

for this production service. We need, too, to give greater attention to the helpful suggestions from lay groups.

Although we are using our own professional people to produce materials which are having a notable effect on school programs, we need the technical helps from experts who are in the field of educational research. These helps, of course, should be so written that they have meaning for the tremendous audi-

ence of eight hundred thousand public school teachers in service. Too many of our technical helps have been written in the curiously unreal style of a pre-service college text.

Let these experts help us find out the best ways of capitalizing on good school practice and good school theory. A renaissance of in-service materials might go a long way toward accelerating the improvement of our schools.

What Is a Curriculum Laboratory? —

FRANCIS L. DRAG

Francis L. Drag, director of curriculum in the San Diego County public schools, draws on his own study of curriculum laboratories¹ in describing present practices in their establishment and use. In this brief review Mr. Drag also indicates needs and valuable guides to the establishment of working curriculum laboratories.

THE MODERN CONCEPT of the curriculum laboratory, its purpose, and consequently its form and function, is the result of an evolutionary process which parallels trends in curriculum activity in the nation. Its history may be traced in four more or less overlapping steps which emerged during the early part of the century.

For example, in 1924 a Bureau of Elementary Curriculum Research was established at Columbia University for the purpose of formulating core and type curriculums for schools, formulating principles for adapting curriculums

for local needs, answering questions from the field regarding curriculums, cooperating with efforts at reorganizing curriculums by the various school systems in the nation, and determining more scientific means for experimentation in the field of curriculum development. At a later date, about 1929, the literature reported the advent of the "Curriculum Laboratory." At this time the name of the Bureau was changed to that of Curriculum Laboratory, the primary purposes of which were (1) to gather courses of study and curriculum materials from school systems, (2) to promote scientific, "test-tube," analysis by experts, and (3) to report the results of such studies to curriculum makers.

¹ *Curriculum Laboratories in the United States*, an unpublished doctoral dissertation at Stanford University, December, 1946.

As other educational systems engaged in curriculum laboratory activities, a third trend emerged as the function became less that of analysis but rather one of production and utilization of curriculum materials under the direction of curriculum leaders. A fourth, although not clearly defined aspect of this evolutionary process may be considered a synthesis of the three trends stated above. It includes the element of participation by a much larger percentage of teachers and of curriculum builders engaged not only in the study of research and the building of curriculum guides, but also in the experimentation and manipulation of the media, aids, and techniques to be actually used with children in learning situations.

Increase Reveals Awareness of Need

In 1945 a comprehensive study was undertaken to determine the prevailing practices with regard to organization, housing, resources, and functions of curriculum laboratories and to offer suggestions which might serve all types of school systems and institutions of higher education in the organization, development, and operation of curriculum laboratories in integral relationship to their curriculum programs.

Data was gathered during the first six months of 1945 from three sources. An inquiry was sent to heads of 3,130 school systems and educational institutions, including counties, cities, colleges and universities, and state departments of education. Personal visits were made to thirty-three localities in fourteen states and considerable correspondence was undertaken in following up the inquiry and the visitations.

Three hundred fifty-three curriculum laboratories were reported by the 1,436 replies to the original request, as contrasted with 107 reported in 1938.² Fifty-one of these were reported by county school systems (county systems were not included in Leary's study), 145 by institutions of higher education, 135 by city school systems, and 22 by state or territorial departments of education. The expression of the need for curriculum laboratory service by 236 school systems or institutions of higher education responding to the inquiry but reporting no laboratory of their own, is a further indication of the trend in the development of such services.

The growth of curriculum laboratories has been definitely on the ascendancy during the last two decades in spite of the fact that all types of school systems in the nation have operated under duress almost continuously since 1930 because of the depression and the recent world war. The rate of growth of curriculum laboratories has been accelerated since 1935, especially during the first half of the present decade, as is indicated by the fact that during each of the years—1940, 1942, 1943, and 1944—more laboratories were reported established than during any previous twelve month period.

Organization Parallels Evolving Concepts

The curriculum laboratory movement has undergone, during the last fifteen to twenty years, a definite evolution.

² Bernice E. Leary, *Curriculum Laboratories and Divisions*, Bulletin 1938, No. 7, Office of Education, United States Department of Interior, Washington: 1938. Pp. 33.

