DEPARTMENT OF EDUCATION OFFICE OF SPECIAL EDUCATION, DIVISION OF INNOVATION AND DEVELOPMENT, RESEARCH PROJECTS BRANCH*

Allen T. Dittman, Project Officer

Biofeedback/Relaxation Procedures: Application to Handicapped Children

University of Houston, School of Professional Education
2700 Bay Area Blvd.
Houston, Texas 77058
Tel. (713) 488-9274

John Carter, Investigator

The theory behind this research is that learning is most effective, and academic performance is increased, when the learner is physically relaxed and mentally attentive to the material being presented. The Project Director has developed a package of relaxation training, including biofeedback, visual imagery, and passive physical relaxation—along with handwriting training—that has been piloted with about 200 children and found to increase scores on several achievement tests.

This project will investigate the relative effectiveness of these components, singly and in combination, with followup to determine the stability of results (year 1). Year two will be used to assess the transferability of the optimum treatment cluster from a clinical setting to a public school setting using regular school personnel.

Year three will be used to develop and disseminate an instructional training package for teachers, based on the results of the first two years, with test of the efficacy of the program in a variety of locales. The target group of children will be the learning disabled, ages 8 to 14.

Project duration: 9/1/80 to 8/31/83.

*These projects are under the supervision of Max Mueller, Ph. D., who is Chief of Research Projects Branch, Division of Innovation and Development, within the Office of Special Education in the Department of Education. It has been functional since May 1980. Prior to that date, it was known as the Bureau of Education for the Handicapped, in the Office of Education within the Department of Health, Education and Welfare.

General Computer System to Teach Language to the Deaf

Iliad Project
Boston University
660 Beacon Street
Boston, Mass. 02215
Tel. (617) 353-2920 or 2918

Kirk L. Wilson and Madeleine Bates, Investigators

Based on an already operational program for generating sentences according to principles of transformational-generative grammar, this project will develop interactive tutorial lessons to teach deaf children both comprehension and production of English sentences.

The computer is designed to be a resource that is in large part under student control, and within certain limitations the learner will decide the content and basic features of each interactive tutorial session. The system will generate relevant demonstrations, exercises, and diagnostic questions. It has been designed to be a portable, stand-alone microcomputer configuration, low in both initial cost and maintenance, so as to be within range for both small and large educational programs.

Duration: 7/1/78 to 6/30/81.

Enhancing the Educational Potential of Non-Oral Children through Matching Communication Device Capabilities to Children's Needs

California State University
Sacramento, California 95819
Tel. (916) 454-6422

Colette Coleman, Investigator

Many children having some form of communication disability could be aided by a speech and language prosthesis. This project proposes to perform research on commercially available speech and language prostheses and adapt them to the individual needs of multiply handicapped children.

Most of these children are cerebral palsied and lack the muscular control to talk intelligibly or in some cases to talk at all. (Some other neurological conditions also have this effect.)

The device will be characterized in terms of required user skills and to perform assessments of language and physical abilities of disabled children in order to prescribe an appropriate speech and language prosthesis.

Improving Motor Control in Spastic Children Using Biofeedback toward Development of a Technology

University of Oregon
Eugene, Oregon 97403
Tel. (503) 686-3591

Dean P. Inman and Robert H. Schwary, Investigators

The project's purpose is to apply biofeedback methods, within an apparent training program, to decrease the activity of spastic muscle groups in cerebral-palsied children, to increase control over other muscle groups, and learn if the effects of the training sessions last. These measures are used to improve muscle control in these children so that they can participate in educational programs.

Project duration: 7/1/79 to 6/31/82.