Team teaching offers the benefits of optimizing the distribution of scarce educational resources while moving toward the established goal of individualized instruction. Team teaching is organized horizontally when each member of the teaching team teaches in all subject areas for 1 year. The vertical form prevails when the teachers assume responsibility for a group of students over two or more years in two closely related subjects. The learning-teaching modes of team teaching utilize large group, small group, and individual instruction. Most existing school buildings can be adapted to this variability of instruction, but new structures should be designed for maximum flexibility of room size to cope with changing demands and situations. The typical team organization contains a team leader, senior teachers, and regular teachers. The leader assumes major responsibility, with senior teachers being responsible for curriculum content. The team as a whole assists in planning the instructional time blocks and actual instruction. A bibliography of 18 items published between 1961 and 1967 is appended. This document was prepared pursuant to an ESEA Title III grant. (LN)
Mr. Paul C. Sowers, who holds a B. S. in Business Administration from Oklahoma University and a B. S., M. A., and Specialist degree in Education from Northern Arizona University, was involved in both elementary school teaching and administration for several years in New Mexico and in Arizona. More recently he taught in the College of Education and directed the Elementary Training School at Northern Arizona University. Currently he is Elementary Education Consultant at the Northern Arizona Supplementary Education Center.
INTRODUCTION

Team teaching as a pedagogical approach is of recent origin. The term was not used in educational publications until the late 1950's, although origins of the concept can probably be traced back as far as the Platoon School, the Pueblo Plan, the Gary Plan, the Winnetka System, and other innovative approaches to education which developed shortly after the turn of the century in American schools.

Although the concept is of recent origin, the practice is spreading rapidly and it appears to be one innovation making a real impact on American school organization. Team teaching encourages schools to recognize individual differences not only in students but in teachers as well. It encourages administrators to make more effective utilization of teachers' talents. It invites us to treat teaching as a profession and to recognize the value of teacher aides and assistants and other para-professionals.

Mr. Sowers, in this publication, introduces the concept of team teaching and presents a variety of practical applications. He draws on a wealth of teaching and administrative experience and speaks in concrete terms about ways in which schools can implement the concept of team teaching. Not every school will choose to take advantage of this approach, but it represents a new and interesting development in organizing teaching for effective instruction.

F. GORDON FOSTER
Dean of Instruction
Northern Arizona University
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1. QUESTIONING THE SELF-CONTAINED

The self-contained teacher in the self-contained classroom, particularly beyond the primary level, has usually found it difficult to do a good job of teaching in all subject areas. He may be considerably more proficient in some areas than in others and as a result may overemphasize certain subjects to the neglect of those in which he has less interest or talent. This imbalance is probably unintentional but is nevertheless present in many cases. Mr. Doe is enthusiastic in his preparation and presentation of arithmetic and science but tends to slide over language arts and social studies in a perfunctory manner. The loss to the students is self-evident.

As the curriculum content becomes progressively more complicated and the spread of individual student differences becomes greater, the self-contained teacher finds it more and more difficult to make adequate daily preparation in all areas. His problem is compounded by the tremendous expansion of knowledge that is currently taking place in our rapidly changing society, for we are at the threshold of a great technological revolution that may make the industrial revolution look small in comparison.
The emphasis on technological advance, along with great population growth and heavy concentration in urban centers, will modify our way of life in nearly all respects thus requiring corresponding changes and a reorientation in our entire educational system. Instructional arrangements will have to be made to allow teachers to prepare and work in the areas of their greatest competency in order that each child may be educated to his full potential. Mediocrity or waste in the development and use of human talent cannot be tolerated for long in a technological society without increasing frustration and social disorientation.

Since the teacher and the child are at the center of the instructional process, we must ask ourselves whether or not the self-contained teacher in the self-contained classroom offers the best solution. We know that teachers differ in talent and abilities just as greatly as children do. Are we to recognize these facts in our instructional process? If so, how? How are we going to make best use of teacher talents and at the same time meet the different needs of the children? Can the self-contained teacher be expected to be proficient in all subjects? Can the self-contained classroom meet the needs of a child whose own capabilities may differ greatly from one area of activity to another? Can the self-contained teacher in a self-contained classroom at the same time cope with the vast variability in abilities and talents that exists among the different individuals within the classroom?

