STRATEGIES AND PROCEDURES USED, AND PROBLEMS

ENCOUNTERED IN IMPLEMENTING DIFFERENTIATED

STAFFING: A CASE STUDY

———————————

A Dissertation

Presented to

the Faculty of the Graduate School

University of Houston

———————————

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Educational Administration

———————————

by

Donald L. Hestand

December 1973

ACKNOWLEDGEMENTS

STRATEGIES AND PROCEDURES USED, AND PROBLEMS

ENCOUNTERED IN IMPLEMENTING DIFFERENTIATED

STAFFING: A CASE STUDY

_____

An Abstract of a Dissertation

Presented to

the Faculty of the Graduate School

University of Houston

_____

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Educational Administration

_____

by

Donald L. Hestand

December 1973

ABSTRACT

Donald L. Hestand. "Strategies and Procedures Used, and
      Problems Encountered in Implementing a Differentiated
      Staffing Structure: A Case Study." Unpublished
      Doctoral Dissertation, University of Houston, 1973.

Committee Chairman: Dr. Stanley G. Sanders

Purpose

        The purpose of this study was to describe the strate-

gies and procedures used, and problems encountered in imple-

menting a differentiated staffing (DS) structure as a pilot

program in an elementary school.

Design of Study

        The study was designed from a systems model that was

used to identify the components and processes within the study.

The design involved six program phases for the development of

the DS project. The study included only phases two, three,

four, and five. The phases were:

        1. Planning Phase.

        2. Program and Organization Analysis Phase.

        3. Development Phase.

        4. Implementation and Evaluation of Pilot Program.

        5. Model Evaluation and Modification Phase.

        6. Model Execution and Evaluation Phase.

The DS program involved grades four, five, and six in the
areas of reading and mathematics.

Procedures

Input data for the project was obtained from pre-tests
of students' and teachers' attitudes and from pre-tests of
student achievement. A Request for Proposal from the board
of trustees was answered, in the form of a formal budget, on
the basis of the input data. The formal budget outlined
organizational and instructional plans for the spring semester
and set forth objectives for the differentiated staffing
project. The staff organization proposed was a team teaching
approach involving one team for reading instruction and a
different team organization for mathematics. The instruc-
tional procedures selected by the teachers were a non-graded
organization of the students for a small group approach,
an individualized approach involving the teaching team mem-
bers, teacher aides, and student aides.

Evaluation

In addition to the output data obtained from post-tests
of students' and teachers' attitudes and from post-tests of
student achievement, the teachers made their own formal
analysis of the project and invited a group of professional
consultants in to visit the project, interview the personnel
and evaluate the DS program.

Because of the difficulty of controlling the internal and external variables involved, no attempt was made to make statistical evaluations of changes in pre-test and post-test scores.

There was an observed change of scores, on the part of the faculty, in their self-values and in the attitudes and concepts they held that corresponded to the concepts of differentiated staffing. They also showed higher scores for their harmonious relations with pupils and in their rapport with pupils, at the end of the project.

When achievement scores for the students were examined, the post-test grade equivalents were generally higher, showing approximately one year of academic growth. The fourth grade gains were the greatest, showing an average of one year of growth in five months from the pre-test date to the post-test date.

While the DS staff and the outside consultant evaluation team had a number of recommendations for improving the differentiated staffing program, they agreed that the new organization provided a much improved learning environment over the traditional system.

Conclusions and Recommendations

It was concluded that the differentiated staffing organization was superior to the traditional organization used

in the school. Although the academic progress of students in
the fifth and sixth grades did not indicate an improvement
over that achieved under a traditional organization, achieve-
ment scores of the fourth grade students did indicate an
improvement. The attitude changes of both teachers and stu-
dents were considered as positive results of the DS program
and positive changes in individual items on the student
attitude inventory were considered important successes of the
program.

The strongest outcomes from the DS program were the
positive attitudes gained by the teachers and their knowledge
and ability to individualize instruction using student aides,
volunteer aides, and regular teacher aides. Also, teachers
developed careful planning procedures during their daily
planning period where, as a group, they considered the problems
and progress of their students daily. In effect, DS was used
as a method to improve motivation, planning, and attitudes,
not an end for these critical problems in education.

It was recommended to the officials of the Wallis
Independent School District that the entire school district
be organized according to the concepts of differentiated staff-
ing. However, the improvements recommended for the pilot
project should be considered as expansion plans are undertaken.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

xi

CHAPTER I

INTRODUCTION

. . . the largest fraction of teachers leaving the
profession each year "will consist of experienced
teachers whose talents are such as to enable them to
command higher salaries and more satisfactory working
conditions in other employment."[1]

So states M. John Rand in quoting the Arthur D. Little

Report, entitled Teacher Supply and Demand in California,

1965-75. He further declares,

. . . that there are "too few opportunities for
promotion, too few opportunities for originality,
dissatisfaction with paper work in teaching, dissatis-
faction with personnel practices, dissatisfaction with
the prestige of teaching, problems presented by the
superintendent, and dissatisfaction with salary."[2]

The teacher's role in our schools today is changing

and there is an expanding professionalization and an ever

increasing recognition of the teacher as a specialist and of

the administrator as a generalist.[3] There is a shift in

attitude at every level of government, from Congress to state

---

[1]M. John Rand, "A Case for Differentiated Staffing,"
in James M. Cooper, ed. Differentiated Staffing. (Philadel-
phia: W. B. Saunders Company, 1972) p. 46.

[2]Ibid. p. 46.

[3]M. John Rand and Fenwick English, "Differentiated
Staffing: Trying on Seven League Boots," in James M. Cooper,
ed. Differentiated Staffing. (Philadelphia: W. B. Saunders
Company, 1972) p. 105.

legislatures and local city councils and, instead of discus-

sions of resources allocated, the questions are on results

obtained for resources used.[4] Much has been written about the

concept of accountability. In explaining the term, Leon

Lessinger states,

> At its most basic level, it means that an agent,
> public or private, entering into a contractual agree-
> ment to perform a service will be held answerable for
> performing according to agreed-upon terms, within
> an established time period, and with a stipulated
> use of resources and performance standards. This
> definition of accountability requires that the par-
> ties to the contract keep clear and complete records
> and that this information be available for outside
> review. It also suggests penalties and rewards;
> accountability without redress or incentive is mere
> rhetoric.[5]

To the classroom teachers, this call for accountability

has sounded like an indictment, and they have perceived the

term as "accountability on the part of the classroom teacher."[6]

Yet, how can they be held accountable in view of the amount

of control they now possess over the process of teaching, the

leadership, inservice education, planning, scheduling, and

the structure of most public schools today?[7] To many teachers

[4]Leon M. Lessinger and Ralph W. Tyler. Accounta-
bility in Education. (Worthington, Ohio: Charles A. Jones
Publishing Co., 1971). p. 28.

[5]Ibid., p. 29.

[6]Joseph Stocker, "Accountability and the Classroom
Teacher." Today's Education. Vol. 60, No. 3, March 1971. p.42.

[7]Arthur W. Eve and Roger H. Peck, "Differentiated Ad-
ministrative Staffing," in James M. Cooper, ed. Differentiated
Staffing. (Philadelphia: W. B. Saunders Company, 1972) p. 100.

across the nation, the new concept of differentiated staffing
has shown a great potential for offering solutions to most of
these questions and problems by the devising of a new type of
staffing structure that will foster teacher differences, pro-
vide incentives for teachers, place teachers in positions of
attaining maximum influence and control over their own des-
tinies, and place more responsibility for educational planning,
leadership, and results on the person doing the teaching.[8]
A myriad of new structural programs have been created giving
teachers the opportunity to occupy various roles, depending
on their preparation, abilities, desires to assume additional
responsibilities, or desires to assume additional duties.

The Association of Classroom Teachers has endorsed
research on differentiated staffing (DS) and its members have
observed that DS appears to provide a more meaningful educa-
tional experience for each child through more effective use
of human resources.[9]

When asked about the purposes of differentiated staff-
ing, Arthur Shapiro replied that it utilized the staff more
efficiently and made it possible to promote good teachers and
still keep them teaching rather than getting them out of con-
tact with the children.

_____

[8]Ibid., p. 98.

[9]Differentiated Staffing," Nation's Schools. Vol.
85, number 6, June 1970. pp. 43-46.

Under DS, you can give teachers more recognition,
more prestige and maybe more money, and still keep
them teaching.[10]

I.   THE PROBLEM AND DESIGN

Statement of the Problem

The purpose of this study was to describe the strate-
gies and procedures used, and problems encountered in imple-
menting a differentiated staffing structure as a pilot program
in an elementary school.

Background Information

Differentiated staffing has been installed in a number
of schools across the country and is not to be confused with
merit pay. Under differentiated staffing, no teacher receives
additional salary unless he or she assumes additional responsi-
bilities or duties. This is the major difference between
differentiated staffing and merit pay. The various DS pro-
grams across the country have their own characteristics and
are designed to fit the differing needs of specific schools,
communities, faculties, and primarily, student bodies.

This model project was designed to fit the community
of Wallis, Texas and the needs of the Wallis Independent
School District student body and faculty.

---

[10]Robert Gourley, Arthur Shapiro, and Rodney P.
Smith. "How Three Administrators View Differentiated Staffing
Problems." Nation's Schools. Vol. 85, No. 6, June 1970. p. 47.

Design of the Study

Grades four, five, and six were designated for this study. A total of ninety-five students were enrolled in these grades and they were being taught on a semi-departmentalized basis under a traditional staffing structure. Five teachers were involved in the instruction of these students.

The fourth, fifth, and sixth grade teachers were interviewed and they expressed an interest in studying and implementing differentiated staffing. They had previously heard three presentations, of approximately forty minutes each, on DS. The number of teachers to be involved and the subject area extent of the pilot project were decided by the study committee in November, 1972.

The researcher served as project director and appointed a study committee to organize an educational, planning, and training program. The project was undertaken in phases as follows:

Program Phases

1. Planning Phase: August 1972 - December 1972.
    Presentation of DS to entire faculty.
    Appointment of study committee.
    Compilation of planning materials.
2. Program and Organization Analysis Phase: October
    1972 - November 1972.
    Development of a feasible DS model.

Compilation of materials for readiness program.

Decision on extent of DS program during pilot
period.

Selection of DS pilot period team(s).

Plan training program.

3. Development Phase: November 1972 - December 1972.

Refine model.

Finalize pilot processes.

Implement readiness program.

Implement training program for pilot implementation.

Design and develop evaluation procedures.

4. Implementation and Evaluation of Pilot Program(s):
January 1973 - May 1973.

5. Model Evaluation and Modification Phase: May-June
1973.

6. Model Execution and Evaluation Phase: 1st Full
Year, 1973-74.

This research study involved phases two, three, four,
and five. During phase two, the entire faculty was involved
in learning sessions and presentations on the concepts of
differentiated staffing. A request for proposal, issued by
the Board of Trustees, was presented to the teachers of the
experimental group during phase three. The request for pro-
posal set forth the conditions and standards to be met by the
DS group and the school.

The study group now became the differentiated staffing committee and their immediate goal was to prepare a response to the request for proposal. The committee, consisting of three teachers, prepared the response and submitted it to the Board for approval. After the proposal (budget) was approved by the Board, a contract was granted to the teaching team and the role of the director reverted to the role defined within the contract.

Planning the Project

The initial planning committee for Wallis Independent School District was composed of administrators and teachers. It was recognized that an educational program was necessary as none of the staff was familiar with the concept of differentiated staffing. Therefore, education was combined with planning during the planning phase in the Fall. The full faculty was also involved in these educational and planning sessions.

Although virtually all of the differentiated staffing plans on which information is available were reviewed, certain restrictions limited the choice of plans for Wallis Independent School District. The district has only one or two sections of each grade level and a total of 445 students in the system. These facts tended to make the fluid hierarchy of the Mesa, Arizona school district's plan the most practical to use. The concept of "in-faculty performance

contracting" will work with any willing faculty, regardless
of the size of the school or staff. An adaptation of that
plan was adopted.

With the educational goals and objectives of the
school district in mind, district personnel, with the help
of outside consultants, diagnosed the status of the student
body and designed a plan to achieve these goals and objec-
tives. From this diagnosis, specifications were drawn for the
request for proposal to meet the goals and objectives. Pro-
posals submitted by the teaching teams summarized approaches
to be taken, detailed the staffing, materials, supplies,
facilities, and supportive services required, and included
a total cost figure.

Approval of the proposal gave the DS group complete
control of the program, and they determined how to use their
members' individual talents, how to spend their funds, how
to shift leadership roles, how to monitor progress, and how
to assess and meet the needs of the individual student.

The proposal submitted by the team set forth a staff-
ing pattern and pointed out that the 95 students involved
would have their pupil:teacher ratio reduced. They also
made a funding request on a total sum basis, guaranteeing to
bring a percentage of the students up to grade level or higher.
No teacher received less than the regular district teacher's
salary while performing in the DS project.

The team leaders assumed many administrative duties such as the planning and coordinating. They were chosen by the teams for one year at a time. The principal worked closely with the team leaders and cooperated in assigning aides, arranging time schedules, and coordinating the team's activities with the remainder of the school's program. He also helped with materials requisitions, and served as a consultant.

Approach

A systems approach to organizational change was used to implement this pilot Differentiated Staffing program taking the process as a whole, incorporating all of its parts and aspects, including the students, the teachers, the organizational structure, the concept data, development procedures, and development and evaluation of goals.

Organizational change may be seen as a series of decision points at each of which an alternative, or combination of alternatives is selected by some process. The alternative selected at each decision point determines subsequent developmental procedures.[11]

In the development of this pilot DS project, a number of decisions had to be made by the people involved in the

[11]Dennis D. Gooler and Arden D. Grotelueschen, "Curriculum Development Accountability," _Educational Leadership_. Volume 29, number 2, November, 1971, p. 166.

study and these decisions determined the ultimate nature of the DS design.

II. FRAMEWORK

The illustration on the following page shows the organizational change process with its sub-parts that work in relation to one another. The sub-parts have been identified as major moments in the development of the DS structure. Field testing is a major moment also, as "go or no-go" decisions related to the development of the program as a whole are sought prior to adoption.

A continual process of interaction, over time, occurred among ideas brought into play by the project participants. Thus ideas about structure interacted with ideas about goals, as well as ideas about procedures and ideas about the structure of the pilot project. Daily decisions were made about some of these ideas; some were eliminated, some kept, and some revised.

The model is "capped" with the philosophy or rationale for the development of the organizational structure change described previously in this report.[12]

---

[12]_Supra_. pp. 1-3.

Figure 1

Philosophy -- Rationale

Interaction of Ideas

| Major
Moments | Input Data
on
Concept | Goals
of
Change | Selection
of
Structure | Development
of
Procedures | Structure of
Pilot
Project |

Field Testing
Revision

Adoption
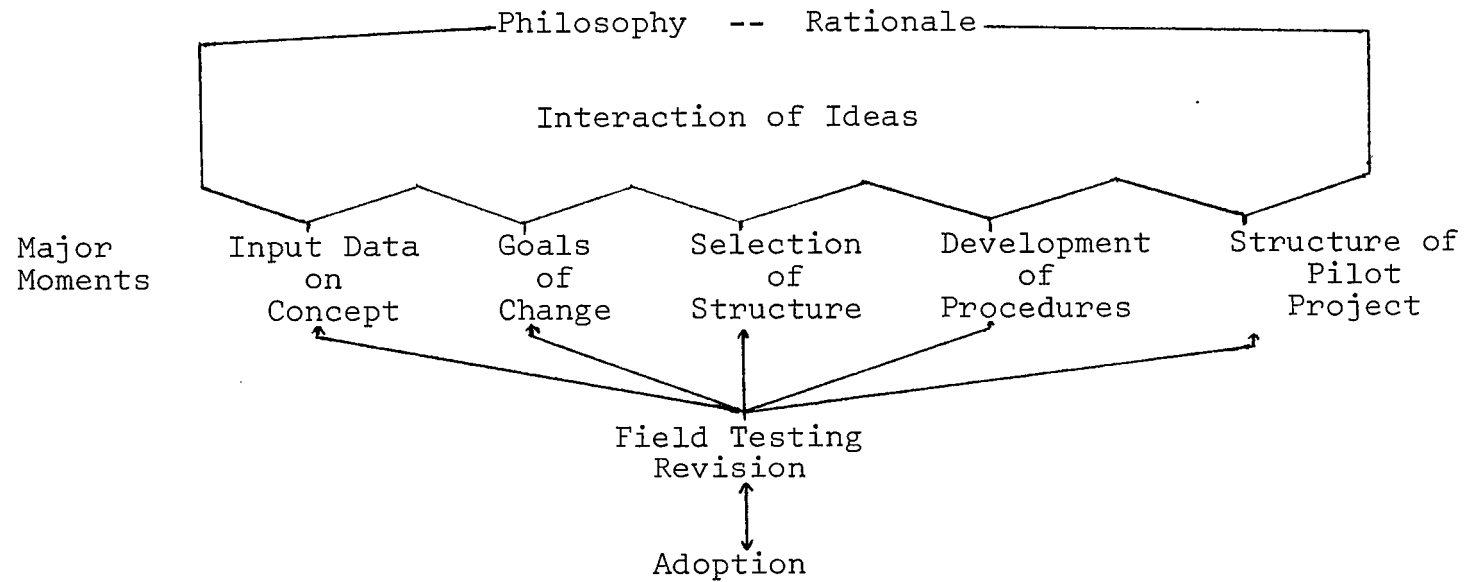
ORGANIZATIONAL CHANGE PROCESS[13]

---

[13]Gooler, "Curriculum Development Accountability." p. 166.

III. ORGANIZATION OF THE STUDY

Chapter I has presented a broad overview and general description of the study. The chapter was divided into eight sections as follows: (1) Introduction, (2) Statement of the Problem, (3) Background Information, (4) Design of the Study, (5) Program Phases, (6) Planning of the Project, (7) Approach, and (8) Framework.

Chapter II will be a review of the literature that is relevant to this study. The subtopics that will be covered are: (1) Trends in Staffing, (2) Projects now in Operation, (3) Evaluations of Current Programs, and (4) Need for More Research.

Chapter III will describe the development of the project. The design will be explained in more detail and a chronological record of activities, meetings, planning sessions, development of materials, events, training sessions, and all related factors will be recorded and described. Informal interviews, interactions, and reactions will also be recorded along with results of achievement tests and attitude inventories.

Chapter IV will report the findings of the study. Various activities, decisions, procedures, and reactions will be analyzed and presented in this chapter.

Chapter V will include a summary and the conclusions of the study.

———

CHAPTER II

REVIEW OF LITERATURE

Differentiated staffing means different things to
different people, and the controversy over it seems destined
to intensify before it is resolved.[1] Although there is an
abundance of literature on differentiated staffing, it is
limited to describing characteristics of the various projects
now in operation across the nation and expressing opinions
of DS. Almost all of the information is contained in periodi-
cals and booklets, apparently because of the relative newness
of the projects. Furthermore, designed research related
directly to the effects of differentiated staffing is non-
existent. Some research "after the Fact" has been done
but many uncontrolled factors were involved.[2]

A comprehensive book found by the researcher is
James M. Cooper's book entitled Differentiated Staffing,
which includes articles by Dwight W. Allen, Dean of the
School of Education, University of Massachusetts, Amherst;

———————————————

[1]Peter B. Mann, "Differentiated Staffing: The Second
Generation." Arizona Teacher, Volume 59, number 3, (January
1971). p. 13.

[2]Fenwick W. English, Larry E. Frase, Raymond G.
Melton, "Evaluating the Effects of Implementing a Differen-
tiated Staff, Problems and Issues: A Tentative Position
Paper," (A Mimeographed Report to Mesa, Arizona Public
Schools), November 1971. p. 2.

Lloyd Kline, public school teacher; Fenwick English, formerly

project director of the Temple City DS Project; M. John Rand,

Superintendent of the Temple City Unified School District;

Donald Sharpes, Program Manager for School Personnel Utiliza-

tion in the United States Office of Education in New York

State; and Marshall L. Frinks, former Director of the Florida

statewide feasibility study of differentiated staffing.[3]

In order to develop meaningful background, this review

will include summaries of literature relating to four topics:

(1) Trends in Staffing, (2) Projects now in Operation, (3)

Evaluations of Current Programs, and (4) Need for More Research.

I. TRENDS IN STAFFING

For a long period of time, school administrators and

teachers have been pre-occupied with the idea of individual-

izing instruction in various ways and of recognizing individual

differences in students. Prior to the Quincy Graded School

in 1848, almost all of the teacher-pupil groupings of modern

elementary education, with the exception of man-media combina-

tions and computerized scheduling, were tried in some form.[4]

---

[3]James M. Cooper, Ed., Differentiated Staffing.
(Philadelphia: W. B. Saunders Company, 1972). pp. 8-11.

[4]Fenwick W. English and Larry E. Frase, "Making Form
Follow Function in Staffing Elementary Schools," The National
Elementary School Principal. Volume 51, number 4, January,
1972, p. 55.

Before school was synonymous with institution, an elementary

education for a Greek boy consisted of going to three differ-

ent teachers for three distinct lessons in grammar, music,

and physical training.[5] In modern times, there are arguments

about the merits of the self-contained classroom versus some

other pattern that has been devised, but we find no staffing

models that are innovative in the sense that they change the

basic functions of staffing. The institution of public educa-

tion crystallized around the notion of a single teacher per

class.

Staffing patterns are difficult to change. They hold

the institution together, divide the labor, and partition

the power. Staffing controls the amount of hierarchically

organized power and defines the relationship between roles.[6]

Various approaches have been used in efforts to differ-

entiate staffs and individualize instruction. Team teaching

became popular in the 1950's and took an important step away

from the traditional hierarchical model where a superintendent

of schools sits on top, responsible to a citizen board of

---

[5]Ellwood P. Cubberly, The History of Education.
(New York: Houghton Mifflin Company, 1948). p. 26.

[6]Everett Reimer, "An Essay on Alternatives in Educa-
tion," Interchange. (Ontario Institute for Studies in Educa-
tion). Volume 2, number 35, 1971. p. 13.

education for the entire program in his district.[7] Differen-
tiation consisted of principals and teachers held responsible

for portions of the district school program and supported by

paraprofessional technical, clerical, and custodial personnel.

Team teaching added the "team-leader" to the staff, thus

decentralizing the hierarchy somewhat in some instances. Team

teaching also added another dimension. Teacher specialization

was stressed and recognition of teacher differences and role

differentiation according to teacher's talents and interests

developed.[8]

Teachers have rejected anything that might increase

status distinctions among themselves, until the current move-

ment toward differentiated staffing came into being. Their

attitude has probably resulted, at least in part, from a

determination to maintain their cohesiveness in the face of

administrative threats.[9] In fact, opposition continues on

the part of some teachers in organizations.[10] Successful

---

[7]Dwight W. Allen and Lloyd W. Kline, "From Habit to
Heresy and Home Again," in James M. Cooper, ed. Differen-
tiated Staffing (Philadelphia: W. B. Saunders Co., 1972).
p. 23.

[8]James Lewis, Jr. Differentiating the Teaching
Staff. (New York: Parker Publishing Company, 1971). p. 29.

[9]Ronald G. Corwin, "Enhancing Teaching as a Career,"
Today's Education. Vol. 58, number 3, March, 1969. p. 55.

[10]Robert D. Bhaerman, "A Study Outline on Differen-
tiated Staffing." (A Mimeographed Report to the Columbia
Teachers Union). N.D.

implementation and growth of DS depends upon removal of the
fears and opposition expressed by these people.

