

## THE USE OF VISUAL AIDS IN SPECIAL TRAINING UNITS IN THE ARMY

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Effective use of visual aids in the classroom promotes learning. Where objectives are clearly defined, subject-matter thoroughly organized, and methods of instruction well adapted to the needs of the group, visual aids serve to facilitate learning. They enable the teacher to motivate his classwork and vitalize his instruction. And they serve to clarify presentations and hence to improve communication.

Although the use of visual aids does not insure good classroom teaching, it does encourage rapid and thorough assimilation of subject-matter. It follows therefore that superior instructors generally secure access to varied and appropriate visual aids and use them judiciously.

Effective visual aids have the following characteristics: a) They are prepared to elucidate, emphasize, or demonstrate specific points or facts; b) They are appropriate to the material being presented; c) They are interesting, clear, and legible; d) They are of suitable size for the class; e) They are easy to manipulate; and f) They are generally inexpensive and durable.

This paper will describe the various types of visual aids which are used to help illiterate, non-English speaking, and educationally retarded men in the Army become useful soldiers. To orient the reader a brief summary will be given of the nature and objectives of the Army's Special Training Units—the organizations to which these men are sent.

### PROGRAM OF INSTRUCTION IN SPECIAL TRAINING UNITS

Illiterate, non-English speaking, and educationally retarded men are not ready, when they enter the Army, to pursue regular basic military training. Accordingly, they are sent to Special Training Units. Assignment to a Special Training Unit takes place immediately after these men pass through the Reception Center, where they receive clothing and equipment, initial inoculations, preliminary classification interviews, and essential orientation in Army customs and regulations.

In a Special Training Unit, the trainees undergo academic and military training which helps them develop sufficient literacy skill, arithmetic ability and orientation in military areas to be able to proceed with regular basic military training. The length of the training period in the Special Training Unit averages eight weeks; eighteen hours a week are given to academic instruction and thirty hours to military training. Since training is adapted to the individual needs of the men, it is possible for a man to leave the unit as soon as he attains indicated standards in reading, arithmetic, and military subjects. The training cycle is planned not to exceed twelve weeks, although an occasional man is permitted to remain sixteen weeks. Men found inept are honorably discharged from the service.

To aid in the accomplishment of its mission, it has been necessary for the Special Training Section, Military Training Division, Army Service Forces Headquarters,<sup>1</sup> to devise its own materials. The *Army Reader*, *Army Arithmetic*, weekly and monthly publications, and guides for the instructors and men have been developed. An effort has been made to construct materials which utilize sound educational principles to attain the objectives of special training. A more complete statement on the program of Special Training Units has been presented elsewhere.<sup>2</sup>

#### TYPES OF VISUAL AIDS AND THEIR USES

It has been stated that the men in Special Training Units receive both academic and military instruction. Instruction in these two areas, however, is related closely. Lessons designed to improve reading skill, use and comprehension of language, and arithmetic ability generally deal with Army problems or needs. Specialized vocabularies are developed for military subjects and appropriate exercises are arranged so that the academic and military presentations are articulated with each other.

In a discussion of the use of visual aids in Special Training Units, it is important to be aware of this correlated teaching

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<sup>1</sup> This was formerly the Development and Special Training Section, Training Branch, Adjutant General's Office.

<sup>2</sup> Paul A. Witty and Samuel Goldberg, "The Army's Training Program for Illiterate, Non-English Speaking, and Educationally Retarded Men," *Elementary English Review*, xx (1943), 306-311.

objective. Similar types of visual aids are appropriate both in the academic and in the military instruction. The illustrations given in the discussion which follows include representative types of visual aids employed.

