

THE DEVELOPMENT OF LIVING SKILLS BY THE HANDICAPPED

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The principal task of this project at this time is the field evaluation of the Stereotoner, an optical-to-aural converter intended to enable blind veterans and civilians to read ink-print materials. The project is currently entering its second year, and collection and analysis of data on approximately 48 cases should be completed in the Spring of 1975.

As a first step, project staff prepared new training materials for use with the Stereotoner in cooperation with Messrs. Lauer and Bennett of the Veterans Administration and Miss Butow of The Hadley School for the Blind. These materials consist of a basic instructional manual comprising 14 units of study, criterion exercises, and a drill and practice tape geared to the interests and vocabulary level of adults. The content includes: Unit 1—Equipment Familiarization, Tone Practice and Tracking Techniques; Unit 2—Numerals 0 through 9; Unit 3—Letters ATRE and atre, mixed; Unit 4—Letters IHOS and ihos mixed; Unit 5—Letters DLUN and dlun mixed; Unit 6—Letters CGMF and cgmf mixed; Unit 7—Letters WPKQ and wpkq mixed; Unit 8—Letters YBV and ybv mixed; Unit 9—Letters JXZ and jxz mixed; Unit 10—Recognizing Common Words, Self-Timed Reading and Letter Patterns; Unit 11—Book Style Type, Italic Type, and Practice with Typefaces; Unit 12—Columns, Tables, and Things That Come in the Mail; Unit 13—Checking Your Equipment, Adjusting for Special Reading Conditions, and Unusual Applications; Unit 14—Remediation (Construction of Characters and Comparison of Characters).

We have also developed a second manual consisting of 48 lessons for home-study purposes. It affords newly trained persons with a guided exploration into four areas as follows: Unit A, Personal Affairs—Letters You Receive at Home, Envelopes and Mailing Labels, Postcards and Notices, Typing and the Stereotoner, Reading and Paying Bills, Computer Printed Bills, Checking Account Statement, Reading a Pamphlet and Reading Labels, Reading Cooking Instructions and Recipes; Unit B, Leisure Affairs—Magazine Tables of Contents, Reading from Magazines, Newspaper Headlines and Newspaper Articles, Reading

from TV Guide, Reading a Booklet, Reading a Catalog, Reading Record and Tape Labels, Reading from the Dictionary, and Reference Books and Indexes; Unit C, Social Affairs—Telephone Book White and Yellow Pages, Reading a Menu, Identifying Currency, Using the Stereotoner for Signing Letters and Checks, Reading Schedules and Announcements of Events, Convention Schedules, School Calendars, College Catalogs, and Reading Voting Materials; Unit D, Business Affairs—Business Letters and Memos, Forms Found in an Office, Printed Materials Around Your Office, Filling Out Forms and Application, Paychecks and Payroll Information, Printed Information About Benefits and Insurance, Computer Printout and OCR Print, Tax Withholding Forms, Property Taxes and Income Tax Short Form, and Xerox and Mimeograph Copies. Each of the four units contains criterion exercises as a check on the level of skill developed.

At the present time, instruction is proceeding at five sites. They are the three Veterans Administration Blind Rehabilitation Centers in Palo Alto, California, Hines, Illinois, and West Haven, Connecticut; The Hadley School for the Blind, Winnetka, Illinois; and the Castro Valley Unified School District, California. The latter two training stations are focusing on civilian training applications in cooperation with the Committee on Prosthetics Research and Development of the National Research Council. As of July 19, 1974, some 12 trainees had received formal tutorial training ranging from 2 to 4 weeks in duration at the Veterans Hospitals and The Hadley School for the Blind. In the study at Castro Valley, one subject, a blind school teacher, has completed initial training from a sighted instructor provided by AIR. The blind educator is now carrying on the Stereotoner training of a blind sixth grade student on a pilot basis.

All training at this time is being accomplished by blind instructors. However, our initial experience with the new reflex viewer produced by Mauch Laboratories, for use by sighted trainers, makes it appear that training by sighted instructors is viable.

Candidates for training are being identified through administration of an Auditory Selection Test. This test was designed by AIR with the counsel of the instructors involved and especially Harvey Lauer, who recorded the master. Essentially, the test consists of a stereo tape cassette with precisely reproduced Stereotoner sounds on it, accompanied by an answer sheet and directions for administration. As of July 30, 1974, AIR has scored 70 of these Auditory Selection Tests. Because of the lack of final criterion data on a sufficient number of cases, it is too soon for us to be sure of the predictive power of this test. However, we are encouraged by the initial results, and we are hopeful that we will be able to establish ranges of scores which should guide the Veterans Administration and others in properly assigning candidates to Stereotoner training.

Our evaluation procedures involve the collection of a wide variety of student characteristics at the outset of training. These include knowledge of his prior exposure to auditory codes, his hearing acuity, his intelligence, his reading preferences, and other descriptive data. We have developed instructional progress logs which should enable us to relate the amount of time studied to the output results of training, such as words per minute, accuracy, and variety of materials read. We have also developed a multipart criterion test which is to be administered at the end of the formal tutorial training period, and a second version of it which would be administered some months later, after the trainee has had full exposure to the home study units and to opportunities for private practice with the Stereotoner.

In addition, we have made followup telephone calls to trainees 1 month after training for debriefing purposes and to assess the value of the instructional materials and training procedures used. We plan to begin making home visits to a selected number of trainees in the fall after they have had sufficient time to complete the 48 lessons of their home study units and, hopefully, time to build reading speed on narrative copy. Essentially, this home visit constitutes an output criterion for the Stereotoner evaluation inasmuch as it will provide AIR staff with comprehensive information on the trainees' functional level of skill and the various uses they find for the Stereotoner.

During the fiscal year 1975, it is anticipated that further efforts will be made to recruit blind veterans as candidates for training and to open up additional opportunities for training within the civilian sector. Plans are currently underway to design a set of tapes to be used as pretraining exercises. These will allow potential trainees to gain initial exposure to the Stereotoner sounds and practice the necessary techniques involved in interpreting those sounds which they will later apply during their formal training. This is expected to alleviate, to some degree, the burden of concentrated study during a 3-week training period that presently exists.