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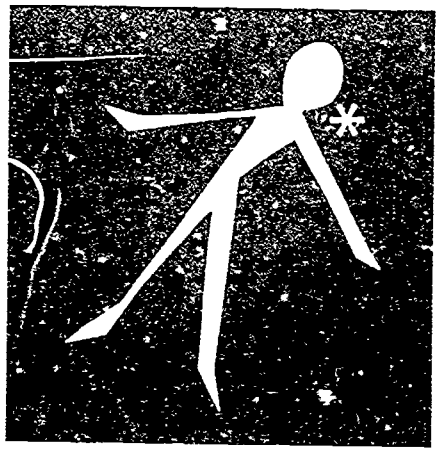
ABSTRACT

The Selective Observation Simulator (SOS) is a program of continuous sound recording and synchronized sequenced still pictures for development of inservice or preservice teachers' skills involving selective observation and class awareness. The trainee listens to taped instructions through earphones and watches self-selected pictures in a projection booth. Films are still-frames in timed sequence, displayed between .5 and 20 second intervals, synchronized with the sound tape by the controller of the Variable-Interval Sequenced-Camera (VINSAC). Five FINSAC cameras, triggered by the controller and mounted side-by-side in a disguise box above the teacher's chalkboard, photograph a wide angle, left-front, left-rear, right-rear, and right-front view of the class, respectively, thus producing five simultaneous films in identical frame-by-frame timing. The trainee in the booth views first the entire class (camera 1), then is instructed to select a closeup view of his choice by pushing one of four buttons on the control panel. If trainee preoccupation with one particular view exceeds a predetermined time period, the screen darkens, and the taped voice encourages frequent view changes, typical of an alert teacher. The observation period lasts typically 10 to 15 minutes. (For related information, see EC 052 044.) (MC)



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SELECTIVE OBSERVATION SIMULATOR
(S O S)

DISSEMINATION DOCUMENT No. 2

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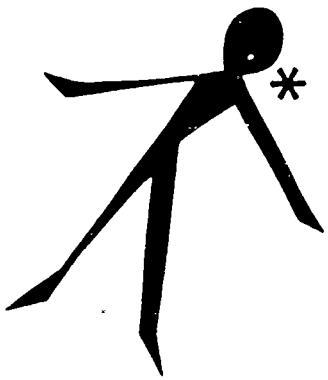

SELECTIVE OBSERVATION SIMULATOR
(S O S)

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Selective Observation Simulator (SOS)

Simulation devices for education of professional practitioners must be based upon clearly defined purposes and must employ problem data which are faithful and convincing representations of selected aspects of actual situations which occur in practice. The brief history of simulation devices in education is following a pattern similar to that traced in fields where simulation is an older technique: the first concern seems to be for maximal "realism", program strategy development follows, and leads to diminished concern for "realism". In education, concern for the goal of maximal realism has led to more emphasis on the production than upon the instructional program. Thus Kersh and others elected to use sound motion pictures at the expense of precise definition of educational purposes. The first training simulator produced by Hudspeth and Ward for the Learning Systems Institute was of this sort (the Professional Decision Simulator, PDS-I).

More recently, the awareness that meaningful representation of classroom action can be made without motion pictures has led to the development of the Zone-Automated Audio Pickup (ZAAP) for increased quality in audio recording of the verbal continuity of action in the classroom and the Variable-Interval Sequenced Action Camera (VINSAC) for automatically photographing still-frames in support of the ZAAP recordings. From this combination are produced synchronized tape-slide sequences suitable for display as a selected observation

experience for teacher-training purposes. (For descriptions of ZAAP and VINSAC, see Papers of the Institute #37 and #40 respectively.)

An elemental simulation device for teacher training needs only to add some single element of "teacher-like" decision-making (processing of the observable data) to the basic observation experience. Such elemental devices will not have the elegance of a NASA space-environment laboratory, but will elevate passive observation to active interaction with the observed experience. And this is the basic contribution of simulation to training experience.