In some schools, teachers are involved in innovative
differentiated staffing programs and they are experiencing
differentiations in their roles and status. There are more
than fifty differentiated staffing programs in the United
States today. Most of them have been federally funded and
are completing a multi-year pilot study of DS concepts and
principles.[11] The Center for the Advanced Study of Educa-
tional Administration has determined that DS is characterized
notably by the exchange of the autonomous teacher in the
self-contained classroom for cooperative instructional teams.
It normally implies the use of auxiliary personnel - aides,
interns, technicians, and specialists - to augment the instruc-
tional process. It also calls for a differentiation of
salaries and wages in terms of responsibilities assumed by
staff members.[12] Some DS programs have been implemented on
the premise that teachers' salaries cannot be improved greatly
as long as all must be paid the same. The need for substan-
tial improvement has been apparent. In most parts of the
nation, the teaching profession has traditionally been noted
for poor salaries and wages. Teachers have devoted much of

[11]"Differentiated Staffing Difficulties," The Educa-
tional Informer. Vol. 5, number 2, August, 1972. p. 1.

[12]Ibid. p. 1.

their time and efforts, through the years, to improve their

financial rewards. Maslow's "Hierarchy of Needs" description

indicates that the needs for security and esteem are basic

to human nature, and that these needs must be satisfied before

an individual will strive for higher goals.[13] A differentiated

salary structure, with greatly improved salaries for key

teachers can be the method of allowing individuals to satisfy

these needs for security and esteem.

In response to critics who say DS is camouflaged merit

pay, Roy Edelfelt, executive secretary of the National Commis-

sion on Teacher Education and Professional Standards, argues

that merit pay means salary differentials based on the quality

of performance in situations where every teacher has a similar

task and the same degree of responsibility. Differentiated

staffing, on the other hand, would establish salary differen-

tials based on differences in degree of responsibility.[14]

While many new techniques are involved in differen-

tiated staffing such as individualized grouping, more use of

teacher aides, and team teaching, some have claimed that

differentiated staffing is simply an outgrowth of team teach-

ing and the idea of the teacher and his staff, both of which

---

[13]Abraham H. Maslow. Motivation and Personality.
(New York: Harper & Row, Inc., 1954). p. 45.

[14]National School Public Relations Association. Differ-
entiated Staffing in Schools Education U.S.A. Special Report.
Washington, D.C., 1970. p. 2.

recognize a diversity of teaching tasks and propose use of
auxiliary personnel in the schools to relieve teachers of
non-teaching duties.[15]   However, as James M. Cooper points
out,

> Staff differentiation in its full meaning recognizes
> the necessity for concurrent changes in scheduling,
> curriculum, decision-making power, and individualiza-
> tion of instruction. Merely adding or subtracting
> new personnel and calling it staff differentiation is
> tokenism. Without the concurrent changes in schedul-
> ing, curriculum and decision-making, staff differentia-
> tion is nothing new.[16]

Cooper points out that there are many variations of
differentiated staffing but the term implies dividing the global
role of the teacher into different professional and paraprofes-
sional subroles according to specific functions and duties to
be performed in the schools, and according to the particular
talents and strengths evident within the human resources of
any given school community.[17] He further states that there
is increasing discontent in the traditional classroom because
the present system fails to recognize individual differences
among teachers, does not allow them to use their creative
talents, does not pay them well enough and fails to allow them
to share in decision-making.[18]

---

[15]Ibid., p. 1.

[16]Cooper, Differentiated Staffing. p. 1.

[17]Ibid., p. 1.

[18]Ibid., p. 1.

Although specialization is widely practiced in public school administration, teachers have continued to play essentially the same role in the instructional areas. In the Temple City California DS project, Fenwick English reports that teacher specialization improved learner achievement and the greater degree of specialization in the teaching of skills and disciplines, the higher the achievement of the pupils. He also states,

> . . . the most important member of the team should be the one whose talents are most appropriate for the immediate task, and the hierarchy should be fluid, not fixed.[19]

Eugene Wolkey reports that the DS program in operation at Mary Harmon Weeks Elementary School in Kansas City, Missouri, where he serves as principal, is tremendously rewarding and shows positive results for the children. He also adds that his staff has been attracted to and held in the school by their DS program.[20]

In a special feature article for the National Education Association, Fenwick English states that DS will help teachers to do a better job because they are actually involved in the selection, evaluation, and retention of their colleagues.[21]

---

[19]Mann, Differentiated Staffing, p. 15.

[20]Eugene V. Wolkey, "Humanism in Differentiated Staffing." The National Elementary Principal. Volume 51, number 4, January 1972. pp. 77-78.

[21]Fenwick English, "Questions and Answers on Differentiated Staffing" Today's Education, Volume 59, no. 3, March, 1969. p. 54.

II. PROJECTS NOW IN OPERATION

As previously stated, there are more than fifty differ-
entiated staffing projects now in operation in the United
States.[22] Federal funds were frequently used to help finance
differentiated staffing programs.[23]

Many articles have been written about individual pro-
grams, giving descriptions and organizational data. Various
comparisons of many of the programs have been made. The pro-
jects vary in organizational structure, nomenclature, salary
scales, operating procedures, and methods of achieving DS
goals. However, most programs have cited very similar goals.
They are,

1. To bring a much broader range of manpower to
education than is now available.

2. To provide teachers who accept more responsibility,
make more decisions, and work longer hours, more salary.

3. To upgrade the quality of instruction and to pro-
vide more individualized learning programs for students.

4. To recognize individual differences in teachers
and to allow them to specialize according to their interests,
qualifications and talents.

---

[22]Supra., p. 17.

[23]Lewis. Differentiating the Teaching Staff. pp.
204-205.

5. To provide flexible scheduling to make maximum use of teacher time and talent.

6. To involve teachers in the decision-making process.

7. To provide the opportunity for outstanding teachers to participate in the decision-making process and also remain in teaching.

8. To make promotion in teaching possible.[24]

To illustrate some differences in the various programs in existence, twelve of them are listed in Table 1 on the following page and their staffing patterns are compared to one another and to a basic format.[25] As can be noted, the nomenclature varies considerably, but the number of staffing categories generally ranges between four and six.

Many other differences in programs exist as can be seen from the following descriptions of twenty current programs:

Chicago Public Schools[26]

Setting. The Model Cities Target Area Schools. These schools were funded by the United States Office of Education and include seven elementary schools.

[24]National School Public Relations Association, Differentiated Staffing in Schools. pp. 1-7.

[25]Lewis, Differentiating the Teaching Staff. p. 67.

[26]Richard Jamgochian and Paul B. Elswick, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

TABLE I

VARIATIONS IN DESCRIPTIVE TITLES USED IN SEVERAL SCHOOL DISTRICTS THROUGHOUT THE UNITED STATES FOR DIFFERENTIATED STAFFING POSITIONS

Basic Format	Temple City	Cherry Creek	Portland Oregon	Kansas City	Florida	Mesa Arizona	Fountain Valley	Chicago (Dumas)	Top of The World (Calif.)	Scottsdale Arizona	Artesia California
Coordinating Teacher	Master Teacher	Team Leader	Curriculum Associate	Senior Instructor	Teacher Research Associate	Master Teacher	Coordinating Teacher	Master Teacher	Coordinator	Cluster Leader	Curriculum Research Coordinator
Team Leader	Senior Teacher	Senior Resident	Team Leader	Instructor	Teacher Curriculum Associate	Team Leader	Learning Analyst	Team Leader		Team Leader	Team Chairman
Regular Teacher	Staff Teacher	Junior Resident	House Counselor	Associate Instructor	Senior Teacher	Staff Teacher		Teacher	Teacher	Instructional Manager	Senior Teacher
Auxilary Teacher	Associate Teacher	Practitioner	House Team Member		Staff Teacher						Beginning Teacher
Intern Teacher		Intern Teacher		Intern Teacher				Intern	Intern		Intern Teacher
Student Teacher		Student Teacher		Student Teacher	Academic Assistant	Student Assistant		Student Teacher			
Teacher Assistant	Instructional Aide							Educational Technitian	Assistant Teacher		
Teacher Aide		Teacher Aide		Teacher AIDE	Educational Technitian	Teacher Aide	Teacher Aide	Volunteer Teacher Aide	Teacher Aide	Instruction. Aide	

James Lewis, Jr. Differentiating the Teaching Staff. (New York: Parker Publishing Company, 1971). p. 67.

Positions. Principal, administrative assistant, instructional team leader, certified teachers, and teacher aides make up the positions in each school.

Structural Change. The major structural change is the delegation of authority to the instructional team leader to coordinate and supervise the instructional phase of teaching, which includes planning and coordinating inservice training for the teams of teachers and the para-professionals, participating in an on-going evaluation process, and coordinating supportive services.

Time. The instructional team leader spends 25 per cent of his time with students and team teachers spend 50 per cent of the time with students.

Decisions. The principal is the spokesman for his school and participates directly in district policy formation. Other personnel may influence him.

Evaluation. Specific performance criteria are being developed for this purpose.

Problems. None.

Benefits. Among the benefits listed are teacher specialization and freedom, teachers have more time for instruction, members of the community are becoming more involved in the educational process and the educational needs

of the community, gains in pupil progress, especially in attitudes and feelings, and better use of staff time.

Dade County, Florida[27]

Setting. Norwood Elementary School, with 625 students, and North Beach High School are included in the DS project. The program was funded by the United States Office of Education.

Positions. There are four staff teams. Included are one team coordinator, ten master teachers, four staff teachers, four instructional aides, three clerical aides, and sixteen interns. The team coordinator and master teachers are compensated for eleven months.

Structural Change. The major structural changes involved the master teachers and the team coordinator. The master teachers identify instructional problems and plan solutions. They also supervise, hire, train, and evaluate pre-professionals and para-professionals. The team coordinator is a master teacher, who performs those duties plus convening meetings and delegating responsibilities, arbitrating decisions and trouble-shooting, joint planning with the principal, and serving as a team advisor.

---

[27]Glenn S. Pate and Carolyn P. Panofsky, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

Time. The team coordinator and master teachers are full-time teachers involved with instructing students. They work longer days and some during the summer. The teachers spend all of their time instructing. The basic change is less time spent in clerical activities. The instructional aides spend 90 per cent to 95 per cent of their time in instructing students. They had previously spent 85 per cent of their time in clerical activities.

Decisions. The team coordinator and master teachers are primarily responsible for decisions regarding acquisition and use of materials and personnel time. All team members cooperatively decide upon the number and kind of positions needed on the team.

Evaluation. Everyone is evaluated by personnel in the positions immediately above and below himself. The principal evaluates all of the professional staff.

Problems. The two primary problems are deciding what training is needed and community relations.

Benefits. The program is too new to assess this aspect.

Louisville Kentucky Public Schools[28]

---

[28]Glenn S. Pate and Paul B. Elswick, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

Setting. Nine elementary schools, four junior high schools, and one senior high school are included in the DS project. The family concept in education is used and each family of one-hundred to two-hundred students is assigned to one differentiated team. All grade levels and curriculum areas are involved.

Positions. Coordinating teacher, staff teachers, teacher interns, para-professionals, student teachers, and volunteer aides make up the team positions in each school. The para-professionals have a hierarchical ranking of six levels.

Structural Change. The principal is now the principal-learning facilitator and has lost his routine business management details of the school to the business manager and now spends at least 50 per cent of his time working directly with students and teams. The coordinating teacher evaluates all members of the team.

Time. The coordinating teacher is a full-time teacher and his administrative duties are in addition to his full-time teaching load. Staff teachers are full-time teachers.

Decisions. Decisions on curriculum changes and curriculum implementation are made by the entire staff. The principal makes general space allocations after receiving information from teachers regarding their needs and desires.

Breaking the time dimensions down to smaller increments,
decisions are made by any member of the team or by the team in
a joint effort.

Evaluation. The principal is formally responsible
for the evaluation of all personnel in the school. A broader
base evaluation model is evolving. All school personnel pro-
vide data to the central administration office for its evalu-
ation of the principal.

Problems. Community reaction, caused by some misunder-
standings, led to opposition to DS and other new programs.
General lack of leadership and not enough trained people to
do all of the kinds of things attempted was also a problem.

Benefits. The number of court referrals, the number
of suspensions, and the number of dropouts have dropped
considerably since the implementation of DS. Increased
community involvement in the schools is also reported as
a benefit. Also, teachers have a greater variety of instruc-
tional possibilities, and expanded opportunities for self-
growth.

School District No. 2, New York, New York[29]

---

[29]Norman J. Boyan and Carolyn P. Panofsky, "A Study
of In-progress Differentiated Staffing." (A Mimeographed
Report to the United States Office of Education) N.d.

Setting. One elementary school in a tri-lingual sec-
tion of lower Manhattan was involved in this DS project. About
65 per cent of the student population are first generation
Chinese-Americans, many of whom speak no English. Of the
remaining 35 per cent, many of the students are Spanish speak-
ing. A community involvement program is important.

Positions. Adjunct professors, a service role, coor-
dinating teachers, teachers, probationary teachers, interns,
teacher aides, educational assistants, and educational associ-
ates form the professional teacher career structure.

Structural Change. General functional parameters were
established by the staffing pattern. Service roles are now
performed by adjunct professors and the coordinating teachers
spend 75 per cent of their time in direct teaching and 25 per
cent in an administrative function. There is now a profes-
sional career lattice and a para-professional career lattice.
Also, a ladder exists for family aides and clerical-technical
personnel.

Time. Adjunct professors have no classroom teaching
responsibilities. Coordinating teachers spend 75 per cent of
their time teaching, and teachers spend full-time in classroom
teaching. Probationary teachers have full-time teaching res-
ponsibilities and interns have daily regular supervised class-
room instructional duties. Teacher aides perform services

for teachers, educational assistants a wider range of support
services, and educational associates have a higher level of
responsibility than educational assistants.

Decisions. One goal was to decentralize the decision-
making process. The School Instructional Committee is the
major decision-making body in the school. It is composed of
the adjunct professors, the coordinating teachers, para-pro-
fessionals, community people, and one administrator. Each
member has one vote.

Evaluation. Performance criteria will be written in
behavioral terms. The school also hopes to develop a peer
evaluation system.

Problems. An initial problem was hostility on the
part of the staff to people coming from the outside. This
problem has now completely disappeared. Another problem is
union resistance to the proposed peer evaluation system.

Benefits. Improved staff communications including
para-professionals and administrators is the chief benefit.

Prince William County Schools, Manassas, Virginia[30]

[30]Norman J. Boyan and Carolyn P. Panofsky, "A Study
of In-progress Differentiated Staffing." (A Mimeographed
Report to the United States Office of Education) N.d.

Setting. Godwin Intermediate School is the only school participating in the differentiated staffing project. The program includes teams, block time arrangements, individualized instruction, and peer instruction.

Positions. Positions include a teacher-dean, school managers, financial clerk, media specialists, counselors, team coordinators, team teachers, curriculum specialists, specialist teachers, teacher aides, clerical aides, and student aides.

Structural Change. The professional and para-professional positions are classified by a six-level career ladder plus additional supportive positions as listed under the positions section above.

Time. The teacher-dean spends approximately 60 per cent of his time in activities directly related to the improvement of instruction, and between one- and two-thirds of this time is spent in direct contact with students. The school managers spend approximately 75 per cent time in activities directly related to the improvement of instruction. The team teachers are full-time members of teams. The curriculum specialists are team teachers but spend part time working in the development of curricula. Specialist teachers are full-time teachers such as reading specialists, a speech therapist, a special education teacher, and a special music teacher.

Decisions. The school managers devise a general
schedule framework for the school and the principal assigns
blocks of time within this framework. Within these limita-
tions, decisions are frequently made jointly by teachers and
counselors. Matters of scope and sequence of curriculum con-
tent and development are also decided by teams.

Evaluation. The teacher-dean retains the formal
responsibility for evaluating teacher performance, although he
is now assisted by the team coordinators. There is also con-
siderable informal peer evaluation as a helping relationship
among teachers, team coordinators, and the teacher-dean.

Problems. The major problem was the incompletion of
the new school building causing instruction to have to take
place in the old overcrowded building.

Benefits. Staff interactions have been greatly
increased by the new staffing arrangements.

Sarasota County School District, Sarasota, Florida[31]

Setting. Seven of twenty-six schools are participating
in a DS project funded by the United States Office of Education.

---

[31]Glenn S. Pate and G. Roger Sell, "A Study of In-
progress Differentiated Staffing." (A Mimeographed Report
to the United States Office of Education) N.d.

Five participating schools are elementary schools and two are junior high schools.

Positions. A listing of DS positions are consulting teacher, directing teacher, staff teacher I, staff teacher II, instructor, resident intern, instructional assistant, teacher aide, student assistant, adjunct teacher, volunteer assistant, and principal-teacher.

Structural Change. The approximate relationships of professional, pre-professional, and para-professional positions within the district's System Model are ranked according to the degree of responsibility and accountability inherent in the tasks performed including the extent of the influence of the position.

Time. The consulting teacher spends less than full-time in direct instruction and contact with students, depending upon his specific job responsibilities. The directing teacher is assigned to duties basically administrative. The staff teachers I and II are assigned to direct instruction for approximately ninety per cent of the time. An instructor may be a beginning teacher assigned full-time to direct class-room instruction. A resident intern is a college student in his final year of preservice training and is assigned full-time for one year in direct instruction. The instructional assistant is assigned to full-time direct instruction under continual supervision.

Decisions. The faculty board consists of the principal-teacher, the consulting teachers, and the directing teachers of a school. It is the governing body of the school and oversees the operation of the school and is the decision-making body in that center. Each member has one vote, and the principal does not possess veto power.

Evaluation. The evaluation of an individual staff member is based upon current job specifications and performance tasks are behaviorally stated. Evaluation is by subordinates, peers, and superiors.

Problems. Not enough was known about providing individualized learning programs. Also, the reorganization of staff interactions and activities created frictions which, though not unexpected, were difficult to handle. Adjustment to the new arrangement proved more difficult than had been anticipated.

Benefits. Increased staff-student contact and individualized programs of instruction have improved student performance. Also, teachers no longer spend as much time in instructional support activities such as clerical duties and pupil supervision. Teachers now have greater involvement in decision-making and report that they have a greater sense of satisfaction and professional pride.

Wayne County Intermediate School District, Detroit, Michigan[32]

Setting. One elementary school has approximately 630 students enrolled and a staff of twenty-three certified teachers and seven para-professionals, divided into eight teaching teams which serve four primary and four intermediate multi-aged student groups. This is an urban area and the DS project was funded by the U. S. Office of Education.

Positions. There are five different kinds of certified teaching positions including team leader, senior teacher, laboratory teacher, staff teacher, and special teachers. There are also para-professionals on the DS staff.

Structural Change. The principal functions as an educational leader and all team leaders and team teachers engage in instructional planning and development and direct instruction. Pupil supervision is primarily the responsibility of the para-professionals.

Time. The team leader spends about 20 per cent time on management and development activities and about 80 per cent time teaching. The senior teachers spend about 10 per cent time on development and the remaining time on teaching.

---

[32]Richard Jamgochian and Carolyn P. Panofsky, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

Decisions. The principal participates in decision-
making at the county level, school level, and in team deci-
sions. Team leaders and team teachers may influence county
policy. The team leaders are involved in shaping school
policy. All curriculum decisions are influenced by the total
professional staff.

Evaluation. Nothing has been developed in this area.

Problems. Nothing has been developed in this area.

Benefits. Increased student contact with teachers and
individual instructional problems has been reported as a
Also, teachers report a feeling of freedom to try new ideas in
teaching and the project has tied the staff together in a
common cause and given a sense of direction to staff activities.

University of Wisconsin, Madison, Wisconsin[33]

Setting. In the state of Wisconsin, there are 100
elementary schools participating in the DS project funded by
U. S. Office of Education. The number of schools involved is
expected to increase to over 200 after the first year. The
project is operated through the University of Wisconsin.

---

[33]Richard Jamogochian and Carolyn P. Panofsky, "A Study
of In-progress Differentiated Staffing." (A Mimeographed
Report to the United States Office of Education) N.d.

Positions. The list of team positions includes a unit leader, five teachers, a teacher aide, an instructional secretary, and an intern. The Superintendent of Public Instruction and building principals are also involved in the DS program.

Structural Change. Direct instruction is now the responsibility of unit leaders, unit teachers, and, to some extent, interns. Planning is done by the principal, unit leaders, unit teachers, and interns. Pupil supervision is primarily the responsibility of interns and aides.

Time. The principal spends most of his time working closely in program development with other staff members. The unit leader divides his time equally between teaching and the extra instructional activities described above. Unit teachers spend full time in instruction-related activities, as do interns and aides.

Decisions. The principal participates in decision-making on three levels: the System-Wide Policy Committee, the Instructional Improvement Committee of his school, and he influences unit decisions from a district/school perspective. Unit leaders and team teachers are represented on the System-Wide Policy Committee and so can influence policy decisions. The unit teachers work cooperatively with leaders and each other to develop team instructional strategies and they make decisions about implementation of district/school goals in terms of individual instruction for children.

Evaluation. The principal assumes responsibility for an on-going evaluation of participant effectiveness in relation to role expectancies.

Problems. No problems have been reported.

Benefits. Involvement in decisions, improved communications, and freedom from various non-instructional tasks were benefits reported by the staff. The administration reported shared decision-making as a benefit.

Cherry Creek School District, Englewood, Colorado[34]

Setting. This project involves nine elementary schools, two junior high schools, and one senior high school. Besides the personnel within these schools, two administrative teams and two special unit teams are involved. Staffing patterns have emerged and dimensions of differentiation within and across these patterns can be seen in all teaching teams. Examples of other innovations accompanying DS are flexible scheduling, non-graded classes, and individualized programs.

Positions. DS instructional positions include teacher coordinator, implementor, tenured teacher, senior teacher,

[34]John A. Nelson and Paul B. Elswick, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

junior teacher, intern, student teacher, parent volunteer, instructional aide, resource teacher, teaching assistant, and high school aide. Different teams will be comprised of varied combinations of these positions.

Structural Change. The composition of each teaching team within the approved framework for a school sets the parameters of authority, influence, and decision-making for the teams and schools. A team leader orchestrates all team activities in implementing the goals and objectives of the district, school, and team.

Time. The teacher coordinator spends 90 per cent of his time in the operation of the total school plan and 10-20 per cent in direct contact with students. Team leaders spend 90 per cent of the time in direct contact with students. Tenured teachers spend 90 per cent of the time in instructional activities with students, and some time in supervising teacher trainees and non-certified personnel. An implementor spends 90 per cent of the time in direct contact with students, and some time in supervising trainees and non-certified personnel. Teacher interns spend 80 per cent of the time in teaching activities and team designated tasks, and 20 per cent in training. Senior and junior teachers spend more than 50 per cent of the time working with individual learners and some time in supervising non-certified personnel.

Decisions. The decision model used takes a systems
approach developed by the Ohio State University Evaluation Cen-
ter. Elements included are context, input, process, and pro-
duct. Primary responsibility for evaluation lies with four
groups: the project staff, the program's Advisory Board, the
Laboratory of Educational Research at the University of Colo-
rado, and an outside consultant. The evaluation program
utilizes a variety of instruments and procedures to measure
objectives. It is designed to assess how well the program is
serving the stated needs and meeting the program's objectives.

Evaluation. The principal is accountable for the
evaluation of personnel on the team. The team leader assumes
the role of evaluator for all certified and staff personnel.
However, the primary mode of evaluating staff performance is
through peer evaluations. Intended responsibilities and per-
ceived activities serve as criteria for these informal evalu-
ations. The use of peer evaluations are for the selection of
team leaders and for the determination of the need for and use
of teacher aides.

