.74	3.84	2.99	2.03
2.72	2.16	3.09	2.72	2.17
3.79	3.48	4.55	3.49	2.10
3.68	3.04	4.00	3.39	2.18
2.53	2.44	3.27	2.59	2.17
3.68	3.30	4.18	3.59	2.09
3.58	3.04	4.45	3.63	2.06
3.95	4.26	4.82	3.86	2.05
3.16	2.56	3.90	3.16	2.04
3.79	3.92	4.70	3.57	2.30
2.84	3.41	4.50	3.14	2.00
3.47	3.63	4.70	3.51	2.08
3.79	3.56	4.70	3.83	2.15
2.63	2.81	4.20	2.68	2.11
3.68	3.44	4.90	3.81	2.16
3.74	3.81	4.60	3.57	2.19
3.95	4.48	4.80	3.95	2.23
3.95	4.04	4.89	3.92	2.20

From this analysis it seemed that the above indicated groups would place these tasks in the category of "only a certificated person can do" when the 2.50 criterion was used.

- 11. Assuming responsibility for planning bulletin boards (principals 2.11)
- 33. Conducting a reading class (teachers and college instructors 2.16)
- 46. Conducting reading groups (teachers 1.89)
- 56. Correcting themes (teachers 2.37)

The remaining tasks would be "non-teacher" tasks as indicated by all groups.

When the data were examined in regard to whether the "non-teacher" tasks could be done by machines, non-certified personnel, or either, there was agreement on most tasks that it should be done by non-certified personnel. Tasks 41, 52, 64, and 74 were the only ones where significant disagreement occurred.

Task 41 (individual tutoring in subject areas) had a mean of 2.50 for the experts. One-half of the experts felt this task could be done by "either."

Task 52 (conducting drill on math facts) had a 2.50 mean for the experts and a 2.58 mean for the college instructors. This indicates that a significant number from these two groups believe the task could be done by "either."

Task 64 (recording grades on report cards) had a 2.54 mean for the college instructors.

Task 74 (maintaining pupil records, such as test scores, grades, health, etc.) had a 2.67 mean for the experts and a 2.42 mean for the college instructors.

Hence it was possible to say that one and in some cases two groups had one-half or more choosing "either" for the following tasks.

- 41. Individual tutoring in subject areas (experts)
- 52. Conducting drill on math facts (experts and college instructors)
- 64. Recording grades on report cards (college instructors)
- 74. Maintaining pupil records, such as test scores, grades and health (experts and college instructors)

This completes the analysis of the tasks with the group as the variable. It was possible to draw certain conclusions from the preceding data regarding tasks only certificated personnel can do and also which tasks can be done by either machines or non-certificated personnel. This discussion may be found in Chapter V of this study.

The major question, "What tasks will building principals, teachers, teacher aides, college instructors, and national experts agree are tasks only a person certified to teach can do?" and the

secondary questions, "On what tasks is there disagreement among the referent groups with respect to the appropriate role of the teachers?" and "On what tasks, if any, is there agreement that the task can be done by devices substituted for teachers?" have been analyzed. Now the other variables will be examined.

Do teacher aides identify fewer or more tasks which only a teacher can do than teachers? This was posited as a secondary question.

If the 2.00 and 2.50 means are arbitrarily set as points of division to increase discrimination on a task continuum, again the number of teacher tasks chosen by each group would be as follows.

Table 4.8. -- Number of tasks for teachers only

	2.00 Mean	2.50 Mean
Teachers	31	44
Aides	20	31

The data in Table 4.8 indicates that teachers did tend to see more tasks as "teacher only" tasks, while aides saw fewer tasks as "teacher only" functions.

Among the other variables examined was sex. The question was, "What, if any, relationship is there between sex and identification of tasks?"

The .10 statistical level of significance was chosen with an awareness of the possible pitfalls. There was a realization that this increases the chance for what is statistically termed a Type I error. However, the use of the .05 level in social science research is arbitrary, as pointed out by Barnes.¹

It should be noted that there is nothing sacred, other than custom, about the 1 and 5 per cent levels. There may be situations in which an individual is willing to operate at the 10 per cent level or more.

. . . deciding is contingent upon the nature of the risks, or values, which are involved.²

The nature of this study did not involve a high risk, since it was primarily exploratory in nature. It did not set out to accept or reject hypotheses, but to find differences. Certain subtle differences were evidenced when the .10 level was used. Perhaps these differences merit further consideration in a more tightly designed research study.

An examination of Table 4.9 shows a significant chi square, at the .10 level, for nine tasks. Of the nine tasks included, as significant at the .10 level, two had greater means for the male respondents while seven tasks had greater means for the female respondents.

¹Fred P. Barnes, Research for the Practitioner in Education (Washington, D.C.: National Department of Elementary School Principals, 1964), p. 80.

²Ibid.

The greater mean indicated that particular sex placed the task more nearly or more completely within the "non-teaching" category. The trend seemed to indicate the females were more willing for the non-certificated personnel to do certain tasks than the males were.

Table 4.9. -- Tasks with significant difference using sex as the variable

Task Number		Chi Square	Female	Male
8	Servicing equipment	9.606	3.83	(+) 4.35
15	Short-term field trips	10.163	(+) 2.87	2.45
26	Enforce discipline	10.135	(+) 2.51	2.18
35	Conduct "fun" music lesson	8.289	(+) 3.59	3.12
44	Enforce classroom discipline	8.525	(+) 2.56	2.06
47	Supervise study time	9.297	(+) 3.67	3.29
49	Desk helping students	16.947	(+) 3.81	3.00
51	Conduct opening period	16.801	(+) 3.35	2.50
62	Administer tests	7.835	2.30	(+) 2.59

$\chi^2 > 7.8$ significant at .10 level.

4 degrees of freedom.

A plus (+) indicates which sex has the larger mean.

Female
7+

Male
2+

Age was also examined as a variable. What, if any, relationship is there between age and identification of the tasks? For 32 degrees of freedom a chi square greater than 42.6 is necessary for significance at the .10 level. An examination of the tasks listed in Table 4.10 shows significant disagreement for eighteen tasks at the .10 level. A plus (+) was placed by the greatest mean for each task and a minus (-) by the lowest mean for each task. By totaling these it became easier to see where the higher means occurred and where the lower means occurred. The totals showed fourteen plus marks and two minus marks falling into the 21-40 year old age category, and six plus marks and seventeen minus marks falling into the 45-65 year old age category.

The plus or higher mean scores indicated a greater willingness for the task to be done by non-certificated personnel. A minus or lower mean score indicated less willingness for the performing of the task by a non-certificated person.

The data seemed to indicate the younger person tended to be more willing for certain tasks to be done by non-certificated personnel.

Is there any relationship between the perception of role and level of schooling? This question was also examined.