1) *Textbooks*.—It may appear improper to classify a textbook as a visual aid. But the *Army Reader* can justifiably be so considered because of its rich and varied use of pictures, illustrations, charts, and diagrams. The *Army Reader* uses pictures to teach new words. It presents a series of illustrations to show various activities in which men engage in a day at camp; demonstrates pictorially various squad and marching formations; indicates through diagrams how budgetary accounts may be kept; and enriches the text, in many ways, with attractive, vital, and pertinent drawings. The *Army Arithmetic* uses pictures to show how numerical abstractions are derived from objects; addition is related to counting; subtraction is the reverse of addition; and multiplication is cumulative addition. Monetary concepts are taught through realistic illustrations, and time, through a calendar which is reproduced.

2) *Flash Cards*.—Flash cards are used in teaching words, phrases, and sentences. Some Special Training Units have developed cards which contain pictures in addition to the verbal material. At times, flash cards are used to foster rapid perception; at other times, they serve for review purposes. On occasion, they are used as part of a language game. Words, phrases, and sentences which are taught may be of the type used to bring about improvement in general reading ability. Or, they may be more specialized and related to some military subject. In some Special Training Units, students are provided with small self-teaching cards, in which the word, phrase, or sentence is associated with a picture.

3) *Spinner*.—An arrow spinner made out of wood or heavy cardboard is attached to a circular board about three feet in diameter. Words or number combinations are pasted on the outside of the circular disc, or word cards with arithmetic combinations are inserted in pockets pasted on the disc. The spinner has been used to teach word and number recognition and to give practice in computation. Since this visual aid introduces an element of chance, it has served as an interesting motivational device in some units. Variations of the spinner

device, such as a word and number wheel, have also been used in introducing instruction in the beginning phases of reading or arithmetic.

4) *Training Films*.—Training films are a regular part of military instruction. The men in Special Training Units are shown various motion pictures. Some of these are on orientation, personal hygiene, organization of the Army; and others deal with military courtesy and discipline and similar topics. A number of training films are shown at the Reception Center before the men come to Special Training Units. Others are used at different periods throughout training.

Illiterate, non-English speaking, and educationally retarded men probably experience some difficulty with films shown to them at the Reception Centers and in the early stages of training. Dialogue for films, generally written at a relatively high level, is too difficult for men in Special Training Units. And, the action in many motion pictures proceeds at too rapid a pace. Accordingly, a number of film strips have been prepared to insure the assimilation of essential knowledge by men in Special Training Units.

5) *Film Strips and Illustrated Instructor's References*.—A film strip is a continuous series of still pictures, charts, or diagrams. It is prepared on 35 mm safety film. The film strip projector is small and compact. The speed of projection of a film strip is controlled by the instructor or his assistant. Any frame in a strip can be held on the screen until the majority of the group has mastered it and is ready to go on to the next one.

The following film strips have been developed to meet the needs of men in Special Training Units: *A Soldier's General Orders*; *Military Courtesy and Discipline*; *How to Wear Your Uniform*; *The Story of Private Pete*, a reading film strip to teach a basic stock of sight words; *Introduction to Numbers*, for the teaching of basic vocabulary, symbols, and group concepts in beginning arithmetic; *Introduction to Language*, two film strips, one for the teaching of nouns and the other for verbs and prepositions; and *The World*, for the teaching of geographic vocabulary and concepts.

Each film strip is well motivated. In some film strips situations which the soldier has encountered in his civilian experiences are associated with the materials of the strip. For example, in

introducing *How to Wear Your Uniform*, several beginning frames are given over to the presentation of men in uniform, i.e. policemen, firemen, football players. Or, in presenting *Military Courtesy and Discipline*, introductory frames deal with tipping your hat to ladies, helping your neighbor fix his car, and giving your seat in a car to a lady. In others, the motivating frames relate to various Army situations in which the soldiers will have need for the type of material to be presented in that particular film strip.

Each film strip is logically organized to meet the needs and interests of the men. Effort has been made to fulfill psychological pre-requisites which are fundamental in the teaching of illiterate, non-English speaking, and slow-learning men. The level of language used is relatively simple. Frames are not cluttered with too much detail or material. Opportunity exists for necessary repetition of certain basic material. Review frames are included. And, correlation of military and academic subject-matter is achieved through the use of appropriate content.