Problems. There has been a problem of teacher acceptance
of differentiated staffing roles. Staff members find it diffi-
cult to assume new roles, particularly teachers who have worked
for some time in a traditional pattern. Also, parents have
objected to DS mainly on the grounds that when students are
taught new things or in new ways, something may be eliminated
from the curriculum.

Another problem is that teachers unconsciously subvert role patterns by moving out of role responsibility areas. There is a problem of mutual trust and respect between certificated staff and persons in the aide category. Teachers make all decisions without involving aides, even though the intention was to include aides.

In addition, the project has been hampered by a lack of training funds.

Benefits. Main benefits are more individualized instruction and greater individual responsibility placed upon students for their own learning. It has proven possible to provide individualized programs for virtually every student.

Kansas City Public Schools, Kansas City, Missouri[35]

Setting. The DS project, funded by U. S. Office of Education, involves two all-black, central-city schools: Mary Harmon Weeks Elementary (K-6) and Martin Luther King, Jr. Junior High School (7-9), which have a combined enrollment of 2,200 students. All grade levels and curriculum areas are affected.

Positions. The professional staff consists of a coordinating instructor, senior instructor, instructor, and

---

[35]Mimeographed Report to the United States Office of Education. N.d.

associate instructor. The para-professional staff is comprised
of an associate teacher, assistant teacher, instructional aide,
advanced instructional aide, youth tutor, and volunteer. The
pre-professional staff includes the beginning teacher and stu-
dent teacher.

Structural Change. The coordinating instructor is
responsible for a broad segment of curriculum activities, super-
vises, orders, and distributes supplies, materials, and equip-
ment. Teams are organized for instruction and the senior
instructor is the team leader. The senior instructor also
schedules daily and long-range activities.

Time. The coordinating instructor spends at least 50
per cent of his time in direct classroom teaching. The remain-
der of his time is spent in initiating plans, staff training,
and research development. The staff teacher is considered a
full-time teacher, the instructor full-time, the associate
instructor part-time, and the beginning teacher spends most of
the time in the classroom. The student teacher uses his time
mainly as an in-class instructor and the instructional aide
uses his time outside of normal classroom teaching. The youth
tutors, individually, spend two hours per day assisting elemen-
tary school students in special problem areas like reading.

Decisions. Curriculum decision-making is a group func-
tion involving persons of all positions. Decisions regarding

personnel, space utilization, assignment of students, time, and materials are primarily the responsibility of higher level personnel.

Evaluation. Evaluation to determine if job specifications or criteria have been realized is engaged in by all members of the instructional team. The appraisal of any staff member is done by an appraisal committee comprised of representatives from all levels.

Problems. The staffs are becoming top heavy with staff members moving up the vertical differentiation ladder.

Another problem is that persons with greater responsibility may tend to dominate the group decision-making process. Individual staff members, designated to perform certain differentiated tasks, tend to become authorities and do not like to have other team members interfere with their domains.

Benefits. An atmosphere has been created, reportedly, that encourages new ways to instruct students. Also, individual student needs and problems may be better met by the variety of skills on the staff. In addition, teachers with skills that resulted from additional training are given recognition in terms of money for expertise. Also, a teacher may advance without giving up teaching. More persons are available to help a young person grow and under the DS pattern there is a built-in function for deliberate planning.

Weber County School District, Ogden, Utah[36]

Setting. There are five schools participating in the
DS project funded by the U. S. Office of Education. All are
junior high schools. Since 1956, the Weber County School Dis-
trict has received nationwide recognition for its educational
innovations. Decisions relative to educational innovation in
the Weber County School District are guided by the central
theme or organizing principle of success-oriented individual
experiences.

Positions. Positions vary for the different schools
and some schools have more positions. Generally, the positions
include the principal, division leader, learning experience
designer, teacher, student teacher, executive secretary, para-
professional, teacher's aide, records aide, instructional aide,
work study personnel, stenographer aide, audio-visual aide, and
production aide.

Structural Change. The teacher is considered a learning
provider and serves as an academic counselor and prime resource
person for students. The principal is considered a coordinator
and consultant for the total school. He develops, interprets,
and implements school policy. The team leader, as a member of

_____

[36]John A. Nelson and Carolyn P. Panofsky, "A Study of
In-progress Differentiated Staffing." (A Mimeographed Report
to the United States Office of Education) N.d.

the Administrative Team, assumes general decision-making responsibilities for the school program.

Time. The only available information regarding time configurations pertained to one school where responsibilities of the development team members are estimated to be an 8 per cent addition to the normal work load.

Decisions. Since the DS project began, all five schools have been given complete autonomy regarding decision-making for curriculum development, space, use of funds, student programming, and other instructional matters.

Evaluation. Informal evaluation among staff are commonly found. The criteria for these informal evaluations of peer performance are based on perceived responsibilities. The principal evaluates all personnel formally.

Problems. Teacher organizations initially resisted DS fearing that the number of certified positions in the district would be reduced. Second, teachers in the new leadership positions who have additional responsibilities desired according compensation. This desire conflicted with the district office's intention that DS not be a vehicle for differentiated salaries. In addition, interpresonal staff problems have become more evident with team members required to work more closely.

Benefits. It is reported that since DS, the needs of the total student are being attended to more fully. Through the use of more specialized personnel, operations are less fragmented, and the use of support services has become more sophisticated.

Western States Small School Project, Carson City, Nevada[37]

Setting. There are three state clusters of three to five rural elementary schools, twelve total, each participating in the DS project funded by U. S. Office of Education. DS in these schools affects the fourth, fifth, and sixth grades. The project was initiated in response to the premise that students attending small rural schools are seriously disadvantaged in their education.

Positions. Positions included in the DS project are the instructional coordinator, instructional technician, principal, media specialist, and teacher.

Structural Change. The principal is considered to be the agent of the community and the Board of Education. An Instructional Design Team is responsible for the instruction in all project classrooms. The Curriculum Development Team

---

[37]Stanley J. Nicholson and Carolyn P. Panofsky, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

prepares curriculum in terms of Instructional Design Team pro-
posals.

Time. No time delineations were available for this
project as there are no classroom DS positions included in the
program.

Decisions. The project subscribes to the notion that
instructional decisions are built into the process of curricu-
lum development and instructional strategies are inherent in
given instructional materials and tasks. Thus, the Instruc-
tional Design Team (IDT) and Curriculum Development Team (CDT)
are the instructional decision-makers.

Evaluation. Instructional technicians are evaluated
by the instructional coordinator with the advice of the Instruc-
tional Design Team. The Cluster Advisory Board is responsible
for evaluating members of the Instructional Design Team. This
evaluation process is not fully formalized.

Problems. Some resistance to the project was made by
principals stemming from an increase in responsibility and a
decrease in authority. There has also been some difficulty
recruiting personnel and difficulty in persuading people to
commit themselves to extended summer training away from home.
There has been a high turnover in personnel and difficult rela-
tions at times between community people and the project.

Benefits. The benefits observed as resulting from DS
are primarily in terms of students. Because of the two suppor-
tive services provided by the Instructional Design Team and
the Curriculum Development Team, the instructional technician
is free to create the social psychological climate for learn-
ing, essential to the life-internship learning concept.

Beaverton School District, Beaverton, Oregon[38]

Setting. One elementary school, one junior high school,
and one high school are participating in the DS project funded
by U. S. Office of Education. The three schools were chosen
because they feed one another; that is, the same students move
from the elementary to the junior high, and, then, to the
high school.

Positions. Instructional teams include a team leader,
instructors, assistant teachers, interns, and aides. Various
specialists are also employed.

Structural Change. The structural organization consists
of three different types of teams--instructional teams, curricu-
lum teams, and specialized instructional personnel.

---

[38]Stanley J. Nicholson and Carolyn P. Panofsky, "A Study
of In-progress Differentiated Staffing." (A Mimeographed Report
to the United States Office of Education) N.d.

Time. The team leader is allowed one hour of release
time per day for his special duties. An instructor spends most
of his instructional time with individuals and small groups.
An assistant teacher is purely instructional.

Decisions. Decisions regarding instructional develop-
ment are made by the instructional staff. Curriculum teams
are concerned with decisions related to instructional content,
while the instructional teams handle matters related to the
process of instruction or instructional strategies. Instruc-
tional teams are also responsible for decisions related to
scheduling time and space, and they are involved with budgeting
for such matters as training and curricula.

Evaluation. The principal has final responsibility for
staff evaluation, but informal evaluation is conducted by
others. The instructional coordinator works with team leaders
who provide observation and assessment of the instructional
staff.

Problems. The high time-cost of experimentation, the
absence of enough money, the threat of job loss for teachers,
complicated by the difficulty in finding people who are willing
to constantly change, difficulty in maintaining an integrated
change of pace between the schools and the central office, and
unstable situation created by the decentralized decision-making
involving people who are making decisions for the first time,

and the lack of capability in knowing how to measure factors
which are supposed to be measured were listed as problems of
the DS project.

Benefits. Among the benefits listed for the Beaverton
DS project are the use of community resources and expertise,
the use of assistants in the classroom who are closer to stu-
dent age creating a degree of adult-student rapport which has
rarely been achieved in the past, teachers being able to per-
form with greater expertise because of support, a higher
adult-student ratio, real team work, and renewal of teacher
interest and attitudes.

Hood River School District, Hood River, Oregon[39]

Setting. There is one school, Hood River Valley High
School, participating in the differentiated staffing project
funded by U. S. Office of Education. The plan has been opera-
tional by curriculum areas since Fall, 1970, and affects the
total student body of approximately 800 and the entire staff
of 3 administrators, 49 professional teachers, 12 para-pro-
fessionals, and 2 pre-professionals. In the Fall of 1970, the
school moved into a new physical plant designed for continuous
progress.

_____

[39]Stanley J. Nicholson and Carolyn P. Panofsky, "A
Study of In-progress Differentiated Staffing." (A Mimeo-
graphed Report to the United States Office of Education) N.d.

Positions. The total staff of the school is comprised
of administrators, learning managers, para-professionals, and
pre-professionals. The learning managers are classified as
curriculum coordinators, team leaders, Level I, and Level II
teachers.

Structural Change. The curriculum coordinators develop
teaching-learning strategies and serve as problem solvers for
other learning managers. Team leaders have responsibilities
similar to the former department heads. Level I and II teachers
are classroom teachers. The principal's position has not
changed other than to allow for the duties of the curriculum
coordinators.

Time. Specific information is available only for
Level I and II teachers. Level II teacher time is approximately
the following: 35 per cent direction instruction, 35 per cent
development of instruction, 5 per cent counseling and advising,
5 per cent monitoring, 10 per cent meetings, 10 per cent
scheduling, breaks, and miscellaneous. Level I teachers spend
more time in direct instruction: 45 per cent instruction,
25 per cent grading and evaluation, 10 per cent preparation
of instruction, 5 per cent counseling and advising, 5 per cent
monitoring, and 10 per cent breaks and miscellaneous.

Decisions. The school cabinet, composed of the princi-
pal, associate principal, administrative assistant for

operation, and the curriculum coordinators, makes school policy decisions and reviews subsequent implementational policies. Learning managers make the decisions for implementation. In budget decision-making, all staff members may recommend. Then team members and leaders prepare the recommendations and submit these requests to the cabinet.

Evaluation. Each coordinator is responsible for evaluating the professional staff in his group and the team leader has recommendatory power in this area. The principal has final approval for retention or dismissal based on the recommendations of the coordinator and team leader.

Problems. No information has been collected relative to problems encountered with DS at Hood River Valley High School.

Benefits. No information has been collected relative to benefits observed from DS at Hood River Valley High School.

Laguna Beach Unified School District, Laguna Beach California[40]

Setting. Laguna Beach Unified School District has one school participating in the DS project, Thurston Intermediate

[40]Norman J. Boyan and Carolyn P. Panofsky, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

School, which has been operational since Fall, 1970. DS is
a part of a continuing reformation of the educational program
in the district. It followed the introduction of team-teach-
ing, daily demand scheduling, and student performance criteria.

Positions. The DS staff includes a principal, a vice-
principal, four team coordinators, one specialty teacher
coordinator, eight specialty teachers, team teachers, one and
one-half counselor, and twelve aides.

Structural Change. There are no changes in the duties
and responsibilities of the principal and the vice-principal.
The team coordinator manages the instructional responsibilities
of the team and engages in instruction. The team teacher
serves as an academic counselor for 25 students in daily home-
room periods.

Time. The principal spends 10 per cent time in demon-
stration teaching and problem-solving activities with pupils,
40 per cent with teachers in planning and training activities,
and approximately 50 per cent in his school administrative
duties. The vice-principal spends approximately 50 per cent
time in monitoring the daily-demand flexible schedule, 30 per
cent in school administrative duties, 15 per cent in teacher
planning and training, and 5 per cent in demonstration teach-
ing. The team coordinator spends 80 per cent of his time in
direct instruction and about 20 per cent in planning and

administrative functions. Team teachers invest about 5 per cent of their time in planning activities and the remainder in direct instruction. Specialty teachers spend about 90 per cent time in direct instruction and 10 per cent in planning activities.

Decisions. The instructional cabinet operates as a curriculum policy-making body for the school. Team members are responsible for implementation decisions.

In addition to the instructional cabinet, an Academic Council has been established as a decision-making body in the school. Members of the Academic Council are selected by the staff.

Evaluations. Thurston School uses a set of eight documents which are thought to provide objective performance criteria and evaluation procedures. The documents emphasize the presence or absence of a given performance rather than allowing only for qualitative evaluations.

Problems. In the early states, the DS project suffered from an insufficient amount of staff input. Consequently, the initial operating format for DS at Thurston School was primarily an administrative hierarchical arrangement. Also, the money received for salaries in the project was insufficient to create a real differentiation of pay.

There was also a communication problem and adequate information was not provided non-project staffs in the district regarding the true differentiated staffing concept.

Another problem was the uncertainty of U. S. Office of Education support funds for the Thurston project.

Benefits. It has been reported that the combination of new scheduling arrangements and staff differentiation affords more time and a more systematic approach for developing curriculum materials and improving instructional delivery. In addition, the new performance criteria and evaluation procedures have clarified role responsibilities and, reportedly, have increased the performance levels of staff members.

Marin County Schools, Corte Madera, California[41]

Setting. The DS project in the Marin County Schools involves local schools within four separate districts. Each of the four local districts has participating schools with a relatively unique pattern of differentiated staffing.

Positions. There are eight positions in the DS project: teacher coordinator, regular teacher, counselor, intern

---

[41]Stanley J. Nicholson, Carolyn P. Panofsky, and Paul B. Elswick, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

teacher, student teacher, and various numbers of instruc-
tional/clerical teacher aides and community volunteers.

Structural Change. Various coordinators have been
given responsibilities for in-service training, supervising
activities which involve staff aides and volunteers within the
total school, and supervising a variety of student extra-
curricular activities.

Time. Teacher coordinators spend two fifths of the
time teaching, and their remaining time in planning and
development activities. The principal spends from 15 per cent
to 25 per cent of his time in direct instruction.

Decisions. Decentralized decision-making is one of
the aims of the DS project. Each school designs its own
training components for the use of available resources and each
school team also designs its own interdisciplinary curriculum
program. Each team decides upon its own utilization of time,
space, and personnel resources.

Evaluations. The principal is formally responsible
for evaluating the total staff, but the evaluation system is
in the process of becoming decentralized.

Problems. A major problem in implementing the DS plan
resulted from the death of the principal early in the school
year. Various responsibilities had to be shifted to make up

for the absence of the principal. The primary problem en-
countered in planning DS for the Wolfe Grade School was trans-
lating the conceptual framework, based on needs assessment,
into concrete operational plans for implementation.

Resistance to change among the teachers was also
reported as a problem in the Shoreline DS project. The vast
size of the San Francisco Unified School District and the
demanding desegregation efforts undertaken in the district have
both contributed to the difficulty of differentiated staffs.

Benefits. Benefits reported from Mill Valley are
primarily of teacher attitudes. Teachers are actively engaged
in thinking about alternative techniques for improving the
instructional program, making better use of resources, and
working cooperatively. It is reported that teacher involve-
ment in decision-making, and increased administrative reliance
on teachers in matters of budgeting and decision-making have
improved teacher morale and renewed enthusiasm for the overall
educational program.

Ontario-Montclair School District, Ontario, California[42]

Setting. There is one elementary school participating
in the DS project funded by U. S. Office of Education. DS
involved kindergarten through the third grade during the first

---

[42]Norman J. Boyan, Stanley J. Nicholson, and Carolyn P.
Panofsky, "A Study of In-progress Differentiated Staffing."
(A Mimeographed Report to the United States Office of Educa-
tion) N.d.

year of operation. The school serves 360 students, of whom

60 are bussed from a disadvantaged area. The total instruc-

tional staff of twelve teachers and the principal participated

in project training during 1970-71.

Positions. The Instructional Cabinet is made up of

the principal, the clinician teacher, a lead teacher, a staff

teacher and an intern.

Structural Change. The major structural change is

the addition of certain positions to the staff to perform

selected duties. Lead teachers are highly skilled practitioners

and they are viewed as service personnel. They spend more time

than staff teachers and interns in activities such as curricu-

lum development, instructional strategies development, and

diagnosis of and prescription for student learning disabilities.

Time. The clinican spends 75 per cent of his time in

direct classroom instruction. He has 25 per cent released

time, provided by the 25 per cent teaching of the principal,

for various administrative and tutoring activities.

Decisions. Matters of instructional delivery are

decided by the total staff. In general, the Instructional

Cabinet initiates a proposal; the clinician chairs, the Cabinet

and each of the five members has one vote. The proposal must

receive the concensus of the entire school staff before it is

put into effect.

Evaluations. Evaluation remained unchanged. The principal is required to evaluate non-tenured staff once a year and tenured staff once every five years. It is reported that two staff members will be engaged in evaluating the performance of the clinician and each lead teacher for the purpose of selection, but not in terms of continuous performance.

Problems. The major problem was that staff felt overworked and overburdened in the development of performance criteria and salaries for vertical differentiation of roles. The staff did not feel that the process of developing the criteria was of direct benefit to the improvement of instruction.

Benefits. The major benefit was that the staff did become aware that developing quality education is a long-range approach and that a commitment to it is necessary.

Portland Public Schools, Portland, Oregon[43]

Setting. Two schools, John Adams High School, and Portsmouth Middle School are participating in the DS project funded by U. S. Office of Education. This report concentrated on Adams High School which has a two-part curriculum program

---

[43]Stanley J. Nicholson and Carolyn P. Panofsky, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

comprised of a core program and an elective program. The DS
project affected only the core program. Adams serves approxi-
mately 1,600 students and the student body is diverse in terms
of social and economic backgrounds. Approximately 27 per cent
of the student body is black.

Positions. DS positions consist of the curriculum
associate, team leader, staff teachers, educational researchers,
teaching supervisors, counselors, associate teachers, interns,
student teachers, aides, and auxiliary personnel.

Structural Change. The curriculum associates have
replaced the principal in such areas as curriculum, counsel-
ing, registration, and scheduling. The team leader performs
duties similar to those of a traditional department head. The
educational researcher has been added to collect and disseminate
information related to teacher and student behavior.

Time. No information regarding time for this project
was reported.

Decisions. Adams is governed by a school-wide Policy
Board and membership consists of administrators, elected
teachers and students in equal numbers, and the president of
the Parent Teacher-Student Association. Chaired by the prin-
cipal in a non-voting capacity, the board establishes school-
wide policy on curriculum activities and school regulations.

Teachers usually have little direct participation in formulating the budget.

Evaluations. Job descriptions serve as the general criteria for evaluating staff performance. Curriculum associates and team leaders are evaluated by the administration, but the evaluative process draws upon significant input from both teachers and students. All other professional staff positions are also evaluated by the administration with teacher peers and student input.

Problems. It is reported that teachers have not been as innovative as anticipated in both grouping students and in the flexible use of time. Groups are usually organized on the basis of 25 to 30 students, which reportedly has limited the utilization of diverse teaching strategies and methods. Also, at times teachers and administrators indicated they were not clear regarding certain school policies and who was responsible for what decisions.

Benefits. No benefits were reported.

Temple City Unified School District, California[44]

[44]Norman J. Boyan, Stanley J. Nicholson, and Carolyn P. Panofsky, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

Setting. There are six schools participating in the
DS project funded by U. S. Office of Education. One high school
and five elementary schools are included in the project. Edu-
cational innovations employed in the district prior to the
DS project include programs of flexible scheduling and individu-
alized instruction, and the creation of resource centers and
labs.

Positions. Positions in the DS project include master
teacher, senior teacher, staff teacher, associate teacher,
intern teacher, and instructional aide.

Structural Change. The role of vice-principal has been
eliminated at the schools which have implemented DS thus far,
and the principalship is evolving toward the role of an imple-
mentor rather than a director.

Time. The master teacher spends 20 to 25 per cent in
classroom teaching. The senior teacher spends 60 per cent of
his time in classroom instruction and the staff teacher is a
full-time classroom teacher.

Decisions. The District Senate is the link between
the individual schools and the Board of Education. It is
composed of the principal and a senior teacher from each of
the six DS project schools, and one representative elected
by each school. It is chaired by the district superintendent
who votes only to break a tie.

The Instructional Council is also a district level
decision-making body. It was created to separate the process
of on-going curriculum development from the process of policy-
making in the area of administrative decisions. It is com-
prised of master and senior teachers and the superintendent.
The Instructional Council is responsible to the District
Senate.

At each project school, the Academic Senate is the
policy-making body of the school, and it is directly responsi-
ble to the superintendent. The principal and senior teachers
comprise the Academic Senate.

Evaluations. Performance criteria are derived from
the job descriptions of each position, written in behavioral
terms. Each department writes its own job descriptions based
on its own needs.

The Temple City Project has developed a collegial
and reciprocal system of evaluation. The senior teachers
evaluate staff teachers, associate teachers, and instructional
aides. These persons in turn each evaluate the senior teachers.
The senior teachers also evaluate the master teacher. The
teachers who were served by the senior teacher decide whether
he will continue in this role. The senior teacher presents
his recommendations to the Academic Senate as the final
authority in matters of evaluation related to staff welfare.

Problems. The major problem encountered related to the role and compensation for associate teachers. Teachers who were in the district at the time DS started and filled teacher positions, failed to perform at the level expected of staff teachers. A morale problem began to develop when new associate teachers began to compare their expectancies with those of some staff teachers. The problem became magnified as a result of the limited number of vacancies in school districts in the area. Persons who normally could leave the district and experience no difficulty in obtaining another teaching position began to realize that they had few, if any, places to go.

The lack of teacher turnover also created other problems. Financial savings projected did not materialize.

Benefits. Evaluation processes have improved as a result of experience and refinement. The pre-service training program resulted in selection of new teachers who fully understand the nature of the program and are anxious to work in it. The quality of performance of these new teachers is a district benefit.

Behavioral objectives in major subject areas are being developed by staff members and citizens, and are influencing changes in evaluation of student progress as well as instructional techniques.

Staff involvement in decision-making through formally constituted bodies such as local and district senates has received wide acceptance and approval by the staff.

Mesa Public Schools, Mesa, Arizona[45]

Setting. Two elementary schools and one junior high school have participated in this U. S. Office of Education funded project. It is based on the premise that student needs change and, therefore, staff roles must change to meet the needs of the students. The concept of performance contracting facilitates continuous role changing in response to changing needs.