Table 4. 11. -- Tasks with significant difference using level of schooling as the variable

Task Number	Chi Square	Level of Schooling								
		Some High School	High School Graduate	Schooling Beyond High School	Some College	B. A.	Some Graduate Work	M. A.	Beyond M. A.	Ph. D.
7	69.517	(+) 4.70	4.25	4.29	4.06	(-) 3.85	4.17	4.00	4.36	4.50
9	72.118	(+) 4.46	3.94	3.43	4.06	3.25	3.77	(-) 3.17	3.81	3.25
10	61.282	(+) 2.96	2.44	(-) 1.43	2.83	1.58	2.09	1.67	2.25	2.50
11	58.312	3.46	3.63	3.00	(+) 3.72	2.46	2.74	(-) 2.25	2.61	3.00
21	53.803	(+) 2.92	2.27	(-) 1.29	2.29	2.08	2.14	1.91	1.97	2.00
23	59.637	(+) 2.33	2.07	(-) 1.00	1.89	1.46	1.73	1.33	1.54	1.75
24	76.594	(+) 2.58	1.73	(-) 1.00	2.61	2.08	2.13	1.33	1.86	2.00
33	67.422	2.92	3.38	(+) 3.86	3.33	2.82	(-) 2.08	2.27	2.29	2.67
34	58.882	2.54	2.31	(+) 3.00	2.56	1.77	1.73	1.67	(-) 1.64	2.00
46	70.609	3.17	2.94	(+) 3.57	3.11	1.92	2.19	(-) 1.67	2.44	2.00
47	64.831	3.92	3.69	3.57	(+) 3.94	3.46	3.27	(-) 3.17	3.53	3.50
48	55.873	4.33	4.06	(-) 3.86	3.89	4.00	4.18	4.25	4.17	(+) 4.50
49	60.531	3.96	(+) 4.06	3.57	4.00	4.00	3.32	3.25	3.31	(-) 2.75
51	57.561	3.33	3.81	2.57	(+) 4.06	3.58	2.73	3.08	2.67	(-) 2.25
52	65.991	(+) 3.92	2.88	(-) 2.29	3.18	3.42	3.86	3.64	3.91	3.75
53	63.707	(+) 3.57	2.69	(-) 2.00	3.50	2.62	3.18	2.92	3.36	3.00
55	70.276	(+) 4.13	3.81	3.71	4.06	4.08	3.77	3.42	3.75	(-) 2.75
57	83.857	(+) 4.42	4.25	3.86	3.94	3.75	3.41	3.67	3.58	(-) 2.75
62	61.512	2.96	2.00	(-) 1.14	2.22	1.75	2.14	2.00	2.78	(+) 3.50
71	53.926	(+) 4.35	3.75	(-) 2.71	3.72	3.77	4.05	3.67	4.08	4.25
Number + and - in each category		11+	1+	3+	3+	0+	0+	0+	0+	2+
		0-	0-	9-	0-	1-	1-	4-	1-	4-
		18+				2+		11-		
		9-								

+ indicates highest mean score for that task
- indicates lowest mean score for that task

32 degrees of freedom
 $\chi^2 > 53.5$ necessary for significance at the .01 level

Table 4.11 shows twenty classroom tasks where disagreement occurred at the .01 statistical level. It was possible to determine some differences at the .01 statistical level for this variable. The respondents were divided into two groups for the purpose of discovering any trend that might exist. Those with some college or less schooling were placed into one group and those with a B.A. or more were placed into another group. The plus and minus were used to designate the highest and lowest mean. The group with less schooling had eighteen plus and nine minus while the group with a higher level of schooling had two plus and eleven minus.

The data suggest that those with a higher level of schooling see a more restricted role for the non-certificated. An exception here would be the national experts, who see a large role for auxiliary personnel.

Table 4.12 considers the answer to grade level taught as a variable. The .10 level of significance was used again to view any subtle differences. Using this level of significance twenty tasks showed disagreement. A plus was placed by the highest mean for each task and a minus by the lowest. The highest mean indicated that this task is more completely or nearly, as the case may be, within the area of tasks performed by non-certificated personnel. The frequency of plus or minus occurring at each grade level is shown.

Table 4. 12. -- Tasks with significant difference using grade level taught as the variable

Task Number	Chi Square	Grade Level Taught									
		K	1	2	3	4	5	6	7	8	Principal
4	55.581	4.45	4.00	3.86	4.18	3.75	3.89	(+) 4.50	(-) 3.33	4.00	4.34
5	48.738	4.03	4.17	(+) 4.29	3.68	3.00	3.44	3.71	3.67	(-) 2.00	3.91
7	54.865	4.57	4.50	(-) 3.86	4.14	3.88	4.00	4.15	4.00	(+) 5.00	4.36
13	54.710	(+) 2.52	(-) 1.50	2.00	2.45	2.38	2.22	2.46	2.33	2.00	1.81
14	55.963	1.90	1.67	2.00	2.05	1.88	1.44	1.36	(+) 2.67	(-) 1.00	1.52
15	49.718	2.96	2.17	2.57	3.00	2.63	2.83	(+) 3.29	2.67	(-) 2.00	2.53
21	66.727	2.62	(-) 1.80	2.00	2.38	1.88	2.06	2.23	(+) 2.67	2.00	1.95
23	54.669	2.21	1.67	1.57	1.81	1.50	(-) 1.44	1.64	(+) 3.00	2.00	1.58
35	51.950	(+) 3.83	2.50	3.14	3.77	2.75	3.39	3.21	3.33	(-) 2.00	3.61
47	47.903	3.79	3.33	3.43	3.86	(-) 3.25	3.56	3.43	(+) 4.00	(+) 4.00	3.45
50	67.406	4.14	(-) 2.17	3.43	3.73	3.75	3.78	3.57	4.00	4.00	(+) 4.18
51	53.946	3.21	(-) 1.83	3.00	(+) 4.24	3.25	3.33	2.93	3.33	2.00	2.82
52	62.299	3.66	3.40	3.29	3.38	(-) 3.00	3.17	3.86	3.33	(+) 4.00	3.84
54	51.602	3.66	3.33	3.14	3.23	3.29	3.50	(+) 3.93	3.33	(-) 2.00	3.59
56	51.566	2.90	(-) 1.33	2.00	(+) 3.29	2.50	2.17	2.57	2.67	2.00	2.84
57	48.961	(+) 4.34	(-) 3.17	3.86	4.05	3.75	3.61	3.86	4.00	4.00	3.50
58	53.607	3.79	(-) 3.00	3.29	3.64	3.25	3.11	3.50	3.33	(+) 4.00	3.80
62	56.273	(+) 2.86	1.67	2.29	2.19	1.88	1.83	1.57	2.00	(-) 1.00	2.84
64	55.067	4.10	3.50	(+) 4.29	(-) 3.14	4.00	3.94	3.93	4.00	4.00	4.25
72	63.054	1.93	2.50	1.71	1.90	(-) 1.38	1.50	1.57	3.33	(+) 5.00	1.64
Number of + and - in each category		4+ 0-	0+ 7-	2+ 1-	2+ 1-	0+ 3-	0+ 1-	3+ 0-	4+ 1-	5+ 6-	1+ 0-
		8+ 12-				13+ 8-					

+ indicates highest mean score for that task

- indicates lowest mean score for that task

36 degrees of freedom

 $\chi^2 > 47.2$ necessary for significance at the .10 level

Any trend was slight as eight plus and twelve minus were found for K-4 grade levels and thirteen plus and eight minus were found for 5-8 and the principal categories.

Indications from the data were that upper grade teachers see a somewhat larger role for non-certificated personnel. Kindergarten and grade eight seem to be exceptions.

Is there any relationship between years of experience and identification of the tasks? This was positted as a secondary question.

