PROPOSED GUIDELINES FOR AN INDUSTRIAL ARTS PROGRAM

FOR THE MENTALLY RETARDED IN

PUBLIC SCHOOL SYSTEMS

APPROVED:

[Signatures]

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Minor Professor

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The problem was concerned with determining what skills were necessary for the employment of the mentally retarded and what guidelines may be used in developing these skills in the secondary level industrial arts program. Data were collected from literature in the field, interviews with placement officers for the mentally retarded, and through the utilization of a checklist instrument sent to firms in the Dallas, Texas area employing the mentally retarded.

The study developed guidelines which should prove useful to an industrial arts instructor having mentally retarded students in his classroom. The guidelines were based upon the results of an industrial survey and available literature.

Chapter I presents the problem and its significance and limitations, reviews background literature and related studies, presents basic assumptions and defines terms used throughout the study. Figures are presented that indicate that approximately 87 per cent of the presumed mentally retarded persons in Texas are not being rendered specialized services, therefore this study assumes them to be either over age or under public school jurisdiction.
Chapter II of the study presents a rationale based upon literature. Opinions and statements of individuals prominent in the field as well as state education policies and laws are presented. The literature presented indicate that there is a definite need for guidelines suitable for use with the mentally retarded in the public school systems.

The development of the instrument, its application and the data collected is presented in Chapter III. Chapter IV reviews the data and attempts to apply it to classroom situations. Guidelines that should be applicable to these situations are developed. The guidelines are based upon the data received from the instrument survey and are basically suitable for use with any student. Usage of the guidelines with the mentally retarded would require that they be heavily emphasized.

Chapter V summarizes the study and presents the findings, conclusions, and recommendations. Generally, the study found that the mentally retarded were employed in unskilled jobs, needed only basic skills training, were hired because they were capable of their duties, and were paid the same wages accorded normal employees in the same job capacity. Most employers did their own training in specifics and rated both their employment programs for the mentally retarded and their mentally retarded employees as good, satisfactory or better. The study also found that IQ scores were not used for employment purposes for the mentally retarded, that communication
skills and safety knowledge were desirable for employment, and that over one-half of the employed mentally retarded had to deal with the public while performing their duties.

The study concludes that the mentally retarded need social and basic skills before employment, that they should have training in safety, communication skills, proper work habits, and dealing with the public. It is also concluded that the guidelines presented were basic to the instruction of all students.

Recommendations are made as follows: the secondary schools should offer basic skills training to the mentally retarded students, should develop practical communications courses for them, and should design other specific course materials for the mentally retarded. It is also recommended that similar studies be carried out in other metropolitan and rural areas.
PROPOSED GUIDELINES FOR AN INDUSTRIAL ARTS PROGRAM
FOR THE MENTALLY RETARDED IN
PUBLIC SCHOOL SYSTEMS

THESIS

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Ronald T. Page, B. S.
Denton, Texas
December, 1971
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Mental retardation has plagued mankind in some form and to some degree since the earliest recorded history. At various times it has been attributed to evil spirits, the devil, bad blood, sinfulness, and any number of other extraneous and intraneous causes. Until recently in the calendar of man's existence the mentally retarded person has been shut out from any form of help, even to the extent of being physically barred from association with "normal" persons. At the turn of the twentieth century man was still locking up the mentally retarded and mentally ill in institutions primarily designed to exclude rather than help.

During the 1960's, however, the problem of mental retardation came under national scrutiny (13, p. 15a). Efforts by the states resulted in programs and special schools designed specifically to enrich and aid the mentally retarded in securing skills that would eventually enable a percentage of them to attain a semblance of normal life, completely or partially independent of these schools. These special schools can handle only a small percentage of the mentally retarded persons in any state's population, and the mentally retarded able to get into one of these schools are usually in the middle to lower levels of mental retardation. Those mentally
retarded persons who are not obviously mentally retarded or are perceived only as "slow learners" are usually still at the mercy of the average school system where help may or may not be obtained.

Statement of the Problem

The problem in this study was to determine what skills were necessary for the employment of the mentally retarded and what guidelines may be used in developing these skills in the secondary level industrial arts program. This study developed and proposed these guidelines. The guidelines are not for a special education program but rather lend themselves to the average industrial arts program. They are based on the results of an instrument sent to Dallas area industries employing the mentally retarded. Answers to the following questions were sought with the instrument.

1. What job opportunities in industry are open to the educable mentally retarded?
2. What training is necessary for these individuals before being employed in industry?
3. What is the nature of the work done by these individuals?
4. Is training presently offered by the employer for these positions?
5. What wages can be expected by the mentally retarded employee?
Background and Significance of the Study

A program of special education for the exceptional child was begun in 1945 in Texas; it was revised in 1965 and again in 1970. In the foreword of the 1970 revision J. W. Edgar, Texas Commissioner of Education, stated that "Texas schools are committed to the principle of education for all children, regardless of variance in abilities" (17, p. iii).

In 1966, the Governor's Advisory Committee on Mental Retardation Planning reported that the Texas public schools were providing special classes for 24,602 educable mentally retarded children and for 2,634 trainable mentally retarded children. The state schools for the mentally retarded housed an additional 11,500 and several hundred more were in private facilities. Thus an estimated total of around 41,000 retarded persons were identified as receiving services in Texas. The presumed population of mentally retarded in Texas, based on a one in thirty-three ratio or three per cent of the population, was nearly 307,000. This left a balance of about 266,000 Texas citizens presumed to be retarded to some degree but probably undiagnosed and untouched by organized services. This figure has and is growing at the rate of 7,200 retarded persons per year (18, p. 2). Clearly, there is a definite need to identify and educate these less fortunate persons. The industrial arts classroom can play a major role in their education, giving them basic training in skills necessary for certain industrial employment.
Limitations of the Study

For the purposes of this study the following limitations were utilized:

1. This study was a survey of those industries which presently employ the mentally retarded in the Dallas area.
2. This study was limited to a survey of only those employers whose names were provided by employment agencies and placement officers for the mentally retarded.
3. This study proposes general guidelines that may be adaptable to schools not having special industrial arts classes for these students.
4. The guidelines were based on the results of the industrial survey and available literature in the field.
5. The proposed guidelines were made applicable to the secondary level industrial arts program.
6. The survey endeavored to include all employment possibilities in the industrial areas as defined in this study.

Definition of Terms

In the course of this study several terms need to be identified.

Average high school pertains to any high school not having special industrial arts programs set aside for those students with learning difficulties.

Basic skills, as used in this study, refers to very simple usage of hand tools requiring some degree of hand-eye coordination.
Educaable mentally retarded or EMR are those persons with IQ's somewhere between 50 and 75 (12, p. 29), or are students who reveal a reduced rate of intellectual development and a mental capacity and level of academic achievement below that of their peer age group (17, p. 14).

Exceptional children refers to the physically handicapped, mentally retarded, emotionally disturbed, and pregnant girls under care of licensed maternity homes (16, p. 170).

Industrial arts program is that phase of the public school curriculum dealing with the tools, skills, materials, and processes of industry.

Industrial employment refers to employment in any position or capacity in the below defined industry.

Industry refers to any organization providing goods and/or services directly or indirectly to the community and employing members of the community to do so.