2. TEAM TEACHING DEFINED

Just what is team teaching? At the present time there are many different concepts of team teaching, some already in practice, others still just concepts; but the important thing in all cases is the basic question: How can we make the best use of time, space, materials, and teacher talents to provide for the individual instructional needs of the students?

Consequently we must ask: (1) Should each teacher work in an isolated situation with a limited number of students, or should a larger number of students be pooled in order that several teachers might cooperate in the instructional effort? (2) If students are pooled, how can we organize the cooperating teachers most effectively to utilize their individual talents? (3) Can the relation and integration of the various subjects be achieved best by one teacher working alone, or by several teachers working together? (4) Is grouping to meet the individual needs of children best secured within a self-contained classroom, or by teachers working in cooperation?

If answer to these questions, opinion appears to be distinctly in favor of more cooperation among teachers in exercising their special
talents for the instructional benefit of the children. And, when two or more teachers assume a common responsibility for teaching a group of children, we have what is called team teaching.

3. TEAM RESPONSIBILITIES

In the self-contained classroom one teacher is usually solely responsible for about thirty children all day every day for every subject. In team teaching two or more teachers are jointly responsible for a larger group. For instance, a team of six teachers would share a common responsibility for the instruction of perhaps 168 students. What would this responsibility include?

First of all, the team members would have to decide upon the type of team arrangement that would be most suitable to their situation. Referring to Figure 1, would the team be horizontal or vertical, and what would be the degree of teacher specialization and interdisciplinary integration?

A partial summary of other responsibilities includes:

1. The proper scheduling of learning experiences and activities.

2. The arrangement of groups to meet the individual needs of the children, including large group, small group, and individual instruction.

3. The close cooperation in planning, instruction, and evaluation so necessary to successful team teaching.

4. The assignment of team member responsibilities in accordance with each one's special interests and talents.

5. The development of curriculum, the organization of instruction, specific teaching methods, and the assessment of student needs by the team working together.

4. TYPES AND COMPLEXITY OF TEAMS

Teaching teams may be organized horizontally across one instructional year or vertically through two or more years. Teams can be limited to one subject or be interdisciplinary in nature; see Figure 1.
A team could be called both horizontal and vertical if the members were to teach all subjects through two or more academic years. Several variations in types of teams are possible.

Horizontal and Vertical Types of Teams

<table>
<thead>
<tr>
<th>Levels by Years</th>
<th>Language Arts</th>
<th>Mathematics</th>
<th>Social Studies</th>
<th>Science</th>
<th>Special Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team #1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>Horizontal Team - All Subjects - One Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team #2</td>
<td></td>
<td></td>
<td>Vertical Team</td>
<td>Two Subjects - Two Years</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team #3</td>
<td></td>
<td></td>
<td>Vertical Team</td>
<td>One Subject - Four Years</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<tr>
<td>3</td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1**

In the plan illustrated here, the teachers in Team One would each share in the instruction of all subjects over a one-year instructional level. In Team Two the teachers would specialize in two closely related subjects over a two-year period. The teachers in Team Three would specialize in one subject area over a four-year period.

The types and complexity of teams can be varied to meet almost any local situation except, of course, for the vanishing one-teacher school. The main purpose in all cases would be to improve instruction for the children through better use of space, time, materials, and teacher talents.

The simple cooperative team, probably two teachers on the same or adjacent grade levels, would frequently find it advantageous to combine groups for some large-group instruction. They might also exchange classes in areas of particular competence, coordinate curriculum planning, and provide groupings to meet the individual needs of children.

A broader team, consisting of five or six teachers across one grade level or vertically through two or more grades, would encourage more extensive cooperation. In this case, each teacher would work as a co-equal, with perhaps different teachers assuming the lead in different situations.
The more complex hierarchical team would consist of a team leader, senior teachers, regular teachers, and perhaps various types of teacher-aides. Such a team would provide status and increased pay levels for those assuming greater responsibility. It would establish more varied professional opportunities and thus tend to stabilize key personnel within the system.

5. ORGANIZATION AND OPERATION

In order to illustrate the differences between a self-contained and a team-teaching situation we will assume six teachers and 168 students. Figure 2 shows the self-contained classrooms wherein each teacher would work independently in one room, teaching all major subjects to 28 children.

