A research and demonstration center has been built at the University of Arizona to (1) aid in educational research, (2) demonstrate the relationship between educational theory and practice, (3) serve as a model for new ideas in school construction and equipment, and (4) provide an opportunity for student teachers to observe teacher and student behavior. Using easily moved wall and ceiling units, the seventy-five foot square area is easily arranged to provide a variety of educational environments. The equipment used, (furniture, audio-visual aids, etc.) is similar to that found in typical schools. (JT)
SCHOOL OF EDUCATION, UNIVERSITY OF ARIZONA
Hollis A. Moore, Dean  John T. Greer, Project Director

Supported by a Grant from Educational Facilities Laboratories, Inc.
Coordinated by Western Regional Center, Educational Facilities Laboratories, Inc., School of Education, Stanford University

Report by John T. Greer
Cover designed by Peter Kastl
Architect: Gordon M. Luepke
An exciting new research and demonstration facility is being built at the University of Arizona. Housed in the west wing of the new College of Education building, the Experimental Learning Center is scheduled to open in September of 1963.

The members of the faculty, in planning the Experimental Learning Center, have recognized the responsibility of the College of Education to provide a wide variety of services to the schools of Arizona. This recognition is best exemplified in the purposes established for the facility, namely: (a) to develop significant research studies which demonstrate the relationship between theory and practice, (b) to serve as a model for new ideas in school construction and equipment, (c) to provide a facility in which actual classroom environments can be recreated, (d) to provide an opportunity for the cooperative effort of subject matter specialists and educators, and (e) to provide teachers-in-training with an opportunity to observe teacher and student behavior.

To accomplish these purposes, a research center featuring a flexible physical structure, temporary student populations, and a transient teaching staff is required. These requirements are met in the design and the operational procedures of the Experimental Learning Center. The structure features a large open area which may be subdivided in any way through the use of movable walls and completely flexible ventilation, lighting, and electrical systems. Students and teachers for the individual projects will be provided by public school districts. The operation of the center will be the responsibility of a small permanent staff consisting of a College of Education faculty member, graduate assistants, and clerical personnel.
The Experimental Learning Center is located in the west wing of the new College of Education building. Included in the one-story wing is a Lecture-Conference Room for large group work (figure A).
Designed by the architectural firm of Gordon M. Luepke of Tucson, the Experimental Learning Center consists of a space seventy-five feet square. The only permanent features within the area are the exterior walls, the office and storage room partitions, and the four supporting columns. The portion of the facility usable for research measures approximately sixty feet by seventy-five feet.

The usable area of the facility will be divided according to the requirements of specific research projects. (Typical arrangements are included in the final section of this brochure.) The primary system for dividing the research area consists of a series of interchangeable wooden panels. Some of the panels are plain while others contain one-way viewing windows or doors. They will be attached to both the ceiling and the floor to insure structural integrity as well as acoustical privacy. (For details of construction, see figure B.)

The floating ceiling of the Experimental Learning Center consists of a series of two inch by four inch wooden cross members and two feet by four feet acoustic or fluorescent light panels. The accessible space between the roof and the ceiling permits units of the flexible air conditioning, lighting and electrical systems to be shifted to any part of the facility.

The floating wooden floor is equipped with removable hatches to permit units of the electrical system to be moved beneath the floor when necessary. This feature enables the use of large quantities of electronic equipment without the hazard caused by cables laid on the floor. The space beneath the floor also serves as a return air passage for the ventilation system.
FIG. 13
KOOF
ACCESSIBLE SPACE FOR FLEXIBLE ELECTRICAL SYSTEMS.

ACCESSIBLE SPACE FOR FLEXIBLE ELECTRICAL SYSTEMS.

TYPICAL CONSTRUCTION—EXPERIMENTAL LEARNING CENTER
EDUCATIONAL BUILDING UNIVERSITY OF ARIZONA TUCSON, ARIZONA
The research envisioned for the Experimental Learning Center calls for working with students of all ages — from pre-school age children to graduate students. The furnishings and equipment of the facility, therefore, must be versatile in order to avoid duplication, movable to maintain the facility's flexibility, and compact to permit easy storage.

Educational Facilities Laboratories made a grant to the College of Education in May of 1962. The grant makes possible the following activities: meetings of the faculty and cooperating school district personnel to identify research projects appropriate for the new facility and the resulting equipment requirements, visits to the university by consultants noted for their work in research and technology, travel by members of the faculty to confer with manufacturers and to attend equipment demonstrations, and the publishing of informational documents such as this brochure.

At the present time, it is possible to identify generally the furnishings and equipment that will be required for the Experimental Learning Center. The list of furnishings includes a suitable floor covering, draperies, and additional partitions.

It is expected that large numbers of children, teachers-in-training, and visitors will be involved in the work of the facility. Consequently, a carpet-like floor covering is required which will subdue the movement noise and aid generally in the control of sound. The floor covering must be laid in such a way that it can be taken up and replaced easily to facilitate the movement of partitions and the access to the flexible service systems.
The construction contract of the facility calls for Venetian blinds to be installed on the window frames. This type of installation is demanded by research projects in which actual classrooms are being simulated or recreated. Other research projects, however, will require more adequate control of light and sound. Draperies of the "blackout" variety appear to be the most satisfactory solution for such projects.

The partitioning included in the contract is sufficient for an arrangement of four typical classrooms. Some of the research projects planned for the facility will utilize this arrangement while others will require spaces of various sizes to accommodate students engaged in independent study, small group discussions, and large group lectures. Additional movable partitions of various types are required, therefore, to create such spaces.

Equipment requirements of the Experimental Learning Center are similar to those of good schools throughout the country. Thus, the facility must be provided with: (a) furniture for all students, regardless of size; (b) furniture for teachers, including demonstration tables; (c) typical classroom equipment such as chalkboards, bulletin boards, bookcases, and storage equipment; (d) a complement of audio-visual equipment and supplies; and (e) equipment appropriate for instruction in various subject matter fields.

The unique equipment requirements of the facility relate to the recording of the research. Plans are presently being made to film portions of the research projects and to record the project directors' comments as they observe the work. Systems of cameras, microphones, and dictation equipment will be required for this phase of the operation.
arrangements for research

The remaining pages of the brochure contain drawings and descriptions of the Experimental Learning Center as a research facility. The projects listed are samples of the types of research to be conducted rather than actual studies in progress.

TEAM TEACHING ARRANGEMENT UTILIZING LECTURE-CONFERENCE ROOM

Examples of research projects using arrangement:
The effectiveness of team teaching
The effectiveness of programmed instruction

Furnishings and equipment required:
Audio-visual equipment for large group instruction
Individual study desks
Programmed learning equipment
Furniture for discussion groups
Filming and recording equipment
Example of research project using arrangement:
The effectiveness of self-contained and
departmentalized elementary classrooms

Furnishings and equipment required:
Standard classroom furniture and equipment
Filming and recording equipment
Example of research project using arrangement:
The effectiveness of team teaching in the elementary school

Furnishings and equipment required:
- Audio-visual equipment for large group instruction
- Individual study desks
- Programmed learning equipment
- Furniture for discussion groups
- Filming and recording equipment
FOUR CLASSROOM ARRANGEMENT

Example of research project using arrangement:
The effect of partitioned classrooms on learning

Furnishings and equipment required:
Standard classroom furniture and equipment
Filming and recording equipment