This process has paralleled curriculum development in the nation from the early efforts to build system-wide courses of study, through curriculum committees working with curriculum specialists, to the more recent trend toward teacher participation in workshop and group planning activities in curriculum development. The present tendency in the organization of curriculum laboratories is closely related to (1) an increasing recognition by educators of the importance of teacher participation in curriculum development; (2) a growing recognition of the need for the use of democratic techniques in school administration, supervision, and in curriculum study; (3) a greater recognition of and emphasis on the social aspects of education; and (4) a recognition of the need for an integrative approach to the curriculum.

Personnel Is a Major Problem

The curriculum laboratories studied have an average of from one to two professional staff members, including full-time and part-time workers. Persons assigned to the curriculum laboratory often have additional responsibilities in other areas of educational service. In all too many instances there exists the practice of giving individuals who perform important curriculum laboratory services other assignments which demand prior claim to their time. This is a problem which will be resolved only when curriculum laboratory functions become accepted as have those of the school library.

Adequate Physical Facilities Are Necessary

Housing facilities provided for curriculum laboratories are to be found in

administrative offices, in special rooms or buildings, in a combination of administrative offices and library, and in the library itself. Among the special types of rooms provided are conference rooms, library rooms, work rooms, offices for professional personnel, duplicating rooms, secretarial rooms, supply rooms, and shipping rooms.

The resource leaders, the curriculum materials, the equipment, and the facilities of curriculum laboratories are, for the most part, inadequately housed. When housing is located in the administrative and instructional offices and in library rooms; when single rooms must be used for conferences, production activities, research, materials storage, and workshops; and when materials must be kept in one general location, professional workers in another, and production facilities in a third; it is to be readily concluded that curriculum development is seriously handicapped.

For efficient curriculum service the curriculum laboratory should be housed in special rooms designed for the purpose. All curriculum service which in any way involves professional or clerical staff, curriculum materials, or facilities in the curriculum laboratory, should be channeled through the laboratory and therefore must be provided for through adequate housing. All rooms—materials rooms, conference rooms, workshops, offices for professional staff, production rooms, and shipping rooms—should be clustered as a curriculum service unit.

The curriculum laboratory should be easily accessible to the other units of the school system which have a direct relationship to its service. These include the facilities of the library, the audio-

visual service, the guidance and research service, the special education service, and special administrative service.

The number and size of the rooms in the curriculum laboratory will vary according to the service responsibilities of the department engaged in curriculum study. When planning quarters for the curriculum laboratory, consideration should be given to provision for offices for professional staff members; space for the materials to be housed in the laboratory sufficient to insure ease of storage and use; space for full-time and part-time clerical staff; conference rooms to accommodate minimum and maximum size groups; audio-visual listening and viewing rooms; workshop rooms for use of staff and teachers engaging in construction projects, including fine and industrial arts, science, and music; and rooms for typing, mimeographing, and other types of production.

It is to be especially emphasized that building plans include housing space for curriculum laboratory service sufficient to meet the present need and the long-range anticipated need. Laboratories designed for limited function often find within a short time the demands for service far exceeding the capacity of the physical facilities provided.

The study reveals that curriculum laboratories, generally speaking, provide such equipment as book-shelves, file cabinets, chairs, tables, desks, typewriters, and mimeographs in numbers sufficient to care for the type and number of services which can be offered subject to limitations resulting from insufficient floor space, sparseness of curriculum materials, and the inadequacy in number of staff members.

Materials Reflect Changing Emphases

The materials provided by curriculum laboratories, listed in descending frequency, include professional books, courses of study, periodicals, curriculum bulletins, educational pamphlets, textbooks, standard tests, workbooks, bibliographies, units, yearbooks, surveys, guides, display materials, and resource and enrichment materials. Curriculum laboratories are generally more adequately stocked with the traditional materials for curriculum building or study (professional books and periodicals, textbooks, units of work, curriculum bulletins, and courses of study) than with the newer types of materials (community resource information, display materials, and construction materials).

These latter types of materials have been recently introduced into workshop situations in which teachers are given the opportunity to construct and create with the same media provided children in the classroom. Their lack of inclusion in curriculum laboratories in quantities equal to the need may result from several factors such as a lack of space for the proper storage and utilization of such materials, the existence of a formal educational program in which the acquisition of subject matter is the dominant learning activity, a lag in the planning for curriculum development by professional leaders, and a corresponding lag in teacher participation in curriculum development. It is heartening to note that increasingly curriculum laboratories are recognizing the importance of display types of materials such as pictures, models, museum objects, charts, and graphs.

