DOCUMENT RESUME

ED 134 558 95 SP 010 740

AUTHOR Melvin, Mary Pauline
TITLE Instructional Programming for Individual Students in the Multiunit School: A Case Study. Technical Report No. 393.
INSTITUTION Wisconsin Univ., Madison. Research and Development Center for Cognitive Learning.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Aug 76
CONTRACT NE-C-00-3-0065
NOTE 254p.; Report from the Project on Conditions of School Learning and Instructional Strategies

EDRS PRICE MF-$0.83 HC-$14.05 Plus Postage.
DESCRIPTORS *Elementary Education; Elementary Schools; Individual Instruction; *Individualized Instruction; Instructional Improvement; *Instructional Programs; *Multiunit Schools; *Nongraded System; Research and Instruction Units; *School Organization; Self Directed Classrooms; Self Directed Groups; Ungraded Schools
IDENTIFIERS Individually Guided Education

ABSTRACT

This study was conducted to determine how instructional programming for individual students has been implemented to provide effective learning environments for elementary school students. The focus was on the processes and procedures used to achieve objectives of the Instructional Programming Model (IPM). A related purpose was to study the multiunit school organization as it relates to implementation of instructional programming. One Individually Guided Education (IGE) school was chosen for case study; the IGE system includes the IPM and a model for the multiunit school. The procedures and processes used in implementing instructional programming and multiunit organization in an actual school situation were compared with these models. Data collection procedures included the use of questionnaires, a two-week observation period, interviews, and use of documents available at the school. Seven generalizations about the multiunit school and instructional programming were generated from the data: (1) the most difficult aspect of implementing the multiunit organization is organizing the students in multiaged teams; (2) a reading specialist is a valuable asset in implementing instructional programming in reading; (3) implementation of instructional programming follows most closely with the IPM when instruction related to the objectives is isolated from other content; (4) following the sequence of the IPM does not tend to encourage student decision making; (5) the successful implementation of instructional programming may depend on frequent informal interaction among team members as much as on the more formal regular team meetings; (6) record-keeping procedures can be developed which are adequate and which do not require an excessive amount of time; and (7) implementation of instructional programming in three or more curricular areas can be achieved. (The appendix includes sample questionnaires and interview schedules.) (Author/MM)

TECHNICAL REPORT NO. 393

instructional programming for individual students in the multiunit school: a case study

AUGUST 1976

WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

Technical Report No. 393

INSTRUCTIONAL PROGRAMMING FOR INDIVIDUAL STUDENTS IN THE MULTIUNIT SCHOOL: A CASE STUDY

by

Mary Pauline Melvin

Report from the Project on
Conditions of School Learning and
Instructional Strategies

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August 1976

This Technical Report is a doctoral dissertation reporting research supported by the Wisconsin Research and Development Center for Cognitive Learning. Since it has been approved by a University Examining Committee, it has not been reviewed by the Center. It is published by the Center as a record of some of the Center's activities and as a service to the student. The bound original is in the University of Wisconsin Memorial Library.

Published by the Wisconsin Research and Development Center for Cognitive Learning, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education, and Welfare. The opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education and no official endorsement by that agency should be inferred.

Center Contract No. NE-C-00-3-0065

WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

MISSION

The mission of the Wisconsin Research and Development Center for Cognitive Learning is to help learners develop as rapidly and effectively as possible their potential as human beings and as contributing members of society. The R&D Center is striving to fulfill this goal by

- conducting research to discover more about how children learn
- developing improved instructional strategies, processes and materials for school administrators, teachers, and children, and
- offering assistance to educators and citizens which will help transfer the outcomes of research and development into practice

PROGRAM

The activities of the Wisconsin R&D Center are organized around one unifying theme, Individually Guided Education.

FUNDING

The Wisconsin R&D Center is supported with funds from the National Institute of Education; the Bureau of Education for the Handicapped, U.S. Office of Education; and the University of Wisconsin.

ACKNOWLEDGEMENTS

People . . .

Because of people, this dissertation, the grand finale of a unique and interesting doctoral program, has become a reality.

The people:

Professor Wayne Otto--an exceptional and much-appreciated major professor

Professors Marvin J. Fruth, Carl A. Grant, Herbert J. Klausmeier, and Dennis W. Spuck--eminent educators, careful critics, faultless friends, and members of the committee

Professors Juanita S. Sorenson, Lloyd H. Joyal, and Max Poole--imaginative educators with a knack for reaching out and helping others

The members of the Delta Kappa Gamma Society--donors of a generous scholarship

The Wisconsin Research and Development Center for Cognitive Learning--provider of financial assistance

Staff members and students of Alys Drive Elementary School--gracious and hospitable hosts

Susan Faust--excellent typist and friendly critic

Colleagues and friends--unnamed, but known and appreciated for their kindness, love, and assistance

Harold and Julia Melvin and the rest of the family--unsurpassed for their love and care

In various measure, they all gave love, support, encouragement, and information--somehow managing to provide the right amount of the right ingredient at the right time. And thus, a dissertation and completed doctoral program became a reality . . . because of people.

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ABSTRACT

The study was conducted to determine how instructional programming for individual students has been implemented to provide effective learning environments for elementary school students. The primary focus was on the entire range of procedures used to achieve the objectives of the Instructional Programming Model (IPM). A secondary focus was on the multiunit school organization as it relates to implementing instructional programming.

The system of Individually Guided Education (IGE) includes the Instructional Programming Model and a model for the multiunit school organization. The procedures and processes used in implementing instructional programming and the multiunit organization in an actual school situation were compared with these models. Three broad questions provided the focus for the study:

1. What is the multiunit organizational arrangement of the school?
2. To what extent does the Instructional Improvement Committee support the implementation of instructional programming?

3. To what extent are Steps 2 through 7 of the IPM implemented in each Instruction and Research Unit?

One IGE school was selected for this case study. The school met the minimal criteria for an IGE school and had implemented instructional programming in reading and mathematics. Data collection procedures included the use of questionnaires, a two-week period of observation and interviewing, and use of documents available at the school. The data were analyzed in relation to the questions posed for the study.

Generalizations about the multiunit school and instructional programming were generated from the data. These included:

1. The most difficult aspect of implementing the multiunit school organization is organizing students in multiaged teams.

2. A reading specialist who coordinates the school-wide reading program, instructs groups of students, and provides other assistance as requested by the team staffs is a valuable asset in implementing instructional programming in reading.

3. Implementation of Steps 2 through 7 of the IPM follows the model most closely when instruction related to the objectives is isolated from other content.

4. Following the steps of the IPM does not tend to encourage student decision making related to objectives, instructional modes, or sequence.

5. The successful implementation of instructional programming may depend on frequent informal interaction among team members as much as

on the more formal interaction of regular team meetings.

6. Record-keeping procedures can be developed which are adequate for managing instructional programming and which do not require an excessive amount of time. Developing such procedures may require revision of record-keeping procedures which were being used prior to the implementation of instructional programming.

7. Implementation of instructional programming in three or more curricular areas can be achieved by identifying a reasonable number of priorities and focusing efforts on achieving them.

CHAPTER I

BACKGROUND AND RELATED LITERATURE

Throughout the twentieth century, educators have been actively involved in seeking more effective means of providing comprehensive and meaningful educational experiences for all students. In the past decades, numerous plans have been proposed for improving the quality of education. Individually Guided Education (IGE) is one result of research and development efforts focusing on the elementary school.

Included in the system of IGE are models for a multiunit school organization and for instructional programming for individual students. Adapting these models to specific schools and implementing them in a manner which is functional, productive, and satisfying for all the people who comprise the school population is a demanding task. Among the changes required are: (1) forming a multiunit organization to replace the traditional age-graded classroom structure; (2) shared decision making by district personnel, the principal, unit leaders, and staff teachers; and (3) cooperation of the staff members of each Instruction and Research (I & R) Unit to plan, implement, and evaluate instructional programs for the students within the unit.

The comprehensive system of IGE includes models for the multiunit school organization and for instructional programming for individual students. Schools or school districts which adopt IGE have the responsibility for determining the procedures to be used to implement these models in their particular situations.

Purpose of the Study

The primary purpose of this study was to determine how instructional programming for individual students has been implemented to provide effective learning environments for elementary school students. The focus was on the processes and procedures used to achieve the objectives of the Instructional Programming Model (IPM). A related purpose was to study the multiunit school organization as it relates to implementation of instructional programming.

Conceptual Framework

Optimal education for individual students depends on much more than a child and a teacher. Elements which affect the quality of each child's educational program include the means of instruction, the materials used, the organizational structure and staffing of the school, the attitudes and expectations of parents and other community members, the availability and application of research data, and the support of organizations to provide a facilitative environment for making the changes needed to improve the quality of instruction.

To meet all these requirements, seven components have been integrated to form the system of Individually Guided Education. These components are shown in Figure 1.1.

The multiunit school instructional-administrative arrangements indicate the organization of students, teachers, unit leaders, consultants, and administrators within a school district (Figure 1.2). There are three over-lapping levels of organization. Within each school, students, teachers, unit leaders, aides, and interns are organized into Instruction and Research (I & R) Units. The unit leaders, the principal, and others such as special teachers, the IMC director, and a parent representative comprise the Instructional Improvement Committee (IIC) of a school. At the district level, the Systemwide Program Committee (SPC) includes the district administrator or a designee, central office and other consultants, representative principals, unit leaders, and teachers, and a community representative.

The multiunit school has been described as an invention of organizational arrangements that have emerged from a synthesis of theory and practice regarding instructional programming for the individual student, horizontal and vertical organization for instruction, role differentiation, shared decision making by groups, open communication among school personnel, and administrative and instructional accountability (Klausmeier, 1975).

Instructional programming for the individual student is based on the Instructional Programming Model (IPM) shown in Figure 1.3. It takes into account each student's beginning level of performance, rate

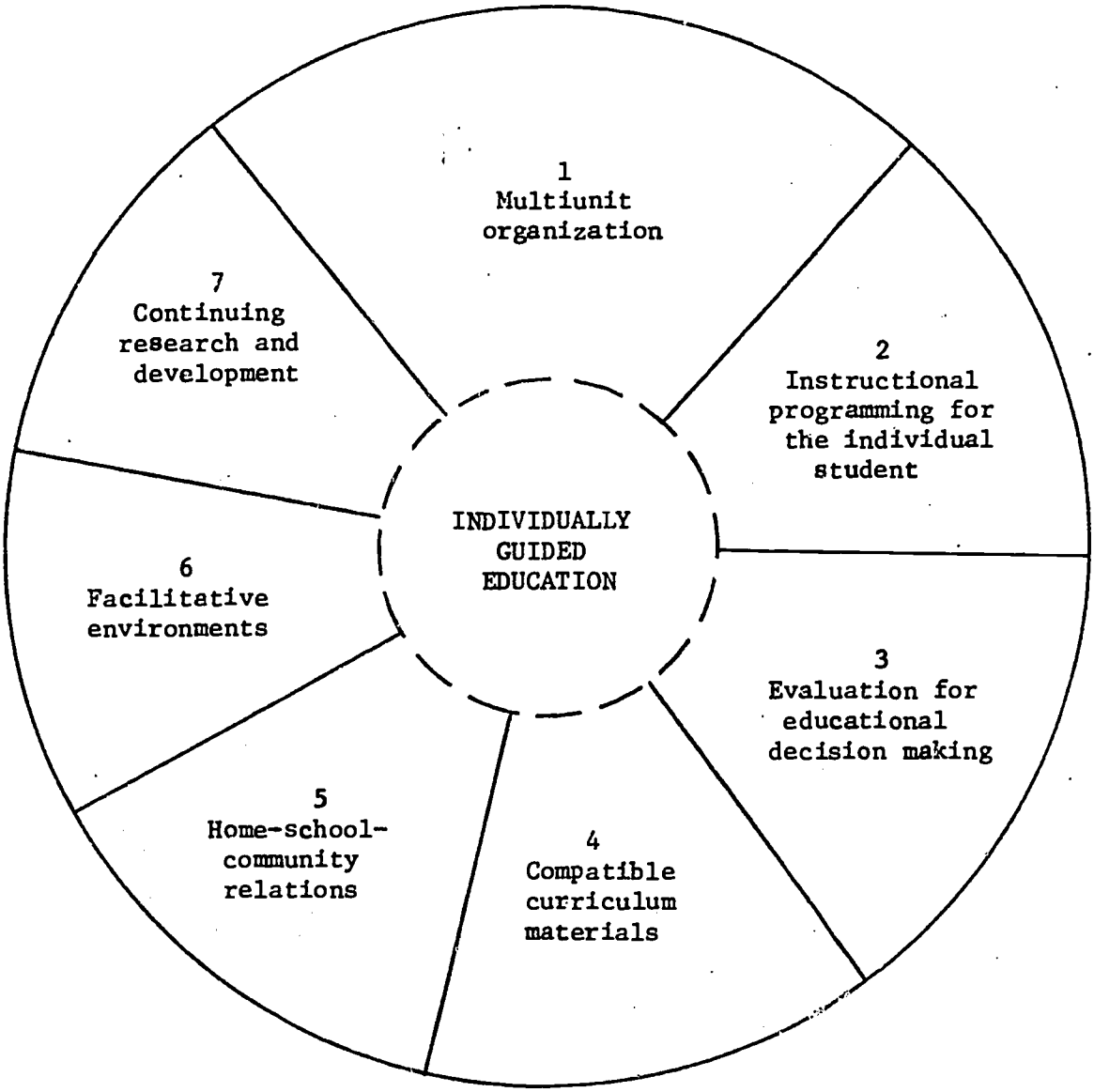


Figure 1.1

Components of Individually Guided Education

(Based on H. J. Klausmeier, M. R. Quilling, J. S. Sorenson, R. S. Way, and G. R. Glasrud, Individually Guided Education and the Multiunit School: Guidelines for Implementation. Madison: Wisconsin Research and Development Center for Cognitive Learning, 1971, Ch. 2.)

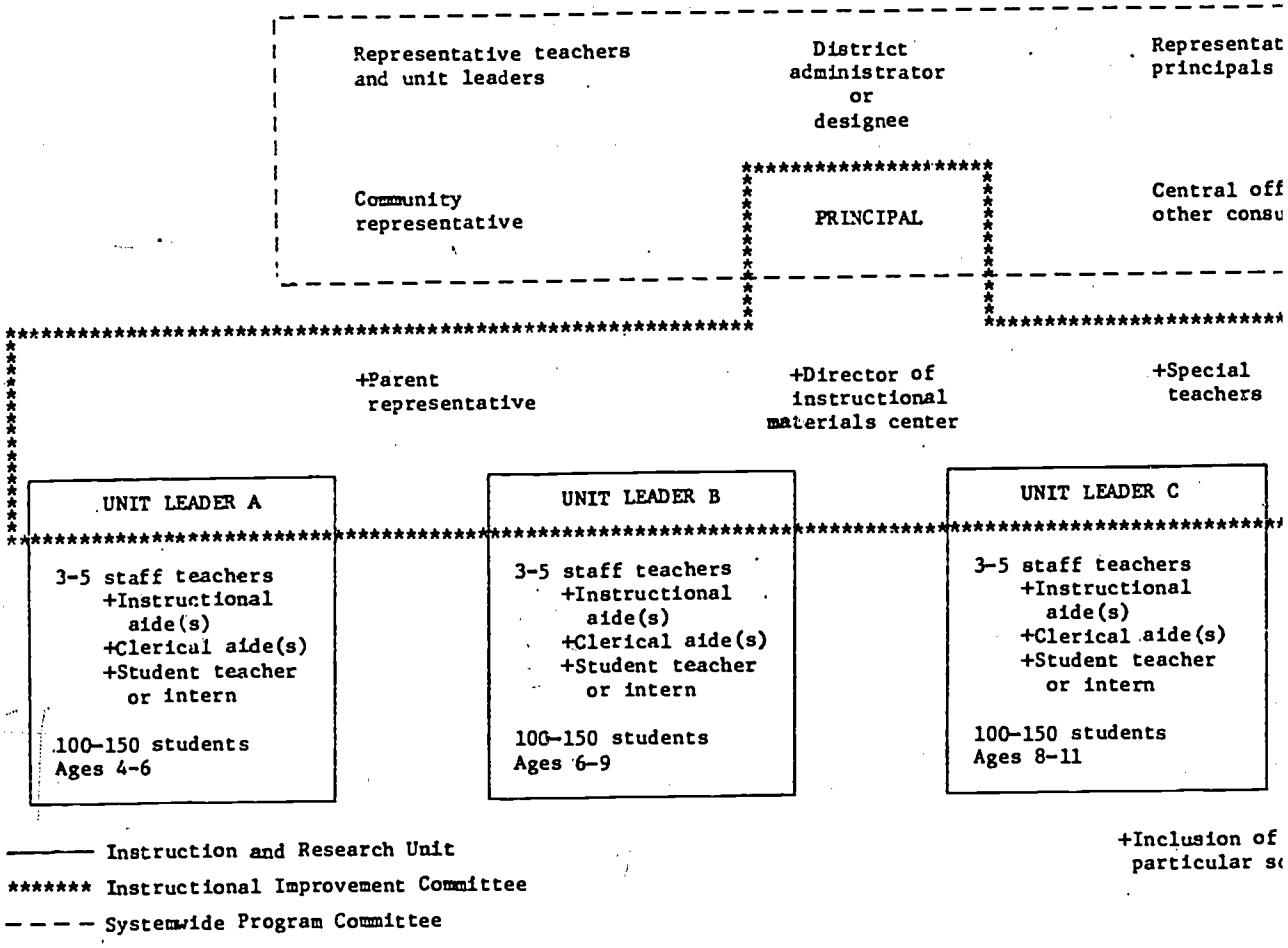


Figure 1.2

Multiunit Organization of an IGE School of 400-600 Students

(Adapted from: Herbert J. Klausmeier, Richard G. Morrow, and James E. Walter, Individually Guided Educat Wisconsin Research and Development Center for Cognitive Learning, 1968.

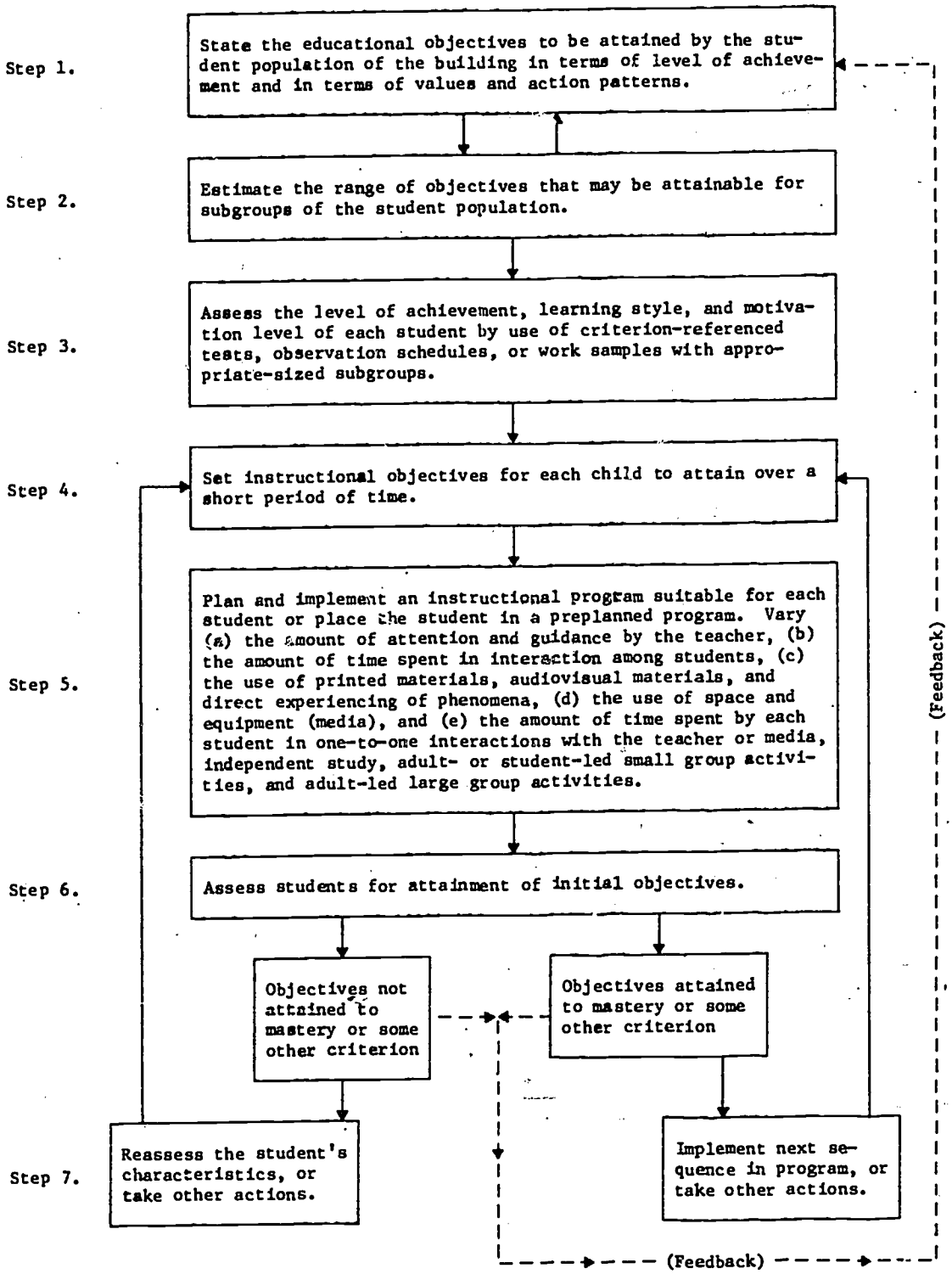


Figure 1.3

Instructional Programming Model in IGE

(Adapted from: Herbert J. Klausmeier, Mary R. Quilling, Juanita S. Sorenson, Russell S. Way and George R. Glasrud, Individually Guided Education in the Multiunit School: Guidelines for Implementation. Madison: Wisconsin Research and Development Center for Cognitive Learning, 1971, p. 19.)

of progress, style of learning, motivational level, and other characteristics in the context of the educational program of the building. Instructional programming can be carried out in any curricular area using objectives from the cognitive, affective, and psychomotor domains. The development of instructional programs for individual students is based on general (school-wide) and instructional objectives. Instructional objectives range from specific behavioral objectives to more open expressive objectives which indicate only activities to be carried out (Klausmeier, 1975).

Objective-based curriculum materials are essential to IGE. Some objective-based materials, such as the Wisconsin Design for Reading Skill Development, Developing Mathematical Processes, Prereading Skills Program, and Individually Guided Motivation have been developed at the Wisconsin Research and Development Center for Cognitive Learning and are in use in IGE schools. Other schools have developed their own objective-based curriculum programs which reflect their particular needs.

To respond to the attitudes, expectations, and concerns of the school community, a strategy for implementing an effective home-school-community relations program is necessary.

Various agencies and groups contribute to the facilitative environments that are required to provide support and services to the schools involved in implementing instruction through IGE. Organizations which can facilitate this implementation include local school districts, state education agencies, teacher education institutions, and regional and state IGE networks. Individuals who are committed to IGE and who have

the necessary knowledge and competence to carry out their respective roles, along with material resources such as appropriate buildings and equipment, are also needed to provide an environment in which the implementation of IGE is facilitated (Klausmeier, 1975).

Continuing research and development is essential for improving instructional materials and procedures. The design of IGE encourages change as a result of research which focuses on instruction and learning as well as on the other components incorporated into IGE.

Successful implementation of all seven components of IGE is a difficult and complex task. Several years of diligent effort on the part of educators are required to reach a stage when the immediate concerns of a school staff can shift from the initial changeover to IGE to refinement of instructional procedures designed to provide an optimal educational environment for every student.

Review of Literature

The comprehensive system of IGE has been developed over a period of approximately ten years by personnel of the Wisconsin Research and Development Center for Cognitive Learning in cooperation with teachers and administrators in school systems and other educational agencies. The multiunit school organization was the first component to be implemented, beginning in 1965-1966. This was followed by the introduction of instructional programming and compatible curriculum materials. The first set of materials was the Wisconsin Design for Reading Skill

Development which was implemented in multiunit schools in 1969-1970. In succeeding years, other components have been introduced in many IGE schools.

During the first years of developing the multiunit school and instructional programming, research was conducted in each school where these components were implemented. In succeeding years as the multiunit school organization and instructional programming were implemented in greater numbers of schools, related research was conducted on a broader base. Much of this research focused on the outcomes and effectiveness of one or more components of IGE.

In the following sections, the research related to instructional programming and to the multiunit school is reviewed. In the review of research related to the multiunit school organization, the emphasis is on attitudes toward the multiunit organization, teacher behavior, effectiveness of leader behavior, and conditions conducive to learning. Research specific to instructional programming focuses on understanding and using the Instructional Programming Model. The review concludes with a discussion of the research related to student attitudes and achievement in IGE schools.

Multiunit School Organization

The model for the multiunit school calls for two different types of organizations within each school--the Instructional Improvement Committee (IIC) and Instruction and Research (I & R) Units. The IIC must include the principal and the unit leaders. Other persons such as the

IMC director, special teachers, and parent representatives may be asked to be members of this committee. The staff of each I & R Unit includes a unit leader and three to five staff teachers; it is recommended that aides and/or interns or student teachers also be included in an I & R Unit staff. Approximately 100 to 150 students are assigned to each I & R Unit (Klausmeier, Morrow, and Walter, 1968). The multiunit school was designed to provide an environment which is conducive to shared decision making for the purpose of providing instructional programs appropriate for individual students.

As a prelude to discussing changes which may be needed as IGE continues to be refined, Lipham and Klausmeier (1976) indicated: "Evidence from current research and practice reveals that the multiunit form of organizational structure is a powerful means for bringing the human and material resources of the schools to bear directly on the improvement of education" (p. 254). This assertion is supported by research focusing on various aspects of the multiunit school.

Attitudes toward the multiunit organization. A comparison of principals of multiunit schools and non-multiunit schools was made by Richardson (1972). One of his findings was that the degree of congruency between the perceptions of the principals and staff members of the multiunit schools was significantly more positive than the perceptions of the principals and staffs of the non-multiunit schools. His study also indicated that all principals placed a high value and priority on educational leadership and that there were no significant differences in actual educational leadership behavior between the two groups of principals.

A measure of attitudes of school personnel toward their work was included in a study by Pellegrin (1969). In his study, teachers in multiunit schools reported higher satisfaction in areas such as personal relationships with administrators and supervisors, opportunity to accept responsibility for one's own work or the work of others, career expectations, and availability of instructional materials. It was also found that teachers in multiunit schools perceived their environment as being more free, less rigid, and more open to experimentation than did teachers in the control schools.

These studies on attitudes of teachers and principals in multiunit schools indicate that the implementation of the multiunit school organization can foster the development of more positive attitudes among educators, but that the leadership behavior of IGE principals does not necessarily differ from that of principals in other schools.

Teacher behavior. In his study of multiunit schools, Pellegrin (1969) found that teachers within an I & R Unit tend to develop specialization in ways such as: (1) working with large or small groups or with individual pupils; (2) serving as an advisor to the unit on materials or media related to a curricular area; and (3) assuming responsibility for certain aspects of the planning process. Teachers in the multiunit schools viewed decision making differently from teachers in the control schools; there was a shift away from reliance on the principal for advice and assistance toward relying on other unit members for assistance in decision making. Teachers in multiunit schools identified the two most important goals for themselves as "giving individual attention to

students" and "diagnosing learning problems of students." By contrast, in the control schools, the most important goals were identified as "ensuring that students learn basic skills" and "developing student ability in analytical reasoning and problem solving."

In a later study, Packard (1973) reported that teachers did not specialize by student characteristics, group size, or instructional tasks. However, some division of labor was apparent in the early stages of implementation of IGE which appeared to be associated with increased work demands. The apparent difference between the findings in Pellegrin's and Packard's studies may, to some extent, be explained by Packard's summary statement: "Seemingly, once curriculum development is over, teachers want to perform all tasks" (p. 113).

In a study of the effects of the multiunit structure on teacher behavior, Olszewski (1973) reported that there were no significant differences in the overall range of teaching behaviors exhibited by teachers in multiunit and non-multiunit schools. In examining a specific class of behaviors, he found that teachers in multiunit schools exhibited a significantly greater number of shared teaching behaviors than did teachers in non-multiunit schools.

Herrick (1974) studied the relationship of organizational variables and teacher motivation to performance. His findings indicate that teachers in multiunit schools were more highly motivated than those in non-multiunit schools.

The research related to teacher behavior includes findings that teachers in multiunit schools participate in more shared teaching

behaviors, have different goals for themselves, and are more highly motivated than teachers in non-multiunit schools.

Effectiveness of leader behavior. A study of variables which are associated with operationally effective IIC's was conducted by Smith (1972). He concluded that the more effective IIC's were those in which the IIC chairman was perceived to exhibit a primary concern for the comfort, well being, status, and contribution of the IIC members.

Gramenz (1974) studied the relationship of principal leader behavior and the organizational structure of the multiunit school to I & R Unit effectiveness. He found a significant positive relationship between the unit leaders' and teachers' perceptions of the instrumental, supportive, and participative leadership behavior of the principal and the effectiveness of the I & R Unit.

The process used in selecting unit leaders in two schools was studied by Murray (1973). He reported that successful units were those in which the unit leader had been chosen either from outside the staff or selected from within using objective criteria. When the unit leaders had been chosen from within the staff by a "popularity contest" process or were prior friends of the principal and carried debts to him or her, the units were less successful.

In a study of the relationship between the effectiveness of the I & R Units and interpersonal behaviors, Evers (1974) found a significant relationship between the unit leader's instrumental leadership and the I & R Unit effectiveness.

Singe (1974) reported findings which complement those of Evers.

His study indicates that task effectiveness and interaction effectiveness were significantly correlated with unit leaders who exhibited both initiating structure and consideration behaviors. These relationships were significant at both the IIC and I & R Unit levels of organization.

The research related to the effectiveness of leader behavior indicates that principals and unit leaders can positively influence the effectiveness of the IIC and the I & R Units through their leadership behavior, and that the effectiveness of unit leaders is related to the process used in selecting them.

Conditions conducive to learning. A study of the effects of the multiunit school organization on instructional programs was conducted by Essig (1971). He reported that there were increased opportunities for students to be involved in determining their educational programs, increased involvement of ancillary personnel with students on an instructional basis, and elimination of traditional lock-step ability grouping.

Wright (1972) studied the extent to which IGE schools are individualized. His study included five basic principles of individualization: (1) learning rate; (2) learning style; (3) student participation in goal setting; (4) student participation in determining learning sequence; and (5) grouping based on student characteristics, desires, and needs. Of these, learning rate was the characteristic most often used in individualizing programs, and student participation in goal setting was the least used.