Table 4.13 is a sample of the data collected for this variable. There was significant disagreement on six of the classroom tasks at the .10 level. Again the plus and minus were used to designate the greatest and the least mean for each task. These were then compiled in order to have a composite picture. It was of interest to note that four plus and zero minus were found for those with one to six years of experience. For the years of experience from seven to fifteen a leveling trend appears with zero plus and one minus occurring. Three plus and five minus occurred for the sixteen to twenty-eight year category.

There seems to be a slight trend for those with less than six years of experience to see certain tasks more completely within the role of non-certificated personnel than the other levels of experience.

Table 4. 13. -- Tasks with significant difference using years of experience as the variable

Task Number	Chi Square	Years of Experience									
		1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28+
1	63.778	(+) 3.33	3.25	2.29	2.00	3.31	2.78	2.33	3.00	2.11	(-) 1.93
2	51.181	4.30	3.75	4.14	3.77	4.08	(+) 4.33	3.83	3.75	3.88	(-) 3.62
6	67.648	4.34	(+) 4.38	(-) 3.57	4.31	4.15	4.22	4.17	4.25	4.14	3.93
11	52.408	(+) 3.40	3.25	3.14	2.38	3.08	2.89	2.83	(-) 1.50	2.22	2.21
38	48.179	2.57	2.25	2.00	2.33	2.54	(+) 2.67	2.33	(-) 1.25	(+) 2.67	1.86
64	50.102	4.11	(+) 4.50	3.71	3.58	4.31	3.78	3.67	(-) 3.25	3.44	3.64
Number of + and - in each category		2+ 0-	2+ 0-	0+ 1-	0+ 0-	0+ 0-	2+ 0-	0+ 0-	0+ 3-	1+ 0-	0+ 2-
		4+ 0-		0+ 1-					3+ 5-		

+ indicates highest mean score for that task
- indicates lowest mean score for that task

36 degrees of freedom
 $\chi^2 > 47.2$ necessary for significance at the .10 level

The experience of the respondents with aides and/or team-teaching merited consideration. Do teachers who have had experience with teacher aides and/or team-teaching identify fewer tasks which only a teacher can do? Table 4.14 gives this information using 2.00 and 2.50 as the arbitrary points of discrimination.

Table 4.14. -- Types of experience by the respondents

Respondents Who Had Had	Teacher Only Tasks Using	
	2.00 Mean	2.50 Mean
Experience with Teacher Aides	23	41
Experience with Team-Teaching	31	41
Experience with Neither	23	39

The differences among the three categories was slight. All three totals were within a two point spread, which seems to indicate these two types of experience affected their perception of the teacher's role very little, if at all.

Summary of Written Comments from Respondents

An opportunity was provided for the respondents to write any comments they might feel were important.

Perhaps the most striking thing about the comments written by the aides was the general positive view of their job and its importance. Many of them expressed "thanks" for someone being interested in their opinion. The comments written by the aides are summarized as follows:

- a. Aides can help with the many clerical details but they want to be more than someone who does the tasks the teacher doesn't care to do.
- b. The most common area of help mentioned was working with small groups and individuals.
- c. Aides felt cheated and abused when they did "baby-sitting" so the teacher could take a coffee break.
- d. A number of aides felt they could make a real contribution in bringing the community and the teacher closer together.
- e. There was evidence of a communication problem. The aides didn't know exactly what they were to do, and they felt the teachers lacked understanding of them. Some teachers receive the same information in a workshop as the aide receives.
- f. Some aides admitted doing most of the tasks listed on the questionnaire at one time or another. Many expressed confidence they could do many more tasks if they were given some training.
- g. Reading was the subject area mentioned most as the area where they could be the most help.
- h. The teacher should ask the aide to help rather than waiting for the aide to do something on her own. A few felt this would help ease the resentment some teachers have toward an aide.
- i. Personality and attitude were stressed as being very important.

Teachers, generally, were positive in their comments. However, many of them qualified their comments concerning how well their aide performed by saying, "My aide is unusual." A few comments were vehement in their opposition to the use of aides. The reaction seemed to be against the "system" rather than the aide. They felt someone was not giving them a fair deal so compensated by allowing them to have an aide.

In summary the teachers' comments were as follows:

- a. Used mostly for clerical duties, helping individuals, and working with slow groups.
- b. Aides are a "stopgap," an excuse for not lowering class size.
- c. Reading was mentioned most as the subject area where they could be used.
- d. Often the aides are treated as "essentially equal in major and minor tasks."
- e. Flexibility is the best approach.
- f. Teachers and aides need training.
- g. Aides are invaluable in developing rapport with some ethnic groups.
- h. Aides should not be asked to check all the papers. It numbs the aide and the teacher loses touch with the child's problems.
- i. Aides are appreciated.
- j. One felt certification is no criterion for teaching ability and another person felt it was very necessary.

- k. Aides can do everything but "unit and lesson planning and the direct teaching thereof."
- l. Aides should be able to handle class unexpectedly if the teacher is called out for an emergency.

The principals were probably more positive than any group. Such phrases as "most pleased," "superior," "very unusual," "most helpful," "every teacher should have one!" were used to describe the aides in their building.

Principals tend to see the aide functioning in the following way:

- a. Helping with remedial work.
- b. Enforcing discipline.
- c. The most important thing is "the aide as a person."
- d. The training provided within the building was felt to be crucial.
- e. Can be used for supervision, group work, individual help, clerical, and routine duties.

College instructors were, as could be expected, much concerned with training and selection. There was some disagreement with using certification as a criterion. Some felt that some of our best teachers are uncertified. The outstanding performer in music and art, and the textbook writer were examples given of people who might do an excellent job of teaching but are not certified.

A summary of their comments is given below.

- a. Aides can and should do routine and clerical tasks.
- b. Aides can supervise lunch periods.
- c. Aides permit learning to occur in a crowded classroom but "hinder the interpersonal relationship between teacher and child."
- d. Other variables should be considered such as: personality and maturity of aide, setting and needs of students, ability of supervisor to analyze task, interpret and train aide.
- e. Aides can "help with everything except analysis and diagnosis."
- f. Their use depends on training and supervision.

Summary

The major question asked in this study was, "What tasks will building principals, teachers, teacher aides, college instructors, and national experts agree are tasks only a person certified to teach can do?"

Using the 2.50 mean as the line of demarcation, the data revealed no significant disagreement, at the .01 level, among the five groups for these tasks. Thus the following tasks seem appropriate to certified teachers.

- *16. Do semester or yearly planning of formal curriculum
- 25. Setting discipline expectations
- 27. Writing programmed materials
- 30. Grouping pupils after diagnosis has been made
- *32. Introducing a math concept to a class
- 44. Enforcing classroom discipline

- 45. Making up daily assignment
- 59. Giving grades on the basis of a subjective test when the criteria are set
- *60. Constructing tests
- *63. Setting criteria for a subjective test
- *67. Conducting parent conferences at school in regard to discipline
- *68. Carrying on research in the school in regard to the effectiveness of a program
- *70. Conducting parent conferences at school in regard to academic performances
- *72. Interpreting research findings
- *73. Aiding in the evaluation of intern or student teachers

* denotes no significant disagreement using the 2.00 mean for demarcation--i. e. more highly differentiated tasks.