Suggestions in the selection of materials for curriculum laboratories, as

gleaned from the study, would include: (1) inclusion of materials based on quality and not quantity; (2) constant evaluation of materials in terms of relevancy to teacher needs, with provision for discarding useless materials; (3) balance in the types of materials provided, taking care to avoid indiscriminate stocking of certain of the more accessible materials such as courses of study, guides, and bulletins; (4) provision for the use of materials related to auditory and visual education; (5) source materials on the local environment and its culture; (6) source materials on the basis of human needs such as food, clothing, shelter, transportation, education, government, recreation, health, and the aesthetic arts; and (7) materials and equipment for construction and experimentation including wood, paper, metal, clay, paint, tools, and many types of science supplies.

Cataloguing Promotes Efficient Use

Curriculum laboratory materials are frequently inadequately catalogued because of insufficient personnel and because of lack of technical knowledge of cataloguing procedures. Generally, where materials are in charge of a librarian, the cataloguing system is much more complete than otherwise.

It is recognized that there is a degree of uniqueness in each curriculum laboratory situation, and in this respect special classification and cataloguing systems should be devised to fit the peculiar functions of the laboratory. Large laboratories might well provide the full-time service of a trained librarian; small laboratories should consult a librarian in setting up classification and cataloguing systems. Simplicity of organization

and ease of use are to be regarded as fundamental. Complex, involved, and weighty systems stifle use, entail a disproportionate expenditure of time, and involve an unjustifiable expenditure of the budget.

Functions Are Many and Varied

In general, curriculum laboratories serve: (1) as laboratories where curriculum planning is engaged in by individuals and groups under professional leadership; (2) as centers for staff use in directing curriculum development; and (3) as storehouses for curriculum materials and dispersal centers for materials to be used by groups in other localities. Laboratories may serve one or more or any combination of these functions.

The specific activities carried on in curriculum laboratories are reported under thirteen major headings. These are, in the order of frequency, curriculum construction and revision; advising and directing curriculum work; improving instruction; collecting and assembling curriculum materials; producing and/or publishing curriculum materials; research and experimentation; investigating problems of the curriculum; sending, selling, and otherwise distributing curriculum materials; offering courses in the curriculum; sponsoring curriculum conferences; serving as a purchasing agency; editing and reviewing curriculum materials; and administrative functions.

Modern School Programs Provide the Guides

The modern curriculum is much more flexible than formerly, is confined much less to a single type of teaching material, the textbook, and has extended

beyond the four walls of the school and the material immediately at hand to include widespread use of community resources. It involves the use of many types of resource materials, teaching materials, reading and reference materials, visual and auditory aids, as well as materials for manipulation and construction. It is evident that this type of curriculum endeavor requires continuous growth in service if teachers are to cope with constantly arising problems, if they are to be prepared to set new educational goals, and if they are to provide more socially significant educa-

tional experiences for boys and girls.

This movement in curriculum development gives rise to the establishment of the curriculum laboratory as a means for implementing the program. It is an essential part of the modern curriculum, and, if operated at its best, will go far in giving teachers a means for developing dynamic philosophies, based upon a constant acquaintance with current problems and a forward looking viewpoint which recognizes the fact that in no institution of society is change more important and necessary than in education.

*The Instructional Service Center*_____

ALICE H. HAYDEN

The ways and means of establishing "instructional service centers" or "curriculum laboratories" are discussed by Alice H. Hayden, director of educational research, University of Washington, Seattle. Miss Hayden discusses problems of organization, provision of service, and personnel in terms adaptable to all schools regardless of size, nature, or locale. Those interested in giving teachers aid in the field of materials will find valuable guides to action in her article.

MUCH HAS BEEN SAID and written about instructional materials, but the degree to which these materials are used effectively in the classroom is in large measure dependent upon the type and amount of *service* available with the instructional materials. Mere provision of teaching aids is no guarantee of effective utilization in the classroom. Actually, most teachers have access to many more fine teaching materials than they use. What then, are some of the reasons why teachers aren't making

better use of these aids? Stated briefly, the principal causes are:

The teacher may not know what is available.

The room facilities may not permit the use of some types of auditory or projected materials.

The procedure necessary to obtain equipment and materials may be too involved and time-consuming.

Certain materials may have to be scheduled so far in advance that the teacher cannot always tell whether the group will have reached or gone beyond the point where

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