Positions. Differentiated roles include the principal, program manager, instructional leader, classroom teacher, teacher aide, teacher intern, and student intern.

Structural Change. There is no generic model for the Mesa project. All staff differentiation plans are site, time, and goal specific. Teaching roles are established in a vertical arrangement, for a specific time period and in a relationship to specific objectives. When the objectives are met, the hierarchy of roles is abolished.

---

[45]G. Roger Sell and Carolyn P. Panofsky, "A Study of In-progress Differentiated Staffing." (A Mimeographed Report to the United States Office of Education) N.d.

Time. Because of the nature of this program and the
fluid hierarchy, no time specifications are arranged.

Decisions. The Central Evaluation Panel acts as an
arm of the Center for Educational Advancement in the allocation
and control of funds administered for the Mesa project. Staffs
of each pilot school decide, usually per majority vote, whether
to respond to a Request for Proposal with a bid. General
constraints on the bid process are decided by the Central Eval-
uation Panel. The classroom teachers are primarily responsi-
ble for assigning students to specific instructional locations
and for determining the instruction of students.

Evaluation. Criteria and evaluation procedures for
staff performance are provided in Requests for Proposals and
responding bids. The Central Evaluation Panel serves as
arbitrator in the evaluation process.

Problems. Two basic problems were encountered during
the first year of project operation: staff fatigue due to
extended work commitments, and interpersonal relations. The
interpersonal problems area was diagnosed as fundamentally
related to lack of attention to people-centered concerns.

Benefits. The following benefits related to the DS
approach were observed: reconceptualization on the part of
the staff at the pilot schools in the nature of the school,

the place of the student within the school, and the profes-
sional relationship of teacher/learner, i.e., the learner as
client; instructional staffs' becoming less inclined to accept
arbitrary decisions on the part of the administration; genera-
tion of a more objective basis for instructional decision-making
staff growth in maturity and development of capabilities to
handle ambiguity; and, more judicious use of resources.

III. EVALUATIONS OF CURRENT PROGRAMS

As can be seen in the foregoing sections, DS models
vary substantially from one school district to another. No
concrete, detailed model for DS exists.[46] Schools have differ-
ent problems related to DS projects, and, often, they have
realized different benefits.

Researchers at the Center for the Advanced Study of
Educational Administration spent the 1970-71 school year con-
ducting on-site observational studies of four schools in their
first year of implementing differentiated staffing. They
found a characteristic course of events in the schools during
that year and some chronic problems of change were revealed
by the observations.[47]

---

[46]W. W. Charters, Jr. and Roland J. Pellegrin, "Barriers
to the Innovation Process: Four Case Studies of Differentiated
Staffing." Educational Administration Quarterly, Volume 8,
Number 1, Winter 1972. p. 14.

[47]Ibid. p. 3.

The course of events described by Charters and Pelle-
grin included the preparation-formulation phase of DS, selec-
tion of schools for participation, staff formulation phase,
staff handicaps during formulation, the implementation phase,
appearance of outside evaluators, and decisions concerning
the succeeding year.[48]

Chronic problems cited by the Charters and Pellegrin
report included gross unclarity of concepts, fallacious
assumptions concerning new and appropriate behavior patterns,
unrealistic time perspectives, and ambiguities and stresses
in the disjunction between the school districts' established
administrative structure and the temporary system for project
management.[49]

DS has been opposed by some people for a number of
reasons. After board approval of a plan in Montgomery County,
Maryland, the Montgomery County Education Association opposed
it bitterly charging that teachers at schools where DS was
scheduled as a pilot program had been only minimally involved
in development of the plan and some knew nothing at all about
it. The dispute developed an additional issue, that of merit
pay. The education association claimed that the motive of

---

[48]Ibid. pp. 6-11.

[49]Ibid. p. 12.

those seeking to impose DS was not to restructure education

but to put merit pay into effect.[50]

Gary Watts, head of the National Education Association's

Division of Field Services, also has strong objectives to DS

because, as he states,

> Every plan I've seen is so structured that the
> higher positions in the hierarchy have less pupil
> contact. The less teaching responsibility gets the
> higher priority.[51]

American Federation of Teachers president David Seldon

expressed his opposition to DS at the organization's 1969 con-

vention when he stated,

> We have avoided an outright negative response but,
> at the same time, we have made it clear that we will
> not support the introduction of ranks into elementary
> and secondary school teaching. We consider this
> merely a device to introduce merit rating in dis-
> guise.[52]

IV. NEED FOR MORE RESEARCH

There are definite indications that many schools

throughout the country are interested in a differentiated staff-

ing structure and in the various instructional techniques,

arrangements, and outgrowths that may accompany it. Each of

the DS programs described in Section II represents a different

---

[50]National School Public Relations Association, _Differ-
entiated Staffing in Schools_. p. 7.

[51]_Ibid_. p. 8.

[52]_Ibid_. p. 8.

model of differentiated staffing and a variety of teaching
methods, structures, problems, and benefits. The project des-
cribed in this case study is the trial of a specific model of
DS representing an effort to further research the organiza-
tional structure and apply it to a local situation.

Differentiated staffing has existed for some time.
Most early models used additional duties as the method of
separating teacher roles beyond the staff level.[53] The
enactment of the Education Professions Development Act in
1967 established a priority program of school personnel
utilization aimed at funding a few experimental, demonstration
training projects for schools adopting differentiated staff-
ing models. Funds to be granted for experimental projects
had to be applied for and the funding of 625 proposals of
the more than 3300 proposals submitted to the U. S. Office
of Education implies that much innovational planning was done
to meet the stiff competition for project approval.[54] Most
initial funding was made for the 1970-71 school year. As
described in Section II, these U. S. Office of Education
funded programs introduced a variety of new, differentiated
structures and models. These programs were each unique and

[53]Fenwick English, "Questions and Answers on Differen-
tiated Staffing," Today's Education. Volume 58, number 3,
March 1969. p. 54.

[54]Donald K. Sharpes, "The Federal Investment in Staff
Differentiation," in James M. Cooper, ed., Differentiated
Staffing (Philadelphia: W. B. Saunders Co., 1972). p. 56.

contained <u>few</u> <u>measurable</u> components for evaluating the project

or students. Fenwick English states that differentiated staff-

ing should be evaluated through the development of curriculums

that can be measured in student outcomes. In the meantime,

alternative models can be compared with each other.[55] U. S.

Office of Education funded projects received multi-year fund-

ing with no evaluation requirements other than periodic on-

site descriptions by Office of Education personnel. This,

however, does not satisfy the local need for answers to ques-

tions like "should the differentiated staffing program be

expanded to include more schools," and "does staff differen-

tiation enhance education for the slow learner," ". . . for

the able student," ". . . for the majority of students?"

Experimental design for program evaluation also pre-

sented many problems. The extreme difficulty of controlling

the internal and external variables and the existing situations

where schools for the staff differentiation project were not

selected on some random basis made experimental evaluation

almost impossible.[56]

Don Barbef, in commenting on the importance of differ-

entiated staffing as an innovation, stated, "Administrators

_____

[55]Fenwick English, "Questions, Differentiated Staff-
ing." p. 54.

[56]Fenwick English, "Evaluating Effects of Differen-
tiated Staffing." p. 5.

will want to examine fully the implications and possibilities of differentiated staffing."[57]

Fenwick English sees differentiated staffing as a concept that promises to cause substantial shifts of power and changes in promotion policies and budgeting procedures.[58]

Differentiated staffing is still in its infancy. The need for research concerning the effects of differentiated staffing is substantiated by the fact that it is almost non-existent in the literature. The fact that there are many wide variations in programs, most of which began in 1970, complicating comparability studies further, illustrates the need for more studies. Interest is growing in differentiated staffing and in the promises it holds for education, as indicated by the endorsement of the concept by the Texas State Teachers Association at their 1973 state convention, in a state containing no known DS programs other than the one in this study. Therefore, it is necessary that more studies be made concerning the effects of all concepts of differentiated staffing.

---

[58]Fenwick W. English, "Differentiated Staffing: Refinement, Reform or Revolution," in James B. Cooper, ed., Differentiated Staffing (Philadelphia: W. B. Saunders Co., 1972). p. 43.

CHAPTER III

DEVELOPMENT OF THE PROJECT

Inputs in phases one and two of this program brought

the Wallis faculty to a decision on the type of differen-

tiated staffing program they wished to try, a decision on

the extent of the program during the pilot period, the selec-

tion of the DS team during the pilot phase, and a planned

training program to prepare the team and the faculty for

implementation of the pilot model. During phase one, and

prior to any detailed discussion of the concepts of differ-

entiated staffing, the Minnesota Teacher Attitude Inventory,[1]

a locally developed Teacher Attitude Inventory[2] based on the

concepts of differentiated staffing, and a Staff Sentiment

Scale[3] were administered to the faculty as pre-tests of

attitudes held toward the concepts of DS. Post-tests for

observation of any changes that might have occurred in the

_____

[1]Walter W. Cook, Carroll H. Leeds, and Robert Callis.
Minnesota Teacher Attitude Inventory (The Psychological Corp-
oration, New York, N.d.).

[2]Developed by Donald L. Hestand, Superintendent, Wallis
Independent School District, Wallis, Texas, 1972.

[3]Developed by Dr. N. Cecil Clark, Florida State Uni-
versity and Dr. Michael De Bloois, Utah State University,
April, 1972.

73

teachers after their experience with the differentiated staffing project and training were taken in May and results are reported in Chapter IV. The students also took a Student Attitude Inventory[4] on the first day of the implementation of the pilot project. Their post-test was also administered in May and the results will be reported in Chapter IV.

Immediately after the teacher's pre-tests, training inputs began with preliminary training sessions, conducted by the superintendent, to introduce the faculty to the term and concepts of differentiated staffing. One hour-long session was held in September and two half-day sessions in October. A consultant from the University of Houston was then employed to hold a series of workshops with the teachers beginning November 9th, to familiarize them with the concepts of DS and with the various styles of DS programs being operated. The objective was to take the faculty through phases two and three and prepare them for phase four of the program.

Phase Two. Program and Organization Analysis Phase: October 1972 - November 1972.

Phase Three. Development Phase: November 1972 - December 1972.

---

[4]Adapted from a "Student Attitude Scale," developed by Cherry Creek District No. 5, Englewood Colorado, relating to their differentiated staffing program.

Phase Four. Implementation and Evaluation of Pilot
Program: January 1973 - May 1973.

Phase Five. Model Evaluation and Modification Phase:
May 1973 - June 1973.

The activities in phases two through five are reported
in sections according to the preceding outline. Phase one
was described in general terms at the beginning of this
chapter. Each of the following sections contains the signifi-
cant activities undertaken, decisions made, concerns of the
faculty, and the reactions of the participants in the study.

PHASE TWO

Compilation of Materials for Readiness Program

During phase one, the faculty gathered materials on
differentiated staffing from every source they could locate.
The school district administrators were primary providers in
this area. They provided two of the few books available on
differentiated staffing, Differentiating the Teaching Staff
by Lewis,[5] and Differentiated Staffing, edited by Cooper.[6]
Periodicals and journal articles were also obtained, and
the superintendent requested occasional papers and materials
from the projects in Mesa, Arizona, and Beaverton, Oregon,

---

[5]Lewis, op. cit., p. 16.

[6]Cooper, op. cit., p. 14.

and from the state of Florida. The National Cluster Coordina-
tion Center in Sarasota, Florida, is a federally financed pro-
ject whose purpose is to collect materials on the various
federally financed DS projects and to distribute the materials.
This center provided an abundance of unpublished materials
from many different DS programs for study.

The Staff Sentiment Scale, mentioned earlier, was
developed by Dr. N. Cecil Clark, a research specialist at
Florida State University and Dr. Michael DeBloois of Utah State
University. This is a rather new instrument and was developed
as an instrument for measuring staff sentiments toward self,
school, and profession and was first used in the New Jersey
Multi-Unit Elementary Schools Project, April, 1972.[7] Dr. Clark
and Dr. DeBloois each sent copies of the instrument, along
with supporting data, to Wallis Independent School District,
and the instrument and data were used in this DS program.

The Staff Sentiment Scale was developed at the Evalu-
ation Training Center, Department of Educational Research,
Florida State University. The revised form of April 1, 1972
has been given in 25 schools in three regions of the United
States. It was administered to 601 subjects and the relation-
ships of underlying factors were estimated by the following
Alpha reliability coefficients:[8]

---

[7]Clark and DeBloois, op. cit., pp. 1-3.

[8]Ibid. p. 9.

I.	Self-Concepts	.74
II.	Frequency of Interaction	.71
III.	Collegiality	.86
IV.	Professional Practices	.61
V.	Preferred Practices	.35

Alpha reliability is described by Cronbach as the mean of all split-half coefficients resulting from different splittings of a test.[9]

The Staff Sentiment Scale is based on an extensive review of the literature of organizational theory and differentiated staffing and upon systematic observation in schools. The revised version was based upon item analysis, subscale intercorrelations, and site visits to two of the schools to interview teachers for their reactions and suggestions. Items were deleted and improved.[10]

Also during phase one, it was decided by the superintendent and the study committee, to center the pilot DS project in grades four, five, and six.[11]

---

[9]Lee J. Cronbach, "Coefficient Alpha and the Internal Structure of Tests," Psychometrika. Vol. 16, number 3, September, 1951, pp. 297-334.

[10]Clark and DeBloois, op. cit., pp. 1-9.

[11]Supra. p. 5.

Development of a Feasible DS Model

The study committee began their study of the various differentiated staffing programs with an in-depth review of the Temple City, California project. This was the structure that had been introduced to them at the beginning of the year and it was discussed in two later in-service work-shops. They considered materials gathered from journal articles, books, and materials gathered from corresponding with schools that had programs in operation and with the National Cluster Coordination Center in Sarasota, Florida. Their routine was to meet during the school day to examine the available materials, each take some of the materials to study for a few days, and then meet on a designated day to discuss the materials studied. Each person, the three study committee members, the elementary principal, and the superintendent, reviewed the materials at their meetings and each reported on the various aspects of the projects.

From the Temple City Project, the committee proceeded to study the Mesa, Arizona in-faculty contracting style of differentiated staffing, the Florida state-wide plan, the plans as Cherry Creek, Colorado; Chicago, Illinois; Louisville, Kentucky; Kansas City, Missouri; Beaverton, Oregon; and Laguna Beach, California. Ten other plans were also reviewed, but not studied in depth.

The three DS teachers had been teaching in self-
contained classrooms, but now began thinking in areas of
specialization and began planning as a team. The fourth
grade teacher had more than twenty years of experience while
the other two teachers had two and five years of experience.
The teacher with two years of experience seemed to have the
most apprehension as the study proceeded. However, they all
had many questions and uncertainties.

The only concepts that seemed to be difficult for the
teachers were the strategies of team teaching and skill group-
ing over a three-grade-level span. Time in two workshop
sessions was spent on these two techniques with very little
progress. Neither of these techniques had ever been experi-
enced by anyone on the staff. During the second session it
was decided to bring in an outside consultant to discuss and
teach the committee the concepts of these two techniques.

A consultant was brought in during the early part of
November to discuss feasible ways of skill grouping over a
three-grade-level span. The consultant studied the situation
in grades four, five, and six regarding students, teachers,
facilities, and grouping information available and held a
preliminary discussion with the committee to determine the
extent of plans that had been made or discussed. He was then
able to outline a feasible plan of grouping and team teaching
that seemed to allay the fears and frustrations that were
bothering the teachers.

One significant development in the planning by the DS study committee and the consultant was the adoption of the results of two criterion-referenced tests as primary grouping instruments.[12] The reading and mathematics inventories contained individualized reports of skill accomplishments and deficiencies in these two subject areas with prescriptive recommendations for corrective measures based on textbooks used by the school. These tests had been administered to the sixth grade students through a state sponsored program.

Decision on Extent of DS Pilot Program

Because of a number of conditions, the committee decided to confine the DS pilot program to the fourth, fifth, and sixth grades in the areas of reading and mathematics. Teachers from these grade levels comprised the DS committee and the criterion-referenced tests to be used as a basis for grouping had already been administered to the sixth grade and were being studied for grouping purposes. These tests covered the areas of reading and mathematics. The outside consultant used in the training program also recommended that the pilot study be confined to one or two subject areas. The study committee, principal, and superintendent subsequently made their decision to include only the ninety-five students

---

[12]CTB/McGraw-Hill. _Prescriptive Mathematics Inventory_ and _Prescriptive Reading Inventory_. California: McGraw-Hill, Inc., 1971.

students in grades four, five, and six in the DS project—

and ordered additional tests to be administered to the fourth

and fifth grades to provide identical information in all three

grade levels for a consistent grouping basis.

Selection of DS Pilot Period Team

Since the teachers in the fourth, fifth, and sixth

grades comprised the DS study committee during phases one and

two of the program, it seemed logical to give them primary

consideration as the team to implement the pilot project.

Also, since the project was to be confined to the mathematics

and reading areas, the study committee, principal, and super-

intendent decided to include a team of three teachers who

were qualified in these areas as the DS pilot project team.

Plan of the Training Program

It was obvious to the teaching team that, in order

for them to implement a successful pilot DS program, they

would have to have a well organized, intensive training pro-

gram conducted by a highly qualified person. They also knew

that a considerable amount of time and work would be required

on their part. They would need the help, support, and encourage-

ment of the other staff members during the program. If the

result was a successful implementation of the pilot program,

it was quite probable that other schools would be visiting

the program to observe. This, along with their personal

investment of time and effort plus the pride of being selected as the group to try the program, apparently gave them the incentive to demand a concentrated training program that would prepare them well for their task.

The team selected a consultant from the University of Houston to conduct their training.[13] This advisor was scheduled to come to the school periodically in November, December, and January and to follow-up with visits and training sessions during the progress of the program in February, March, and April.

Before the arrival of the consultant, the teaching team met to identify their needs in the way of training and the tasks which had to be accomplished before implementation of the program on January 16, 1973. When they met with the consultant, the teachers presented their ideas to him and he helped them to organize a training program by adding items which would need to be accomplished before beginning the DS program. The final agenda of items in the training program is included in phase three, the development phase. Prior to the actual training program additional preparation included a refinement of the DS model and finalizing the pilot processes.

---

[13]Dr. Jody L. Stevens, Associate Professor of Educational Administration and Supervision.

PHASE THREE

Refinement of the DS Model

By November, 1972, the differentiated staffing com-
mittee knew the basic provisions of several differentiated
staffing programs and they had a general idea of the type of
plan that they thought would work in a school the size of
Wallis. Some features of several DS programs appealed to the
committee. They listed these features in order that they
might be considered in a model DS program for the school. The
following items were listed:

1. A fluid hierarchy.

2. In-faculty performance contracting.

3. The team teaching approach.

4. Maximum use of specialization.

5. Use of student aides.

6. A maximum effort to individualize instruction.

During the month of November, two formal in-service
training sessions were scheduled with a consultant and the DS
committee. Four additional sessions were scheduled by the
committee to meet with the principal and the director to work
on a DS model. The committee scheduled its sessions in a
way that would allow the consultant to evaluate the work
done in committee meetings that did not include him. He
evaluated the work and planning that had been done in prior
sessions and offered suggestions for improvement and continued
work.

By the middle of November, the committee had decided on a DS model that was an adaptation of the model used in the Mesa, Arizona schools. A team teaching approach, with a fluid hierarchy that provided for the selection of the team leaders each year, was the basis of the model structured by the committee. It further provided for in-faculty performance contracting whereby the Board of Trustees would issue a request for a proposal to accomplish some phase of the educational program. The faculty could then form teams to respond to the Board's request. For this pilot program, the request for proposal was to be confined to the reading and mathematics areas in grades four, five, and six.

The DS committee also decided that their response would provide, as much as possible, for teacher specialization, individualization of instruction, and maximum use of aides.

The committee then asked their outside consultant to train them in staff differentiation procedures, team teaching, effective use of aides, individualizing instruction, and to assist the director with the development of a Request for Proposal to be approved and issued by the Board of Trustees. The concept of differentiated staffing, plans for the pilot project, and the Request for Proposal were presented to the Wallis school board on November 14, 1972. The board accepted the information and material for study until the next regular board meeting on December 12, 1972.

Finalizing the Pilot Processes

In addition to refining the DS model, decisions on various procedures to be used in the pilot phase of the DS program had to be made. The decision to confine the pilot program to grades four, five, and six and to the areas of reading and mathematics necessitated planning for the use of three regular teachers during a part or parts of the day. To respond to the expected request for proposal from the Board of Trustees, plans regarding reading and mathematics objectives, personnel, teaching materials and equipment, funding, and evaluation had to be made. The DS committee concerned itself with these areas in its meetings during the latter part of November and the first week of December.

Reading and mathematics objectives were based on skill weaknesses indicated by the criterion-referenced tests that were administered to the students.[14] The committee worked individually on the objectives and met periodically to compare notes and progress. They decided to list the objectives in a behavioral manner.

During the process of writing reading and mathematics objectives, the committee decided that they could work together more easily if they organized themselves into a teaching team or teams. They decided to organize two teams with one teacher serving as team leader for the reading team and another

---

[14]Supra. pp. 80-81.

teacher serving as team leader of the mathematics team.

This arrangement seemed to facilitate things for the teachers,

put someone in charge of planning sessions, and helped them to

project their plans somewhat.

The director furnished the DS teams with a budget

format adapted from one used by the Mesa, Arizona schools.

By studying this format, the teachers acquired a knowledge of

the information needed to respond to the anticipated request

for proposal from the Board.

The DS teams decided that the best arrangement for

teaching reading and mathematics under a differentiated staffing

structure would be to schedule a special block of time in which

to do it. They asked the elementary principal about the possi-

bility of rescheduling to allow them an uninterrupted period

for these subjects. The principal advised them that he could

arrange for the DS block from 12:15 p.m. to 3:00 p.m. followed

by a common conference period from 3:00 p.m. to 3:45 p.m. daily.

The above arrangement was felt to be particularly suit-

able for compensating for the basic problems of overwork

encountered in the Mesa project.[15] Staff members were also

encouraged to pace themselves and to fully utilize team members

in spreading out the work load.

---

[15]*Supra.* p. 63.

Because of the interpersonal problems which had been encountered in the Mesa plan, it was decided that the director and principal would meet as often as possible with the teaching teams during their common conference period to give attention to any people-centered problems that might arise. Regular teacher aides and other aides would also meet periodically with the teams for this purpose.

Implementation of Readiness Program

During the intervening month, between the November and December school board meetings, several board members discussed the proposed differentiated staffing program with the superintendent. Some of these discussions were devoted to objectives and goals of the proposed program and provisions to be included in the Request for Proposal. These discussions, along with conferences with the DS teachers and school administrators and information from other DS projects, formed the basis of the Request for Proposal (see Appendix A) prepared by the superintendent for the Board of Trustees. The Request for Proposal was presented and approved for presentation to the teachers at the regular Board meeting on December 12, 1972. The teaching teams, director, and principal were now ready for the preparation of a response for the Board of Trustees and for a training program to prepare them for the implementation of the pilot program.

Implementation of the Training Program

When the Board issued their proposal request to the teachers, the teams met to outline their plans for the preparation of their response and for the concurrent training necessary to prepare them to implement the pilot DS project. The proposal request called for a response on January 8, 1973 and, upon approval of the proposal, for implementation of the pilot project on January 16th, the beginning of the second semester. Therefore, the teachers had approximately one month to prepare.

The entire Wallis faculty was included in most inservice sessions when an outside consultant was used. However, the time was usually split, and at least two hours were devoted to the DS teams.