IQ, as used in this study, is the abbreviation for intelligence quotient.

Mentally retarded children includes any child whose mental condition is such that he cannot be adequately educated in the regular classes of the public schools without the provision of special services (16, p. 170).

MR, as used in this study, is the abbreviation for mentally retarded.

MRE, as used in this study, is the abbreviation for mentally retarded employee.
Slow learners are individuals whose intelligence is below average but above that of the EMR. Their IQ ranges from 70 to 90, and their academic progress is usually retarded (5, p. 41).

Special classes or programs pertain to those classes set up especially for a specific group of individuals because of some common trait, condition, mental ability, or other characteristic.

Special services are special teaching in the public school curriculum within and/or without the regular classroom (16, p. 172).

Review of Related Studies

Much has been done in the area of mental retardation in the past. Only in the previous ten years has dealing with retardation using special rehabilitation programs really come into focus (13, p. 15a). Federal and state programs have concentrated much attention in this area and as a result interest has transferred to individuals involved in research. Several graduate studies have been written dealing with various relationships between retardation and industrial arts. These may be grouped into three general classifications.

Attitudes and Motivation

In 1967, Glismann conducted a study at Utah State University in which he attempted to develop special courses in arts and crafts that would change the slow learning ninth
grader's attitudes toward school and attempted to determine the effect of his programs on student motivation. The study failed to achieve significant changes in either case (9). In a master's thesis at North Texas State University in 1948, Duffle compared the mentally retarded child with the normal child in classroom adjustments and theorized that more individualized instruction was needed for the mentally retarded (7).

Curriculum Value

Jageman's study in Colorado in 1968 endeavored to determine the value of industrial arts for the EMR. The experimental group showed no significant growth in any of the areas studied (12). Burris hypothesized that a group of MR's receiving training in special education-vocational rehabilitation programs in Mississippi would be more successful than a similar group without this training. He found that there were observable differences but not statistically significant differences (2).

In a study at Texas A&M in 1970, Drennan determined that the ratings of MR workers who participated in a course of industrial education were better than those of MR workers who did not have the course. He found that the course was most beneficial to those MR's who were placed in positions where cautiousness and safety were necessary and in positions where the MR was working in direct relationship with others (6).
In a master's thesis at North Texas State University in 1947, Duncan dealt with the exceptional child and compared course offerings for these students in the public schools of Texas to comparable courses at North Texas State University beneficial to teachers of these children (8). Later, Moore surveyed 154 administrators in 30 states for opinions on how much practical arts should be included in the programs of mentally retarded youth. He reported that the thirteen- to fifteen-year-olds should spend one-third of their time in practical arts and the sixteen-and-over group should spend one-half of their time in practical arts (14).

Heggen studied the aptitudes and achievements of students at the Utah State Industrial School to establish patterns to serve as guidelines in the formation of a vocational education curriculum. He recommended a general vocational curriculum with stress on vocational guidance and a well defined work experience program (10).

In 1968, Benjamin conducted a study to determine whether there were any differences in the job successes experienced by students of three different ability groups graduating from work study programs in New York and whether there was any differentiation in curriculum for these three groups. Generally, his study indicated that the higher level group was employed more quickly, for longer periods of time, and for higher wages than the two lower ability groups (1).
Three studies were used in more depth in this study and are referred to in Chapter IV. These are the works of Scanlon (15), Cocks (4), and Byram (3). Each of these dealt with specific course offerings to the mentally retarded in specific schools or communities in the United States.

One study pertained to teacher training. In 1969, Wentz compared the practices of industrial arts teachers in programs for EMR youth with those of special education teachers who taught some phase of industrial arts. In the study he researched the experiences and background training of those teachers and determined the tools and equipment which were used in the programs at that time (20).

Basic Assumptions

For the purposes of this study the following assumptions were made.

1. There are many undiagnosed mentally retarded persons in the public school systems who are capable of learning to some degree.

2. Industries employ the mentally retarded in certain job capacities and will continue to do so in the future.

Source of Data and Information

Data for this study were obtained from the following sources.

1. Background data came from books, periodicals, newspapers, bulletins, reports, and government documents.
2. A list of industries employing the mentally retarded was compiled from employment agencies and from directors of placement for the mentally retarded.

3. A checklist instrument was developed to survey those industries pertaining to the jobs which were being held by the mentally retarded and which skills were considered necessary for employment.

4. Personal interviews were arranged with placement officers and vocational school counselors.

5. Previous research in the field was utilized where applicable.

6. A tour was made of a sheltered workshop and training center where the MR were given employment without job competition.

Procedure of the Study

The following procedures were used in seeking answers to the questions indicated in the statement of the problem.

An instrument was developed and adapted from an employer's rating scale used by Warren (19). This instrument was sent to thirty-nine firms which employed the mentally retarded. The names of these firms were obtained from agencies dealing with the employment of the mentally retarded.

Data returned by these firms were compiled and converted into percentages where practical. The data were analyzed and applied to classroom situations. Guidelines were formulated
based upon these data. Conclusions and recommendations drawn were based upon the data and the guidelines which were established.


8. Duncan, David W., "To Determine if There is a Need of Industrial Arts Teachers for Special Education for Exceptional Children in the Public Schools of Texas," unpublished master's thesis, North Texas State University, Denton, Texas, August, 1947.


13. McConal, John, five-part article on mental retardation, Fort Worth Star Telegram, April 5, through April 9, 1970, 15a, 4a, 9a, 13a, and 6c.


18. The Texas Plan to Combat Mental Retardation, Governor's Advisory Committee on Mental Retardation Planning, Austin, Texas, June, 1966.

20. Wentz, Charles H., "A Study Of Industrial Arts Activities For Educable Mentally Retarded Junior High School Youth With Implications For Guidelines In Special Industrial Arts Activities," unpublished doctoral dissertation, Texas A&M University, College Station, Texas, 1969.
CHAPTER II

A RATIONALE OF THE STUDY BASED UPON LITERATURE

Employment of the mentally retarded in Texas is rising. Due to concerted efforts by rehabilitation centers such as the Texas Rehabilitation Commission and the Texas Association for Retarded Children, persons with marked learning difficulties now have employment opportunities which would have seemed impossible a few years ago. Employers are waking to the realization that the mentally retarded are a source of production and service which have been too long ignored.

In an industrial world there are a great many simple, routine, repetitive but necessary duties that need to be constantly performed. Normal people become too bored and are unchallenged by these jobs. However, they may be successfully accomplished by the EMR personnel available. If properly placed the EMR could possibly eliminate labor turnover resulting from job boredom (8, p. 328). According to DiMichael, "... the mentally retarded have wide job potentialities even though they work in unskilled and semi-skilled occupations" (3, p. 335). Cohen and C. Williams delimited the employment possibilities even further by stating that, "positions held by mental defectives are more likely to be of an unskilled type, rather than skilled or
"semiskilled" (2, p. 235). An opposite view was taken by D. Williams, On-The-Job Training Coordinator for the National Association for Retarded Children. He believed that MR's were not challenged enough, and that the mild to moderately retarded could function in positions of much greater responsibility and complexity (15). Terman stated that:

> A large proportion of the tasks in the modern organization of industry can be performed by individuals of the 70 and 75 IQ class as well as by those of superior intelligence, and with more satisfaction in the performance (10, p. 507).