The Selective Observation Simulator (SOS) is almost the most elemental simulator imaginable for teacher education. Given a sound-and-picture representation of a teaching situation, the SOS adds only the demand that the observer be selective as he views the situation.

Program Description The Selective Observation Simulator (SOS) is a program of continuous sound recording and synchronized sequenced still pictures (typical interval between pictures is 5 seconds). The trainee uses earphones to hear the tape and watches the pictures automatically displayed in a rear-projection booth. The initial training tape informs the trainee that each of the four buttons arranged on the control panel will bring him a close-up of a particular segment of the general view. The opening view in each program is a wide-angle picture of the students in the classroom, photographed from the teacher point-of-view. As the program develops the trainee is free to select a close-up of the left-front, left-rear, right-rear or right-front at his pleasure and in any order, in place of the wide-angle view. When he releases the buttons the wide-angle view returns. When his preoccupation with any one view exceeds a pre-determined duration of time, the continuity tape stops and the screen goes dark.

A voice on the earphones encourages him to behave more like an alert teacher--to fix attention on a specific set of actions only for a short time then to re-scan the entire scene, etc. After this brief instruction the tape-and-slide program reappears and continues. If again he fails to select a close-up or fails to switch away from a given close-up before the predetermined time limit, the system shuts down to deliver another (different) brief lecture on the importance of selective observation. This process continues until the end of the observation experience, typically ten to fifteen minutes, interrupted only when the fixing on a given view exceeds the allowed maximum. The trainee is not made conscious of the mechanical and standard relationship between the time lapses and the interruptions for the brief corrective lectures. He is able to perceive, of course, that he is being systematically discouraged from static observations whether of the class-wide view or a given detailed view.

Program Purposes The SOS program is intended primarily to provide an interesting format in which to present selected observation experiences to in-service or pre-service teachers. The secondary purpose is to develop in the trainee the habit of selective observation while maintaining a continuous awareness of the entire class. These purposes are combined in SOS on the assumption that the necessity to interact with aural-visual data will be a more significant learning experience than would be a passive observation of the same situation.

Technical Description The SOS-sound tape is produced by the ZAAP or other high quality sound recording system adapted to the particular problems of

of classroom recording. The films are still-frames in timed sequence, displayed at the frequency originally photographed (between .5 second and 20 seconds interval). Synchronization data is produced by the VINSAC controller and is a permanent element of the sound recording. (The equipment and functions are described in Papers of the Institute #40 and #37.) In the SOS application, one VINSAC controller simultaneously triggers five VINSAC cameras. The five cameras are mounted side-by-side in a disguise-box above the chalkboard at the teacher's end of the room. Camera #1 photographs the wide-angle view of the general scene. Camera #2 through #5 photographs left-front, left-rear, right-rear and right-front with appropriately longer lenses. Thus five simultaneous films are produced in identical frame-by-frame timing.

The SOS display unit is a booth with earphones and rear screen projection. Four buttons arranged in finger-tip location (as an arc) are numbered 1 through 4. These buttons lift respective (external) shutters for each of the five projectors enclosed in the booth. In operation, the five projectors are operating constantly and simultaneously, advanced by the synchronization data on the audio tape. If no button is pushed, the shutter ahead of projector #5 is in the lifted position. The other four projectors are blocked off by their shutters. Pushing any button closes the shutter on #5 and lifts the shutter corresponding to the button pushed, i.e., #1 is left-front, #2 is left-rear, #3 is right-rear and #4 is right-front. The trainee can move from any button to any other or can move back to the general view by releasing all buttons. (Holding down more than one button produces a temporary "double exposure" superimposition of views.)

The "coaching" is on a separate audio tape playback device. The continuous loop of tape contains approximately ten repetitions (with variations) of essentially the same message: "Pay attention to the whole class as well as to

selected details." Each version of the message is a standard time unit in length. Thus the timer which controls the program has two purposes: 1) it is reset to zero when any button is depressed or lifted in order to establish the time to trip off the projectors and the observation's basic audio tape when a trainee holds one scene too long, and 2) it turns on the coaching playback for the standard number of seconds required for the instructional message before re-starting the observation experience.

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