Self-Contained Teachers and Classrooms
(6 Teachers and 168 Students)

| 1 Teacher 28 Students | 1 Teacher 28 Students | 1 Teacher 28 Students | 1 Teacher 28 Students | 1 Teacher 28 Students | 1 Teacher 28 Students |

Figure 2

A teaching team, on the other hand, operates on the principle of cooperative endeavor rather than independent action. The same 168 students would be considered one instructional group under the direction of six cooperating teachers as indicated in Figure 3.

A Teaching Team
(6 Teachers and 168 Students)

6 Teachers
168 Students

Figure 3
The team would be somewhat like a “school within a school” in that it would possess considerable autonomy in regard to the instruction of its assigned number of children. It would plan and coordinate the curriculum to be offered, make its own schedules, provide for large-group, small-group, or individual instruction as needed, and utilize its teacher talents to greatest advantage.

A hierarchical team would establish considerable role differentiation. The team leader would assume overall responsibility, senior teachers would act as curriculum leaders, regular teachers would assist in the planning, and all would instruct. For illustration, let us look at Figure 4, which shows a basic structure for an interdisciplinary team.

An Interdisciplinary Team
(6 Teachers and 168 Students)

Team Leader
(Social Studies)

Senior Teacher
(Language Arts)

168 Students

INSTRUCTION

Senior Teacher
(Math.-Science)

6 Teachers

Three Regular Teachers

Figure 4

The team leader in this situation would probably be appointed by the principal but could be elected by his team associates. He would have to have leadership ability and considerable overall knowledge of curriculum, with expertness in at least one major subject area because it
would be his duty to organize and supervise the activities of the whole team as an instructional unit.

Senior teachers, each having demonstrated proficiency in specific curriculum areas, could be chosen by the team leader or by the principal as deemed most appropriate. These senior teachers, along with the team leader, would provide instructional leadership in all major activities. Because of their added responsibilities, the senior teachers would receive about $500 more a year, and the team leader $1,000 more than the regular teachers.

The regular teachers would normally be those just beginning, those of limited experience, or those fully experienced but not choosing or not able to assume responsibilities beyond regular instruction.

The team as a whole would set up the blocks of time considered necessary for the major subject areas. Within this time framework each subject leader would establish the basic student groupings and scheduling patterns for his particular area. Because of the autonomy and independence of the team, the groupings and scheduling could be as flexible and varied as the circumstances required.

The leader in a particular subject area, after carefully planning with the other team members, would set up the curriculum experiences deemed necessary for his area. He would design the essential units of study, and then assign student groups and instructional tasks to each member of the team. As work in the unit progressed, changes in student groupings and teaching assignments could be made whenever new arrangements appeared appropriate.

Time for planning is of primary importance to the team. By increasing the size of the groups assigned to the other teachers whenever instructionally feasible, the team leader could assign himself the time necessary for administration and supervision. In the same way, the senior teachers could be allotted free time. Also, if special teachers are available for art, music, physical education, or library, time can usually be found for overall team planning with the regular teachers present. The whole team should be able to meet together at least once a week, and in some systems, school is dismissed one afternoon each week for this specific purpose.

The load on the team members can be greatly lightened if special teachers and teacher-aides are made team auxiliaries. This should be done if possible. Special teachers do much to strengthen and broaden the instructional program, and teacher-aides relieve the teachers of many non-professional duties. Thus the curriculum would be improved and more time for teacher planning would arise as a welcome secondary benefit.

To picture large-group, small-group, and individual instruction all occurring during any given period, see Figure 5. In this case all six team...
members are occupied with social studies instruction of one sort or another. It would frequently be possible, however, to arrange large-group instruction for a larger number of children and thus allow one or two teachers time off for planning or parent-teacher conferences.

Large-Group, Small-Group, and Individualized Instruction During One Social Studies Period
(6 Teachers and 168 Students)

<table>
<thead>
<tr>
<th>Students</th>
<th>Teachers</th>
<th>Instruction Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>2</td>
<td>Making drawings for notebooks from overhead projections</td>
</tr>
<tr>
<td>32</td>
<td>1</td>
<td>Completing some basic unit instruction</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>Advanced discussion group</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>Individualized vocabulary study</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>Designing a mural</td>
</tr>
</tbody>
</table>

Figure 5

As a matter of overall organization, the principal and the team leaders would make up the administrative body of the school. The curriculum-design group would be extended to include the senior teachers, and the actual instruction would include all except the principal; see Figure 6.
Overall Organization of a Team Teaching School

<table>
<thead>
<tr>
<th>Administration</th>
<th>Curriculum Design</th>
<th>Actual Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Team Leaders</td>
<td>Principal Team Leaders</td>
<td>Team Leaders</td>
</tr>
<tr>
<td></td>
<td>Senior Teachers</td>
<td>Senior Teachers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regular Teachers</td>
</tr>
</tbody>
</table>

Figure 6

Since the principal will share his administrative responsibilities with the team leaders, he will have much more time to serve as a curriculum leader. Through his direction and coordination of activities, there should evolve continuous curriculum evaluation and improvement.