Certainly these views reflect the fact that the MRE's are of great value to society.

In the modern community there exists the pressing need to educate the mentally retarded. Texas Senate Bill 112, as interpreted by the Texas Education Agency, defines the mentally retarded child as any child whose mental condition is such that he cannot be adequately educated in the regular classes of the public schools without the provision of special services (11, p. 170). Senate Bill 230, as interpreted by the Texas Education Agency, defines special services as "special teaching in the public school curriculum within and/or without the regular classroom" (11, p. 172). Present Texas law provides for a school district to establish classes for the MR when a sufficient number of eligible children live in that district (13, p. 38). This leaves out the smaller and more sparsely populated districts. Yet the compulsory attendance law requires that these people attend school. Ebling stated that:
To require school attendance for this type child without making such provisions for his education not only negates the philosophy of American education but in many cases aggravates the problem rather than helps to solve it (4, p. 536).

The State Plan for Special Education contained the following excerpt:

It is the intent of the State Board of Education that all local school districts operating approved special education programs for exceptional children under the Minimum Foundation Schools Program Act shall provide comprehensive special education programs and services for handicapped pupils between the ages of three and twenty-one years, exclusive, by the school year starting September 1, 1976 (12, p. 29).

According to Senate Bill Number 112, the term "exceptional children" referred to the mentally retarded as well as the physically handicapped, emotionally disturbed, and pregnant girls under care of licensed maternity homes (11, p. 170). Until the school year of 1976-77, and until such time that all school districts diagnose and offer special services for their MR students, there seems to be a need for a set of guidelines developed that may be of aid to teachers who have MR's and suspected MR's in their classrooms.

In developing a training program for the EMR, the following aspects should be considered: 1) determination of vocational skills required, 2) determination of personal traits and characteristics necessary for job success, and 3) the establishment of logical steps to train for these skills and characteristics (2, p. 230). Ebling stated that "the principle goal of any community program for the educable
mentally handicapped is eventual self-sufficiency" (4, p. 537). Self-sufficiency is not only the MR's gain but the taxpayers as well. It requires $100,000 in taxes to support one MR during his lifetime (7, p. 15a). Kolstoe stated that:

> It seems apparent that an effort to instruct the individual in the use of hand tools, in tasks of assembly, sorting for speed and accuracy, and persistence, should be built into the program especially at a junior high school or high school level (6, p. 481).

As a dual benefit Sharkey and Porter stated that "A carefully planned program of industrial arts for the slow learners would, in all likelihood, serve the educable mentally handicapped just as well" (9, p. 22). This coincides with Williams' (15) opinion that the MR needs to be challenged more.

Kolstoe expressed further that:

> In training experience, whether in a workshop or in school, it would seem to be important for each individual to be introduced to a variety of jobs where he might work as an apprentice in order that he may be acquainted with the many different kinds of jobs which he may be able to do as well as exposure to some jobs which he definitely cannot handle (6, p. 481).

The literature studied did not indicate that specific training is necessary, nor even desirable. Keys and Nathan (5) indicated that the more specific the training, the more limited the market for employment after training, and the faster that market is depleted. Certainly this thought can be easily incorporated into an industrial arts program where
general training can be easily accomplished. A statement from Cohen and C. Williams follows:

... a general background of experience with basic tools, machine operations and materials aid youth in adapting to job situations, therefore it is evident that a vocational training program for the mentally retarded should reflect the point that specific job skill training is not required (2, p. 234).

Current industrial practices did not indicate that specific skill training was necessary for unskilled and semi-skilled jobs (2, p. 234). However, in the U.S. Department of Labor's Occupational Outlook Handbook the following excerpt refers to the semi-skilled positions which might be filled by the mentally retarded.

Many of these workers use a variety of hand tools, such as screwdrivers, pliers, files, soldering irons, measuring devices, and cutting tools. Many of these workers also make elementary adjustments and do minor maintenance work on the machines they operate. Some are required to keep simple records of their work (14, p. 350).

The mentally retarded may frequently be employed where knowledge of tools is required and identification and proper use of a large variety of tools were believed to be extremely important (2, p. 233). Certainly this knowledge is not identified as specific skills and certainly this same knowledge could be taught in a junior and senior high school industrial arts program.

In a survey by Kolstoe, employers stressed the importance of a cooperative and cheerful attitude in those employed; "... the schools should make a concerted effort to teach
each mentally retarded child the value of cooperative and coordinated experiences in socializing activities with other children" (6, p. 481). Again quoting Cohen and C. Williams; "Personality and emotional adjustment are more related to job success than are slight differences in intelligence" (2, p. 235). Cohen further stated that "programs should re-emphasize the potential of the retarded, particularly for the many kinds of jobs which a high degree of literacy or other educational attainments are not requisite" (1, p. 712).

In summary, Chapter II presented the ideas of prominent individuals in the field of training and employment of the mentally retarded. These ideas emphasize that there is a definite place for the mentally retarded in today's industrial society. The views of state agencies and its governing bodies have been presented as a judicial element for this rationale. The laws presented concerning the MR in the public schools definitely indicate a need for methods of educating the MR in the classroom until special classes are set up. The literature presented definitely indicated that specific skills were not necessary. Instead, basic overall exposure and training in the identification and use of common tools and materials were desirable. Basic abilities such as hand-eye coordination, accuracy of work, and persistence were emphasized. Personal attitudes were presented as being very important -- cooperation, cheerfulness, and emotional stability were pointed out.
The industrial arts program in a secondary school could not expect to accomplish definite gains in all of these areas. However, with guidelines to follow, the industrial arts program has the potential of achieving good all-around gains in these areas. It could do more for MR students in some areas, such as those pertaining to actual job performance, than has been done for them in the public schools at any time in the past. A work-training and employment program is out of the realm of the public schools without special services, but there are definite steps that can be taken while waiting on these special programs. Industrial arts is in a position to take those steps.


7. McConal, John, five part article on mental retardation, Fort Worth Star Telegram, beginning April 5, 1970.


CHAPTER III

A STUDY OF THE EMPLOYMENT REQUIREMENTS FOR THE MENTALLY RETARDED

Chapter I set forth questions which sought information concerning the requirements for the employment of mentally retarded individuals. Answers for those questions were sought through the use of a questionnaire.

Development of the Instrument

The instrument was based upon an employer's rating scale used by Warren in his comparison of employed and unemployed mentally retarded males (1). Adaptations were made to suit the intent of this study.

The instrument was divided into five parts. The first part, "General Information," dealt with testing and training of all employees. Part two, "General Information Dealing With Mentally Retarded Employees," sought information related to number of MR's employed, types of jobs held, and service rendered by the MR employees. The "Employee Relations" section dealt with associations between MRE's and other employees. The section entitled "Specific MRE Information" was concerned with responsibilities, performance, work habits, appearance, health, versatility, and pay scales for the mentally retarded employees. The final section dealt with
general and specific skills used by the mentally retarded employees in their particular jobs.