Changes in student learning patterns resulting from the

implementation of the multiunit school organization were studied by Joyal (1973). His findings showed that learning patterns in multiunit schools were characterized by increased uses of different instructional and audiovisual materials, instructional groups of various sizes, and greater self-direction in terms of learning activities.

These studies indicate that the multiunit organization can provide more opportunities for students to be involved in determining their educational programs and activities. The multiunit organization discourages some of the least desirable characteristics of age-graded schools, such as lock-step grouping in which all students move at the same rate.

In general, the research related to the multiunit school organization indicates that this form of organization provides a positive and supportive environment in which to implement instructional programming for individual students.

Instructional Programming Model

Instructional programming for individual students involves a seven-step sequence as shown earlier in Figure 1.3. According to Ironside (1972), teachers in IGE schools are able to understand the model for instructional programming, but find it difficult to implement systematically. In a follow-up study, Ironside (1973) indicated that IIC's and principals expressed the need for assistance, training, and reinforcement in implementing instructional programming.

The interpretations of four characteristics of instructional

programming (the seven-step sequence, continuous progress, criterion-referenced assessment, and preassessment) were examined in a study by Klenke (1975). In a case study, he interviewed school staff members, board members, students, parents, and non-parent community members of two IGE schools. He found that the interpretations of instructional programming and its underlying characteristics varied widely. Each school generally followed the basic steps of instructional programming, but there was much variation in the ways and degree to which continuous progress, criterion-referenced assessment, and preassessment were implemented.

Although instructional programming is being implemented in schools, these studies suggest that there are many differences in what schools are actually doing in their efforts to provide instructional programs for individual students.

Student Outcomes in IGE Schools

A number of studies have been conducted to determine the student outcomes which are related to the implementation of instructional programming and the multiunit school organization. These studies have focused on student attitude and achievement.

Student attitude. Wysong and LaBay (1970) compared the attitudes of students in an urban IGE school and in a matched, traditionally organized school. They found that the students in the IGE school responded more positively to school than did pupils in the traditional school.

In a study of the relationship of IGE to the learning climate of pupils, Nelson (1972) compared students in multiunit IGE schools with students in self-contained classrooms. Significant findings included: (1) the mean self-concept of the students in IGE schools was higher than in traditional schools; and (2) the mean score on pupil attitude toward fellow pupils in IGE schools was higher than in traditional schools. Pupil attitude toward teachers in IGE schools did not differ from that in traditional schools. Mean scores were higher, but not significantly so, for students in IGE schools on attitude toward instruction and school morale.

Edwards (1972) studied affective change in elementary schools implementing IGE. He concluded that the environment of the IGE schools in his study was more conducive to the development of favorable student attitudes toward school and toward peers than that of the non-IGE schools. Evidence concerning student attitude toward school and student self-concept tended to favor the IGE schools, but not significantly.

The research on student attitudes is inconclusive. In the studies which did report significant differences in attitudes, the difference was in favor of the students in IGE schools.

Student achievement. During the formative years of IGE, studies related to instructional programming were carried out by Klausmeier, Quilling, and Sorenson (1971). They found that higher student achievement was occurring in those situations where the curriculum component in reading had been incorporated into smoothly functioning multiunit schools.

In another study of reading which focused on word attack skills, Quilling and Otto (1971) reported that positive results were demonstrated in terms of attainment of program objectives after one year's implementation.

The results of a study of three IGE schools in one school district indicate that achievement scores on the Iowa Test of Basic Skills showed increases over scores achieved prior to the implementation of IGE in all areas tested (Kennedy, Entress, McElwee, Pautsch, Schollaert, and Zwadzich, 1972).

The results of a three-year study in another district showed that second- and sixth-grade students in the multiunit schools had higher standardized achievement scores than students in the control schools in all areas except spelling at the sixth-grade level (Hackett and McKilligin, 1972).

Bradford (1972) compared students in an IGE setting with students in traditional self-contained classrooms on self-concept and on achievement in reading and mathematics over a one-year period. Her results indicated that there were no significant differences in reading achievement. In mathematics and in self-concept, the gains of the IGE students were significantly higher than those of the students in the control group.

In some Los Angeles schools, local objectives to decrease the percentage of students scoring below the second quartile on national norms were identified for the 1972-1973 school year. In one of the IGE schools, the objectives were achieved for the first- through fifth-grade students

in reading and for the fourth-grade students in arithmetic. Test results for other groups (reading in sixth grade and arithmetic in fourth through sixth grades) indicated that the percentage of these students below the second quartile had also decreased, although not sufficiently to meet the local objectives (Flournoy, 1974).

A comparison of reading and mathematics achievement of second- and third-year students in IGE schools and traditional schools was made by Burtley (1974). In his study, the mean gain scores over a period of two years in reading and in mathematics for both second- and third-year students were significantly higher in IGE schools than in traditional schools.

In a study of the use of an objective-based approach in word attack, Kurth (1975) reported that at least 90 percent of the students who had used the objective-based program were able to decode 80 percent or more of the phonetically regular words.

Positive student outcomes occurring after the implementation of IGE were reported by the Merrimack Education Center (Final Evaluation Report, 1974). Results of interviews with school staff indicated that although achievement gains remained about the same as before IGE was begun, other gains had occurred. Students seemed to enjoy school more; behavior problems had decreased; and students seemed more curious and self-directed.

Student outcomes in the cognitive and affective domains were investigated in the IGE setting and in the control setting in one region of New Jersey (Evaluation Report, 1974). No statistically significant

differences were found in the language arts achievement of children in IGE and non-IGE schools. Statistically significant differences in mathematics tended to favor the non-IGE schools. The data indicated no significant differences between IGE and control schools in students' self-concepts.

The majority of these studies of student achievement in IGE schools support the outcome of higher achievement in IGE schools. Only one of the studies reported a significant difference in achievement which favored the non-IGE schools. These results strongly suggest that IGE can lead to the outcome of higher student achievement which is expected as a result of the cooperative planning and implementation of instructional programming for individual students.

Reports of the procedures used by schools to form their multiunit organization and to develop instructional programs for individual students are as yet limited. One such study describes the implementation of IGE in the John Ridgeway Public School (Ciaglia, Messner, Gresso, Gies, and Leonard, 1973). The study includes the sequence of events which led to the implementation of IGE as well as those which occurred during the first year changeover. Due to the nature of the study, no conclusions were presented. However, the study provides insights into the thoughts and feelings, along with the successes and frustrations which occurred during the early stages of planning and implementing IGE in one school.

The research which has been discussed was conducted in IGE schools with the purpose of identifying outcomes which are associated with the

implementation of IGE. For educators, the outcomes indicate that leadership behavior can have a positive influence on the effectiveness of the IIC and the I & R Units, and that the implementation of the multiunit school can foster the development of positive attitudes. The outcomes for students include higher achievement, increased opportunity for involvement in determining their educational programs, and participation in a greater variety of learning modes.

In summary, the research does indicate that the implementation of IGE is positively related to some of the desirable outcomes which are being sought in elementary education. At present, there is little research describing the day-to-day processes and procedures used in schools to attain these desirable outcomes. The present study provides some of the needed information about these processes and procedures.

Rationale for the Study

The daily experiences of students in IGE schools are, to a considerable extent, determined by the multiunit organization and the implementation of instructional programming. The organization determines the large group of students and teachers with whom each child interacts during the learning activities which are planned and implemented in the I & R Unit. The objectives and activities which comprise each student's instructional program are reflected in the implementation of instructional programming. Objective-based curricular materials are essential to planning and implementing instructional programs for individual students.

The nature of the models for instructional programming and for the multiunit school are such that certain outcomes are expected for all IGE schools. However, there is much room for variation within these models as schools adapt them to their unique characteristics such as school goals, interests and expectations of the school community, school size, available staff, and attitudes, interests, and needs of the school population. Evers and Klenke (1976) indicate that multiple strategies are needed in planning and implementing instructional programs. A variety of group sizes, multifaceted instructional activities, and diverse teaching methods are required. These elements must be harmoniously blended with the instructional needs, level of motivation, learning style, and other characteristics of individual students to provide effective instructional programs for each of them.

In the review of the literature, it was reported that teachers in IGE schools find it difficult to implement instructional programming (Ironside, 1972) and that the characteristics of instructional programming are interpreted in different ways (Klenke, 1975).

Lipham and Klausmeier (1976) point out that one impediment to effective instructional programming is the failure to follow the sequence of Steps 1, 2, 3, and 4 of the model. Problems arise in those situations where the first step to be implemented is preassessment (Step 3). In schools where this occurs, objectives for individual students are often selected (Step 4) without reference to the major educational objectives of the school, district, or state (Steps 1 and 2).

Another problem is the development of management procedures which

make it possible to implement instructional programming simultaneously in several curricular areas (Klausmeier, 1972).

Several years have elapsed since schools began the implementation of IGE. Many of these schools have implemented instructional programming in at least two areas of the curriculum; some have achieved this in three areas, and a small number have succeeded in providing instructional programming for individual students in all areas of the curriculum. Determining the processes and procedures used in these schools to achieve success in implementing instructional programming for individual students is an important step toward helping schools make the changeover to IGE or to refine their existing IGE practices.

Statement of the Problem

The primary purpose of this study was to determine how instructional programming for individual students has been implemented to provide effective learning environments for elementary students. The focus was on the processes and procedures used to achieve the objectives of the IPM. A related purpose was to study the multiunit school organization as it relates to implementation of instructional programming.

To achieve these purposes, implementation of instructional programming and of the multiunit school organization was compared with the theoretical models of these components of IGE. The following broad questions provide the focus for the study:

1. What is the multi unit organizational arrangement of the school?

   A. What is the rationale for this arrangement?

   B. In what ways has the model for the multi-unit school organization been modified?

2. To what extent does the IIC support the implementation of instructional programming by:

   A. implementing Step 1 of the Instructional Programming Model?

   B. coordinating the activities of the I & R Units to achieve continuity of instruction in all curricular areas?

   C. arranging for the use of time, facilities, and material and human resources which must be shared throughout the building?

3. To what extent are Steps 2 through 7 of the Instructional Programming Model implemented in each I & R Unit?

   A. In what ways has the Instructional Programming Model been modified to meet the needs of each I & R Unit?

   B. How does the implementation of instructional programming compare between I & R Units?

Significance of the Study

The development and refinement of the components of IGE have been based on a synthesis of theory and practice. In this study, a detailed description of the practices involved in two components of IGE was the basis of a comparison between theoretical models and actual implementation. Such a comparison is important, both for refining theory and for re-considering actual practices.

In discussing the research related to the administration of the multiunit school, the National Evaluation Committee of the Wisconsin Research and Development Center for Cognitive Learning posed the question, "What variations in the Center's design for a multiunit school are presently operational and are viewed by the Center as acceptable deviations . . . ?" (National Evaluation Committee, 1974, p. 10). This study responds to the question as it identifies ways in which the multiunit school model has been modified in actual practice.

IGE is considered to be a dynamic, changing system by those who have been responsible for the development of the components of IGE. This study provides some insights into possible modifications within some of these components.

The implications of this study may be valuable to researchers who wish to identify elements of IGE which still require further research.

This study can help practitioners to gain a better understanding of both the theory and practice of IGE. Many persons find that theory becomes more meaningful when considered in the context of an applied situation. IGE is a complex innovation which includes reorganizing schools, re-defining staff roles and responsibilities, and implementing a system of instructional programming for the purpose of providing effective and appropriate instruction for individual students. Educators who wish to adopt or refine instructional programming for individual students need information about effective procedures for managing the tasks of identifying objectives, selecting and administering appropriate assessment instruments, planning for each student, implementing

numerous instructional programs simultaneously, and evaluating both student achievement and program implementation. The means in which this was been accomplished by one school is described in this study.

Overview of the Research Report

The background of this study and the related literature have been presented in this first chapter. The next chapter describes the methodology and procedures used to conduct the study. The detailed presentation of the case study appears in Chapters III and IV; the analysis and discussion of the findings are presented separately in Chapter V. The sixth and final chapter includes a summary of the study, observations about the findings, and implications for further research and practice.

CHAPTER II

METHODOLOGY AND PROCEDURES

The research methodology and procedures used to conduct the study are explained in this chapter. The rationale for the methodology is discussed in the first section. Then the means used to identify and select the school for the case study are explained. In the next section, the data collection procedures are described. This includes the selection and preparation of instruments as well as the procedures used in observing and interviewing. Following this is the explanation of the data analysis techniques used in preparing and presenting the final research report. The chapter concludes with a statement of the limitations of the study.

Rationale for Methodology

A field study approach was necessary for this study inasmuch as the intent was to describe the nature of existing conditions. Festinger and Katz (1966) indicate that " . . . the great strength of the field study is its inductive procedures, its potentiality for discovering significant variables and basic relations that would never be found if

we were confined to research dictated by a hypothetical-deductive model" (p. 75). This strength is important in a study which is designed to describe conditions as they exist. It cannot be assumed that the questions and types of information which are identified in advance will include everything that is significant in a specific situation. Thus, a method was needed which made it possible to include significant information that became available in the process of collecting the data.

The form of field study which was selected as the most effective means of achieving the purpose of this study was a case study of a single school. Sax (1968) defines the case study as " . . . any relatively detailed description and analysis of a single person, event, institution, or community" (p. 288). Sax presents several uses of the case study. Two of them are: "[The case study] may provide new insights, help modify pre-existing conditions, or point out gaps in knowledge. The case study may also be useful in demonstrating how a theoretical model can be exhibited in a concrete example" (p. 290).

The need for case studies in IGE schools has been supported by the National Evaluation Committee of the Wisconsin Research and Development Center. Suggestions for future research were included in their 1974 report (National Evaluation Committee, 1974). Two of these suggestions were:

> Emphasis on in-depth case study or intensive comparative studies in a limited number of schools in preference to surveys and broad sampling studies.
>
> Less reliance on questionnaires and standardized

> instruments and more on interview and observation techniques. (p. 11)

To carry out this case study, the procedure known as participant observation was used. According to McCall and Simmons (1969), participant observation

> . . . refers to a characteristic blend or combination of methods and techniques that is employed in studying certain types of subject matter. . . . This characteristic blend of techniques . . . involves some amount of genuinely social interaction in the field with the subjects of the study, some direct observation of relevant events, some formal and a great deal of informal interviewing, some systematic counting, some collection of documents and artifacts, and open-endedness in the direction the study takes. (p. 1)

Thus, participant observation is not a single method, but a type of research enterprise which combines several methods toward the end result, namely, an analytic description of a complex social organization. McCall and Simmons indicate that:

> An analytic description (1) employs the concepts, propositions, and empirical generalizations of a body of scientific theory as the basic guides in analysis and reporting, (2) employs thorough and systematic collection, classification, and reporting of facts, and (3) generates new empirical generalizations (and perhaps concepts and propositions as well) based on these data. (p. 3)

In this study, the basic guides for data collection, analysis, and reporting were the models for instructional programming and for the multi-unit school. Systematic procedures, described later in this chapter, were

used to collect, classify, and report the data. Based on the data, some generalizations were derived and are presented at the conclusion of this report. These generalizations reflect an analysis of the data as compared with the IGE models for instructional programming and for the multiunit school organization. The emphasis in this study was on the rationale for modifications which have been made in the models, and on the implications these modifications may have for revising the models or for clarifying procedures for implementing the models.

The procedure of participant observation can involve different degrees of participation and/or observation. Gold (1958) discusses four possibilities: complete participant, participant-as-observer, observer-as-participant, and complete observer. The role assumed by the researcher for this study was observer-as-participant. This role calls for relatively formal observation and data collection but also permits informal observation and participation.

The methods which were used in collecting data for this study were questionnaires, structured interviews, informal interviews, observation, and reviews of documents collected at the school. Detailed descriptions of these methods are included in the section on data collection.

School Selection

To obtain a detailed and thorough description of the procedures and processes involved in implementing instructional programming for

individual students in a multiunit school, one school was selected for this study. The requirements for the school were that: (1) it met the minimal criteria for an IGE school as defined in the IGE Implementor's Manual (Evers, Fruth, Heffernan, Karges, and Krupa, 1975); (2) instructional programming had been implemented in at least two curricular areas, one of which was reading; (3) at least one element of the Wisconsin Design for Reading Skill Development (Otto and Askov, 1974) was being used; (4) the school staff was willing to cooperate with the researcher by completing the questionnaires and permitting the observation; and (5) the school had a minimum of three I & R Units.

Minimal Criteria for IGE Schools

The minimal criteria for the multiunit school organization as defined in the IGE Implementor's Manual are:

> The entire school is organized in the MUS-E organization pattern with:
>
> A. Instruction and Research Units (I & R Units)
> Each I & R Unit has:
> approximately 75 to 150 students of multiages
> approximately 4 to 6 teachers
> one unit leader
> The unit leader and teachers of the I & R Unit meet at designated, regular times each week.
>
> B. An Instructional Improvement Committee (IIC)
> The IIC is composed of:
> the principal
> the unit leaders from each I & R Unit in the building
> the IMC director
> The IIC meets at a designated time each week. (p. A-26)

The minimal criteria described in the IGE Implementor's Manual for

instructional programming are:

> The school applies the Instructional Programming Model (IPM) in one or more curricular area(s) by:
>
> A. stating schoolwide educational objectives to be attained by the students in the building for the curricular areas to which the IPM has been applied.
> B. estimating the range of educational objectives that may be attained by students in each I & R Unit for the curricular areas to which the IPM has been applied.
> C. assessing individual student's level of achievement, learning style, and motivation level using criterion-referenced tests, observation, or work samples for the curricular areas to which the IPM has been applied.
> D. setting instructional objectives for each individual student to attain over a short period of time for the curricular areas to which the IPM has been applied.
> E. planning and implementing an instructional program for each individual student for the curricular areas to which the IPM has been applied.
> F. assessing students for attainment of the stated instructional objectives for the curricular areas to which the IPM has been applied.
> G. if the student has attained the objective(s) to mastery, setting the next instructional objective for the student; if the student has not attained the objective(s) to mastery, reassessing the student, and going through the instructional sequence again or engaging in some other activity. (p. A-27)

Selection Procedure

A random sample of forty IGE schools which met these minimal criteria for IGE schools had been identified by researchers at the Wisconsin Research and Development Center (Bocian, 1976; Feldman, in press; Mendenhall, in press; Sigurdson, 1976). These researchers were conducting studies of achievement and attitudes of students, attitudes of teachers,

and patterns of decision making.

It was decided to select one of these schools for this in-depth case study. The four researchers who were conducting the study in the forty schools were asked to identify those schools in their study which best typified the multiunit school and instructional programming. From the list of twelve schools thus identified, those which were known to have fewer than three I & R Units or were not using the Wisconsin Design were deleted. This left two schools which appeared to meet the minimal criteria. Each of these schools was contacted. The staff of one school indicated that their schedule would make it difficult for the researcher to carry out the necessary observation.

Alys Drive Elementary School was the remaining school which appeared to meet the requirements for this study. The researcher contacted the principal, explained the study, and asked if the staff would be willing to participate. The principal indicated that Alys Drive was organized as a multiunit school consisting of five teams (I & R Units), had implemented instructional programming in reading and mathematics, and was using the Wisconsin Design: Word Attack and Study Skills. He discussed the proposed research with the IIC and received their support before inviting the researcher to proceed.

Data Collection

Collecting the data involved the use of questionnaires, a two-week period of observation and interviewing by the researcher, and the use

of documents available at the school.

Instruments

The Descriptor for Individualized Instruction (DeVault, Golladay, Fox, and Skuldt, 1973) was used in collecting data related to instructional programming. The descriptor includes information related to the following aspects of instruction: program context, sequence, program pattern, objectives, assessment procedures, rate, media, grouping, record of information, and use of information. According to the authors, "The Descriptor is designed to provide a graphic portrayal of individualized instructional programs. . . . It can be used to describe a single program . . . as it is described orally . . . , as it is reported through the observation of the program in use with learners, or described through a combination of these means" (p. 3). The Descriptor was selected as a data collection instrument because the items it contains include information necessary for describing the procedures used in instructional programming.

The components of the Descriptor and their relation to the Instructional Programming Model are as follows:

Instructional Programming Model	Descriptor
Type of program materials used	Program context
Patterns of instructional programming	Sequence Program pattern
Step 3	Assessment procedures Record of information

Instructional Programming Model	Descriptor
Step 4	Objectives Use of information
Step 5	Rate Media Grouping Record of information Use of information
Step 6	Assessment procedures Record of information
Step 7	Use of information

The validity and reliability of the Descriptor have been studied by the authors. They concluded that, "There seems to be ample evidence of an informal nature that the Descriptor . . . is both valid and reliable" (p. 53). Information supporting this conclusion is presented in the description of the development procedures for the Descriptor. The decision to use the Descriptor was supported by this developmental information.

Additional instruments for collecting data which were not included in the Descriptor were prepared by the researcher. These included questionnaires and interview schedules. (Copies of each of these instruments are included in the appendix.) These instruments focused on information (beyond that provided by the Descriptor) needed to answer the three broad questions which were presented in the statement of the problem.

The means used to gather data related to each question are presented in outline form below. For each question, there is a listing of the

procedures used, the persons involved, and the titles of the instruments used in collecting the data.

Question 1: What is the multiunit organizational arrangement of your school?

A. What is the rationale for this arrangement?

B. In what ways has the model for the multiunit organization been modified to meet the needs of the particular school?

Procedure	Person(s) Involved	Title of Instrument
Questionnaire	Principal	Multiunit Organization
Questionnaire	IIC	Implementation of Multiunit Organization and Instructional Programming
Individual interviews	IIC members and some teachers	Rationale for Multiunit Organization

Question 2: To what extent does the IIC support the implementation of instructional programming by:

A. implementing Step 1 of the Instructional Programming Model?

B. coordinating the activities of the I & R Units to achieve continuity of instruction in all curricular areas?

C. arranging for the use of time, facilities, and material and human resources which must be shared throughout the building?

Procedure	Person(s) Involved	Title of Instrument
Questionnaire	Principal	IIC Information
Obtain copies of IIC minutes and agendas	Principal	

Procedure	Person(s) Involved	Title of Instrument
Group interview	IIC	Instructional Programming - Step I IIC - Coordination
Observe IIC meeting		
Individual interviews	At least one teacher in each I & R Unit	Same questions as used for IIC group interview
Questionnaire	IIC	Implementation of Multiunit School and Instructional Programming

Question 3: To what extent are Steps 2 through 7 of the Instructional Programming Model implemented in each I & R Unit?

A. In what ways has the Instructional Programming Model been modified to meet the needs of each I & R Unit?

B. How does the implementation of instructional programming compare between I & R Units?

General Information

Procedure	Person(s) Involved	Title of Instrument
Questionnaire	Unit leaders	I & R Unit Information
Individual interviews	Unit leaders and teachers	I & R Unit Staff Member Interview Questions
Questionnaire	All unit staff members	I & R Unit Staff Member Questionnaire
Obtain copies of agendas, minutes, etc.		

Instructional Programming in Specific Curricular Areas

Procedure	Person(s) Involved	Title of Instrument
Questionnaire	Staff members of	I & R Unit--Instructional

Question 3 (Continued):

Procedure	Person(s) Involved	Title of Instrument
	units using Wisconsin Design	Programming Using Wisconsin Design
Questionnaire	Unit leaders	I & R Unit--Instructional Programming in Reading
Questionnaire	Unit leaders	I & R Unit--Instructional Programming in Math
Individual interviews	Various unit staff members	Using questions from the above three questionnaires
Group interviews	I & R Unit staffs (2-3 teachers for each curricular area)	The Descriptor for Individualized Instruction
Observe unit meetings		

The instruments developed by the researcher were based on information from Unit Operations and Roles (DiPego, 1970), The Unit Leader and Individually Guided Education (Sorenson, Poole, and Joyal, 1976), and The Wisconsin Design for Reading Skill Development: Rationale and Guidelines (Otto and Askov, 1974). Assistance in determining the best procedures and in developing open-ended interview schedules was obtained from professors with expertise in field methodology. After the instruments were developed, they were submitted to a panel of experts who were asked to react to the content validity of the instruments. This panel consisted of persons who had experience as IGE principals, unit leaders, and/or teachers, and persons who have been involved in IGE development activities at the Wisconsin Research and Development Center.

Based on the recommendations of the panel members, changes were made to improve the instruments and procedures.

Procedures

The researcher observed at Alys Drive Elementary School for a two-week period extending from March 29 through April 9, 1976. The researcher was at the school from 8:00 a.m. to 4:00 p.m. daily. Prior to the visit, questionnaires had been mailed to the principal and unit leaders. These were collected by the researcher during the period of observation.

One formal interview was held with the IIC and one with the principal. Structured interviews using the Descriptor to collect information about instructional programming in reading and in mathematics were held with each team. Separate interviews were scheduled for reading and for mathematics for each team. At least two staff members participated in each interview. The researcher also interviewed the assistant superintendent in charge of instruction. This interview focused on the growth and development of IGE in the district over a five-year period. Notes were taken during all scheduled interviews.

When the researcher was not involved in formal interviews, time was used for informal interviews and conversations and for observing in instructional areas. Informal interviews were held with all full-time team members during the two-week period. Beginning on the third day of the observation, notes were taken whenever convenient during informal interviews. Additional notes were recorded from memory at the end of each day.

The researcher observed informal, organizational, and instructional activities in all five teams and in the special areas. Notes were taken either during or after such observations. These notes included information about physical facilities, schedules, grouping arrangements, instructional procedures, available materials, and displays of student products.

Informal conversations were held with students. They shared information about activities they were involved in and their attitudes about school. Notes were made about these conversations. Informal conversations were also held with several parents who were in the building for programs or as volunteers.

The researcher spent approximately half of each eight-hour day observing and the other half in structured interviews and informal conversations.

During the two-week period of observation, copies of agendas and minutes for IIC and team meetings were requested and obtained. Additional documents related to IGE implementation and refinement were contributed by various staff members. These included information about student achievement, schedules, materials being used for instruction and evaluation, record-keeping and report forms, curriculum guides, and communications with the district office. The researcher attended one school-wide faculty meeting, one IIC meeting, and three I & R Unit meetings.

Over a period of several weeks after the data had been collected, the researcher organized the information into a descriptive narrative

report. Copies of sections of this report were sent to the principal, and other sections were sent to the team leaders. These persons were invited to read the report and share any corrections or suggestions with the researcher. Their corrections and some of the suggestions were incorporated in the final report which appears as Chapters III and IV of this report.

Data Analysis Procedures

During and after the period of data collection, the data were separated into the following categories: background information, multiunit organization for 1975-1976, activities of the IIC, and activities of each of the five teams. The background information was further categorized under the topics of (1) history of IGE at Alys Drive: 1971-1975; (2) physical facilities; (3) daily schedule; (4) curriculum; (5) components of IGE; (6) professional activities and concerns; and (7) goals achieved since implementing IGE. After developing an outline based on these topics, the researcher recorded all the relevant information in a narrative description of Alys Drive School.

The three major questions posed in Chapter I served as the framework for organizing and summarizing the detailed information. First, the current status of the multiunit organization at the school and the rationale for this organization were explained. Then the extent to which the IIC supports instructional programming was summarized. This was followed by an analysis of instructional programming in reading

and mathematics at the team (I & R Unit) level. Finally, the five teams were compared in terms of their implementation of instructional programming for individual students.

Limitations of the Study

This was a case study of a single school. The particular school was selected because it met the desired criteria. Because the school is not representative of any larger population of schools, the results of the study cannot be generalized to other schools. The data which were collected and recorded in this report are based on the assumption that the researcher's observations were objective and that the reporting is accurate.

CHAPTER III

THE CASE STUDY: BACKGROUND INFORMATION

The case study of Alys Drive Elementary School is presented in two chapters. The first part of this chapter describes the school's involvement with IGE from 1971 to the end of the 1974-1975 school year. This is followed by general information about the school including physical facilities, the daily schedule, school-wide curriculum, components of IGE, professional activities and concerns, and goals which have been achieved since IGE was implemented. Chapter IV then describes the multiunit organization and instructional programming at Alys Drive in 1975-1976.

Alys Drive Elementary School is one of six elementary schools in the Lancaster Central School District, Lancaster, New York. Students from kindergarten through the fifth grade attend the elementary schools. One middle school serves the sixth- through eighth-grade populations; the ninth- through twelfth-grade students attend the district high school.

The Lancaster Central School District encompasses the towns of Lancaster and Depew located east of the city of Buffalo. Residential areas comprised mainly of single family dwellings occupy most of the

area included in the district.

The district administration of the Lancaster Schools consists of the district superintendent, Dr. Hayes; the assistant superintendent in charge of instruction, Ms. Whittaker; the assistant superintendent in charge of business, Mr. Bauer; the pupil personnel director, Mr. D'Amore; the personnel director, Mr. Romance; the elementary curriculum coordinator, Mr. Bunting; and supervisors of transportation, building, and maintenance. Each of the school buildings has its own principal.

The Alys Drive Elementary School is located in a residential neighborhood in Depew. At least 80 percent of the residents live in single family dwellings, and the remainder live in apartment complexes. The neighborhood is a lower middle class area and most of the residents are blue collar workers. There are some white collar workers and some families which are supported by unemployment or welfare incomes.

The student body includes kindergartners through fifth graders. The enrollment fluctuates between 550 and 600 students.

The History of IGE at Alys Drive: 1971-1975

1971-1972

Implementation and refinement of Individually Guided Education (IGE) has been an ongoing process at Alys Drive since 1971. In the spring of that year, Dr. Hull of the State University College at Fredonia announced plans for a summer workshop focusing on Individually Guided Education and the Wisconsin Design for Reading Skill Development (WDRSD).

Ms. Whittaker, assistant superintendent for instruction in the Lancaster Central Schools, encouraged the staffs of the district elementary schools to consider attending the workshop. The staffs of two schools, Alys Drive and Bowmansville, expressed interest, so four teachers representing the two schools attended the workshop. These teachers returned to Lancaster with positive reports about the possibilities of the IGE system. They recommended that the two schools seek further information about IGE and WDRSD. The district Individualization of Instruction Committee recommended that the district support the two schools in pursuing Individually Guided Education.

Mr. Sciole (the principal of Alys Drive Elementary School), one teacher at Alys Drive, the district curriculum coordinator, and representatives from Bowmansville attended a Principal-Unit Leader Workshop. With the assistance and support of Ms. Whittaker and Mr. Sciole, weekly inservice workshops were planned for the 1971-1972 school year. These were attended by the first- and second-grade teachers of Alys Drive and Bowmansville Schools and the reading teacher from Alys Drive. The workshops focused on the components of IGE and on the Wisconsin Design for Reading Skill Development: Word Attack. The agenda for the second inservice workshop, October 20, 1971, from 2:45 p.m. to 3:30 p.m. serves as an example of the content of these workshops. This agenda included the following items:

1. Brief discussion of last meeting
2. Instructional Programming Model
3. Organizational Chart of a Multiunit School
4. Videotape - Elaine McGregor

To gain further information about IGE, four teachers traveled to Madison to attend the State Coordinators meeting in the fall of 1971. In addition to attending the meeting, the teachers visited an IGE school in Appleton, Wisconsin.