In order to facilitate the operation of the interdisciplinary team which we have been discussing, it would be advisable to schedule all instruction in one subject area at the same period of the day. By concentrating the efforts of every team member on one area at a time, groups could be arranged to meet a much wider field of individual student differences. Please refer to Figure 7 as an illustration of this idea. Groups would be homogeneous according to actual achievement except where social, emotional, or physical factors required special consideration.

Interdisciplinary Team Teaching Schedule with Regrouping for Each Area
(6 Teachers)

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Language Arts</th>
<th>Social Studies</th>
<th>Mathematics</th>
<th>Science</th>
<th>Special Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Homogeneous Grouping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Six Instructional Groups Possible</td>
<td>In Every Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 7
The procedure demonstrated in Figure 7 would require four class changes and regroupings after the initial language arts period. An alternative to cut down on the number of such changes is shown in Figure 8. In this instance the children would be grouped on their language-art achievement and remain in the same groups for social studies. They would then be regrouped according to their mathematics achievement and remain in this grouping for science. A final regrouping, based again on achievement, would then be made for special activities.

Interdisciplinary Team Teaching Schedule
Limited Regrouping
(6 Teachers)

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Language Arts and Social Studies</th>
<th>Mathematics and Science</th>
<th>Special Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Six Homogeneous Groups in Closely Related Areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Figure 8

As mentioned previously, the use of teacher-aides whenever possible will help greatly in the functioning of a team. Instructional aides can relieve the teacher of many of the less difficult instructional routines, and clerical or general aides can assume much of the paper work and burden of scheduled “duties.” Once again, such aides are not absolutely essential to the working of a team, but they enable the teachers to have more free time for planning, for working with individual children, for conferences, and for concentration on truly professional tasks.

Audio-visual equipment usually finds more use with a team than in the self-contained classroom, and is especially adapted to those areas of instruction where large group presentations are appropriate. With the advent of more and more technological aids, it appears certain that the use of audio-visual devices will become increasingly prevalent in instructional processes.
6. BUILDING DESIGN

Variations of team teaching can be adapted to any school of more than one teacher. It is not necessary that special buildings be provided. Much can be done to implement new instructional arrangements in the buildings that we now have.

However, as we look to the future, plans can be made to design buildings more suitable to team teaching practices. The primary concern here is to make the new buildings accommodate the educational program desired, and not try to fit new programs into conventional structures.

The main principle is flexibility. As the program changes, and invariably it will, we cannot always afford to construct new buildings. Consequently, the ones that we do build must be designed to provide adequately for changing demands and situations.

There are three types of space designs that offer varying degrees of flexibility. We will call them variable space, flexible space, and open space; see Figures 9, 10, 11.

Variable Space

Figure 9

Variable space would consist of several different sizes of permanent-wall rooms to accommodate the varying size of instructional groups.
Flexible space would be about the same as variable space except that many of the walls would be flexible and could be opened or closed, as desired, to provide larger or smaller rooms.
Open space would permit the greatest flexibility. The whole area could be rearranged with portable partitions at any time to meet the needs of any situation.

In actual practice, new school plans would probably incorporate some of all three space types, the idea being to provide buildings that could be used over a long period of time but still be adaptable to changing programs.
7. SUMMARY

In any school the first consideration is to meet the needs of the children. Second comes the question of how we can best use the talents of the teachers. Considering the two needs together, it appears that team teaching offers a great deal in the way of solution.

A recent poll conducted by Gallup International, Incorporated, under a grant funded by the Kettering Foundation, and reported in the Arizona Daily Sun on August 10, 1967, indicated that 88 percent of the parents polled favored team teaching. Professional educators throughout the country should take a close look at this interest in team teaching, study the implications, and provide sound leadership in its development, application and direction.
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