For criticism and validation, the instrument was sent to three individuals working directly in the area of job placement for the mentally retarded. Interviews were held with two of these individuals for the purpose of acquiring more information. A tour of a sheltered workshop and training station associated with one of these individuals was also taken.

Lists of employers of MRE's were provided by agencies in the Dallas, Texas area which dealt with the training and placement of mentally retarded individuals. It was believed that these employers would be more willing to co-operate in the study and that information obtained from them would be much more reliable and productive in terms of actual MRE job evaluation. In all, the names of thirty-nine employers in the Dallas, Texas area were secured and each was contacted. Other employers' names were unavailable as a result of placement officers who desired to protect the employment of certain clients.

Securing employment for MR's depends upon many factors. Appearance alone may keep the MR out of a position for which he is technically qualified. The stigma of employing a MR may remove his chances for employment with those who are still unable to break from old ideas. The method of approach and terminology used by the placement officer may determine
whether the MR secures employment or not. In some cases the term "mentally retarded" is not used at all. Some employers are not aware that they actually employ the mentally retarded.

Industries surveyed included food services, drug sales, hospitals, construction, metal works, cleaning and laundries, discount stores, animal clinics, repair shops, plastics warehouses, meat markets, electronics industries, and optical goods.

Presentation of Data

Thirty-nine inquiries were sent out and twenty-seven replies were received. Five of the twenty-seven replies were negative in that no answers were given to any of the items contained in the instrument. Twenty-two, or 56 per cent, of the original group surveyed completed the instrument. Ten employers added extra comments which they believed pertinent to this study.

The number of employees in the participating industries ranged from a low of 3 to a high of 20,000. The total number of employees represented in the survey was approximately 25,400. Eighty-four of these employees were classified as mentally retarded by their employers. However, some of the employers indicated that they had employed MR's but were not doing so at the present. One industry offering sheltered employment in several job categories employed forty-one MRE's, or almost half the total MRE's in the survey.
A total of 2,433 employees, of which 33 were considered to be retarded, was obtained from the results of participating employers giving both total and MR employment figures. Stated in terms of percentage, 1.35 per cent of these employees were retarded.

The data in Table I show the results of the General Information part of the instrument.

**TABLE I**

PER CENT OF EMPLOYERS ANSWERING GENERAL INFORMATION

<table>
<thead>
<tr>
<th>Questions</th>
<th>Per Cent Answering*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Do you use IQ scores for employment purposes?</td>
<td>0.0</td>
</tr>
<tr>
<td>Do you require specific training before employing an individual?</td>
<td>13.5</td>
</tr>
<tr>
<td>Do you offer in-service or on-the-job training?</td>
<td>100.0</td>
</tr>
<tr>
<td>a. Is it required of all employees?</td>
<td>59.1</td>
</tr>
<tr>
<td>b. Is it required only of new employees?</td>
<td>22.7</td>
</tr>
<tr>
<td>c. Is it continuous?</td>
<td>31.9</td>
</tr>
<tr>
<td>d. Is it periodical?</td>
<td>36.4</td>
</tr>
<tr>
<td>e. Are pay raises based upon completion of this training?</td>
<td>41.0</td>
</tr>
<tr>
<td>Do you prefer to train employees yourself?</td>
<td>72.7</td>
</tr>
<tr>
<td>Do you prefer them pretrained?</td>
<td>22.7</td>
</tr>
</tbody>
</table>

*n = 22.
As can be seen in Table I, 95.5 per cent of the employers surveyed did not use IQ scores for employment purposes. The remaining 4.5 per cent used them only occasionally. Specific training was necessary before employment in only 13.5 per cent of the situations surveyed while some sort of training after employment was offered in 100 per cent of the cases. The data in Table I indicate that 72.7 per cent of the surveyed industries preferred to train their own employees, only 22.7 per cent preferred them pretrained, and 18.3 per cent could use employees either way. The discrepancy in percentages occurred because some of the participants indicated either or both methods were acceptable.

In addition to the information in Table I, 100 per cent of the participants indicated that both personal and work neatness were desirable. However, 80 per cent of them indicated that they had positions where neatness was of less concern than performance.

Presented in Table II are data expressing the reasons for hiring the MRE's as indicated by the surveyed employers.

### TABLE II

**REASONS FOR HIRING MENTALLY RETARDED**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Per Cent Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civic responsibility</td>
<td>32.0</td>
</tr>
<tr>
<td>Capable of the job</td>
<td>91.0</td>
</tr>
<tr>
<td>Felt sorry for them</td>
<td>4.5</td>
</tr>
<tr>
<td>Other</td>
<td>13.6</td>
</tr>
</tbody>
</table>

*\(n = 22\)*
It can be readily seen that the majority, 91 per cent, of the employers employed the MR because they believed they could handle the job. For "Others" the most common reason given was that the MRE's provided a dependable work force.

Presented in Figure 1 are the relative percentages of jobs held by the eighty-four MRE's involved in this study.

![Job percentages of MRE's in this study.](image)

As the data in Figure 1 indicate, the largest single job category held by the MRE's involved in this study was the position of laborer. This was closely followed by maintenance and food services. The "Other" category consisted of written-in responses in the areas of general odd jobs,
laundry sorting, animal care and feeding, simple assembly, and service aides in hospitals.

The percentages exhibited in Figure 2 reveal the quality service the surveyed industries received from their MRE's.

<table>
<thead>
<tr>
<th>Service Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>24%</td>
</tr>
<tr>
<td>Good</td>
<td>48%</td>
</tr>
<tr>
<td>Fair</td>
<td>20%</td>
</tr>
<tr>
<td>Poor</td>
<td>8%</td>
</tr>
</tbody>
</table>

Fig. 2--Employer ratings of MRE service.

It can be readily seen that 72 per cent of the employers rated their MRE's as good to excellent in service rendered.

The data in Figure 3 graphically illustrates the employers' attitudes toward their MR employment programs.

<table>
<thead>
<tr>
<th>Attitude Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfactory</td>
<td>26.3%</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>68.5%</td>
</tr>
<tr>
<td>Poor</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

Fig. 3--Employer ratings of MRE programs.

The unsatisfactory programs were indicated as resulting from poor supervision and noncapability.

It was found that in 79 per cent of the cases the MRE's were directly responsible to only one person. This personal supervisor was available to help them at any time in 72 per
cent of the cases. Personal interviews with placement officers indicated that the presence of an individual, from which the MRE could always receive help, was an extremely important factor in the success of the MR's employment.

The data in Figure 4 show to what degree the personal supervisors affected the success or lack of success of the MR's employment programs.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>12.5%</td>
</tr>
<tr>
<td>Often</td>
<td>25.0%</td>
</tr>
<tr>
<td>Extensive</td>
<td>56.3%</td>
</tr>
<tr>
<td>Always</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Fig. 4--Percentage of responsibility of personal supervisors to success or lack of success of MR employment program.

It can be seen in Figure 4 that the personal supervisors definitely affect the outcome of the MR employment program. It should be noted that one-half of the 12.5 per cent reporting that their personal supervisors were not a factor also stated that their programs were unsatisfactory.

In only 9.5 per cent of the companies did the normal employees associate with the MRE's on a social level. Sixty-seven per cent reported that their normal employees associated with the MRE's only as co-workers and only 23.5 per cent of them reported that their normal employees associated with the
MRE as friends. In 90 per cent of the situations surveyed the MRE's tried to associate with the normal employees.