On what tasks is there disagreement among the referent groups with respect to the appropriate role of the teacher?

The data showed the experts disagreeing with the other groups on tasks 12 (do unit planning), 14 (initiating innovations in the structure of the subject matter), 17 (daily planning for a subject), 18 (developing innovations in instructional methodology), 19 (initiating major curriculum change), 22 (choosing instructional materials on a day to day basis), 23 (selecting methods of presenting materials and lesson), 39 (choosing appropriate motivational techniques), and 61 (constructing grading scales). The other four groups would identify these as teacher tasks, using the 2.00 mean as the line of demarcation.

Do teachers who have had experience with team-teaching identify fewer tasks which only a teacher can do?

Do teachers who have had experience working with teacher aides identify fewer tasks which only a teacher can do?

There was a two-task difference in identification for teachers with these experiences or without either experience. Teachers with neither type of experience identified 39 tasks while the other two groups each identified 41 "teacher only" tasks.

What if any relationship is there between age and identification of tasks?

The data did seem to indicate some discrimination by age. The 21-25 year old age group seemed the most willing to have the non-certificated person perform certain classroom tasks. The 56-65 year old group seemed extremely reluctant to have certain tasks performed by non-certificated personnel when compared with other age groups. Generally it can be stated that the data revealed the younger person somewhat more willing to have fewer tasks labelled "teacher only" tasks, and, conversely, more tasks within the role of non-certificated personnel.

Is there any relationship between years of experience and identification of tasks?

A trend seemed to be indicated by the data. The respondents with fewer years of experience had greater means, which indicated more willingness to place the identified tasks within the

role of the non-certificated person. The group with less than six years of experience saw the role of a teacher more narrowly than any other group. The period of seven to eighteen years seemed to be a rather neutral time, with no strong indication either way. However, from nineteen years to twenty-four years of experience the trend seemed to indicate some resistance to certain tasks being performed by non-certificated personnel.

Do teacher aides identify fewer or more tasks which only a teacher can do than teachers?

Using a 2.50 mean as a line of demarcation, the teachers identified 44 tasks as "only certificated personnel" tasks, and the teacher aides identified 31 tasks for "only certificated personnel." The data indicated that teachers saw more tasks as "teacher only" tasks while aides saw fewer tasks as being done by only teachers.

Is there any relationship between the perception of role and the level of schooling?

The relationship between level of schooling and role perception yielded some apparently significant data. Twenty tasks indicated disagreement among the groups at the .01 level. The differences were apparent at the .01 level, which lessens the chance for error. The trend was for the groups with a lower level of schooling to judge the tasks more nearly or completely within the role of non-certificated personnel. Groups with a higher level of education

judged the tasks more nearly or completely within the role of the teacher. The nationally recognized experts were an exception, since they saw an expanded role for auxiliary personnel.

What relationship is there between sex and identification of tasks?

When the responses of men and women were compared, the data revealed the women with a greater number of high means. The women seemed to see the teacher's role in a somewhat more restricted sense than men. In other words, the women would apparently favor non-certificated personnel doing more classroom tasks than would men.

What if any relationship is there between grade level taught and identification of tasks?

There were twenty tasks with significant disagreement at the .10 level. However, trends were hard to ascertain from examining the data. There was some indication that the upper grades tend to see more tasks done by non-certificated personnel. Exceptions to this would be the kindergarten group, which favored an expanded role for non-certificated, and the eighth grade group, which saw the role for the non-certified in a more restricted fashion.

On what tasks, if any, is there agreement that the task can be done by devices substituted for teachers?

From the data, it was possible to say that one and in some cases two groups had a significant number choosing "either non-certified personnel or machine" for the following tasks.

- 31. Working with a group on drill of basic addition facts
- 41. Individual tutoring in subject areas
- 52. Conducting drill on math facts
- 64. Recording grades on report cards
- 74. Maintaining pupil records, such as test scores, grades, health, etc.

The written comments were generally positive in nature. There were many indications of a need and desire for training of all concerned and a more clearly defined role for auxiliary personnel. There was general agreement that clerical work can definitely be done by auxiliary personnel and they can also be of help in areas such as reading, art, music, and physical education.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

The purpose of this study, as stated previously, was to more clearly and completely delimit the role of a fully certificated teacher. By doing this it was hoped that the study would

1. provide a rationale for the development of support teams of auxiliary personnel;
2. facilitate the evolution of a teacher who would be able to utilize his education to a near maximum;
3. give some general direction to administrative restructuring in regard to the effects of using auxiliary personnel;
4. give further direction to teacher education and training programs for auxiliary personnel.

Certain questions were established which, if data could be collected, would give added information for these stated purposes. Classroom tasks were identified as the indicators which could hopefully be placed on a continuum of tasks. The continuum might then be used as a basic construct for further refinement of the educative process. It was decided that the four performance groups most

affected (aides, teachers, principals, and college instructors) should be asked for their perceptions concerning identification of "teacher only" tasks. Responses from nationally recognized experts were also used as a benchmark, and to give perspective to the investigation.

The major question asked in this study was, "What tasks will teachers, aides, principals, college instructors, and national experts agree can be done by only a person certificated to teach?" If this question could be answered, a beginning could be made toward establishing the certificated personnel end of the task continuum.

This study was not typical because it did not endeavor to accept or reject a basic hypothesis, but rather to discriminate among classroom tasks by responses from the identified groups. Because of this statistics were viewed as a tool to show some differences if there were any statistically visible. No one statistical level was viewed as the absolute for the entire study.

Chi square was used as a test for homogeneity when the comparison of responses from the various groups was examined. This meant that using a higher statistical level for finding disagreement actually meant a lower degree of agreement.

The .01 level was used to identify tasks where there was lack of disagreement because the .05 level did not show lack of

disagreement among most of the tasks. Since our purpose was to discriminate among the tasks if possible, and the .05 level did not discriminate, the .01 level was used.

The 2.00 mean and the 2.50 mean were arbitrarily set as division points on the task continuum. Using the 2.00 mean as the division point and lack of disagreement among the five groups, at the .01 level, as the criteria, the following tasks were identified for the "teacher only" end of the continuum.

2.00 mean

- 16. Do semester or yearly planning of formal curriculum
- 32. Introducing a math concept to a class
- 60. Constructing tests
- 63. Setting criteria for a subjective test
- 67. Conducting parent conferences at school in regard to discipline
- 68. Carrying on research in the school in regard to the effectiveness of a program
- 70. Conducting parent conferences at school in regard to academic performances
- 72. Interpreting research findings
- 73. Aiding in the evaluation of intern or student teachers

A secondary question concerned points of disagreement on task identification among the five groups. When the data were examined they revealed that the nationally recognized experts were most often in disagreement with the other groups. All the groups, except the national experts, agree that the following tasks should also

be "teacher only" tasks. If the task continuum is considered again, these tasks would be placed next on the continuum.

The tasks were:

2.00 mean -- (all groups agreed except the experts)

- 12. Do unit planning
- 14. Initiating innovations in the structure of the subject matter
- 17. Daily planning for a subject (continuous)
- 18. Developing innovations in instructional methodology
- 19. Initiating major curriculum change
- 22. Choosing instructional materials on a long term basis
- 23. Selecting methods of presenting materials and lessons
- 39. Choosing appropriate motivational techniques
- 61. Constructing grading scales

When the 2.50 mean and lack of disagreement among all five groups were used as the criteria, the following tasks were identified.

