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ABSTRACT

Eight papers focus upon specific subject programs for educable and trainable mentally retarded (EMR and TMR) students. Three of the papers, concerning driver education and traffic safety education for EMR students, cover driver education guidelines and materials developed in a Michigan state institute involving teachers of EMR and teachers of driver education, Alabama's statewide project for EMR driver and traffic safety education, and a pilot project involving EMR students in a two-part Non-Traditional Driver Education Program emphasizing safety training. Other papers describe in detail the EMR home economics program at Oak Ridge (Tennessee) High School, discuss instructional objectives for work-study programs for EMR elementary through high school students, briefly describe the Northwestern Illinois Athletic Association for Trainable Mentally Handicapped Youth, present a Piagetian approach to arithmetic for the retarded, and examine the team work experience (supervised work in teams in community settings) in work oriented special education programs for retarded persons not able to benefit from the type of vocational training available within the structure of present work study programs on the secondary level. (KW)

Exceptional Children Conference Papers:

Specific Subject Programs for EMRs and TMRs

Paper Presented at the

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PREFACE

Specific Subject Programs for EMRs and TMRs is a collection of eight papers selected from those presented at the 49th Annual International CEC Convention, Miami Beach, Florida, April 18-24, 1971. These papers were collected and compiled by The Council for Exceptional Children, Arlington, Virginia. Other collections of papers from the Convention have been compiled and are available from the ERIC Document Reproduction Service. Other collections may be found by consulting the Institution Index of Research in Education under Council for Exceptional Children or the Subject Index under Exceptional Child Education. Titles of these other collections are:

Deaf-Blind, Language, and Behavior Problems
Diagnostic and Resource Teaching
Gifted and Developmental Potential in Women and the Disadvantaged
Infantile Autism
Local, State, and Federal Programs
Physical Handicap
Pre and Inservice Teacher Preparation
Trends and Issues in Special Education

Table of Contents

Description of EMR Home Economics Program at Oak Ridge High School

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I. INTRODUCTION

As a preface to describing the home economics program for educable mentally retarded students at Oak Ridge High School, it seems appropriate to review briefly the setting in which the program operates: the community, the school, and the special education class.

Oak Ridge had its beginning in 1943 as a government-operated town. Most of its citizens were employed in plant operations connected with World War II. At the end of the war, the plants turned their major efforts to scientific research in the field of atomic energy. The town was incorporated in 1959, but continues to receive federal funds to help finance municipal operations. There is some private industry in the town, but the plants still employ a majority of the working citizens. The educational level of the community is high. Population is listed as 31,250.[1]

Schools were opened in 1944 and were managed by a government operating company until incorporation. At this time, the city took over their operation. The school system has a six-year elementary,

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[1] "School and Community--Oak Ridge Schools," Evaluative Criteria (Washington, D. C.: National Study of Secondary School Evaluation, 1970). (For experimental use only, unpublished.)

three-year junior high and three-year senior high organization. The high school enrollment in March 1969 was 1,785.[2]

In 1957, the first special education class for EMR students at the high school began. A second class was added in 1967. Combined average enrollment for the two classes is 30. Enrollment in March 1969 was 27, with 13 boys and 14 girls.[3] All classes at the high school operate on the period scheduling plan. Special education students take courses required for graduation and courses chosen as electives in which they are interested and in which they can operate. Most of the courses EMR students take are taught by special education teachers. EMR students attend high school four years instead of three. The fourth year they attend school a half day and work a half day if suitable employment is available. They graduate and receive the regular diploma on which it is indicated that credits were earned in a special class and cannot be used for college credit.[4]

Girls take home economics as an elective leading to a major. The program is organized into a four-year course of study and is taught by the home economics teacher and the special education teacher working together as a team. The objectives of this program are worthy home membership and the four objectives of education: self-realization,

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[2]Oak Ridge Schools, Monthly Enrollment, March 1969.

[3]Ibid.

[4]A Curriculum Guide for Teaching the Educable Mentally Retarded (Oak Ridge, Tennessee: Oak Ridge Schools, 1969), pp. 109-137.

social competence, economic efficiency, and civic responsibility. The teachers share the belief of many other educators that through the home economics program the mentally retarded girl can best be prepared personally, emotionally, socially, and economically to meet the demands of an adult society.[5]

II. INSTRUCTIONAL GUIDELINES

The four-year course of study includes seven homemaking areas: foods, sewing, home care and beautification, self-improvement, child care, health, and family relations. The areas of safety and consumer education are not taught as separate units but are related to all areas. Various activities in each of the units are covered every year. However, the curriculum is not divided into a set year's program. Instead, carry-over and improvement from the previous year, needs, abilities, and interests of the students determine what is taught and when. Many of the same topics are covered each year because the EMR student learns from repetition, and skills and knowledge are best retained when over-learned.[6] Also, some students will accept more responsibility the second or third year, working more independently and becoming more proficient in these activities. Units in home economics can be varied in so many ways that repetition does not result in a lack of interest from students.

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[5]Samuel A. Kirk and G. Orville Johnson, Educating the Retarded Child (Boston: Houghton Mifflin Company, 1951), p. 37.

[6]G. F. Thanos and A. McConnell, "High School Programs for the Educable Mentally Retarded," Journal of Secondary Education, XL (November 1967), 317.

Tool subjects are presented in practical situations when opportunities arise. All materials used are adapted to a level which can be understood by the student. Learning activities are centered around tasks which the girl is likely to encounter in life. Teaching techniques are used which emphasize simple, direct methods, with orderly and well-planned procedures. Written tests are not often given. Oral testing is used more frequently. This serves several purposes: it gives practice in oral expression; it serves as a listening experience; it is a method of reenforcement for teaching; and it indicates areas which need additional study.

The needs of the students are continually being identified. The special education teacher visits in each home at the beginning of the school year and makes other contacts with the family throughout the year. Because of this, teaching can be more practical, taking into consideration the student's homelife. Plans are carefully prepared with the needs of the student foremost. In fact, the entire course of study is based on what is most useful for the student. Plans are flexible to meet day-to-day situations. Efforts are made to capitalize on learning opportunities as they arise. Standards are set in the potentialities of the student. An endeavor is made to find something that each student can learn. At times, the girls are asked to choose the topic they would like to study. Much attention is given to the development of healthy attitudes and work habits

III. TRAINING FOR OCCUPATIONAL EFFICIENCY

One of the prime goals for the retarded is occupational adequacy. Many homemaking skills naturally relate to vocational occupations. This paper defines vocational training as practical education designed to train for work, and considers it to be specialized training. No effort is made to do vocational training as such in the one-hour home economics period. The American Vocational Association has defined vocational education as education designed to develop skills, abilities, understandings, attitudes, work habits, and appreciations needed by workers to enter and make progress in employment on a useful and productive basis.[1] Understandings, attitudes, work habits, and appreciations, in addition to some basic skills, are taught in the class but are considered in Oak Ridge as prevocational training.

Job opportunities, relating to home economics, for the mentally retarded in Oak Ridge are studied by the teachers and presented to the pupils when a particular area is covered. The purpose of this is to acquaint the student with these jobs, to have her study a job and to study herself to determine whether or not she likes the job and is qualified for it. A job analysis sheet is usually filled out in doing this job study. (See Appendix, page 65.) An effort is constantly being made to encourage the girl to make a realistic self-evaluation, a task

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[1] Chester W. Harris (ed.), Encyclopedia of Educational Research (New York: The Macmillan Company, 1960), p. 1555.

which is most important, but usually very difficult for this type student. Many jobs do not require specific training as employees are trained on the job. Examples of this are service jobs, for which many of the students are best fitted and which are the most likely types of employment in this community.

Much attention is placed on personal factors as they are equally as important on the job as in the home. The teachers emphasize at all times the factors listed by O. P. Kolstoe and R. M. Frey in their findings from evaluations of training programs which show that a high school curriculum for the retarded should offer specific provisions to encourage:

self-confidence
cooperation
cheerfulness
ability to accept criticism
ability to mind his own business
initiative
respect for supervision.[8]

IV. AREAS OF STUDY

This section describes the seven areas into which the home economics course of study has been divided. Topics from all areas are covered each year. Other topics are added when new needs are recognized. Teaching methods and activities which seem most practical for this class are chosen from the endless number which could be used.

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[8]Oliver P. Kolstoe and Roger M. Frey, A High School Work-Study Program for Mentally Subnormal Students (Carbondale: Southern Illinois University Press, 1967), pp. 47-48.

Only a partial listing of those used is given here. Teachers are continually watching for new materials. No regular text is issued to the students; however, copies of most of the home economics books listed are available and are used at various times. Reading levels of these texts are too high for regular use. Some of the materials listed are used as guides for the teachers.

Foods

This unit centers around food preparation. Basic nutrition is taught and the girls are encouraged to use this in planning food for their families and for themselves. In food labs, the girls learn to work together. They usually either do a complete project as a small group or have a part in a big project. They learn that these labs do not succeed unless each one fulfills her responsibility. Food service occupations are studied.

Unit topics.

1. Basic four food groups.
2. Nutritional needs, including special needs for particular groups.
3. Foods as they affect weight and complexion problems.
4. Meal planning.
5. Shopping.
6. Food preparation.
7. Use of prepared mixes.
8. Serving of food.
9. Kitchen clean-up.

10. Food preservation: canning, freezing, preserving.

11. Use and care of small appliances and other kitchen equipment.

12. Table manners.

13. Making meals pleasant.

14. Party foods, holiday and seasonal entertainment.

15. Nourishing snacks.

16. Vocational studies: food service occupations--waitress, dish washer, school cafeteria worker, salad maker.

Activities and methods. A great number of teaching activities are used in this field. Only a partial list is presented here. In food labs, the existing food patterns of students are recognized and used as a starting point. Cleanliness and safety are constantly emphasized. Basic cooking methods and simple measuring techniques are also emphasized. Practice is given in using economy foods, such as powdered milk and government surplus foods. Word recognition of common cooking terms is given special attention. Simple things which can be the important "extras" in homemaking are introduced. Recipes are adapted to the group and individual copies are duplicated. Girls play quiz games on nutrition and fix bulletin boards. They write menus and classify according to the basic four food groups. Newspaper ads are used for practice in reading food words, determining prices, and developing an awareness of sizes and amounts. The girls also study ads to compare prices between two stores. (See Appendix, page 65.)

A low-reading-level worktext is useful for reenforcing nutrition principles, for drill in tool subjects, and as exercises in following simple directions.

Girls keep records of foods they eat, analyze health problems which might be connected with diet, such as poor complexion, overweight, underweight, and tiredness. They plan menus which might be helpful for these specific problems. An effort is made to reach the home in this study by having the girls write a letter to their mothers. The letter varies with the problems different girls want to work on. (See Appendix, page 69.) They also take home easy-to-read nutritional information.

The students serve refreshments to teacher groups in order to practice meeting people and working with others. A study in food service occupations includes a meeting with the school cafeteria supervisor and a tour of the cafeteria and a simulated "cafeteria" situation in which the students prepare, serve, and sell lunch to a group of teachers.

Materials.

1. Homemaking for Teen-Agers, Book 1. Peoria, Ill.: Charles A. Bennett Co., Inc., 1955, Chap. 4, 5.

2. Family Meals and Hospitality. New York: The Macmillan Co., 1960.

3. Steps in Home Living. Peoria, Ill.: Charles A. Bennett Co., Inc., 1966, Chap. IV.

4. We Are What We Eat, worktext. Austin, Texas: Steck Vaughn Co., 1966.

5. "Workers in the Food Trades," "Dishwashing Machine Operator," Teen-Agers Prepare for Work, Book 1. Castro Valley, California: Carson and Daly, 1956.

6. Betty Crocker's Cookbook for Boys and Girls.

7. Pamphlets and filmstrips from food companies and U. S. Department of Agriculture; 4-H Club food leaflets.

8. Supervised Food Service Worker, U. S. Department of Health, Education and Welfare.

9. Vocational films on professional food preparation and service.

Sewing

Planning for this unit takes into consideration the great variations students have in their abilities to use the sewing machines and to do hand sewing. An effort is made to find something that each girl can do with her hands which contributes to her appearance, to the appearance of others, and to the appearance of her home. Students are guided toward an appreciation of pretty things. The patience and muscular coordination which the girls exhibit on projects in this unit are interpreted by the teacher for possible vocational implications. However, the sewing activities are not considered prevocational.

Unit topics.

1. Fabrics, patterns
2. Styles.
3. Use of machine and other sewing tools.
4. Clothes construction.

5. Altering and repair.

6. Textile painting, embroidering, other handiwork.

7. Making things for the home.

8. Gifts for others.

Methods and activities. Common sewing terms are studied with the use of illustrations. Girls are encouraged to follow the pattern instruction sheet by using the printed diagrams or by asking for help. Study is given in materials and styles. Days are scheduled for clothing repair. Girls bring items from home that need repair; teachers also bring items for repair in order to give varied experiences in this type of work. Gifts are made for others such as stuffed toys, sofa pillows, luncheon sets, painted fabric pictures, and pillow cases. The girls make luncheon sets and aprons for the homemaking room. Students who master skills teach and help the others.

Individualized instruction is the only effective teaching method in this unit. It is necessary to show some students over and over how to do the same thing. A few never learn.

Materials.

1. Homemaking for Teen-Agers, Book I, Chap. 2.

2. Snip, Clip and Stitch. Chicago: Parkinson Division, Follett Publishing Co., 1968.

3 Charts from McCall's Patterns Educational Service.

4. Film strips: "McCall's Easy Sewing."

5. Pattern books.

Child Care

Teaching in this unit is designed to help the girls in three areas: with their younger brothers and sisters, with their own children, and in child care jobs. The students enjoy this unit because it deals with familiar subjects and materials and is taught in terms they understand. In studying behavior of children, they are sometimes able to identify their own patterns of childish behavior.

Unit topics.

1. Young child from birth to 2 years: physical development, emotional and social development, behavior patterns, daily care and safety.

2. Child from 2 to 5 years: physical development, emotional and social development, intellectual growth, behavior patterns, daily care and safety.

3. Kindergarten and nursery school.

4. Child from 6 to 12: physical growth, behavior patterns, personality development, emotional needs, intellectual growth, daily activities.

