

DESIGNING SCHOOLS FOR VARIABILITY

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THE concept of variability has been the focal point of school building design in recent years. Designing a school building that will enhance the individuality and variability of students and teachers is indeed a challenge to today's educators and school planners. Professional people with creative ideas must not be restricted by rigidly designed buildings that are not readily adaptable to current educational practices (1).

The recent emphasis on the team teaching approach which provides for flexible scheduling, large and small group instruction, individual study, and which capitalizes on teacher competencies, is one attempt at providing greater variability in the total educational program. Designing schools to promote this approach demands flexibility in the physical facilities.

Team Teaching Centers

The organization of teaching teams varies a great deal among schools using this approach. The more common organizational plans provide a team for each grade level or each academic departmental subject area. Among other things, these plans facilitate flexible scheduling and ungraded teaching.

Regardless of the organization, however, most schools find it desirable to have a "team teaching center" for each teaching team. Each of these "centers" has a large group lecture room (usually the size of four to six regular classrooms) which can be subdivided into smaller rooms to accommodate small group activities and individual work. Also in the "center" are glass paneled seminar rooms, a soundproof listening and recording area, semi-private carrels for individual study, and a small reading room which houses library resource materials and audio-visual equipment.

The facilities provided in the "center" include a raised stage, movable furniture, adjustable chalkboards and bulletin boards, built-in sound equipment, and audio-visual and television facilities.

Each "team teaching center" has a team workroom which is used by teachers in planning together and in preparing transparencies, slides, "passouts," overlays, and other instructional materials. The workroom contains dry mount presses, duplicating machines, copying machines, and various other equipment used in preparation of instructional materials. Semi-private or private offices are located in the workroom for use by teachers in counseling with students and for individual planning (5).

Library Facilities

In schools emphasizing individuality, the library is visualized as being the heart of the instructional program. Its function has been expanded to include a much wider range of materials and services than were included in more traditional libraries. In many instances, it has been given a different name such as learning laboratory, instructional materials center, or educational media center. As these names suggest, a library contains more than books and periodicals; it may contain films, filmstrips, tapes, records, disc recordings, slides, microfilms, video-tapes, maps, and various other materials.

This newer concept of the function of the library places greater emphasis on independent study by pupils. Rather than "closed" stacks and a large reading room, the newer libraries have "open" stacks with the bookshelves being used to subdivide the large reading room into several smaller "rooms." In addition, several "satellite" reading rooms, with their own collections of materials, are located at strategic places throughout the school. A large number of individual study carrels are used to provide students with semi-private study areas.

Other facilities provided in the library are soundproof rooms for listening, viewing and recording. These rooms are equipped with booths so that students can use films, tapes, slides, or similar materials for independent study. Other soundproof rooms are provided for use by students in typing reports and related assignments (2, 3).

Task of the Architect

A major task facing the architect is that of designing a building that will not only facilitate the current educational plans, but also one that can be adapted to future educational programs. Thus, two key considerations of the architect are *flexibility* and *adaptability*.

In order to provide greater flexibility in space utilization, architects are designing buildings with long span spaces of 60 to 100 feet between interior walls that provide structural support. This large space can be subdivided into several small rooms by using operable partitions or movable walls; and semi-isolated areas can be provided by the use of such "sight barriers" as bookcases, bulletin boards, and chalkboards.

Many obstacles to the adaptation of the buildings to future educational programs are removed by placing stairs, plumbing, shafts, boilers, and other permanent type facilities at the perimeter of the building. This allows interior changes

to be made in a short time and at very little expense. The use of flat ceilings of constant height makes it easier for adaptations to be made in the use of curtains and operable partitions (6).

Considerable attention is also given to the environmental aspects of school buildings. Lighting systems are designed so that they can be adapted as changes in the use of space and facilities are made. Year-round climate control systems are being installed by using under-floor and above-ceiling space for air conditioning ducts, plumbing, and electrical conduits. Acoustical improvements are being made through the use of soundproof partitions, acoustical materials on ceilings and walls, and carpet on the floors. More attention is given to color combinations, areas for displaying art work, and development of attractive areas where pupils can congregate and relax during free time.

Future Considerations

In looking to the future, it is difficult to determine what changes are on the educational horizon. It seems safe to speculate, however, that there will continue to be many technological innovations. Among these will be the use of the electronic computer.

Except for their uses in scheduling and for other administrative purposes, computers have had very little impact on the educational programs of schools. The promise they hold for the future, however, is tremendous. For example, "computerizing" programmed materials offers unlimited possibilities for individualizing instruction (4). In addition, elaborate storage and retrieval systems for all sorts of information are being developed and will be available to the schools in a few years (2). Because of these and other possible uses of the computer, it is imperative that school buildings include at least the rudiments necessary for future installation of these facilities.

In summary, when schools are designed for variability, educational programs can be changed when the needs of pupils and teachers demand such a change. Buildings that are rigid and inflexible in design often force a school to continue educational programs although these may be outdated and ineffective.

References

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