

## Materials Assist In-Service Growth

*Practice and understanding  
can be changed  
through creative use of materials.*

THE expansion of the United States into a world-wide power with millions of Americans living in countries all over the free world has had a powerful impact upon our educational system. International relations, economic developments and foreign language instruction are receiving new emphasis in order that our younger citizens may better meet the problems they will face as adults. Another great impetus to change in the curriculum has resulted from the revolutionary discoveries in the scientific and mathematical fields and the new instructional goals in these subjects.

The result of such developments in our society has been to outmode much of our teacher preparation and make in-service education on an unprecedented scale necessary. Good materials designed for the purpose are an important part of all in-service programs.

The improved materials now available for classroom use have provided models for the newer aids to in-service education. Auditory and visual materials for

teacher education have been created in many localities, and television is being extensively used for in-service purposes. The formats devised for student use have proven equally effective when used with teachers. The whole field of specialized materials for in-service use has grown rapidly in the past decade.

Teachers' guides are effective in changing the pattern of education and are, in small and isolated school systems, a principal material for in-service education. The changes in psychological understandings and teaching methods written into schoolbooks today require an extensive textbook manual to aid the teacher.

The projected instructional materials, including films, filmstrips, tapes, recordings, radio and television, usually have accompanying teachers' guides for each title, and often a brochure covering an entire series. All of these teaching aids also have built-in teaching practices with much in-service value. A teacher may follow the exercises in a textbook, but must observe the sequence and content of a film or broadcast. Many learning situations are so presented, particularly

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in projected materials, that teaching methods are influenced. A teacher viewing a film with a class is usually observing a carefully prepared teaching device and some transfer of techniques usually follows. An educational television program, which frequently portrays a teacher before a class or group, also affects the methods of the teacher as well as the instruction of the class. The Pittsburgh television programs in arithmetic or the splendid "Great Dramatic Literature" film series, produced in Boston, are examples.

School systems interested in in-service education should choose their materials in a manner that will contribute to the purpose. The possibilities for growth inherent in the process of making a choice of books and other instructional aids should be utilized. A textbook committee of principals and teachers chosen from the whole system and large enough to represent the teaching staff will have a marked in-service training effect. Discussions throughout the staff will necessarily influence concepts of learning. The investigation into teachers' manuals, giving the psychological reasons for textbook organization, will provide another avenue for staff study. As teachers' concepts improve, better and more flexible materials will be demanded and produced.

The previewing of films and the producing of broadcasts by staff members have similar values. It is probable, for instance, that in producing the television program, "Exploring Our City," for the fourth grade in Seattle, the idea of using the community in social studies was given considerable impetus. Indeed, Marshall McLuhan apparently would have us believe that television programs represent a different quality of learning which directly affects the viewer in a

manner entirely different from that of books. In many areas radio and television series are actually the structure of the subject curriculum. This is found in such examples as the White film series in physics or a radio series using the facilities of a city for a primary social studies core.

### Materials Center

The growth of materials produced specifically to change teaching concepts has been a feature of the past decade. Motivated by the needs of the times, school systems are creating programs of in-service materials on all levels and of every type. The field of projected materials for in-service programs particularly, has been aided by the newer developments. Films and broadcasts directed at problems of teacher training are becoming numerous; the Indiana University's Audio-Visual Center catalogue, for instance, lists 218 film titles in this field.

An answer for the need for in-service materials can be found in the instructional materials centers which are becoming a vital part of public school systems and universities. Curriculum laboratories for in-service training are usually a part of centers, and the number existing today indicates the importance of such resources. Another feature of these centers is the exchange of publications. Portland has an arrangement with 20 school systems and 22 universities for the exchange of materials.

Television for in-service education has great possibilities, since it permits simultaneous observation by all the teachers in a system. Incidentally, the public also views telecasts and the public interest that is created can have marked effects, particularly in cities.

Production of materials as an in-service training experience for teachers takes many forms, and some examples of methods used in various systems might be helpful. Since the writer is most familiar with practices in Portland, a beginning might be made by a fairly complete description of the materials in use in that city.

Basic to in-service training and to teaching on all levels are the four general and two special guides. The general guides are primary, intermediate, upper, and secondary and are designed to provide a general framework for the curriculum offered in the schools. The two special guides are primary reading and primary number. An intermediate number guide and a reading guide for all grades are in preparation.

Forty-nine resource units on all levels implement the guides and provide a wealth of suggestions for teachers. In addition, 227 special publications in subject matter fields are available for faculty study.

A complete set of these materials is available in every school building. Portland's *Curriculum Publications Catalogue* lists 353 publications grouped in the various curriculum areas. These publications consist of resource units, material lists and suggestions on teaching techniques.

Housing for in-service training materials is provided in the Instructional Materials Center in the administration building. This center consists of a curriculum laboratory, a professional library, a publications section, an elementary library, and an audio-visual depository. Teachers visit the center in great numbers each month.

Typical of other materials used in Portland were those produced to introduce a new spelling program. Since

teaching practices throughout the city were involved, careful attention was given to preparing materials for teacher use. A teachers' manual was written by a teacher committee and samples of the new spellers were sent to all teachers. A filmstrip was produced and several regional conferences of teachers were organized to see the filmstrip and hear a discussion describing the new techniques. Faculty meetings were then held throughout the city and the spelling materials as well as duplicated brochures covering the points discussed in the conferences were reviewed by the teachers. A marked degree of unanimity in method resulted.