5. Activities for a sick child.

6. Vocational studies: baby sitting; regular child care jobs; teacher's aide in nursery school, kindergarten or day-care center.

Activities and methods. Girls study facts pertaining to the correct ways to handle children. This is followed by a discussion of experiences and problems which they have encountered at home or in the

neighborhood. Students practice using art materials, reading children's books, singing songs, and telling stories. They make simple toys out of materials which are available at home. A public health department nurse teaches a course on "Care of the New Baby and Young Child." Dolls are used to practice bathing and dressing. The girls make scrapbooks on topics being studied. They like to cut pictures from magazines, to paste, and to label. Visits are made to a day care center or to a kindergarten class. Newspaper ads for children's clothing are studied.

Materials.

1. Homemaking for Teen-Agers, Book 1, Chap. 1.

2. Steps in Home Living, Chap. VII.

3. Learning About Children. Philadelphia: J. B. Lippincott Co., 1964.

4. Understanding Children Under 6, Kentucky Home Economics Occupation Training Program. Lexington: University of Kentucky, 1967.

5. "Baby Sitters," Teen-Agers Prepare for Work, Book 1.

6. Feeding Little Folks. Chicago: National Dairy Council, 1967; other booklets from food, furniture, and various companies.

7. Pamphlets from public health department on child care, mother and baby care, safety for children and other related topics.

8. Child development films and filmstrips listed in catalog published by Tennessee State Department of Education, Division of Vocational-Technical Education, Home Economics Education, 1967.

Family Relations

This area is of prime importance, but is one of the most difficult to teach because the students have widely varying concepts of what a home should be and what relationships should exist among those living there. The fact that the teacher is familiar with the homes of her students enables her to begin her teaching where the student is and work from there.

Unit topics.

1. Relationships within the family.
2. Relations with people outside the home.
3. Understanding the roles and responsibilities of family members.
4. Dating, sex education.
5. Preparation for marriage and parenthood.
6. Service to others.
7. Family problems.
8. Finances, simple family budget.
9. Family parties and holiday celebrations.
10. Use of leisure time.
11. Vocational studies: companion to an elderly person.

Activities and methods. Informal group discussion is used often. Role playing is also done frequently. This gives the girls a chance to air their feelings and provides an opportunity for explaining the roles and responsibilities of family members in an informal way. An idea

given by Henrietta Flack in an article on teaching tips has been used successfully.[9] In this, incomplete sentences are assigned, such as "It really bothers me when . . . ; I really get angry . . . ; I wish I could . . . ; would I like to have myself for a daughter . . .?" The girls finish the sentences orally. Ways in which the girls can contribute to the well-being of the family are often discussed.

Materials.

1. Successful Living. Atlanta: Allyn and Bacon, Inc., 1959, Chap. 18, 19, 20, 21.

2. Homemaking for Teen-Agers, Book II, Chap. 11.

3. Steps in Home Living, Chap. II.

4. Companion to an Elderly Person, U. S. Department of Health, Education and Welfare.

Self-Improvement

Opportunities are taken in all units to guide students toward personal growth. However, specific units on this subject are taught several times each year. It is felt that self-improvement results in an improved self-image which is reflected in improved performance of the students in all areas. Developing poise for job interviews and for situations which involve meeting the public is stressed in this unit.

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[9]Henrietta Flack, "Timely Teaching Tips," Forecast for Home Economics, XIII (March 1968), 174.

Unit topics.

1. Self-analysis.

2. Improving manners; controlling emotions; getting along with others.

3. Meeting the public at home and in the community.

4. Health habits important to personal appearance: cleanliness; correct posture; proper diet; care of hair, complexion, nails.

5. Clothing: suitability, appropriateness, care.

6. Vocational studies: how to act in a job interview, personal factors which contribute to job success.

Activities and methods. Behavior studies are done in short periods of time and repeated frequently. The girls discuss acceptable behavior, evaluate their behavior, set goals for improvement, make suggestions to the teacher as to how she can help, and check their progress periodically. Role playing is used in studying emotions. There is a concentrated effort to help students overcome shyness. They discuss meeting the public and do role playing in answering the door, meeting salesmen, answering the telephone, introducing callers to their families. They practice writing down essential parts of messages and giving directions. Actual situations are provided to help develop this type of skills.

Personal and social factors are discussed in relation to job success. (See Appendix, page 70, for a chart used in this area.) Films on how to act during a job interview are viewed and discussed.

APPENDIX

SAMPLE JOB ANALYSIS FORM*

1. Job Title_____

2. Description of duties_____

_____

_____

3. Experience ____ required ____ not required

____ not required, but helpful

4. Employment

____ full-time ____ part-time ____ seasonal

5. How many people employed? ____male ____female

6. What tests are given?

_____

7. What kinds of licenses are required?

____ health certificate ____ other

8. Must the employee fill out a written application?

____ yes ____ no

9. How are employees found? ____ employment service

____ applicants come in ____ referral by friends

____ help wanted ads _____ other

10. Are there plenty of workers available?

____ shortage ____ steady supply ____ more than enough

_____

*Adopted from Oliver P. Kolstoe and Roger M. Frey, A High School Work-Study Program for Mentally Subnormal Students (Carbondale: Southern Illinois University Press, 1967), pp. 47-48.

Descriptions of vocational opportunities in this area are presented as some are of practical interest to this student.

Unit topics.

1. Health needs of different age groups.

2. Securing medical and dental services--in emergencies, for illnesses, for regular check-ups; public health agencies; immunizations.

3. Common operations and illnesses; common medical terms.

4. Symptoms of illnesses.

5. Care of the sick.

6. Study of the hospital.

7. Health insurance.

8. Vocational studies: nurses aide, hospital housekeeping jobs.

Activities and methods. In studying care of the sick, students learn how to feed the patient; how to give medicine; how to take temperatures; how to fix ice bags and hot water bottles; how to make the patient comfortable; and how to entertain him. A nurse visits the class and discusses illnesses, hospital routines, operations, and other topics in which the students express an interest. She tells of the training required for her job and describes the various types of work nurses do and the work other employees in this field do. Students tour the hospital. Much attention is given to teaching how to recognize danger signals and how to know when professional help is needed. First aid for home accidents is reviewed. (All students at the high

school take a semester health course in which first aid is taught.)

Materials.

1. Homemaking for Teen-Agers, Book II, Chap. 12.

2. Steps in Home Living, Chap. VI.

3. Lessons in We Are What We Eat.

4. Pamphlets from public health department.

5. Movie "Measles Vaccine" and other health movies.

6. "Patients Are People," six-film course for nursing aides on proper patient care and comfort, designed for hospitals or nursing homes, also of value for home nursing.

7. Vocational materials on nurses aides, hospital housekeeping jobs.

Home Care and Beautification

This is an area in which most of the students can make a major contribution to their family. It is hoped that the girl will learn that keeping her home clean, comfortable, and attractive is a job she can do with competence and with pride. The vocational potentials in this area are considered practical for a majority of the students. Emphasis is placed on developing favorable attitudes toward work of this type.

Unit topics.

1. Housekeeping--major areas.

2. Housecleaning.

3. Washing and ironing.

4. Furniture and appliances.

5. Room arrangement.

6. Home maintenance.

7. Home improvements.

8. Credit buying.

9. Simple things that make a home attractive.

10. Housing in this city.

11. Vocational studies: maid in private business or private home.

Activities and methods. Much emphasis is placed on learning and applying rules of good housekeeping. Need for schedules and planning of jobs to be done daily, weekly, and occasionally is studied. How personal habits can simplify housekeeping is discussed. Girls are introduced to various kinds of cleaning products and costs by conducting a survey of the products other people use. They are asked to interview four neighbors and fill out a survey report. (See Appendix, page 71.) Ways of conducting the interviews are discussed and practiced through role playing. After the surveys are done, the results are tabulated on the board and discussed. This assignment has important implications in self-improvement and provides practical opportunity for use of tool subjects.

A maid visits the class and tells about her work. She tells about the different places she has worked, mentions specific methods

of housecleaning, and emphasizes personal characteristics which she has found necessary for this type of work. Girls discuss housekeeping work they do at home and analyze their methods as to how they can be improved. Opportunities for practical application of housekeeping skills are provided in the homemaking room throughout the year. Sometimes a girl who does not help at home will exhibit an interest and skill in certain phases of housekeeping. The teacher makes suggestions to the home concerning this.

Periodically, sewing time is spent making items for the home, such as sofa pillows, curtains, pillow cases. A piece of furniture is refinished, usually a small table or footstool from the teachers' lounge, giving an opportunity for service as well as learning. Sensitivity to beauty is encouraged by exposure and suggestion.

Materials.

1. Homemaking for Teen-Agers, Book I, Chap. 3.

2. Steps in Home Living, Chap. V.

3. Introduction to Cleaning. How to Clean a Floor, and other pamphlets from companies which make cleaning supplies.

4. The Happy Housekeepers, worktext. Phoenix, N. Y.: Frank E. Richards, 1964.

5. Homemaker's Assistant, Hotel and Motel Housekeeping Aide, U. S. Department of Health, Education and Welfare.

6. Filmstrips from companies which make cleaning supplies.

V. SUMMARY--CONCLUSION

The home economics course of study offered for this student is based on what is most useful for her within her own cultural environment. This is possible because the teachers know the students and are continually identifying their needs. The team teaching of the home economics teacher and the special education teacher increases the effectiveness of the program. There is continuity in long-term objectives because teachers work with the same girls for several years. The teachers help the individual student learn to evaluate herself realistically in terms of her abilities and limitations. Much positive reenforcement is given, and, where possible, the students are confronted with situations in which they can achieve.

The class provides for growth in good citizenship. The success of many of the unit activities depend on students assuming responsibility and working together. They learn that rules are necessary not only in food and sewing labs but in every area of life. They learn that each must take her turn doing unpleasant jobs as well as pleasant ones. They share the joy of group accomplishments.

It is felt that the educable mentally retarded girl may achieve through this home economics program the most effective education possible for her.

The girls then "apply" for certain jobs: they are greeted by a "receptionist" and are interviewed by the teacher. The interviews are evaluated with the girls.

Lab sessions are held in applying nail polish, makeup, rolling hair, and straightening hair. Check lists are used in analyzing grooming habits; girls decide what they must do to improve their personal appearance and keep records of their progress. An instructor from a beauty school talks on beauty care, followed by a field trip to the beauty school. Some of the girls usually want to be beauty operators or hair washers, but learn from this experience that they cannot qualify for these jobs.

Materials.

1. Homemaking for Teen-Agers, Book 1, Chap. 7, 10.
2. Steps in Home Living, Chap. I, II, III, VIII.
3. Film strip and tape, "Your Job Interview."
4. Charts on personal grooming.
5. Success Insurance, The Beauty Habit, Skin Care for Teen-Agers, and other booklets published by cosmetic companies.

Health

The purpose of this unit is to teach health habits, knowledge, and attitudes which will enable the students to practice healthful living. The responsibility a girl must assume in maintaining her own health and the health of her family is emphasized. Girls are made aware of public health resources and when and how they should be used.

11. How are employees paid?

___ hourly ___ weekly

___ monthly ___ piecemeal

12. What is the average wage? ___ beginning

___ after six months ___ after one year

13. Does the employee

___ work alone ___ work with others

14. How much education is required? ___ elementary school completion

___ high school diploma ___ technical school

___ some high school ___ college

15. How much on the job training is given?

___ none ___ several weeks

___ several days ___ more

16. How much supervision is the employee given?

___ none ___ some ___ much

17. Does the employee handle money?

___ yes ___ no

18. How much memory is required?

___ none ___ little ___ much

19. Does the employee meet the public?

___ none ___ occasionally

___ seen by public ___ talks to public

20. How much reading is required?

___ none ___ some ___ much

21. How much math is required?

____ none ____ little

____ counting _____ other

22. How much writing is required?

____ none ____ little ____ much

23. What kind of speaking is required?

____ little ____ asking for materials

____ giving messages ____ conversation

____ giving directions _____ other

24. What personal physical qualifications are required?

____ good general health ____ good eyesight

____ strong legs and back ____ good hearing

Would you like to have this job? _____

Could you do this job? _____ Tell why?

SAMPLE FORM FOR COMPARING PRICES*

Food	Store	Amount or Size	Price
Meats			
Vegetables			
Fruits			
Cereals			
Ice Creams			
Milk			
Bread			

*Newspaper ads are used for practice in reading food words, determining prices, and developing an awareness of sizes and amounts. This chart is used to compare prices between two stores.

SAMPLE LETTER WRITTEN TO PARENT CONCERNING IMPROVED FOOD HABITS*

Oak Ridge, Tennessee
November 8, 1968

Dear Mama,

In homemaking class we have been studying the importance of eating the right food. A proper diet helps us to feel better. It helps us to stay well. It also helps our appearance.

I need to eat more fruits. I would like to lose some weight. I should eat less. I am trying to cut down on my snacks. I have learned that some food is bad for my complexion. I should not eat chocolate candy and fried food. Will you please help me do these things?

Sincerely,

Mary

*While studying nutrition, the students learn to recognize health problems which are connected with improper diet. Each girl studies the foods she eats, looking for deficiencies which might contribute to her particular health problem. She then writes a letter home asking for help in improving her food habits. This letter was written by one of the girls. Each girl's letter varies. (The girls are given grammatical and spelling help.)

CHART OF PERSONAL AND SOCIAL FACTORS RELATING TO JOB SUCCESS*

ATTITUDES					
Toward other students					
Toward teachers					
Toward work					
APPEARANCE					
PERSONAL CHARACTERISTICS					
Good disposition					
Courteous					
Dependable					
Enthusiastic					
Minds own business					
Controls temper					
Pleasant voice					
Good listener					
HABITS CONTRIBUTING TO WORK SUCCESS					
On time					
Works without close supervision					
Follows instructions					
Sticks to a job					

*Students are rated on this chart at regular intervals to show progress in improving personal and social factors.

FORM USED IN SURVEY OF CLEANING PRODUCTS*

CLEANING SUPPLIES	PRICE	AMOUNT OR SIZE
Dishwashing Soap		
1.		
2.		
3.		
4.		
Window Cleaner		
1.		
2.		
3.		
4.		
Bath Soap		
1.		
2.		
3.		
4.		
Wax for Tile Floors		
1.		
2.		
3.		
4.		
Laundry Soap		
1.		
2.		
3.		
4.		