2.50 mean

- 25. Setting discipline expectations
- 27. Writing programmed materials
- 30. Grouping pupils after diagnosis has been made
- 44. Enforcing classroom discipline
- 45. Making up daily assignment
- 59. Giving grades on the basis of a subjective test when the criteria are set

Using a mean of 2.50 as the arbitrary point of significance it was possible to say that, except for the experts, the groups did not significantly disagree that the following tasks are also teacher tasks.

2.50 mean -- (all groups except experts agreed)

- 3. Ordering instructional aids
- 10. Developing instructional aids
- 13. Planning for one day in one subject area
- 21. Choosing instructional materials on a day to day basis
- 24. Establishing classroom routine
- 26. Enforcing discipline
- 28. Diagnosing minor learning difficulties
- 29. Prescribing for correction of minor learning problems
- 34. Introducing a reading lesson
- 36. Teaching an art class
- 38. Conducting penmanship class
- 42. Individual counseling with pupil
- 62. Administering tests to evaluate in a subject area
- 65. Evaluating the citizenship of a pupil
- 66. Making home visitations to become aware of home needs

This gives a basic construct of tasks for the "teacher only" end of the continuum. Those tasks identified using the 2.50 mean could possibly be in the "office-code" (refer to Figure 1.1, Chapter I) section of the continuum. In other words, these tasks could possibly be assigned to well qualified auxiliary personnel.

Further examination of the data revealed that one group, and for one task, two groups place the following tasks in the category of "only a certificated person can do," when the 2.50 criterion is used.

- 11. Assuming responsibility for planning bulletin boards (principals 2.11)
- 33. Conducting a reading class (teachers 2.16 and college instructors 2.16)
- 46. Conducting reading groups (teachers 1.89)
- 56. Correcting themes (teachers 2.37)

The remaining tasks listed on the questionnaire were considered non-teacher tasks by all groups.

Another secondary question was, "Do teacher aides identify fewer or more tasks which only a teacher can do than teachers?" The data indicated that teachers did tend to see more tasks as "teacher only" tasks while aides saw fewer tasks as "teacher only" functions.

When sex was examined as a variable the trend was for the female to view the tasks as more nearly or completely within the non-certificated personnel category. Nine tasks had a significant chi square at the .10 level. The females had a higher mean response on seven tasks while the males were higher on two tasks. The data indicated that females tend to view auxiliary personnel as more able to perform certain tasks in the classroom than males do.

Another variable considered was the age of the respondents. When the data were examined significant disagreement at the .10 level was found for eighteen tasks. When the age groups were divided into two larger sections the trend seemed more clear. The forty to forty-five year old group was used as a division point. The totals showed the 21-40 year old age group with higher means on fourteen of the eighteen tasks. Apparently the younger person sees auxiliary personnel doing more tasks in the classroom.

The relationship between perception of role and level of schooling completed by the respondent was examined. The level of disagreement was higher when level of schooling completed by the respondent was examined than for any other variable. It was possible to discriminate at the .01 level of significance. Twenty classroom tasks showed disagreement among the various level of schooling groups. The groups which had some college or less schooling had higher means on eighteen of the tasks. The group with a B.A. or more was higher on only two tasks. The evidence suggests that respondents with less than a college degree tend to see auxiliary personnel doing more tasks in the classroom. The higher the level of schooling completed, the less likely the person will see auxiliary personnel competent for an expanded role. Nationally recognized experts were an exception. The experts saw an expanded role for auxiliary personnel.

Is there any relationship between grade level taught and perception of role? This question was examined. There was significant disagreement on twenty tasks at the .10 level. Although the respondents working in fifth through eighth grade had a higher mean on twelve of the twenty tasks, the trend was not strongly evident. For example, the kindergarten group had a relatively large number of high means when compared with the other individual groups, yet this does not follow the general trend as previously indicated.

The number of years of experience a respondent had had seemed to affect the way the tasks were judged. There were high means, which reflected a broader role for auxiliary personnel, for those with six years of experience or less. A leveling trend seemed to occur after seven years of experience until twenty years of experience. After twenty years of experience the respondent viewed the teacher's role expanded and a more narrow role for auxiliary personnel.

The identification of tasks seemed to be little affected by whether the respondent had had experience working with aides or in a team-teaching situation. Forty-one "teacher only" tasks were identified by those with experience with aides and forty-one "teacher only" tasks were also identified by those who had had experience in team-teaching. Thirty-nine tasks were identified by those who had had neither type of experience. Apparently these two types of experience do not greatly influence the perception of role.

It was hoped that some indication would be given concerning whether the "non-teacher" tasks could be done by non-certificated personnel or machines. Nearly all the non-teacher tasks were identified as being within the province of the non-certificated personnel. Various groups identified the following tasks as ones which could be done by either machines or non-certificated personnel.

- 31. Working with a group on drill of basic addition facts (college instructors and experts)
- 41. Individual tutoring in subject areas (experts)
- 52. Conducting drill on math facts (experts and college instructors)
- 64. Recording grades on report cards (college instructors)
- 74. Maintaining pupil records, such as test scores, grades, and health (experts and college instructors)

This list, while small, is indicative of the type of functions which have potential for being performed by machines if the need and opportunity presents itself.

The written comments were generally positive. This was true of all groups which responded.

Aides presented a good self-image in most cases. While they admitted they had done nearly all of the tasks listed on the questionnaire at one time or another, there was a feeling they should not do all of them. There was confusion concerning what the aide's role was supposed to be. Most aides resented doing only "baby-sitting" and menial tasks.

Teachers had mixed reactions. Most were positive about their experience with aides but usually left a psychological loophole by saying their aide was "exceptional." A few felt someone or "the system" was not treating them fairly so compensated by giving them an aide. Flexibility, a need for training, and the opportunity for community linkage were common threads of expression.

The principals were the most positive of any group in their view of the performance of auxiliary personnel. The one addition they provided was that training should be done within the building where the aide is assigned.

College instructors seemed concerned with training and selection. The instructors appeared to do more fence straddling than any other group. Generally they favored increased use of auxiliary personnel but when, how, and to what extent depended on numerous variables. The importance of the supervisor's ability to analyze and interpret tasks were mentioned as extremely important.

Conclusions

This study sought to establish a cornerstone for building a more efficient and relevant educative process by considering the potential for using auxiliary personnel. While the cornerstone has not been laid, perhaps it has broken the ground.

By looking specifically at classroom tasks it was possible to see some agreement on a group of tasks which might be done competently by only certificated personnel. It was recognized that there might be that one rare exception who could do it all without any schooling, but the emphasis here was on the rule. The degree of agreement, or lack of disagreement, was evidence that a common ground can be reached.

What areas were indicated to be considered as areas for only certificated personnel?

Agreement on the following tasks indicated a concern for keeping evaluation as an area for certificated personnel.

- 60. Constructing tests
- 63. Setting criteria for a subjective test
- 68. Carrying on research in the school in regard to the effectiveness of a program
- 72. Interpreting research findings

Planning the formal curriculum was considered an area for certificated personnel. This was indicated by task sixteen.