During the year, the Board of Education was asked to support the implementation of the Wisconsin Design and the multiunit school organization. The Board granted permission to implement these changes for a trial period of five years.

Through the workshops and other meetings in 1971-1972, plans were made to use the WDRSD: Word Attack materials in the first and second grades beginning in September, 1972. Two I & R Units were organized to include all first- and second-grade students and teachers. These were called Team A and Team B. Each team included both first- and second-grade students.

1972-1973

During the 1972-1973 school year, the remedial reading teacher at Alys Drive, Ms. LaCrego, became more involved with the total reading program. As the reading teacher, Ms. LaCrego had been primarily responsible for providing remedial instruction for those students who needed it, and for providing assistance to the classroom teachers at their request.

After becoming acquainted with the WDRSD materials and procedures, Ms. LaCrego developed a plan for a Reading Center which would serve all students, not just those who needed remedial instruction. The Reading Center would have a specific location in two unoccupied classrooms. The

teams which were using WDRSD would schedule instruction in word attack skills at different times of the day. The staff of each team would continue to identify the students to be grouped for instruction on certain skills. Some of these groups would then be assigned to the Reading Center. The students in these groups would go to the Reading Center at the scheduled time for instruction with the reading teacher. Having the reading teacher available as an additional staff member would make it possible to provide instruction in a greater number of skills at any one time as well as decrease the size of the groups.

The principal and some staff members participated in workshops and other inservice programs related to IGE throughout the 1972-1973 school year. Plans were made to implement WDRSD at the third-grade level in the coming year.

The WDRSD: Word Attack Skills materials were used throughout the year by the two teams which included the first- and second-grade students. At the end of the school year, parents were asked to respond to a questionnaire. An abbreviated form of the questionnaire and summarized responses are shown in Figure 3.1.

The teachers were asked to write their reactions to the first year in the IGE program. Their responses were as follows:

STRENGTHS

1. Teacher aides
2. Skill sequence in Reading (Wisconsin Design Testing)
3. Increased use of diversified materials

LANCASTER ELEMENTARY I.G.E. - PARENT QUESTIONNAIRE -
ALYS DRIVE SCHOOL - 1972-1973

Teachers and Administrators have worked many hours this year planning and presenting our new I.G.E. Elementary Program. Our goal is to present teaching situations which best meet each child's individual learning needs. At the end of our first year, we would like to know how parents feel about our program. Please take time to answer this questionnaire and return it by Friday, June 15th.

1. Did your child enjoy school this year?

   Very much (122) Sometimes (43) Very little (0)
   No difference from last year (11)

2. Did your child comment about school experiences this year?

   Every day (42) Frequently (92) Once in a while (32)
   No difference from last year (0)

3. Has your child developed any new interests this year as a result of the I.G.E. Program?

   Yes (118) No (41)

4. Which of the following learning experiences did your child enjoy?

	Very much	Sometimes	Very little
a. Independent learning activities	94	58	6
b. Activity Room	124	27	10
c. Books and Materials	129	32	3
d. Art activities	119	35	9
e. Group of Teachers	99	42	10
f. Group of Children	107	38	6
g. Library - Media Center	126	26	2
h. Working with different age groups	67	67	16

Figure 3.1

Parent Responses to Questionnaire

LANCASTER ELEMENTARY I.G.E. - PARENT QUESTIONNAIRE -
ALYS DRIVE SCHOOL - 1972-1973

5. In your opinion, what did your child gain most from the I.G.E. Program?

6. Do you feel this Program should continue?

   Yes (156) No (6)

7. What did you like about the reporting system?

Figure 3.1 (Continued)

Parent Responses to Questionnaire

4. Children really reading at own rate
5. Children more aware of what they can do
6. Skills well learned
7. Teachers' attitudes toward learning changing; providing classroom environments which foster learning
8. Child attitudes toward reading seem to have improved
9. "Reading is many different kinds of material"
10. Retooling can be exciting
11. Availability of resource files
12. Activity room
13. Greatest progress in attitudes of students and teachers
14. Children more eager to read
15. Children's reading ability improved
16. Gives a concrete basis for evaluation of children and reports to parents

WEAKNESSES

1. Printing of some tests needs to be improved
2. Sequence in two levels needs to be reviewed
3. Not many changes made in teachers' methods of instruction or goals

AREAS OF IMPROVEMENT OR NEEDS

1. Revise test sequence in B and C level
2. Define individualization for our program
3. Centralize materials

1973-1974

In September, 1973, a new multiunit organization was created to include first-, second-, and third-grade students. There were then three teams. Team A included all the first-grade students. Teams B and C each included second- and third-grade students. The WLRSD: Word Attack materials were used by all three teams. One teacher on each team had a self-contained room to provide a less diverse setting for those students who had not functioned as well as expected in the situations involving re-grouping among the entire team. Within these self-contained rooms, individualized instructional procedures were used by the classroom teachers.

During the 1973-1974 school year, leadership and assistance continued to be provided by Ms. Whittaker at the district level and by Mr. Sciole within the school. Some teachers attended workshops; inservice programs were held in the district.

By this time, additional support for IGE schools was being provided by the Board of Cooperative Educational Services (BOCES), First Supervisory District, Erie County--one of the regional education agencies in New York. Each BOCES has a director for Optional Educational Programs (OEP). IGE is one of the optional educational programs in the state. Thus, the OEP director in each BOCES office serves as a consultant for the IGE schools in that region.

An example of the involvement of BOCES is provided in the agenda for a meeting on December 4, 1973. This agenda contained the following information:

BOARD OF COOPERATIVE EDUCATIONAL SERVICES
First Supervisory District, Erie County

INDIVIDUALLY GUIDED EDUCATION MEETING

DATE: December 4, 1973 (Tuesday)

TIME: 3:00 - 8:00 P.M.

PLACE: Alys Drive School - Lancaster Pupil Schools

Agenda

3:30 - 4:00	Welcome and get acquainted.
4:00 - 4:30	New York State Education Department's Role - Mr. David Weeks, Division of Elementary Supervision, New York State Education Department.
4:30 - 4:45	B.O.C.E.S. role in I.G.E. - Jack Hanssel, B.O.C.E.S. #1, Erie County
4:45 - 5:00	Visitation - Alys Drive School
5:00 - 6:00	Status report of participating districts.
6:00 - 7:00	Dinner
7:00 - 8:00	Small groups a. Time for planning b. Multiple age groups c. Reporting to parents d. Community evidence e. Wrap-up and next steps

Continuing leadership and support for IGE in New York were also provided by Dr. Hull at Fredonia and Dr. King in the State Department of Education. These two men share the responsibility for coordinating IGE activities in the state of New York.

In response to questions and concerns which were arising about this

new system and program, 21 teachers representing the two IGE schools attended a meeting of the Board of Education to explain how the program was functioning.

Some of the teachers were asked to serve as consultants to schools in other districts. In Lancaster, district policy does not permit teachers to earn fees for consultant services carried out on school time. It was decided that the fees earned in consulting about implementation of IGE or WDRSD would be deposited in a special district fund. This fund was to be used to bring other consultants to the Lancaster District, thus providing additional opportunities for professional growth for the faculties of the IGE schools.

By 1973, a Systemwide Policy Committee (SPC) had been formed in the Lancaster School District. The SPC was composed of two persons from the central office and the principals and all unit leaders from the two IGE schools. The SPC did not designate a permanent chairperson. It was decided to share this responsibility by having the SPC members alternate as chairpersons for the meetings.

The staffs of the IGE schools recognized that their instructional programs could be improved if more student teachers were assigned to their schools. The SPC recommended that a brochure be prepared which would provide an overview of the multiunit school and the meaning of IGE. A copy of this brochure is shown in Figure 3.2. This brochure was then made available to colleges and universities in the area for distribution to those students who were making plans for their student teaching experience. The brochures were sent to the State University of New

ADVANTAGES OF

I G E
Individually Guided Education

M U S E
Multi Unit School Elementary

Daily Staff Interaction

Continuous Pupil Assessment

Complete Building Utilization

Flexible Scheduling

Personalized Instruction

Lancaster Central School District
177 Central Avenue
Lancaster, New York 14086

February 14, 1973
Curriculum Department /JP

I G E
Individually Guided Education

L C S
Lancaster Central Schools

LANCASTER INDIVIDUALIZES

"Builds on the Natural Desire of the Child to Learn"

After many years of agreeing with the concept of individualizing instruction, Lancaster has found a plan to put the concept into action. IGE is that plan! It really works for students and for teachers!!

IGE has Power - makes learning an exciting, continuous experience.

Mildred Whittaker
Assistant Superintendent

Figure 3.2

Brochure for Student Teachers

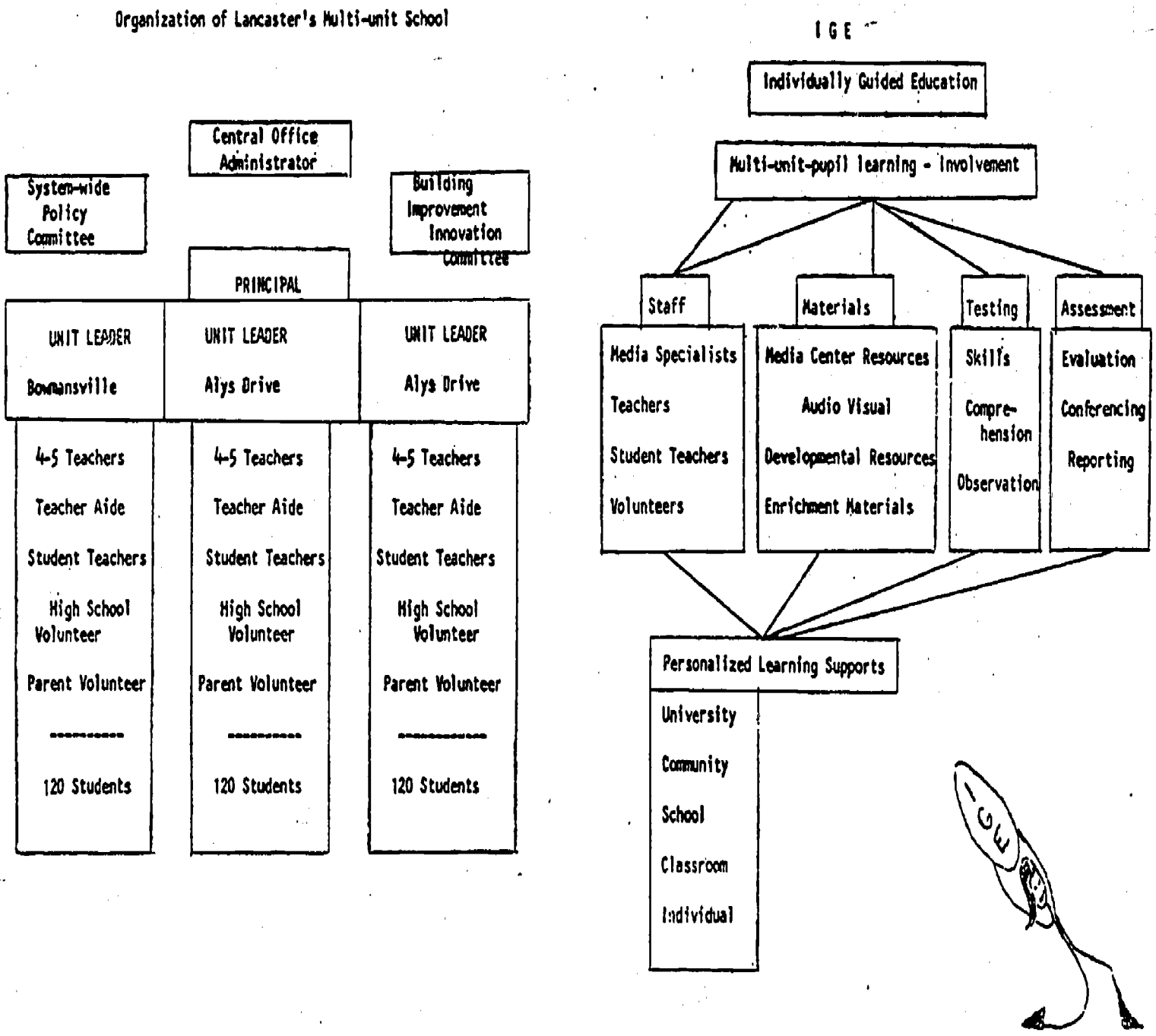


Figure 3.2 (Continued)

Brochure for Student Teachers

York at Buffalo, Medaille College, Conesius College, and D'Youville College.

In the same year, Medaille College began the development of a competency-based teacher education program which required that provisions be available for them to send education students into schools for observation, participation, and student teaching. The Lancaster School District contacted Medaille to discuss ways in which the institutions could support and assist each other's programs. One of the Alys Drive teachers, Ms. Nemmer, served on the committee at Medaille to develop the competency-based program.

Near the end of the school year, the IIC devoted some of its meetings to planning for the following school year. The minutes of their meetings on April 24 and 25, 1974, included the following references to planning the multiunit organization for 1974-1975:

> Need to meet again to determine how teams will be set up for next year -- this includes both staff and children.
>
> We need to give more consideration to ability of children when assigning them to a unit.
>
> Depending on what is done in fourth grade next year Team C sees possibilities of working with next level to group for reading, math and spelling.

The minutes of an IIC meeting on May 7, 1974, included the following remarks from Ms. LaCrego, the reading teacher:

> Team Structure
>
> On May 30th a meeting will be held with all IGE staff to assign children to groups.
>
> Teachers should have information on each child as to standing in Math & Spelling.

Team A will provide information on Reading Skills & Comprehension for children on their team.

Reading Teacher will correlate information on Reading for children working on Team B & C and also for Kdg. children.

After children are assigned to teams, I will meet with Teams to set up comprehension groups for next year.

4th grade teachers might also set up reading groups for 5th grade teachers. I will meet with you to inform you of new materials that will be available at 5th grade level.

1974-1975

A new multiunit organization was created for the 1974-1975 school year as the fourth-grade students and teachers became involved in the IGE organization and in using WDRSD: Word Attack materials. Four teams were organized: Team A included all six-year-olds (first-grade students); Team B included seven- and eight-year-olds (most of the second graders and some third graders); Team C also consisted of seven- and eight-year-olds (some second graders and most of the third-grade students); and Team D was composed of eight- and nine-year-olds (the fourth graders). The inclusion of self-contained individualized classes on Teams A and B was discontinued. The staffs of those teams felt that the children did not need the self-contained atmosphere.

Instructional programming was expanded to include WDRSD: Study Skills and instruction in mathematics. The Reading Center continued to function effectively and by this time was considered to be the heart of the school-wide reading program.

In 1974, Ms. Whittaker worked with interested persons from other districts to establish a Hub for the IGE schools in western New York.

Workshops related to several aspects of IGE were conducted during this school year. Using the money from the consultant fees fund, outside speakers were brought in for workshops which were scheduled from 3:30 to 8:30 approximately once a month. These workshops were open to all IGE schools in the Hub. Topics for three of these workshops were WDRSD: Study Skills, Mathematics in IGE Schools, and Individually Guided Motivation.

Faculty members in the IGE schools and Ms. Whittaker in the central office became increasingly involved in professional IGE activities beyond the district. In June, 1974, and June, 1975, they organized Principal-Unit Leader Workshops for the Hub schools and other interested persons. In the fall of 1975, they conducted a "One Step Beyond Awareness Workshop" for the Hub schools.

In the summer of 1975, Ms. Whittaker and Ms. LaCrego conducted a workshop for fourteen of the district's substitute teachers. The purpose of the workshop was to help these teachers understand IGE and the instructional procedures used in the IGE schools.

Near the close of the 1974-1975 school year, plans were made for reorganizing the multiunit organization for September, 1975. The planning involved including the fifth graders and responding to some of the concerns related to the 1974-1975 organization. Excerpts from the agenda of an IIC meeting on April 10, 1975, provide insight into the goals and concerns which were considered in the planning stages:

1. Discussion of tentative goals
   (a) Multiage grouping

(b) Math Programs
(c) Fifth grade involvement in IGE

2. Needs

Team A 2 lower primary sections*
2 middle primary sections*
Team B 3 lower primary sections
2 middle primary sections

(a) IIC and Team A and B members agree on concept
(b) We have some information on criteria for multi-aging but would like more
(c) Team C - undecided
(d) Team D - favors concept and is willing to continue this type of grouping
(e) Fifth grade - needs to know more about IGE

Problems

(a) Intermediate - Lacks time to adequately plan for children who would be involved in an extended multiage program
(b) Intermediate - Team D finds it difficult to plan for IGE program as developed so far at this level

Additional information about the rationale for the 1975-1976 multiunit organization was gathered through informal conversations with some teachers. They indicated that consideration was given to: (1) the numbers of students and staff which could be grouped together for an effective team; (2) providing the most effective means for meeting the needs of individual students; (3) assigning teachers who work well together to a team; (4) assigning teachers to teams at their preferred level of instruction (e.g., lower primary, fourth grade, upper intermediate, etc.); (5) assigning students to teams by grade level to provide for grade level instruction in social studies and science; and (6) keeping

*Among the primary faculty, different terms were used to describe certain aspects of the school's program. "Lower primary" was synonymous with "first grade" and "middle primary" with "second grade."

grade level students together to meet the requests of some of the art, music, and physical education teachers.

Based on the above information and considerations, the regular classroom staff members and all first- through fifth-grade students were assigned to teams for the 1975-1976 school year.

The preceding section has described the development of IGE at Alys Drive over a four-year period. The 1975-1976 implementation of the multiunit school organization and of instructional programming are described later in Chapter IV. To provide a complete picture of the setting in which these components of IGE are being implemented, additional background information is presented in the remainder of this chapter.

Physical Facilities

Alys Drive School is located on a large open lot covering approximately the space of two city blocks. All the area is grass covered except for sidewalks, the driveway, and the parking area in the front of the building. Playground equipment including climbing bars, swings, and seesaws is located behind the building. One area is used for a baseball diamond. The rest of the area is open space, available for any type of playground activity.

Alys Drive School was built in 1964. The entire building is on one level (see Figure 3.3). It includes a central section and two wings. The two wings contain the classrooms for the first- through fifth-year students. The central section includes rooms for all other school

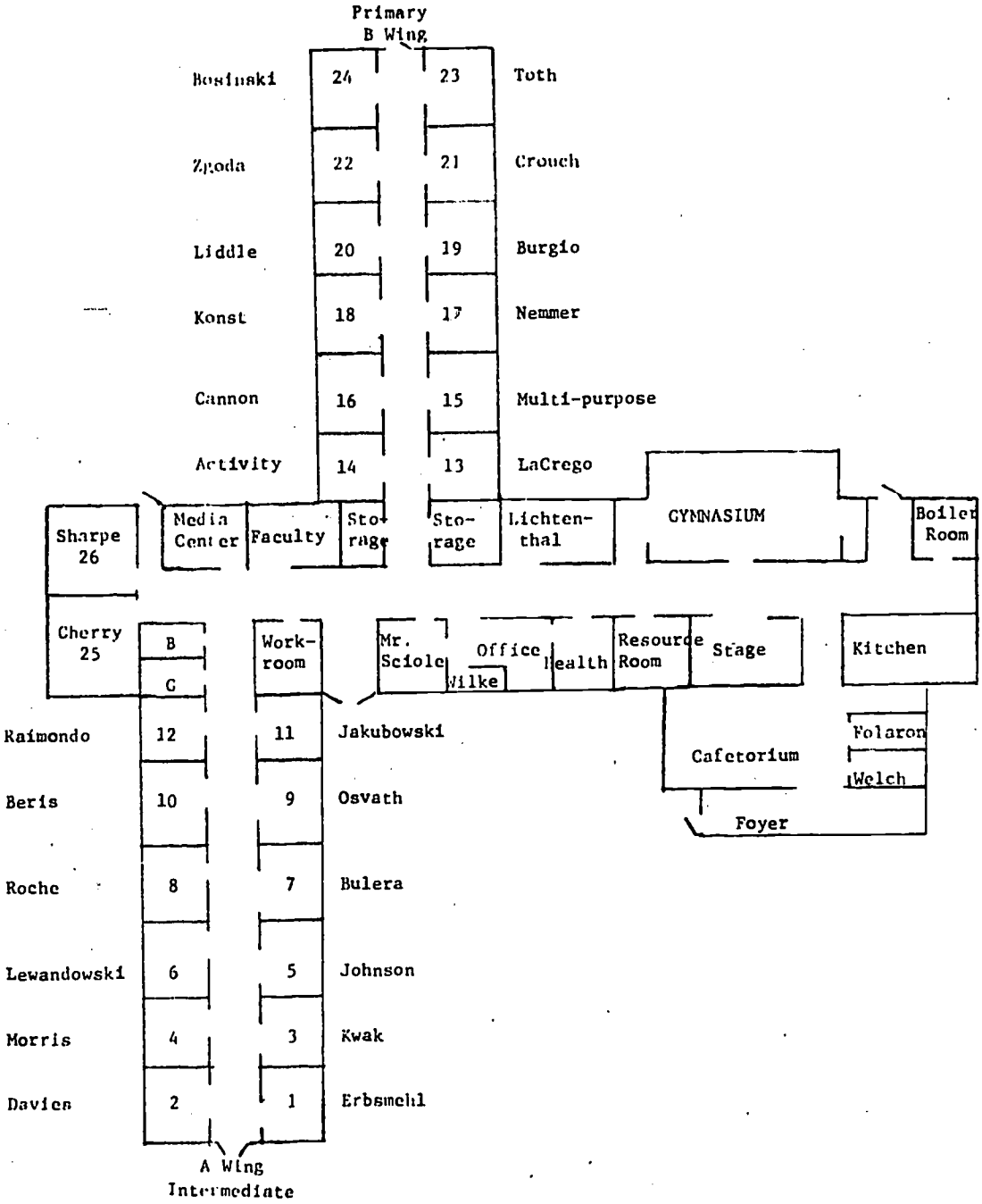


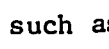
Figure 3.3

Alys Drive Elementary School Building Plan

functions. These consist of two kindergarten classrooms; the Media Center; the faculty lounge, storage rooms, and school offices; rooms for health services, speech lessons, and other special instruction; classrooms for art, vocal music, and instrumental music; the gymnasium; an area including a stage, cafetorium, and kitchen; and the boiler room.

The rooms in the two classroom wings are located side by side along either side of the hallways. Each room has a single entrance from the hall. There are no doorways or movable walls between the rooms. The hallways and classroom floors are tile.

All of the classrooms have the same basic structure. The outside walls have a large window area. A desk-height cabinet containing the heating and ventilating elements as well as some storage space runs the full length of the windows. On the wall space beside the windows is a tall cupboard with four or five open shelves for storage. Along the opposite wall, the space is occupied by storage areas. Approximately three-fourths of this space consists of closed storage shelves and drawers under a desk-height counter. A sink is built into this counter area. The remainder of the storage space is a taller cupboard which includes shelves and a coatrack. In the primary wing, a portion of this wall space is occupied by a lavatory. The wall space above the counter top is covered with bulletin boards to a height of approximately seven or eight feet. The wall above this area is clear glass, permitting the light from the rooms to brighten the halls. One end wall of each room holds a large chalkboard three-fourths the width of the wall; the other end wall has a bulletin board of the same size.

The rooms have a variety of types of furniture. Sufficient desks and chairs are available for each student to have a place of his or her own. Each teacher has a desk and chair. A variety of other furnishings are available in the rooms. These include portable dividers made of three hinged bulletin boards. These are on wheels and can be arranged as a straight divider or turned at angles to form a three-sided divider in many shapes such as  , , and . Work tables of different heights, three- or four-drawer file cabinets, soft furniture such as sofas or large pillows, and a piece of carpet are available in some rooms. Each room has a telephone connected to the intercom system.

In the halls, the walls are lined with individual coatracks for the students. Each rack has a coat hook; approximately ten inches above the floor is a shelf which can hold books, boots, gym shoes, etc. The top of the row of coatracks is a narrow shelf which can be used for storing student materials or for displaying three-dimensional projects.

The kindergarten rooms, gymnasium, art room, music rooms, and other special areas have many of the same characteristics as the classrooms. However, their sizes, arrangement of storage space, and provision of furnishings are varied to suit the type of instruction which occurs in each area.

The school office area includes the principal's office, a small conference room, a closet and a large room which includes a reception area and desks for the two secretaries.

A room which serves an important function for virtually all of the staff members is the faculty lounge, located in the central hall. The

faculty lounge is a spacious room, approximately one and a half times the size of the classrooms. It has one large window which looks over an open grassy area of the playground. The lounge is comfortably furnished with a couch, several casual chairs, six tables each surrounded by straight-back chairs, a desk, a magazine rack, coatracks, and a stove-refrigerator unit. Two telephones, one connected to the intercom and one for outside calls are in the lounge. There are two chalkboards installed on the walls.

Across the hall from the lounge is a faculty workroom which also serves as a storage room. This room has open shelves on three sides. A variety of basal reading books are stored on these shelves. The room contains two large work tables. On one of them is a duplicating machine and paper supplies. Cardboard boxes containing files of ditto masters for instruction in reading and mathematics cover the second table. A file cabinet is filled with copies of tests for use in reading and mathematics. Equipment which is shared by all staff members is also stored in the workroom. This includes an opaque projector, a rear projector system for a 16mm projector, and reel-to-reel tape recorders.

The Media Center is also located in the central hall. It consists of one large room and two small rooms. In the large room are shelves containing the books which are circulated. The furnishings include a check-out desk, four study carrell spaces, and several reading tables. The floor in one corner is carpeted for a story area. One of the small rooms is designated as a reference room. In it are standard reference

materials such as encyclopedias and atlases as well as the biography collection. The other small room includes the Media Center director's desk, a work area, and storage space for non-print media.

The Media Center collection of books, magazines, and non-print media exceeds the minimum standards for school library resources as recommended by the state of New York. In April, 1976, the collection consisted of approximately 6,000 books, 23 magazines, 644 filmstrips, 73 multimedia kits, and 543 tape recordings. (Some of these materials are checked out to the Reading Center on a long-term basis, but are part of the Media Center collection.) The total book circulation for the period from September, 1975, through March, 1976, was 23, 417.

Two of the rooms which were originally built for classroom use are now used for the Reading Center. The built-in storage space in these rooms is the same as in the classrooms. Additional storage space has been created in one room by building floor-to-ceiling open shelves which extend the width of the room. The furniture in the Reading Center rooms includes student tables, individual desks, chairs of different sizes, a large open storage rack, and a teacher's desk, chair, and filing cabinet.

A third classroom which is not needed for a class at the present time is designated as a multi-purpose room. It is available for use by staff members and students as the need arises. A variety of desks, tables, and chairs, along with a kitchen stove, make up the furnishings for the multi-purpose room.

Daily Schedule

School is in session each day from 8:45 a.m. to 3:15 p.m. Students begin to arrive at the building soon after 8:30. Those who arrive at this time congregate in the wide hallway just inside the main entrance. They visit with their friends, talk to teachers as they walk by, sit against a wall and read, or just stand or wander around quietly.

At 8:45 a bell rings and the students move through the halls to their team areas. After depositing outdoor wear at their coatracks, they go into their homerooms, or visit with friends in the halls or other rooms. At 8:55 a signal on the intercom indicates that students are to be in their rooms.

Daily morning exercises are conducted by students over the intercom system. Responsibility for these exercises rotates from room to room throughout the year. To open the exercises, a student announces, "We will now say the Pledge of Allegiance." Following the Pledge, a patriotic song is announced and the students in charge lead the singing. Teachers and students throughout the building participate in these opening exercises. Within the next 15 to 30 minutes, routine matters such as attendance and lunch count are taken care of in each homeroom. In all rooms which were observed during this period of time, students assumed the responsibility for these matters.

After the morning details are completed, the daily schedule varies from team to team. Team schedules are presented in the next chapter when each team is discussed in detail. There is no school-wide schedule

for recesses or breaks. Each team is free to plan these as appropriate in their total schedule.

Hot lunches are served in the school. Almost all the students stay at school for lunch. About half of them buy hot lunches and the others bring lunches from home. The lunch hour begins at 11:20 when the Team E students and staff go to lunch. A different team is scheduled for lunch each 15 minutes, with the last team being served at 12:20. Teams of students are in the cafetorium for lunch period for thirty minutes. Supervision is provided by paid aides. Generally, most teachers eat their lunches in the faculty lounge. Teachers are responsible for their students when they leave the cafetorium. A common practice is to take the students back to their team areas where they may have 15 to 30 minutes of free or unstructured time for relaxation.

About 3:00, preparations begin for going home. Students return to their homerooms, instructional areas and desks are cleaned up, and students get those items which they will wear or take home. Again using the intercom system, students assume the responsibility for dismissal. The first dismissal is for those students who walk. Then bus riders are dismissed, by bus number, as the buses appear in the driveway. By 3:15 most students have left the building.

On Thursdays, the students from Teams A, B, and C are dismissed at 1:30. This early dismissal is included to provide time for team meetings and planning. The original early dismissal schedule included only Teams A, B, and C because IGE and the Wisconsin Design had not been implemented at the upper levels. At the present time, Teams D and E

are functioning according to the IGE system, but they have been unsuccessful in acquiring the early dismissal time.

Curriculum

Instructional programming at Alys Drive is carried out in reading and mathematics. In this section, detailed descriptions are presented of the school-wide aspects of these programs. Brief overviews of other curricular areas are also presented, followed by descriptions of other resources within the school.

Reading

The school-wide reading program at Alys Drive is an integrated program which has been developed through the cooperative efforts of the principal, the staffs of the five teams, the reading teacher, and the Media Center director. The concept of the Reading Center has evolved over a period of four years into a complex combination of materials, space, time, and personnel which provide the essential elements for reading instruction throughout the school.

A great variety of materials are available for the reading program. WDRSD materials are used as the focus of instruction in word attack and study skills. All other aspects of reading instruction are combined under the heading of comprehension. A set of comprehension objectives has been identified by the System for Pupil and Program Evaluation Development (SPPED), a component of BOCES. These objectives reflect the following areas of comprehension: identify details, identify main

idea, identify sequence, can follow directions, can infer, draw conclusions, relate cause/effect, distinguish fact/opinion, can classify, and recognize analogies.

The WDRSD resource files are one source of instructional materials. In addition to these materials, a variety of basal reading materials are available. These include sets of readers from American Book, Benziger, Ginn, Harper and Row, Houghton Mifflin, Lippincott, and Scott Foresman. These materials are stored in the faculty workroom.

In the Reading Center and the Media Center a wide variety of supplementary materials are available. These include: (1) high interest, low vocabulary book series; (2) workbooks and duplicating masters; (3) tapes and correlated worksheets or activities; (4) boxed sets of skill tapes and related print materials; (5) individualized kits of printed stories and skill materials; (6) hardware kits of records and films and the accompanying viewer and record-player; (7) transparencies; (8) filmstrips; (9) commercial and teacher-made games; and (10) a variety of story books.