*This survey form is used in studying cleaning products. The girls interview their neighbors to determine what supplies they use. They record the price if it is on the product. Otherwise, it is found in an ad or at the store.

Symposium: Driver Education and the Educable Mentally Handicapped

Herman F. Dick
Oakland Schools, Pontiac, Mich.

NEED

Recently increased attention has been directed toward driver education for the educable mentally retarded. Calls from both drive education and special education teachers, asking for assistance in procedures and techniques express an educational need.

This interest has been highlighted by journal articles, state sp conferences on driver education for the handicapped, active interest a tion by major auto insurance companies and reports on driver education t capped by manufacturers.

All these concerned individuals and groups appear to be seard Acts to questions such as:

Can the educable mentally retarded student learn to drive a c

Can the educable mentally retarded student obtain a driver's What about the student who can't read? How can he obtain a license?

Can the educable mentally retarded student obtain automobil

One of the primary goals for an educable mentally retarded p o help these students become vocationally competent and self sufficien ployment opportunities for EMR students involve getting to and from a job. T nunities

driving your car is the only way to get to a job. The ability to drive often determines whether an EMR student can get a job. This does not mean just helping the EMR student in obtaining a license but rather it becomes our responsibility to teach our EMR students to become good drivers.

We must also be realistic about the situation and consider that EMR students will either now or as adult's drive whether we teach them or not, safely or unsafely, and legally or illegally. Our responsibility is to instruct these students, those that are mentally and physically able, in the best ways that we know or can innovate for both their own benefit and society's benefit.

REVIEW OF LITERATURE

A review of the literature offers several different viewpoints ranging from Egan who questions the ability of an EMR student to drive a car at all with his conclusions based on physical coordination and written tests to Gotshall who replies with a "resounding yes" after teaching driver education to EMR students since 1954.

Pappanikow and Bowman suggested using an instrument to measure perception time (unfortunately they did not identify the instrument) before permitting EMR students to learn to drive. They also discuss foresight as an important factor in driving. Their comment was that foresight was probably hereditary as well as acquired.

Others point out that many factors such as psychomotor functions, intelligence, personality characteristics, and attitude are involved in determining whether or not a person can become a safe driver.

Physical coordination or rather lack of physical coordination did not appear to be a factor in determining one's ability to drive a car.

Related literature by Howe would indicate that normal children were superior to mentally retarded children on a variety of motor tasks. Platt points out that this is not necessarily so and many familial groups surpass normal children in physical ability. These studies were involved with specific tasks that may or may not be related to driving ability. Also many deficiencies can be corrected by a variety of aids: power steering, automatic transmission, power brakes and other correctional aids.

Brazell included an attitude scale in his study on driver education. He found that students who received low grades in attitudes tend to have more moving violations and more accidents than those students who have high attitude scores. These attitude scales were completed by teachers. Other researchers found similar results with "normal" populations.

One of the most comprehensive studies of driver education and EMR students involved 72 mentally retarded subjects compared with 360 subjects of average and above average intelligence, half from a low socio-economic status and the other half from a high socio-economic status, all from the Lansing, Michigan, Public Schools. Driving ability criteria was the number of accidents and points as recorded at the Michigan Secretary of State's office over a five year period. Intelligence and socio-economic factors did not appear to influence driver records. There were some differences as to type of offenses: subjects from low socio-economic groups received less speeding violations but had more points for other violations.

I am very disturbed about the journal articles related to driver education. Comments such as "studies show that those who do receive driver education have fewer

than half the accidents incurred by those who don't." No reference given. Others do not include the names of the instruments and/or tests given and yet they refer to a test and treat this as if the results are valid.

Very little reference is made regarding attitude. I realize that to teach or encourage changes in attitude is difficult but the one study reporting attitude and others making reference to attitude all stress the importance of this factor. Perhaps teacher attitude and example may be of some value and should be stressed.

Even though attitude findings in one study were based on subjective basis, students with low attitude scores were not only involved in more accidents but also had a significantly higher percentage of moving violations.

STATE INSTITUTE

During the summer of 1968, 15 teachers of EMR and 15 teachers of driver education programs participated in a one week workshop to explore some of the problems of teaching EMR students to drive safely. This group felt that there are some guidelines that are considered essential to strengthen the driver education program for EMR students:

1. Pre-driver education course should be offered by the special teacher before the student enters the driver education course.

2. The special teacher should stop teaching driver education materials while the student is taking regular driver education to avoid confusing the students.

3. The special teacher should be available to provide reinforcement. A cooperative arrangement between the two teachers is imperative.

4. The special teacher may need to rewrite some materials to enable the educable mentally retarded student to comprehend the material.

5. We may need to develop alternative forms of evaluation.

Driver education instructors and special education teachers both agree that we need additional materials to teach EMR students to be successful drivers.

First, let's look at these students. As all of you well know this is not a homogenous group. Some of these students can succeed in a regular driver education program, the number varies from 1/2 to 3/4; however, most students repeat the driver education course two or three times. What this does for the EMR student we can only guess but I have found students who would rather wait until they were 18 years old and then get their license without driver education. This defeats our purpose.

This then leaves 1/2 to 1/4 of our EMR students who experience varying degrees of difficulty in obtaining a driver's license.

These students often are poor or nonreaders or if they can read they are unable to understand the written words. Yet these nonreading students are able to learn about laws and understand driving concepts, and are very capable in learning the driving functions. Our problem becomes one of providing the input so these students would be able to learn the skills of driving.

MATERIALS

The materials that we have prepared are divided into a predriver education course and some self instructional units to be used concurrently with the driver education course.

We were presented with two major problems. Many of our students had difficulty in reading the text and more important had difficulty in understanding the concepts. The abstractions were too complex to translate into a useable picture. Along with this there

was the added factor of how to support students in regular driver education programs. The teacher often found it difficult to spend sufficient time working with one or two students.

The pre-driver education course is presented during either the 9th or 10th grade to all the students. During this time the student becomes familiar with the vocabulary, some of the rules and regulations and general aspects of how an automobile functions. With the use of slides, transparencies, and other materials and appropriate discussion, the students are guided to develop favorable attitudes toward driving. These materials were intended for group use.

Show slides - transparencies

Alcohol series (T) or

Mention Language Master, special cards with pictures

The second phase starts when the EMR enrolls in the driver education course. This is an integrated class with "normal" peers. Through this process 1, 2, or 3 of the students in a EMR room would be enrolled in driver education at any one time. This model creates problems for the teacher as he is not always able to devote the necessary time in support. The materials for this phase were designed to support the student without teacher assistance or at least minimal assistance.

The slides and tape units are short and cover only one area at a time.

An example unit could be:

Slides and Tape

Show one sample

McCure points out that his students had difficulty in obtaining their licenses

because they could not read the exam. I am sure many of you faced this same problem. Perhaps most important in McCure's observations was that EMR have difficulty in learning complex material in an incidental manner. This means we must have a structured program in driver education for EMR students.

If after all of our instruction, the student fails the state test for the license we have not completed our task.

Show example of test questions

Driver and Traffic Safety Education for Educable Mentally Retarded Youth

Faye M. Brown
Auburn University, Montgomery, Alabama

Sixteen, what's so special about the sixteenth birthday? In a recent survey of 200 Jr. High School teenagers in Montgomery, Alabama, 80 percent indicated that the thing most special about their sixteenth birthday was in direct relation to automobiles and/or their ability to drive.

Several comments were received from teenagers:

"Man, my sixteenth birthday means that I will no longer have to put up with my mother telling me every turn to make, how to park and when to stop." "Sixteen means I can use the car to throw my papers." "Golly, when Johnny's sixteen we can go to the drive-in theater and I can stay out until 11:30 p. m." It is obvious that the teenager sees the opportunity to drive and own wheels as a high point in his life. The mentally retarded teenagers have the same desires and motivations to drive as any other youth who reaches driving age.

Failure to Provide the EMR with Driver and Traffic Safety Education....

In recent years, driver and traffic safety education has found it's place in the public school curriculum in a large number of our schools. It should without question be a part of every school curriculum beginning at the elementary level. Although much progress has been made in the area, little has been done to provide driver and traffic safety education to the educable mentally retarded youth.

Why is this true? Is it a failure to recognize that these students do drive on our states highways?

In November of 1968, a questionnaire was sent from my office (The Alabama Program for Exceptional Children and Youth, State Department of Education) to all fifty states asking some very specific questions about driver and safety education programs for the EMR students. Of the 41 states responding to the questionnaire, only six indicated that any effort was made from the state level to provide driver and traffic safety education for the EMR students. There will be a limited number of the questionnaire results available during the small group discussions.

Our failure as educators to recognize and provide driver and safety education for the EMR students does not mean the students will not dirve. Many EMR's are driving on our streets and highways each day and for the most part, they have been taught to drive by another student or by parents who have not had any type of formal training in driver and traffic safety education. We need to recognize that many of these students will find their employment in jobs that require them to drive, thus it becomes an important responsibility of the State and the schools to provide training that will make them better drivers. This will not only make them better prepared prospective employees, but will be a step toward reducing accidents on the highways.

Alabama's Project

Early in 1969, after many conferences and meetings with staff members from the Alabama Highway Safety Office, the University of Alabama, and the State Department of Education, (Program for Exceptional Children) a proposal was submitted to the Governor's Coordinator, Office of Highway and Traffic Safety.

The Program for Exceptional Children and Youth, Alabama State Department of Education, was funded to develop a project entitled, Driver and Traffic Safety Education for Educable Mentally Retarded Youth, from the National Highway Safety Bureau, Washington, D. C., in cooperation with the Alabama Highway Traffic Safety Office.

This project is particularly exciting because it is pioneering in an area where little has been done to provide adequate driver education and traffic safety education for handicapped youth. Out of 27,030 mentally retarded youth in the Alabama schools, approximately 18,000 of these will fall within the category of the educable mentally retarded who have an intelligence quotients between 56-80. At the present time, there are 177 classes in the State of Alabama with teenagers approaching and beyond sixteen years of age. These 2,655 students represent a fractional part of the educable mentally retarded youth in Alabama schools who need the type of training provided by this project.

The Driver and Traffic Safety Education Goals:

1. To train (special education) teachers of high school age EMR youth in driver and traffic safety education.
2. To provide basic driver and traffic safety education courses to the EMR youth. There is not an adequate number of driver and traffic safety instructors in the Alabama public schools to provide the basic driver and traffic safety courses to all students. Thus, the writer of this proposal felt it would be better to train special education teachers in driver and traffic safety rather than attempt to find and train driver and traffic safety instructors in the special education. This may be considered the lesser of the two evils. I am of the

opinion that a team approach could be ideal.

Some of the expected outcomes of this project are:

1. Trained teachers in driver education, capable of providing in-service training for additional teachers as well as training for EMR students.
2. Better informed youth with respect to traffic laws and safety rules.
3. Safer highways by developing safer drivers.
4. A driver and traffic safety curriculum guide written to meet the needs of the educable mentally retarded youth.

The first year of the project was carried out in three phases:

Phase One - Thirteen special education teachers received a three-week comprehensive course equivalent to the accepted basic course in driver and safety education at the University of Alabama. The courses were taught by two Professors, one having a doctorate in Driver and Traffic Safety Education and the other having a doctorate in Special Education.

Phase Two - Provided testing and instruction in driver and traffic safety education for the mentally retarded youth. Prior to the initiation of instruction, each student received a physical examination, social maturity test, and psycho-physical test. Using the information obtained from the test results, and their knowledge of the educable mentally retarded youth, the special education teacher planned a driver and traffic safety education program to meet the individual needs of each student.

Students were given classroom instruction, observation, and laboratory instruction under the supervision of the special education-

driver education teacher. Dual-control driver education automobiles were available for each of the participating classes.

At least three in-service meetings were held during the school year at which time the twelve teachers discussed and shared their experiences in this project. These work sessions were directed by consultants from the State Program for Exceptional Children and an instructor in Driver and Traffic Safety Education from the Michigan State University.

Phase Three - A wrap-up session of two weeks was held at the end of the school year with the project teachers and instructors in attendance. At that time, a self-study of the total project was done. Pertinent information such as letters, forms, and other data was compiled into a self-study publication (on display for group sessions). Based on the years teaching experiences the teachers identified sixteen objectives which they called performance objectives.

1. To know and demonstrate proper driving procedures.
2. To demonstrate reading/writing/communication skills necessary for the acquisition of understanding and knowledge pertaining to driver and traffic safety education.
3. To compensate for physical impairments.
4. To identify and demonstrate understanding of SELECTED auto parts, devices and safety equipment; as well as the need for their respective maintenance.
5. To increase independence and employability as a result of learned driving skills.
6. To demonstrate a knowledge of traffic laws, safety practices and responsibilities of drivers and law enforcement officers and their relationship to each other.

7. To understand decisions required for selecting, purchasing, financing, registering and insuring an automobile.
8. To acquire the necessary knowledge which a driver needs to adequately handle emergency driving situations.
9. To acquire the necessary knowledge which a driver needs when driving in adverse weather conditions.
10. To acquire knowledge and understanding of causes of traffic collisions and how they might have been prevented.
11. To acquire an understanding and awareness of deficiencies in the design and construction of roadways.
12. To acquire knowledge and understanding of the Laws of Nature and how they affect driving.
13. To demonstrate an understanding of the special problems encountered with other users of the highway and their relationships to the passenger car.
14. To understand the affects which alcohol, narcotics, and drugs have on the motor vehicle operator.
15. To develop an understanding of various types of driver personalities and the problems they may cause on the highways.
16. To develop the ability to select the safer alternative under norral driving situations.

The performance objectives have not been placed in any preferred order. They are being used to develop a tentative curriculum guide and will be revised, improved, and expanded during a week's follow-up workshop at the end of this school year (1970-71). This workshop will involve the project teachers from the 1969-69 and 1970-71 school year.

The curriculum guide we are presently working on states each performance objective and under it is listed the concepts to be taught, the student activities, the content, the inter-disciplinary approach, the vocabulary, the instructional methods and techniques, and the resources and materials to be used. Under the heading "vocabylary" we are listing the basic driver and traffic safety words and we are adding a simplified glossary at the end of the guide designed specifically with the EMR students in mind. It may become necessary to change this arrangement at a later date.