The DS teams began their training program with a request for their consultant to present methods and procedures involved in open-concept teaching and in team teaching. They wanted to stress the individualization of instruction through team teaching techniques, utilization of teacher aides, and the use of special materials for group work.

The training program was combined with the construction of the DS teams' response to the Board. This response was, in reality, a formal budget structured to meet the requirements and standards outlined by the Board in their proposal request. The teams began their work on the proposal by formalizing their behavioral objectives. This was a time

consuming task because the teachers did not know what behavioral
objectives were. A training session with the director plus
some trial and error experiences were necessary to accomplish
this task.

Upon completion of their behavioral objectives, the
teams began composing the structure of two teaching activities,
reading and mathematics for grades four, five, and six. The
team leaders instructed team members to work alone, in the
beginning, to decide what they thought was needed in the areas
of personnel, facilities, equipment, materials, and funds, to
accomplish the objectives outlined. They then met, as a
group, with the director to compile their information into a
single report. This report was made a part of the formal
budget or proposal to the Board.

The teams began their proposal to the Board with a
statement of their major school goals. They followed the goals
with the structure of their reading and mathematics components.
Their budget statement explained the purposes of the DS pro-
gram and outlined procedures, methods, and techniques to be
used and set forth a time-table for the accomplishment of
goals and objectives. All preparations and plans of operation
were presented in the next section of the proposal and plans
for evaluation of budget objectives were stated in the last
section.

Although the project director and the elementary
principal often had suggestions regarding formulation of the

program and the training plans, staff determination of these areas was an overarching value in the proposal, and project administrators intervened as little as possible in the deliberations. They limited themselves to procedural facilitation. Even procedural specifics were determined mainly by staff consensus. The administrators, however, were under obligation to assure that the procedures were carried out inasmuch as these were the most concrete elements in the proposal contractual agreement with the Board, and success of the project could be most readily gauged in terms of their expeditious completion.

During the period of formulation, the school's professional staff operated under a number of handicaps, of which uncertainty regarding the task at hand and competing time demands of normal duties were the most salient.

Regardless of the amount of training and guidance given them by their outside consultant, a certain amount of uncertainty existed in the minds of the DS teams because they faced a task that was a totally new concept to them. They expressed this uncertainty to both the consultant and the project director. The consultant gave them the guidance, training, and definitions that they requested. However, the project director and other administrators were reluctant to help define dimensions of the instructional program for fear of compromising its grass-roots character.

Another handicap involved the leadership and incentive to develop the new program. While DS concepts state that the teachers are responsible for defining the new program, in point of fact the project was initiated by someone else and was organized and paid for by someone else. However, the DS team was given a choice though they may have felt an obligation to develop and carry out a program when the superintendent asked if they would like to become participants. Later interviews will show that this condition existed to a small degree but was overcome by subsequent developments as the project progressed.

In contrast to many programs in the literature, this project was developed, almost from the beginning, by the teachers with guidance and instruction from their consultant. After an introduction and expression of interest by the superintendent and a request for these specific teachers to develop a pilot program, the teachers proceeded with all plans and developments. They formed their decision-making structure early by organizing themselves into teaching teams with team leaders. Although they had unfamiliar work to do, they had the advantage of the use of a consultant who was an expert in the field.

The Board of Trustees accepted the teachers' project proposal on January 8, 1973. The teachers now had one week and one day to finish preparations for the implementation of

the pilot project on January 16, 1973. These final days were filled with tenseness and anxiety but the teachers also exhibited an unusual degree of confidence. They expressed that they had worked and studied hard and felt that they were ready to begin. They realized that many unforeseen details would come up as the program went into operation, but the pilot project was considered as a working model, and one purpose of the working model was to work out details.

Evaluation Procedures

Evaluation in several different areas was planned by the teachers. They felt that evaluation of the program was important from the standpoint of academic success with the students. Inherent in this was attitudinal changes on the part of students and teachers.

As stated earlier,[16] the Minnesota Teacher Attitude Inventory, a locally developed Teacher Attitude Inventory based on the concepts of differentiated staffing, and a Staff Sentiment Scale were administered to the staff prior to any discussions or training for DS. The teachers decided to have these inventories administered as post-tests near the end of the program to observe any differences occurring in teacher attitudes.

_____

[16]Supra. p. 73.

The DS teachers also decided to administer a student

attitude inventory at the beginning of the program. It was

based on DS concepts. The scale was adapted from an attitude

inventory developed by the Cherry Creek, Colorado schools.[17]

A post test was also to be administered to enable the teachers

to observe any differences in student attitudes that may have

been caused by their experiences in the DS program.

The school had routinely administered the fourth, fifth,

and sixth grade students standardized achievement tests in the

Fall. The DS teams decided to follow-up by administering the

same achievement tests as post tests in the Spring to enable

them to observe any changes in normal academic progress.

There are no comparative studies or test results with

which the test results of this study can be compared. The

results of pre-tests and post tests will be illustrated in

graphic form, and value judgments by individuals may be made.

In an effort to acquire additional evaluation informa-

tion, it was decided to ask an outside team to visit the

program and interview the teachers late in the semester, using

an interview form to assure similar types of information (see

Appendix B). A primary objective was to be able to consolidate

the data obtained into a composite report that could be used

---

[17]Adapted from a "Student Attitude Scale" developed
by Cherry Creek District No. 5, Englewood, Colorado, relating
to their Differentiated Staffing Program.

as feedback to the staff for evaluation and revision purposes.
A team of three professional people, with some knowledge of
differentiated staffing concepts, visited the program during
the latter part of April and made this evaluation. Their
findings will be reported in chapter IV.

PHASE FOUR

Implementation of the Pilot Program

On January 15, 1973, the school scheduled a teacher
workday, one day prior to the beginning of the second semester
and the DS pilot program. The DS teams spent the day finaliz-
ing grouping arrangements for mathematics and reading instruc-
tion, completing a file folder for each student in each subject
area, and discussing final plans for beginning the project.
Personnel plans had also been completed with the employment of
one teacher aide and the assignment of eight volunteer junior
and senior high school aides to the program. An additional
paid aide is scheduled to begin work in the program on April 1,
1973. In addition, the elementary principal volunteered to
instruct a mathematics group daily. His college major field
of study was in mathematics.

The student-instructor ratio was now much larger. For
reading instruction, the ratio changed from 95:3 to 95:12 and
for mathematics instruction the ratio changed from 95:3 to
95:13.

Much of the workday was used to orientate the new
teacher aide. Her planned duties were to work directly with
students during the DS block of time from 12:15 to 3:00 p.m.
and to help with clerical duties. The teacher aide worked a
full day with these three teachers from 8:00 a.m. to 4:00
p.m. daily. She helped with the instruction of other classes,
prepared instructional materials, and acquired audio-visual
equipment and materials as needed.

Program Organization

As previously stated, the three DS teachers organized
themselves into two teams for mathematics and reading instruc-
tion.[18] One of the teachers was generally recognized in the
school as being an outstanding reading teacher and another
was strong in mathematics instruction. These teachers were
elected by the team as team leaders in their respective areas.
The three teachers were very compatible and worked well together.
The team leaders led team planning in their areas and made
final decisions. They considered all 95 students as a group
and planned instructional groups according to skill weaknesses
indicated by the criterion-referenced tests administered
earlier.[19] A non-graded approach to grouping and instruction
was used. If a student needed instruction in a particular

[18]Supra. p. 85.

[19]Supra. p. 81.

reading or mathematics skill, he was assigned to a group of students with similar needs regardless of grade level. Efforts were made to assign students to groups comprised of students of similar age but this was not always possible.

Team planning sessions went very well. During reading planning sessions, the mathematics team leader became a team teacher and during mathematics planning sessions the reading team leader played a similar role. Team leaders' decisions and suggestions were accepted well.

Operating Procedures

The team leaders asked the director to begin the DS program by explaining the new techniques and procedures to all students at the beginning of the DS block of time on the first day of operation. They brought the ninety-five students to the school auditorium at 12:15 p.m. for an oral presentation and inauguration of the new program. However, even though they were very attentive, the nine, ten, and eleven year old students did not appear concerned or curious about the new grouping arrangements, team teaching, teacher aides, student aides, supervision plans, or the new daily schedule. The few questions asked after the presentation were in regard to the amount of time to be devoted to reading and mathematics each day, two hours and forty-five minutes, and about more time for physical education and recess.

After the presentation, the teachers returned the students to the classrooms and made group assignments. The group assignments were tentative pending verification by the group leader that all students were grouped correctly. Instructional planning for the various groups was not a difficult job since the criterion-referenced tests used reflect many skill strengths and weaknesses in both reading and mathematics and they provide reference page numbers in the school's second, third, fourth, fifth, and sixth grade textbooks for corrective or remedial teaching. In addition, the mathematics team used a diagnostic mathematics test to verify and expand the results of the criterion-referenced test.

Some group adjustments had to be made after the first day of instruction but changes were minimal. The teachers had taught these children for a semester, under a traditional structure, and they knew their strengths and weaknesses. The tests simply verified their knowledge about the students in most cases.

During their first common conference period at 3:00 p.m., the team leaders were careful to set a procedure and system of reviewing the work and progress for the day and of making plans for the following day. This procedure included input regarding student progress and recommendations of group assignment adjustments. The teams expressed satisfaction with the events of their opening day.

The second day of operation brought some routine into the DS classes. Students knew what group to join, where the group would work, and who their teacher or aide would be. However, daily evaluations brought about some changes in these arrangements as the teams determined student needs. These changes were gradual and did not have adverse effects.

The second day also brought the DS teams outside consultant to the school on a regularly scheduled visit. He spent his time observing the classroom and grouping arrangements and conferring with the teachers during their conference period. His chief recommendation was for the teachers to do less of the actual teaching and more planning and supervising of the aides, as they instructed groups, and more monitoring of groups.

Structural Change

In the process of planning a differentiated staffing model, the DS teams decided to not only differentiate structure but to include some other changes. They were as follows:

1. Creation of a fluid hierarchy.

2. Differentiation of salaries.

3. Team planning and teaching.

4. Non-graded approach to classroom organization.

5. Teacher specialization.

6. Use of junior and senior high school aides.

The fluid hierarchy is the foundation of the differentiated staffing concept in the Wallis model. Although it

is of a temporary nature, because the team leader must be elected to that position by peers annually, the structure is permanent. Built into this differentiated structure is a differentiated salary scale based on responsibility and amount of work done.

TABLE 2

WALLIS STAFFING MODEL AND SEMESTER SALARIES

		Team Leader	Regular Salary Plus $582
	Team Teacher		Regular Salary Plus $300
Teacher Aide			Regular Salary
Student Aide			
Volunteer Aide			

Time

The roles of team leader, team teacher, teacher aide, student aide, and volunteer aide are formally described and time for various categories of duties is set. In contrast to the assignments in many current projects, the team leader is not taken away from student contact. Her team leader duties are in addition to a regular teaching load. It is her responsibility to spend the time necessary to accomplish a satisfactory job. The fluid hierarchy, allowing team members

to elect their leaders each year, provides a flexible self-correcting mechanism. If a team leader fails to perform satisfactorily, team teachers may elect another teacher to fill the position the next year.

Team teachers are full-time classroom instructors and are scheduled for ten months of work.

Teacher aides spend most of their time preparing instructional materials and performing clerical duties. However, almost one-half time is spent in direct contact with students performing duties such as study supervision, drill work, and tutoring.

Student aides spend an average of one hour daily with the DS program. All of this time is spent in direct contact with students, usually providing drill work and tutoring.

Volunteer aides spend half-time with clerical work and half-time in direct contact with students when possible.

Evaluation Data

A number of pre-tests, post-tests, and other evaluation activities have been described.[20] Data acquired from these tests and activities will be presented in chapter four in tabular form and an analysis will be made.

---

[20]Supra. p. 73.

PHASE FIVE

This phase includes an analysis and evaluation of the accomplishments, events, and activities in phases one, two, three, and four and decisions regarding revisions and modifications of the DS model and program to be made for the next year of operation. Since chapter IV is concerned with analysis of results, this information will be included in that chapter.

CHAPTER IV

EXECUTION AND MODIFICATION OF THE MODEL

The findings are reported in two major sections. Each section is a major area of the model or systems approach used in the development of the pilot project as illustrated in figure two on the following page. The first section discusses the interaction of ideas within the system, and the second section reports field testing and revision.

The first section, the interaction of ideas, is partly a continuation of the evaluation program presented in phase three.[1] All pre-test and post-test results are presented in tabular form in this section, although no particular significance is placed on the test results other than the input value of the tests to project personnel. The statistical significance of the test results was not a factor to be considered in the final evaluation of the DS structure. The test results were considered as input data affecting interaction, strategy, and decisions on procedures to be used. In the last part of this section, analyses of the goals of change, strategy, procedures, and problems, selection of structure,

---

[1]Supra. pp. 92-94.

Figure 2
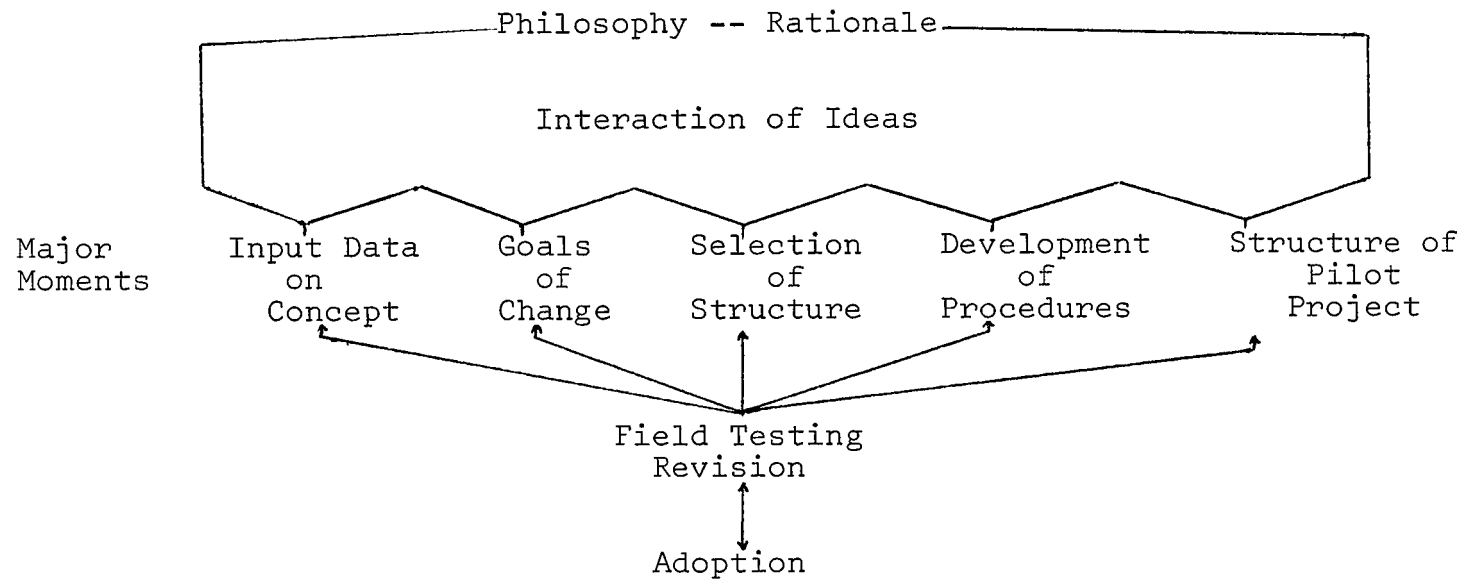
ORGANIZATIONAL CHANGE PROCESS[2]

---

[2]Gooler, "Curriculum Development Accountability." p. 166.

development of procedures, and the final structure of the
pilot project are made.

The second section, field testing and revision, pre-
sents an analyses of the project by project teachers, the
results of an evaluation of the project by a group of out-
side consultants, and final revisions made by project personnel.

Chapter IV reports the results of the activities that
took place during phase five of the project. These activities
are more properly recorded in this chapter than with the other
four phases in Chapter III, since it consists of evaluation
of the activities in those four phases.

I. INTERACTION OF IDEAS

Input Data on Concepts: Changes

Inputs to the project included the organized in-service
program for teachers during the various phases of the program
and information gained from the various attitude scales and
achievement tests administered. During phase one, the faculty
was asked to respond to three attitude inventories to enable
the DS team to acquire inputs regarding attitudes toward differ-
entiated staffing concepts and toward teacher-pupil relations.[3]
Even though these attitude inventories were administered as
pre-tests and post-tests, the initial inventory results

[3]Supra. p. 73.

provided valuable inputs and information that gave the project director, the outside consultant, and the DS committee members starting points for planning and for developing a training program. Because of the difficulty of controlling the internal and external variables involved, no claims were made regarding the statistical significance of pre-test and post-test results.[4]

During phase three, the SRA Achievement Series[5] was administered to the fourth, fifth, and sixth grade students as a pre-test. A post-test was administered during the month of April, 1973. The initial test helped to furnish the DS teams the information they needed for grouping and planning.

Also during phase three, a pre-test attitude inventory was administered to the fourth, fifth, and sixth grade students[6] and the post-test was administered during the month of April, 1973.

Staff Sentiment Scale

The Staff Sentiment Scale is comprised of five sub-scales dealing with self-concepts, frequency of interaction, collegiality, professional practices of the school, and

[4]Supra. p. 72.

[5]Louis P. Thorpe, D. Welty Lefever, and Robert A. Naslund, Science Research Associates Achievement Series. (Science Research Associates, Chicago, 1964).

[6]Supra. p. 74.

preferred professional practices. Subtest one, "Self-concepts,"

was a measurement of the individual's perception of himself.

Topics included disposition, creativity, adaptability, and

the possession of special abilities. All ten items in the scale

make reference to different criteria for self-worth. The ten

items in subtest two, the "interaction" scale, ask for the

frequency with which the respondent interacted with persons in

a variety of positions: the principal, a student teacher or

intern, etc. "Collegiality," subtest three, was considered as

the central thrust of the scale and twenty items were employed

referring to quality of interaction. "Professional practices

of the school," subtest four and "preferred professional prac-

tices," subtest five, are items measuring the individual's

perception of the school and giving the individual's prefer-

ences regarding various practices of the school.[7]

The Staff Sentiment Scale gave the project director,

the DS committee, and the outside consultant a measure of

faculty sentiments to use for planning inservice training and

special training in DS concepts. The initial results also

provided information for guidelines to be used when planning

the extent of the pilot DS project. The DS teams compared

---

[7]N. Cecil Clark, "An Instrument for Measuring Staff
Sentiments Toward Self, School, and Profession." (A Mimeo-
graphed Report to the American Educational Research Associ-
ation, Chicago, Illinois, 1972), pp. 6-7.

their faculty's mean scores with the standardized score means
and planned accordingly.

The self-concept score mean was slightly lower than
the mean for the standardizing group and the planning committee
decided that training in this area would be included, but not
stressed. The score mean for the faculty in the interaction
scale was much lower than that of the standardizing group and
the planning committee decided to stress their DS training
in this area. They saw a need to give the faculty training
that would increase their confidence and feelings of import-
ance. It was believed that training in DS concepts would
give teachers more confidence in their work and would accom-
plish this goal.

The results for scales III and IV did not cause con-
cern to the director and the committee because the scores
were slightly above the test averages. However, scale V on
preferred practices presented the DS committee and project
director much concern. This scale indicated the conditions
which teachers felt were most desirable in a school. These
items included many conditions relating directly to the
basic concepts of differentiated staffing. The DS planners
felt that this scale was a definite indicator of the staff's
present feelings toward DS concepts. The staff's average
score was two standard deviations lower than the average of
the group that standardized the scale, thus indicating clear
need for training in these concepts.

Table 3 gives the pre-test results of the Staff Senti-
ment Scale which were the basis for the training activities
discussed above. It also contains the post-test results,
and analysis of the changes during the training program and
the DS project.

TABLE 3

STAFF SENTIMENT SCALE*

		Pre-Test		Post-Test		Scores of Norm-ing Group	
		Item Mean	Std. Dev.	Item Mean	Std. Dev.	Mean	Std. Dev.
I.	Self Concepts	3.88	.37	4.05	.48	4.01	.54
II.	Frequency of Interaction	2.39	.68	2.28	.81	3.56	.62
III.	Collegiality	3.43	.54	3.79	.57	3.39	.66
IV.	Professional Practices	3.09	.60	3.19	.39	2.63	.55
V.	Preferred Practices	2.79	.53	2.91	.36	3.63	.40

*Developed by Dr. N. Cecil Clark, Florida State Univer-
sity and Dr. Michael DeBloois, Utah State University, April,
1972.

Increases in scores were made in all but scale II,
frequency of interactions. The following changes were indi-
cated:

Scale I   - Self Concepts   +.17

Scale II - Frequency of Interaction   -.11

Scale III - Collegiality   +.36

Scale IV - Professional Practices   +.10

Scale V   - Preferred Practices   +.12

There was an increase in the self-concept score mean. A DS goal was to raise the self perceptions held by staff members. Due to the small number of subjects and the potency of other uncontrolled variables, a significant cause and effect relationship could not be shown. However, the Wallis faculty mean score was now slightly higher than that of the standardizing group.

The decrease in scale II could have a number of meanings. The DS staff attributed the change to a more independent attitude assumed by the faculty as they acquired the concepts of DS and assumed DS roles and practices of planning for themselves and accepting the responsibility and accountability for their actions. This attitude would call for less interaction with administrators and supervisors.

Scale III showed the greatest score increase. Another DS goal was to cause teachers to view their professional abilities, ideas, and views as more important to the school, to their colleagues, and to the profession.

Both scales IV and V showed small increases. These scales compared teachers' attitudes with the concepts of

differentiated staffing. All of the above changes in scores could have been caused by chance.

Minnesota Teacher Attitude Inventory

The Minnesota Teacher Attitude Inventory was also administered. This provided a measure of the extent to which teachers' relations with pupils were harmonious and characterized by mutual affection and sympathetic understanding.[8] This inventory gave the DS staff inputs regarding the attitudes toward children which the teachers possessed and also their attitudes toward teaching, toward the school, and toward subject matter. These attitudes afford a key to the prediction of the type of social atmosphere a teacher will maintain in the classroom. Items in the inventory discriminate sharply between teachers who do have good rapport with pupils and those who do not.[9]

In determining the validity of this inventory, 756 items were used in approximately seventy schools involving 100 superior and 100 inferior teachers. Forms A and B were completed by the teachers and it was found that 115 of the 756 items discriminated between the two groups of teachers at the five per cent level of chi-square.[10]

---

[8]Walter W. Cook, Carroll H. Leeds, and Robert Callis, Minnesota Teacher Attitude Inventory (The Psychological Corporation, New York, N.d.). p. 3.

[9]Ibid. p. 4.

[10]Ibid. p. 10.

The reliability of the scale as determined by the split-half method was .87.[11]

Pre-test scores indicated that only two teachers, of the thirty-two measured, scored above the fiftieth percentile and two others scored in the forty-first and forty-fifth percentile. The poorest raw score was -6, in the first percentile. The mean raw score for the test was 9.97 compared to a 29.2 mean raw score for the standardizing group. These scores indicated that the staff needed training to be able to approach the mean of the Minnesota Teacher Attitude Inventory.

Table four shows the pre-test and post-test raw score means and corresponding percentiles compared to the scores of the group that standardized the inventory. The range of possible scores is from plus 150 to minus 150.