Of great value to the teacher is an *Illustrated Instructor's Reference* which has been written to accompany each of the film strips. The *Reference* states the purpose of the strip; indicates general teaching methods for the type of material being presented; and contains specific suggestions for teaching each frame. The picture in each frame is reproduced in the *Reference*. This makes it easy for the instructor to pre-view each film strip while preparing his lesson.

The use of film strips and the *Illustrated Instructor's References* has become an important regular part of instruction in Special Training Units.

6) *Pictures*.—Pictures have been used in a variety of ways. Graphic portfolios are available for instruction in some military subjects, i.e. defense against chemical attack, scouting and patrolling, etc. In these portfolios, pictures are used to illustrate such points as the effects of different gases if the enemy ever uses them, and methods of making adequate uses of terrain in scouting. Other pictures which are not part of a particular portfolio are also used to teach military material. For example, different types of planes and tanks are best described through the use of carefully selected photographs.

*Our War*, a monthly magazine prepared especially for men in Special Training Units, makes extensive use of pictures. This publication is of great value in the reading program and the pictures help the men to visualize the material more effectively. Picture pages appear as a regular feature of this magazine. In recent issues there have been picture pages on the following subjects: Army Christmas; How Airplanes are Made; Weapons in the Making; Chemical Warfare Weapons; and Women in the War.

Other publications, designed especially for Special Training Units, also use pictures. *Newsmag-Special Edition*, a weekly publication which presents the news of the war on all fronts, is richly illustrated with pictures and maps. *Your Job in the Army*, a pamphlet which contains simple accounts of Army jobs for which Special Training Unit men are well adapted, includes pictures and sketches to portray the nature of work to be performed in each job.

Instructors make varied and wide use of bulletin boards in the classroom. These bulletin boards contain pictures, charts, maps, and other materials. These materials are varied from time to time. It is not uncommon in a classroom in a Special Training Unit to see pictures on the bulletin board of timely, current activities of interest to the men, i.e. outstanding generals, prominent athletes and actors in uniform, and camp occurrences.

7) *Posters*.—Some organizations have developed posters which contain representations of insignia, both for grade and branch of service. These help to orient the men concerning Army organization and personnel. Directional posters and signs have been used to help the men in becoming adjusted to the camp and its environs.

One unit has started an interesting series of posters to illustrate talks given by the Chaplain. Another unit has made posters to teach the men the importance of safeguarding military information.

8) *Cartoons*.—The men in Special Training Units are attracted to cartoon strips as are most other adults. *Our War* contains a cartoon strip as one of its regular features. This strip tells of the experiences of Private Pete and his friend, Daffy. Recent issues have carried the following cartoon strips: Christmas in Camp, Pete Goes Home, Marksman Pete, Pete Meets Gas, and

Private Pete Gets a Letter. The cartoon strip has the same characteristics that other material has which is prepared for Special Training Units. The content is realistically associated with the men's experiences, and the level of difficulty of the language does not exceed the fourth grade. Humorous elements are used in the strips to heighten their appeal to the men. But, effort is put forth to make certain that the men will gain some basic information or knowledge from every strip.

The cartoon technique has been employed in other ways. For example, one Special Training Unit has developed a set of posters which presents figures in caricature to teach the men to identify various gases and agents used in Chemical Warfare. This is a particularly effective device as it serves to attract attention, elicit interest, and foster learning.