We have also requested that each teacher keep a time card on each student or have the student keep the card. Based on the experiences of last year's operation, the teachers are attempting to provide approximately 10-15 hours of behind-the-wheel instruction to each student and to provide approximately 60-75 hours of classroom instruction. This, of course, will vary from student to student, but we are attempting to establish a reasonable timetable guide.

This year we are following basically the same plan with the in service teacher training program as we did last year. The teachers have made teaching aids and have shared them at the meetings. You will see on display the booklet of directions for building a simulator from plywood and odds and ends. One of our teachers built this remarkable simulator and provided the directions. This project has provided the teachers and students an opportunity to utilize all types of material and technology and many interesting and creative teaching aids have been developed.

Summary

Teenagers consider the opportunity of driving and owning an automobile as a high point in their lives. The educable mentally retarded teenager is no different in this respect from the so called "normal".

Students enrolled in driver education are individuals, and individuals have different abilities and needs, but a common need is to know how to safely operate an automobile. The EMR students can and do get a driver's license. They do operate motor vehicles on our streets and highways whether they do or do not have specialized training to meet their individual needs. The results of a recent nation-wide survey reported that Alabama is one of seven states developing a state directed driver and traffic safety education program for the handicapped youth.

Through the cooperation of the Program for Exceptional Children and Youth, Alabama State Department of Education, and the Alabama Office of Highway and Traffic Safety, a grant was obtained from the National Highway Safety Bureau to develop a program for the educable mentally handicapped youth of Alabama. The three year project is to provide teacher training in driver and traffic safety education as well as training to educable mentally retarded students. Curriculum materials are being developed for use in driver education programs for educable mentally handicapped students.

During the 1970-71 school year approximately 200 EMR teenagers will be taught driver and traffic safety education courses. The majority of these youth will obtain a driver license and the majority

of them will past their permit and license test on the first try after completing the requirements of the courses.

During the summer of 1969, thirteen experienced teachers of educable mentally handicapped students spent three weeks in a teacher preparation course in driver and traffis safety education. One additional week was spent during the school year and two weeks in June, 1970, were spent in course evaluation and curriculum development. During the summer of 1970, ten additional teachers participated in a three week preparation course at Auburn University at Montgomery. The courses were taught by Dr. Faye M. Brown, specialist in the area of exceptional children, and Dr. Charles E. McDaniel, specialist in the area of driver and traffic safety education.

As a result of 1969-70 year's work, performance objectives and teaching outlines have been developed which are being field tested by the teachers participating in the project. During this year, these materials are being evaluated and necessary changes are being made to assure the best possible driver education programs for the educable mentally handicapped youth of Alabama.

QUESTIONNAIRE, NOVEMBER 1969, FOR DRIVER AND TRAFFIC SAFETY EDUCATION FOR EMR STUDENTS

State Education Agency _____

1. Does your state provide a state-directed driver and traffic safety education program for the handicapped youth? _____

2. Is this state program under the direction of Special Education, Driver Education, or some other division? _____

3. What areas of exceptionality does the program include? _____
Are these programs funded through the State Department of Education, _____
the special title projects _____, or National Highway Safety Bureau _____

4. If program is reimbursed through the State Department of Education, how much reimbursement is received for each student? _____

5. How many local school agencies provide driver and safety education for the handicapped youth?
_____

6. What areas of exceptionality? _____
How many mentally retarded or physically handicapped students participate in such programs?
_____

7. If the team approach is used, in which of the following areas is the special education teacher involved?

		Yes	No
(a)	all phases of the driver and traffic safety education course	_____	_____
(b)	only classroom instruction	_____	_____
(c)	on-street driving	_____	_____
(d)	other _____		

8. What are your requirements for:

		Min. Hrs.	Avg. Hrs.
(a)	behind-the-wheel on-street instruction	_____	_____
(b)	behind-the-wheel on-street observation	_____	_____
(c)	off-street multiple-car driving range instruction	_____	_____
(d)	simulation instruction	_____	_____

9. Have you developed a curriculum guide for the driver and traffic safety education courses for the handicapped? _____ If so, are copies available? _____

10. Is there a driver and traffic safety education program or projects in your state which you feel could provide valuable information to a developing program, either through written information or visitation? If so, Please give the name and address of the person to contact.

SUMMARY - Driver Education Programs for Handicapped

1. Forty-one States replied to questionnaire.

2. Thirty-five states do not have driver education programs for handicapped children.

3. Six states do have driver education for handicapped children.

1. Does your state provide a state directed driver and traffic safety education program for the handicapped youth?

NO	YES
Washington State	West Virginia State
South Carolina State	Delaware State
Missouri State	Wisconsin State
Maine State	Illinois State
Oklahoma State	Michigan State
Arkansas State	North Carolina State
Indiana State	
Alaska State	
Colorado State	
Nebraska State	
Kansas State	
Oregon State	
Georgia State	
Montana State	
Louisiana State	
New Hampshire State	
Nevada State	
Idaho State	
Connecticut State	
Rhode Island State	
Ohio State	
Florida State	
New Jersey State	
New Mexico State	
Mississippi State	
Maryland State	
South Dakota State	
Pennsylvania State	
New York State	
Tennessee State	
Wyoming State	
Virginia State	
Washington D.C.	
California State	
Hawaii State	

2. Four State programs under "Driver Education".
One State program under "Division of Instruction and
Division for Handicapped"

3. Area of exceptionalities included:
2 - All handicaps
1 - EMR's only
1 - All permissable by motor
2 - Physical Handicapped and MR

Most programs funded through State Department of Education

One through Special Title projects and Consultant Service Highway Safety Bureau

4. (a) West Virginia receives special aid of $300,000 prorate at approximately $30 per student.

(b) Michigan receives $30 per student

(c) Illinois $10 per student

(d) North Carolina "100% except local salary supplements."

(e) Wisconsin - $24 per student and 70% teacher salary if trained in special education.

(f) Delaware - No reimbursement

5. West Virginia - two special schools EMR. Eleven other school agencies provide special instruction in Driver Education for EMR.

Michigan - Delaware - All

Illinois - Special Education teachers and Driver Education teachers

North Carolina - 100%

Wisconsin - Most

6. West Virginia, Michigan, North Carolina, and Delaware - All
Wisconsin - Most.

7. Most states involved all phases of driver education and traffic safety education in training in team approach. West Virginia, Illinois, North Carolina, Wisconsin, and Delaware used team approach in classroom instruction also. West Virginia used team approach in on-street driving as did Illinois, Wisconsin, and Delaware.

8. Most states required 6 minimum hours behind the wheel - on-street instruction. Michigan, required 12 hours of simulation instruction as did Illinois and North Carolina. Delaware required 4 hours of simulation instruction.

SPECIAL PROJECT

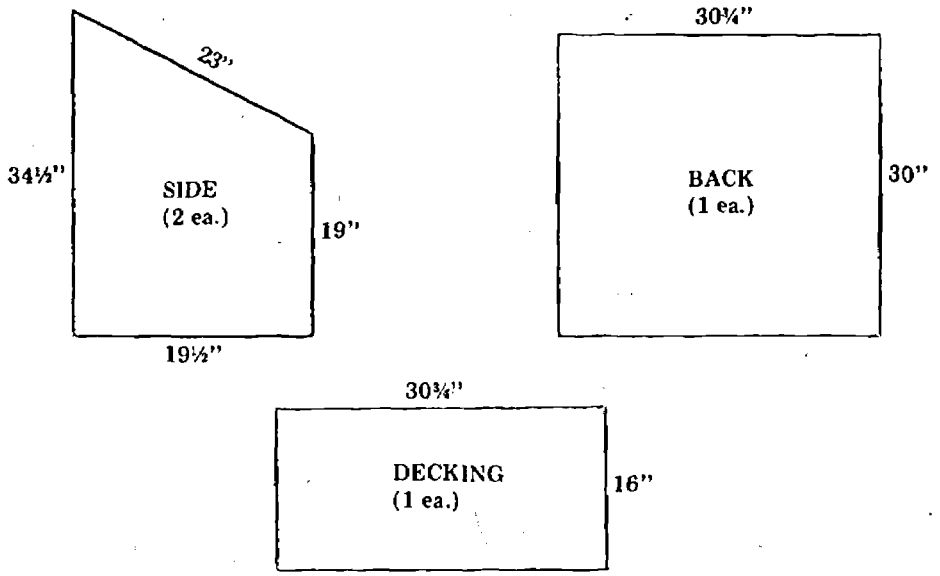
Driver and Traffic Safety Education for the Educable Mentally Retarded Youth

Alabama State Department of Education
For
Exceptional Children and Youth

Teacher: Ellie Kennedy
Teacher Aide Constructed by: Mr. Kennedy

Materials Needed

Plywood (½ — inch) cut as follows:

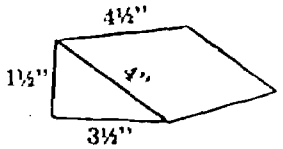


Two - by - fours cut as follows:

2 ea. — 29-¾" for brake and accelerator attachments and connections.

2 ea. — 9½" for brake and accelerator pedals.

1 ea. — 4½" for mounting block for steering wheel.



(Drill ½" hole in center on top of block mount)

ATTACHMENT BLOCK FOR STEERING WHEEL MOUNTING

1 ea. — 5" bolt for mounting steering wheel.

3 ea. — steel washers for mounting steering wheel.

1 ea. — tap or nut for mounting steering wheel.

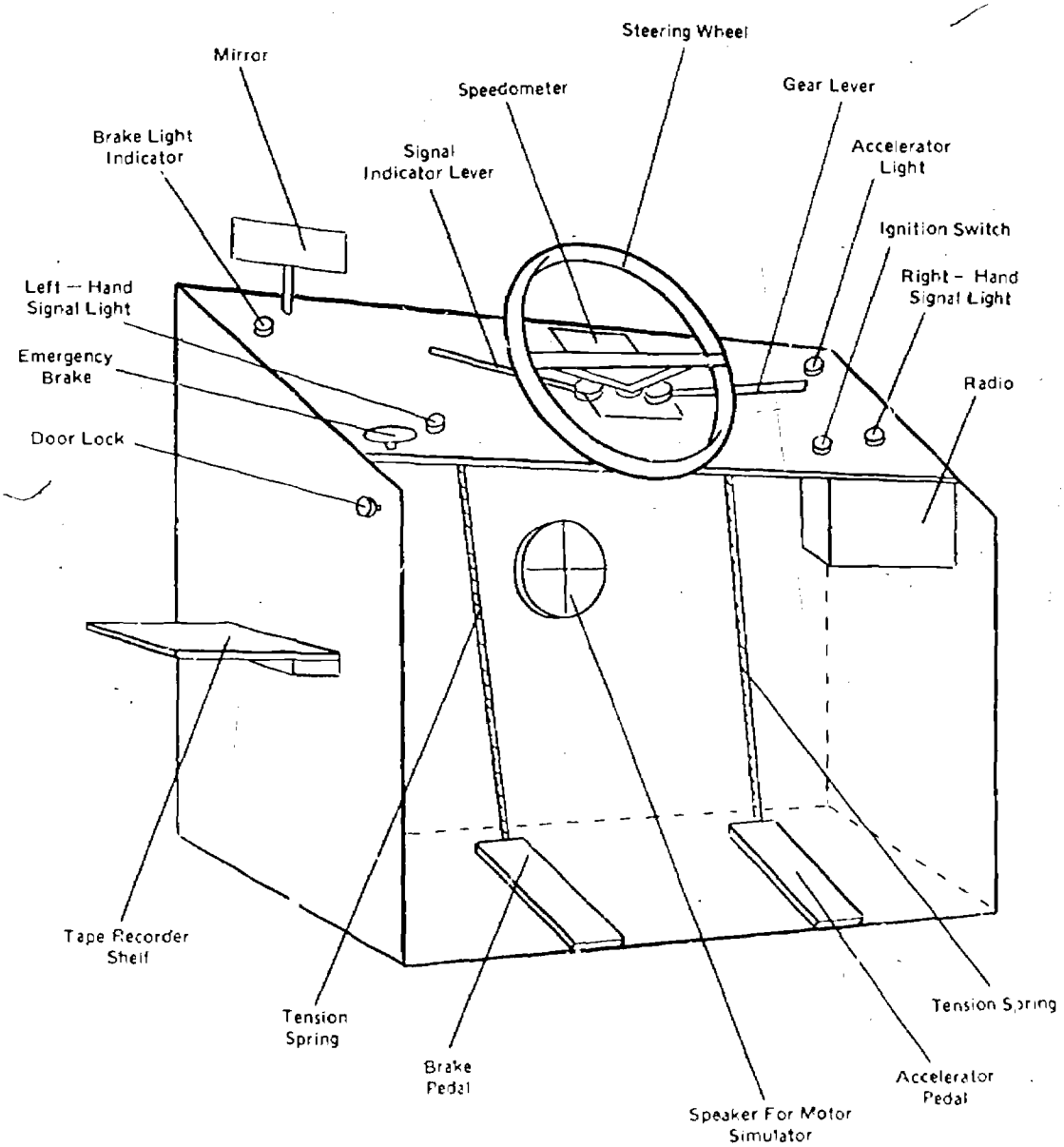
2 ea. — common screen door springs for brake and accelerator tension.

Finishing and 8 - penny nails — for nailing chassis together.