- 16. Do semester or yearly planning of formal curriculum

Although the distinction was not as clear, there was evidence that discipline is a function for certificated personnel. This did not follow some of the general comments written by the professionals. Task sixty-seven had agreement among all five groups.

- 67. Conducting parent conferences at school in regard to discipline

There was agreement among all five groups, when the 2.50 mean was used, that task twenty-five and forty-four were "teacher only" tasks.

- 25. Setting discipline expectations
- 44. Enforcing classroom discipline

This would reinforce task sixty-seven and the proposition that discipline can be done by certificated personnel only.

The introduction of new concepts should be accomplished by certificated personnel.

- 32. Introducing a math concept to a class

Teacher associations have indicated a desire and belief that teachers must control entrance to teaching. Agreement among all five groups on task seventy-three shows that classroom teachers are not alone in their opinion.

- 73. Aiding in the evaluation of intern or student teachers

To the extent that one can say the following tasks relate to interpreting classroom activities to parents, it can be concluded that interpretation of the classroom program to parents can be done by only certificated personnel.

- 67. Conducting parent conferences at school in regard to discipline
- 70. Conducting parent conferences at school in regard to academic performance

This gives the following areas which are the responsibility of only certificated personnel.

- a. Evaluation
- b. Planning
- c. Discipline
- d. Introducing new concepts
- e. Entrance to the profession
- f. Interpretation of program to parents

These were the areas where there was lack of disagreement among the five groups. Where disagreement occurred, the most pronounced variance was caused by the nationally recognized experts. The areas of disagreement seemed to be primarily:

- a. Innovation
- b. Selecting methods
- c. Choosing motivational techniques
- d. Short term planning

There was indication that only five tasks could be done by machines as well as non-certificated personnel. Although this seems like a small number, when the tasks are examined the implications for related tasks and the amount of man-hours which would be saved if done by machines gives added weight to this possibility. Briefly the areas are:

- a. Drill on basic facts
- b. Reports

It was possible to conclude from the data that sex, years of experience, age, level of schooling, and grade level taught are

variables of varying significance which should be considered when using auxiliary personnel in the classroom.

The differences indicated some preference for the female sex; personnel less than forty years of age; six years of experience or less; not a high level of schooling; and a slight preference for upper grades. There were some exceptions. These were only differences and should be interpreted as such. The study did not seek to accept or reject a hypothesis regarding these variables. Others may desire to do more extensive research in regard to the points of difference.

Aides saw fewer tasks as "teacher only" tasks than teachers. This could indicate a basic conservatism on the part of teachers, a lack of information for both parties, or the belief by the aides that their role is expanding. Whatever the case, it must be recognized and remembered when training programs are planned and in various interpersonal situations.

Implications

The implications of this study were considered with the original purposes of the study providing a framework for building a viable pattern of relationships. The implications were hopefully concerned with relevant change and not incarcerated in the dizzy arena of erudite self-delusion.

The review of literature implicitly, if not explicitly, provided a basis for the rationale of developing instructional support

teams. The need and potential for using auxiliary personnel was further reinforced by the written comments from the respondents. Teachers expressed a need for help. A variety of success experiences were related. The fact that some agreement on a group of tasks was accomplished seems to indicate that task differentiation and role delineation are not pipe dreams, but can become reality.

Perhaps the most potent anchor pin in the rationale for using auxiliary personnel is the linkage between the community and school. The written comments expressed the need for and limited success with using auxiliary personnel to gain rapport with the home. This seemed especially true for minority ethnic groups. Societal changes have begun to force the school out of the cocoon of complacency and into the torrent of neighborhood upheaval. If the teacher is to be a successful orchestrator of learning experiences, all the instruments must be heard. The establishment of a task continuum lends credence to the potential for building career ladders. This must be done if auxiliary personnel function with any degree of self-esteem. A dead end job may create petrified performers.

While care must be taken to guard against dead end jobs, proper recognition should be accorded each job level so the worker can retain his self-esteem should he choose to remain in that job slot.

The proper training and education of a teacher is a costly matter. Generally, a high level of instruction is provided the novice

but the valuable theoretical underpinnings are lost in the halocaust of classroom trivia and the necessity of survival. The data revealed a somewhat surprising amount of agreement that many tasks could be done by auxiliary personnel. Machines also hold a great deal of potential for permitting the teacher to make the maximum use of his education. It should be remembered that the use of ancillary personnel was not considered in this study and the tasks generally done by ancillary personnel were purposely deleted. If those tasks were included, the potential help for teachers becomes apparent. Perhaps then teachers could be primarily concerned with strategy development and less concerned with the technical aspects. The possibility would then exist for teachers to look more at the learning process and less at teaching.

Administrative restructuring would be necessary for the school system using auxiliary personnel extensively. The creation of additional levels of personnel would magnify the problems of communication. The hierarchy could easily become too sharp a pyramid. Master teachers would become integrally involved in procedural decision making. The administrator would be forced to become more than ever a catalyst for meaningful group interaction. There would be no time for the nuts and bolts operation. These functions would all be delegated. The administrator would liken his role to that of an architect, constantly designing better functional relationships.

Negotiations would increase in complexity; but as the variables increase, so do the possibilities for new vectors of change.

The administrator should be aware of such variables as sex, age, experience, level of schooling, and grade level taught when hiring new personnel and in making assignments. The data indicated some preference should normally be given to the younger female with a small degree of experience, teaching in the upper grades, and without advanced schooling when beginning a program using auxiliary personnel. This seems to imply that the older, more experienced, and better educated would need more intensive in-service training. Of course it should be remembered that what is true for a group is not necessarily true of each individual within the group.

Extreme care would be necessary in planning the in-service training. The data indicated neither experience working with aides nor experience in team-teaching greatly changed the perception of role. Perhaps the quality of experience is the crux of it.

It does seem evident from the data that some model for role differentiation could be established. Role specifications would provide more clearly defined functional performances which could then be more explicitly communicated to trainees and professionals.

There seems to be implied a need for a high level of openness and security on the part of all involved.

The approach to different groups should vary. For example, the data indicated that auxiliary personnel possess a reasonably positive feeling about their ability to perform an increasing share of classroom tasks. The aide sees his role expanding. On the other hand, teachers tend to see the aide's role in a more restricted fashion. The auxiliary must be controlled but not emaciated while the teacher needs illumination on the potential of using auxiliary personnel more extensively.

The desire and need for training to take place in the school setting was expressed often in the written comments. This would of course necessitate an open school laboratory.

As auxiliary personnel become an increasingly integral component of the educative process it is apparent teachers will be able to concentrate on the more complex functions. The metamorphosis within the public schools will force teacher education to have a highly selective focus.

Teacher education cannot afford to spend a great deal of time on clerical training, construction of instructional aids, material files, the use of audio-visual equipment, bulletin boards, and other similar activities. The primary areas of concern indicated by the data should be interpersonal relationships with students and adults, evaluation of the program in view of the dynamics of learning, and

a field approach to educational planning. The directed focus would permit a highly selective program at the college level. Because of the variety of public school programs evolving, the teacher's training must have the potential for individualization.