In Table III the data relate information of a more specific nature concerning the MRE's.

**TABLE III**

**SPECIFIC MRE QUESTIONS AND INFORMATION**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Percentage of Responses*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Do the MRE's:</td>
<td></td>
</tr>
<tr>
<td>a. have positions in which they are directly responsible for certain acts being performed?</td>
<td>81.9</td>
</tr>
<tr>
<td>b. have a position where they deal with the public?</td>
<td>63.7</td>
</tr>
<tr>
<td>c. have good work habits?</td>
<td>77.3</td>
</tr>
<tr>
<td>d. have good work attendance records?</td>
<td>81.9</td>
</tr>
<tr>
<td>e. require more discipline?</td>
<td>18.1</td>
</tr>
<tr>
<td>f. receive a variety of jobs?</td>
<td>45.4</td>
</tr>
<tr>
<td>g. do as much as others in the same job capacity?</td>
<td>77.3</td>
</tr>
<tr>
<td>Are the MRE's:</td>
<td></td>
</tr>
<tr>
<td>a. job attitudes positive?</td>
<td>72.7</td>
</tr>
<tr>
<td>b. responsible?</td>
<td>45.4</td>
</tr>
<tr>
<td>c. honest?</td>
<td>54.6</td>
</tr>
<tr>
<td>d. dependable?</td>
<td>63.7</td>
</tr>
<tr>
<td>e. cooperative?</td>
<td>59.1</td>
</tr>
<tr>
<td>f. neat?</td>
<td>45.4</td>
</tr>
<tr>
<td>g. clean?</td>
<td>45.4</td>
</tr>
<tr>
<td>h. healthy appearing?</td>
<td>59.1</td>
</tr>
<tr>
<td>i. punctual to work?</td>
<td>81.9</td>
</tr>
<tr>
<td>j. punctual to appointments?</td>
<td>50.0</td>
</tr>
<tr>
<td>k. punctual in completion of duties?</td>
<td>77.3</td>
</tr>
<tr>
<td>l. willing to try something new or more difficult?</td>
<td>54.6</td>
</tr>
<tr>
<td>m. able to perform a variety of tasks?</td>
<td>45.4</td>
</tr>
<tr>
<td>Can the MRE follow instructions if presented clearly?</td>
<td>54.6</td>
</tr>
</tbody>
</table>

* n = 22
It should be noted that in only 50 per cent of the cases did the MRE's have to qualify for positions of some responsibility. Qualifying consisted of actual job performance in 71 per cent of these cases and skills tests in only 21 per cent. The remaining 8 per cent were by referral. No one reported using oral or written tests for job qualification. Of the fourteen situations where dealing with the public was required only four of them did so consistently, the remainder doing so only periodically.

Good work habits were indicated as being exhibited in 90 per cent of the situations. In order of indicated importance these were as follows: completion of work, keeping work area clean, not wasting time, and safety consciousness. Also written in by the employers were low job turnover, low absenteeism, and low tardiness rate.

It may be noted that in all reporting cases every time the answer to the question, "Are the MRE's able to perform a variety of jobs?" was given as "No", the same answer was given for the question "Do you offer the MRE a variety of jobs?". The same situation occurred for the positive answer.

Instructions had to be repeated only one to three times in 77 per cent of the cases, four to six times in 23 per cent of the cases, and more than six times in no cases.

In all the reporting cases there was absolutely no differentiation between the wages paid to MRE's and the pay accorded the normal employees in the same job capacity.
Information dealing with certain basic abilities needed for MR employment in various jobs is presented in Table IV.

**TABLE IV**

**USEFULNESS OF CERTAIN BASIC ABILITIES AND KNOWLEDGE FOR EMPLOYMENT OF THE MENTALLY RETARDED**

<table>
<thead>
<tr>
<th>Ability or Knowledge</th>
<th>Percentage Answering</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Ability to read blueprints</td>
<td>6.0</td>
</tr>
<tr>
<td>Ability to read and write</td>
<td>83.0</td>
</tr>
<tr>
<td>Ability to use basic math</td>
<td>21.0</td>
</tr>
<tr>
<td>Knowledge of general shop safety</td>
<td>70.0</td>
</tr>
<tr>
<td>Ability to communicate with drawings</td>
<td>6.0</td>
</tr>
<tr>
<td>Ability to communicate verbally</td>
<td>90.0</td>
</tr>
</tbody>
</table>

*n = 22.*

It should be noted that of the six categories listed in Table IV, only those having to do with methods of communication and safety were rated highly by the employers. One of the employers responded to this section of the instrument by adding "the ability to appropriately respond to an authority figure."

Placement directors indicated that all employees involved should know of the MRE's condition and how to handle emergencies involving them. In 75 per cent of these cases the employees were aware of the MRE's condition but only 50 per cent knew how to handle emergencies involving them.

Only ten of the twenty-three hand tools listed in the instrument were indicated as being useful to the MRE's.
However, five more were written in. In their order of selection, beginning with the most frequently selected and ending with the write-ins, they were as follows: broom, mop, paint brush, scrapers, screwdriver, claw hammer, wrenches, wood saw, nails, aerosol paint can, rakes, coffee cart, towels, stapling machine, and taping dispenser.

All the machines listed in the instrument were selected at least once as being used by MRE's. However, only the air compressor paint sprayer and the floor polisher were indicated more than once.
CHAPTER BIBLIOGRAPHY

CHAPTER IV

METHODS OF TRAINING THE MENTALLY RETARDED

This chapter examines the information presented in Chapter III and attempts to combine it with literature available in the field in a manner that will be beneficial to an industrial arts teacher who has, or suspects he has, mentally retarded students in his classes.

Recognition of the mentally retarded student appears to be the first goal. There are several traits exhibited by these individuals which may help to identify them. The mentally retarded are slow learners. They require much time to grasp new ideas and need patient instructors. They lose interest quickly and are easily discouraged by failure. They are unable to deal effectively with abstract ideas and transfer of learning is difficult. They lack insight and judgement and are not able to understand their own needs. They know only today, being unable to perceive of the needs for tomorrow (1, p. 548). The mentally retarded have poor hand-eye coordination as well as poorly coordinated body movements. Their walk may have a distinctive gait. Reaction time is slower than normal and their overall physical vitality may be low. Posture is also usually poor in the retardate (2, p. 253). These pupils may be overly aggressive, have a
limited vocabulary, and have little or no creative ability (5). These students realize they are slower than others and may be in a set pattern of self-devaluation.

Permanent records can give insight into the students' past and may lead to definite evaluations of their mental condition. The counselors should definitely be contacted when trying to diagnose whether or not a student is to be considered retarded. Whether or not the student's mental condition is definitely ascertained, steps can be taken to aid in his training.

In many instances the suspected MR may already be in the industrial arts classes because of efforts being made to keep these students in courses where failure is less marked (8, p. 201). Gardner found that induced failure stimulated normal boys to greater achievement, while mentally retarded boys tended to withdraw and showed decrements in performance (4, p. 16). It is apparent that failure is not beneficial to these pupils and this idea should be constantly on the mind of the instructor. Course work for the mentally retarded should be built upon success, not failure.