Proposed Skills To Be Taught On Simulator

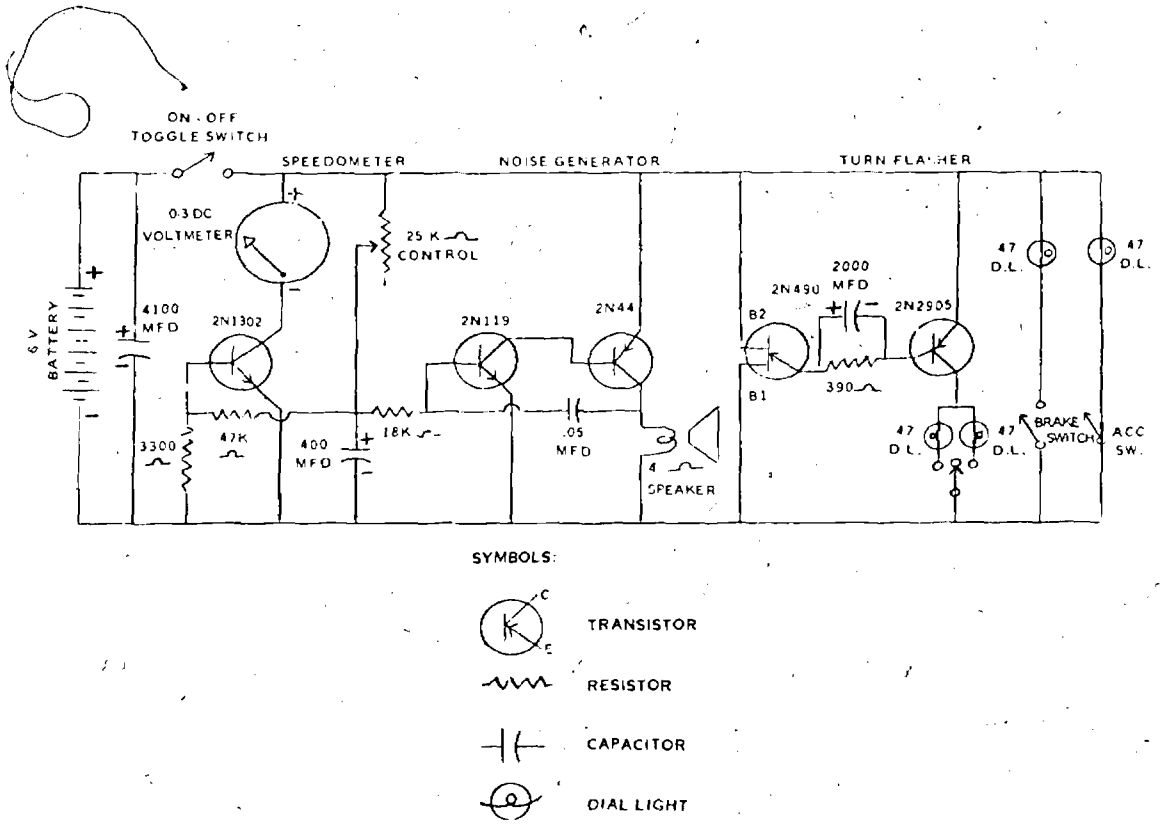
		COMPLETED
1.	Steering (Foreward)	[ ]
2.	Steering (Backward)	[ ]
3.	Right–turn steering	[ ]
4.	Left–turn steering	[ ]
5.	Overhand steering	[ ]
6.	Left–hand signaling	[ ]
7.	Right–hand signaling	[ ]
8.	Proper acceleration	[ ]
9.	Alertness to speeding	[ ]
10.	Proper braking	[ ]
11.	Attention to instrument panel	[ ]
12.	Use of emergency brake	[ ]
13.	Locking car door	[ ]
14.	Use of seatbelts	[ ]
15.	Ignition	[ ]
16.	Gear shift for automatic transmission	[ ]
17.	Adjusting mirror	[ ]
18.	Execution of teacher commands (proper)	[ ]
19.	Proper responses under distractive circumstances	[ ]
20.	Proper sequential responses	[ ]

Diagram Of Simulator and Various Parts



Note. 6-Volt Dry Cell Battery Underneath Decking To The Back (Inside).

Wiring Diagram Of and Electronic Parts Used In Teacher-Made Simulator



A. One 4" speaker
B. Approximately 24 feet of telephone wire
C. Three toggle switches
D. Five indicator bulbs (No. 47 dial light)
E. 6-Volt Dry Cell Flashlight Battery
F. Two pressure foot switches
G. One capacitor, 4100 MFD, 8 volts
H. One potientiometer, 2,500 Ohms
I. One flashing unit composed of: One transistor # 2N490, One transistor # 2N2904, One condensor # 2,000 MFD, 6 volts, One resistor # 390 Ohms
J. One Multi-vibrator consisting of: One transistor # 2N119, One transistor # 2N44, and One condensor 2MFD with one resistor 27,000 Ohms.
K. One DC Voltmeter, 0-3V

TEACHER / STUDENTS	SEX	AGE	HANDICAP		READING LEVEL	HOURS IN PROGRAM			ATTENDANCE		ENTERED WITH PERMIT	
			IQ	OTHER		CLASS	CAR	OBSERVATION	PRESENT	ABSENT		

IN PROGRAM		ATTENDANCE		PERMIT						LICENSE			COMMENTS
					ATTEMPTS								
'AR	OBSERVATION	PRESENT	ABSENT	ENTERED WITH PERMIT	MACH.	WRITTEN	ORAL TAPE	ORAL	DATE PASSED	ENTERED WITH LICENSE	ATTEMPTS	DATE PASSED	

Concept	Student Activities	Content

...ser-Disciplinary Approach	Vocabulary	Instructional Methods and Techniques	Resource and Material

INSTRUCTIONAL OBJECTIVES FOR WORK-STUDY PROGRAMS FOR THE EDUCABLE MENTALLY RETARDED ELEMENTARY THROUGH HIGH SCHOOL

Jacque L. Cross
Ohio Department of Education, Columbus

NOTE: The following is a preparation for a twenty minute presentation scheduled on April 22, 1971 of the CEC International Convention. The presentation is to be given from an outline prepared from this document; and, therefore, is not an exact replica of that presentation.

I believe that we can accept the premise that the goal of the education of the educable mentally retarded is to help them to become self-sufficient contributing citizens in spite of the learning deficiencies they may have. To become occupationally adequate is a major objective of that goal.

The advent of the work-study, or work experience, phase of this program over a decade and a half ago has proven to be an essential educational technique for the EMR. Swimming ability cannot be proven without water, nor can working ability be proven without employment. However, empirical evaluations made over these past dozen years indicate that occupational success is more often achieved with early student placement in the program. Further, the percentage of success is increased when occupational orientation is made an established part of the curriculum, beginning at the early elementary level.

By occupational orientation, I am referring to the developmental phases of the student which need to be made prior to an attempt at actual work experience. Some students assigned to the EMR program, or otherwise, develop "occupationally" regardless of the curriculum they are exposed to in elementary and junior high. These students will be occupationally adequate in spite of us; and I dare say, in many programs, these students are the first to be placed by work-study coordinators, and in some programs, the only ones successfully placed.

However, our goal is to help every youngster to become occupationally independent. Briefly, occupational education must be provided in all the three behavioral domains, introduced by Bloom in 1956. Let me exemplify each:

A. Cognitive Domain - (academic areas)

1. Alerting students to the fact that independent living is dependent upon occupational self-sufficiency.

2. Helping students to realize that there are many types of occupations, most of which require special preparation for attainment. Preparation for some is extensive, others to a lesser degree, etc.

3. Students must realize that places of employment have rules which must be followed.

4. Each student must obtain a social security card.

5. Students must learn the procedures for making applications for work, for resigning, etc.

6. The list is quite extensive.

B. Affective Domain -

1. Students need to develop automatic and efficient work habits involving such things as organizing for task performances, respect for tools and equipment, cleaning up after all activities, etc.

2. Students must develop a positive occupational attitude, such as being prompt, being in attendance, following directions, accepting criticism, functioning without constant supervision where possible, etc.

C. Psychomotor Domain - Students must develop physical skills as much as possible in: (1) gross motor development, (2) fine motor development, (3) eye-hand coordination.

Certainly, development of many of these skills must begin as early as possible and be continued sequentially as part of the prescribed curriculum for each child.

Such a curriculum as described here has been established through the development of a number of educational guides for teachers. Notably, the Cincinnati Guide for Teaching Slow Learning Children (EMR), developed in 1964, is one. This was one of the first efforts to commit to writing a comprehensive minimal body of knowledge which must be reached by any individual in order for him to function independently in our society. "Learning to Earn a Living" is one of

the persistent life problem areas included in this guide. It concerns itself with the areas we are discussing today, Occupational Orientation, primary through high school.

However, we find that very few special teachers are educating their youngsters in this area as part of a planned sequential curriculum. For the most part, occupational orientation amounts to a haphazard series of experiences for the youngster, which, more often than not, provides negative concepts of work activities rather than positive development in the occupational areas.

Basically, this situation has arisen because our educational guides have failed to serve their major purpose - to communicate. Let me provide a few examples:

A. A High School Goal - "The student understands the importance of good personal and social traits of a worker."

What does this mean to the busy classroom teacher of eight high school adolescents with learning problems? To reach this goal, what will she begin on Monday morning? Personal appearance, being trustworthy, loyal, helpful, friendly, courteous, kind, etc.? Anyway, how do you teach those things???? So she moves to another goal in her trusty guide. "Seeks help when uncertain of work procedures." "Well," she concludes as she closes the guide, "you can't teach that either." So she picks up that old history text and decides that maybe we should understand more of our ancestral heritage anyway.....

B. We could move to other levels, Early Elementary - "The student begins to accept correction." or "Begins a task promptly when directed." That's a good one. Which task? Scrubbing a desk which has been crayoned on or passing out the chocolate cake for a party? Who needs to teach that?

C. Or at the Upper Elementary (intermediate) level - "The student knows some of the things the following people do: custodian, secretary, librarian, etc." What does this mean? The custodian chews tobacco and spits behind the furnance? The secretary comes in late every day? The librarian swears when she gets mad? Or the three of them have a little triangle going????

Please be aware that this is not an attempt to belittle a great deal of educational organization regarding curriculum content, nor the extensive and conscientious efforts of many, many very knowledgeable people. My purpose is to try to emphasize that our curriculum guides do not serve the purpose for which they were constructed, to communicate with the teacher, and ultimately to serve children.

Let us now examine another approach for providing guidance to teachers of the educable mentally retarded. The instigators of the relative new science in communication, writing behavioral instructional objectives, such as Mager, McAshen, Popham, etc., have provided us with a profound tool or devise. The basis of behavioral objectives is to clarify communication in a concise and measurable way. To quote McAshen, "The distinguishing characteristics of each of the behavioral objectives stated at the desired level is that they specify a goal, a behavior to be performed at the end of the project, and some standards to evaluate the quality of the performance that will be acceptable as proof that the objective has been achieved.", For our purposes, the behavioral objectives indicate clearly that which the individual needs to learn, how you will test to find out if he has learned it, and under what conditions this will be established. Let us provide several examples in the occupational orientation areas:

1. At the high school level, "The pupil seeks help when uncertain of work procedures." In measurable behavioral terms, The student will demonstrate the ability to seek assistance when uncertain of work procedures in five specific situations, created by the teacher.

2. "The student appreciates and maintains a good school attendance record." Objective - The student will demonstrate the ability to be in attendance at school, or work, at least 90% of the time, for a four month period.

3. Let's try another at the high school level. The stated goal: "The pupil understands that because of his limited skill and educational achievement, he will usually need to work at simi-skilled jobs." In behavioral terms - The student will demonstrate the ability to identify at least six work skills which he possesses in the areas of physical, social, and academic abilities, and relate these to three or more occupations where he can work.

   In sequential development in the same category at the junior high level in objective terms - The student will demonstrate the ability to describe job duties of two workers in each of the following occupational categories: professional, clerical, service, agriculture, processing, and machine trades. And, The student will demonstrate the ability to differentiate the physical, social and academic skills required in such jobs as the following: gas station attendant and nurse; truck driver and secretary; laundry worker and welder.

For variety, let's look at the early elementary level, six through nine years of age. "The pupil begins to follow directions when doing tasks." The student will demonstrate the ability to follow a series of three oral directions to complete a specific task or group of tasks. Or for one final example, "The pupil knows his full name, full address, city and state." To be more specific, The student will demonstrate the ability to write his full name. And also, The student will demonstrate the ability to introduce himself, telling his full name, address, and phone number.

These are only a few examples of some specific directions which could be provided for the classroom teacher. A complete set of behavioral objectives in one area of curriculum could be extremely beneficial for the education of each student. Twelve sets of objectives in the twelve persistent life problem areas will establish a minimum body of knowledge that a student must attain in order to survive independently. The objectives could provide a means for measuring the students ability to attain this body of knowledge.

There have been some criticisms directed toward the use of behavioral objectives which may be quite justified. One is a list of behavioral objectives does not necessarily provide the teacher with specific guidance regarding appropriate teaching techniques. For instance, in the objective previously exemplified, (The student will demonstrate) the ability to follow (specific procedures established by the teacher) for seeking assistance in (five specified situations.) There is no indication as to how "The student will demonstrate", what the "Specific procedure" should be, or what kind of "Five specified situations." However, it does indicate where the teacher must begin and how far she must go in order to bring this educational aspect to the test.

Another criticism is that there may be some profound curriculum areas especially in the affective domain for which behavioral objectives cannot be written. For some of us, this is doubtful. However, if it proves to be true -- so be it!! Certainly, those areas can be handled as efficiently as they are right now, if they are, i.e. "getting along with others." The other areas, for which objectives can be written, can be more effectively handled.

On the plus side, behavioral instructional objectives can provide education of handicapped children with a number of factors:

1. Curriculum guides will no longer serve only those who wrote them, but will serve all who use them. They will communicate to the user from the writer.

2. Objectives direct appropriate teaching techniques

3. Require individual evaluations of students and lead directly toward individualized instruction according to student needs.

4. Provide a structure upon which the curriculum goals can be recycled according to the dictates of a constantly changing society.

5. Provide special educators with a technique to determine accountability.

6. Provide a basis to test alternate program models for children with learning problems.

7. Provide specific guidance for the selection of appropriate teaching materials and equipment.

Northwestern Illinois Athletic Association for Trainable Mentally Handicapped Youth

Doug Brandow and Glen Taylor
DeKalb County Special Education Ass'n, Illinois

The Northwestern Illinois Athletic Association is composed of nine schools for the trainable mentally handicapped in northwestern Illinois. The association is designed to serve strictly the trainable mentally handicapped in the age range from ten to twenty one; hence, providing these students with the opportunity to participate in an established athletic program. In the association, participation is equal to or more important than winning.

The objectives of the association are youth involvment, parent involvment and community involvment. Each objective tends to correlate it self for the total development of the trainable student.

The athletic association desires to have an ongoing program throughout the school year for the trainable student. Schools involved in this program are Dixon State School, Dixon Truman, Rock Falls, Rockford Public Schools, DeKalb County, McHenry County, St. Charles, Aurora Public Schools, and Elgin Public Schools.