A new order of partnership between public schools and colleges will be necessary to integrate theory and practice. This partnership in providing experientially based training will enrich both programs. It will require two basic thrusts: (a) Certificated teachers must become more involved in guidance, screening, and training of prospective teachers. (b) College curricula must be flexible enough to enable the reversal of course sequence when necessary. For example, the educational methodology should come before the liberal arts course work because the methodology would be necessary for some auxiliary job levels.

This direction was indicated by the agreement among the groups that evaluation of externs should be done by certificated personnel. Also the entire structure of the maximum use of indigenous auxiliary personnel is predicated on the second major thrust given.

The training of teachers will be within a new construct of the university, public schools, and community colleges. Communication and liaison personnel will be a necessary ingredient for success.

Specific Recommendations

The implications give consideration toward some specific recommendations.

- A. An experimental training program should be established to determine the special training components needed for auxiliary personnel and the teachers working with them. This research should be cooperatively planned and evaluated by public school administrators, teachers, community college instructors, and university personnel. The effect on the learning process should be foremost in consideration.
- B. Community colleges and universities must plan together to enable ease in transfer of credit, and a more flexible policy on admission to allow the role of auxiliary personnel to develop.
- C. The educational, social, and economic results of the concentrated use of auxiliary and ancillary personnel in a controlled setting should be researched. The variables should be isolated when possible and their effect on changing attitudes, behavior, and life style determined.

Additional Questions for Study

- 1. What are the advantages of a teacher beginning his training as an auxiliary as opposed to the traditional route of four years on campus with one term of student teaching?
- 2. Is there a more efficient and meaningful way than task delineation to identify roles within the classroom?
- 3. How can we identify the intuitive person who can do high level tasks, and how do we make maximum use of him?
- 4. Why do the personnel with advanced schooling apparently have a more restricted view of the role of auxiliary personnel?

5. What are the financial implications when auxiliary personnel are added?
6. How can administrators best maintain a dynamic equilibrium within the educative framework and still constructively employ indigenous personnel with negative feelings about the school?

Hopefully this study has pointed to some differences, shown some areas of agreement, created new questions. Perhaps more was left unanswered than was asked originally. If so, some degree of success was reached.

BIBLIOGRAPHY

BIBLIOGRAPHY

Allen, Dwight W. "A Differentiated Staff: Putting Teaching Talent to Work." Occasional Papers. National Commission on Teacher Education and Professional Standards. Washington, D.C.: NEA, December, 1967.

American Association of School Administrators and Research Division. Educational Research Service Circular. Washington, D.C.: National Education Association, April, 1967.

Auxiliary School Personnel. National Commission on Teacher Education and Professional Standards. Washington, D.C.: NEA, 1967.

Barnes, Fred P. Research for the Practitioner in Education. Washington, D.C.: National Department of Elementary School Principals, 1964.

Bowman, Garda, and Gordon J. Klopff. New Careers and Roles in the American School. A Report Prepared for the Office of Economic Opportunity. New York: Bank Street College of Education, September, 1967.

Brenner, Marcella. "The School Technician--A New Career." Innovations for Time to Teach. Department of Classroom Teachers. Washington, D.C.: NEA, 1966.

Brunner, Cathrine. "A Lap to Sit On and Much More!" Childhood Education, XLIII (September, 1963).

Central Michigan University. Total List of Schools That Have Employed Teacher Aides Over a 12 Year Period. Mt. Pleasant, Michigan: Central Michigan University, 1964.

- Clement, Stanley L. "More Time for Teaching." National Association of Secondary School Principals Bulletin, December, 1962.
- Davies, Don. "Editorial." The National Elementary School Principal, 46: 4-5 (April, 1967).
- Deason, John. "What They Say About Teacher Aides." School Executive, December, 1957.
- Denmark, George W. "The Teacher and His Staff." National Education Association Journal, December, 1966.
- Esbenson, Thorward. "Should Teacher Aides Be More Than Clerks?" Phi Delta Kappan, Vol. 47, No. 5 (January, 1966).
- Faust, C. "Utilization of Teaching Resources in Secondary Schools." California Journal of Secondary Education, Vol. 32 (September, 1957).
- Fine, Sidney A. Guidelines for the Design of New Careers. A Staff Paper for the W. E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, September, 1967.
- Fund for the Advancement of Education. A Cooperative Study for the Better Utilization of Teacher Competencies. A Report Prepared by Central Michigan College, Mt. Pleasant, Michigan, 1955.
- Fund for the Advancement of Education. A Cooperative Study for the Better Utilization of Teacher Competencies. An Evaluation Report Prepared by an Outside Evaluating Committee, Central Michigan University, Mt. Pleasant, Michigan, 1958.
- Greenshields, M. J. "Big Timbers' Teacher-Helper Plan." The American School Board Journal, 104: 20 (1942).
- Journal of Teacher Education. "A Symposium: The Bay City, Michigan, Experiment--A Cooperative Study for the Better Utilization of Teacher Competencies." Journal of Teacher Education, 7: 100-152 (1956).
- Laux, Dean M. "A New Role for Teachers." Phi Delta Kappan, Vol. 46 (February, 1965).

- Pearl, Arthur, and Frank Riessman. New Careers for the Poor: The Nonprofessional in Human Services. New York: The Free Press, 1965.
- Riessman, Frank. New Careers, A Basic Strategy Against Poverty. A. Phillip Randolph Educational Fund, 1967.
- Savage, Wilbur. "Teacher Oriented Programs, A Venture into Team Teaching." Associated Public School Systems Yearbook, 1966.
- Scates, Douglas. "The Prior Meaning of Increases in Teaching Staff." Journal of Teacher Education, 7: 82-88 (1956).
- Scates, Douglas E., and Alice V. Yeomans. The Effect of Questionnaire Form on Course Requests of Employed Adults. Washington: American Council on Education, 1950.
- Schmitthausler, C. "Analysis of Programs Using Nonprofessional Teacher Helpers in Public Elementary School Classrooms." Unpublished Doctoral Dissertation, University of California, Berkeley, 1966.
- Shipp, Mary D. "Teacher Aides: A Survey." The National Elementary School Principal, May, 1967.
- Stafford, Curt. "Teacher Time Utilization with Teacher Aides." Journal of Educational Research, October, 1962.
- Steinberg, Sheldon S., and Eunice O. Shatz. "Junior Colleges and the New Careers Program." Junior College Journal, February, 1968.
- TAP. The Teacher Aide Program. A Project of the Model School Division of the Public Schools of the District of Columbia, Conducted by the Washington School of Psychiatry, August, 1967.
- TEPS Newsletter. National Commission on Teacher Education and Professional Standards. Volume 10, No. 3. Washington: National Education Association, January 15, 1967.
- The Classroom Teacher Speaks on His Supportive Staff. Report of the Classroom Teachers National Study Conference on

the Classroom Teacher and His Supportive Staff. Washington: National Education Association, November, 1966.

- Trump, J. L. "A Look Ahead in Secondary Education." National Association of Secondary School Principals Bulletin, 42: 5-15 (1958).
- Ussery, Wilfred T. A Speech Given as National Chairman of CORE, before the House Committee on Education and Labor, July 17, 1967.
- Walker, Helen M., and Joseph Leu. Statistical Inference. New York: Henry Holt and Company, 1953.
- Wirth, A. "A New Hierarchy for the Teaching Profession." Changing Education, 1: 3-5 (1967).

