

Walter E. Fernald State School

BEHAVIOR DEPARTMENT

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Annual Report
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Title I Project No. MH-MA-5-72
Assessment and Utilization of Habilitation Potential
in the Training of Mentally Retarded Children in Self-Help Skills

Supported in part by Title I funds, our department's educational and habilitative programs, under the direction of James McCormack, made significant advances this year in six areas:

Curriculum Development
Programmed Instruction of the Severely Retarded
Assessment Measures
Training of Personnel in Programmed Instruction
Volunteer Training
Training of Resident Teaching Aides

Curriculum Development

The core curriculum was set up in December 1970. On the basis of students' achievements and failures over the past year, some programs were revised, others replaced entirely. For example, the Dates program was separated into reading phases (days, months, date numbers) and comprehension phases (learning the sequence of days, months, and months in each season). The Currency program was completely rewritten, with the terminal behavior becoming the use of vending machines on the Fernald grounds. The Math program was divided into two parts: Number Identification (1 through 12, to prepare students for learning to tell time by the hour) and Quantity (using the concept of 1 to 5 items in everyday situations). New programs were written: Table Clearing, Color Recognition (touching colors that the teacher names), Leisure Time Activities (teaches severely retarded students to do school work during their free time in their residential building), Verbal Reasoning (judging whether a statement makes sense or not), SR-400 Pre-Reading (a series of SR-400 machine programs to teach association of words with appropriate pictures and colors). Other programs were expanded after students reached criterion on the final phase. Examples include Printing, Questions (conversational language development), and Quantity.

Programmed Instruction of the Severely Retarded

From July 1, 1971 to June 15, 1972, 14,046 individual tutorials were conducted in our classroom. Every student was scheduled for several different programs (five to ten), each taught two to ten times a week. A system for handling student records was developed last year. (A detailed description is available upon request.)

Student improvement this year was impressive. An analysis of each student's progress through his programs was conducted so that we could list terminal behaviors achieved during the year. For the first time, we are now able to begin setting long-term goals for the students: possible jobs outside the institution, placement in sheltered workshops, or, for the less capable, responsibilities in their residential buildings.

Assessment Measures

An embryonic assessment battery emerged this year. It became apparent that "critical task" phases of programs might be predictive of success on other programs and could help assess workshop potential. The following examples illustrate this breakthrough:

<u>Program:</u>	<u>Predictive value for:</u>
Peg Placement	Motor coordination adequate for classroom attendance
Sorting Objects by Color	Ability to sort various objects on other dimensions
Picture Identification	Expressive vocabulary, lower levels
Verb Identification	Expressive vocabulary, higher levels
Questions, phases 1 & 12	Social conversational level
Quantity, phases 12	Ability to use counting in varied situations

An important Ph.D. dissertation study, conducted by Jim Hamilton, developed a "downward extension" of the standard Kohs Block Design Test for "subtrainable" and "trainable" children.* Among a number of significant findings, Hamilton's assessment procedure showed that "learning potential" (ability to profit from brief instruction) clearly is not predicted from I.Q. levels within the severely retarded group and that the I.Q. < 31 ("subtrainable") group not only showed group gains from coaching but also showed extensive overlap in learning potential with those in the I.Q. 32-51 group. Learning potential status was significantly correlated with performance on a related Knox Cube task.

In the next year, we would like to develop these measures further, while participating in the evaluation now going on at Fernald. These measures need to be obtained from larger groups to test their reliability and predictive value.

Training of Personnel in Programmed Instruction

One particularly rewarding aspect of the classroom work was orientation and training of personnel in behavior modification and programmed instruction. Numerous lectures were given to groups as diverse as C.A.R.V.E. (Concord Reformatory Inmates); in-service nursing groups; Fernald teachers; attendants from G.B.U., West Building, and East Building. We also spoke to groups from other state schools, Cambridge Mental Health Association, and the Arlington Public Schools, plus special education, psychology, occupational therapy, and nursing students from Boston University,

* Hamilton, J. L. Application of the learning potential paradigm to severely mentally retarded adolescents. Unpublished doctoral dissertation, University of Missouri, Columbia, June 1972.

students from Wellesley, George Peabody College, the University of Wisconsin, etc.