Historically, ground work for the association was laid during the 1969 school year with track meets and practice basketball games with modified rules to meet the needs and abilities of the trainable student. (See attached rules.) The nine school league was formed officially during October, 1970. Activities during the school year have been track meets,

a five game basketball schedule, a basketball tournament involving students living away from home and being involved in social activities and recreational experiences for one week.

Future activities and plans include track meets modified softball swimming meets, and basketball games and tournaments. In addition, recreational programs such as summer camps are being planned for students.

NORTHWESTERN ILLINOIS ATHLETIC ASSOCIATION
FOR TRAINABLE MENTALLY HANDICAPPED YOUTH
MODIFIED BASKETBALL RULES

1. Boys and girls from classes for the trainable mentally handicapped may participate.

2. Each game will consist of four 6-minute quarters with a 1-minute time out at the 3-minute point of each quarter.

3. Each team is allowed four time outs of its own during a game.

4. The clock should stop when the ball is not in play.

5. 10-minute halftime.

6. The teams will not change baskets at halftime.

7. Fouls are called for any excessive physical contact.

8. Each free-throw shooter merits two shots from a distance of his capability.

9. No double dribble is called. Each player is encouraged to dribble the ball as much as possible. Running with the ball the length of the court without attempting to dribble would constitute a traveling violation.

10. For out-of-bounds plays on the far end of the court, the defensive team cannot run interference until the offensive team passes the mid-court line.

11. The home team should furnish two modified referees, a timer, and a scorekeeper.

12. Other rules are the same as in a regular basketball game.

FOR FURTHER INFORMATION:

Northwestern Illinois Athletic Assn.
DeKalb County Special Education Assn.
503 Oak Street
DeKalb, Illinois - 60115.

A PIAGETIAN APPROACH TO ARITHMETIC FOR THE MENTALLY RETARDED *

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The theory is cognitive, and is more concerned with structure than content (Copeland, 1970). For these reasons present remarks will adopt a Piagetian framework (Piaget, 1965).

As one develops a mathematics program for retardates certain canons are remembered:

1. All children pass through stages of cognitive development and any learning task should be appropriate to the pupil's level of development.

2. If one defines a retardate as a person who will not go beyond the concrete level of thought, areas of mathematics which require formal or abstract thought will not be included in his training program.

3. Arithmetic readiness is not a phenomenon that suddenly emerges, rather it evolves from the interrelation and extension of more basic abilities.

4. Retardates frequently have not achieved the flexibility and reversibility of thought characteristic of normals of equivalent mental ages.

5. Because the goal of training programs for retardates is to equip them for post-school living, mathematics should be presented as a means of solving real life problems. To develop an understanding of mathematics, language and action must go together; there must be concrete experience which derives from action on the part of the child, from teacher participation, and from discussion on the activity.

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Matching Task with Stage

As the child proceeds through life inwardly organizing and assimilating and outwardly coping or accommodating to environmental experiences thought is elaborated and organized. Indirect learning and problem solving become possible. Such is the generation of the mind. Change from a reflexive to an inventive organism is defined by four states of intellectual development (Stephens, 1966):

I. In a normal child the first major stage, sensory-motor operations, occupies approximately the first 24 months. It is characterized by the growing realization that objects are permanent. Relations are established between similar objects and then between objects which are increasingly dissimilar, including relations between these objects and his own body.

II. During the pre-operational stage, which generally occurs between the years two to seven, the child acquires language. Through the use of symbols it becomes possible for thought to group past, present, and future events. Although the thought processes of this stage may be rapid, reasoning is intuitive and intelligence remains pre-logical. Thinking is influenced by what is seen at that given moment. It is difficult to consider two attributes of an object, such as length and width simultaneously. Rather, regard is addressed to length, and width is excluded as decision is made regarding the quantity contained in an object.

At this stage exploration through action permits a child to experience number, size, shape, direction, and relationships through play with concrete materials:

Observations about numbers - include one, many, none, too many, not enough

Consideration of size involves longer-shorter, wider-narrower, twice as many, but half as long

Knowledge of shape arise through experience with balls, square blocks, flat things, three sided figures, lines which are straight or crooked (curved)

Awareness of patterns is gained from such patters as tiling and blocks (Freidus, 1966)

III. At the concrete stage, which occurs approximately between the years seven to sixteen, cognitive classifications, seriations, reversibilities, and/or systems of grouping come into being. Objects or events are classified, compared for similarities or differences, located in space or time, evaluated or counted. This thought structure makes possible such intellectual operations as addition, subtraction, multiplication, division, and measurement of time and space. Because these operations are constantly tied to action they are concrete, not formal.

During the stage when action combines with representation the child begins to acquire the language of mathematics in order to communicate experiences and record observations. Numbers are introduced to record actions; relationship symbols are introduced to record judgments. Random collections are regrouped in terms of the powers of base ten.

The act of putting together two or more groups is interpreted as addition and identified by a plus. This is done for various operations the child performs with concrete materials until he can write his actions in mathematical sentences.

IV. Formal or abstract operations are not generally achieved by normal persons until their sixteenth or seventeenth years. They have been found to be unachieved by retardates. With abstract thought consideration extends beyond the present and forms theories. It now is possible to reason deductively, to generate and to check hypotheses. Formal thought invokes reflection on groupings; it operates on operations, rather than on concrete objects.

To supply a child with the correct opportunity for learning requires determination of the level of cognitive development presently achieved by the child as well as knowledge of tasks appropriate for this level of ability. Ideally, the problem or task should be just enough in advance of the pupil's present level of performance to be motivating and challenging, but not so far as to be frustrating. For the teacher to supply the pupil with the appropriate learning situation requires a developmental analysis of task as well as of pupil.

Realistic Mathematical Goals

Initially it was Inhelder (1968) who demonstrated the usefulness of Piaget's theory of cognitive development in the diagnosis of reasoning in retardates. Assessment of the thought processes available to the retardates included in her study indicated that none of the subjects achieved the level of formal or abstract thought. For this reason she proposed that a retardate could appropriately be defined as "a person who does not develop beyond the concrete level of thought". An ongoing longitudinal project concerned with the development of reasoning in normals and retardates (Stephens, 1971) confirms Inhelder's earlier findings. None of the 75 retardates, IQ 50 to 75, ages six through

twenty, included in the current research achieved the level of formal or abstract thought. However, data from the current study do indicate that cognitive development does proceed in educable retardates through late adolescence. Although there is a deceleration of tempo, development does not become fixated as the retardate approaches young adulthood.

These findings suggest that mathematics programs for retardates should have as their ultimate goals the ability to solve problems at the concrete level. Because skills basic to performance in mathematics continue to develop into the retardate's years of young adulthood mathematics is appropriately included in secondary level and adult training programs. During these years guidance by the teacher will be available as the transition is made from initial acquisition and use of arithmetical skills in laboratory settings to their functional application to ongoing problems of daily living.

Skills Basic to Mathematical Operations

The Geneva School is much more interested in number readiness than in arithmetic achievement as such (Flavell, 1963). They seek to understand and diagnose the development of number-relevant capabilities, capabilities which are considered more subtle and basic than those involved in the familiar elementary operations of counting, rote addition and subtraction. The capabilities they study comprise the fundamental properties of numbers, properties which the ordinary adult seems to assume and could not tell you when they were acquired because they seem almost innate. Yet, they are not innate and their presence must not be assumed. Developmental diagnosis of a retardate well may indicate that initial efforts could more appropriately center on attainment of the sequence of abilities basic to mathematics rather than on drill in counting, addition, or subtraction.

The need is to find out what it is that numerical operations really entail in the way of component skills and beliefs and what prior acquisitions are implied by numerical operations.

Piaget's works afford excellent analyses of the abilities basic to mathematics. For example, the development of one-to-one correspondence is one of the origins of number (Piaget, 1965); one-to-one correspondence provides the most direct measurement of the equivalence of two sets. Both counting on the finger and the exchange of one object for another are indications of the considerable part played by correspondence in the synthesis of number. To put a spoon by the side of each of six plates entails one-to-one correspondence, a process basic to multiplication.

Seriation can be accomplished by children whose mental age is two if the specific task is placing five cylinders of graduated sizes one inside the other. A more advanced task involves placement of ten dolls of varying heights in a row descending in order. The seriation of a set of elements according to size requires awareness that each term is both greater than the preceding one and smaller than those which follow.

Understanding of space and spatial representations are built up through the organization of actions performed on objects in space, at first motor actions and later internalized actions which eventually become operational systems (Piaget and Inhelder, 1963). A cornerstone of Piaget's general theory is the belief that actions rather than perceptions comprise the necessary experience for developmental progress. Studies indicate that topological differences

(order, enclosure, continuity, etc.) precede Euclidean and projective ones in development (Piaget, Inhelder, and Szeminska, 1964). By the time the average child is four he can discriminate objects on the basis of topological differences, i.e., without viewing he can tactually explore a group of objects in a bag and can distinguish a closed from an open figure, an object with a hole in it from one without a hole, and an open from a closed square.

Evaluation forms for the teaching of number in a Piagetian pre-school have been devised by Kamii (1971). These forms and suggested approaches to teaching particular mathematical concepts are as appropriate for retardates as for normals at the preoperational level.

Flexibility and Reversibility of Thought

Thought at the concrete level is characterized by flexibility and reversibility. Flexibility of mental operations is evidenced in the ability to group objects by first one and then another criterion: e.g., to sort geometric figures first in terms of shape, then later in terms of color, and still later in terms of size. Retardates frequently experience difficulty in shifting from one criterion (e.g., size) to another (e.g., shape). Flexibility is also evidenced in the ability to classify objects in terms of categories and sub-categories. Retardates may experience difficulty in recognizing that a car can simultaneously be classified as an automobile and a vehicle, or that two cups of water may equal a pint as well as half a quart.

The conservation assessments which have become hallmarks of the Genevan School require reversibility of thought. When two clay balls are equal in amount they

remain equal even though one is rolled into a long thin sausage. As one views the long sausage it is necessary to reverse the thought process, to think back and remember that the two were the same originally, that nothing has been added or subtracted; therefore, they must still be the same. This reversibility of thought, which characterizes operations at the concrete level is required in subtraction: 5 + 3 = 8; reverse the process: 8 - 3 = 5. To reverse thought processes is more difficult for retardates than for normals of comparable mental age.

The current research on the development of reasoning by Stephens (1971) which utilized Piagetian reasoning assessments and which involves 75 normal subjects, IQ 90-110, CA 6 to 20, and 75 retardates, IQ 50-75, CA 6 to 20, indicates that significant differences continue to occur between the performance of normals and retardates when mental and chronological age are held constant.

Comparison of the two groups indicates the performance of retardates generally is characterized by insufficiencies in the grouping, the flexibility, and the reversibility required in concrete operational thought. Because retardates can perform adequately on tasks involving addition it should not be assumed that they are equally capable in subtraction, a process that requires reversibility. Training to promote flexibility and reversibility of thought should be more appropriate than rote drill in subtraction.

Data from Stephens' study also indicates retardates' success on concrete level tasks requires mental ages which are in advance of those required for normals.

To illustrate this, findings are reviewed in Table 1 which sets forth the mental ages at which 50% of the normals and the mental age at which 50% of the retardates achieved successful performance on reasoning tasks which require skills basic to mathematical performance.

Insert Table 1

These findings suggest that mental age is not a sufficient criterion for determining the appropriate time for the introduction of various mathematical concepts. Differences not accounted for by mental age also must be considered in the introduction of sequentially difficult tasks. Again, there is note of the need to locate developmentally both the pupil and the task.

Living and Communicating Mathematics

Nowhere is Piaget's axiom "a child knows an object only to the extent to which he has acted upon it" more appropriately applied than in the field of mathematics. To understand mathematics a person must be aware of the transformation that brought the state into being, and not merely be aware of the end state itself (Lovell, 1971). Teaching mathematics to retardates should occur in a laboratory equipped with materials which will promote discovery of such concepts as space, time, speed, weight, linear, and liquid measure. Learning should involve exploratory situations where these pupils are taught to pose questions, to answer them in a variety of ways, and to discuss the results (Rasmussen, 1962).

To build an individualized educational program in number concepts the teacher must be able to analyze subject matter into basic components. If the task is change-making, determine what basic abilities are involved in making change.

During the past five years efforts by such persons as Lovell (1971), Freidus (1966), Kamii (1971) and Copeland (1970) have provided methods for implementation of Piaget's approach to the understanding of mathematics. Current efforts by Cawley and Goodstein at the University of Connecticut extend findings to the area of retardation. Application and evaluation of these methods by you is a vital part in attaining a "living approach" to mathematics for retardates.

REFERENCES

Copeland, R. W. How children learn mathematics. New York: The MacMillan Co., 1970.

Flavell, J. H. The developmental psychology of Jean Piaget. New York: D. Van Nostrand Co., 1963.

Freidus, E. The needs of teachers for specialized information on number concepts. In Cruickshank, W. M. (Ed.) The Teacher of Brain-Injured Children. Syracuse: Syracuse University Press, 1966.

Kamii, C. Evaluation of learning in pre-school education. In B. S. Bloom, J. T. Hastings, and G. F. Madaus (Eds.) Handbook on formative and summative evaluation of student learning. New York: Mc Graw-Hill, 1971.

Lovell, K. The growth of understanding in mathematics. New York: Holt, Rinehart, & Winston, 1971.

Piaget, J. The child's conception of number. New York: W. W. Norton & Co., 1965.

Piaget, J. & Inhelder, B. The child's conception of space. London: Routledge and Kegan Paul, 1963.

Piaget, J., Inhelder, B., & Szeminska, A. The child's conception of geometry. New York: Harper Torch Books, 1964.

Rasmussen, L Mathematics laboratory materials. Chicago: Encyclopedia Britannica, 1962.

Stephens, W. B. Piaget and Inhelder: Application of theory and diagnostic techniques to the area of mental retardation. Education and Training of the Mentally Retarded, 1, 1966, pp. 75-86.

Stephens, W. B. Developmental gains in reasoning in normals and retardates. Paper presented at Biennial Meeting of Society for Research in Child Development, Minneapolis, April 1971.