APPENDICES

APPENDIX A

LIST OF NATIONALLY RECOGNIZED EXPERTS INCLUDED IN THE STUDY

APPENDIX A

LIST OF NATIONALLY RECOGNIZED EXPERTS INCLUDED IN THE STUDY

It should be remembered that not all responded to the questionnaire.

Sidney A. Fine, Ph.D.
W. E. Upjohn Institute

Dr. Edsel Erickson
School of Education
Western Michigan University

Jack Ferver, Director
Center for Extension Programs
University of Wisconsin

Barry Greenberg
Research Assistant
Bank Street College of Education

Dr. Lee S. Shulman
Michigan State University

Dr. James G. Kelly
Department of Psychology
University of Michigan

Dr. Ben Bloom
School of Education
University of Chicago

Bruce Rosen
School of Education
Atlanta University-Georgia

Dr. Abraham H. Blum
Department of Educational
Psychology
University of Wisconsin

Clarence Olsen, Director
Volunteer Programs, Mott
Institute
Michigan State University

John Lindlof, Director
Auxiliary Demonstration Center
University of Maine

Mrs. Stella Zahn
Director of Training
New York City

Dr. Wilton Anderson
Board of Education
New York City

Dr. William Durr
Reading Specialist
Michigan State University

Dr. Jean M. Lepere
Teacher Education
Michigan State University

Dr. David T. Turney
Department of Education
George Peabody College

Milan Dady, Director
Auxiliary Personnel Demon-
stration Center
Morehead State University

Sumner M. Rosen, Ph.D.
New York University

Frank C. Emmerling
State Department of Instruction
Raleigh, North Carolina

Dr. Curtis Gear
School of Educational Psychol-
ogy
University of Wisconsin

Dr. Arthur Pearl
School of Education
University of Oregon

David Selden
Assistant to the President
American Federation of
Teachers

Mrs. Esther Wattenberg
University of Minnesota

APPENDIX B

QUESTIONNAIRE

TASK DISCRIMINATION FORM

(For K-6 Level)

The purpose of this questionnaire is to identify those tasks requiring a certified person and those which can be done by a non-certified person.

Consider each task listed below and indicate if you think it is or is not a task which can be done competently only by a person who is certified to teach. We are not concerned with the question of should in this questionnaire. For purposes of this study, "certified teacher" may be broadly enough interpreted to include other professional educators, for example principals, whose background includes certification and teaching experience.

It is assumed that when a task can be done by persons not certified to teach it would be performed under the supervision and guidance of a certified person, after training was given to the non-certified person.

When we speak of "devices substituting for teachers" we mean teaching machines and computer aided instruction and other such devices.

USE THE FOLLOWING CHOICES:

- A - I believe strongly only a person certified to teach can do this.
- B - I believe only a person certified to teach can do this.
- C - I am uncertain.
- D - I believe persons not certified to teach or devices substituting for teachers can do this.
- E - I believe strongly persons not certified to teach or devices substituting for teachers can do this.

- A - I believe strongly only a person certified to teach can do this.
 B - I believe only a person certified to teach can do this.
 C - I am uncertain.
 D - I believe persons not certified to teach or devices substituting for teachers can do this.
 E - I believe strongly persons not certified to teach or devices substituting for teachers can do this.

Can be done by machines
 Non-certified personnel
 Either

	A	B	C	D	E		1	2	3
49. Desk to desk helping of students						If you check box D or E, be sure to make a choice of box 1, 2, or 3.			
50. Writing lessons on the board (assignments, etc.)									
51. Conducting opening period of day (sharing, etc.)									
52. Conducting drill on math facts									
53. Leading intramural sports									
54. Monitoring a class which is using teaching machines						If you check box D or E, be sure to make a choice of box 1, 2, or 3.			
55. Carrying on a spelling drill									
56. Correcting themes									
57. Correcting arithmetic papers									
58. Giving grades on the basis of an objective test when the scale is set									

- Can be done by machines
Non-certified personnel
Either

[illegible]

- A - I believe strongly only a person certified to teach can do this.
- B - I believe only a person certified to teach can do this.
- C - I am uncertain.
- D - I believe persons not certified to teach or devices substituting for teachers can do this.
- E - I believe strongly persons not certified to teach or devices substituting for teachers can do this.

Can be done by machines
Non-certified personnel
Either

	A	B	C	D	E		1	2	3
69. Acting as truant officer						If you check box D or E, be sure to make a choice of box 1, 2, or 3.			
70. Conducting parent conferences at school in regard to academic performances									
71. Conducting after school interest groups, such as flower arranging, leather work, etc.									
72. Interpreting research findings									
73. Aiding in the evaluation of intern or student teachers									
74. Maintaining pupil records, such as test scores, grades, health, etc.									

*PLEASE CHECK TO BE SURE YOU HAVE MARKED 1, 2, OR 3 IN THE SECOND COLUMN FOR EACH TIME YOU CHOSE D OR E IN THE FIRST COLUMN.

PERSONAL INFORMATION FORM

1. Name _____
2. Age _____
3. School system or college _____
4. Grade level assignment _____
5. Years of experience _____

6. Have you had experience working with:

	Check One		Number of Years
(a) teacher aides	no ☐	yes ☐	___ years
(b) team-teaching	no ☐	yes ☐	___ years
(c) working as teacher aide	no ☐	yes ☐	___ years

7. What is the highest level of schooling you have completed?

- ☐ a. some high school
- ☐ b. high school graduate
- ☐ c. school beyond high school (e.g. business or trade)
- ☐ d. some college
- ☐ e. bachelor's degree
- ☐ f. some graduate work
- ☐ g. master's degree
- ☐ h. some graduate work beyond the masters

Please add any comments you have about the kinds of tasks teacher aides can most effectively help teachers with.

APPENDIX C

LETTER OF INTRODUCTION

462 S. Tuscola Road
R. R. #2
Bay City, Michigan 48706

May 8, 1968

Dear Colleague:

The recent interest and concern regarding the function of auxiliary personnel in the school has caused a re-examination of just which tasks require a fully certificated teacher. In an effort to answer this question we would greatly appreciate your cooperation in completing the enclosed questionnaire.

All the personal information is confidential.

Please answer each item carefully as each is pertinent to our study. The questionnaire takes approximately 20 minutes to complete.

Even though participation is voluntary, I believe you will agree this is an opportunity to help our profession move forward.

A brief summary of the study will be available for anyone who desires the information.

Place the questionnaire into the self addressed envelope and return directly to me.

Thank you for your cooperation.

Sincerely,

R. Arden Moon
Graduate Student
Michigan State University

RAM:jm

APPENDIX D

FOLLOW-UP LETTER

462 S. Tuscola Road
R. R. #2
Bay City, Michigan 48706

May , 1968

Dear Colleague:

Recently you received a letter and questionnaire regarding task identification. This is part of a research study to help in identifying the proper role for the teacher and the aide. The findings should be very helpful to all concerned.

I want to assure you again that all personal information is confidential and individual responses are treated as part of a group in the analysis of the data.

Please fill out the questionnaire and return in the self addressed, stamped envelope, if you have not done so. Your cooperation is greatly appreciated.

Sincerely,

R. Arden Moon
Graduate Student
Michigan State University

RAM:jm