TABLE 4

MINNESOTA TEACHER ATTITUDE INVENTORY*

	Project School Teachers		National Norm for Elem. Teachers
	Pre-Test	Post-Test	
Raw Score Mean	9.97	25.21	29.2
Standard Deviation	21.69	32.31	38.6

*Walter W. Cook, Carroll H. Leeds, and Robert Callis. Minnesota Teacher Attitude Inventory (The Psychological Corporation, New York, N.d.)

[11]Ibid. p. 10.

Post-tests were administered during the last part of April, 1973. As can be seen in Table four, there was an increase from 9.97 to 25.21 in the pre-test and post-test means (see Appendix C).

Wallis Student Attitude Scale

A student attitude scale, developed by the Cherry Creek, Colorado schools, was adapted for use in the DS project.

TABLE 5

WALLIS STUDENT ATTITUDE SCALE*

	Pre-test	Post-test
Test Mean	30.24	30.63
Standard Deviation	9.95	11.75
Kuder-Richardson 21 Reliability	.91	

*Adapted from a "Student Attitude Scale" developed by Cherry Creek District No. 5, Englewood Colorado, relating to their Differentiated Staffing Program.

The scale, see Appendix E, called for student opinions about school work, their teacher, the school, and the students' relationships with their teacher. Although there was virtually no difference in pre-test and post-test means, the DS teachers were very interested in some individual items that they considered important goals of the DS program. Substantial

increases in positive responses were found in the following

test items on the post-test: (see Appendix E)

1. I think my school work is important.

2. I feel free to discuss a personal problem with

my teacher.

3. My teacher speaks to me outside of class.

4. My teacher has helped me to make new friends.

5. Most students respect my teacher.

6. I spend enough time studying.

7. I enjoy coming to school.

The largest positive increase was with the last item.

Substantial negative increases were found in the following

items:

1. I usually do a good job of studying.

2. The grading system is an incentive to do my best

work.

3. I put school work before other things.

4. My friends think that getting good grades in

school is important.

5. I want to keep my grades about the same as those

of the rest of the members of my group.

6. I would be going to school whether or not I had to.

The nature of the items in which there were positive

responses indicated favorable development of students in areas

that were important as DS concepts and as primary purposes for

the DS program. Again, the measured changes in scores were too small to be statistically significant and could be attributed to chance. However, team members were aware of the data and they were used with other in-put information in determining program adjustments (see Appendix C).

Wallis Teacher Attitude Scale

An attitude scale developed by the researcher, entitled The Wallis Teacher Attitude Scale, was also administered to the faculty before DS training began. This attitude scale was directed specifically toward teachers' attitudes toward basic concepts of differentiated staffing (see Appendix D).

TABLE 6

WALLIS TEACHER ATTITUDE SCALE[*]

	Pre-test	Post-test
Test Mean	111.80	109.64
Standard Deviation	12.52	14.78

[*]Developed by Donald L. Hestand, Superintendent, Wallis Independent School District, Wallis, Texas, 1972.

There was a slight decrease in the mean scores from pre-test to post-test, as can be seen in Table 6. These results may have been caused by chance.

The Wallis Teacher Attitude Inventory received face validity from ten educators who had some personal experience

with differentiated staffing. Also, reliability, as deter-

mined by the split-halves method, was .94.[12]

Achievement Test Scores

To obtain program inputs and observe changes in stu-

dents in the academic areas, standardized achievement tests

were administered to the fourth, fifth, and sixth grade stu-

dents. A pre-test was administered prior to the beginning of

the project and a post-test was administered in April, 1973.

Pre-test information was used to plan the individualized team-

teaching program utilized during the project. Test scores

from these and other standardized tests gave the teachers a

beginning point of reference in their non-graded grouping

program.

Fourth grade. The SRA Achievement Series,[13] was

administered to all fourth grade students during the month of

November, 1973 and again in April, 1973. Validity of the

items written for the tests was established by assembling

the items into pretest forms and administering them to approx-

imately 200 pupils per grade in each of two grade levels

[12]Donald L. Hestand, "A Comparison of Teachers' Atti-
tudes Toward Differentiated Staffing, Compared to the Tradi-
tional School Structure" (unpublished paper, University of
Houston, 1972), Appendix A.

[13]Louis P. Thorpe, D. Welty Lefever, and Robert A.
Naslund, Science Research Associates Achievement Series,
(Science Research Associates, Chicago, 1964).

suitable for the items. The items were selected for the final versions on the basis of whether they differentiated adequately between the high- and low-scoring students on the particular test form, whether they met the required content and skill specifications, and whether they measured growth between the grades in which they were tested. Pretest items that did not meet the specifications were not included in the final versions. Pretest forms were written and tried out until a satisfactory compilation of items was acquired for final forms.[14]

The mean raw scores and grade equivalents of the subjects taught in the DS project are presented in Table seven, page 117.

The grade equivalent gain, as indicated by the tests, for fourth grade students was much more than the usually expected one grade level per year. Approximately five months lapsed from the pre-test administration to post-test administration. The DS staff attributed the indicated growth to the concentrated individualized program of instruction planned and carried out by the teachers.

Reliability for the subject areas tested ranged from .79 to .87.[15]

---

[14] "SRA Achievement Series Technical Report," Science Research Associates, Inc., Chicago, 1968. p. 6.

[15] Ibid. p. 21.

TABLE 7

SCORES FOR FOURTH GRADE SRA SERIES[*]

Achievement Area	Pre-test Form D		Post-test Form E&F		G.E. Gain
	Mean Raw Score	Grade Equiv.	Mean Raw Score	Grade Equiv.	
READING					
Comprehension	33	4.1	25	5.3	1.2
Vocabulary	23	3.8	22	4.6	.8
MATHEMATICS					
Concepts	27	3.8	18	4.7	.9
Computation	29	4.3	23	5.3	1.0

[*]Louis P. Thorpe, D. Welty LeFever, and Robert A. Naslund, Science Research Associates Series (Science Research Associates, Chicago, 1964.

Fifth Grade. The SRA Achievement Series,[16] was administered to all fifth grade students during the month of April, 1972 and again in April, 1973. The validity of test items mentioned previously applies to this test also.[17] The mean raw scores and grade equivalents of the subjects taught in the DS project are presented in Table eight.

[16]Louis P. Thorpe, D. Welty LeFever, and Robert A. Naslund, SRA Achievement Series.

[17]Supra. p. 115-116.

Reliability for the subject areas tested ranged from .72 to .89 as determined by the Kudor-Richardson formula 20 estimates of reliability.[18]

TABLE 8

SCORES FOR FIFTH GRADE SRA SERIES[*]

Achievement Area	Pre-test Form D		Post-test Form E&F		Grade Equiv. Gain
	Mean Raw Score	Grade Equiv.	Mean Raw Score	Grade Equiv.	
READING					
Comprehension	18	5.3	28	6.1	.8
Vocabulary	18	5.6	27	5.5	-.1
MATHEMATICS					
Concepts	16	4.8	26	6.4	1.6
Computation	13	5.4	28	6.4	1.0

[*]Ibid.

The grade equivalent gain for fifth grade students, as indicated by the test results, was approximately average. A loss was indicated in the vocabulary section of the reading test and a large gain was observed in mathematics concepts. The teachers observed there had been some weakness in vocabulary instruction during the year because of concentration on other

[18]"SRA Achievement Series Technical Report," p. 22.

aspects of the curriculum. The students had been presented material that was not challenging, which may have caused them to lose interest in vocabulary training.

Sixth Grade. The SRA Achievement Series was administered to all sixth grade students during the month of April, 1972 and again in April, 1973. The validity of test items mentioned previously applies to this test also. Reliability for the subject areas tested ranged from .84 to .91 as determined by the Kudor-Richardson Formula 20 estimates of reliability.[19] The mean raw scores and grade equivalents of the subjects taught in the DS project are presented in Table nine page 120.

The least grade equivalent growth for any of the classes was indicated by the sixth grade test results. While more than one academic year of growth was shown in mathematics concepts, no growth was observed in the grade equivalent score for mathematics computation and only two tenths of a year was indicated by the reading vocabulary mean grade equivalent score.

Goals of Change

Goals of change for the pilot project underwent alterations as the project developed. The original goals were

---

[19]"SRA Achievement Series Technical Report," p. 22.

TABLE 9

SCORES FOR SIXTH GRADE SRA SERIES*

Achievement Area	Pre-test Form D		Post-test Form E&F		Grade Equiv. Gain
	Mean Raw Score	Grade Equiv.	Mean Raw Score	Grade Equiv.	
READING					
Comprehension	22	5.9	24	6.5	.6
Vocabulary	23	6.0	24	6.2	.2
MATHEMATICS					
Concepts	20	5.3	20	6.5	1.2
Computation	22	6.4	20	6.4	.0

*Ibid.

selected from inservice training session developments and from the materials covered in individual study endeavors of the DS staff. They were changed as the DS project developed.

At the beginning of the program, the DS committee submitted a proposal to the board of education citing the following goals: (see Appendix F)

1. To provide all of our students with the best opportunities possible for a complete and well-rounded education.

   a. By specializing in our work.

b. By planning daily for our own teaching

tasks and for our fellow teachers.

2. To provide individual help to students.

3. To develop a favorable attitude in students

toward their school work and their teacher.

4. To provide a better atmosphere for each student.

5. To find more time to council with students and

parents.

6. To demonstrate that a group of teachers can plan

and carry out an effective educational program

without being appointed to administrative posts.

7. To help people to realize that if we are going

to be accountable for our teaching outcomes,

we must have the opportunity to plan the inputs

of the teaching process.

The above goals include provisions for most differen-
tiated staffing concepts and the task of the DS staff was to
evaluate them through experience and to develop a set of
goals that would meet the needs of the Wallis school district.
Interaction between staff members as the project operated
and as it developed, provided input, alteration of original
goals, and the development of other DS goals and gave DS
staff members insights regarding the most desirable goals and
the most important goals for the school in order to effect
needed changes.

During the last month of the pilot project, the DS
staff listed the following goals of change in order of import-
ance:

1. To provide a team-teaching approach to individualiz-
   ing instruction utilizing a non-graded grouping
   arrangement.

2. To plan instruction together daily, shifting
   groups as the need arises.

3. To use student aides as well as teacher aides in
   the individualized instructional process.

4. To develop a favorable attitude in students
   toward their school work and their teachers.

5. To find more time to council with students and
   parents.

6. To demonstrate that a group of teachers can plan
   and carry out an effective educational program
   without being appointed to administrative posts.

7. To help people to realize that if we are going
   to be accountable for our teaching outcomes, we
   must have the opportunity to plan the inputs of
   the teaching process.

Strategy, Procedures, and Problems

Many of the original strategies and procedures employed
were also modified or changed as the program developed and
problems were encountered and solved. This began when the

training sessions were shifted from the presentation of general

DS procedures and concepts to an emphasis on grouping procedures

and methods of individualized instruction. The staff also

visited schools that were using methods that might fit into

their plans.

A modification was also made in the extent of the DS

program. The pilot phase was limited to the areas of reading

and mathematics rather than encompassing all subject areas

in the intermediate grades.

Another change in strategy was the decision to designate

two teaching teams, involving the same teachers, rather than

utilizing only one team for the two subject areas. This change

was made to enable team leaders to concentrate more in special

subject areas, to spread more responsibility, and because of

the subject area interests of the teachers involved.

A major problem that confronted the staff during the

planning and training phase of the project was the demand for

time. Each staff member was a full-time employee of the

school district and no extra time nor compensation was awarded

to them for their planning and training during these phases.

The teachers changed their strategy during phase four

by arranging for more parent involvement. In the beginning,

there was no parent information or parent involvement program.

It became apparent to the DS staff that this was needed and

parents were invited to a parent information program. This

information program was carried out in the form of a formal presentation of the DS program followed by a question and answer session.

An expansion of the student teacher aide program was a recommended modification that came about through successful experience with the project. The staff felt that this program was a very good means of providing effective individualized instruction and recommended an expansion and an increase over the eight student aides that they used with the ninety-five students in the project.

A final recommended strategy change was to begin the project at the beginning of the school year rather than at mid-term. Students and teachers were already adjusted to one another and to a routine when the DS program was implemented requiring a new adjustment. The mid-year adjustment was difficult to make.

Selection of Structure

Selecting a desirable DS structure was the subject of more interaction and required more feedback than any other aspect of the pilot program. Items that were of concern to the staff were the choice between a rigid or a fluid hierarchy, degree of differentiation in salaries, teacher evaluations, and roles of the principal and project director.

During phase three, the DS teachers realized that their planning would proceed much faster if they would organize

themselves into teams with a team leader or leaders, as was
planned for phase four.[20] After organizing into two teams,
relationships with one another and with the director and prin-
cipal had to be developed and established. It was also
decided that a choice between a rigid and a fluid hierarchy
would be made during the project based on the experiences and
interactions of the staff. The choice of a fluid hierarchy was
eventually made to establish a self-correcting mechanism of
evaluation and control.[21]

It was an extremely difficult task for team leaders to
begin making decisions formerly made by administrators. Although
the board of education granted the DS teams an amount of money
to use in any way they wished in order to accomplish their
task, they could not make a decision on the part to be allocated
to supplement salaries to provide differentiation. The super-
intendent refused to make a decision for them when they
approached him. The team leaders considered this problem for
a period of three weeks and finally came to a decision when the
program director suggested that they complete their budget and
apply the remaining funds to salary supplements. This worked
out well for them. All teachers were given extra salary
because of additional duties and team leaders were allocated
even larger shares because of the additional responsibility
they had assumed.

---

[20]Supra. p. 81.

[21]Supra. p. 98.

The question of teacher evaluation was discussed extensively and, except for the peer evaluation involved in the annual election of a team leader, no new arrangements were made. The principal still evaluates all teachers.

No formal roles were made for the principal or the project director. Their roles evolved informally through interactions and experience and each position terminated at the end of the program in the role of a coordinator and advisor.

Development of Procedures

More interaction and feedback was involved in this phase of the project than in any other. Procedures began in the early stages of planning and training and gradually intensified through the last day of operation of the pilot phase. Procedures were developed through interaction, experience, and feedback.

In the early stages of the project, procedures for training and planning had to be developed. These initial procedures were developed with some interaction between the superintendent and the DS committee and adjustments to the procedures were made as experience was gained and the need became apparent.

As the DS committee gained knowledge and training in program concepts, they increased their role in the development of procedures. The program director served more as a guide and coordinator as the DS teams grew in their ability to plan

DS procedures. Eventually the teams developed procedures of training for implementation of the pilot project, procedures of classroom operation on the first day of implementation and on succeeding days, instructional planning procedures, class instruction procedures, classroom organization procedures, student grouping procedures, budgeting procedures, and student evaluation procedures.

Structure of Pilot Project

As the project staff grew in its knowledge of DS concepts, they formed various program structures in their minds and discussed them in efforts to devise a structure for their project. These interactions included the project director and principal as participants, and their administrative experience in the school district was added to the inputs of the effort to make decisions.

Taking into consideration the various inputs such as attitude inventory results, achievement test scores, and the interactions and decisions in the various major moments of development, the staff decided on a team teaching structure with team leaders and team members graduating down to teacher aides, student aides, and volunteer aides (see Table 2). There would also be a differentiation of salary with increases for additional work or responsibility. The project director was not included in the formal structure but was a part of the pilot project playing the role of coordinator and advisor.

II. FIELD TESTING REVISIONS

Teacher Analysis of the Project

In April the project staff began analyzing the various project components, implementation procedures, preparations, problems, community relations, and affects of the DS program on the students. They considered items such as suggestions for revisions of procedures, an evaluation of the preparation and training the DS staff received prior to implementation, strengths of the program, weaknesses noted, student assignments, assignments of aides, communication to parents, the time schedules utilized, student and teacher attitude changes, and the academic effects of the program on students.

1. The middle of the year implementation of the project was difficult because students had established a routine for the year.

2. The teachers could have used more training in the grouping of students, acquiring teaching materials needed for group instruction, and in the manipulation of groups for optimum learning situations. They learned this by experience and school visitations during the progress of the program.

3. The DS staff felt that the strengths of the program were the individualized approach through the utilization of teams which gave them more time to spend with individuals needing help, the ability to reach every child at all times through team teaching and the use of regular and student

aides, and the increased opportunities students have to express themselves.

4. Weaknesses of the program included the need for a revised report card that fitted the nongraded feature of the program to better inform parents of student progress, the need to expand the project to include all subject areas, and the need for more student aides.

5. Communications to parents seemed adequate to the teachers but, with some experience in the DS program and some confidence gained through the experience, they felt like they could improve this area of the program.

6. Some changes in students' attitudes and work habits were noted by the teachers. There was no change in student attendance during the second semester as compared to the first semester although individual students, who were known to have been absent for trivial reasons, began attending more regularly. The teachers attributed this to the small groups where students stayed busy under the constant supervision and guidance of a teacher, teacher aide, or student aide. The students seemed happier, more independent, and more self-disciplined, and the teachers observed that students had done more work than they would have under a traditional organization.

7. Another change was in the attitude of the teachers toward their method of teaching. One of the teachers told the

faculty that she wouldn't teach any other way than the
individualized approach utilizing small group instruction now.
They all stated that they were now more open in their attitude
and that their classrooms will reflect this regardless of the
organization of the school in the future.

Evaluation by Outside Consultants

To obtain a more objective view and evaluation of the
DS program, the DS faculty and director requested an evalu-
ation visit by professional personnel outside of the school
district. Three professional people, who were acquainted with
the concepts of differentiated staffing, were selected by the
Administrative Education Department of the University of Houston
to visit the program, talk with the director, and interview
the DS faculty. The evaluation team visited the project on
April 27, 1973.

Each member of the evaluation team followed a visita-
tion of the classrooms and instructional activities with
individual interviews of a regular DS team member and an
assistant teacher. To assure the acquisition of similar
information and data that could be consolidated into a com-
posite report to the DS faculty, the evaluation team used
a structured interview form designed to evaluate specific
aspects of the DS program (see Appendix B).

General impressions of the evaluation team were:

1. There was a good learning environment.

2. The students were actively involved in group
   activities.

3. There was a relaxed atmosphere.

4. There was enthusiasm on the part of the teachers.

5. The staff appears to have made a good start on
   a DS project.

Three of their general observations were less favorable.
They were:

1. There was a lack of parental involvement,
   especially in the initial period.

2. The assistant teachers did not appear to have very
   much knowledge of the project.

3. The assistant teachers were unhappy about parts
   of their role.

The evaluation team found favorable reports on such
DS concepts as selection of personnel, differentiated salaries,
teacher specialization, shared decision-making, teacher res-
ponsibility, teacher accountability, and teacher budgeting
of funds. They found that teacher evaluation procedures were
yet to be developed.

Advantages of the program were listed as:

1. Opportunities for professional growth existed.

2. There were financial rewards for assuming extra
   responsibilities.

3. There was more teacher prestige and better
   student attendance.

4. The project created interest in team teaching in
the entire school.

5. The students had gained positive attitudes and
began working together better.

6. The teachers worked together well.

7. Teachers did better planning and more work.

8. Parents now had more interest in the school.

Some problems listed were:

1. The teachers needed more preparation before
beginning the program.

2. The teachers needed to adjust to having other
teachers in the room.

3. Students need to develop more self discipline
in the small grouping situations.

4. Parents needed to be more involved in the program
(see Appendix G).

Final Revisions

On the basis of the various test results, their own
analysis, and the evaluation made by the outside consultants,
the DS staff made some final revisions in the structure and
procedures of a DS program for the school. The basic struc-
ture of a teaching team for each subject area remained the
same. This extension of the pilot program was considered a
logical and feasible way to expand the DS program into addi-
tional subject areas. In the intermediate grades, there

would be a different team leader for the team in each sub-
ject area.

Procedural revisions included planning that would give
the teachers more training in the areas of team teaching,
grouping, and individualized instruction procedures, provi-
sions to begin new programs at the beginning of a school
year rather than at mid-term, and a planned parent information
program before and during any DS program.

CHAPTER V

REVIEW AND CONCLUSIONS

The purpose of this study was to describe the strategies, procedures, and problems of implementing a differentiated staffing structure as a pilot program in an elementary school. The case study description of planning, implementing, and evaluating the program is reviewed and conclusions about the program are made in this chapter.

I. DESIGN OF STUDY

The program was designed from a systems model that was used to identify the components and processes within the study. The design involved six program phases for the development of the DS project. The study included only phases two, three, four, and five. Phase one was pre-planning of the DS project and phase six is full-year implementation, which is planned to follow this pilot project. Phase two was the organizational phase. Materials for a readiness program were compiled and a feasible DS model was developed from studies of other DS projects. A consultant was employed to train the teachers who were to initiate the pilot projects. Other organizational activities included the selection of a

basis for grouping students, a decision on the extent of the pilot DS project, and the development of a training program.

Phase three began in November, 1972. It included a refinement of the DS model to be used, further work with and training by the outside consultant, refinement of teaching procedures to be utilized, work on the response to a request for a DS proposal by the board of trustees, and evaluation procedures. This phase was the final preparation for initiation of the pilot project. The teachers organized themselves into teams, made student assignments, organized their teaching plans and procedures, and completed final arrangements for implementation of the DS program.

Phase four began on January 16, 1973. A team teaching program in reading and mathematics began during a block of time in the afternoon. Two teams were formed and students were grouped for a non-graded approach to individualized instruction. Structural changes had been made providing for team leaders, team teachers, teacher aides who had been employed by the DS staff, and student aides. Differentiated salaries were developed by the DS staff and personnel were paid according to their responsibilities and additional work.

As phase four progressed, the DS staff refined teaching procedures and techniques, grouping practices, planning activities, and personnel assignments. Periodic visits by their outside consultant gave the staff opportunities to

discuss problems and ideas with him and to utilize his advice
in the solving of problems and in the development of ideas.

Phase five was an evaluation and analysis of the pro-
ject. The findings were reported in two major sections.
Each section was a major area of the model or systems approach
used in the development of the pilot project. Findings were
presented according to the major moments of decision in the
model and according to the evaluation instruments utilized.
At the beginning of the program, the DS staff agreed that
significant parts of the evaluation phase would be their own
analysis of the strengths and weaknesses of the project and
an evaluation of the project by a group of outside consultants.
These evaluations were made before final revisions of the
program were decided upon.

II. SUMMARY OF FINDINGS

The evaluation program for the DS project provided
inputs for planning and observations of changes during and
at the end of the project. Evaluations were made of teachers'
and students' attitudes, students' achievement, teaching and
administrative procedures and techniques, and employment of
DS concepts, procedures, and techniques. It was assumed that
the training the faculty received during the DS project and
the operation of the project would have some effect on
teachers' and students' attitudes and on student achievement.

The test results were reported in tables and changes can be
observed and conclusions can be drawn.

Teachers' attitudes were measured on three different
scales. The Staff Sentiment Scale indicated that the faculty's
self concepts, collegiality, and professional practices were
slightly lower than the standardizing group's, at the begin-
ning of the program, and slightly higher at the end of the
program. The faculty's scores on preferred practices also
improved during the study, although scores did not reach the
average of the national norms. This instrument indicated that
teachers did not increase their frequency of interaction.
There was an observed change of scores on the part of the
faculty, in their self-values and in the attitudes and con-
cepts they held that corresponded to the concepts of differ-
entiated staffing.

The Minnesota Teacher Attitude Inventory also indicated
that the teachers' scores were higher for their harmonious
relations with pupils and in their rapport with pupils at the
end of the project.

A locally designed instrument, which was prepared in
an attempt to measure teachers' attitudes toward the essential
concepts of differentiated staffing, gave no evidence of change
in these attitudes.