TABLE 1 [1]

MENTAL AGES FOR ACHIEVEMENT OF PIAGETIAN REASONING ASSESSMENTS [2]

Variables	Normals	Retardates
1. Conservation of Substance	7	10
2. One-for-One Exchange	7	7
3. Dissolution of Sugar (Sub.)	7	12
4. Dissolution of Sugar (Wt.)	8	11
5. Dissolution of Sugar (Vol.)	Unattained	Unattained
6. Conservation of Weight	7	10
7. Term-to-Term Correspondence	7	10
8. Class Inclusion - Animals (3)	10	10
9. Class Inclusion - Animals (4a)	7	Unattained
10. Class Inclusion - Animals (5a)	16	Unattained
11. Class Inclusion - Animals (5b)	7	10
12. Conservation of Volume (1 - 3)	14	Unattained
13. Conservation (4)	15	Unattained
14. Rotation of Beads	6	11
15. Conservation of Length	7	10
16. Conservation of Rods - Length	7	10
17. Changing Criterion - Total	10	Unattained
18. Conservation of Liquid	7	8
19. Class Inclusion - Beads (Total)	7	12
20. Dissociation of Weight and Volume	16	Unattained
21. Intersection of Classes	6	3
22. Rotation of Squares (1)	11	12
23. Rotation of Squares (2)	7	6
24. 2-3 Dimensions	Unattained	Unattained
25. Changing Perspectives - Mobile	12	Unattained
26. Changing Perspectives - Stationary	11	Unattained
27. Chemistry	16	Unattained
28. Relationships - Brothers & Sisters	8	11
29. Relationships - Right & Left	7	Unattained

1 - Table denotes age at which 50% of normals and 50% of retardates performed successfully.

2 - Sample = 75 normals, IQ 90-110, CA 6-18, MA 6-20;
75 retardates, IQ 50-75, CA 6-18, MA 3-13.
(Tasks 14 and 21 were achieved by 50% of the normals at MA 6; had normals with MA's below six been included in the study data may have indicated achievement of tha two tasks at ages prior to six.)

Project Students: Safety Training Using Driver Education Non-Traditional Systems

John K. Smith
Montgomery County Board of Education, Dayton, Ohio

INTRODUCTION

This project is dedicated to the idea of helping handicapped youth save their own lives as well as the lives of all other people who use the public highways. It is sincerely hoped that this project will provide justification and a practical, meaningful approach to a high school safety education program for all handicapped youth.

Many factors influenced this study. Statistics indicated that many students, especially handicapped ones, were graduating from public schools without a "well-rounded" driver education program. Research also pointed out that many of these handicapped youths, by the age of nineteen or twenty, are automobile owners and drivers. Many students live where there is no means of public transportation to the job vacancies that exist. Also many Educable Mentally Retarded (EMR) students enrolled in work-study programs are unemployed because they have no transportation.

First objective of this study was to develop program guidelines and to determine the feasibility and make recommendations for safety education with emphasis on Driver Education for the handicapped. This pilot project was limited to EMR students from three local school districts in Montgomery County, Ohio. Part One was the academic phase used to develop: 1) knowledge and understanding of the rules, regulations, and laws; and 2) good driving habits through the use of classroom learning situations. Part Two dealt with practical training, and functional application of these skills and ideas. Near the end of Part One, every participant was asked to take the necessary state test to obtain a temporary driving permit. Part Two was available only to the participants who successfully completed Part One, and obtained an instructional permit.

The participants were selected in cooperation with the local special education staff, the work-study coordinator, and the school administrator.

The I.Q. range of participants was 52 to 72 with a mean of 61.8. The chronological age ranged from 15.9 years to 19.1 years with a mean of 17.3 years. The mental age range was 8.9 years to 12.2 years with a mean of 10 5 years.

At the beginning of the Non-Traditional Driver Education Program, the students were given pre-tests to determine their knowledge of safety, their self-concept as a learner, and their self-concept as a worker. These tests were given not only to determine if the students' knowledge of driving could improve, but also to aid the teacher in establishing a starting point for the academic work. Results from the pre-test did not determine eligibility for participation.

CONCLUSIONS

Of the 16 students selected to participate in the study, 87.5% (14) completed the academics. Of these 14 students who completed the above, 86.7% (12) obtained a instructional permit. The remaining two students did not receive parental permission to continue. One student was involved in a home accident and was unable to participate. Eight out of the 11 remaining students who completed the laboratory phase obtained a drivers license by the end of the project. Two students were recommended not to take the state examination until more experience was obtained and one student after 3 attempts failed to obtain his drivers license.

Forty-two hours of classroom related studies and at least 16 hours of laboratory experience was presented to each student. This was more than the minimum amount of time required by the State of Ohio. Each student also received 48 hours of driving observation.

RECOMMENDATIONS

Driver Education for handicapped youth, especially EMR students, should be a two part program. Part One deals with knowledge and understanding of the rules, regulations and laws of highway safety and part two deals with safe driving; the two are inter-dependent.

Based on studies made, it is recommended that consideration be given to the implementation of a four track program to meet the driver education needs of handicapped students.

TRACK I Handicapped students (about 15% to 20%) that can master and benefit from the now existing "traditional" program should be permitted and encouraged to enroll.

TRACK II This track is designed for the other (80% to 85%) students who cannot master the traditional academic program. In this track the academics are taught by a certified EMR teacher. Those students that can complete the academics and can obtain their instructional permit are enrolled in the traditional laboratory phase.

TRACK III This track provides auxiliary instruction for those students (15% to 20%) who display a need previous to, during, or at the conclusion of the traditional laboratory phase.

TRACK IV This track is for all other handicapped students (2% to 5%) from track two above who are in need of a especially equipped automobile. This track would include physically handicapped, multi-handicapped and other students with special needs.

OPERATIONAL PROGRAM

From the evaluation of the pilot project came basic considerations and recommendations that are the basis for formulation of this operational project. Some of these considerations are as follows: 1) a driver education and safety program is the responsibility of each school district, therefore, a program should be offered during the regular school day; and 2) a program should be designed to meet the needs of the handicapped and be made available to all youth.

Two general objectives of this project are as follows: 1) To sponsor a special workshop to provide comprehensive driver education instruction and certification for secondary teachers of EMR students; and 2) to provide a quality driver education program that meets the need of handicapped youth.

In order for each professional staff member to fulfill his obligation to the handicapped student the project utilizes a team teaching approach.

This project sponsored 5 special workshops that were attended by 22 EMR teachers. These workshops provided background information and qualified each participant for state certification in driver education.

CONCLUSIONS

A breakdown of the results of the project showed that 153 students participated in the four track program. A total of 120 students completed both the academic and laboratory phases of the course and 92 students were successful with the state examination for licensing. Of the remaining 28 students, 15 were not successful and 13 students did not attempt the state road test examination.

RECOMMENDATIONS

In order to make this program more effective and reach as many students as possible, three general recommendations are made: 1) a junior high pre-driver education program is necessary to provide the student with a basic understanding and knowledge of the state's requirements for the instructional permit, 2) the use of instructional media which includes driver training simulators to assist the student in the transition between the academic phase and the laboratory phase of driver education, and 3) the need of a course at the college level in driver education for teachers of handicapped students.

Team Work Experience for the Mentally Retarded

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ONE OF THE MOST SIGNIFICANT DEVELOPMENTS IN REHABILITATION AND SPECIAL EDUCATION DURING THE PAST DECADE HAS BEEN THE GROWTH OF THE WORK STUDY PROGRAMS FOR RETARDATES IN HIGH SCHOOLS THROUGHOUT THE NATION. EDUCATIONAL CURRICULUM HAS BEEN DESIGNED TO FACILITATE THE STUDENT'S TRANSITION FROM SCHOOL TO EMPLOYMENT BY PROVIDING ACTUAL WORK EXPERIENCE DIRECTLY RELATED TO THE ACADEMIC OFFERINGS. WHAT IS TO BE DONE WITH THE TRAINABLES (I.Q. BELOW 50) AND A SUBSTANTIAL SEGMENT OF THE EDUCABLES (I.Q. BETWEEN 50 AND 80) NOT QUALIFIED TO PARTICIPATE IN THESE COMMUNITY WORK STATIONS? JOSEPH WEINGOLD, EXECUTIVE DIRECTOR OF THE NEW YORK ASSOCIATION FOR RETARDED CHILDREN, HAS A THEORY WHICH CAN BE APPLIED TO THIS SITUATION: "EACH NEW SERVICE DEMONSTRATES A NEW DEED AND OPENS UP ADDITIONAL AREAS OF EXPLORATION. THIS IS WHAT I CALL THE PANDORA BOX THEORY OF SOCIAL SERVICE."

IT IS ESSENTIAL THAT WE SPECIFICALLY IDENTIFY THAT SEGMENT OF OUR RETARDED POPULATION UNABLE TO FUNCTION INDEPENDENTLY IN A WORK STUDY PROGRAM. ACCEPTING THE INCIDENCE OF MENTAL RETARDATION AS 30 IN 1,000, ONE OF THESE 30 IS "DEPENDENT" REQUIRING HOUR BY HOUR SUPERVISION IN AN INSTITUTIONAL SETTING. THE SECOND GROUP, 4 OUT OF EVERY 1,000 POPULATION IS THE "SEMI DEPENDENT" GROUP WHO MAY HAVE THE CAPACITY TO PERFORM USEFUL WORK AND LIVE AT HOME IN THE COMMUNITY. SPECIAL EDUCATORS REFER TO THIS GROUP AS TRAINABLES. THE THIRD IS THE "MARGINALLY INDEPENDENT" GROUP WHO REPRESENT 25 PER THOUSAND IN THE GENERAL POPULATION. THESE ARE THE EDUCABLES WHICH IS BY FAR THE LARGEST GROUP AND MANY OF THEM EVENTUALLY BECOME EITHER COMPLETELY OR PARTIALLY SELF SUPPORTING.

SPECIAL EDUCATORS AND REHABILITATION SPECIALISTS WHO HAVE BEEN WORKING WITH THESE GROUPS RECOGNIZE CERTAIN FACTORS WHICH CAN BE DETERMINED WITH REASONABLE CERTAINTY. AS A GENERAL RULE, THE TRAINABLE DOES NOT VOCATIONALLY SURVIVE IN

COMPETITIVE EMPLOYMENT. THERE ARE A FEW EXCEPTIONS SUCH AS WORKING FOR A RELATIVE. A SUBSTANTIAL PORTION OF THE EDUCABLE RETARDED SCHOOL POPULATION EXHIBITING SUCH CHARACTERISTICS AS SOCIAL IMMATURITY, EMOTIONAL MALADJUSTMENT, LIMITED ATTENTION SPAN, AND POOR COORDINATION ARE NOT ELIGIBLE FOR COMMUNITY JOB STATIONS DUE TO INABILITY TO PERFORM AT A SUFFICIENT LEVEL. IN SHORT, THERE ARE SEGMENTS OF OUR RETARDED SCHOOL POPULATION WHO NEED VOCATIONAL TRAINING NOT BEING PROVIDED WITHIN THE STRUCTURE OF PRESENT WORK STUDY PROGRAMS ON THE SECONDARY LEVEL. MANY STATES HAVE MANDATORY LEGISLATION REQUIRING LOCAL SCHOOL BOARDS TO PROVIDE A PROGRAM FOR THESE STUDENTS UNTIL THEY REACH TWENTY-ONE YEARS OF AGE. ONLY IF SPECIAL EDUCATION IS TO BE EQUATED WITH A PROFESSIONAL FORM OF BABYSITTING WOULD THE TEACHER BE JUSTIFIED IN PRESENTING A "WATERED DOWN" CURRICULUM, MEANING AN ELEMENTARY CURRICULUM AT A REDUCED LEVEL; SUCH A CURRICULUM IS GUIDED BY UNREALISTIC GOALS AND IMPLEMENTED WITH KNOWLEDGE THE RETARDATE WILL NEVER USE. RECOGNIZING THAT DIRECT EXPERIENCE WHICH PRECEDES RECORDED HISTORY AND PROVIDES THE FOUNDATION FOR BASIC EDUCATION IS THE MOST EFFECTIVE PATH TO LEARNING FOR THESE STUDENTS, CURRICULUM MUST BE REVISED TO PROVIDE THESE STUDENTS WITH THE OPPORTUNITY FOR VOCATIONAL TRAINING, NAMELY, TEAM WORK EXPERIENCE.

TEAM WORK EXPERIENCE FURNISHES GROUPS OF MENTALLY RETARDED STUDENTS WITH SUPERVISED WORK IN A VARIETY OF COMMUNITY SETTINGS. A VOCATIONAL INSTRUCTOR IS RESPONSIBLE FOR THE SUPERVISION AND TRAINING OF THE WORK CREWS AT THE JOB STATIONS. STUDENTS SPEND HALF THE DAY WITH THE SPECIAL EDUCATION TEACHER FOLLOWING A VOCATIONALLY ORIENTED CURRICULUM AND ARE ASSIGNED TO GROUPS OF FIVE FOR SUPERVISED WORK EXPERIENCE. IT IS NOT EXPECTED THAT THE VOCATIONAL INSTRUCTOR SHOULD BE CERTIFIED IN SPECIAL EDUCATION; COMMON SENSE AND THE

ABILITY TO COMMUNICATE WITH THE RETARDED ARE SUFFICIENT.

IN JANUARY 1970, THE MANCHESTER (CONN.) BOARD OF EDUCATION RECEIVED AN ALLOCATION UNDER THE 1968 AMENDMENTS TO THE VOCATIONAL EDUCATION ACT OF 1963 DESIGNATED TO PROVIDE VOCATIONAL EDUCATION TO THE HANDICAPPED. AN OCCUPATIONAL INSTRUCTOR WHO IS A GRADUATE STUDENT IN THE SCHOOL OF REHABILITATION HAS BEEN HIRED ON A PART TIME BASIS. STUDENTS ARE LEARNING TO WASH CARS AT A LOCAL SERVICE STATION, SHOVEL SNOW FOR PRIVATE HOMEOWNERS, WASH WINDOWS AT A LOCAL CONVALESCENT HOME AND CARE FOR LAWNS. THE VOCATIONAL INSTRUCTOR, SPECIAL EDUCATION TEACHERS AND SUPERVISOR HOLD PERIODIC MEETINGS IN ORDER TO DISCUSS THE PROGRESS OF THE PARTICIPATING STUDENTS AND DETERMINE HOW THE SCHOOL CURRICULUM CAN BE ENRICHED TO MEET THE VOCATIONAL NEEDS OF THIS GROUP.

