

maintained throughout the years, the Division's catalog today features such diversified materials as foreign dolls in costume, collections of articles illustrating the life and customs of the American Indians, the Chinese, and the early American settlers. Teachers have available collections of mounted birds and mammals, insects, and reptiles. Children may study food products, rocks, minerals, and industrial collections, and have available the scientific apparatus for simple experiments. As far as possible all visual materials are distributed so that the children may handle the individual objects and study them closely for detail.

Audio and Visual Aids Combine for Effective Teaching

Teachers are urged to correlate the use of educational films with other audio-visual aids, including film strips, lantern slides, photographs, booklets, charts, framed pictures, phonograph records, and

radio transcriptions. All of these materials are available through the Division of Audio-Visual Education.

The Division is preparing to encourage the use of radio programs during the coming year as another type of correlation of visual and audio materials. The responsibility for the development of the program of radio education has been placed in the Division of Audio-Visual Education, which is working with the Committee on Radio Education, recently appointed by the superintendent of instruction.

Two fundamentals govern the basic policy of audio-visual education in the St. Louis schools. One is to make the most effective use possible of the audio-visual teaching aids now available. The other is to be constantly on the alert for new materials and teaching techniques which will help provide the understanding necessary to solve the problems of an everchanging, dynamic civilization.

◀ *Our sailors' sights are high*

Training Aids Step Up Navy Instruction_____

A PRIME OBJECTIVE of all armed forces training is "Maximum Learning in Minimum Time." To attain this objective, the services are increasingly turning to audio-visual instructional tools commonly called *training aids*.

In the Navy the aids have been written into the various curricula, and directives have been issued whereby training officers and instructors *must* use them at the appropriate time and in ways that are based upon proved instructional techniques. Training aids, as defined by the armed

forces, include motion picture training films, sound and silent slide films, slides, mock-ups, models, exhibits, simulated training devices, posters, photographs, recordings, and radio.

Results of Use

While, to date, little detailed evidence bearing on specific results of their use has been released to the general public, the comments of thousands of hard-boiled Navy, Marine Corps, and Coast Guard officers and men clearly attest their

enthusiasm and belief in the value and worth of the aids. Added to these comments are statements from the Army, the Merchant Marine, and numerous industrial concerns attributing accelerated learning, greater retention of information, and other results such as increased interest, clearer concepts, and a generally higher standard of instruction to the use of audio-visual aids.

Extent of Production and Use

Production figures of some of the aids stagger the imagination. The Navy Bureau of Aeronautics, Training Film Section, has produced and made available for distribution more than 700,000 ten-minute reels of training films. The Bureau of Naval Personnel, Training Aids Development Center, has distributed more than 3,000,000 small blinker gadgets used in learning code. The production and distribution of other aids are proportionately as large.

The armed forces are using training aids in every conceivable physical situation. The most extensive use is in camps and training stations. However, they are used-

Because there was no money, because the school staff was already overworked, or for any one of a dozen other reasons, education has never had the chance to try audio-visual aids on the impressive scale now being used in the armed services. Here, then, is a ready-made opportunity to learn from the experience of others. By studying the Army-Navy procedures and considering carefully the services' evaluations of their own programs, educators may gain much valuable assistance in planning for the use of audio-visual materials in the school. The accompanying article, describing the use of training aids in the Navy, was written by Lieut. Comdr. Francis W. Noel in Education in the Armed Services, a pamphlet edited by Lieut. William B. Brown. This publication may be purchased for 50 cents from the Department of Supervision and Curriculum Development, NEA, 1201 Sixteenth Street, N. W., Washington 6, D. C.

on maneuvers, at operational bases for in-service training, aboard ships, and even aboard submarines where perhaps only one or two men can observe a film on a catch-as-catch-can basis. The Army has probably used them more generally before larger groups than has the Navy. Naval training practice encourages small group use with a maximum of approximately fifty men. . . .

Today the aids are distributed largely from about thirty libraries. These libraries are an integral part of a Training Aids Section offering comprehensive audio-visual services and are located at the headquarters of each Naval District and at foreign bases.

Training Aids Centers

Typical services of these Training Aids Sections include:

1. Advice on the selection of aids to meet particular training problems.
2. Advice on proper utilization techniques.
3. Loan of various aids, including necessary equipment (usually based upon "custody pending completion of use").
4. Delivery of the aids.
5. Instruction on the operation of the equipment.
6. Service of equipment.
7. Preview facilities.
8. Classrooms for ships' crews and operational in-service training groups' use.
9. Limited production of aids peculiar to local needs.

It is to be noted that each Training Aids Section has an appropriate number of utilization officers assigned to its staff whose job specifically is to work with training officers and instructors in the selection and proper utilization of avail-

able aids. These officers do not wait for visitors to come to the section, but rather go to the activities. A comprehensive forces-afloat program has been developed wherein one of the utilization officers visits the training officer of each ship immediately upon its arrival to help in solving any particular in-service training problem he may have.

Utilization Pattern

In the Navy, instructional films are not always used wisely. There are some instructors who show a film and assume that training has taken place. The Navy knows that the mere showing of a film is usually a waste of time and seldom productive of any desirable educational outcomes. Naval policy now requires that all appropriate training aids must be used, and that their use must be evaluated in terms of good instructional practices. This utilization pattern includes the following steps:

1. Preview by the instructor.
2. Selection in terms of a training need.
3. Preparation of the class for the aid.
4. Use of the aid.
5. Discussion and clarification of any questions arising.
6. A short quiz on the aid.
7. Procedure as soon as possible to a practical application of the material presented by the aid.
8. Evaluation of the whole procedure by both trainees and instructors.

It has been found that continuous instructor and student evaluation of the aids and the way in which they are used are important steps in effective utilization.

The Bureau of Naval Personnel, Training Aids Section, produces brief study guides on selected aids, the contents of which are organized along this suggested

pattern of use. A pamphlet *More Learning in Less Time* gives the over-all philosophy of selection and use as well as many helpful hints to instructors.¹

"What are some of the major conclusions of the armed forces training aids experience to date?" This question is being asked with increasing frequency. The full answer cannot be given at this time. However, even now a few findings for future guidance of the Navy stand out in bold and significant relief. They include:

1. The development and use of training aids must be guided at all times by *curriculum requirements*. Aids must *implement the curriculum* and must never be allowed to *dictate it*.

2. All production and distribution of training aids must aim toward and be guided by the requirements of effective utilization.

3. Training aids properly selected and used can greatly improve all types of training.

4. Evaluation and research studies must continually be made to provide:

- a. The development of more effective aids.

- b. Better ways of using them in terms of good instructional techniques.

5. To render development of the training aid movement fundamentally sound, a comprehensive program of teacher-training in the proper selection and use of the aids is required.

6. There is a tendency to over-emphasize the physical aspects of training aids. To guard against this, attention must be continually focused upon the end results—**THE IMPROVEMENT AND ENRICHMENT OF LEARNING.**

¹ Copies available without cost from *Business Screen*, 157 East Erie Street, Chicago, Ill. Not available to the public from Navy sources.

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