Another type of problem—that of adolescent guidance—was approached differently. The psychiatric social workers in the Portland schools had long sought an avenue by which the 13- and 14-year-old pupils could gain help for their personal problems. An experiment was begun in this area by the creation of a radio program called "Teens Talk." After a year's experimentation a sound film was produced illustrating some of the problems that were discussed in the radio programs. This film has helped teachers to understand what is involved in adolescent problems and how better to utilize the radio as a resource.

An example from another city provides an illustration—the great effort being made in New York City to meet the educational problems resulting from the influx of Puerto Ricans. For several years a flow of research publications has been provided to the New York City staff to alert them to the investigations in progress. This program is now developing specific techniques of teaching such as are discussed in the very recent pamphlet on "The Future Is Now." Most of the materials used in this program of in-

service work are printed, but television is also being considered.

An entirely different approach was used in the recent introduction of a new map program in the fourth grade of the Spokane, Washington, Public Schools. A series of grade meetings to explain the maps and globes for use in each grade was held. Bulletin boards and flannel board presentations were organized, and carefully planned demonstrations of class situations were presented. The value of actual experience with the materials to be used in the classroom was stressed. Since the number of teachers was not too great, this type of approach could be used.

In Seattle, homeroom teachers in the elementary schools found that they needed help in the field of art. As a result, a carefully organized television series, "Growth Through Painting," was presented. In a field such as art, in which demonstrations of techniques are necessary, television has great possibilities. Teachers' guides for the telecasts were prepared and made available in advance so that when the teachers gathered before the receivers after school, the presentation could be easily understood. Principals' observations at the conclusion of the course indicated an upgrading of the art programs in the school.

Los Angeles, in helping large numbers of teachers with new developments, makes extensive use of materials prepared especially for in-service training on specific problems. One form used in Los Angeles was a filmstrip and record combination which could easily be shown in any school. Their productions on "Teaching Science," "Teaching Arithmetic," "Teaching Language Skills" and "Elementary Classroom Guidance" are now available for purchase through Weiberg and Associates.

Examples such as these could be drawn from many school systems and although the telecast and projected aids are not readily available, the printed materials of a number of school systems may now be purchased.

### National Efforts

No discussion of materials for in-service education would be complete without mention of some of the organized national efforts in this field. The best known of these is probably that of the Physical Science Study Committee in the high school physics course. This group consulted with teachers and produced materials designed to help teachers make the transition from the old to the new in physics teaching. The laboratory manuals and teachers' guides produced in annual summer schools have proved most helpful. The series of films which the committee is now engaged in producing will also help to acquaint teachers with possibilities for experimental materials which accompany the PSSC guides. The laboratory equipment developed to accompany the course is also featured in teacher sessions. Displays and demonstrations are of great value in in-service training. Teachers flock to materials fairs or to elementary science resource rooms where simple equipment is demonstrated.

The Beberman and Rosenbloom efforts in the field of mathematics are also giving much attention to the production of in-service materials. Teachers have been assembled from all over the country to study the problems of teaching the newer concepts in mathematics and have returned to carry out in-service programs in their home cities. An integral part of these experiments has been

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interests; he mistrusts starry-eyed optimism and the evangelistic attitude because they may substitute hope for reality. He tries hard to distinguish the factual from the fatuous. In all of this, educationists should have no quarrel with him. The problems of education will require plenty of hardheadedness from all of us as well as devotion to ideals.

The distorted stereotypes of Progressive Education give him cause to wonder whether educationists are realistic or whether they are defenders of a new orthodoxy. There has probably been enough evangelism and hopeful optimism associated with educational progress to provide some basis for his suspicion, especially in the 1920's and 1930's. Yet the antidote to distortion is clear information. If the educationists of the 1960's are a more hardheaded lot they can exhibit the fact by seeing to it that information about the schools is accurate and by avoiding clichés and vagueness. Joe will respect people who

state their goals unmistakably and then lay out the difficulties and what they propose to do about them.

Part of our job in making information available is to examine most critically the research evidence on how people learn, what motivates and frustrates their learning in contemporary life, and what has been well established (and what we still do not know) through curriculum studies. It is certain that educational changes will be indicated by new knowledge and new circumstances. Some of the school practices we have thought were most solidly justified will prove to be mistaken or obsolete. Those of us who do not cringe at the thought of being "progressive" can, in principle at least, welcome the prospect of replacing some of our most cherished ideas by new and better ones. Nothing less will serve the present time by serving the children of the time.

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the teachers' manuals produced to accompany the student materials.

American education recognizes the great importance of in-service materials in helping teachers to face the problems of the atomic age. It is encouraging to note the increasing use of the newer media in this whole area of in-service training. Research has long demonstrated that the projected picture-and-sound combination is valuable in the learning process. While it is true that the impact

of technology has not yet fully been realized in the teaching profession, it is a hopeful sign that school systems are everywhere beginning to produce new tools for in-service training.

The public schools of the United States face a challenge both from the enormous growth in student population and from the expanding body of knowledge in the various subject fields. If teachers are to maintain the accelerated pace set for education, every effort must be made to improve their techniques and the good materials vital to success in in-service education.

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