The data collected for this study indicated that consideration was not given to IQ scores at job levels where the mentally retarded were employed. Examinations usually were not required for employment either. This would seem to dictate that time should not be used to any degree trying to
prepare MR students for entrance type tests. They apparently will not need this type of training.

The data definitely demonstrate the tendency for companies to train their own employees in specifics. This can be considered as a positive aid, for specific training should be out of the realm of the secondary schools industrial arts programs. General training, however, is well within the scope of these programs.

The data provided by the instrument indicated that jobs held by the MRE's were largely physical in nature. Very little in the way of thought processes was needed. However, the ability to read, write, and communicate was considered necessary as well as a general knowledge of safety precautions. Most of the jobs designated were concerned with labor of some type; general, maintenance, and food service being the most common. In these job capacities the ability to read blueprints was not deemed to be necessary. Even basic mathematics was indicated as being needed very little. The data did indicate that basic traits such as neatness of person and neatness of job were desirable as was a sense of responsibility and dependability. Honesty and cooperativeness also were common traits needed in all employees.

The information received seemed to suggest that basic hand tool skills were not deemed absolutely necessary for most MR employment. A few employers did show that their MR employees used various power machines. Also recommended by
the employers surveyed were the development of good basic work habits, work dependability, and hand-eye coordination. Such factors as punctuality, low rate of tardiness, low rate of absenteeism, and completion of assigned duties were heavily stressed by the employers as added recommendations.

The remainder of this chapter is divided into areas dealing with characteristics, traits, and skills which were indicated in the data as being desirable for MR employment. Each area includes recommended guidelines for its development at the secondary level of the industrial arts program.

Good Work Habits

Good work habits are desirable in all employees. For added job security, the MR employees need to develop their work habits to a finer degree than the normal person. Good work habits include the following: keeping work area clean, not wasting time, safety consciousness, completion of assigned jobs, low absenteeism, low tardiness rate, and low accident rate. Most of these can be taught in the industrial arts program.

The facilities in the industrial arts laboratory in many respects make it a limited production manufacturing plant. Each student usually is assigned a definite work station. The responsibility for keeping this work area clean is excellent training for later employment. The MR student should be made well aware of where the waste receptacles are located. Ideally speaking, they should be very close to his
work area so that he does not constantly have to hunt for them. Their close proximity encourages the MR to properly dispose of the waste materials, thereby helping to keep his area clean. It should be remembered that in all probability, the MR will spoil more material as a result of mistakes than the average student.

Extreme patience on the part of the instructor should be required. The mentally retarded must be told numerous times how to perform the most menial tasks. For instance, proper tool location in the tool rack may have to be shown many times before the MR student can successfully return the tool without help.

Proper use of time may be emphasized by using a schedule much like that used in industry. A simple chart showing the various steps in the completion of a project and a reasonable time allotment for each step may be utilized here. It should be kept very simple for the sake of the MR. The instructor should remember that reading may be very difficult but essential for these students. To stifle competitive urges, the instructor may elect to use a work progress chart with only his MR students. Early competition with normal students could lead to failure for both the individual and the instructor's efforts. However, if wisely chosen, later competition with normal students may be extremely beneficial to the MR in terms of self-esteem.
Safety should always be stressed with students in the laboratory. The MR student should never be allowed to use any power tool without the knowledge of the instructor. Prior to his using the tool the instructor should have gone over safety precautions many times with him. An actual demonstration should be absolutely necessary on all machines. If possible to do so safely, the MR students should be allowed to occasionally see what might happen should the wrong approach to machine usage be used. Here the instructor would obviously have to fake the actions of the machines with the power off. It should be kept uppermost in the instructor's mind that the students may be emulating him. Therefore, he should never attempt an operation without using every available safety measure. If any machine lacks a safety guard, the instructor should improvise or purchase one. It is extremely important that the MR should be exposed to and required to use all safety measures for all tools he might operate.

Low absenteeism and punctuality should be emphasized. The MR usually has more occasion to remain away from school because of sickness, doctor visits, or related reasons than does the average student. The high tolerance level of the school for absenteeism is directly opposite to a very low tolerance level in industry. This must be impressed upon the MR student. He must be made to realize that getting to class, thereby preparing for work, on time every time is an absolute must. Both the data and the literature surveyed
indicated that more jobs were lost because of tardiness or absenteeism than for all other reasons. This statement does assume that the MR's were well placed initially.

Basic Communication Skills

This study found no jobs that did not require some form of communication. It is doubtful if any MR or anyone else would be hired in a capacity that required no skills in communication. The ability to read, write, and communicate verbally are extremely valuable tools. Unfortunately, these are the very skills with which the MR's have trouble. Many times the exposure the MR has to the learning of these skills involves abstractions or concepts with which he is not familiar. There is a need to lower the level of teaching to a point where the MR can make concrete relationships between his world and that being taught to him. Byram stated that:

The industrial arts laboratory offers a distinct advantage in the instruction of the mentally retarded by enabling the pupil to work with concrete experiences rather than the abstract learning experiences encountered in the academic classroom (2, p. 7).

The construction of a project that requires writing in its operation is a constant reminder that writing is a useful skill (11, p. 38). When developing projects for the MR the industrial arts instructor should keep this thought in mind. The same idea would hold true for basic mathematics and basic reading skills. Group projects would act to remind the MR
of the necessity of all communicative skills. It should be kept in mind that the MR's follow the same development sequence as the average child, except their rate of learning is slower and they rarely learn as much (5, p. 5).

Personal Traits

For the use of this study personal traits include honesty, cooperativeness, dependability, and a sense of responsibility. The results of the survey indicated that such personal attributes were desirable in all employees. Instruction in these areas should be approached indirectly rather than directly. The setting of good examples by instructor actions would probably have a more lasting and desirable effect than efforts to make the student develop positively in these areas. These traits should be emphasized as being desirable, but the instructor should proceed with caution should anything more direct be attempted.

Group and production line projects, where the students have to work together to achieve a common goal, are desirable means for developing cooperative attitudes and achieving responsible behavior. Utilizing production charts for a production line project should aid in instilling ideas of dependability. Positions of responsibility, such as line foreman, quality control inspector, or supervisor, help develop this trait. By moving the MR through various positions in a production line, he gains experiences in adapting
to new work situations and responsibilities. It is more desirable to achieve these goals by placing the students in positions where they have to develop these traits in order to accomplish their own tasks, rather than by requiring them to develop because the instructor deems it necessary.

General Personal Development

Mather and O'Toole stated that the major goals of a work experience program should be as follows: build work confidence, improve self-esteem, interpersonal relations, concentration, physical stamina, and personal grooming (10, p. 25). Jordan stated that a basic curriculum for the retarded should stress the following:

1) development of personality skills,
2) development of manual dexterity, coordination, and speed,
3) development of a degree of academic skill for those who will be unskilled or semi-skilled workers,
4) training in the use of basic tools,
5) instruction in handling money and following directions (7, p. 287).

Personal development is complex, with numerous interacting and overlapping factors. It is beyond the scope of this study to deal with any specific developmental process. However, several statements are made that may aid in accomplishing some progress in this area.