The Wallis Student Attitude Scale scores indicated no
change in average scores in pre-tests and post-tests for

participating fourth, fifth, and sixth grade students. However, the DS students may have been influenced in a manner that kept their positive attitude score average from decreasing toward the end of the year.

In addition, there were some changes in the scores on individual items of the test administered to the DS students. The students showed positive increases in seven items relating to their relationships with teachers and their attitudes toward school and school work. Increases in negative responses were shown in six items relating to grades and the priorities placed on school attendance and school work.

Accurate analysis of these findings required that the score changes of individual items be considered.

Pre-test and post-test achievement scores for the students in the DS program were compared. The grade equivalents were observed to determine changes in academic growth. In the five months between the tests, the fourth grade students' scores showed an average grade equivalent gain of one academic year in reading and mathematics. There was a full academic year between pre-tests and post-tests for the fifth grade. Their grade equivalent growth was approximately one academic year in reading comprehension and mathematics computation. However, their reading vocabulary and mathematics concepts grade equivalent changes indicated opposite extremes. The reading vocabulary scores indicated a one-tenth

of a year loss and the mathematics concepts scores indicated
a one and six-tenths of a year gain.

Pre-test and post-test mean scores for the sixth
grade students indicated a grade equivalent growth of less
than one academic year in reading comprehension and vocabulary
and in arithmetic computation. However, their beginning-of-
the-year scores compared favorably with the national norms
and the small measurement of growth may be attributed in part
to regression toward the mean. Lack of growth may also have
been a result of working at a skill level which did not chal-
lenge sufficiently. Growth in mathematics concepts did show
encouraging recovery from a "below average" state at the
beginning of the year. However, this "below average" could
have been the result of regression.

When the DS teachers evaluated the pilot project,
in a series of special meetings for this purpose, they listed
a number of weaknesses, strengths, and recommended adjustments.
They felt that the middle of the year implementation of the
program caused some difficulty in the necessary student and
teacher adjustments to new procedures and routines. Other
findings were that they had received insufficient training
in individualized teaching techniques and in procedures such
as grouping and manipulating four or five small groups. They
also expressed need for training in the use of teacher aides
and student aides and the need for a revised report card that

would more accurately reflect student progress in the non-
graded program. Also, after some experience in the program,
it was felt that a slight increase in parent communication
would improve parent understandings of the teaching procedures
used and individual student and class goals being sought.

Some strengths found in the program included the
increased number of opportunities the individual students had
to respond in the small groups utilized throughout the project.
Important student attitude and work habit changes were also
observed by the teachers. The attendance averages of some
students improved considerably. The teachers said that the
students also appeared happier, more independent, and more
self-disciplined that they had before the program began.

Another finding was a change of the DS teachers'
attitudes and opinions of their approach to teaching. They
all stated that they now understood and valued the individualized
approach and would always use this approach in the future regard-
less of the teaching situation in which they were placed.

When the group of outside consultants visited the
project, they found a number of weaknesses and strengths of
the program through observations and interviews of the teachers.
Their general impression was that the changes were a great
improvement over the traditional system of teaching (see
Appendix G).

Weaknesses were pointed out in the areas of teacher
understanding of various DS concepts such as evaluation and

accountability and degree of teacher involvement in budgeting.
Also, the program may have developed too rapidly, not allow-
ing the teachers enough time for complete conceptualization
of DS principles and philosophies.

When the team of consultants made their conclusions,
they agreed that the teachers and assistant teachers indi-
cated that the benefits received from differentiated staffing
far outweighed any disadvantages. They also concluded
that the program generally provided a "good learning environ-
ment." (See Appendix G)

The consultants' final finding was that the staff
appeared to have made a good start in differentiated staff-
ing. High interest and enthusiasm on the part of students
as well as teachers was quite evident to them (Appendix G).

III. CONCLUSIONS

During the operation of the differentiated staffing
program, it was evident that the DS organization provided
many more varied teaching techniques, planning opportunities
and freedom, and that the students and teachers were happier
and more satisfied under this style of organization. Although
several pre-tests and post-tests were administered, the study
was not conducted as a rigorous, experimental research pro-
ject, but as a field activity or case study. Results cannot
be substantiated as statistically significant findings, but

were used only as inputs into the program and were the basis
for modification of the model and for adjustments in the pro-
gram strategies and procedures, rather than for final evalu-
ation and research conclusions. The conclusions were made on
the basis of the investigator's observations, the opinions of
the DS staff, and the evaluation results of the team of out-
side consultants.

It was evident that the DS structure can handle the
same type of curriculum as the traditional structure, and the
team concluded that, with more experience and expertise on
the part of the staff, it will prove superior through better
performances by the students. It was also evident that the
DS structure allows more varied approaches to student organi-
zation for instruction. This benefit was due largely to the
utilization of the DS concept of shared decision making
resulting in a decision to use team teaching techniques with
teacher decisions on procedures and techniques to be used.
Teacher accountability also had a direct effect in this area
as teachers were aware of planned evaluation procedures and
of their personal involvement in the analysis of the evalu-
ation results.

The teachers displayed an increasing amount of confi-
dence as the program progressed and their enthusiasm left the
impression that morale was high and attitudes were good. They
enjoyed a freedom to plan all aspects of their instructional
program as they determined need requirements. This freedom

to plan, purchase desired materials, and implement procedures, techniques, and programs tended to make instruction more practical and realistic to the students and more satisfying to the teachers. Also, the individualized, non-graded instructional approach used by the teachers provided continuous attention and supervision to each student. Their work was constantly monitored and they received instant feedback.

The problems encountered during the program were not insurmountable and, in all cases, the problems were solved by a change or modification of strategy or procedures. This ability to change or modify strategy and procedures was another advantage of the DS structure where decisions can be made by the people experiencing the problem. It was evident that the effect of immediate modification and change was satisfying to the teachers.

There were indications of more interest and a better attitude toward teaching and learning on the part of the teachers and the students during the DS program. Several factors might account for this. The first reason might be the individualized instructional approach used by the teachers. The second reason might be the growing positive attitude of the teachers due to the planning and teaching freedoms provided by the DS concepts applied to the project. A third reason might be attributed to the desire that everyone involved in the project had for successful results and to the special efforts made to achieve more. However, the

favorable attitude test results of the teachers and students must not be overlooked. The teachers and students displayed changing attitudes during the progress of the DS program and these favorable changes were more evident as academic achievement successes were experienced.

It is difficult to determine if the academic success was due to the favorable attitude changes or if the favorable attitude changes resulted from the academic success. Further research might help determine this.

When the DS staff's program analysis was compared with the evaluation results of the team of outside consultants, several of the findings were very similar. Both agreed that a longer, more concentrated training period for teachers would be desirable and that implementation at the beginning of the year would be easier and more practical than at mid year. Both also agreed that the new structure resulted in a greatly improved learning environment over that provided by the traditional structure and that benefits received from differentiated staffing far outweighed any disadvantages.

The strongest outcomes from the DS program were the positive attitudes gained by the teachers and their knowledge and ability to individualize instruction using student aides, volunteer aides, and regular teacher aides. Also, teachers developed careful planning procedures during their daily planning period where, as a group, they considered the

problems and progress of their students daily. In effect,
DS was used as a method to improve motivation, planning, and
attitudes, not an end for these critical problems in educa-
tion.

Considering the findings of the various evaluation
groups, the problems encountered, the procedures involved,
and daily observation of the program, the investigator con-
cludes that a differentiated staffing structure, properly
applied to a specific teaching situation, is superior to a
traditional structure. With the proper modifications of
strategy and procedures, due to varying situations, most
problems encountered will be overcome and the program will
be successful and superior in many ways to the traditional
organization.

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

Allen, Dwight W., and Kline, Lloyd W. "From Habit to Heresy
    and Home Again." Differentiated Staffing. Edited by
    James M. Cooper. Philadelphia: W. B. Saunders Company,
    1972.

Barbee, Don. "Administrative Implications of Differentiated
    Staffing." The National Elementary School Principal.
    Volume 51, number 4, January, 1972.

Bhaerman, Robert D. "A Study Outline on Differentiated
    Staffing." A Mimeographed Report to the Columbia Teachers
    Union. N.d.

Boyan, Norman J.; and Nicholson, Stanley J., and Panofsky,
    Carolyn P. "A Study of In-progress Differentiated Staff-
    ing." A Mimeographed Report to the United States Office
    of Education. N.d.

Boyan, Norman J. and Panofsky, Carolyn P. "A Study of In-
    Progress Differentiated Staffing." A Mimeographed
    Report to the United States Office of Education. N.d.

Charters, W. W. Jr., and Pellegrin, Roland J. "Barriers to
    the Innovation Process: Four Case Studies of Differen-
    tiated Staffing." Educational Administration Quarterly.
    Volume 8, number 1, Winter 1972.

Clark, N. Cecil. An Instrument for Measuring Staff Senti-
    ments Toward Self, School, and Profession. Unpublished
    Paper, 1972.

Cook, Walter W.; Leeds, Carrol H.; and Callis, Robert. Minne-
    sota Teacher Attitude Inventory Manual. New York: The
    Psychological Corporation.

Cooper, James M. Differentiated Staffing. Philadelphia:
    W. B. Saunders Company, 1972.

Corwin, Ronald G. "Enhancing Teaching as a Career." Today's
    Education. Volume 58, number 3, March, 1969.

Cronbach, Lee J. "Coefficient Alpha and the Internal Struc-
    ture of Tests." Psychometrika. Volume 16, number 3,
    September, 1951.

CTB/McGraw-Hill. _Prescriptive Mathematics Inventory and Prescriptive Reading Inventory_. California: McGraw-Hill, Inc., 1971.

Cubberly, Ellwood P. _The History of Education_. New York: Houghton Mifflin Company, 1948.

"Differentiated Staffing." _Nation's Schools_. Volume 85, number 6, June, 1970.

"Differentiated Staffing Difficulties." _The Educational Informer_. Volume 5, number 2, August, 1972.

English, Fenwick N. "Differentiated Staffing: Refinement, Reform or Revolution." _Differentiated Staffing_. Edited by James M. Cooper. Philadelphia: W. B. Saunders Company, 1972.

English, Fenwick. "Questions and Answers on Differentiated Staffing." _Today's Education_. Volume 58, number 3, March, 1969.

English, Fenwick W. and Frase, Larry E. "Making Form Follow Function in Staffing Elementary Schools." _The National Elementary School Principal_. Volume 51, number 4, January, 1972.

English, Fenwick W.; Frase, Larry E.; and Melton, Raymond G. "Evaluating the Effects of Implementing A Differentiated Staff, Problems and Issues: A Tentative Position Paper." A Mimeographed Report to Mesa, Arizona Public Schools, November, 1971.

Eve, Arthur W., and Peck, Roger H. "Differentiated Administrative Staffing." _Differentiated Staffing_. Edited by James M. Cooper. Philadelphia: W. B. Saunders Company, 1972.

Gooler, Dennis D., and Grotelueschen, Arden D. "Curriculum Development Accountability." _Educational Leadership_. Volume 29, number 2, November, 1971.

Gourley, Robert; Shapiro, Arthur; and Smith, Rodney P. "How Three Administrators View Differentiated Staffing Problems." _Nation's Schools_. Volume 85, number 6, June, 1970.

Jamgochian, Richard, and Elswick, Paul B. "A Study of In-progress Differentiated Staffing." A Mimeographed Report to the United States Office of Education. N.d.

Jamgochian, Richard, and Panofsky, Carolyn P. "A Study of
In-progress Differentiated Staffing." A Mimeographed
Report to the United States Office of Education. N.d.

Lessinger, Leon M., and Tyler, Ralph W. Accountability in
Education. Worthington, Ohio: Charles A. Jones
Publishing Co., 1971.

Lewis, James Jr. Differentiating the Teaching Staff. New
York: Parker Publishing Company, 1971.

Mann, Peter B. "Differentiated Staffing: The Second Genera-
tion." Arizona Teacher. Volume 59, number 3, January,
1971.

Maslow, Abraham H. Motivation and Personality. New York:
Harper & Row, Inc., 1954.

National School Public Relations Association. Differentiated
Staffing in Schools Education U.S.A. Special Report.
Washington, D. C., 1970.

Nelson, John A., and Elswick, Paul B. "A Study of In-progress
Differentiated Staffing." A Mimeographed Report to the
United States Office of Education. N.d.

Nelson, John A., and Panofsky, Carolyn P. "A Study of In-
progress Differentiated Staffing." A Mimeographed Report
to the United States Office of Education. N.d.

Nicholson, Stanley J., and Panofsky, Carolyn P. "A Study of
In-progress Differentiated Staffing." A Mimeographed
Report to the United States Office of Education. N.d.

Pate, Glenn S. and Elswick, Paul B. "A Study of In-progress
Differentiated Staffing." A Mimeographed Report to the
United States Office of Education. N.d.

Pate, Glenn S., and Sell, G. Roger. "A Study of In-progress
Differentiated Staffing." A Mimeographed Report to the
United States Office of Education. N.d.

Rand, M. John. "A Case for Differentiated Staffing." Differ-
entiated Staffing. Edited by James M. Cooper. Philadel-
phia: W. B. Saunders Company, 1972.

Rand, M. John, and English, Fenwick. "Differentiated Staff-
ing: Trying on Seven League Boots." Differentiated
Staffing. Edited by James M. Cooper. Philadelphia:
W. B. Saunders Company, 1972.

Reimer, Everett. "An Essay on Alternatives in Education,"
    Interchange. Ontario Institute for Studies in Education.
    Volume 2, number 35, 1971.

Sell, G. Roger, and Panofsky, Carolyn P. "A Study of In-
    progress Differentiated Staffing." A Mimeographed Report
    to the United States Office of Education. N.d.

Sharpes, Donald K. "The Federal Investment in Staff Differ-
    entiation." Differentiated Staffing. Edited by James
    M. Cooper. Philadelphia: W. B. Saunders Company, 1972.

Stocker, Joseph. "Accountability and the Classroom Teacher."
    Today's Education. Volume 60, number 3, March 1971.

Thorpe, Louis P.; Lefever, D. Welty; and Naslund, Robert A.
    Science Research Associates Achievement Series. Science
    Research Associates, Chicago, 1964.

Wolkey, Eugene V. "Humanism in Differentiated Staffing."
    The National Elementary Principal. Volume 51, number 4,
    January, 1972.

APPENDICES

APPENDIX A

REQUEST FOR PROPOSAL

General Work Conditions

1. According to a Board of Trustees ruling, the district may contract a part of the fourth, fifth, and sixth grade instruction to faculty members during the Spring semester of 1973.

2. The district wishes to contract instruction in at least two areas to test the concepts and procedures of Differentiated Staffing during the Spring of 1973 as a pilot project. Of the ninety-five students in grades four, five, and six, 62 are in the disadvantaged category.

3. The faculty members involved may use any textbooks, materials, equipment, or resources now available in the school district.

4. The school district will remain in charge of grades 4, 5, and 6, but once a contract is awarded to the faculty members, they will have complete control of the instructional program specified and they will determine how to use their members' talents, how to spend their funds, how to divide the share set aside for teacher salaries, how to shift leadership roles, how to monitor progress, how to assess and meet the needs of the individual student, and how to evaluate student achievement.

5. Assessment plans must be generally specified in the bid and a guarantee of a minimum and maximum progress standard, or forfeiture of funds per student not achieving this standard and a bonus for those achieving more than the set standard, included in the plans. An alternative course is to make an overall bid for the work and standards that will be achieved.

6. The elementary principal will work closely with the teaching team and cooperate in acquiring aides, arranging time schedules, and coordinating the team's activities with the remainder of the school's program. He will also help with materials requisitions, and serve as a consultant and human and public relations director.

7. The district desires greater parental involvement with the educational process.

153

8. The district desires to know the intended plan of opera-
    tions of the contracting teaching team. A reporting
    format is appended.

9. The district will approve the evaluation instruments to
    be used and the type of data analysis to be employed.

10. Teachers must have a valid teaching certificate.

11. The district desires aide training for all non-certified
    personnel.

12. The response to this RFP must be submitted to the Board
    of Trustees by January 11, 1973.

13. Periodic inservice training is desirable and at least
    three half-day sessions should be scheduled.

14. The role of the principal and project director must be
    defined in the bid.

APPENDIX B

Form for Evaluating a Differentiated
Staffing Program

       The information you gather through the use of this form
will be consolidated with information gathered by other members
of the evaluation team. Please be as objective and thorough
as possible and encourage those you interview to be objective
and truthful. No person will be identified with any informa-
tion collected. Please do not identify anyone in your report.
Also, exclude evaluation team members' names.

What is your position in the DS staff? Team Teacher_____
                                          Asst. Teacher_____
  (Asst. Teachers are the principal and 2 other
  teachers.)

STRUCTURAL CHANGES MADE: What changes were made in structure
        from traditional organizational concepts to differen-
        tiated staffing concepts? Describe briefly.

Changed staffing pattern?_____

Differentiated salaries?_____

Teacher specialization?_____

Shared Decision-making?_____

Teacher responsibilities?_____

Teacher accountability?_____

Teacher evaluation?_____

Teacher freedom to budget funds?_____

Teacher assignment of Personnel?_____

Teacher assignment of students?_____

Teacher scheduling of time and students?_____

Teacher determination of student evaluation procedures?_____

Other (Please specify)_____

_____

TIME: How much time do you spend with each of your duties?
Briefly describe the duties. (Estimate percent of time)

Team Teachers - Instruction_____

Asst. Teachers - Supervision of team members_____

(circle title)   Evaluation_____

                  Curriculum_____

                  Clerical_____

                  Other_____

DECISIONS: What decisions are now made by the DS staff that
were not formerly made by classroom teachers?

Budgeting -

Personnel -

Scheduling -

Evaluation (personnel) -

Evaluation (students) -

Teacher materials -

Teaching procedures -

Teacher assignments -

Student assignments -

Others -

EVALUATION: Has the personnel evaluation system changed from
what was used under traditional organization? If
not, what plans are being made, if any? (How
are teachers and others evaluated?

PROBLEMS: Briefly describe problems that have been encountered before implementation, as implementation took place, and during the program. What problems still exist?

	With Teachers	With Students	With Parents	Other
During Training				
At Implementation (beginning)				
During the Program				
What problems still exist?				

BENEFITS: What benefits do teachers list because of the DS
            program?   (Describe briefly)

To teachers - _____

To the school - _____

To students - _____

In communications - _____

In teacher relations - _____

In use of staff time - _____

In community relations - _____

In use of student time - _____

In student achievement - _____

To student interest - _____

To teacher interest - _____

Other benefits - _____

        What disadvantages exist in comparison to a tradi-
        tional classroom program?   (Describe briefly)

To teachers - _____

To the school - _____

To students - _____

In communications - _____

In teacher relations - _____

In use of staff time - _____

In community relations - _____

In use of student time - _____

In student achievement - _____

In student interest - _____

To teacher interest - _____

Other disadvantages - _____

APPENDIX C

MINNESOTA TEACHER ATTITUDE INVENTORY SCORES

Pre-test Raw Score	%	Pre-test Raw Score	%	Post-test Raw Score	%	Post-test Raw Score	%
69	60	0	7	72	62	20	21
64	55	0	7	70	60	20	21
57	45	-6	4	70	60	18	19
45	37	-10	4	68	58	16	19
45	37	-10	4	64	54	16	19
42	30	-10	4	58	48	14	18
41	29	-12	4	56	46	12	14
41	29	-12	4	53	43	10	13
40	29	-18	3	52	42	10	13
28	27	-20	3	52	42	8	11
24	22	-32	1	48	39	-4	6
21	19	-38	1	38	26	-8	6
18	15	-44	1	36	25	-24	5
18	15	-60	1	32	23	-36	4
14	15			31	22	-40	4
4	8			28	21	-48	1
4	8			20	21		

APPENDIX D

TEACHER ATTITUDE SCALE

		Strongly Agree				Strongly Disagree
1.	Good teachers should be made school administrators.	1	2	3	4	5
2.	Most teachers do not prepare their lessons well.	1	2	3	4	5
3.	Teachers should have more decision-making power in the school.	1	2	3	4	5
4.	Most teachers are over-paid.	1	2	3	4	5
5.	All teachers should be on a single salary schedule.	1	2	3	4	5
6.	Teachers should be paid according to their ability as a teacher.	1	2	3	4	5
7.	Teachers should evaluate each other.	1	2	3	4	5
8.	Teachers should be allowed to choose their administrators.	1	2	3	4	5
9.	Every teacher should have the services of a teacher aide daily.	1	2	3	4	5
10.	Most teacher aides are not needed.	1	2	3	4	5
11.	Most teacher aides are not qualified.	1	2	3	4	5
12.	Most teachers understand children well.	1	2	3	4	5
13.	Our schools need fewer teachers and more teacher aides.	1	2	3	4	5

163

	Strongly Agree			Strongly Disagree	
14. Good teachers are not paid enough.	1	2	3	4	5
15. Good teachers must be good disciplinarians.	1	2	3	4	5
16. Elementary teachers should specialize in a few areas of teaching.	1	2	3	4	5
17. Schools should always be trying out new ideas of teaching.	1	2	3	4	5
18. Job responsibility should be the basis for a teacher's salary.	1	2	3	4	5
19. Teachers do not have enough prestige.	1	2	3	4	5
20. Most quality people go into fields other than teaching.	1	2	3	4	5
21. Administration is a talent drain away from the class-room.	1	2	3	4	5
22. Some teachers are stronger in some roles than in others.	1	2	3	4	5
23. The school is the chief source of education for children today.	1	2	3	4	5
24. Teachers should be account-able for one year of pro-gress for each student each year.	1	2	3	4	5
25. If the child doesn't learn, the teacher is usually to blame.	1	2	3	4	5
26. Our entire teaching system needs many changes.	1	2	3	4	5

		Strongly Agree				Strongly Disagree
27.	We need a change in the administrative structure of our schools.	1	2	3	4	5
28.	Teachers need more opportunities to accept more responsibility.	1	2	3	4	5
29.	Teachers should be paid more if they accept more responsibility.	1	2	3	4	5
30.	A teacher is responsible if his student doesn't pass.	1	2	3	4	5
31.	If teachers did more of the planning, schools would be more effective.	1	2	3	4	5
32.	All teachers teach the same way.	1	2	3	4	5
33.	Teachers usually judge children's problems about the same way.	1	2	3	4	5
34.	Teachers should have the opportunity to specialize.	1	2	3	4	5
35.	The teacher should decide on techniques of teaching his/her students.	1	2	3	4	5
36.	The teacher should decide on the curriculum materials and textbooks to be used with his/her students.	1	2	3	4	5
37.	The teacher should be allowed to determine his/her class schedule times with students.	1	2	3	4	5
38.	Teachers should work in teams.	1	2	3	4	5

	Strongly Agree				Strongly Disagree
39. Teachers should formulate their own teaching teams.	1	2	3	4	5
40. Teachers should choose their own teaching team leaders.	1	2	3	4	5

WALLIS TEACHER ATTITUDE SCALE SCORES
Likert

Pre-test	Post-test
141	147
129	137
126	130
124	128
123	124
123	124
120	121
119	119
118	117
117	115
116	114
116	113
116	113
113	112
113	112
112	112
111	109
110	109
109	108
109	108
109	106
108	104
106	104
106	104
105	102
101	101
97	100
96	99
83	91
30	88
	87
	81
	79

APPENDIX E

STUDENT ATTITUDE SCALE

Agree   Disagree

_____   _____ 1. I usually do a good job of studying.

_____   _____ 2. I think school work is important.

_____   _____ 3. My teacher is concerned about whether or not
a student has friends.

_____   _____ 4. Students in my school make a special effort
to make new students feel welcome.

_____   _____ 5. I feel that my teacher is interested in
me as a person.

_____   _____ 6. I understand the reasons behind school rules
and regulations.

_____   _____ 7. I feel that my teacher cares about what stu-
dents think about their subjects, their
classroom work, and their assignments.