A long-term training program involved the Monson State Hospital Behavior Modification Unit, directed by Mrs. Darlene Agin. It included lectures to supervisory staff, attendants, and teaching aides, plus two-day apprenticeships in our classroom for three teaching aides at a time. We also visited the Unit at Monson as consultants on particular programs with residents. We are continuing to keep in touch with this group.

Another long-term relationship developed with the staff of the Behavior Modification Classroom in Brockton, under the supervision of Mr. Robert Gracia. We offered a lecture to the whole staff, then each of their teachers spent two days working in our classroom. Their supervisor, Miss Ronnie Allalemdjian, spent two weeks with us, setting up her own programs with our assistance.

Volunteer Training

As in previous years, we continued to train large numbers of volunteers in behavior modification and programmed instruction methods. This year we trained 80 volunteers from local colleges (Boston University, Boston College, Harvard, Radcliffe, Brandeis, Simmons, Wellesley, Tufts, Middlesex Community) and high schools (Lincoln-Sudbury Regional, Lexington, Newton).

Nancy Silver,* a Boston University psychology student, spent two mornings each week in the classroom. She wrote her own program in dressing skills and began teaching it to 10 students, four of whom have completed the program. We will continue to use the program in our classroom.

We continue to have surprisingly good attendance from our volunteers. The reasons seem to be:

1. They are trained in practical techniques on the job.
2. They are involved in teaching, not "babysitting."
3. They are encouraged to take initiative in their work and have freedom to work with students and programs of their choice.

Training Resident Teaching Aides

Four of Fernald's educable residents are functioning as teaching aides. Their duties include conducting tutorial programs and recording the appropriate data, sorting and filing data, running a twice-daily "store," conducting group arts and crafts activities, taking students to a campus store to make purchases with their tokens, cleaning the classroom, and accompanying students on field trips. They are also being taught more advanced academic skills by programmed instruction.

* She has been hired by the Recreation Department at Fernald for the summer. Three other former volunteers are now involved in special education: one as an attendant at Fernald, one as a counselor at Camp Freedom, and one as a teacher of disturbed children.

Two of these residents have improved significantly this year. Myrtle Harroun works with students in the classroom activity area while teachers and volunteers are conducting programmed tutorials. She has been asked to work as an assistant counselor in a camp for the retarded this summer. Arthur Patterson takes students to the store and does general cleaning work. He will advance to the Fernald League Opportunity Workshop (F.L.O.W.) this September. If successful there he will eventually be given an outside job. The other two resident teaching aides do their work adequately but still need supervision and further training in social skills.

Staff Salaried on Title I

Edward Pinkerton, who succeeded Warren Hofstra in February.

Functions: design, conduct, and analysis of programs presented via the SR-400 Scholar teaching machine.

Hara Ann Bouganin

Functions: teacher and program analyst; also helps to train volunteers and other people interested in our behavioral approach.

James L. Hamilton (half-time)

Functions: development of procedures for assessing learning potential in severely retarded people.

Students

The classifications and age categories of the Fernald residents served by our department's classroom are as follows:

Ages:

15 full-time students under 21
11 full-time students over 21
16 half-time students under 21

Classifications:

26 severely or profoundly retarded
10 trainable
6 educable

The following is a monthly breakdown of our activities during the past year:

MONTH	STUDENT HOURS	NUMBER OF PROGRAMS TAUGHT	RESIDENT TEACHER HOURS	VOLUNTEER HOURS	NUMBER OF VISITORS
July 1971	1314	1314	231.5	11.5	29
August	1295	993	232	42	25
September	1492	1033	240	45	13
October	1910	1161	246	379	168
November	1518	863	274.5	354.5	48
December	1513.5	1021	214	262.5	48
January 1972	1504	1117	277	125.5	106
February	1485.5	1262	267	251	72
March	1621	1403	264	231.5	109
April	1520	1392	244	211	77
May	1660	1722	298.5	108.5	48
June (1-15)	813	735	141	8	33
TOTALS:	17,646	14,046	2,929.5	2,030	776

Plans for Next Year

Next year, if adequate funding is available, we plan to continue improving our curriculum while extending and refining our assessment procedures. We expect to be more actively involved in training Fernald personnel. We hope to continue training resident teaching aides as well as high school and college volunteers.

More importantly, we hope to develop our investigative and consultant functions to become an increasingly useful resource for teachers and parents at Fernald, at other state schools, and in the community.