9) *Maps*.—In the *Newsmag-Special Edition*, maps are employed to help the men locate the various fronts on which military action is taking place and about which they are reading. In *Our War*, maps are similarly used to aid in developing the men's reading abilities. However, they are also constructed to include some measurement concepts. In a recent issue, the map page in *Our War* dealt with "Neighbors Around the World." A polaroid type of map was used to portray distances by air from certain points across the North Pole. At the bottom of the map were pictures of a Fiji Islander, a Chinaman, an Eskimo, a Russian, an Indian, and a Brazilian. In the accompanying text, questions such as these appeared for the men to answer: "Which man lives nearest to us?", and "Which man lives farthest away?" Two other recent issues contained maps of Canada and Mexico, the accompanying stories entitled, "Our Good Northern Neighbor" and "A Good Southern Neighbor." These maps were a pictorialized type showing where the farm land, minerals, forests, and furs were in Canada and where in Mexico the minerals, cattle, rubber plants, coffee, and bananas might be found. The men were provided with questions such as these to check their comprehension and retention of the material: "Which product covers most of the land in Canada?", "Name three products that Canada ships to England," "In what part of Mexico are cattle raised?", and "What product is grown near Mexico City?" Geographic orientation which Special Training Unit men obtain from the use of maps helps

them to understand better such phases of the war effort of the Americas as relate to the production and delivery of food and supplies.

Men in Special Training Units do not have extensive experience in military map reading of the sort that relates to surrounding terrain. Yet, in such subjects as scouting and patrolling and in preparing for marches and bivouacs, simple maps are used. *The Soldier's Handbook* contains such illustrative maps; for example, a scout observing landscape position, from a place of concealment, for signs of hostile occupation.

Maps serve as an indispensable training aid for men in Special Training Units. They help to advance both the academic and military preparation of the men.

10) *Diagrams and Charts*.—Appropriate diagrams and charts are of great value in teaching important military and academic material. In teaching the names and functions of parts of the rifle, it is generally helpful to have a diagram of the rifle on a chart with the parts properly designated. Diagrammatic presentations make it much easier to teach the formations and steps of a squad or platoon in marching. Many units have used diagrams of gas masks to show the face plate, hose, carrier, and canister, and to demonstrate how the mask works. Appropriate diagrams and charts insure clarity and understanding.

11) *Actual Objects and Models*.—Whenever feasible, actual objects are introduced. Even before the men use guns and gas masks to develop certain performance skills, they have an opportunity to examine and handle gas masks and guns. In presenting some types of material, a number of units have developed appropriate models for instructional purposes. In the subject, Defense Against Air Attack, it is necessary for the men to learn to identify the more prominent American and enemy planes. One unit made a set of models of prominent American planes to illustrate the relationships of wings, engines, fuselages, and tails. In regular training units, models of tanks, mortars, and other weapons have been used to aid the men to visualize and understand their structure and functioning characteristics.

12) *Sand Tables and Topographic Models*.—Sand tables and topographic models have also been used with relatively small groups of trainees to provide an overall view of an area. Terrain



can be represented realistically with this type of aid. Valleys, streams, elevations, and roads are shown clearly; and buildings and different types of military equipment can be placed appropriately. Sand, water, clay, plasticene, sponge, paper, cardboard, wood, and toy equipment—all have been used to prepare topographic models. Aids of this type have promoted the rapid assimilation of principles of camouflage and dispersion in defense against air attack.

#### SUMMARY

A brief description has been given of the various types of visual aids which have been employed by Special Training Units in the Army. Of course, the use of these training aids is not limited to Special Training Units. All training programs in the Army have made extensive use of such aids and devices.

No single type of visual aid is recommended for a particular period of instruction in a Special Training Unit. Instructors can select the types of aids with which they are most familiar and which seem most suitable for a particular purpose. To help instructors, most Special Training Units have organized a Training Aids Section which prepares and distributes training aids.

Army training, whether basic, technical, or specialist, is organized realistically. Instructors have their objectives clearly in mind. They know the skills that their men need to develop to meet certain field and battle situations. And they know the teaching methods by which different types of materials can be most effectively learned. An indispensable adjunct to effective methodology is the visual training aid. It has already demonstrated its value in a training program which must secure the maximum results within a minimum time limit.