The reading teacher, Ms. LaCrego, has identified the instructional materials which relate to each of the word attack and study skills. This information is recorded in a large three-ring notebook which has one or more pages for each skill; under each skill, related materials for instruction are listed. Folders containing materials for use in skill instruction are filed in a two-drawer file cabinet in the Reading Center. Five built-in drawers, one for each team, are used for storing partially completed material such as workbooks and printed materials

from kits which are being used by the students on that team.

Instructional reading games are stored in other large drawers. A large free-standing storage shelf holds kits and other boxed materials. Workbooks, duplicating masters, and non-book printed materials are organized on built-in shelves. Story books are kept on open shelves, readily accessible to students.

The WDRSD resource files and duplicating masters for two sets of basal materials are available in file boxes which are stored near the duplicating machine in the workroom.

Sets of test materials reflecting the objectives for word attack skills, study skills, and comprehension are available in a file cabinet in the workroom. The WDRSD skill tests are available for posttesting upon completion of a sequence of instruction. Informal scanning tests in word attack skills, developed by Ms. MacCrego, are available for use at the beginning of a school year for initial placement in skill groups. Comprehension tests are available for each grade level. These tests were developed by teachers in the Lancaster Schools and are based on the set of comprehension objectives identified by SPPED.

Several forms are used to keep records of the reading achievement of each student in the school. On a wall in one room of the Reading Center are five wall charts, one for each team. Each student is listed on a chart which also lists all of the word attack skills. For each student, the chart indicates whether a skill has not yet been introduced, has been introduced, or has been mastered. Near this chart are five file boxes containing folders for each student on each team. These folders

contain work samples of reading activities as well as samples of some of the tests the student has taken.

The Lancaster Reading Skills Progress Record is used for a permanent record of each student's achievement of reading objectives. Specific objectives are listed under the headings of readiness, phonic analysis, structural analysis, locational and work study skills, sight vocabulary, vocabulary development, and comprehension. The data on objectives which have been mastered and can be applied in independent situations are recorded in blue; skills which have been mastered according to criterion-referenced test results but which a student cannot apply independently are recorded in red. Additional information recorded on the progress record includes basal readers completed, scores on the Gates MacGinitie Reading Test, and scores on individual standard (sic) tests.

The school Media Center is another component of the reading program. All students in the school are scheduled into the Media Center on a weekly basis. Ms. Bell, the Media Center director, works cooperatively with the teachers of each team and the reading teacher to provide instruction which is directly related to the reading program. Certain study skills which relate to library usage are taught by Ms. Bell.

Other personnel who are an integral part of the Reading Center are the three half-time teacher aides. Under the supervision of the reading teacher, they monitor small groups in learning activities, give tests to small groups or individuals, and prepare materials.

To provide for the most effective and efficient use of the Reading Center, a weekly schedule for instruction is used. A copy of the schedule

is shown in Figure 3.4. The letters (A, B, C, D, E) in each block indicate the team from which the students come at that time. The students come for instruction related to word attack skills or to comprehension. (Re-organizing the schedule to provide time for instruction in study skills is a topic of discussion which has not yet been resolved.)

In addition to providing instruction on a scheduled basis, the Reading Center is used for individual testing as requested by teachers. The reading teacher provides assistance in suggesting tests appropriate for individual students for particular purposes. Tests may be administered by the reading teacher, a team leader or teacher, or an aide.

At certain times during the school year, the reading teacher provides additional assistance for specific purposes. In the spring, she works with each team as they make recommendations for student placement for the next school year. In the fall, she and the aides assist in giving and scoring the scanning tests which are used in conjunction with the group charts to determine initial grouping for skill instruction. During the year, the reading teacher provides input when teams request help in making decisions about re-grouping students for comprehension.

The interaction of many people and an organization for using the available materials, space, and time are important elements in the school-wide reading program. In many respects, Reading Center is synonymous with the school-wide reading program.

Mathematics

The mathematics program at Alys Drive is based on the set of

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:10- 9:40	B Skills	B Skills	B Skills	B Skills	B Comprehension
10:00-10:30	D Comprehension	D Comprehension	A Comprehension	D Comprehension	E
10:30-11:00	B Comprehension	A Comprehension	E Comprehension		A Comprehension
11:00-11:30	D Skills	D Skills		D Skills	D Skills
11:30-12:00	C Comprehension		C Comprehension	B Comprehension	C Comprehension
12:30- 1:00	A Skills	A Skills	A Skills		A Skills
1:30- 2:00	C Skills	C Skills	C Skills		

Figure 3.4

Reading Center Schedule, 1975-1976

objectives included in the Comprehensive Achievement Monitoring (CAM) system. The CAM system was developed by the Board of Cooperative Educational Services (BOCES), First Supervisory District, Erie County, New York. The CAM system includes sets of objectives, criterion-referenced tests, and a computer management system. Teachers, supervisors, and administrators were involved in developing the CAM system. The objectives and tests which are now in use were developed by six teachers as the product of a workshop in the summer of 1974.

Objectives have been identified for the topics of: sets; numbers, numerals, number systems; whole number operations; fractions; measurement; geometry; word problems; algebra; and statistics, probability. Specific objectives related to each topic are identified for each grade level beginning at the second grade.

The CAM system includes criterion-referenced tests related to the objectives at each level. Five tests of equal difficulty are provided at each level. Each test includes at least one item related to each objective for that level. The tests may be used as overview pretests in the fall to determine objectives for individual students; as check-up tests at intervals during the year to determine progress; or as post-tests at the end of the year to determine which objectives have been mastered. These tests are used in different ways by the five teams. Some revisions of the original materials have been made, and others are anticipated as the result of this year's experience in several schools.

It was the decision of the Alys Drive IIC to use the CAM system as the focus for mathematics instruction starting in September, 1974.

(Beginning in September, 1976, all schools in the Lancaster District will be expected to use the CAM system as the basis of their mathematics programs.) Each team made the choice to use or not use the computer management system. Team C is the only team using the computer assistance at the present time.

The district requires that the 1975 Houghton Mifflin materials, School Mathematics: Concepts and Skills, be used as basic mathematics texts in all schools. This series includes instructional objectives for all levels. All teams have sufficient copies of the printed materials from this series for use with all students. Suggested "hands-on" materials, correlated with the texts and workbooks, are not available at Alys Drive. A resource file of mathematics material, particularly duplicating masters related to the Houghton Mifflin objectives, is available in the workroom.

Each team has a collection of supplementary materials, both commercial and teacher-made, for use in mathematics instruction. These include games, charts, three-dimensional items, and activity sheets.

Using either the CAM objectives or the Houghton Mifflin objectives as the basic framework, the staff members of each team plan, implement, and evaluate mathematics instruction using whatever procedures they determine to be most effective for their team.

Language Arts

Decisions regarding instructional materials and procedures for language arts are made by each team. All teams use a set of printed

materials, workbooks, activity sheets, or kits, for their spelling programs. The teams have selected different sets of materials based on the needs of their students and the teachers' prior experiences with spelling materials.

Some teams use text materials for part of their language instruction; some use contracts as an organizing technique; others make plans based on their prior knowledge of what students are expected to learn at certain levels of elementary school. The amount of cooperative planning and teaching in language arts varies widely among the teams.

Science

Science: A Process Approach (SAPA) has been selected as the school-wide science program. Each team has SAPA materials appropriate for the levels of their students. These materials are not supplied in sufficient quantities for each homeroom to have a set. The degree of use of SAPA materials and the procedures for planning and teaching science are determined within each team.

Social Studies

New York State has identified a bank of social studies objectives which should be attained by elementary school students. Objectives selected from this bank are used as the framework for social studies instruction in some teams. Social studies textbooks from several sources are used at the intermediate levels. Decisions about social studies materials and instructional procedures are made by teams or by individual teachers.

Special Areas: Art, Music, and Physical Education

Special teachers are responsible for instruction in art, music, and physical education. The students are scheduled for special classes by homerooms. Students on Teams A and B have two 30-minute art classes weekly; on Team C, one 45-minute art class weekly; and on Teams D and E, two 40-minute classes weekly. Ms. Lichtenthal is the instructor for these classes.

Two teachers, Mr. Adamec and Ms. Anderson, share the responsibility for physical education. The students on Teams A, B, and C have two half-hour physical education classes weekly. Two classes are scheduled simultaneously. These sessions may be team taught by the two instructors, or the gymnasium may be divided and each section used for separate classes. The kindergartners have one half-hour session of physical education in the gymnasium weekly. Team D and E students have two 45-minute sessions weekly. This includes swimming instruction at the high school for Team E students.

Music is taught by a full-time vocal music instructor, Ms. Welch, and a part-time instructor for instrumental music, Ms. Folaron. All students receive instruction in vocal music. Team A, B, and C students have two half-hour classes weekly. Team D and E students have one 45-minute class. In addition, some Team D and E students meet weekly as a chorus.

Students in Teams D and E may choose to participate in instrumental music. Those who choose instrumental music receive small group instruction on their instruments and participate in large group band activities.

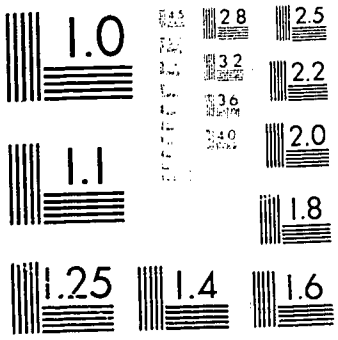
Additional Resources

Many decisions related to individual students are made by the Diagnostic Committee. The regular members of this committee are Mr. Sciole, Ms. LaCrego, Ms. Stewart (the resource teacher), and Mr. Schwartz (the psychologist). When the committee meets to discuss a student, the team leader and/or staff teachers of that student's team serve on the committee. The committee makes decisions such as assigning students to the Resource Room and determining placement when there is a concern about a student's ability to function in a team composed of his or her age-mates.

Ms. Stewart is the resource teacher. She works individually or in small groups with students who have particular learning problems. Students are referred to the resource teacher by the team teachers or by the Diagnostic Committee. For those students who are assigned to the Resource Room, Ms. Stewart plans and carries out instructional activities related specifically to their needs.

The speech teacher, Ms. Wilke, works individually with those students who need help in developing correct speech habits. The amount and type of instruction each student receives varies, depending on the students' needs.

Ms. Grabenstatter, the nurse, is at the school approximately 80 percent of the time. In addition to taking care of immediate problems of sickness and injury, she plans school-wide programs related to health and safety and is available to assist teams in matters of health and safety.



Components of IGE

Two of the components of IGE, the multiunit school organization and instructional programming, are described in detail in the next chapter of this report. Curriculum has been described in the preceding section of this chapter. Information about facilitative environments was contained in the section describing the history of IGE at Alys Drive. The three remaining components (evaluation, home-school-community relations, and research and development) are discussed briefly in this section.

Evaluation

A comprehensive program for testing student achievement is an important element of the evaluation program at Alys Drive. The New York State Pupil Evaluation Program (PEP) includes fall testing of all students in grades 3, 6, and 9. The Alys Drive third graders take the PEP test each fall. In the spring, all elementary students in the Lancaster School District take the Gates MacGinitie Reading Test. In addition to the state and district testing programs, Alys Drive administers the Stanford Achievement Test to all their students except kindergartners each spring. The IIC as well as team staffs review the results of each set of tests and make modifications in their instructional programs based on the results.

Throughout the school year, evaluation of instructional programs is based on pretests, retention tests, check-up tests, and posttests. The uses of such tests in each team are described in greater detail in

the next chapter.

Home-School-Community Relations

Alys Drive has not developed a specific plan for a home-school-community relations program. However, a variety of activities have been conducted by the school or by individual teams to keep parents informed about and involved in the school program. During the early stages of implementing IGE and WDRSD, several meetings were held to explain the new procedures and program. Some of the teams conducted information meetings for the parents of their students.

The use of volunteer parents fluctuates from year to year and from team to team. When a team feels its program would benefit from additional adult supervision of small group or individual activities, an effort is made to schedule parent volunteers on a regular basis.

Reporting student progress involves both written progress records and conferences. At least 90 percent of the parents participate in the conferences.

Parents are encouraged to visit school whenever they wish. A limited number of parents take advantage of this opportunity. Parents are more likely to come when their child is involved in a program. Homerooms and/or teams sponsor programs which relate to their instructional programs. During the two-week period of observation for this study, three programs occurred: Team B had a tasting party; one Team A homeroom presented an Easter play; and all kindergartners were involved in a Bicentennial production. Each program was attended by parents of at least 50

percent of the students.

Parents have expressed their support for Alys Drive in other ways. When some aspect of the school program is threatened as a result of budget cuts, re-organization, etc., several dozen parents have expressed their concerns by writing letters either to the school or to the district office.

Continuing Research and Development

Because of their interest in continuing research and development, the Alys Drive staff members agreed to participate in this study as well as in an earlier study also conducted through the Wisconsin Research and Development Center.

The IIC is currently working on a proposal to have the school be validated by the state. This validation would mean that the school could apply for Title IV funds. These funds would be used to set up Alys Drive as a model school for western New York, as well as to provide more opportunities for participating in conferences and workshops. The complex procedure of becoming validated requires that the school provide evidence of the success of their program.

Professional Activities and Concerns

During the second semester, 1975-1976, eight of the Alys Drive teachers, along with teachers from other schools in the area, were enrolled in a course, Introduction to IGE. The course was taught by Dr. Hull from the university at Fredonia. Classes were held at Alys Drive.

The course included the seven components of IGE. Heavy emphasis was placed on materials and procedures appropriate for instructional programming in the different curricular areas.

During the two-week period when this researcher observed at Alys Drive, the staff was planning for parent conferences which were to be held on three afternoons of the following week. Scheduling conferences and preparing the necessary written reports occupied much of the teachers' planning time. In addition to updating the reading progress records, teachers also completed a Parent Conference Check List for each student.

As discussed earlier, the Media Center functions as an integral part of the school-wide reading program. However, Ms. Bell expressed concerns about the manner in which the Media Center currently functions. Providing regularly scheduled times for each homeroom to use the Media Center occupies a major portion of each school day, leaving very little time for students to use the Center for their independent studies and small group research. In order to provide common planning time for the staff members of Teams D and E, one homeroom from those teams is scheduled for the Media Center at the same time the other groups go to art, music, and physical education. This makes it impossible for Ms. Bell to meet with the teams for planning sessions. It also makes it difficult for her to group the students according to their previous achievement on study skills objectives related to library usage.

Goals Achieved Since Implementing IGE

According to the staff of Alys Drive, higher student achievement has been an important goal for their school. Since the implementation of IGE, progress has been made toward this goal. Changes have also occurred in relation to attitudes of community members, library circulation, and the use of materials and equipment. Staff members provided information supporting their feelings of success in each of these areas. This information is presented in the following sections.

Student Achievement

Results of achievement tests support increased student achievement during the period since IGE has been implemented. In New York, all third, sixth, and ninth graders participate in the statewide Pupil Evaluation Program (PEP) each fall. Of these grade level groups, only third graders attend Alys Drive. A five-year summary of the results of these tests is shown in Table 3.1. These results indicate that achievement in reading has increased during the past five years among the students attaining scores in Stanines 1 through 6. Instructional programming in mathematics was first introduced in 1974; thus, only the fall, 1975, results could reflect any IGE-related differences. These results do not indicate increased achievement after the first year of instructional programming in mathematics.

It is interesting to note the fluctuation of achievement results over the five-year period, especially the lower achievement in 1973. This lower achievement occurred in both reading and mathematics. No

Table 3.1

New York State Pupil Evaluation Program:
Five-Year Summary for Alys Drive Elementary School

Stanine	Percentage of pupils who obtained total scores within achievement level groupings for 1971 through 1975				
	Grade 3-Reading				
	1971	1972	1973	1974	1975
7-9	25	28	26	28	28
4-6	59	53	46	69	68
1-3	16	19	28	3	4
N tested	113	120	96	113	100
Stanine	Grade 3-Mathematics				
	1971	1972	1973	1974	1975
7-9	37	26	26	38	33
4-6	60	66	47	60	67
1-3	3	8	26	3	0
N tested	115	121	95	112	100

final explanation was offered for this occurrence. It was suggested that the lower performance might have been related to the added strains on staff members' time and energy which were required in implementing new procedures (multiunit organization and team teaching) and materials (WDRSD).

Tables 3.2 and 3.3 show a comparison of the Alys Drive 1975 PEP results with other groups--Lancaster District Schools, public schools in the state, and public and non-public schools which are similar to Alys Drive in size and composition of student body. Again, the results in reading strongly support successful achievement at Alys Drive. The results in mathematics indicate a decreasing number of students whose performance is at the lowest level

In addition to the PEP tests for third grades, Alys Drive regularly administers the Stanford Achievement Test and the Gates-MacGinitie Reading Test. The results of these tests, shown as average grade levels, are presented in Table 3.4. The average gain is shown for each grade level for which results were available for both 1974 and 1975. At all grade levels where 1974 scores were available for comparison, the students achieved higher performance in 1975.

Attitude

Another indication of the success of the school program is strong support from the community. In response to a questionnaire about IGE distributed in June, 1973, 162 parents answered the question, "Do you feel this program should continue?" Of these, 156 said "yes" and 6

Table 3.2

New York State Pupil Evaluation Program-Fall, 1975
Alys Drive Elementary School

Grade 3-Total Scores--Reading

Stanine	Raw Score Range	Cumulative Percentage of Pupils in the:		Cumulative Percentag Pupils in Other Referenc	
		School	System	State Public Schools	Public a Public C
9	48-50	100	100	100	10
8	44-47	99	96	97	9
7	39-43	90	85	89	8
6	32-38	72	68	77	6
5	23-31	49	47	59	4
4	16-22	21	27	40	2
3	12-15	4	12	23	1
2	9-11	0	4	11	
1	0- 8	0	1	4	
N=	--	100	420	234,837	

*C-Type 5 are those schools in New York which are comparable to Alys Drive in size position of student body.

Table 3.3

New York State Pupil Evaluation Program-Fall, 1975
Alys Drive Elementary School

Grade 3-Total Scores--Mathematics

Stanine	Raw Score Range	Cumulative Percentage of Pupils in the:		Cumulative Percentage of Pupils in Other Reference Groups	
		School	System	State Public Schools	Public and Non-Public C-Type 5*
9	53-60	100	100	100	100
8	48-52	96	96	95	95
7	42-47	86	85	87	87
6	35-41	67	68	75	74
5	25-34	40	44	58	57
4	18-24	7	15	36	34
3	11-17		4	18	17
2	6-10		1	5	5
1	0- 5			2	2
N=	--	100	422	232,076	

*C-Type 5 are those schools in New York which are comparable to Alys Drive in size and composition of student body.

Table 3.4

Alys Drive Achievement Results-June, 1975

Test	Grade				
	1	2	3	4	5
Stanford Achievement Test					
Average Grade Level-1974		2.00	3.11	3.92	4.84
Average Grade Level-1975	2.28	3.46	4.99	5.26	7.29
Average Grade Level Gain		1.46	1.88	1.34	2.45
Gates-MacGinitie					
Average Grade Level-1974		2.53	3.41	4.63	
Average Grade Level-1975	2.40	3.44	4.59	5.56	
Average Grade Level Gain		.97	1.18	.93	

said "no." More recently, parents have written letters to the school or district to indicate their support for continuing the IGE program.

Books, Materials, and Equipment

The Media Center director reported that circulation of books has shown a steady increase since the implementation of IGE and WDRSD. The principal and other faculty members reported that they have been able to acquire a wider variety of materials as a result of shared usage throughout the building. Team interaction and planning have also led to more effective use of the available materials and equipment.

Summary

Background information related to the implementation of IGE at Alys Drive Elementary School has been presented in this chapter. Following a brief introduction to the school and district, the history of IGE activities from 1971 to 1975 was described. The remainder of the chapter was devoted to describing the environment in which instructional programming and the multiunit organization were being implemented in 1975-1976.

CHAPTER IV

THE CASE STUDY: IGE AT ALYS DRIVE, 1975-1976

Two components of Individually Guided Education, as implemented at Alys Drive during the 1975-1976 school year, are described in this chapter. In the first part, the multiunit organization is presented. Then the functions and activities of the IIC and of each of the teams as they carry out instructional programming are described.

Multiunit Organization

The multiunit organization at Alys Drive includes five teams (I & R Units). The composition of each team in April, 1976, was:

Team A

Team leader	-- Barbara Zgoda
Teachers	-- Patricia Bosinski Natalie Crouch Deborah Toth
3 Student teachers	-- full time (Buffalo State)
3 Participants	-- 3 days weekly (Medaille)
88 Students	-- ages 6, 7, 8 (38 first graders, 50 second graders)

Team B

Team leader	-- JoAnne Burgio
Teachers	-- Gail Cannon Nellie Konst Jacqueline Liddle Donna Nemmer
3 Student teachers	-- full time (Buffalo State)
2 Participants	-- 3 days weekly (Medaille)
120 Students	-- ages 6, 7, 8 (1 transfer from kindergarten, 67 first graders, 52 second graders)

Team C

Team leader	-- Geraldine Jakubowski
Teachers	-- Linda Beris Charles Raimondo Marion Roche
2 Student teachers	-- full time (Buffalo State)
97 Students	-- ages 8, 9 (82 third graders, 15 fourth graders)

Team D

Team leader	-- Genevieve Bulera
Teachers	-- Jane Johnson Ann Marie Lewandowski Marge Osvath
3 Student teachers	-- full time (2-Buffalo State, 1-Medaille)
104 Students	-- ages 9, 10 (2 third graders, 102 fourth graders)

Team E

Team leader	-- Beverly Davies
Teachers	-- Shirley Erbsmehl Donald Kwak Phyllis Morris
2 Student teachers	-- full time (Buffalo State)
95 Students	-- ages 10, 11 (8 fourth graders, 87 fifth graders)

Other faculty and staff members include:

Principal	-- John Sciole
Kindergarten	-- Jeannette Cherry Diane Sharpe
Reading	-- Barbara LaCrego
Art	-- JoAnne Lichtenthal
Music	-- Christine Folaron Cathleen Welch
Physical Education	-- Joseph Adamec Nancy Anderson
Media Center Director	-- Maxine Bell
Media Center Clerk	-- Mary Darmstetter+
Speech	-- Marilyn Wilke
Dental Hygenist	-- Susan Bortle*
Nurse	-- Lois Grabenstatter
Psychologist	-- Lauren Schwartz*

+Part-time personnel

*District personnel who are available to Alys Drive upon request

Resource	-- Karen Stewart
Secretary	-- Sara Murphy
Clerical Aide	-- Carol Gliss+
Teacher Aides	-- Cynthia Bouman+ Kathleen Decherd+ Mary Wagner+

The Instructional Improvement Committee (IIC) is composed of Mr. Sciole, the principal; the five team leaders; Ms. LaCrego, the reading teacher; and Mr. Adamec, representing the special teachers.

The members of the Systemwide Policy Committee (SPC) are Ms. Whittaker and Mr. Bunting from the district office and the principals and all unit leaders from the two IGE schools in the district.

The kindergartens are not included in the multiunit organization. Each kindergarten teacher has a morning session and an afternoon session. The kindergartens are basically self-contained. Ms. Zgoda, the Team A leader, provides instruction in word attack skills for nine kindergartners who have acquired the necessary readiness skills. This instruction is scheduled for three half-hour periods weekly.

The Instructional Improvement Committee

In this section, the IIC is discussed in detail. The description focuses on the activities carried out to: (1) maintain communication throughout the building and the district; (2) coordinate resources

---

+Part-time personnel

within the building; and (3) coordinate instruction, including Step 1 of instructional programming.

Regular IIC meetings are held after school on Monday every other week. Additional meetings are scheduled whenever a special need arises; they are usually held on Monday afternoon or before school on Tuesday.

Agendas are either written or announced prior to each meeting. Items for the agenda may be suggested by any member of the IIC. Minutes are written for each meeting and are distributed to all staff members. In general, the IIC meetings are attended only by the regular members. Other staff members sometimes attend meetings if an agenda item is of particular concern to them.

The activities and decisions of the IIC involve communication and coordination. Coordination includes arranging for the use of time, facilities, and personnel throughout the school, as well as planning for instruction in several curricular areas.

Communication

Within the building, the IIC serves as the communication link among the five teams and with other staff members. At team meetings, concerns and ideas may arise which are of relevance to others in the building. These matters are taken to the IIC by the team leader. IIC decisions and other matters of discussion are reported back to staff teachers by the team leaders. Distribution of IIC minutes and informal

conversations also serve to keep all staff members informed about building-wide matters.

The IIC also serves as the communication link with the SPC and other district office persons. One example of such communication occurred in the spring of 1975. The issue was the need for additional planning time for the intermediate teams. The IIC prepared a comparative time analysis, indicating what could be accomplished with the extra planning time as compared to the possibilities without the time. The analysis was presented to the superintendent for his consideration.

In April, 1976, the IIC was working on another matter involving communication with the district office. Sixth-grade students are currently at the Middle School. During the 1976-1977 school year, part of the Middle School building will be remodeled; thus, the sixth grades are being assigned to elementary buildings where space is available. Three sixth-grade classes will be located at Alys Drive. The addition of these students requires changes in room assignments and in schedules.

One concern of the IIC is to maintain the Reading Center. Another is to include the sixth grades as a new team in the multiunit organization. During the 1975-1976 school year, the IIC identified problems posed by the addition of the sixth-grade students. They also developed suggested solutions for some of the problems. The IIC requested that Mr. Sciole arrange for them to meet with the superintendent to discuss matters related to the returning sixth grades. The IIC listed some concerns, as well as tentative solutions, in outline form for presentation to the superintendent. The outline is shown in Figure 4.1.

CONCERNS 1976-1977

April 8, 1976

I. Staff Concerns

A. Scheduling

1. Common Instructional Blocks
2. Common Planning Blocks

B. Large Area Instructional Space

1. Primarily to maintain Reading Center Concept
2. Large Group Team Activities
3. Central organization of materials

C. Primary Large Block Planning time

D. Aides

1. Continuation of a multitude of services to staff & children
2. Need to decide how aides are to be used at 5th & 6th grade level

E. Unit Approach to Individualization

1. Maintain flexibility in grouping in all curriculum areas
2. Maintain Team Approach between Units, Reading Teacher and aides
3. Continue increased higher child participation ratio in reading due to smaller group sizes
4. Continue effective use of individual Teacher -- i.e. - Word Attack Skills 1 objective, 1 group of children needing common instruction, 1 teacher
5. Clerical organization maintained by aides
6. Staff attitude
7. Individual Unit programs 76-77

F. Team? (Sixth Grade)

1. Participation in IGE, Wisconsin Design, etc.
2. Utilization of individual teacher talents
3. Scheduling into Reading Center

Figure 4.1

IIC Planning Report for 1976-1977

G. Budgeting

1. Transfer of portion of 6th Grade funds from Middle School to Alys Drive
2. Materials and furniture
3. Inventory of materials being returned to Alys Drive
4. Library materials

H. Special Areas - extra teachers

I. Grouping - team structure

1. grade level
2. multi-age

J. Team cluster arrangement

K. Student Teachers

1. Interest
2. Space

II. Community Concerns 76-77

A. Continuation of IGE and Current Reading Program

B. Continuation of Reading Center Concept

C. Continuation of child's instructional needs being met at own rate and style

D. Small groups in Reading - higher child participation ratio

III. Tentative Solutions 76-77

A. Scheduling - With services of 1/2 time Art teacher-common instructional blocks and planning blocks maintained

B. Large Area Instructional Space

1. Remove section of wall between Room 13 and large store room

C. Large Block Planning Time?

Figure 4.1 (Continued)

IIC Planning Report for 1976-1977

D. Aides?

1. continue to work with reading teacher and teams?
2. need to determine use of aide time at 5th and 6th grade level

E. Unit Approach

1. Flexibility maintained
2. Teaming with Reading Teacher and Aides?

   a. Depends on Large Instructional Space
   b. Continuation of aide employment

3. Child participation ratio? Reading
4. Effective use of individual Teacher Reading?
5. Clerical maintenance of material organization?
6. Staff attitude?
7. Individual Unit Programs 76-77

F. Sixth Grade Team

1. Need identification of Teachers
2. Schedule meeting of IIC

G. Budgeting?

H. Special Areas - commitment of 1/2 time art teacher at our specified schedule

I. Grouping

J. Team Cluster Arrangement

1. 3 Team C rooms transfer to primary wing or 4 depending on possibility of rennovation of large group instructional area
2. 6th grade utilize rooms in intermediate wing

K. Student teachers

Report prepared by:
Instructional Improvement
Committee - Alys Drive

Figure 4.1 (Continued)

IIC Planning Report for 1976-1977

On April 8, 1976, the IIC held a special meeting to discuss the procedures to use in presenting the information to the superintendent at the meeting scheduled for the following week. An agenda was prepared for the meeting, indicating the order in which topics would be considered along with the name of the IIC member who would present each topic.

Coordination: Resources

Many decisions related to coordinating the use of resources--time, facilities, personnel--are made on an annual basis. Decisions related to short-term matters are made in response to specific needs or concerns.

Time

Mr. Sciole and Mr. Adamec assume the responsibility for developing the school-wide schedule for special teachers. Through the IIC, each team indicates its particular needs, especially their suggestions for common planning time. Based on information received from team leaders, the schedule is prepared.

Through the actions of the IIC, a weekly early dismissal has been acquired for the primary teams. The IIC is continuing its efforts to gain the same for the intermediate teams.

Facilities and Equipment

The IIC determines how classrooms will be assigned to each team. In planning for the return of the sixth grades for 1976-1977, the IIC

has had to prepare changes in room assignments. Insofar as possible, all rooms for a single team are located in the same area. For the 1976-1977 school year, this appears to be impossible; the most feasible plan devised so far will require that Team C students and teachers be split between the primary and intermediate wings. On an ongoing basis, requests for special use of spaces such as the cafetorium are handled through the office.

Some equipment and materials are shared throughout the building. Several major pieces of hardware are managed through the use of sign-up sheets. Most materials are catalogued in the Media Center and are obtained through regular check-out procedures. There appears to be little need for IIC involvement in coordinating the use of equipment and other materials.

Each team assumes the responsibility for ordering its own supplies. Special teachers order the supplies which they need. Mr. Sciole combines all requests into one school order to be sent to the district office. Undesirable overlaps of requests are corrected in this final order.

Personnel

Decisions regarding the placement of students and teachers within the multiunit organization are made by the IIC. In determining the composition of teams, consideration is given to the number of students, space allocation, and problem situations which should be alleviated.

At times, the IIC conveys suggestions about the need for additional

personnel to the district office. An additional half-time art teacher has been requested for the 1976-1977 year. The three half-time aide positions were obtained at the request of the IIC.