The foremost fact is that any program for the MR must be built upon success (9). The very first project attempted by the MR must be successful. This establishes a positive
attitude and immediately raises the individual's self-esteem. For this reason the instructor should carefully choose or plan the initial project with that specific goal in mind. Each project should be useful. For a student to see his project in daily use may instill a sense of accomplishment and remind him that school experiences are valuable.

It is generally agreed that the nature of the project should be of relatively short duration. Because the MR student has a short attention span, any project requiring more than a short time to finish would be undesirable. Any project requiring more than a few class periods to finish may end up unfinished, and the student can lose the sense of accomplishment so needed.

In planning the progress of the MR the instructor should begin with the very simple and very slowly move to more difficult tasks. Any signs of frustration must be immediately noted to avoid failure. The instructor should plan on constant supervision of the MR's and must be prepared to repeat even simple instructions many times.

Explanations must be brief. All demonstrations should be short and very clear. The use of films usually is of little value because they may travel too fast for the MR student (3, p. 26). Filmstrips may be of value if the wording is clear and simple. Simple drawings are desirable. Instructor developed filmstrips using 35 millimeter film can be very advantageous if well done.
A sense of progress, capability, and accomplishment can be communicated to the student by using production charts. These indicate progress toward specific ends such as product completion, increased wages, and promotions (10, p. 25).

Individual projects will provide motivation, reward, and a sense of accomplishment. Group projects encourage the spirit of cooperation (6). Working on group projects also provides opportunities to work with and under the direction of others (12). Beard stated that:

."... it is not the learning of specific types of work per se which is of primary importance, but rather it is the learning of good work habits such as cooperation, accepting and carrying out instructions, displaying a sense of responsibility, and development of a satisfaction of accomplishment (1, p. 553).

Presentation of Guidelines

Guidelines are statements, indications or outlines that give direction to future policy or conduct. In light of this definition, the following guidelines are presented as a summary of this chapter. They are directed to the instructor.

1. Be extremely patient with the MR students.
2. Progress very slowly and repeat often.
3. Utilize repetitive operations.
4. Progress from the very simple to the more complex.
5. Make instructions very simple and clear.
6. Be prepared to repeat instructions many times.
7. Build upon the success of the MR.
8. Keep all assignments relevant to the individual.
9. Deal only in concrete ideas, never abstract.
10. Choose projects with student success uppermost in mind.
11. Utilize personal schedules to show extent of project completion.
12. Utilize only projects that will be useful to the MR student.
13. Require project completion.
14. Keep projects simple enough that they can be finished in a relatively short period of time.
15. Accept only behavior indicative of good work habits.
16. Encourage school attendance.
17. Utilize personal schedules to show extent of project completion.
18. Avoid student competition that could undermine the MR's self appraisal.
19. Use demonstrations frequently and individually.
20. Keep demonstrations short and to the point.
21. Require the use of all safety equipment.
22. Never perform an operation in front of the MR student that could result in his injury if attempted by him.
23. Set a good example at all times.
24. Utilize instructor developed teaching aides.
It should be noted that these guidelines are generally basic to the teaching of all students. They differ for the MR in the extent and depth to which they apply. Each guideline should be carried to the extreme. This study indicated that the teaching of the MR should basically be simplified, repetitious, and built only upon student success. Specific methodology in dealing with the MR student will depend to a great extent upon the student himself. Each MR is an individual and requires individual attention.
CHAPTER BIBLIOGRAPHY


CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary purpose of this study was to develop and propose guidelines that could be used in an industrial arts program that would give basic training to the educable mentally retarded in the skills necessary for employment in various industries. Determination of the necessary skills was accomplished by the use of a checklist instrument.

The instrument was completed by twenty-two firms in the Dallas area which had employed or were employing the mentally retarded. Information given pertained to employment requirements, employee relations, job titles held by the mentally retarded, success of MR employment, and skills and tools utilized by the MR employees.

A rationale of the study was presented and was based upon literature available in the field. Information from the instrument was combined with literature and presented in Chapter IV. Guidelines deemed feasible for use were incorporated along with this information. The guidelines are broad and are directed to the instructor having no training in the educating of the mentally retarded.
Findings

The findings represented in this study were as follows.

1. The mentally retarded were employed only to a limited degree, generally in jobs of an unskilled nature, or requiring only very basic skills.

2. IQ scores were not used for employment purposes in the job categories surveyed.

3. Specific training was generally not needed as in-service or on-the-job training was offered for the employees in each situation surveyed. Most employers preferred to do their own employee training.

4. Employee neatness was desirable.

5. Most MRE's were hired because the employers felt they were capable of performing the skills necessary for the position.

6. The MR could handle a variety of jobs, but this study indicated that the positions most frequently offered them were as laborers, food service workers, or maintenance workers.

7. Seventy-two per cent of the employers rated the service they were receiving from the MRE's as good to excellent, and over ninety-four per cent of the employers rated their programs of MR employment as satisfactory or better.

8. A person who supervises the MRE was indicated as being very important in the success of an MR employment program.
9. Most normal employees were aware of the MRE's condition, but only associated with them as co-workers.

10. Most of the MRE's in this survey had good work habits, were punctual, and could follow clearly stated instructions.

11. Sixty-six per cent of the MRE's had to deal with the public in the performance of their jobs.

12. There was no difference in the wages paid to the MRE and those paid to normal workers in the same job category.

13. The ability to read, write, and communicate verbally was needed in most job categories surveyed, and a knowledge of general shop safety was also deemed desirable.

14. The most frequently checked tools were those used in the capacity of custodian or maintenance.

Conclusions

The following conclusions are indicated by the findings of the study.

1. The mentally retarded are being employed in situations requiring physical rather than mental labor, and can handle a variety of the unskilled-type jobs.

2. Social and basic skills are needed by the MR before employment; training in job specifics should be undertaken by the employer.

3. The MR should have training in good basic work habits and should be taught to deal with the public.

4. Basic communicative skills and shop safety should be taught to the MR.
5. It is also concluded that guidelines useful for educating the mentally retarded, as presented in this study, are basically the same as for educating the normal student. They differ mainly in that those applied to the MR must be heavily emphasized.

**Recommendations**

Based upon the findings and conclusions of the study, the following recommendations were made.

1. The public secondary schools should offer the MR basic training in the social skills necessary for employment.

2. Further studies should be undertaken in this area to design specific course material for the MR.

3. Further studies should be undertaken to design a practical communications course for the MR.

4. This same study should be carried out in other metropolitan and rural areas.
APPENDIX A

June 14, 1971

Dear Employer,

I am a graduate student at North Texas State University working on my thesis in industrial arts. The study concerns itself with the development of guidelines which might be used in the public education of those students who have marked difficulty with learning -- difficulty enough that this study considers them as mentally retarded to some degree. These guidelines will be based upon basic requirements and skills necessary for employment in industry.

These individuals with learning difficulties usually go through the public school system as students who are socially promoted or are eventually allowed to quit because of age. Through proper training and job placement they may develop into very adequate and capable employees.

It would be of immense aid to the completion of this study if you would take the time to fill in and return the enclosed checklist. All answers will be kept confidential and your or your company's name will not be used in the study.