_____   _____ 8. I do as well as my classmates in school.

_____   _____ 9. My grades tend to encourage me in my school
work.

_____   _____ 10. My teacher has talked with me about the things
I do best.

_____   _____ 11. I feel at ease when talking individually to
my teacher.

_____   _____ 12. When I am in a "rut" in school, I know how
to get out of it.

_____   _____ 13. My teacher has done something important
especially for me as an individual.

_____   _____ 14. My teacher shows respect and consideration
for students under her supervision.

_____   _____ 15. I feel free to discuss a personal problem
with my teacher.

_____   _____ 16. The grading system is an incentive to do
my best work.

Agree   Disagree

_____   _____17. It is easy for me to make friends.

_____   _____18. My teacher is aware of the opinions of
                    her students.

_____   _____19. Time spent in school is worthwhile.

_____   _____20. To be accepted by a group of friends is
                    one of the best things that can happen
                    to a person.

_____   _____21. My teacher speaks to me outside of class.

_____   _____22. I feel that I have become involved in
                    school activities.

_____   _____23. I put school work before other things.

_____   _____24. My teacher lets me know when I have done
                    a good job.

_____   _____25. I have several close friends at school who
                    would stick by me even if I were in serious
                    trouble.

_____   _____26. My teacher has helped me to make new friends.

_____   _____27. My friends think that getting good grades
                    in school is important.

_____   _____28. Most students respect my teacher.

_____   _____29. I spend enough time studying.

_____   _____30. I have a friend whom I can trust to keep
                    my secrets.

_____   _____31. My teacher misses me when I am absent from
                    class.

_____   _____32. My school subjects interest me.

_____   _____33. Making friends at school is easy.

_____   _____34. My teacher thinks that I will be successful
                    in my adult life.

_____   _____35. My teacher tries to give students a chance
                    to be successful in class.

Agree   Disagree

_____   _____36. I look forward to seeing my friends at school.

_____   _____37. I feel that I can _really_ talk with my
                    teacher.

_____   _____38. School work is easy for me.

_____   _____39. I work to learn in school.

_____   _____40. I enjoy doing school work.

_____   _____41. I want to keep my grades about the same as
                    those of the rest of the members of my
                    group.

_____   _____42. School work is exciting and interesting
                    for me.

_____   _____43. My teacher is willing to spend extra time
                    and effort to help me.

_____   _____44. I enjoy coming to school.

_____   _____45. I hate to miss school.

_____   _____46. I would be going to school whether or
                    not I had to.

_____   _____47. I think my teacher enjoys teaching.

_____   _____48. It is easy for me to get along with my
                    teacher.

_____

        Adapted from a "Student Attitude Scale" developed by
Cherry Creek District No. 5, Englewood, Colorado, relating
to their Differentiated Staffing Program.

WALLIS STUDENT ATTITUDE SCALE SCORES

Item No.	Pre-test Yes	No	Post-test Yes	No	Item No.	Pre-test Yes	No	Post-test Yes	No
1	60	28	53	37	25	63	24	65	25
2	64	24	75	16	26	28	60	38	54
3	38	50	46	45	27	77	11	71	21
4	66	22	73	19	28	64	24	75	16
5	62	26	65	27	29	40	48	52	38
6	54	35	54	37	30	60	27	62	28
7	66	22	66	26	31	32	56	33	56
8	40	48	43	47	32	53	35	52	37
9	68	20	72	19	33	53	35	60	31
10	38	50	40	52	34	59	29	56	30
11	49	39	51	40	35	72	16	71	20
12	41	47	55	37	36	77	11	81	11
13	52	35	53	38	37	39	49	41	49
14	69	19	73	19	38	39	49	40	48
15	38	50	51	40	39	70	18	74	18
16	68	20	64	27	40	45	43	46	45
17	65	23	71	21	41	71	17	64	27
18	56	32	58	32	42	47	41	46	42
19	54	34	61	31	43	64	23	62	28
20	69	19	79	13	44	39	49	61	28
21	34	54	45	37	45	52	36	54	36
22	56	31	60	30	46	65	23	60	30
23	54	34	39	39	47	69	19	66	22
24	64	23	69	22	48	58	29	62	28

APPENDIX F

.

BUDGET
Differentiated Staffing Pilot Program
January 15, 1973 to June 2, 1973

Wallis Independent School District

The following budget is designed to serve ninety-six
students, 3 teachers, 1-1/4 teacher aides, and a num-
ber of student aides and volunteer aides.

Submitted By

Myrtle Hatton

Bobbie Reinecker

Carol Sheddan

BUDGET ABSTRACT

Major school goals, as they are orally expressed by
our school administrators, teachers, board members, and some
parents, will be the primary objective of this Differentiated
Staffing project and this budget has been designed to achieve
these goals. Additional goals will also be an objective in
an effort to demonstrate their worthiness in the profession.

To provide all of our students with the best oppor-
tunities possible for a complete and well-rounded education
will be of prime concern. We will work toward this goal by
specializing in our work where the teachers having the most
talent, training, and interest in an area of teaching or in
the teaching of a skill will plan and teach in that area and
be assisted by the other teachers and personnel. We will
also take the time to plan daily for our own teaching tasks
and for our fellow teachers. In this way, we are dependent
upon one another and we must evaluate one another. If one
person on the team does not do his job, it directly affects
the other team members.

To provide the individual help students need to be
successful in school and to develop a favorable attitude
toward their school work and the teacher is also a prime
concern to us in planning this budget. We will work more
toward this goal by providing a better atmosphere for each
student where he will be working with students that work at

his pace and level, more aide assistance for individual help and tutoring, and more appropriate student materials. Through these tactics, we hope to find more time to council with students and their parents in efforts to build better interests and attitudes in both.

We plan to demonstrate to you that, when given the opportunity, we can plan and carry out an effective educational program for our boys and girls without being appointed to administrative posts. We also hope to open new avenues of thinking about individualization of instruction and of teaching and to help people to realize that if we are going to be accountable for our teaching outcomes, we must have the opportunity to plan the inputs of the teaching process.

BUDGET

INTERMEDIATE MATHEMATICS OBJECTIVES

At the conclusion of approximately 17 weeks of instruction
80% of the students in the fourth, fifth, and sixth grade
mathematics classes will be able to answer the following
items on a written mathematics examination:

Grade Four

    a. Given problems on a fourth grade level, the student will
       be able to add whole numbers involving renaming and re-
       grouping in four out of five problems.

    b. Given problems on a fourth grade level, the student will
       be able to subtract whole numbers using all cases of
       renaming and regrouping in four out of five problems.

    c. Given problems on a fourth grade level, the student will
       multiply accurately whole numbers in four out of five
       problems.

    d. Given problems on a fourth grade level, the student will
       be able to divide whole numbers resulting in quotients
       with zero and non-zero remainders in four out of five
       problems.

    e. Given triangles and quadrilaterals, the student will be
       able to classify and find the perimeters of four out
       of five figures.

    f. Given problems on a fourth grade level, the student will
       be able to add and subtract fractional and mixed numerals
       with like and different denominators involving no re-
       grouping in eight out of ten problems.

    g. The student will be able to state a time as a given num-
       ber of hours and minutes before or after a specified
       time and determine if the new time is a.m. or p.m. in
       four out of five problems.

    h. The student will be able to identify the place value for
       any number in any position up to one million in four
       out of five problems.

    i. Given problems on a fourth grade level, the student will
       be able to successfully use number sentences to solve
       four out of five problems involving numbers of arithmetic.

j. Given problems on a fourth grade level, the student will be able to identify the commutative and associative properties of addition and multiplication and the distributive property of multiplication in four out of five problems.

179

Grade Five

    a. Given a standard numeral, the student will be able to
       identify the place value for any number in any position
       up to one billion in four out of five problems.

    b. Given addition or subtraction problems involving whole
       numbers, the student will be able to find the correct
       sums or differences in eight out of ten problems using
       renaming and regrouping.

    c. The student will be able to correctly multiply a whole
       number by any number less than 1000 in four out of
       five problems.

    d. The student will be able to correctly divide a whole
       number dividend by a one or two-digit divisor in four
       out of five problems.

    e. Given geometric figures on a fifth grade level, the
       student will be able to classify correctly eight out of
       ten figures.

    f. Given standard numbers under 100, the student will be
       able to find the prime factors in four out of five
       problems.

    g. Given problems on a fifth grade level, the student will
       be able to add, subtract, multiply, or divide any two
       numbers of arithmetic with fractional numerals or with
       mixed numerals, and name the results in simplest form
       in eight out of ten problems.

    h. Given problems on a fifth grade level, the student will
       be able to correctly add, subtract, or multiply decimal
       numerals in eight out of ten problems.

    i. Given problems on a fifth grade level, the student will
       be able to successfully use number sentences to solve
       four out of five word problems involving numbers of
       arithmetic.

    j. Given problems on a fifth grade level, the student will
       be able to identify the commutative and associative
       properties of addition and multiplication and the dis-
       tributive property of multiplication in four out of
       five problems.

Grade Six

    a. The student will be able to read, write, and identify
       the place value of numbers through the trillions in
       eight out of ten problems.

    b. Given problems on a sixth grade level, the student will
       be able to add, subtract, multiply, or divide whole
       numbers accurately in eight out of ten problems.

    c. The student will be able to construct, measure with a
       standard protractor, and correctly classify four out
       of five angles.

    d. Given any standard number on a sixth grade level, the
       student will find the prime factorization in four out
       of five problems.

    e. Given problems on a sixth grade level, the student will
       be able to write mixed numerals when fractional numerals
       are given and write fractional numerals when mixed numerals
       are given in eight out of ten problems.

    f. Given problems on a sixth grade level, the student will
       be able to add, subtract, multiply, or divide any num-
       bers of arithmetic with fractional numerals or with
       mixed numerals, and name the results in simplest form
       in eight out of ten problems.

    g. The student will be able to find the sum or the differ-
       ence of any two integers in four out of five problems.

    h. The student will be able to add, subtract, multiply, or
       divide decimal fractions in eight out of ten problems.

    i. The student will be able to write a decimal numeral for
       any number of arithmetic, either by inspection or by
       division in four out of five problems.

    j. Given problems on a sixth grade level, the student will
       be able to successfully use number sentences to solve
       four out of five word problems involving numbers of
       arithmetic.

Cost

Three mathematics teachers ¼ of the day.	$3,560.50
One Teacher Aide	1,532.00
Supplies	366.00
Diagnostic Test Booklets	15.40
Scoring Service.	95.00
TOTAL MATHEMATICS COMPONENT	$5,568.90

READING OBJECTIVES

The pupils in the fourth, fifth, and sixth grades reading
will answer 80% of the questions from a teacher made test,
based on the McCullough Word-Analysis Tests, basic reader
achievement tests, basic reader unit tests, and S.R.A.
Standardized Achievement Tests.

Grade Four

   a. On a completion test or ten sentences (3 parts to
      each sentence), the first as a beginning sentence.
      one of the next two completes the idea of the first
      sentence and makes a better ending. The pupil will
      place an X in the blank before eight out of ten
      correct sentences that complete the idea of the first
      sentence and makes a better ending.

   b. When 10 multiple choice questions have been taken from
      the Table of Contents of a book and presented to the
      pupil on a test, the pupil will fill in 8 out of 10
      blanks correctly by supplying the page, author and
      title of each poem, story or play.

   c. When given a list of 20 words to alphabetize by the
      first letter in the words, the student will list 16
      of the words in the correct order.

   d. When asked to mark the long vowel sounds in a list of
      20 words, the student will do 16 correctly.

   e. When given a list of 10 respellings for words (3
      words for each respelling), the student will underline
      8 out of 10 words correctly.

   f. On a test for word relationship ten words are given
      (after each word there are 3 other related words and
      one word about something different). The student will
      draw a line through the unrelated word in 8 of the
      sentences and supply a related word.

   g. In a matching test when given a column of words-A and
      a column of phrases-B student will be able to match
      words from A that means the same or nearly the same as
      words or phrases in B.

   h. When given a multiple choice test containing 10 import-
      ant facts mentioned in the story, the student will choose
      8 out of 10 facts correctly.

i. After reading a selection the students will be able
   to organize 8 out of 10 statements in sequence.

j. When asked on a test the student will determine whether
   four out of five paragraphs are factual or fictional.

k. When given a syllabication test students will divide
   16 out of 20 words correctly.

Grade Five

a. When given 10 sentences in a matching test on interpreting figures of speech, the student will match 8 of the numbered phrases with their correct meaning.

b. On a vocabulary test of 25 words, four words in a row, (example--pork, beef, lamb, picnic) the student will correctly cross out 21 of the 25 words that do not belong there.

c. From a list of 10 homonyms the student will choose the correct word for 8 out of 10 sentences and write it in the blank.

d. When given a true-false test of 20 questions taken from an article to be read, the pupils will choose the correct answer for 16 questions.

e. On a comprehension test of 10 questions the student will place an X in the blank before 8 correct sentences that tell the main idea.

f. On a vowel sound test of a list of 10 words containing four different sounds of a, the pupil will write the correct symbol above the a's in 8 out of 10 words.

g. On a test of antonyms of five sentences containing two words with opposite meanings, the student will draw rings around the two words and write them in the blanks after the sentence with 80% accuracy.

h. When given a list of 10 words in isolation on students performance level they will define 8 out of 10 correctly.

i. When given a list of 5 root words on a test and a list of prefixes and suffices, students will form four out of five new words correctly by filling the blank before the root word with a prefix and the blank after the root word with a suffix.

j. On a test for critical reading, when ten statements are taken from an article, students will differentiate between facts and opinions with 80% accuracy.

k. When given a list of 20 words to alphabetize from the third letter in the words, students will write 16 out of 20 in the right order.

l. Pupils will arrange 8 out of 10 main ideas from 10 paragraphs in correct sequence.

Grade Six

    a. After reaching the climax in a story, the students will be able to predict the outcome with 80% accuracy.

    b. When given ten statements from a selection containing facts and opinions, 8 out of 10 students will correctly distinguish between facts and opinions.

    c. When given a list of 20 words in column A and 20 words or phrases in column B to match definitions, students will match correctly 16 out of 20 words.

    d. On a multiple choice test with 10 sentences, each sentence containing an underlined word with a blank after the underlined word (the 3 different definitions are written below the sentence numbered 1, 2, or 3), the student will fill 8 out of 10 blanks with the correctly numbered definition.

    e. When given a list of 10 words with two pronunciations for each word, students will draw a ring around 8 out of 10 of the correct words.

    f. When given a word list of 25 words and ten key words for vowel sounds, students will write each word under the correct key word with 80% accuracy.

    g. Students will alphabetize 16 out of 20 words to the fourth letter correctly.

    h. When given a list of 20 true-false questions from an article, the student will answer 16 out of 20 correctly.

    i. Students will define 20 words in isolation on their performance level with 80% accuracy.

    j. Students will complete an outline with 80% accuracy.

Cost

Three Reading teachers ¼ of the day.	$3,560.50
One Teacher Aide (April and May)	462.00
Supplies	489.00
Diagnostic Test Answer Sheets.	14.80
Scoring Service.	95.00
TOTAL READING COMPONENT	4,621.30

BUDGET STATEMENT

This budget is designed to finance a pilot Differentiated

Staffing Project with our present fourth, fifth, and sixth grade

students during the Spring of 1973. Instruction will begin

at the beginning of the Spring semester, January 15, 1973, and

end on May 31, 1973, followed by two teacher work days.

Instructional areas will include Reading and mathematics. The

concepts and procedures of Differentiated Staffing will be

tested as much as possible during this semester to determine

it's value to our school system.

It is our understanding that we will be allowed to use

any textbooks, materials, equipment, or resources now available

in the school district. The school district will remain in

charge of grades 4, 5, and 6, but when this contract is awarded

to us, we will have complete control of the instructional

program specified and we will determine how to use the talents

of the various members of our teaching team, how to spend the

funds approved in this budget, but within the provisions of

this budget, how to divide the share set aside for teacher

salaries, how to shift leadership roles, how to monitor pro-

gress, how to assess and meet the needs of the individual stu-

dent, and how to evaluate student achievement.

We have pretested all of our fourth, fifth, and sixth

grade students with prescriptive Reading and mathematics

tests published to the McGraw-Hill Testing Bureau, to diagnose

their academic weaknesses at the present time to give us a beginning point for grouping and instruction. These tests indicate skill weaknesses and we shall teach skills according to the previously listed objectives. The students will achieve according to the listed behavioral objective standards. Our bid relating to General Work Condition number five in your Request for Proposal, is the alternative course suggested, an overall bid for the work and standards that will be achieved. Specific assessment plans are outlined in the next section of this budget.

Our plans are to ask the elementary principal to work closely with our teaching team to help in arranging time schedules, to coordinate the team's activities with the remainder of the school's program, and to help us to acquire special materials needed for our program. We will also use him as a consultant and as a public relations director for our program. It is our desire to achieve greater parental involvement in the school and the principal can help us in this area.

The elementary principal has kindly arranged a block of time almost three hours long for us to teach Reading and mathematics to the fourth, fifth, and sixth grade students under a Differentiated Staffing Structure. This time comes immediately after the lunch break. He has also arranged for our teaching rooms to be located next to and adjacent to one another, and for us to have a common conference period for planning and counseling.

We shall operate our classes on a non-graded basis, utilizing team teaching, teacher aides, volunteer aides (if available), and student aides (if available). The students will be grouped according to their skill weaknesses and needs, with no regard for present grade level. Of course, social problems will be recognized, but efforts will be made to overcome them. If a child needs to learn a particular skill, he/she will be placed with a group studying that skill, without regard for grade level. Children having difficulty with certain skills will be given an aide for special or tutorial assistance.

Mrs. Myrtle Hatton will plan the Reading assignments for the teaching team, monitor progress and plan activities. Mrs. Reinecker will perform this leadership role in the area of mathematics. The three certified teachers will cooperatively evaluate the progress of the students and plan the assignments of the aides.

Only one new aide will be employed and she will receive teacher aide training prior to her beginning duties with the students.

To further our knowledge of individualized instruction and the procedures and concepts of Differentiated Staffing, the teaching team has already had a number of inservice training sessions. Additional sessions are planned during the Spring semester. At the present time, nine sessions are planned. Four of these sessions are scheduled half-day

sessions with an expert consultant in the area of Differentiated Staffing.

Because of his position and other considerations, it is our desire that the Superintendent serve as our project director. He has agreed to this role at no additional salary. He will serve as our contact with the Board of Trustees unless there is a special reason for personal contact between the Team Members and the Board. The director will also assist us with evaluation procedures, serve as consultant to assure proper procedures and proper record keeping. He will arrange for inservice training sessions and training instructors and will provide us with information needed in teaching or DS areas.

The role of the principal has previously been described.

EVALUATION

Budget objectives will be evaluated by the pretest and post-test method. All students were administered the Science Research Associates Achievement Test this Fall as a pretest. They will receive the same test in May as a post-test of academic progress.

Teacher-made tests will also be used to measure the specific skills mentioned in the behavioral objectives in this budget. Examples of the types of pre and post teacher-made tests are appended.

Attitudes of teachers and students will also be evaluated. The teachers took a pre-test last Fall, before beginning their study of Differentiated Staffing. The test (attitude) was one that was developed by Dr. N. Cecil Clark of Florida State University and Dr. Michael DeBloois of Utah State University. They will take this same attitude test in May and the results will be reported to you.

The fourth, fifth, and sixth grade students will be administered an attitude test, developed in the Cherry Creek, Colorado schools, at the beginning of the program and again at the end of the project (in May) to determine any change in their attitudes toward school or toward their teachers.

The Board will be furnished a Final Report as soon as possible after the end of the pilot program.

APPENDIX G

TO: Mr. Don Heston, Superintendent
      Wallis Independent School District
      Wallis, Texas

SUBJECT: Evaluation of Differentiated Staffing Program

FROM: Dorothy White, Kris Breckman, Harold Lennington
       (Members of evaluating team)

As the evaluation team interviewed the teachers and other staff members, the general impression was that the changes which had been brought about in the implementation of differentiated staffinw were considered to be a great improvement over the traditional system. Much enthusiasm was expressed toward having the opportunity to be actively involved in the decision-making process, such as in the selection of personnel, determining how certain supplementary funds were to be spent, in deciding areas of instructional specialization, in scheduling of classes, and in utilization of teaching strategies. Positive attitudes were reflected toward differentiated salaries, and toward differentiated responsibilities, which teachers felt allowed contact with more students.

In some areas, however, there appeared to be less understanding (conceptualization) on the part of both the teachers and assistant teachers. For instance, teacher evaluation seemed to be interpreted as referring only to evaluation of students, and teacher accountability seemed to be understood primarily as accountability to one's self. Assistant teachers apparently had very little input into the

decision-making process, and some were even unaware of the existence of differentiated salaries. As already mentioned, teachers were enthused about being able to have final authority regarding certain expenditures, but they were unaware of the total amount of funds available, perhaps suggesting a need for more involvement on the part of the staff in the drafting of the annual budget.

Teachers indicated that they spent approximately seventy percent of their time on instruction, approximately twenty per-cent of their time on curriculum and related planning, with the balance of their time being spent on supervision, evalu-ation, and clerical matters.

In discussing problems related to differentiated staffing, it was the general consensus of opinion that there were no major problems, nor had there been any during the development and implementation of the program. However, it was indicated that there were some minor problems. During the training period some felt that the program may have developed too quickly, not allowing the teachers enough time for proper conceptualization. Others indicated there were some misunderstandings and confusion on the part of the parents, whom the teachers felt may not have received enough information concerning differentiated staffing as it was being introduced into the district. As the program began to be implemented, the teachers suffered from what they considered

a lack of expertise in grouping students, learning to adjust to others moving in and out of the classroom, and adjusting to more noise and movement on the part of the students. It was also felt that students needed more preparation for differentiated staffing than just being told they were going to try something new. Further, it was indicated that grouping advanced students with less advanced students initially caused some problems both with the students and the parents, since this procedure was viewed, by some, as a demotion in grade level. Because of a change in grouping procedures and in classroom rearrangements, students became more participative, which the teachers viewed as a need for more self-discipline on the part of the students.

All members of the staff agreed that more space, more openness, more aides, newer facilities and equipment, and better communication between the home and school are needed in order to improve the effectiveness of the program.

Both the teachers and assistant teachers indicated that the benefits received from differentiated staffing far outweighed any disadvantages. Specific benefits mentioned by the staff included such factors as better staff communication, improved professional growth and development, more effective staff planning, more effective student learning, more personal communication with students, and more interest in the school and its program on the part of the entire community.

When briefly visiting several classrooms, the evaluation team found what they considered to be a good learning environment. The atmosphere was relaxed, students were working individually as well as in small groups, teachers were actively involved in supplying assistance to students when needed, students were helping other students, and last but not least, students seemed to be enjoying themselves as they actively participated in the learning process.

In summary, the staff appears to have made a good start in differentiated staffing. High interest and enthusiasm on the part of students as well as teachers is quite evident, and the anticipation of expanding the program during the 1973-74 school year is serving as a source of challenge and motivation to members of the staff.