Coordination: Planning for Instruction

Coordination of instruction includes decisions related to achieving continuity of instruction in curricular areas and decisions related to Step 1 of instructional programming.

Continuity of Instruction

The original decision to implement IGE and to use WDRSD: Word Attack was made prior to the organization of the IIC. Since then, the IIC has had responsibility for curricular decisions at the building level. Many decisions about materials to be used in different curricular areas are made at the district level. However, the IIC did decide to use the CAM system as the focus for mathematics instruction beginning in September, 1974. The IIC also requested and received permission to implement the Study Skills element of WDRSD.

Continuity of instruction is, to some extent, achieved through a graded organization in which students learn content appropriate to their grade level. In the curricular areas for which instructional objectives have been identified, continuity is achieved by organizing instruction around the objectives. As an example, in mathematics, the basic set of objectives for Team C are those identified in the CAM system for Level 3. However, objectives at lower or higher levels are selected for

those students whose performance on the criterion-referenced tests indicates a need for instruction at Level 2 or 4.

Through informal interaction as well as focused discussion, a general understanding of the content of each curricular area for each team or grade level has evolved.

The IIC's concern for continued efforts in this area is indicated in an IIC agenda item for the April 10, 1975, meeting:

> IIC-Needs
> (1) If goals are to be met IIC would have to become more active to insure continuous progress for children and coordination of curriculum.

Instructional Programming - Step 1

In reading and mathematics, school-wide objectives are identified as those which are included in the programs being used in these areas, i.e., WDRSD: Word Attack Skills; WDRSD: Study Skills; SPPED comprehension objectives; and CAM mathematics objectives.

The IIC and the teams have developed minimum criteria for promotion which also serve as general objectives. A set of criteria has been developed for the first- through fourth-grade students. Each set includes criteria for reading (comprehension and skills), mathematics, and social and emotional maturity. These criteria for each grade level are presented in Figure 4.2 in the form in which they are on file at the school.

First Year Students

I. Completed a Primer Reader (minimum requirement)

Completed A Skills

II. Math -

Memorize basic add & sub. facts to 10 (11-20 - optional)

Count and write numerals to 100

Introduction to:

time (hour & half)
tens
symmetry
1/2 - 1/4

III. Social Maturity.

Second Year Students

I. Reading Comprehension

A. Finish 1^2 satisfactorily. Teacher uses own judgment according to reading series and child's performance.

*Gives Gates at end of year

II. Skills

A. Students should be strong in B skills. (Be able to apply these skills) Vowel skills are the most important B skills.

III. Math

A. Basic equation concept

1. missing addends
2. regrouping
3. addition
4. subtraction

Figure 4.2

Minimum Promotion Criteria

B. Numerical sequence 1-1000

IV. Independent work habits - good attention span - read and interpret directions. Good listening habits.

V. Maturity - don't confuse immaturity with discipline problems.

VI. Ability and IQ - If child does not have high IQ and he is working at his potential he should be put into the next level.

If student has high IQ and not working to his potential, he should be retained.

Third Year Students

I. Reading Comprehension

-- Completed to second level, ready for third
-- Judgment will vary with series used

II. Math

-- Completed second level, ready for third
-- Sums to 18
-- Knowledge of equations and working forms
-- Addition and subtraction - regrouping
-- Introduced to multiplication

III. Skills

Be strong in phonics portion of C skills. Able to apply.

IV. Maturity

-- Social maturity - are they ready to advance
-- Stigma of being retained - peers
-- Consider actual value of retaining socially mature child that is an underachiever (working to ability)
-- Family situation

-- acceptance by parents

Figure 4.2 (Continued)

Minimum Promotion Criteria

-- siblings on same team
-- child's acceptance of retention

Fourth Year Students

I. Academic Progress

A. Achieved 3.0 level placement in Math, Language, Spelling and Reading (Gates)

B. Received 4.0 level instruction in social studies and science

II. Maturation

A. Establishes workable relationships with teachers and peers

B. Completes assignments

C. Demonstrates independence and responsibility

D. Size (height) is appropriate to peer group at team levels

III. Achievement

A. Emphasis is placed on individual capacity and ability. Children working up to capacity should not be retained.

B. Underachievement is an important criteria in considering retention on a team. A child's potential for growth should be considered.

IV. Years Spent in School

A. One repetition in the primary and in unusual cases one retention in the intermediate is permissable. Whether an individual child has been retained in previous years is an important consideration.

V. Family

Figure 4.2 (Continued)

Minimum Promotion Criteria

A. Parent acceptance and co-operation should be considered.

B. Consideration of sibling competition on a team may be important.

C. Individual child acceptance of retention so that placement will not be detrimental to emotional and social health.

VI. Attendance

A. Neglect in attendance causing gaps in concept development and academic progress can be sufficient reason for retention on a team.

Figure 4.2 (Continued)

Minimum Promotion Criteria

Instruction and Research Units

The remainder of this chapter is devoted to descriptions of instructional programming as implemented in each of the five teams. Although the term Instruction and Research Unit is used in the IGE literature to describe the group of students, teachers, and other persons who work together in the instructional setting, this terminology is seldom used at Alys Drive. The groups are most often referred to as teams. To maintain consistency with the actual school situation, the word team is used in the remainder of this chapter.

The Descriptor for Individualized Instruction (DeVault, et al., 1973) was used to collect the information about reading and mathematics which is reported in the following sections. During the interviews with staff members from each team, information was recorded in graphic form on the Descriptor. This information was then translated into narrative descriptions of instructional programming. The relation of the components of the Descriptor to the steps of instructional programming are as follows:

Instructional Programming Model	Descriptor
Type of program materials used	Program context
Patterns of instructional programming	Sequence Program pattern
Step 3	Assessment procedures Record of information
Step 4	Objectives Use of information

Instructional Programming Model	Descriptor
Step 5	Rate Media Grouping Record of information Use of information
Step 6	Assessment procedures Record of information
Step 7	Use of information

The section about each team begins with information about the staff and students of that team. Then the procedures used in instructional programming are described. For word attack skills and mathematics, these procedures are related directly to Steps 2 through 7 of the Instructional Programming Model. The procedures used by Team E for study skills are also presented as Steps 2 through 7. The procedures used for reading comprehension involve some elements of instructional programming but not as specifically as in word attack skills and mathematics. Therefore, the description of instruction in comprehension is not related specifically to the steps of instructional programming. Less detailed descriptions of instruction in language arts, science, and social studies are also included.

In the description of each team, one feature is highlighted and presented in detail. It should be understood that these features are not necessarily unique to those teams, but are simply presented as examples of the overall instructional program and procedures at Alys Drive. The features which are highlighted for each team are: Team A--instructional modes in word attack skills; Team B--a team-wide unit of

instruction in social studies; Team C--the use of contracts; Team D--cooperative team planning in all curricular areas; and Team E--materials and procedures for comprehension instruction.

Team A

Staff and Students

The staff of Team A includes a team leader, Ms. Zgoda; three staff teachers, Ms. Bosinski, Ms. Crouch, and Ms. Toth; three full-time student teachers; and three part-time participants. There are 88 students, ages 6, 7, and 8; 38 are first-year students and 50 are in their second year.

Professional background. The team leader and staff teachers have all participated in IGE workshops and inservice programs; all have taken a graduate course related to IGE. Two of them have had four years' experience in an IGE school, another has had three, and the fourth is in her second year of teaching in an IGE school.

Team planning. Team meetings are regularly scheduled on Thursday afternoon from 1:30 to 3:30. The team has a common planning time from 9:15 to 9:45 daily while the students are in special classes. This time may be used for team meetings, but generally the staff meets informally in the lounge. Discussion of team matters often occurs at this time as well as during the lunch break. Decisions are sometimes made during these informal meetings.

Agendas and minutes are written for the Thursday afternoon meetings.

Re-grouping of students for word attack skills is regularly handled at these meetings. Other matters which require team discussion and decisions are included on the agenda as necessary. The minutes for re-grouping meetings include a listing of the skills to be taught, the students assigned to each group, and the teacher for each group. Minutes are distributed to all teachers on the team, the principal, and the reading teacher.

The teachers on Team A have not become specialized in terms of team responsibilities. All contribute to the team effort by cooperating and assisting as required by particular circumstances.

Student organization. The students are assigned to homerooms by grade levels. There are two second grades and two first grades. Those students who needed extensive reading readiness activities at the beginning of the year are assigned to one first-grade room. The other first grade is a more heterogeneous group which includes many students who are able to handle learning activities independently. One second-grade room includes students who require much teacher direction and many structured activities. The other second grade includes students who generally have a higher level of achievement and can assume more self-direction.

Team A is located at the end of the primary wing and occupies two classrooms on each side of the hall. Team A does not have a daily team schedule for instruction in the different curricular areas. All Team A students are scheduled for special classes from 9:15 to 9:45. Word attack groups meet from 12:30 to 1:00 Monday through Thursday.

Instruction in all other areas is scheduled by individual teachers for their homerooms.

Instructional Programming in Reading--Word Attack Skills

Instruction in word attack skills is scheduled for four half-hour sessions weekly.

IPM - Step 2. The word attack objectives which Team A has selected for their students include Levels A, B, and C skills of WDRSD. The team has a minimum goal that all students should complete the Level B skills.

IPM - Step 3. First-grade students and other students who are new in the school are given the placement test of the Wisconsin Tests for Reading Skill Development in September. The returning second graders take the locally-prepared scanning test to determine if their performance is consistent with the records of the previous school year, or if they should review some of the skills which they learned in the previous year. Based on the record of last year's achievement and the results of the scanning test or on the placement test, skills to be learned by each student are identified. An effort is made to have students proceed from skill to skill in a sequence which has been determined by the school staff. However, sequence is not the most important consideration and exceptions are made when deemed necessary for scheduling purposes.

IPM - Step 4. In team meetings, the teachers identify skills for which groups of students need instruction. Skill groups are formed

for groups of related skills or for single skills. When it is not possible to place all students in appropriate word attack groups, some students may be assigned to the Resource Room for special help or be grouped for activities in vocabulary development or comprehension. Skill groups are planned for a period of two to three weeks.

IPM - Step 5. Individual teachers plan instructional activities for the skill group(s) which they will teach. As an example, one period of instruction in word attack skills could include activities, organization, and use of space as follows: In the hall, a student teacher tests a small group on long and short vowel sounds. Also in the hall, another student teacher listens and helps one child as she reads from her reading book. In a classroom, the team leader has 16 students listen for the sounds made by au, aw, all, and awk in an oral exercise. The students complete a related worksheet, then check their own papers as they take turns reading and providing answers. New words containing the letters are written on the board and the students read them. In another classroom, a teacher assists some students in playing a word game involving rhyming words. Another teacher supervises students who are completing worksheets at their desks. In the other room, the fourth teacher is supervising students who are completing a test related to the skills they have just studied. Three groups of children are in the Reading Center. One of these groups listens to tapes and completes a related worksheet under the direction of the reading teacher. A second group is reading stories and completing exercises in materials from an individualized kit. The third group is

taking a test. Aides monitor the activities of the students who are working independently or taking tests.

Some groups complete their skill work before the end of the pre-determined two- or three-week period. The teachers may check the group record chart, identify another skill which those students need, and proceed with related instruction. Or another reading activity such as vocabulary study or supplementary reading may be chosen for the group. Similar activities are available for individual students who master a skill earlier than others in the group.

IPM - Steps 6 and 7. By the end of the two- or three-week period, all students have taken posttests. The results are recorded on the group charts and new groups are formed. Students who did not master their skill(s) will be re-assigned to another group working on that skill at a later time.

Pattern of instructional programming. Instructional programming in word attack skills is based on common objectives for all students. All students are expected to achieve full mastery of these objectives. A pre-determined sequence of skills is used as a framework, but variations are made as needed to make it possible for most students to be assigned to a skill group at any given time.

Instructional Programming in Reading--Comprehension

Instruction in all areas of reading except word attack skills occurs in the homeroom setting. Individual teachers use the previous year's records and the assistance of the reading teacher to form reading groups

and to select appropriate basal readers for each group.

Activities used for vocabulary and comprehension include: teacher-directed small group reading sessions; workbook exercises; games, independent work using recorded lessons; self-check learning center activities; independent reading; sharing books with others; art activities; and creative drama. Each teacher has developed procedures to encourage children to read independently at home and to keep records of what they have read.

Additional comprehension instruction for all students is provided by the reading teacher. For these activities, groups of students are scheduled in the Reading Center on a rotating basis such that each child goes three times every three weeks.

Although comprehension groups are not re-grouped on a regular basis, students are moved from group to group within their homerooms in an effort to have each one working at the most appropriate level. Teachers sometimes create new groups or combine existing groups to provide for students' needs. Teachers make these decisions individually but they often share and discuss such plans in informal team gatherings. Tests are provided with some of the reading series. Teachers use these as pretests to determine if students are ready for a book, or during instruction for diagnostic information. The SPPED comprehension tests are used to determine when students have attained criterion level in each area of instruction. Results of these tests may be used to focus instruction but are not used for re-grouping. The results are recorded on a group record chart.

Pattern of instructional programming. The comprehension objectives are common for all students. A common criterion of mastery has been identified for the students of each grade level. The sequence of instruction is determined by individual teachers.

Instructional Programming in Reading--Study Skills

Study skills, Levels A and B, are taught in Team B. Individual teachers make decisions about when and how to teach these skills. For the most part, they are correlated with science, mathematics, and social studies instruction. Individual keysort cards are used to record study skills which have been achieved.

Instructional Programming in Mathematics

Instruction in mathematics occurs in the homeroom setting. Some grouping is done within the rooms depending on the help available to instruct small groups. Approximately 150 minutes a week is devoted to mathematics.

IPM - Step 2. The CAM system includes 43 objectives which are to be achieved by second-grade students. CAM does not provide objectives for first graders. In general, the Team A teachers prefer the mathematics objectives which are identified for grades one and two in the Houghton Mifflin series. One second-grade teacher reported that at least three-quarters of her students scored at mastery level for the Level 2 CAM objectives at the beginning of the school year. Another teacher indicated that the use of CAM tests as pretests is very frustrating for students who have achieved only a few objectives. Each of

the Team A teachers has arrived at a balance of CAM objectives and Houghton Mifflin objectives which are appropriate for the students in her room.

IPM - Step 3. Preassessment involves the use of the CAM tests and/or teacher observation. Diagnostic tests correlated with the text are used as pretests for some units of study.

IPM - Step 4. Sets of instructional objectives related to one topic are selected for group instruction. The Houghton Mifflin program is written for slow, middle, and high achievers. Within one topic, the number of objectives and/or the criterion of attainment may vary according to the ability of the students. A basic minimal program which all students should attain is identified and the teachers make an effort to ensure that all students achieve these basic objectives.

IPM - Step 5. A variety of materials and procedures are used for mathematics instruction. All students use the series workbook as a supplement to other instructional materials and activities. Most topics are introduced to the whole class by the teacher. Then students complete some related activities. The teachers provide extra instruction for small groups or individuals. In addition to the workbooks, the students use commercial and teacher-made games (e.g., Quizmo, Add-All), manipulatives (e.g., popsicle sticks, the abacus), models (e.g., clocks, play money), and flash cards.

The sequence of instruction is determined by each teacher. To maintain interest, instruction related to computation is alternated with topics such as money, telling time, and measurement.

IPM - Steps 6 and 7. Upon completion of a topic, the students are posttested. These results are recorded, and the class as a whole proceeds to a new topic. At the same time, those students who did not achieve mastery are given extra help by the teacher (as time permits), by peer tutors, or by parent volunteers.

During the course of a year, teachers use diagnostic tests to identify the topics in which individual students need additional instruction. The whole class may review a topic, or small groups may be formed for review or re-teaching.

Pattern of instructional programming. There are common objectives for all students, by grade levels. Full mastery of the basic minimal program is the criterion for all students; many students are expected to achieve more than the minimal program. Sequence of instruction is determined by individual teachers based on their judgment of what is most appropriate for their students.

Other Curricular Areas

Language arts instruction is planned by the individual teachers. Many language activities such as writing, drama, and story-telling are correlated with reading activities. The Ginn Word Enrichment Program is used as the spelling program.

Science instruction is based on the SAPA materials. The second graders have science in their homerooms. Sixteen required units and five optional units are included in Level B. When these are completed, some students work on Level C activities. Completion of these units is

recorded on individual science cards which remain in each student's personal folder. The two first-grade teachers cooperatively plan and teach science for their students.

There is no required social studies program. The New York State Social Studies Curriculum is used, to a limited extent, as a resource for social studies objectives. Most social studies instruction is homeroom-based. During this school year, the team has cooperatively planned and taught units of instruction about the Bicentennial and about Pilgrims.

Additional Information

The Team A teachers explained that their teaching patterns were different last year when the team included only first graders. Then they grouped their students across the team for mathematics as well as word attack skills, and used team teaching in science. Study skills were grouped within the team and were taught once a week on Friday.

Team B

Staff and Students

The staff of Team B includes the team leader, Ms. Burgio; four staff teachers, Ms. Cannon, Ms. Konst, Ms. Liddle, and Ms. Nemmer; three full-time student teachers, and two part-time participants.

Team B has 120 students, ages 6, 7, and 8. One student was transferred to the team from a kindergarten class; 67 students are first graders, and 52 are second graders.

Professional background. Four of the teachers have been at Alys Drive since IGE was implemented there. This is the first year of IGE experience for the fifth teacher.

Three of the teachers participated in the 1971-1972 inservice program at Alys Drive. They, and a fourth teacher, have attended school and regional IGE workshops. The fifth teacher, who joined the staff in the middle of this year, has received her IGE training from the team staff members.

Team planning. Team meetings are scheduled each Thursday at 1:30 and last from one to three hours, depending on the work to be accomplished. Team B teachers have a half hour of planning time during each school day. This is sometimes used for team planning and sometimes for individual planning. Each of the teachers devotes an average of one hour or more before or after school daily for personal planning.

Re-grouping of students for word attack skills is a regular agenda item for the weekly team meeting. Other regular items include mathematics skills and topics for instruction in social studies and science. Communications coming from or directed to the IIC are also discussed. One such item at an April meeting was consideration of how to serve the student teachers from an undergraduate college when the only reimbursement the college could offer was fee waivers--which were applicable only to undergraduate courses. Discussion of team matters also occurs frequently in the lounge before school, during the team's common planning time (9:45 to 10:15, Monday through Thursday), and at lunch time.

The team leader prepares an agenda for each regular team meeting.

During the meeting, minutes are written on a duplicating master. These are duplicated and distributed to all team staff members, the principal, and the reading teacher. The minutes include a listing of the new skill groups--skills to be learned and students and teacher assigned to each skill. Other decisions are recorded in abbreviated form. Decisions made in informal settings are not recorded. An attempt is made to inform each staff member of such decisions by word of mouth.

There is very little specialization of work within the team. One teacher has the responsibility for ordering films for the team. All teachers have responsibilities for designing units of instruction and preparing materials.

Student organization. The students are grouped for homerooms by grade level. There are three first-grade rooms and two second-grade rooms. Team B occupies five classrooms in the middle section of the primary wing.

The daily schedule of instruction has been determined cooperatively by the team staff (see Figure 4.3). Instruction in the basic curricular areas occurs at the same time in all five homerooms.

Instructional Programming in Reading--Word Attack Skills

Instruction for word attack skills is scheduled from 9:10 to 9:40 Monday through Thursday. On the first day of new skill groups, each homeroom teacher reads the lists to her students, then has them line up and go to the appropriate room. On the following days, the teachers give permission to go to skills groups and the students find their way

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:10-9:40 Word Attack Skills	9:10-9:40 Skills	9:10-9:40 Skills	9:10-9:40 Skills	9:10-10:10 Reading
9:45-10:15 Burgio - Music Nemmer, Konst - Gym Cannon - Art	9:45-10:15 Nemmer - Music Cannon, Burgio - Gym Konst - Art	9:45-10:15 Burgio - Music Nemmer, Konst - Gym Cannon - Art	9:45-10:15 Nemmer - Music Cannon, Burgio - Gym Konst - Art	10:15 - Music (Konst) 10:15 - Art (Burgio)
10:30-11:30 Reading *11:00 - Library (Burgio)	10:30-11:30 Reading *11:00 - Library (Cannon)	10:30-11:30 Reading *11:00 - Library (Konst)	10:30-11:30 Reading 10:45 - Music (Cannon) *11:30 - Library (Nemmer)	10:45 - Music (Cannon) 10:45 - Art (Nemmer) 11:30 - Library (Liddle)
11:30 Spelling 12:15 Lunch	11:30 Spelling 12:15 Lunch	11:30 - Spelling *12:00 - Art (Nemmer) 12:15 - Lunch *12:30 - Lunch (Nemmer)	11:30 - Spelling 12:15 - Lunch 12:45 - Music (Konst)	12:15 - Lunch
1:15-2:00 Math	1:15-2:00 Math	1:15-2:00 Math	Early Dismissal	1:15-2:00 Math
2:00-3:00 Study Skills (Social Studies and Science)	2:00-3:00 Study Skills (Social Studies and Science)	2:00-3:00 Study Skills (Social Studies and Science)	Team	
2:30 Burgio - Art 3:10 - Dismissal	3:10 - Dismissal	3:10 - Dismissal	Meeting	3:10 - Dismissal

* = Exception to schedule

[ ] = Specials

Figure 4.3

Team B Daily Schedule

to the right places. The students accept the changes of groupings and locations, and there is very little problem in having the students appear in the right place at the right time.

IPM - Step 2. The word attack skills which have been identified for instruction for the Team B students are the Level A, B, and C skills; skills from Level D are sometimes taught to a few students.

IPM - Step 3. All students have taken the placement tests to determine initial skill group placement. At the beginning of the school year, the scanning test is used to determine the skills each student has either retained or forgotten during the summer.

IPM - Step 4. Mastery of skills is recorded on a wall chart for all students. This record is used to determine the skills which each student should learn. Results from the scanning test are also used for the initial skill grouping in the fall.

IPM - Step 5. Instructional groups are determined at team meetings. A group of skills are identified for which some students need instruction. The number of skills which will be taught in any time period is determined by the number of staff members available; this varies, depending on the number of student teachers assigned to the team. All students are assigned to a group. Group sizes generally range from five to fifteen students.

The following example of the groups identified for one instructional sequence is taken from the minutes of the team meeting on April 8, 1976: compound words, 22 students, Reading Room; Dolch list, 14 students, Reading Room; possessives, 8 students, a student teacher; possessives,

7 students, Ms. Burgio; possessives, 11 students, a student teacher; diphthongs, 9 students, Ms. Nemmer; digraphs (B-8), 11 students, Ms. Liddle; contractions, 16 students, Ms. Konst; plurals (C-13), 8 students, Ms. Cannon; plurals (C-13), 8 students, a student teacher.

Each teacher is responsible for planning the instructional activities for one or two groups. The groups meet in the classrooms, in the Reading Center, and in the halls. The WDRSD resource files are used by some teachers for instructional activities and worksheets. Other activities are selected on the basis of prior experience, from the Reading Center or homeroom files, and from basal reading materials. Teachers usually present a skill in an oral activity; students have opportunities to answer questions, select examples, and discuss the application of the skill. Worksheets, oral exercises, and games are used to reinforce new learnings. Those students who master the skill before the end of the scheduled instructional period work on application of the skills or are assigned to another group.

IPM - Steps 6 and 7. At some time during the two-week period, posttests are given to determine whether each child has learned the skill being studied. The results of the posttests are recorded on the group record chart, and new groups are formed. Students who did not master their skills are placed in another group to study the same skill either during the next instructional sequence or at a later date. This decision is based on the judgment of the team teachers.

Pattern of instructional programming. Common objectives are set for all students, and all are expected to master these objectives. A

suggested sequence of objectives is used to guide planning, but variations are made as necessary to provide instruction for all students within the limits of possible grouping arrangements.

Instructional Programming in Reading--Comprehension

Each homeroom teacher has the responsibility for instruction in comprehension and vocabulary development. Approximately one hour is devoted to comprehension instruction each day. Comprehension skills are those identified in the SPPED materials. The objectives for the Team B students are to reach the level of achievement required by the SPPED tests for first- or second-grade students. Teacher judgment by the team teachers and the reading teacher along with information acquired from tests that accompany basal readers are used to determine initial placement of students in a basal reader which is appropriate for each student's level of achievement.

Each teacher has two, three, or four reading groups for her homeroom students. Each group proceeds through its assigned basal reader in the sequence in which the book is written, with occasional variations due to student interest or the teacher's own ideas for a more interesting sequence. Different groups proceed at different rates depending on the students in each group. Provisions such as peer tutoring or extra teaching from an adult are made for students who tend to work at a slower rate.

Printed materials (basals, other story books, workbooks, instructor-written and learner-written materials) are used for approximately 70

percent of the reading instruction. About 10 percent of the instruction is carried out with audiovisual materials (films, filmstrips, audiotapes, records, overhead projectors, and videotapes). The remaining 20 percent is based on games, flash cards, and chart materials.

Students in small groups receive some direct instruction from a teacher almost every day. Other activities are completed alone or with a few classmates. Students make choices for about half of the activities they pursue without teacher direction.

Three half-hour blocks are available each week for comprehension activities in the Reading Center. The team plans for the use of this time so that all students have some opportunities for additional comprehension instruction over a period of three or four weeks.

Some students are assigned to the Resource Room to receive individual instruction as needed to assist them in learning to read.

Developing a positive attitude toward reading is emphasized. Encouraging students to select books for independent reading is considered to be an important element in developing a positive attitude.

The groups for reading comprehension are fairly stable, but changes within each homeroom are made when the need arises. Based on observations of a student's performance, teachers make the decisions to assign the student to another group. The reading teacher is sometimes asked to test individual students and make recommendations for re-grouping.

During the second semester of first grade or anytime in second grade, teachers may decide to use the SPPED tests for diagnostic or

record-keeping purposes. Students who do not attain the criterion level for a given area are given additional instruction in that area. SPPED test results are recorded on a group record sheet. Some teachers keep a file of work samples for each student.

Pattern of instructional programming. Common objectives achieved to mastery are used in comprehension. The sequence of instruction is determined by individual teachers for their homeroom students.

Instructional Programming in Reading--Study Skills

Study skills are taught by homeroom teachers within the context of science and social studies. Levels A, B, and C skills are used. Sequence, content, and instructional procedures are at the discretion of each teacher. These plans are sometimes discussed at team meetings or in informal conversations as a matter of keeping each other informed.

Instructional Programming in Mathematics

Mathematics is taught within the homeroom setting. The teachers as a team determine the sequence in which objectives will be taught. Four hours each week are scheduled for mathematics instruction.

IPM - Step 2. The math program for Team B students is built around the objectives identified for grades one and two in the CAM math system. Tests based on these objectives are provided for grade two. The teachers have prepared tests for use with the objectives for grade one.

Most of the students at each grade level are expected to achieve the objectives designated for that grade level. However, provisions

are made to permit some students to achieve more advanced objectives and some to achieve fewer objectives.

IPM - Steps 3 and 4. At the beginning of the year, a pretest which reflects all the objectives for each grade level is given to all students at that level. Based on the results of this pretest, each teacher selects objectives for the students in her homeroom.

IPM - Step 5. New objectives and related instructional activities are usually introduced by a teacher to a group of approximately 25 students. Following the introduction of objectives, about half of the students' time is spent in teacher-led small group activities. The availability of several student teachers on the team makes it possible to provide a large amount of small-group instruction. The remainder of the time is spent working alone or in pairs.

Individual teachers plan the activities which they will use for teaching each objective. Manipulative materials, audiovisual materials, and printed materials are used in instructional activities. As a team, the teachers discuss the materials available and share ideas about appropriate media for different objectives. Manipulative materials, including building objects, games, charts, and models are used for approximately 70 percent of the instructional time. Printed materials, including workbooks and teacher-prepared materials are used for 20 percent of the instruction. Films, filmstrips, and audiotapes make up the remainder of the instructional materials.

The majority of the students at each grade level move at the same rate in their math programs. Variations are possible for those students

who achieve their objectives more quickly and for those students who need more time. Students sometimes request additional activities on a particular objective. They may also request to move on to new objectives ahead of the group.

IPM - Step 6. The CAM system includes six criterion-referenced tests for each grade level. One of these is given every six weeks during the year. The results of these tests are used to determine the performance of each student. Re-teaching or review of specific objectives is planned for those students who have not retained skills which they learned earlier in the year.

IPM - Step 7. Group record charts are used to record assessment information for each student. This information is used by the teachers in planning for mathematics instruction. Individual teachers provide additional instructional activities for students who do not achieve their objectives; this may occur immediately after the posttest, or at a later date.

Pattern of instructional programming. Common objectives are set for the students at each grade level. All students are expected to master these objectives. The teachers as a team determine the basic sequence of instruction. Some variations in sequence are made in response to the needs or interests of individual students.

Other Curricular Areas

Language arts instruction occurs in the homeroom setting. The students are not cross-grouped among the rooms. Few references to language

arts plans are made at team meetings. Contracts are used by some teachers for spelling instruction.

Topics for science instruction are discussed at team meetings. A combination of SAPA, WDRSD: Study Skills, and teacher-made materials are used for science instruction. The three first-grade teachers usually plan together for science. Activities related to the selected topics and the procedures for teaching them are then determined by each homeroom teacher. These ideas are sometimes discussed at team meetings.

General topics for social studies instruction are selected by the team. Sometimes planning is done cooperatively by the team, sometimes by individual teachers for their homerooms. This decision is basically a matter of time and interest. In November, 1975, all teachers and students on the team cooperated in a social studies unit on Indians, Pilgrims, and Thanksgiving. The culmination of this unit was a Thanksgiving luncheon which the students planned and prepared.

In March, 1976, the team focused social studies instruction on the topic of Brotherhood. This began in late February when the three first grades selected Brotherhood as a topic and decided to study children in other countries. Among other activities, they discussed having a tasting party at which children could sample foods from the countries they studied. In the course of informal conversations about the unit, the second-grade teachers became involved. Plans continued to develop: each group would learn a song from the country they were studying; each group would learn a folk dance; parents would be asked to contribute a favorite national food. The activities grew, the plans

increased, and it was decided to have a combined program and tasting party on Friday, April 2. Invitations were sent to Central Office personnel, Board of Education members, and parents. The parents were invited to donate food if they wished.

During the week of March 30, much time and effort went into practicing songs and dances for the program. Regular schedules were disregarded to provide time for practicing in the cafetorium. This involved trying out songs and dances on the stage as well as learning where and how to sit as a member of the audience. At times, nerves became frayed and children became restless. Three large-group practice sessions were held in the cafetorium during the week.

On the morning of the program, parents began delivering the foods they had prepared. Teachers and student teachers also brought foods. There were 50-60 containers of foods representing about 20 nations. The multipurpose room was used to set the foods out in cafeteria style. At 12:30, serving began. The superintendent, an assistant superintendent, a curriculum coordinator and two or three board members came. The principal, reading teacher, and some other staff members also came. Under the direction of the unit leader and teachers, parents and other available adults assisted with the serving. The students were wide-eyed at the selection of foods, but all managed to find several items which looked intriguing. The students returned to their homerooms to eat. The visitors ate with the students.