Thanking you in advance,

Ronald T. Page
Graduate student, NTSU

RTP/rp
Enclosure
APPENDIX B

Your help in making this study possible is greatly appreciated. Answers to the following questions will aid in determining what skills are necessary for the employment of those people with learning difficulties. Through these answers guidelines will hopefully be devised that may result in these individuals being better trained during their secondary school education.

GENERAL INFORMATION

1. Type of work your company does: ____________________________
2. Approximate number of employees: ____________________________
3. Do you use IQ scores for employment purposes? Yes( ) No( )
   a. What is your cut-off score? __________
   b. Do the scores actually relate to employee performance? ( ) ( )
   c. Are examinations required for employment? ( ) ( )
   d. Is the examination a formality? ( ) ( )
   e. Is it used to determine job placement? ( ) ( )
   f. Can the test results be waived in certain cases? ( ) ( )
4. Do you require specific training before employing an individual? ( ) ( )
   What type? Skills __, Attitudes __, Company policy __, Other ______________
5. Do you offer in-service or on-the-job training? ( ) ( )
   a. Is it required of all employees? ( ) ( )
   b. Is it required only of new employees for initial training? ( ) ( )
c. Is it continuous? ___ or periodical? ___

d. Are pay raises based upon completion of this training? Yes( ) No( )

e. Is it designed to better the employees' present skills and abilities? ( ) ( )

6. Do you prefer to train employees yourself? ___
or do you prefer them pretrained? ___

7. Is neatness of importance in your employees? ( ) ( )
a. Personal ___ b. Neatness of work ___
c. Do you have positions where neatness is of less importance than performance? ( ) ( )

GENERAL INFORMATION DEALING WITH MENTALLY RETARDED EMPLOYEES

Note: MRE is used to abbreviate Mentally Retarded Employee.

1. Have you been approached to hire MRE's? ( ) ( )

2. Do you or have you employed any mentally retarded person? ( ) ( )
   a. What reasons did you use for hiring them?
      Civic responsibility ___, capable of job ___, felt sorry for them ___, other (please specify)
      ______________________
   b. If your answer to question two was "no", why not?
      Never approached ___, not capable of job ___,
      not needed ___, against company policy ___,
      other __________________

3. How many MRE's does your company employ? __________
   Please check the closest job titles: Employed how long?
   ( ) a. Maintenance worker __________________
   ( ) b. Service station worker ________________
   ( ) c. Food service worker ________________
   ( ) d. Furniture repairman ________________
4. What kind of service are you receiving or did you receive from the MRE's?

Excellent____, Good____, Fair____, Poor____

5. Has your program of employment of the mentally retarded been satisfactory?

Very satisfactory____, Satisfactory____, Unsatisfactory____

If your program has been unsatisfactory please indicate why. ____________________________

EMPLOYEE RELATIONS

1. Is there a certain employee to which the MRE's are directly responsible? Yes( ) No( )

   a. Is this person available at all times for help? ( ) ( )
   b. How much of a factor have they been in the success or lack of success of the MRE?
      None____, Often____, Extensive____, Always____

2. Do the other employees associate with the MRE? ( ) ( )

   How? Socially____, Only as coworkers____,
   As friends____

3. Do the other employees know of their condition? ( ) ( )

   If not, why not? ____________________________

4. Do the regular employees know how to handle emergencies involving the MRE? ( ) ( )

5. Do the MRE's associate with the other employees? ( ) ( )
SPECIFIC MRE INFORMATION

1. Do the MRE's have a position in which they are directly responsible for certain acts being performed? Yes( ) No( )
   a. Did they have to qualify for this position? ( ) ( )
   b. How? Oral test___, Written test___, Skills test___, Actual job competition___,
      Other________

2. Are the MRE's attitudes toward their particular job positive? ( ) ( )

3. Are the MRE's in a position where they must deal with the public? Consistently___, Periodically___, Never___

4. Do the MRE's have sufficiently good work habits? ( ) ( )
   •Not waste time___, Keep work area clean___,
     Safety conscious___, Complete their work___,
     Other________

5. Are the MRE's responsible?____ Honest?____, Dependable?____, Cooperative?____.

6. Do these employees have a good work attendance record? ( ) ( )
   If not, are there medical reasons? ( ) ( )

7. Are your MRE's neat?____, Clean?____, Healthy appearing?____.

8. Are the MRE's punctual...to work? ( ) ( )
   ...to appointments? ( ) ( )
   ...completion of duties? ( ) ( )

9. Do the MRE's require more or stricter discipline? ( ) ( )

10. Are they willing to try something new or more difficult? ( ) ( )

11. Do you offer the MRE a variety of jobs? ( ) ( )
12. Are the MRE's able to perform a variety of jobs?  
   Yes( ) No( ) 
   How many? 1-2____, 3-4____, 5 or more____

13. If the MRE does well at his job do you move him to one of more responsibility?  
   ( ) ( )

14. Can the MRE follow instructions if presented clearly?  
   ( ) ( )
   How many times do instructions have to be repeated? 1-3____, 4-5____, more____

15. Do the MRE's do as much as other employees in their job capacity?  
   ( ) ( )
   If not, how much? 1/2 as much____, 3/4 as much____

16. Do you increase the MRE's wages if they improve in their jobs?  
   ( ) ( )

17. Do the MRE's receive full pay for their particular job?  
   ( ) ( )

18. Are the MRE's paid according to performance?  
   ( ) ( )

19. Do the MRE's follow the same pay scale progressions as the other employees?  
   ( ) ( )
   If not, why not? ________________________________

The following questions deal with general and specific skills that can be taught in an industrial arts program in the secondary schools. Please answer to the best of your ability those that apply in your situation.

Are the MRE's in your organization required to use the following tools in order to accomplish their jobs? (Please circle the ones that apply).

2. Ball pein hammer  6. Cold chisel  10. Files or rasps
15. Wrenches  19. Scrapers  23. Framing square
(List below if needed)

Do the MRE's need the following?

1. ability to read blueprints  Yes ( ) No ( )
2. ability to read and write ( ) ( )
3. ability to use basic mathematics ( ) ( )
4. knowledge of general shop safety ( ) ( )
5. ability to communicate with drawings ( ) ( )
6. ability to communicate verbally ( ) ( )
7. others (please specify) ________________________________
   ________________________________
   ________________________________
   ________________________________
Do the MRE's in your company operate any of the following machines? (please circle any that apply)

1. air compressor paint sprayer
2. electric hand saw
3. drill press
4. electric sander
5. electric hand drill
6. band saw
7. wood surfacer
8. jointer
9. wood lathe
10. table saw
11. jig saw
12. radial arm saw
13. metal lathe
14. mill
15. arc welding rig
16. gas welding rig
17. spot welder
18. cutting torch
19. sheet metal brake
20. sheet metal forming machine
21. hydraulic press
22. floor polisher
23. injection molder
24. vacuum forming machine
25. shaper (metal)
26. shaper (wood)
27. sheet metal shears (floor model)
28. punch press
29. offset printing machine
30. typesetting machine
31. others (please specify)

In the space below please feel free to comment on any factors that you feel should be emphasized in the training of the mentally retarded that would be of mutual benefit to both the employer and the retarded.
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