A COMMUNITY WORK STATION HAS ALSO BEEN ESTABLISHED AT THE MANCHESTER SENIOR CITIZEN CENTER WHERE AN INSTRUCTOR HAS BEEN HIRED TWO DAYS A WEEK TO PROVIDE A FOOD SERVICE TRAINING PROGRAM. THE STUDENTS HAVE BEEN LEARNING ABOUT THE CARE AND MAINTENANCE OF EQUIPMENT, SAFETY, PREPARATION OF SANDWICHES AND THE CORRECT WAY OF SERVING. AN OUTCOME OF THIS PROJECT IS A LOW COST LUNCHEON EVERY MONDAY FOR THE SENIOR CITIZENS. A TYPICAL MENU INCLUDES AN EGG SALAD SANDWICH, BEVERAGE AND FRUIT CUP FOR FORTY CENTS. THERE HAS BEEN A VERY ENTHUSIASTIC RESPONSE AND THE SENIOR CITIZENS ARE PETITIONING FOR DAILY SERVICE.

THE INSTRUCTOR HAS ESTABLISHED A TRAINING PROGRAM WITH THREE MAJOR OBJECTIVES; 1. DEVELOPMENT OF MARKETABLE SKILLS IN FOOD SERVICE 2. ENCOURAGE PROPER ATTITUDES TOWARD WORK 3. DEVELOP DESIRABLE SOCIAL SKILLS WITHIN A REALISTIC WORK SETTING. IF A STUDENT SETS A TABLE INCORRECTLY, THERE IS SUFFICIENT TIME FOR THE SUPERVISOR TO EXPLAIN IT AGAIN AND REQUIRE THEY DO IT RIGHT.

ONE OF THE BASIC FAILURES OF MANY APPRENTICE PROGRAMS IS THE LACK OF SUPERVISORY

TIME GIVEN TO TEACH A SKILL TO A RETARDATE. FOR EXAMPLE, A TRAINEE MIGHT BE SHOWN HOW TO OPERATE A DISHWASHER ONCE, AND IS THEN ON HIS OWN INADEQUATE RESOURCES. IN THE TEAM WORK APPROACH THEY LEARN THEIR JOBS TO THE POINT WHERE THEIR SUCCESS IF ALMOST GUARANTEED. WHILE NO ONE EXPECTS THAT EVERY STUDENT WILL DEVELOP SKILLS TO THE POINT OF COMPLETE COMPETITIVE EMPLOYMENT IN THE COMMUNITY, THEY ALL DEVELOP A GREAT DEAL OF SELF RELIANCE.

AN EXAMINATION OF THE LITERATURE INDICATES THAT THE CREW APPROACH HAS BEEN SUCCESSFUL IN A VARIETY OF PLACES AND SETTINGS. WHILE AUTOMATION AND THE INCREASING COMPLEXITIES OF INDUSTRIAL SOCIETY ARE RAPIDLY ELIMINATING SOME OF THE TRADITIONAL JOB SOURCES FOR THE RETARDED, IT IS ENCOURAGING TO NOTE THE DEVELOPMENT OF NEW TECHNIQUES. FOR EXAMPLE, THE U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE HAS FINANCED A RESEARCH AND DEMONSTRATION PROJECT UTILIZING THE "TEAM APPROACH" IN THE KFAR NACHMAN INSTITUTION NEAR TEL AVIV, ISRAEL. THIS PROJECT HAS HOPEFUL IMPLICATIONS FOR THOUSANDS OF SEVERELY RETARDED ADOLESCENTS INSTITUTIONALIZED THROUGHOUT THE WORLD. THESE RETARDATES RANGING IN AGE FROM 17 TO 22 AND MENTAL AGES OF 6 OR LESS WOULD PROBABLY SPEND THEIR LIVES IN CLOSED RESIDENTIAL FACILITIES. DR. CHIGIER, PEDIATRICIAN AND PROJECT DIRECTOR, ASKS THE FOLLOWING QUESTION: IS THE INSTITUTION TO BE A PLACE OF CUSTODY FOR THEM - AT WORST, A PRISON, AT BEST A CONVALESCENT HOME - OR CAN THE INSTITUTION PROVIDE A MEANINGFUL EXISTENCE? A GROUP OF ADULTS, HITHERTO CONSIDERED "HOPELESS CASES", HAVE BEEN TRAINED IN WEEDING, HOEING, PRUNING AND FRUIT PICKING. THEY WORK AS A SUPERVISED GROUP IN CITRUS GROVES AND ARE PAID FOR THEIR PRODUCTIVITY. FOR HUMAN BEINGS ON THE FRING OF SICIETY WHO FOR GENERATIONS HAVE BEEN CONDEMNED TO MONTHS AND YEARS OF IDLENESS, THE OPPORTUNITY TO ENRICH THEIR LIVES PHYSICALLY AND MENTALLY BY BEING PRODUCTIVE IS A BEACON OF LIGHT.

THE SAN JUAN UNIFIED SCHOOL DISTRICT IN SACRAMENTO, CALIFORNIA IS USING GROUPS OF TRAINABLE STUDENTS AS A CLEANUP CREW AT A PUBLIC RECREATION AREA, DITCH CLEANING, WEED PULLING, BRUSH REMOVAL AND FOR NUMEROUS GARDENING JOBS. IN CHICAGO, TWO TEACHERS AND A GROUP OF RETARDATES OPERATE A PET SHOP.

IN OUR SOCIETY, MONEY IS THE BASIC INCENTIVE FOR MOTIVATING PRODUCTIVITY. IN REGULAR HIGH SCHOOL WORK STUDY PROGRAMS FOR THE RETARDED AND SHELTERED WORKSHOPS, THIS SAME INCENTIVE HAS BEEN USED SUCCESSFULLY. WHILE THE PRIMARY EMPHASIS OF TEAM WORK EXPERIENCE HAS BEEN ON TRAINING IN OCCUPATIONAL SKILLS, IT IS RECOGNIZED THAT THE MODERATELY RETARDED ARE ENTITLED TO A MONETARY REWARD FOR THEIR ECONOMIC PRODUCT. THIS IS AN ADULT ROLE WHICH THEY CAN ATTAIN. IT IS IMPROBABLE THAT THEY WILL EVER ASSUME OTHER ADULT ROLES SUCH AS FATHER, HOMEBUILDER OR AUTOMOBILE OWNER.

THE VOCATIONAL INSTRUCTORS HAVE MADE SOME INTERESTING OBSERVATIONS IN RELATION TO REMUNERATIVE WORK AS AN INCENTIVE. RECEIVING MONEY FOR WASHING CARS, SHOVELLING SNOW AND FOOD SERVICE TRAINING WAS IMPORTANT FOR MEMBERS OF THE TEAM; THE ACTUAL AMOUNTS DID NOT MAKE TOO MUCH DIFFERENCE. PIECE RATES HELP THE STUDENTS TO SEE THE RELATIONSHIP AMONG EFFORT, PRODUCTION AND PAY. WHILE CANDY, FREE MEALS AND TRADING STAMPS HAVE BEEN USED AS REWARDS, THE FINANCIAL INCENTIVE WITHOUT DOUBT WAS THE MOST EFFECTIVE.

CAN A COMPLEX INDUSTRIALIZED SOCIETY IN WHICH INEFFICIENCY, WASTE AND MARGINAL PRODUCTIVITY ARE NEGATIVE FACTORS MAKE PROVISION FOR TEAM WORK EXPERIENCE? SUPERVISED WORK IN THE COMMUNITY IS SIMILAR TO THE SHELTERED WORKSHOP FOR "TERMINAL CLIENTS", BOTH PROJECTS INVARIABLY OPERATE AT A FINANCIAL LOSS. DR. MAX DUBROW, DIRECTOR OF THE NEW YORK ARC WORKSHOP, JUSTIFIES THE HABILITATION PHILOSOPHY OF HELPING THE RETARDATE IN OUR ECONOMY TO ACHIEVE HIS HIGHEST LEVEL OF FUNCTIONING IN THE FOLLOWING

81

TERMS:

> If there are values of dignity, worth, and self-respect inherent in work per se, these values should apply to sheltered as well as to competitive employment. The absolute amounts of productivity or earnings are not necessarily the only or even the major criterion which determine these values. A client whose best efforts yield only a modest wage can be as proud of his achievements as another client who earns considerably more but operates at much less than his optimum potential. We have to guard against a tendency to equate meaning of work with wages earned.

THE UNITED STATES DEPARTMENT OF LABOR HAS GIVEN OFFICIAL STATUS TO THE MARGINAL PRODUCTIVITY OF THE MODERATELY AND SEVERELY MENTALLY RETARDED. REHABILITATION FACILITIES CAN RECEIVE WORK ACTIVITY CENTER PERMITS REQUIRING NO MINIMUM WAGE BECAUSE OF THE "INCONSEQUENTIAL PRODUCT AND THERAPEUTIC NATURE" OF THE PROGRAMS FOR THESE CLIENTS. TRADITIONALLY, VOCATIONAL REHABILITATION SERVICES HAVE CONCENTRATED ON THE MORE ABLE MENTALLY RETARDED WHO HAVE THE POTENTIAL FOR GAINFUL EMPLOYMENT. IN ORDER TO BE REALISTIC, SERVICES FOR THE LESS ABLE SHOULD FOCUS ON THE REHABILITATION GOAL OF LIVING MORE INDEPENDENTLY IN THE COMMUNITY, RATHER THAN VOCATIONAL PLACEMENT. LEGISLATION WAS PROPOSED IN CONGRESS IN 1957, 1959 AND 1961 TO AMEND THE FEDERAL VOCATIONAL REHABILITATION ACT OF 1954 PROVIDING SERIOUSLY HANDICAPPED ADULTS WITH APPROPRIATE REHABILITATION SERVICES WHICH WOULD ENABLE THEM TO "ACHIEVE SUCH ABILITY OF INDEPENDENT LIVING AS TO ELIMINATE OR SUBSTANTIALLY REDUCE THE BURDEN OF THEIR CARE." IN SPITE OF THE FACT THAT THIS PROPOSED INDEPENDENT LIVING REHABILITATION LEGISLATION HAS BEEN REJECTED BY CONGRESS, THERE ARE INDICATIONS THAT SIMILAR PROPOSALS WILL EVENTUALLY BE PASSED IN THE FORTHCOMING DECADE. THE MODERATELY AND SEVERELY RETARDED DESERVE A SHARE OF THE GREAT SOCIETY.

THERE ARE SIX DISTINCT ADVANTAGES TO THE TEAM APPROACH.

1. THE INSTRUCTOR WORKS WITH A GROUP OF FIVE RETARDATES ON A JOB AND IS ABLE TO PROVIDE INDIVIDUALIZED INSTRUCTION FOR EACH MEMBER.
2. TEAM MEMBERS HAVE THE OPPORTUNITY TO COMPETE WITH INDIVIDUALS IN THEIR OWN ABILITY RANGE WHICH ENCOURAGES EACH MEMBER TO WORK HIS HARDEST. THEY DO NOT BECOME DISCOURAGED BY THE NECESSITY OF COMPETING WITH SO CALLED NORMAL INDIVIDUALS.
3. TEAM WORK PROVIDES SOCIAL EXPERIENCES IN A COMMUNITY SETTING ALLOWING THE PARTICIPATING MEMBERS TO WORK TOGETHER IN HARMONY.
4. THE TEAM APPROACH PROVIDES SOME OF THE MEMBERS WITH THE WORK SKILLS WHICH EVENTUALLY MIGHT LEAD TO COMPETITIVE EMPLOYMENT. THE LESS ABLE RETARDATE WHO CAN MAKE A VERY LIMITED CONTRIBUTION TO THE TOTAL EFFORT OF THE TEAM CAN STILL BE INCLUDED.
5. TEAMS CAN BECOME PROFICIENT BY CONSTANT REPETITION OF THE SAME JOB. I.E. WASHING CARS. THEY CAN DO MORE WORK AND EARN MORE MONEY.

THERE ARE MANY POSSIBILITIES FOR THE TEAM WORK EXPERIENCE CONCEPT DURING THE COMING DECADE. A GREAT DEAL WILL DEPEND ON THE INITIATIVE AND CREATIVITY OF THE PROGRAM ADMINISTRATORS. TEAMS COULD BE USED TO DO THE DOMESTIC WORK FOR HOMEOWNERS, CLEAN UP PARKS AND PUBLIC RECREATION AREAS, AND OPERATE A "PET WALKING" SERVICE.

THE PRIMARY GOAL OF T.W.E.* WILL ALWAYS BE TO HELP THE MENTALLY RETARDED ADJUST TO INDEPENDENT LIVING. THERE APPEARS TO BE GENERAL AGREEMENT AMONG THE SPECIALISTS THAT THIS IS BEST CARRIED OUT IN A WORK ORIENTED PROGRAM GIVING THE INDIVIDUAL A FEELING OF PRODUCTIVITY AND VALUES CONFORMING TO THE CULTURAL NORMS. SINCE AMERICANS HAVE ALWAYS ADMIRED THE "TEAM SPIRIT" OF THE ATHLETIC FIELD, THERE IS REASON TO BELIEVE THAT TEAM WORK EXPERIENCE WILL BE ACCEPTED WITH EQUAL ENTHUSIASM.

*TEAM WORK EXPERIENCE

REFERENCES

DUBROW, MAX "PATTERNS OF PROGRAMMING" PAPER PRESENTED AT CONFERENCE MANNS CHOICE, PA., MAY 25, 1961.

FENDELL, NORMAN "ISRAEL'S ETERNAL CHILDREN", DIGEST OF THE MENTALLY RETARDED. FALL, 1969, VOL.VI - NO. 1.

HANSEN, CARL "THE WORK CREW APPROACH TO JOB PLACEMENT FOR THE SEVERELY RETARDED", JOURNAL OF REHABILITATION. MAY, 1969.

WEINGOLD, JOSEPH T. "THE PLACE OF THE COMMUNITY IN THE VOCATIONAL REHABILITATION OF THE MENTALLY RETARDED SECONDARY STUDENT", LECTURE AT SYRACUSE UNIVERSITY, MAY 15, 1963.