After the serving, eating, and clean-up were completed, the students played quiet games, talked, or listened to stories. Shortly

before 1:30, the teachers and students took their places in the cafetorium. At least 100 parents, young siblings, and other relatives were there to see the program. The students presented their announcements, explanations, songs, and dances according to plans--and all (participants and audience) were immensely pleased with the experience.

Additional Information

Team B is the only team which has five homerooms. The music, art, and physical education schedules for primary teams are set up to provide for four special classes at a single time, thus freeing all homeroom teachers on a team for a common planning time. To handle the five homerooms, the students from Ms. Liddle's homeroom have been divided into four small groups, each of which goes with another homeroom for special classes. This arrangement is quite satisfactory for the 9:45 to 10:15 special classes, but it does create an unusual situation when special classes are scheduled at other times for a single homeroom. It is the opinion of the team, especially Ms. Liddle, that the importance of a common planning time outweighs the inconvenience of having small groups of students leaving the room during time scheduled for homeroom instruction.

In discussing the importance of planning and teaching as a team to provide for the needs of individual students, one teacher explained, "Cross-grouping works with teaching academically . . . that is, teaching more specific skills . . . but otherwise homerooming is more effective. . . . We used to group more, but have back-tracked; homeroom teachers

can really know their students better."

Team C

Staff and Students

The staff of Team C includes the team leader, Ms. Jakubowski; three teachers, Ms. Beris, Mr. Raimondo, and Ms. Roche; and two full-time student teachers.

There are 97 eight and nine year old students on Team C; 82 are third graders and 15 are fourth graders.

Professional background. The team leader has taught in an IGE school for four years. Two teachers have three years' experience in an IGE school, and one is a second-year IGE teacher. Team C was first organized as part of the multiunit school in 1973-1974 when WDRSD: Word Attack was introduced at the third-grade level. These teachers were not involved in the 1971-1972 year-long inservice program about IGE and WDRSD. The team leader has participated in IGE workshops. She has been the source of information about IGE for the other team members.

Team planning. The weekly schedule provides for four hours of planning time--two hours during the day and two hours after school. Team meetings are scheduled during these times; the time not spent on team meetings is used for personal planning. Additional time for individual planning is taken before or after school as needed by the teachers.

Regular team meetings are held at 1:30 on Thursday. The team meets

during the daily 10:15 to 10:45 common planning time when there is a need. The team leader prepares an agenda for regular team meetings; all team staff members contribute items for the agenda. Minutes are written for each meeting and distributed to the team staff and the principal. The team leader keeps a complete set of minutes in a notebook.

The Team C staff members have developed some areas of specialization. Two of them were on the committee which developed the CAM math program. They have continued to be mathematics resources persons for the team. The other two teachers assume much of the responsibility for preparing learning contracts. All teachers are involved in preparing instructional materials.

Student organization. The students in Team C are homogeneously grouped for homeroom. Two homerooms are comprised of the slower students and the other two have the higher achieving students. Team C occupies four rooms near one end of the intermediate wing; three are adjoining rooms on one side of the hall and the other is across the hall.

Team C uses a team-wide daily schedule (see Figure 4.4); thus, the schedule within all four homerooms is basically the same.

Instructional Programming in Reading--Word Attack

This is the third year that Team C has used WDRSD. One or two in-service sessions were provided for the staff to learn about the Design. Three half-hour periods each week are devoted to instruction in word attack.

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00- 9:10	Home Room	Home Room	Home Room	Home Room	Home Room
9:10- 9:30	Spelling-Activities →				Specials vary to each teacher -Math -Spelling
9:30-10:15	Math	Math	Math	Math	
10:15-10:45	Specials (see individual schedules)				
10:45-11:00	Snacks, drinks, lavatory				
11:00-11:30	Reading	Home Room class times (health, science, enrich.)	Reading	Home Room class times (health, science, enrich.)	Reading
11:30-12:00 12:00-12:30	Comprehension (Reading Center time- 11:30-12:00)		Comprehension (Reading Center time- 11:30-12:00)		Comprehension (Reading Center time- 11:30-12:00)
12:30- 1:00	Lunch	Lunch	Lunch	Lunch	Lunch
1:00- 1:30	Writing-Language	Writing-Language	Writing-Language	Dismiss at 1:10	Projects —
1:30- 2:00	Skills	Skills (1:20-2:00)	Skills		--art, ss
2:00- 2:30	Social Studies	Science	Social Studies		--science
2:30- 3:00	Films-projects	Science	Films-projects		--holidays
3:10	Dismiss -- (1) walkers, (2) buses when called				

Instruction Per Week

Math- 225 min.

Spelling- 100 min.

Comprehension- 270 min.

Skills- 100 min.

Writing-Lang.- 90 min. +

Social Studies- 135 min.

Sci.-Health- 90 min.

Figure 4.4

Team C Daily Schedule

IPM - Step 2. Level C skills of WDRSD: Word Attack are the basic set of skills taught in Team C. Instruction also includes Levels B and D skills for students whose performance indicates that instruction at these levels is appropriate.

IPM - Steps 3 and 4. The locally-prepared scanning test is given at the beginning of the school year. Information from this test and from the group record chart of the previous year is used to determine a subset of skills which each student should learn. Based on the tests, prior information, and teacher judgment, skill groups are identified at team meetings or by the team leader.

Most of the time, all students are placed in skill groups. In occasional instances where a student is not assigned to a skill group, he or she uses skill time to study in the Reading Center or Media Center or to pursue reading-related activities in the classroom.

IPM - Step 5. Skill groups are taught by all team teachers and in the Reading Center. An attempt is made to assign groups to teachers so that teachers have as many of their homeroom students as possible.

Individual teachers determine the activities and procedures to be used for teaching their skill groups. Most skill instruction involves oral presentations, discussions, and worksheets. New skills are presented to the whole group. Related activities are carried out by the entire group, by smaller groups, or individually. Teachers provide extra assistance to small groups or individuals as needed.

Students who master a skill before the end of the instructional period do not continue to work with the group. They may select enrichment

activities or work independently on reading activities involving more difficult vocabulary, word usage, or application of skills.

IPM - Step 6. The period of time devoted to a single sequence of instruction varies. After skill groups have been functioning for several days, the team decides when to complete the sequence. All students take the posttest for their skill.

IPM - Step 7. The results of the posttests are recorded on the group record chart. The chart is used to determine the skill groups for the next period of instruction. Students who did not master their skills are re-assigned to a group studying that skill either immediately or at a later date.

Pattern of instructional programming. There are common objectives for all students, and full mastery is the expected level of achievement for all. The sequence of instruction is determined by the needs of students in the team; decisions about sequence are made by the team staff.

Comment. Team C staff members indicated that they support the skill group approach. Because the skills are isolated, the students get more thorough instruction in each skill which helps them read better. In the other reading activities, they can really focus on comprehension because recognizing words is less of a problem.

The students enjoy the cross-team grouping because they have opportunities to be with different teachers and with friends from other rooms.

Instructional Programming in Reading--Comprehension

Instruction in reading comprehension is scheduled for 270 minutes weekly (11:00 to 12:30 Monday, Wednesday, and Friday).

At the beginning of the school year, all the students on the team are grouped for comprehension. Eight or more reading groups are formed, each at a different level. Each teacher has at least two groups. Students do not necessarily stay in their homerooms for reading, but the teachers tend to teach those groups which have many of their homeroom students.

As a team, the teachers select basal readers for each group. They try to match the basals with the type of students who are in each group. The initial groups are formed on the basis of information from past records, recommendations from previous teachers (including the reading teacher), comprehension tests, and teacher judgment. After a few days of instruction, changes are made based on teacher observation of student performance.

The SPPED comprehension skill areas are used as a focus for instruction. The results of the SPPED tests are used as one source of information for assisting in planning instructional activities in comprehension.

In addition to basal reader materials, Team C uses contracts as an important element of their reading program. Some contracts are directly related to content in a basal reader. One such contract included the following directions:

1. VOCABULARY - Write the pronounciations for . . . .

2. Use your glossary to define . . . .

3. Read "Danger at High Tide," pp 63-72.

   Answer the questions.

   FACT QUESTIONS . . . .

   INFERENCE QUESTIONS . . . .

4. CREATIVE CORNER: Describe a time when you have been lost or wandered so far away that you had trouble getting back home again.

5. FOR FRIDAY: Research workbook 26-29

6. Learn some French words! Turn to page 82 in the book, Let's Travel in France. Pick 5 words or sentences. Write them in French with the correct pronounciation.

7. Use the book, Let's Travel in France, to answer these questions . . . .

8. Use the book, Life World Library--France, to answer these questions . . . .

Other contracts focus on certain types of activities rather than specific content. An example of this is a contract for a book report (see Figure 4.5) which includes brief directions for each day and two forms on which to write the report (one for the scrap copy, one for the final copy).

Students are encouraged to plan and carry out activities which involve reading. They have brought paperbacks, magazines, old encyclopedias, and comics from home. Other materials available at school are encyclopedias, library books, dictionaries, paperbacks, and newspapers. These materials are used for independent reading and for specific

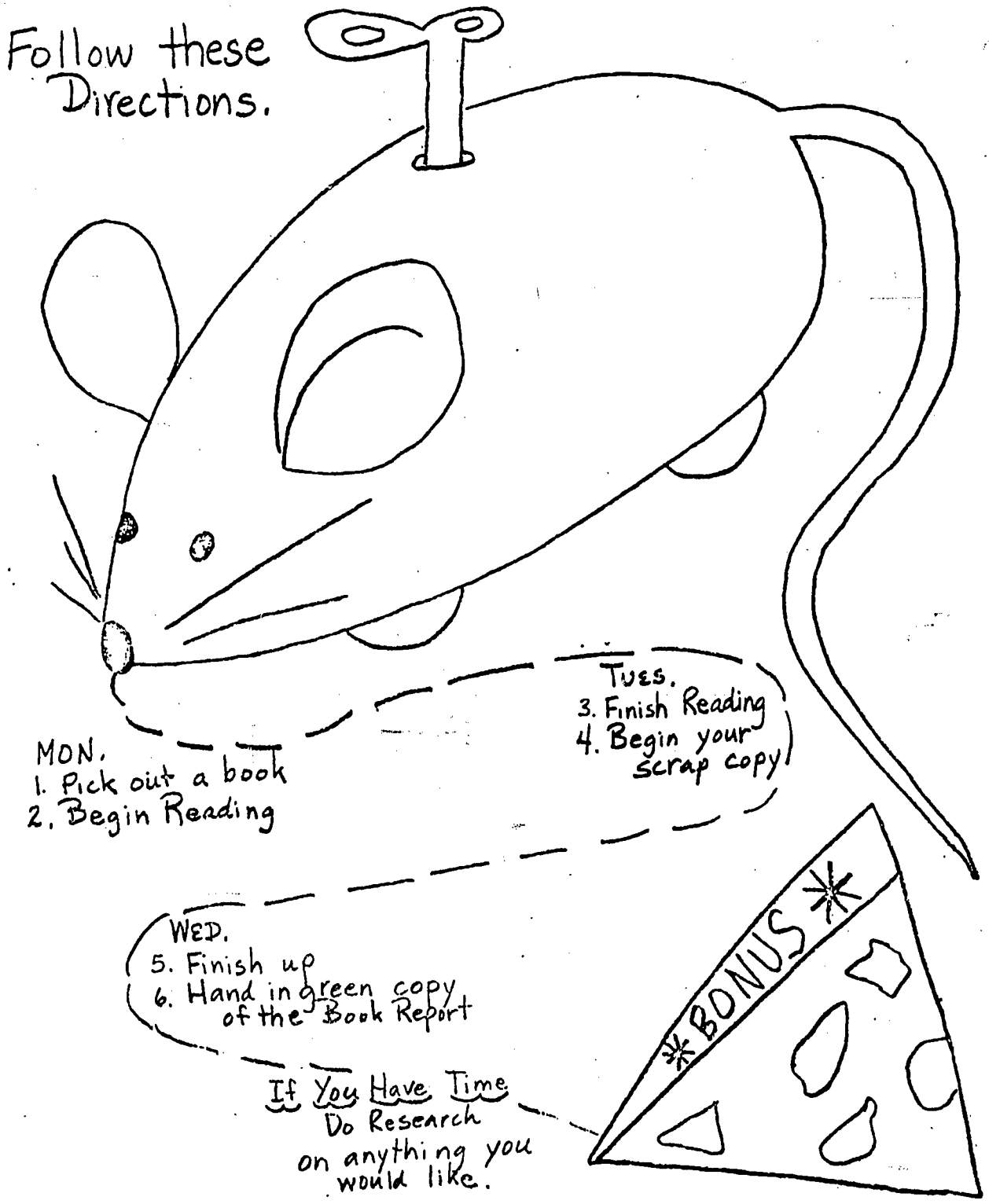
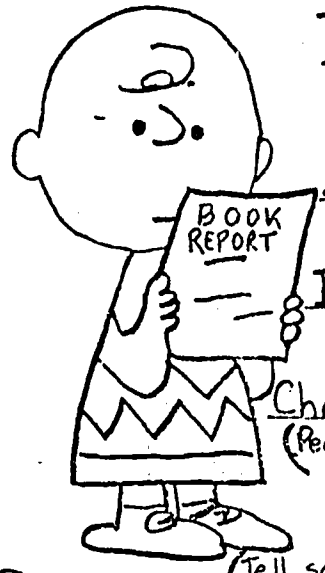


Figure 4.5

Book Report Contract



Title: _____
(Remember each word begins with a capital letter)

Author: _____
(Person who wrote the book)

Illustrator: _____
(Name of the person who drew the pictures)

Characters: _____
(People in the story) _____

_____

Summary: (Tell something that happens in the beginning of the story, something as the story goes on, and something at the end of the story.)

Opinion: (Did you like the story? Tell why or why not.)

Figure 4.5 (Continued)

Book Report Contract

projects identified by students or teachers.

The students are encouraged to use the Media Center for research and for selecting books for independent reading. The Media Center schedule includes an 11:30 to 12:00 (Monday-Thursday) block for Team C which coincides with Team C's schedule for reading comprehension. Sometimes students may choose to use their reading time at the Media Center.

Additional comprehension instruction occurs in the Reading Center. Each student is scheduled for the Reading Center for three half-hour periods every other week. Ms. LaCrego plans instructional activities which involve reading kits, audiotape lessons, filmstrips, and other supplementary materials. The students also have opportunities to select those materials which are of interest to them.

Although the students are grouped for comprehension, much of their learning occurs independently or in small groups of friends.

The comprehension groups are flexible. Re-grouping is a continual process, occurring whenever the staff determines that an individual student would benefit from a different group assignment. Many of the Team C students change reading groups during the course of a year.

Pattern of instructional programming. The basic areas of instruction in comprehension are common for all students. Achieving mastery as defined by the SPPED comprehension tests is expected for all students, but programs for individual students are not limited to that which is required for mastery. Each teacher determines the sequence of instruction for his or her groups. Variations in the basic sequence occur when students carry out independent activities.

Instructional Programming in Reading--Study Skills

Level C skills are taught in Team C. They are taught within the context of science, mathematics, and social studies. Those skills which relate to using books and libraries are taught by Ms. Bell in the Media Center.

Team C has decided not to use the tests provided with WDRSD: Study Skills as the information gathered has not been useful to them. Records are kept of the study skills each student has studied.

Instructional Programming in Mathematics

The mathematics program of Team C is based on the CAM objectives for third grade. There are 32 objectives grouped under the nine main topics. This is their second year of using this mathematics program.

Mathematics is scheduled for 45 minutes each day, providing 225 minutes of math instruction each week. Students remain in their homerooms for mathematics.

IPM-Step 2. The 32 third-grade objectives comprise the major part of the math program for most students. Additional objectives at a lower level are identified for those students who have not yet achieved them. Provisions are made for those students who are able to work on higher level objectives.

IPM - Steps 3 and 4. In September, all Team C students are given a general math pretest which includes items related to all 32 objectives. Individual teachers use the information from these pretests to plan the math programs for their homeroom students.

Individual teachers determine the topics and related sets of objectives to be taught at a given time. Grouping patterns include some independent work and various grouping arrangements with an instructor. Approximately 40 percent of the math instruction is in large groups (20-25 students) with a teacher. About 30 percent of the time, students work alone. During the remainder of the instructional time, teachers work directly with individuals or with small groups.

Commercially prepared worksheets, instructor-prepared printed materials, workbooks, and texts are used for about 60 percent of the instruction in math. Teacher presentations and discussions are used for introducing new concepts. Some audiovisual materials (films, filmstrips, and audiotapes) and some manipulative materials (games, charts, and three-dimensional materials) are also used. The team members are working cooperatively to develop a file of printed materials related to each objective.

In each homeroom most of the students move at the same rate through the math program. A small number of students move at a slower rate and do not achieve the complete set of 32 objectives.

IPM - Step 6. Upon completion of activities related to a single topic, mini-tests are given. The results are stored on record charts.

IPM - Step 7. A new topic or set of objectives is selected by individual teachers for their students to pursue. Students proceed to this new topic regardless of their performance on the posttest for the previous topic. Additional instruction on specific topics is provided at a later time for those students who need it.

At intervals during the year, retention tests are given to determine which students may need additional help on earlier objectives. A single test may serve as a posttest, pretest, and retention test. These tests are part of the CAM system. The results are stored in the computer system. Some results are also recorded on group charts and used to determine appropriate instruction for individuals or the whole group.

Pattern of instructional programming. There are common objectives for all students in the team. Mastery, as defined by scores on the CAM tests, is expected for all students. The sequence of instruction is determined by individual teachers for their homeroom students.

Comment. Team C expects to discontinue the use of computer storage of information after this year. The teachers find their own record-keeping devices to be sufficient for their needs and feel that the cost of the computer is an unnecessary expense.

The teachers mentioned several aspects of the CAM math program which make it valuable for them. The set of objectives gives them a clear, concise outline of the intent of the math program. They are able to adjust their teaching to their styles and the students' needs by selecting materials from a variety of sources. And, the students are aware of their progress. They know what is expected of them, how many objectives they have achieved, and how well they are doing.

Other Curricular Areas

Language arts instruction is the responsibility of the homeroom teachers. However, there is much team sharing of ideas and an exchange

of student contracts for language activities.

The spelling program is based on a third-grade text. Many of the activities for students are organized in contracts. These contracts often include a specific activity for each day of the week. Students work on their contracts during free moments and independent study time as well as during spelling time. Word attack skills are integrated into the spelling program. This includes review of previously learned skills and some introduction of new skills.

Instruction in social studies and science is carried out in the homeroom setting. Informal discussion among team members sometimes leads to a team-wide emphasis on the same topic during a given period of time. Records are kept to indicate which science units the students have studied.

Team D

Staff and Students

The staff of Team D includes the team leader, Ms. Bulera; three teachers, Ms. Johnson, Ms. Lewandowski, and Ms. Osvath; and three full-time student teachers. Team D is basically a fourth-grade team of 106 students, ages 9, 10, and 11.

Professional background. Two of the staff members have been at Alys Drive since the original implementation of IGE; the other two teachers have had three years' experience in an IGE school.

The team leader has participated in two unit leader workshops, in

inservice programs related to WDRSD, IGM, and DMP, and is currently taking an IGE course. One staff teacher is also taking the IGE course. Another staff teacher participated in district IGE workshops. All staff teachers have been involved in IGE orientation meetings. The team leader has served as a resource person to the team in providing information and leadership in implementing IGE.

Team planning. Team D has four 45-minute periods of common planning time weekly. Team meetings are held during these periods. Meetings are not scheduled regularly, but are held when there is a need. Informal conversations in the lounge frequently occur during these blocks of time; team plans and decisions often result from these conversations.

Informal agendas are used to organize team meetings. Skill groupings and necessary communications are frequent agenda items. As an example, the agenda for the team meeting of April 6, 1976, included parent conferences, reports and record forms, and re-grouping for word attack skills.

Minutes of meetings are not usually written. According to the team leader: "Our first year in IGE our unit meetings were more formally organized and more frequent. This year we are able to function more informally. All of us . . . know what needs to be done and do it!"

Some specialization of work has developed among the team staff. The team leader takes responsibility for matters related to organization and scheduling. Two staff members teach all the science and the

other two teach all the social studies.

Student organization. The students are heterogeneously grouped in homerooms. The team uses a team-wide daily schedule. Figure 4.6 shows a student schedule. Each student checks the boxes to indicate his or her responsibility at the times when instruction occurs in different curricular areas. On the line below the name of each curricular area, the student fills in the teacher for each area.

Team D occupies four rooms in the central section of the intermediate wing. Three are adjoining rooms on one side of the hall; the other is across the hall.

Instructional Programming in Reading--Word Attack

This is the second year Team D has used WDRSD. Instruction in word attack skills is scheduled for 100 minutes a week (four 25-minute periods).

IPM - Step 2. No specific set of word attack skills has been identified for instruction in Team D. An assumption is made that any skills which have not yet been mastered are appropriate for instruction for individual students. Level D skills comprise the major portion of the program, but lower-level skills are included for those students who have not yet mastered them.

IPM - Steps 3 and 4. Students are placed in skill groups based on information recorded on the group record chart and on the results of the scanning test given in the fall.

IPM - Step 5. Every two or three weeks, new skill groupings are

MONDAY	TUESDAY	WEDNESDAY	THRUSDAY	FRIDAY
9:00- 9:15	pledge, lunch count, attendance, morning study period			
9:15- 9:55 Math	9:15- 9:55 Math	9:15- 9:55 Math	Science ☐ Social Studies ☐	9:15- 9:55 Math
10:00-10:55 Reading	10:00-10:55 Reading	10:00-10:40 Science ☐ Social Studies ☐	10:00-10:55 Reading	10:00-10:55 Reading
11:00-11:25 Skills	11:00-11:25 Skills	10:45-11:25 Science ☐ Social Studies ☐	11:00-11:25 Skills	11:00-11:25 Skills
11:30-12:00	lunch			
12:00-12:45	12:00-12:45	12:00-12:45		12:00-12:45
12:55- 1:25 Spelling	12:55- 1:25 Spelling	12:55- 1:25 Spelling		12:55- 1:25 Spelling
1:30- 2:15 (2:10) Art ☐ Library ☐ Music ☐ Gym ☐	1:30- 2:15 (2:10) Art ☐ Library ☐ Music ☐ Gym ☐	1:30- 2:15 (2:10) Art ☐ Library ☐ Music ☐ Gym ☐		1:30- 2:15 (2:10) Art ☐ Library ☐ Music ☐ Gym ☐
2:25- 3:00 Science ☐ Social Studies ☐	2:25- 3:00 Science ☐ Social Studies ☐	2:25- 3:00 Science ☐ Social Studies ☐		2:25- 3:00 Science ☐ Social Studies ☐
3:00- 3:15	Dismiss School			

Figure 4.6

Student Schedule--Team D

determined by the team. Skills to be taught are selected, students are assigned to appropriate groups, and teachers (including the Reading Center staff) are identified for each group. Individual teachers plan the activities for their group. Instruction generally occurs in small groups of 12-15 students. Worksheets, oral activities, and games are used for instruction. Application of skills is emphasized at the time students are learning the skills.

Students who are not placed in skill groups are organized into enrichment, application, or study skill groups. Students who master skills early in an instructional sequence are usually placed in another group for instruction in a different skill.

IPM - Step 6. Upon completion of a sequence of instruction, the students take the posttest for their skill.

IPM - Step 7. Results of the posttests are recorded on the group record chart. Students who did not achieve mastery are re-assigned for instruction in the same skill at some time in the future.

Using the group record, the team selects another set of skills. New groups are formed, and the sequence continues.

Pattern of instructional programming. There are common word attack objectives for all students in the team. Full mastery is the criterion set for all these objectives. The sequence is determined by the team staff; variations are made to adjust to the needs of individual students.

Comment. The staff of Team D indicated that they consider the Reading Center concept and the instructional cycle for word attack

skills as strong and important elements in their reading program.

Instructional Programming in Reading--Comprehension

Approximately four hours are devoted to instruction in comprehension each week. At the beginning of the year, all students on the team are grouped for reading comprehension. Two or three groups are assigned to each teacher. These groupings are based on student achievement as indicated by performance during the previous year and on the SPPED comprehension tests. A basal reader series is selected for each group. The difficulty levels of these materials range from second through fifth grade. Although more than one group may use materials at the same level, the expected level of achievement or rate of progress for the groups may differ. Comprehension reading groups are fairly stable through the year, but some re-grouping occurs in response to changing patterns of performance of individual students.

Individual teachers are responsible for planning the instructional activities and selecting supplementary materials for their reading groups. As a result of much informal interaction among the team staff, teachers are aware of what other teachers are doing and often exchange materials and ideas for instruction.

Some comprehension instruction also occurs in the Reading Center. Three half-hour periods weekly are scheduled for Team D comprehension; the students go on a rotating basis so that each receives instruction in the Reading Center every two weeks.

Approximately 70 percent of each student's reading time is spent

in small groups with a teacher. New concepts are taught; improving comprehension is emphasized; and word attack skills are reinforced. The basal reading materials are used for this small group instruction. Other materials such as workbooks, teacher-prepared activity sheets, paperbacks, films, filmstrips, audiotapes, and games are also used.

During the remaining 30 percent of reading time, students work independently or on a one-to-one basis with the teacher. Students meet individually with teachers for: (1) instruction on a specific topic or objective; or (2) conferences to discuss independent reading activities and to plan personal reading programs.

Contracts are used to organize independent reading activities for some students. These contracts indicate books or stories to read and related activities to complete. Individualized reading kits are used by some students for instruction, for enrichment, or for application.

At appropriate times, such as upon completion of a topic, a reading book, or a set of objectives, individual teachers test a group of students to determine their progress. Different types of tests (e.g., SPPED tests, tests correlated with a reading series, teacher-made tests) are used. Based on the results of these tests, further instruction is provided as needed.

The Team D students have a clear understanding of their goals and responsibilities in reading. They are aware of their mastery or non-mastery of each of the comprehension areas. They know the choices which are available for reading activities and are able to select from those with a minimum of teacher guidance.

Pattern of instructional programming. Objectives and criteria are common in that all students are expected to achieve mastery of the areas of comprehension instruction. Beyond that, there are variable criteria for individual students. The sequence of instruction is determined by each teacher for the students in her group, with some variations for individual students doing independent activities.

Instructional Programming in Reading--Study Skills

The Team D staff has identified a set of study skills which they consider appropriate for their students. These skills are taken from WDRSD Levels C, D, and E. The staff has prepared a plan to integrate these study skills with science, social studies, spelling, reading, and library (see Figure 4.7). Specific skills have been identified for groups of students at three or four different levels in each of the curricular areas. The library-related skills are taught by Ms. Bell in the Media Center; all other skills are taught within the team.

Mastery of study skills is recorded on the keysort cards provided with the WDRSD materials.

Instructional Programming in Mathematics

The team schedule includes four forty-minute periods weekly for mathematics instruction.

IPM - Step 2. Mathematics objectives for Team D include the fourth-grade objectives from the CAM system and the objectives from the Houghton Mifflin mathematics text for fourth grade.

IPM - Step 3. Students are assigned to general team-wide math

SPELLING	READING	SCIENCE	SOCIAL STUDIES	LIBRARY	CROSS SKILL GROUP
Level 3 C-11 (Optional)	Level 2 D-9	D-4, D-5, D-6 C-3, C-6, C-7, C-8, C-9 (Optional) E-4, E-5	D-7, D-12, D-13 C-10 (Optional) E-8, E-10, E-11, E-12, E-13 (Optional)	D-7, D-12, D-13 C-10 (Optional) E-8, E-10, E-11, E-12, E-13 (Optional)	Any E
Level 4 D-8, D-10 D-11 (Optional)	Level 3 D-9				
Level 4 D-8, D-10 D-11 (Optional)	Level 4 D-9, D-14				
Level 5 D-8, D-10 E-9 (Optional)	Level 5 D-9, D-14				

Figure 4.7

Study Skills Plan--Team D

groups at the beginning of the school year based on achievement scores and performance from the previous year and on the recommendations of the staff of Team C. The higher-achieving groups have 28-30 students each; the lower-achieving groups have fewer students.

IPM - Step 4. Individual teachers select the topics or objectives for their math group. One group begins with instruction at the third-grade level. The others use just the fourth-grade materials.

IPM - Step 5. All groups use the Houghton Mifflin fourth-grade text. Additional materials include commercial and teacher-made games, other texts, teacher-made worksheets, transparencies, filmstrips, and worksheets and diagnostic tests correlated with the basic text. The staff has developed a file of worksheet materials organized by skill areas (e.g., addition, subtraction, multiplication, division, place value, set theory).

Large group, small group, and independent work are used in instruction. New topics or concepts are usually presented to the large group. Small groups are used for providing additional instruction or practice as needed by students. Individually, students do much written work for practice in solving problems and in learning basic facts. Independent small groups are sometimes organized to study together and to play math games. The math programs for some students are organized by contracts.

In general, the sequence of instruction follows the textbook, but each teacher may change the sequence to suit the needs and interests of her group. Some topics are omitted for the lower groups to allow

more time for instruction and practice in basic skills. Pacing of instruction varies from group to group depending on the ability of the students.

IPM - Step 6. Text-related diagnostic tests are used when students have completed a topic. Scores are recorded on individual student grade sheets.

IPM - Step 7. All the students in a group begin new topics together. Those who need extra instruction on earlier topics are given additional help as time permits. Throughout the year students may be moved to different groups if their rates of progress suggest such changes would be beneficial.

Pattern of instructional programming. Common objectives have been identified for all students in the team. Mastery is the expected criterion for all students. Individual teachers determine the sequence for their group of students. Individual students occasionally depart from the basic sequence for specific purposes.

Comment. The Team D staff feels the CAM objectives are too general and too easy to be useful in instruction. All fourth-grade CAM objectives are included in their math text, so the text objectives are used to plan instruction. The CAM objectives are referred to for general guidelines, but the related tests are not used in Team D.

The teachers tend to become specialists in teaching different types of groups (e.g., the slower students). Each has developed certain materials and approaches which are most effective for the students in her group.

There is agreement that the math texts now being used are good instructional material. They are " . . . less abstract than earlier modern math books." Teachers like the emphasis on the more practical aspects of math. They indicate that the content is extensive and that even the best achievers will not be able to complete the entire text.

Other Curricular Areas

The students are cross-grouped for spelling. Four groups are identified at the beginning of the school year based on a pretest and records from the previous year. One group uses third-grade materials, two use fourth, and one uses materials at the fifth-grade level. Two different text series are used. After the initial groups are organized, individual teachers determine the instructional methods and procedures for their groups. Although there is no actual team planning for instruction, the teachers have some awareness of what each group is doing.

Other language arts instruction occurs with the heterogeneous groups in the homeroom setting. There are no pre-determined language objectives. The language text serves as a resource for content. Some teachers use it for instruction; others do not. A major portion of instruction is focused on creative writing and grammar.

Science instruction is based on the objectives and materials of the SAPA program. Topics from the third- and fourth-grade materials are used. Ms. Bulera and Ms. Lewandowski teach all the science for the

team. Together they decide who will teach each topic. Then each prepares for a single topic, and teaches it for all four homerooms. For example, Ms. Bulera taught the sequence on chemistry at the same time Ms. Lewandowski was teaching controlling and manipulating variables. Science is taught to one homeroom group at a time to keep the group sizes reasonable for the available space and equipment.

Ms. Johnson and Ms. Osvath teach all the social studies for Team D. The basic content is taken from the New York State curriculum, The Biographical Approach to Famous Americans. The students use a basic text, Trailblazers, as well as other texts for enrichment, along with tapes, records, and filmstrips.

Additional Information

Team D functions as a team in relation to all curricular areas. Their team efforts began with the implementation of WDRSD. They have extended these suggested implementation procedures to other curricular areas. The team leader commented, "It [the adaptation of instructional programming] seems to have developed naturally. I can't imagine doing it any other way."

The staff of Team D expressed much concern about the excessive amount of record keeping which is expected. Word attack skills are recorded on group charts and study skills on keysort cards; this information is used by the team staff. In addition, they record information on reading progress charts, comprehension skill records, conference forms, and report cards. The sentiment was expressed that, "Too much

of this record-keeping is just for show; no one ever uses it."

Compounding the frustrations of record keeping is the lack of an early dismissal time for this team. During the 1974-1975 school year, the team staff gave serious consideration to their planning time needs. The team prepared a lengthy report explaining the needs and concerns as well as some suggested solutions. The report was shared with the IIC and sent to the district office. No changes occurred as a result of the request.

Team E

Staff and Students

The staff of Team E includes the team leader, Ms. Davies; three staff teachers, Ms. Erbsmehl, Mr. Kwak, and Ms. Morris; and two full-time student teachers. Team E is a fifth-grade team of 95 students, ages 10, 11, and 12.

Professional background. This is the first year that Team E has been involved in implementing WDRSD; therefore, this is the first year these teachers have used materials designed for use in an IGE setting. However, three of these teachers have been at Alys Drive since IGE was first implemented at the lower levels, and the fourth teacher joined the team in 1973. They have functioned as an informal team for several years. All of the staff members have been involved in IGE workshops and inservice programs. Two of them are currently taking the IGE course from Fredonia.

Team planning. Team E has a daily planning time from 12:45 to 1:25. Team meetings are held at this time as the need arises. Agendas and minutes of meetings are not written.

Individual staff members have not become specialists in any aspect of team planning and instruction. The staff members of Team E consider flexibility and team effort to be two of the most important strengths of their team.

Student organization. The students are grouped heterogeneously for homerooms with about 24 students in each room. Team E occupies four rooms, two on each side of the hall at the end of the intermediate wing.

Instruction is planned according to a team-wide daily schedule. Mathematics, reading, and spelling are taught in the morning. Special classes, as well as language arts, science, and social studies, are scheduled during the afternoon.

Instructional Programming in Reading--Word Attack and Study Skills

This is the first year the fifth grades have used WDRSD. Ten students receive instruction in word attack skills in the Reading Center for a half-hour period weekly. All other students have mastered the required word attack skills.

Study skills are taught to all Team E students. Study skills are regularly scheduled for one 55-minute period each Wednesday.

IPM - Step 2. The study skills to be taught in Team E have been identified by skill topic, not by levels or by specific objectives. The number of topics taught during a year depends on the time available for

study skills instruction.

IPM - Steps 3 and 4. The team selects a single skill topic such as indexes to be taught during a 3-week period. All students then take a placement test for that topic. Based on information from the placement tests, a level of instruction in the chosen skill area is identified for each student.

IPM - Step 5. Depending on the needs of the students, four or five groups are formed. Instruction on the same skill topic is provided at Levels C, D, E, and F. The team decides who will teach each group. At times the Media Center director or a student teacher provide instruction for some groups. One teacher may teach groups at two levels if the number of students in each group is small; if the number of students at any one level is quite large, two groups are formed.

Individual teachers have the responsibility for planning instructional activities for their groups. The WDRSD resource file is used for some activity materials. The teachers use other appropriate resources, such as reference books, maps, and globes along with their own ideas and materials.

During an instructional sequence, tests are sometimes given to identify specific needs of individuals within the group. Further instruction is then focused on these needs.

In addition to direct instruction in the skill groups, study skills are reinforced in other instructional situations (e.g., mathematics, social studies).

IPM - Step 6. At the end of the pre-determined period of instruction,

all students take the posttest for their level. The results are recorded on a group record chart and later transferred to keysort cards.

IPM - Step 7. A new skill area is selected for instruction, the students take the appropriate placement test, and new groups are identified based on the results of the test.

Pattern of instructional programming. The objectives for study skills are variable, depending on each student's achievement level. A common criterion of mastery at the appropriate instructional level is set for all students. Although there is no specific sequence of instruction for the different skill topics, all students pursue these skills in an invariant sequence as a result of the management and re-grouping procedures.

Comment. The Team E staff supports the procedure of separating study skills from other content areas for instruction. According to one teacher, "There's more focus and emphasis on specific skills than when they're taught just in math and social studies."

Instructional Programming in Reading--Comprehension

At the beginning of the school year students are grouped by general reading ability into four reading groups. These groupings are based on information about each student's previous performance including recommendations from Team D, scores on the Gates MacGinitie Reading Test, and information from other achievement tests.

Each of these four groups is assigned to a teacher. Within these large groups, the individual teachers may identify small instructional

groups. This decision is based on reading level as well as student interest and attitude.

Instructional objectives for reading are determined by the staff--sometimes individually and sometimes as a team. They are based on the general fifth-grade curriculum and the abilities and needs of the students in each group. The expected level of attainment varies for individual students. One staff member indicated, "We recognize individual differences . . . have different expectations within a fifth grade norm." Basal readers and other basic reading materials appropriate for each large group are identified by the reading teacher.

The following materials and groupings were being used regularly for instruction in the four large groups in April, 1976:

Group 1: One group of 22 students was reading On the Edge; a second group of 6 students was reading Kings and Things. Both groups functioned together for other reading instruction. The students in both groups regularly used materials from an individualized literature kit.

Group 2: The students were divided into two groups using the basal readers, Kings and Things and Sky Lines. Along Story Trails was used for enrichment. Tape recordings and television programs related to Newbery Award books were used by all students.

Group 3: There were two basic reading groups using the Open Highways series, one at Level 4 and one at Level 5. All students used Sprint (a high interest, low vocabulary biweekly magazine) and Reading for Concepts as enrichment material. A strong emphasis was placed on comprehension skills for the total group.

Group 4: Two basal readers, Open Highways (Level 3) and Open Highways (Level 5) provided the focus for instruction. Individualized reading materials, at a comprehension level appropriate for each student, were used for instruction in the Reading Center.

In addition to instruction in the classroom, students carry out independent study activities. Whenever appropriate, students use additional materials such as filmstrips, tapes, and reference books in the Media Center.

At least once every ten weeks, all students are evaluated on their reading progress. As a result of the evaluation, students are re-grouped as necessary.

Individual teachers keep informal records of student performance in reading. Achievement is also recorded on the required records--the reading progress card and conference sheets.

Pattern of instructional programming. All students in Team E do not pursue common objectives. Achievement of objectives is based on variable criterion levels. The sequence of instruction differs for each group. Within each group, students follow a general sequence as determined by the teacher.

Comment. The lowest reading achievement on Team E was reported to be about a 2.5 grade level. According to Ms. LaCrego, "This is the first time that all of our fifth graders can read at least some materials."

The Comprehension element of WDRSD will be used in the school next year. Team E anticipates making some changes in their grouping and

teaching procedures when these materials are available.

Instructional Programming in Mathematics

Team E bases their mathematics program on topics included in the New York State syllabus and on the Houghton Mifflin program. Objectives are available with the CAM system, but they are not being used by Team E. They expect to use them next year.

IPM - Step 2. The objectives for math instruction are those identified by the New York State syllabus and the Houghton Mifflin program for fifth grade.

IPM - Steps 3 and 4. At the beginning of the school year, four math groups are formed. In general these are identified as above-average fifth, average fifth, below-average fifth, and very low achievers. The groups are determined on the basis of records and recommendations from the previous year. The groups are of different sizes, with the slowest group having the fewest number of students.

IPM - Step 5. All groups use the fifth-grade Houghton Mifflin math textbook. Individual teachers determine the sequence and pacing of instruction for the students in their groups. The pace varies within groups as well as between groups.

Materials other than the basic text include worksheets correlated with the text, math practice cards, instructional games, equipment (e.g., measuring tools, protractors), geometric objects, models, and teacher-made activity sheets. Films and filmstrips are occasionally used for instruction.

Introductory lessons for a topic are often presented to a whole group. Follow-up activities usually involve small group or individual work. Teachers provide specific instruction for small groups of students who need additional explanations or teacher direction. For some topics, assignments are given for a three- to five-day period. Students do these assignments independently, requesting help from the teacher as needed. Other independent activities involve small group drill or practice and the use of old math texts for additional practice or for studying a different topic.

During the course of a year, the students may make decisions about which one of a set of topics they will study. When two groups are studying the same topic, the two teachers sometimes plan instructional activities cooperatively.

In all groups, there is an emphasis on everyday applications of math concepts. This emphasis is particularly strong with the slower group. These students are expected to learn only the basic math concepts for the fifth grade. Within all groups, the expected level of achievement varies according to the ability of individual students.

IPM - Step 6. Diagnostic tests are sometimes given upon completion of a chapter or topic. If students need additional instruction, a topic may be re-taught or reviewed immediately or later in the year. Teacher judgment is used to determine whether to re-teach a topic or proceed to a new topic.

IPM - Step 7. Individual teachers keep informal records of student performance on daily work and diagnostic tests. Math achievement

is also recorded on conference forms and on the grouping chart.

The basic math groups are flexible, and individual students are re-grouped whenever there is a need for a different type or pace of instruction.

Pattern of instructional programming. There are common mathematics objectives for all students in Team E; the expected level of attainment varies depending on the ability of the students. Individual teachers determine the sequence of instruction. Within a group, students proceed in an invariant sequence with occasional alterations resulting from the interests and/or needs of individual students.

Other Curricular Areas

The grouping procedure used for math is also used for spelling. Groups at four achievement levels are identified at the beginning of the year, and changes are made as needed. Other language arts instruction occurs in the homeroom setting. Individual teachers determine topics, activities, and sequence for instruction. These decisions are based on common expectations of appropriate content for fifth grade.

In science, the Level F SAPA materials provide the focus for instruction. Instruction in science and health is basically the responsibility of the homeroom teachers. However, two of the teachers do exchange students and share instructional responsibilities in these areas.

Social studies instruction is planned and carried out by individual teachers in the homeroom setting. Most instruction is based on the

MacMillan text, Living in the Americas.

Additional Information

Three of the Team E teachers have taught together at the fifth-grade level for thirteen years. These teachers suggested that this has made it easier for them to work as a team. As reported earlier, they have informally practiced team teaching for several years.

As one of the teachers explained their situation and provided information about the grouping procedures for study skills, spelling, and math, the closing comment was, "I guess we're using an IGE format without realizing it."

Summary

The implementation of the multiunit school organization and of instructional programming for individual students at Alys Drive Elementary School during the 1975-1976 school year has been described in this chapter. First, the multiunit organization for the school was described. This was followed by a discussion of the communication and coordination activities of the IIC as they affect instructional programming. Then the processes and procedures used by each of the five teams in implementing instructional programming were described.

CHAPTER V

ANALYSIS AND DISCUSSION

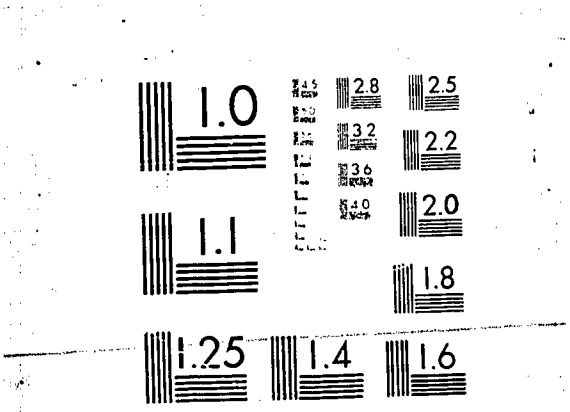
The descriptive data about Alys Drive Elementary School have been presented in detail in the previous two chapters. In this chapter, the data are analyzed and discussed in relation to the questions posed for this study.

Multiunit School Organization

Question 1: What is the multiunit organizational arrangement of the school?

I & R Units. The school is organized into five teams. Each team has a team leader, three or four staff teachers, 88 to 120 students, and two or three student teachers. Teams A and B also have part-time participants. The kindergartners, their teachers, and the teachers of special areas are not assigned to teams.

The students in Teams A and B are first and second graders with an age span of approximately three years. Teams C, D, and E are basically grade level teams for third, fourth, and fifth graders. Each team has some students who have been in school one year longer than most students on their team. These assignments are the result of having


1.0
1.1
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8
1.25
1.4
1.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

retained students whose levels of achievement and/or maturity were less than the staff considered reasonable for assigning the students to teams with their age-mates. A few of the most capable students have been assigned to teams one level ahead of their expected grade level.

Instructional Improvement Committee. The Instructional Improvement Committee includes the principal, the five team leaders, the reading teacher, and one of the physical education teachers. The IIC does not include the Media Center director or a parent representative.

Systemwide Policy Committee. The principal and all team leaders represent the school on the district SPC. Other members of the SPC are the principal and team leaders from the other IGE school, the assistant superintendent in charge of instruction, and the curriculum coordinator.

Question 1A: What is the rationale for this arrangement?

The school staff has not developed a statement of the rationale for their multiunit organization. Rather, the organization has evolved over the five-year period of implementing IGE as changes have been made in response to particular situations. In the following sections, those considerations which have had the greatest impact in determining the multiunit organization are discussed.

I & R Units. There have been changes in the multiunit organization each year. These changes have been necessary to carry out the school's plan to add one additional grade level to the IGE system each year. Annually, decisions have been made as to how the new grade level will

be incorporated in the organization. These decisions have been based on previous experiences and the attitudes and concerns of the staff members involved. There is currently a strong emphasis on grade level teams which is, in part, the result of adding one grade each year. In the course of doing this, the concept of grade level has been reinforced to the point of being a greater consideration than the concept of multiaging.

There is also a strong emphasis on grade levels in the district and the state. Testing programs and many report forms are directed at grade level groups of students. Curriculum guides emphasize content to be learned at each grade level. Assigning students by grade levels makes it easier to comply with district and state guidelines.

Among the staff members of the teams, there are varying opinions and attitudes toward multiaging. This topic has been discussed at meetings and in informal conversations for several years. A need has been expressed for more extensive information on the purpose and strengths of multiaging.

In the first two years of IGE, the primary students were organized as multiaged teams; within the teams, multiaged groups of students were assigned to each homeroom. The students went to special classes (art, music, and physical education) as homeroom groups. Some of the special teachers were not receptive to having the students multiaged for instruction in their areas. In the following year, the staffs of the multiaged teams assigned their students to homerooms by grade levels. This resulted from the concerns expressed by some special teachers as well

as the uncertainty among the team teachers as to the value of multiaging within homerooms.

Each year's decision about the multiunit organization has been based on the input, suggestions, and concerns of the staff of each team. Insofar as possible, the organization is planned so that teachers can work in the situation in which they feel they can best carry out their responsibilities.

The school will again be reorganized for the 1976-1977 school year. Staff members indicated that they expect the plan will include six teams, one for each grade level. There is a feeling expressed by some staff members that, although multiaging has some strengths, these are not sufficient to outweigh the difficulties involved in planning and managing instruction for students at several grade levels.

Instructional Improvement Committee. The principal and all team leaders are members of the IIC, following the description of the IIC in the IGE literature. The reading teacher is included because of her extensive involvement in developing and assisting in the school-wide reading program. The physical education teacher is included as a representative of the special teachers. He also assumes the duties of the principal when the principal is absent.

No particular consideration has been given to including the Media Center director on the IIC. She did express the thought that being a member of the IIC might be a reasonable way to try to overcome some of the problems which exist in scheduling the Media Center and providing related instruction appropriate for individual students. Parents have

not been included on the IIC. The staff has not felt any particular reason to arrange for a parent representative on the IIC.

Systemwide Policy Committee. There are only two IGE schools in the district. Including the principal and all team leaders from each school has been an effective way to ensure representation of all staff members and to arrive at decisions which reflect the opinions and needs of both schools.

Question 1B: In what ways has the model for the multiunit school been modified to meet the needs of the particular school?

The prototypic model for the multiunit school suggests that each team should include 100 to 150 students. In the IGE Implementor's Manual (Evers, Fruth, Heffernan, Karges, and Krupa, 1975), the recommendation is that 75 to 150 students be assigned to each team. Four of the teams at Alys Drive have fewer than 100 students. The major modification of the model is the lack of multiaging to include students of two or more grade levels on all of the teams. The IIC and SPC structures follow the prototypic model closely.

Instructional Improvement Committee

Question 2A: To what extent does the IIC support the implementation of instructional programming by implementing Step 1 of the Instructional Programming Model?

The IIC, in cooperation with the teams, has identified criteria to be used in determining whether or not students should be promoted to the next level within the building. At the present time, these are the only

general educational objectives which have been put into written form. Other objectives have been discussed, but have not been formally identified.

The IIC considers the WDRSD: Word Attack Skills, WDRSD: Study Skills, and CAM (Comprehensive Achievement Monitoring) mathematics objectives to be the school-wide educational objectives for reading and mathematics.

Question 2B: To what extent does the IIC support the implementation of instructional programming by coordinating the activities of the I & R Units to achieve continuity of instruction in all curricular areas?

Under the direction of the reading teacher, a set of records for all students in the building is maintained for word attack skills. Continuity, without overlap, is achieved by referring to these records as students are placed into groups for instruction in word attack skills.

In comprehension, continuity is achieved as the reading teacher works with the team leaders and staff teachers to identify groups of students with similar instructional needs, to select basal reading materials for them, and to make changes in grouping and materials throughout the year in response to changes in learning rate or style of individual students.

Continuity of instruction in mathematics results from the use of the CAM objectives as the focus for assessment and record keeping. For most students, mathematics instruction is planned around textbook materials at their grade level. A small percentage of students use

materials and/or objectives from higher or lower levels. Most of the CAM objectives are contained in the text materials; teachers plan additional instructional activities for those CAM objectives which are not included in the texts. Informal communication among the staff members along with the records of objectives which have been achieved serve as the means of assuring continuity of instruction for each student.

No formal steps have been taken to achieve continuity in the other curricular areas. The combination of teaching content by grade levels, keeping records of topics and content, and frequent interaction among teachers within and between teams makes it possible to have a continuous program of instruction with a minimum of repetition for individual students.

Question 2C: To what extent does the IIC support the implementation of instructional programming by arranging for the use of time, facilities, and material and human resources which must be shared throughout the building?

The IIC spends a small proportion of actual meeting time on matters related to coordination of resources. Planning for school-wide schedules occurs once a year when the daily schedule for special teachers and the Media Center is determined. The IIC makes suggestions regarding the schedule, and the detailed schedule is worked out by Mr. Sciole and Mr. Adamec. Ms. LaCrego works with the IIC and with individual teams to plan the schedule for the Reading Center.

Planning for the daily schedule also includes the planning for the use of human resources which are shared throughout the building. The

schedule determines when special teachers will work with each homeroom group. The Reading Center schedule is planned in such a way that the assistance of the aides is available for instruction and clerical tasks related to word attack skills.

Planning for the use of the available building space is also an annual function. The IIC determines which rooms will be assigned to each team. The use of space which is shared (e.g., the multipurpose room and the cafetorium) is handled through the office on an ad hoc basis. Materials and equipment which are shared are managed by checking them out from the Media Center or by using sign-up sheets in the faculty workroom.

As a result of the annual planning and the provision of effective management procedures, it is not necessary for the IIC to devote much time to arranging for the use of resources. A more important function is to obtain these resources in the first place. The IIC was instrumental in obtaining the weekly early dismissal for the primary teams and in getting the three half-time aide positions for the building. Needs for curricular materials and major equipment are discussed by the IIC and their recommendations are communicated to the district office.

Much of the planning for 1976-1977 has been related to the addition of the three sixth-grade homerooms. The IIC has made several recommendations which are important for including the sixth grades and for maintaining or improving IGE, especially the reading program. These include: (1) remodeling one area of the building so that a

storage room can become part of the Reading Center to replace the space of one Reading Center room which will be used as a classroom; (2) continued availability of at least three half-time aide positions; (3) the addition of a half-time art teacher to the staff; and (4) early dismissal for the intermediate teams to alleviate problems associated with insufficient planning time.

Instruction and Research Units

Question 3: To what extent are Steps 2 through 7 of the Instructional Programming Model implemented in each I & R Unit?

A. In what ways has the Instructional Programming Model been modified to meet the needs of each I & R Unit?

Reading. Instructional programming for individual students has been implemented in reading in all teams. The reading program is based on WDRSD: Word Attack Skills, WDRSD: Study Skills, and the SPPED (System for Pupil and Program Evaluation Development) comprehension areas.

Team-wide planning and instruction for word attack skills occurs in Teams A, B, C, and D. The procedures used are based on the suggested procedures described in the WDRSD materials. In Team E, only a few students receive instruction in word attack skills. These students are identified by the team; their word attack instruction is planned and carried out by the reading teacher.

For study skills, team-wide planning and instruction occurs in Teams D and E. In these two teams, instructional programming in study

skills follows Steps 2 through 7 of the IPM. In Teams A, B, and C, instruction in study skills is carried out by individual teachers in the context of other curricular areas. In these teams, study skills are generally not isolated for instruction. Rather, they are emphasized as they occur in instructional sequences in mathematics, science, social studies, or library skills. Individual teachers select the skills and determine the sequence for instruction. Teams A, B, D, and E use the WDRSD posttests and record the results on the study skills record cards. The posttests are not used in Team C.

Comprehension instruction is based on objectives which are more general than the word attack and study skills. Planning and implementing comprehension instruction is more of a long-range procedure. All teams identify comprehension groups at the beginning of the year. In Teams A and B, groups are formed within each homeroom; in Teams C, D, and E, cross-team groups are formed. (Cross-team groups include students from the entire team who have similar needs.) The reading teacher assists all teams in forming groups and identifying appropriate reading materials. Basal readers are used for comprehension instruction in all teams. In addition to the instruction carried out by the team teachers, Teams A, B, C, and D have regularly scheduled blocks of time for students to receive additional comprehension instruction in the Reading Center.

The amount of interaction among team members regarding instruction in comprehension and the frequency of re-grouping students differ from team to team. Each team has developed planning and instructional

procedures which the team members feel are most effective for their situation.

The following observations regarding school-wide comprehension instruction indicate the extent to which Steps 2 through 7 of the IPM are being implemented:

Step 2: Rather than identifying a range of objectives, all teams plan instruction to reflect the ten areas of comprehension instruction identified in the SPPED materials. These are: identify details, identify main idea, identify sequence, follow directions, infer, draw conclusions, relate cause/effect, distinguish fact/opinion, classify, and recognize analogies. The level of expected achievement for each team is defined by the mastery score for the correlated SPPED comprehension tests for the grade level(s) of the students in the team.

Step 3: The major preassessments occur at the beginning of the school year when initial groups are formed. The procedures used include records from the previous year, and teacher judgments from the reading teacher, teachers of the previous year, and the teachers for the current year. Teacher judgments reflect student learning style and motivational level as well as reading ability.

Step 4: Much instruction reflects the content and sequence of the basal reading materials being used by particular groups. Some instruction includes self-selection of reading books and pursuing independent reading activities which may or may not focus on instructional objectives. Occasionally, short-term instructional objectives are identified for individuals or small groups to attain.

Step 5: Variations in teacher guidance, grouping mode, and the use of time, materials, and space occur to some extent in all teams. The amount of variation is very much a matter of individual teachers' preferred teaching styles and their interpretations of the best procedures for the students in their groups.

Step 6: Various types of assessments (text-related diagnostic tests, teacher-made tests, and SPPED tests) are used at the discretion of individual teachers or as determined by the team staff. Diagnostic and teacher-made tests are used to determine student performance related to completed units of instruction (chapters or topics), and to identify areas in which certain students need further instruction. SPPED tests are generally given toward the end of the year when it is expected that most students have reached the expected level of attainment for their grade.

Step 7: The information attained at Step 6 may be used to determine the next sequence of instruction, especially if assessments indicate that students need additional instruction in a particular area. In other cases, the next sequence is determined by the reading materials being used or by teacher and/or student interest.

Students whose progress is greater than that of most others in their group are identified through the assessments and teacher judgment. These students, as well as those who need additional work or a slower pace, are re-assigned to other reading groups when the teachers consider this to be the most effective way to meet the needs of individual students.

Step 7 may lead back to Step 4 or to Step 5. Throughout the year, the teams attempt to provide sufficient focus in their instruction that each student shows improvement in each area of comprehension instruction. However, instruction is not limited to the ten areas, but is planned to provide wide experiences in reading for each student.

Mathematics. Instructional programming in mathematics is based on combinations of the CAM objectives and the Houghton Mifflin objectives. Teams B and C use the CAM objectives for planning and evaluating instruction; most instructional activities are selected from the Houghton Mifflin materials. Teams A, D, and E use the Houghton Mifflin objectives and materials for instruction.

In Teams A, B, and C, mathematics instruction is planned and carried out within each homeroom. Long-term cross-team groups are organized for math in Teams D and E. In all teams, math instruction generally follows the procedure of large group teacher presentation, after which individual students or small groups complete related activities such as worksheets, games, or exploration with manipulative materials. While students are doing these activities, teachers often provide extra instruction for those students who need it.

Objectives are used as an overall focus for mathematics instruction. However, most instructional activities are based on topics or areas of content (e.g., telling time, re-grouping in subtraction, long division, adding fractions). Thus, a topic is identified for a group, a variety of instructional activities are carried out, and all students are expected to improve their understanding of the topic or their

computational skills. Upon completion of a topic, tests are usually given to determine students' understanding of that topic.

At intervals during the year, the CAM tests which reflect the objectives to be attained are given by Teams B and C. The results are used to determine objectives (or topics) for which further instruction is necessary. Teams A, D, and E use the results of text-related diagnostic tests to determine when further instruction is needed for a given topic.

Patterns of instructional programming. The patterns of instructional programming reflect decisions made at both the building level and the team level. The patterns used for word attack skills, study skills (Team E only), comprehension, and mathematics, are shown in Figure 5.1.

The common objectives and common levels of attainment for all areas in Teams A, B, C, and D result from the use of WDRSD: Word Attack Skills, SPPED comprehension areas, and CAM mathematics objectives as the focus for instruction and/or assessment. The common objectives and common levels of attainment refer to a minimal level of achievement which is expected of all students at each grade level. Additional instructional activities which do not necessarily reflect specific objectives occur in both reading and mathematics.

Sequence is determined by teams or individual teachers. Because much instruction occurs in groups, the staff members make decisions about basic sequence. Variations in sequence occur as individual students carry out additional activities which may or may not reflect

	Word Attack Skills			Comprehension			Mathematics		
Team	Objectives	Level of Attainment	Sequence	Objectives	Level of Attainment	Sequence	Objectives	Level of Attainment	Sequence
A	C	C	C/V	C	C	C	C	C	C
B	C	C	C/V	C	C	C	C	C	C/V
C	C	C	C	C	C	C/V	C	C	C
D	C	C	C/V	C	C	C/V	C	C	C/V
E	V	Study Skills C	C	V	V	C/V	C	V	C/V

Key: C - Common
V - Variable
C/v - Combination of common and variable

Figure 5.1

Patterns of Instructional Programming

instructional objectives.

In Team E, variable objectives are used in study skills. The objectives for individual students reflect different levels of related topics or skills. Team E does not use the SPPED comprehension tests or the CAM mathematics objectives and related tests. The objectives for these areas are derived from the text materials in use. The expected levels of achievement in these areas vary for individual students.

Question 3B: How does the implementation of instructional programming compare between I & R Units?

In discussing Individually Guided Education, the staff members at Alys Drive seldom refer to instructional programming. Their references focus more on working as teams to provide appropriate groupings to meet the needs of individual students and to share information about students and instructional activities. The team organization is considered an important element of IGE by all team members. All teams have developed a spirit of cohesiveness in relation to providing for the needs of their students. However, each of the teams functions in a different way to achieve its goals.

Team A has cross-team grouping for word attack skills. All other basic instruction is carried out within the homeroom setting. The staff members interact frequently, especially during their common planning time and lunch time. Each person has a general awareness of what the others are doing, and they often exchange ideas and suggestions about effective instructional activities and materials. This exchange of ideas occasionally leads to a cooperatively-planned unit of instruction

for all students in the team. The regular team meetings are used to plan for word attack skill instruction and for other matters which relate to all team members.

Team B also has cross-team grouping for word attack skills. The remainder of the instruction in reading as well as in language arts and mathematics occurs within each homeroom. The three first-grade teachers cooperatively plan and teach science. About half the units of instruction in social studies are cooperatively planned and carried out by all team members. The staff members keep in close contact through much informal conversation--in the hall near their rooms, and in the lounge during their planning and lunch times. Plans for team activities often occur spontaneously in these informal settings. The weekly team meetings are used for regular planning activities and for communicating information.

Cross-team grouping is used for all reading instruction in Team C. Short-term groups are formed for word attack skills. Long-term groups are formed for reading comprehension; frequent re-grouping of students occurs among the groups. Many instructional ideas and materials are shared by the team staff, especially for reading and other language arts activities. Team C has formal planning sessions during team meetings as well as some informal planning which occurs as the staff members converse in the hall near their rooms or as they eat lunch together in the lounge.

In Team D, team planning and cross-team grouping are used for word attack skills, comprehension, mathematics, and spelling. Two teachers

assume the responsibility for science instruction and the other two handle social studies. Study skills are taught within the context of spelling, reading, science, social studies, and library. Specific skills have been identified for instruction in each of these areas. Much information is shared in informal settings, especially in the lounge during the common planning time or at lunch time. Decisions are often made during these informal sessions. Team meetings are scheduled when there are specific matters to be discussed or decided by the team.

Team E uses cross-team grouping for study skills, comprehension, mathematics, and spelling. Their approach to team planning and cross-grouping has evolved over a period of several years during which the same teachers have taught the fifth grades. Team planning occurs mainly during their common planning time in formal or informal team meetings. In addition to the team-wide planning, two teachers plan together for science and health instruction for the students in their homerooms.

Summary

In this chapter, the data gathered at Alys Drive School have been discussed in relation to the questions posed for this study. The implementation of IGE at Alys Drive reflects many of the procedures and processes recommended in the IGE literature. At the same time, certain aspects of this school's IGE program have deviated from the IGE models

in response to the staff's views of the needs and unique characteristics of their school population.

In the following chapter, the procedures used at Alys Drive and the modifications which have occurred are discussed in terms of the implications they have for the implementation of IGE in other schools or for reconsideration of the prototypic models for instructional programming and for the multiunit school.

CHAPTER VI

SUMMARY, OBSERVATIONS AND GENERALIZATIONS, AND IMPLICATIONS

Summary

This study was conducted to determine how instructional programming for individual students has been implemented to provide effective learning environments for elementary school students. While the primary focus is on the entire range of procedures used to achieve the objectives of the Instructional Programming Model (IPM), an important secondary focus is the multiunit organization (MUS) as it relates to implementing instructional programming.

Earlier studies of IGE schools indicate that instructional programming is difficult to implement systematically (Ironside, 1972), and that the interpretations of its characteristics vary widely among those who are involved in instructional programming (Klenke, 1975). Difficulties arising from the failure to follow the sequence have been discussed by Lipham and Klausmeier (1976). Klausmeier (1972) has expressed the need to develop adequate management strategies which make it possible to implement instructional programming simultaneously in several curricular areas.

In spite of the problems which do exist, a number of studies of

IGE schools which have implemented instructional programming in reading and/or mathematics do indicate that higher student achievement has occurred (Burtley, 1974; Flournoy, 1974; Hackett and McKilligan, 1972; Kennedy, et al., 1972; Klausmeier, et al., 1971; Kurth, 1975; Quilling and Otto, 1971). Other studies which compared student attitude in IGE schools and non-IGE schools indicate that positive student attitudes are associated with IGE schools (Wysong and LaBay, 1970; Edwards, 1972). The multiunit school organization has been found to be associated with an increase in shared teaching behaviors (Olszewski, 1973), higher teacher motivation (Herrick, 1974), and a greater variety of instructional materials and modes for students (Joyal, 1973).

These studies identified outcomes which are associated with the implementation of IGE, but did not investigate the details of the procedures used to achieve the outcomes. The details of the year-long process of changing over to IGE in one school have been reported by Ciaglia, et al. (1973).

In the present study the details of carrying out instructional programming in reading and mathematics were examined in a multiunit school in its fourth year of implementing IGE. Three broad questions were posed as the focus for the study:

1. What is the multiunit organizational arrangement of the school?
   - A. What is the rationale for this arrangement?
   - B. In what ways has the model for the multiunit organization been modified?

2. To what extent does the IIC support the implementation of instructional programming by:

   A. implementing Step 1 of the Instructional Programming Model?

   B. coordinating the activities of the I & R Units to achieve continuity of instruction in all curricular areas?

   C. arranging for the use of time, facilities, and material and human resources which must be shared throughout the building?

3. To what extent are Steps 2 through 7 of the Instructional Programming Model implemented in each I & R Unit?

   A. In what ways has the Instructional Programming Model been modified to meet the needs of each I & R Unit?

   B. How does the implementation of instructional programming compare between I & R Units?

Field methodology was used to carry out this case study of one IGE school. The criteria applied in selecting the school were that it met the minimal criteria for an IGE school as defined in the IGE Implementor's Manual (Evers, et al., 1975), had implemented instructional programming in at least two curricular areas, was using the Wisconsin Design for Reading Skill Development (WDRSD), had at least three I & R Units, and had a staff which was willing to participate in the study. Alys Drive Elementary School in Depew, New York, was selected for the study.

A combination of techniques was used in collecting the data. The Descriptor for Individualized Instruction (DeVault, et al., 1973) provided an effective means for collecting detailed information about program context and pattern, sequence, objectives, assessment techniques,

rate, media, grouping, record of information, and use of information. Additional data related to instructional programming and the multiunit organization were gathered through questionnaires, observations, interviews, and perusal of related documents. The observation and interviewing were carried out by the researcher during a two-week period of full-time attendance at the school.

After the data were collected, they were categorized according to topics related to the questions of the study. The information was then reported in a detailed narrative description of the school (Chapters III and IV). Following this narrative presentation, the data were analyzed and discussed as they relate to the questions of the study (Chapter V).

Observations and Generalizations

Multiunit School Organization

Certain aspects of the model for the multiunit school may be easier to implement than others. At Alys Drive School, the assignment of staff members to appropriate roles in the multiunit organization follows the MUS model closely; however, the assignment of students deviates from the model in respect to multiaging.

The SPC includes all persons suggested in the model except a community representative. The IIC follows the model by including the principal, the unit leaders, and two special teachers. The I & R Units (teams) follow the model in respect to numbers of staff and students

and composition of the staff.

Factors which seem to have contributed to the successful organization of staff members into teams include an expectation among the staff members that a team of teachers can provide more effective learning environments than can individual teachers, a physical setting in which the members of each team are located in proximity to each other, and a cooperative spirit among the staff members. Although the cooperative spirit may have contributed to the successful multiunit organization, it may also be true that the organization has contributed to the cooperative spirit.

Another important feature of the multiunit organization at Alys Drive is the assignment of student teachers to each team. At the time of this study, each team had two or three full-time student teachers. The availability of this number of student teachers resulted from a concentrated effort by district and building personnel to inform area colleges and universities of their needs, and to provide an effective learning environment for the student teachers.

The major modification of the model for the multiunit school is in the minimal degree of multiaging within Teams C, D, and E, and in the proposed organization for the 1976-1977 school year when each team is expected to include students at a single grade level. The staff at Alys Drive has given consideration to the strengths and weaknesses of multiaging during their four years as an IGE school. The topic has appeared on agendas during these four years and was also a topic of discussion during the interviews for this study. Multiaging has

occurred in the primary teams, but the recent trend is toward grade level teams. The emphasis on grade levels is encouraged by district and state curriculum guides and reporting procedures as well as by some of the teachers within the school. There are teachers who support the concept of multiaging, but they feel there is a lack of information based on research and practice which could be used to build a strong case for multiaging.

To date, the literature describing IGE has not included much supportive data regarding multiaging. If multiaging is to be a vital characteristic of IGE in actual practice, more extensive information explaining the reasons for and strengths of multiage grouping needs to be made available to schools as they plan their multiunit organizations.

A different multiunit organization has been used in each of the four years of IGE at Alys Drive. The staff members did not indicate that this frequent reorganizing created any particular problems. It may be that reorganizing in an attempt to meet the needs and interests of the staff and students is more important than maintaining a less acceptable organization for the sake of stability.

School-wide Coordination and Communication

Effective means have been developed to coordinate instruction and resources throughout the school. The reading teacher, Ms. LaCrego, has provided leadership to coordinate the school-wide reading program through the Reading Center. Within the Reading Center concept, she coordinates the use of the space alloted for the Reading Center, plans

for the use of the aides' time, recommends reading materials to be acquired, maintains records of each student's progress, and assists each team in planning and implementing instructional programs in reading. Her assistance and support are highly valued by the staff. It seems reasonable to suggest that other schools which are implementing IGE should attempt to obtain an interested and qualified staff member to provide similar services. Carrying this suggestion further, it also seems reasonable to speculate that having a staff member to coordinate and participate in instruction in other curricular areas might provide the support which is needed to implement instructional programming in those areas. This would be of particular value in areas for which a school has identified minimal objectives for all students.

The Media Center, directed by Ms. Bell, also serves an important function in the coordination of resources. Most non-text materials in the building are catalogued in the Media Center. Well-established check-out procedures make it possible for teachers to locate needed materials readily.

From the interviews and observations, it became apparent that the support and leadership of the principal, Mr. Sciole, were very important to the staff members. They often indicated that the effective implementation of IGE was in large part attributable to him, yet they seldom gave examples of specific actions which he had taken. It would seem that his role has been one of providing leadership through the kinds of activities which are inconspicuous, but effective in causing changes to occur. Chairing the IIC, encouraging shared decision making,

and giving support and information as needed or requested by teams or individual teachers are examples of the actions Mr. Sciole has taken in providing leadership at Alys Drive.

Instructional Programming for Individual Students-

General school-wide objectives, as defined in Step 1 of the IPM, have not been identified at Alys Drive. Rather, the staff uses the instructional objectives contained in the adopted curricular materials as their school-wide objectives. Criteria for promoting students reflect the minimal achievements expected of students to be assigned to a higher grade level. The combination of instructional objectives and minimal promotion criteria appears to be sufficient for an understanding of the general school-wide expectations for student achievement.

In relation to Step 1, it might be reasonable to assume that a set of instructional objectives can be substituted for general school-wide objectives. This seems to be a feasible assumption if the emphasis is on identifying a minimal level of achievement which all students can be expected to attain. However, this would not provide guidelines for expected levels of achievement for the more able students--and these are the students who might benefit most from IGE with its possibilities for providing instruction over a wider range, at a more advanced level, or at a faster pace.

Implementation of instructional programming at the team level. The implementation of Steps 2 through 7 of instructional programming follows

the model closely when the teams use the WDRSD materials and the suggested guidelines for implementation. This is probably due to two factors: (1) the WDRSD guidelines reflect the IPM; and (2) many staff members first became acquainted with instructional programming through workshops about WDRSD. Staff members have used their knowledge of WDRSD to develop instructional programming procedures in comprehension and in mathematics.

Several observations about the use of the Instructional Programming Model are noted:

1. The steps are easiest to follow when instructional objectives are stated specifically, as in the word attack and study skills elements of WDRSD.

2. The steps are followed closely when the staff members consider the objectives to be of sufficient importance to be isolated for instruction. Teams A, B, C, and D have specific periods of instruction for word attack skills, and Teams D and E have identified procedures to provide specific instruction in study skills.

3. The steps are also used, but in a less precise way, in mathematics. For the most part, mathematics objectives are not isolated for instruction. Rather, instruction is planned on the basis of units of instruction or topics. Objectives are then used at intervals as checkpoints to determine which students need additional instruction to attain mastery of certain objectives. The approach to mathematics instruction may also be affected by having two sets of objectives (CAM

and Houghton Mifflin) which are recommended by the district. Fortunately, the two sets of objectives are not in conflict. However, it would seem that the implementation of instructional programming would be simplified if the staff only had to deal with one set.

4. In comprehension, ten areas of comprehension serve as the focus for instruction; the objectives for individual students are to attain the level of competence which has been identified for the student's grade level in each area. Steps 2 through 7 can be identified in the actions taken in comprehension instruction, but they do not necessarily occur in a regularly planned sequence.

5. At Alys Drive, grouping students on a short- or long-term basis is one of the most used techniques for providing instruction at a level appropriate for individual students.

6. Students seldom have opportunities to make decisions regarding the objectives they will learn or the sequence in which they will pursue them. When instructional programming is used mainly in connection with common objectives, there is no option for student selection of objectives. If an emphasis on self-selection of objectives were desired, a broader range of objectives would need to be made available. Student decision making could also occur within the pattern of common objectives by encouraging students to select instructional materials, grouping modes, or sequence of instruction.

7. The variations suggested in Step 5 of the IPM were observed in, or reported by, all teams over a period of time. Within a single instructional activity, it is not always possible to provide the ideal

setting for each student. Achieving a balance of appropriate instructional modes for each student over the long-range may be as close to the ideal as is actually possible within a school setting.

8. Much instruction focuses on activities rather than objectives. Perhaps there is a place in elementary education for activities which do not necessarily lead to the achievement of objectives. A related possibility is that activities (or units of instruction or topics) could serve as the short-term focus of instruction, and objectives and criterion-referenced tests would be used as guidelines for long-term planning and evaluation.

9. Interaction among team members in informal as well as formal settings is a vital element of the process of planning and implementing instructional programs for individual students. Having a daily schedule and a physical setting which are conducive to informal interaction may be important factors in providing a supportive environment for the implementation of IGE.

Patterns of instructional programming. The patterns of instructional programming in word attack, comprehension, and mathematics for Teams A, B, C, and D all reflect common objectives, common level of achievement, and common basic sequence with some variation for individual students. However, the actual expectations of the staff members are not the same for all students. There are several reasons for this apparent contradiction.

1. The objectives are common in that they serve as a guide for

minimal expectations. Students may pursue additional activities, especially in comprehension and mathematics, which lead to higher achievement or more extensive learning; these are not necessarily reflected as the achievement of additional objectives.

2. The common level of achievement is mastery, defined by a predetermined score, which is also a minimum expectation. Knowledge which exceeds the grade level expectations in comprehension and mathematics is not reflected in the scores for mastery.

3. The common sequence is related to a strong emphasis on small group instruction. As long as instruction occurs in teacher-directed groups, the sequence is controlled by the teacher. Independent student work is encouraged by many teachers, but this mode is not often used for achieving a given set of objectives. Thus, the variations in sequence of instructional activities are not reflected in describing the patterns of instructional programming inasmuch as the patterns deal with units of instruction or sets of objectives. Most variations in sequence occur within a unit of instruction rather than across units.

It is difficult to consider the pattern of instructional programming in a curricular area (such as comprehension in this study) where instruction is focused on broad areas, and increasingly higher levels of achievement are expected throughout elementary school. Describing the objectives and expected level of achievement as common for all students states the minimal expectations but does not reflect the variety of additional learning experiences carried out by many students (e.g.,

extensive independent reading or research on a specific topic). An alternative would be to identify all the possible activities which students might pursue and state them as variable objectives. Whether or not this is sufficiently important to the overall instructional program to be worth the time and effort would have to be determined by the staff members involved.

Management. The strategies used for planning and managing instructional programming differ from team to team. Each team has developed procedures which reflect the personal interests and styles of the team members. Effective communication through the IIC serves as a means of avoiding problems which could occur when different procedures are used.

Some record-keeping procedures are the same for all teams. These include school-wide wall charts for recording achievement in word attack skills; individual records of level of achievement in comprehension; and record forms for achievement of CAM math objectives. Other available record forms, such as the keysort cards for study skills, are used by some teams but not others. In both reading and mathematics, the records are an important source of information for assigning students to groups or identifying objectives for individual students. These records seem to be sufficient for managing instructional programs.

Several teachers expressed concerns about the excessive amount of record keeping which is required. These comments related to some school and district record-keeping forms which are not needed for managing instruction. In some cases, the same information is recorded on more

than one form.

Keeping records to manage instruction is not necessarily an overwhelming task, but as new or different forms are required for this purpose, a serious effort must be made to change district and school record-keeping policies to avoid the additional work involved in recording the same information in several ways. It might be wise to provide implementors with suggestions for assisting schools and districts to review their record-keeping policies so that the records required for instructional programming might replace some record forms rather than being required in addition to the previous forms.

The amount of formal team planning which is required in instructional programming appears to be related to the type of objectives which are being used. Planning for specific objectives such as word attack skills requires frequent team discussion about prior achievements, skills to be taught, grouping arrangements, and teacher assignments. Planning for broader objectives, as in comprehension, occurs less frequently; once decisions about levels of instruction and basic groups are reached, regular team planning is no longer required. In informal sessions, the team members keep each other informed and make decisions for changes.

Cooperative planning for instructional programming in curricular areas other than reading and mathematics has occurred in different ways in each team. Cooperative team planning has resulted from a combination of personal interests and informal interactions among team members. After the initial changeover to IGE, it may be that teams should be encouraged to develop their own procedures for extending instructional

programming into other curricular areas. The IIC should be involved in providing basic guidelines, but the staff members of each team could determine procedures which are most effective for them.

Because of the importance of informal interactions among team members, room locations are important. It may be that locating team members in close proximity can be as effective in terms of the physical setting as providing open space areas for each team.

The faculty lounge is an important element of IGE at Alys Drive. It is a spacious, pleasant room, and many faculty members spend their break time in the lounge. Much of the lounge conversation is about school-related matters. Many team decisions are made in the lounge, and communications from the IIC or district are often shared and discussed. It seems reasonable to assume that IGE at Alys Drive would function differently, and probably less effectively, if there were no central gathering place for the entire staff. It is possible that the quality and location of a faculty lounge has an impact on the quality and degree of implementation of IGE in other schools.

The original decision to implement WDRSD and the multiunit organization was approved by the Board of Education for a trial period of five years. The five-year trial period may have made it less threatening for the staff to handle difficulties which occurred in the early stages of implementation than would have been possible if there had been more pressure to "prove" the effectiveness of IGE in a shorter period of time.

Implications

Implications Related to the Models--MUS and IPM

Although the models for the multiunit school and instructional programming have been modified to some extent, many of the elements of each model have been maintained. Thus, recommendations for revising the models do not seem desirable. However, it does seem important to emphasize that the models are flexible and can be adapted in various ways to achieve the intended purposes in many different types of school situations.

Implications for Further Research

Several of the observations which have been made suggest questions which might be pursued in further research.

1. In what ways do the outcomes for students in multiaged I & R Units differ from the outcomes for students in I & R Units of a single grade level?

2. What differences in student outcomes occur over the seven-year period of elementary school in schools which have identified school-wide educational objectives as compared to schools which have not identified school-wide educational objectives?

3. Is the achievement of student outcomes in a given curricular area enhanced by the availability of a staff member who assumes the responsibility for coordinating the planning, implementation, and evaluation of instructional programming throughout the school in that area?

4. Is there a difference in the procedures used for instructional programming when a staff learns about instructional programming through compatible curriculum materials (e.g., WDRSD) and when they learn through studying the Instructional Programming Model and then adapting their own materials? If there is a difference in procedures used, is there any effect on student outcomes?

5. Is there a relationship between the availability and use of a comfortable lounge and the effective implementation of the multiunit organization and instructional programming?

6. What are the most effective procedures for a school staff to use in extending the implementation of instructional programming to encompass several or all curricular areas?

This was a case study which has provided a description of the processes and procedures used in implementing instructional programming in a multiunit school. The results of a case study of a single school cannot be generalized to other schools. Additional case studies such as this one are needed to verify or modify the observations and generalizations which have been presented.

Implications for Practitioners

This study dealt primarily with the implementation of instructional programming in reading and mathematics. As schools extend the use of instructional programming to additional curricular areas, management procedures will need to be refined or changed to meet the demands of the task. Two possible approaches to extending instructional programming

to several or all curricular areas are presented here. One approach would be to identify a limited number (e.g., six to ten) of essential objectives in each curricular area for each student to attain during a school year. Focused instruction would then be planned for these objectives; additional instruction could involve activities which are valued for reasons other than attaining objectives. One staff member could assume the responsibility for coordinating the objectives and record-keeping techniques for each area throughout the school.

Another approach to implementing the IPM in all curricular areas would be to have each team, or the total staff, identify those characteristics of instructional programming which they consider most important for their situation. Some of the characteristics which would be considered are objective-based instruction, criterion-referenced assessment, student grouping patterns, varied instructional procedures and activities, continuous progress, and team planning. The selected characteristics would be the ones which would receive the most emphasis as the staff extended instructional programming into additional curricular areas. Over a period of time other characteristics could gradually be included as necessary to improve instructional programming in each area.

Educators who are involved with the implementation of IGE at other stages may also find this study to be of value. The study provides a detailed description of the procedures used in implementing instructional programming in reading and mathematics. As educators implement IGE, they frequently want to know "how other schools have done it." The

details of the year of planning as well as the description of IGE in 1975-1976 may be useful as sources of ideas which can be adapted for use in other schools.

Educators involved with IGE schools may be interested in comparing their implementation with the models for instructional programming and the multiunit school. The methods and instruments used in this study could be used in conducting such studies.

The staff members of the Alys Drive Elementary School willingly accepted the proposal for this study in spite of any misgivings they might have had about exposing weaknesses in their IGE program. Some staff members expressed appreciation for the opportunity to describe their programs in detail as this gave them an opportunity to analyze what they were actually doing in a careful and thorough manner. Perhaps their willingness to cooperate with a total stranger will provide encouragement to other IGE school staffs who have been hesitant to subject their programs to the careful scrutiny which is necessary in the process of refining Individually Guided Education.

APPENDIX

Questionnaires and Interview Schedules

QUESTIONNAIRE
Principal

MULTIUNIT ORGANIZATION

1. Names and positions of the members of the IIC: _____

_____

_____

_____

_____

2. Name and composition of each I & R Unit:

Unit name: _____ Staff Members:

Number of students: _____ Unit leader _____

Ages of students: _____ Teacher _____

Teacher _____

Teacher _____

Clerical aide _____ Teacher _____

Student teacher or intern _____ Instructional aide _____

Unit name: _____ Staff Members:

Number of students: _____ Unit leader _____

Ages of students: _____ Teacher _____

Teacher _____

Teacher _____

Clerical aide _____ Teacher _____

Student teacher or intern _____ Instructional aide _____

QUESTIONNAIRE
Principal

Unit name: _____ Staff Members: _____

Number of students: _____ Unit leader _____

Ages of students: _____ Teacher _____

Teacher _____

Teacher _____

Clerical aide _____ Teacher _____

Student teacher or intern _____ Instructional aide _____

Unit name: _____ Staff Members: _____

Number of students: _____ Unit leader _____

Ages of students: _____ Teacher _____

Teacher _____

Teacher _____

Clerical aide _____ Teacher _____

Student teacher or intern _____ Instructional aide _____

Unit name: _____ Staff Members: _____

Number of students: _____ Unit leader _____

Ages of students: _____ Teacher _____

Teacher _____

Teacher _____

Clerical aide _____ Teacher _____

Student teacher or intern _____ Instructional aide _____

QUESTIONNAIRE
IIC

IMPLEMENTATION OF MULTIUNIT SCHOOL AND INSTRUCTIONAL PROGRAMMING

1. When did your school first implement the multiunit organization?

   _____

2. When did your school begin to implement instructional programming in:

   reading? _____

   math? _____

   other (specify)? _____

3. What inservice activities were provided to teach the staff about IGE models and processes? _____

   _____

   _____

   _____

   _____

INDIVIDUAL INTERVIEWS
IIC members and some teachers

RATIONALE FOR MULTIUNIT ORGANIZATION

Note: The numbered questions are the questions for which I am seeking answers. Following each question are probes (phrased in a more informal manner) which will be used in the actual interviews.

1. What are the strengths of your school's multiunit organizational arrangements?

   PROBE: What do you like about the multiunit organization? What about team teaching? multiage grouping? nongradedness?

2. What are the weaknesses of your school's multiunit organizational arrangement?

   PROBE: What bothers you about the multiunit organization? What about team teaching? multiage grouping? nongradedness?

3. What is the rationale behind your school's multiunit organizational arrangement?

   PROBE: Why did the school decide on the multiunit organization now in effect?
   Who was the motivating force behind this organization?
   What factors were considered in deciding on the multiunit organization?
   Has the multiunit organization changed since the first year of implementation?
   What features have changed?

4. Are changes now being considered? If so, what are they?

5. Do you have any suggestions for change?

QUESTIONNAIRE
Principal

IIC INFORMATION

1. Other than the regular members of the IIC, who else has attended IIC meetings during this school year? _____

2. Why did they attend (e.g., personal choice, invited by someone, etc.)? _____

3. What is the IIC meeting schedule? _____

4. How is time arranged to make it possible for unit leaders to attend IIC meetings? _____

5. Is an agenda prepared prior to each IIC meeting? _____

   If yes: Who prepares the agenda? _____

   Who submits agenda items? _____

   Who gets a copy of the agenda? _____

   If no: How are topics to be discussed determined? _____

6. Are minutes written for each meeting? _____

   If yes: Who writes the minutes? _____

   Who gets a copy? _____

IIC INFORMATION (Continued)

QUESTIONNAIRE
Principal

If no: How are decisions recorded and reported? _____

_____

GROUP INTERVIEW
IIC

INSTRUCTIONAL PROGRAMMING - STEP 1

1. In what curricular areas has the IIC set school-wide objectives?
2. What are the school-wide objectives? (Obtain copies)
3. Who was involved in determining these objectives?
4. How were the objectives determined?
5. If objectives have not been set, how is content coordinated throughout the school?

IIC - COORDINATION

1. What has the IIC done to coordinate the activities of the I & R Units to achieve continuity of instruction in all curricular areas?

   PROBE: What does the IIC do to achieve continuity throughout the school in reading? in math? language arts? social studies? science?

   NOTE: Use minutes of IIC meetings to determine the answer to this question insofar as possible.

2. What actions has the IIC taken to coordinate the use of:

   A. the IMC--materials; equipment; learning activities based in the IMC.

   B. physical facilities.

   C. time.

   D. human resources--art, music, physical education teachers; other specialists; paraprofessionals.

   E. other matters which require coordination.

   NOTE: Use observation to determine answers to these questions as much as possible.

QUESTIONNAIRE
Unit leaders

I & R UNIT INFORMATION

1. What is your regular schedule for unit meetings? _____

_____

_____

2. Are agendas prepared prior to each unit meeting? _____

If yes: Who submits items for the agenda? _____

_____

Who prepares the agenda? _____

Are agendas distributed prior to the meetings? _____

Who receives them? _____

_____

If no: What procedures are used to organize unit meetings? _____

_____

_____

3. Are minutes written for each meeting? _____

If yes: Who receives them? _____

_____

If no: How are decisions recorded? _____

_____

_____

INDIVIDUAL INTERVIEWS
Unit leaders and teachers

I & R UNIT STAFF MEMBER INTERVIEW QUESTIONS

1. In general, what proportion of unit meeting time is devoted to each of the following purposes?

ongoing operations	setting objectives
developing units of instruction	developing plans for assessment
assigning students to groups	scheduling students
monitoring student progress	evaluating student progress
evaluating instructional programs	

PROBE: How much unit meeting time does your unit use for management activities?
Once management is taken care of, what else do you accomplish in unit meetings?
In the last three months, what have been the most important achievements of your unit?

2. What do you consider to be the strengths of your I & R Unit staff in planning, implementing, and evaluating instruction for the students in your unit?

PROBE: In terms of planning instruction, in what ways has your unit been most effective?
What aspects of implementing instruction have been most effective?
What about evaluating instruction?

3. What changes would you suggest to make your I & R Unit more effective?

QUESTIONNAIRE
All unit staff members

I & R UNIT STAFF MEMBER QUESTIONNAIRE

Name of unit _____

PERSONAL INFORMATION

1. Name _____

2. Position: Teacher ___ Unit leader ___ Aide ___
   Student teacher ___ Other _____

3. Years of teaching experience in IGE schools _____

4. Years of teaching experience in non-IGE schools _____

PROFESSIONAL PREPARATION RELATED TO IGE

1. Describe any special preparation you have had for teaching in an IGE school (include university courses, inservice programs, workshops, etc.): _____

   _____

   _____

PROFESSIONAL RESPONSIBILITIES

1. What is your weekly schedule for planning time as an individual?

   _____

   _____

2. In general, what percent of your time is spent in:

   teaching _____% planning _____% keeping records _____%

   other (describe) _____% _____

3. What are your major strengths as a member of the I & R Unit staff? (For example, designing units of instruction, preparing materials, providing expertise in one curricular area, etc.)

   _____

   _____

I & R UNIT STAFF MEMBER QUESTIONNAIRE
(Continued)

QUESTIONNAIRE
All unit staff members

4. Other than participating in unit meetings, what regular unit responsibilities do you have? _____

_____

_____

QUESTIONNAIRE
I & R Units using Wisconsin Design

I & R UNIT--INSTRUCTIONAL PROGRAMMING USING WISCONSIN DESIGN

Name of unit _____ Number of students _____

Age range of students _____

1. What inservice activities did your unit staff members participate in which helped prepare them for using the Design? _____

_____

_____

2. Did all students take the Wisconsin Tests for Reading Skill Development prior to implementation of instruction using the Design procedures? _____ If no: On what basis were students exempted from testing? _____

_____

3. How are Wisconsin Design tests scored? Staff member ___

computer ___ NCS ___ Other _____

4. How are records (group charts and/or individual profile cards) used in planning instruction? _____

_____

_____

5. What is the weekly schedule for instruction in Word Attack Skills?

_____

6. What is the weekly schedule for instruction in Study Skills? _____

_____

7. What procedures are used in forming instructional groups?

keysort cards ___ computer ___ teacher judgment ___

other _____

I & R UNIT--INSTRUCTIONAL PROGRAMMING USING WISCONSIN DESIGN (Continued)

QUESTIONNAIRE
I & R Units using Wisconsin Design

8. How are teachers and students matched for instruction? _____

_____

9. What provisions are made for students . . .

A. who are not placed in a skill group? _____

_____

B. who master the objectives early? _____

_____

10. Is postassessment carried out at regularly scheduled times? _____

If yes: How often? _____

If no: How is postassessment handled? _____

_____

11. How are the elements of the Design integrated into your total reading program? _____

_____

_____

12. What are the strengths of the Design as implemented in your I & R Unit? _____

_____

_____

13. What suggestions would you make to improve the effectiveness of the use of the Design in your Unit? _____

_____

_____

QUESTIONNAIRE
Unit leader

I & R UNIT--INSTRUCTIONAL PROGRAMMING
IN READING

(The following questions are to be answered in relation to reading activities excluding elements of the Wisconsin Design.)

1. How much in-class time is devoted to reading each week? _____

2. Have possible objectives which may be attained by the students of your I & R Unit during the course of a year in reading been identified? _____

   If yes: How were they determined? _____

   _____

3. Is instruction in reading organized by (circle one):

   units of instruction topics modules skills other _____

4. Are instructional activities planned cooperatively by the I & R Unit staff or individually by each teacher? _____

5. Approximately how often does re-grouping of students occur? _____

6. Are provisions made for students who achieve their objectives earlier than most of the group? _____ If yes, what are these provisions? _____

   _____

7. Are provisions made for students who don't achieve their objectives within the time alloted for instruction? _____ If yes, what are these provisions? _____

   _____

8. Are all students expected to master all objectives, or does the expected level of attainment vary for individual students? _____

   _____

QUESTIONNAIRE
Unit leader

I & R UNIT—INSTRUCTIONAL PROGRAMMING
IN MATH

1. How much in-class time is devoted to mathematics each week? _____

2. Have possible objectives which may be attained by the students of your I & R Unit during the course of a year in mathematics been identified? _____ If yes, how were they determined? _____

_____

3. Is instruction in mathematics planned and carried out in (circle one):

units of instruction topics modules skills other _____

4. Who assumes responsibility for initial planning for these units, topics, etc.? _____

5. How many mathematics units, topics, etc., have been carried out in your unit during this school year? _____

6. Approximately how often does re-grouping of students occur? _____

_____

7. Are instructional activities planned cooperatively by the I & R Unit staff or individually by each teacher? _____

8. Are provisions made for students who achieve their objectives earlier than most of the group? _____ If yes, what are these provisions?

_____

_____

9. Are provisions made for students who don't achieve their objectives within the time alloted for instruction? _____ If yes, what are these provisions? _____

_____

10. Are all students expected to master all objectives, or does the expected level of attainment vary for individual students? _____

_____

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