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The Role of the Public Schools in Training Mentally and Physically Handicapped Students and the Secondary Level, with Emphasis on Employable Skill Development for Business.

Helen E. Bruno
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THE ROLE OF THE PUBLIC SCHOOLS IN TRAINING MENTALLY AND PHYSICALLY HANDICAPPED STUDENTS AT THE SECONDARY LEVEL, WITH EMPHASIS ON EMPLOYABLE SKILL DEVELOPMENT FOR BUSINESS

by

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Bachelor of Science, 1971
Northern Michigan University

An Independent Study
Submitted to
Dr. Robert N. Hanson, Professor
Business Education Department
of
Northern Michigan University
in partial fulfillment of the requirements
for the degree of
Master of Arts in Education

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This independent study, submitted by Helen E. Bruno in partial fulfillment of the requirements for the degree of Master of Arts in Education at Northern Michigan University, Marquette, Michigan, is hereby approved by the Advisor under whom the work has been done.

Robert W. Hanson
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ABSTRACT

THE ROLE OF THE PUBLIC SCHOOLS IN TRAINING
MENTALLY AND PHYSICALLY HANDICAPPED STUDENTS AT THE SECONDARY LEVEL,
WITH AN EMPHASIS ON EMPLOYABLE SKILL DEVELOPMENT FOR BUSINESS

Helen E. Bruno, Master of Arts in Education
Northern Michigan University

Purpose

The purpose of the study was to determine the kinds of education
or training being offered to the mentally and physically handicapped stu-
dents at the secondary level in the public school, the kinds of programs
that can be offered, and the teacher's role in the education or training
of these students.

Methods and Sources

The method of study included the use of library resources, letters
of inquiry, and personal interviews. The Learning Resources Center at
Northern Michigan University, plus the professional libraries of Dr. Robert
M. Hanson and Dr. Marjorie McKee, were used. The Business Education Indexes
from 1963 through 1971 and the Education Indexes from 1968 through 1971
were the sources for locating information from these libraries. Mr. Robert
Kennon, Supervisor for the Disadvantaged and Handicapped, Michigan Depart-
ment of Education, Lansing, Michigan, recommended resource people who would
be able to provide information on programs in operation. The Educational
Services Department of Michigan Bell Telephone Company, Marquette, Michigan,
recommended organizations that could be contacted for information pertaining
to the study.
Summary of the Findings

The significant findings of this study were: (1) The interest of the public is shifting toward a recognition of the need for educating and training the mentally and physically handicapped. (2) The public high school classroom is recommended for this education and training to allow for adjustment to the competition with the normal employee in the world of work. (3) The education should be on an individualized basis as disabilities are unique. (4) A large portion of our mentally and physically handicapped students would benefit greatly from this education because they can be educated or trained. (5) Some secondary schools do have programs in operation, but these schools are very few in number. (6) Many schools are in the process of developing programs because state legislatures have passed mandatory education bills which will force the public schools to implement programs for the mentally and physically handicapped. (7) At the present time, there is much to be done at the public school level in order to insure that the physically and mentally handicapped get the education and training to which they are entitled. (8) The handicapped student can be integrated into the regular classroom. (9) The teacher does not have to have special training, although this would be helpful. Resource teachers can be utilized to aid in the development of the programs and the orientation of instructors to teaching the handicapped. (10) More in-service training would help the instructor who is teaching the handicapped. (11) A study several years from now would show how the programs that are in operation and the programs that are presently being developed have progressed. An ongoing evaluation procedure will be important in providing the best possible programs for mentally and physically handicapped students at the secondary level.

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CHAPTER I

INTRODUCTION

The education and training of the mentally and physically handicapped students have advanced considerably in the last decade at the elementary level. At this stage, however, the education is too often terminated and the students do not advance any further. Eugene P. Whitney says:

Basically it is a simple fact that our specialized, dogmatic, mass production type of education does not reach all students. Some educators feel that perhaps public education has the responsibility to develop and offer programs that will reach all students.¹

Since a significant portion of our students are classified as mentally or physically handicapped, the public schools have a responsibility to them that should be emphasized.

Purpose of the Study

The purpose of this study was to determine:

1. The kinds of education or training that are being offered to the mentally and physically handicapped students at the secondary level in the public schools.

2. The kinds of programs that can be offered to these students.

3. The teacher's role in training these students.

Need for the Study

Education and training for the mentally handicapped have been expanding in the elementary schools. When the student passes this level, his education and training too often come to an abrupt end. While it is recognized that the special education on the elementary level is valuable, continued education in the secondary level is important in order to provide these students with employable skills.

Education and training for the physically handicapped have been offered in certain areas only, and all students have not been able to attend these schools. The students often have to be away from home in order to attend the school, and it presents many problems.

The well-being of the handicapped individual is greatly enhanced if he feels that he is contributing to society and is self-supporting. This can be accomplished with programs offered by the public schools at the secondary level.

The writer feels that there is a great void in this area of education. The immediate need is: 1) to find what kinds of programs are currently being offered, 2) what kinds of programs can be implemented, and 3) the teacher's role in training the handicapped.

Definitions of Terms

Educable Mentally Retarded

The group of mentally retarded whose rate of intellectual development ranges from 50 to 75 percent of normal intellectual growth. These students will achieve maximally at the sixth grade level.¹

Employable Skills

Salable skills that will enable the student to secure and maintain a job.

Individualized Instruction

Instruction that is structured so as to be flexible in response to the individual needs of the students.

Mentally Handicapped

Those students who have the ability to learn but will advance much more slowly and will not achieve as high a level as other students. Their intelligent quotient (IQ) ranges from 50 to 95. The mentally handicapped will be identified in two areas, the educable mentally retarded and the slow learner.

Physically Handicapped

This includes the sensory handicapped and the health impaired. The disability may be muscular or neuromuscular deficits, skeletal deformities, or chronic health problems. The sensory handicapped includes those with sight and hearing problems. The range of impairment may vary from slight to total.¹

Slow Learner

These students have an intellectual development of 70 to 95 percent of normal intellectual growth and are limited to a maximum mental age of from 12 to 1½ years. They are slightly inferior in physical development, have a greater incidence of poor health, and are slightly inferior in coordination, speed, and accuracy of movement.²

Special Education

Education that is structured with the individualized needs of the mentally and physically handicapped students as the basic criterion.

Special Needs

Needs for different considerations that extend beyond the needs of the ordinary student. These needs are required by students with mental and physical handicaps.

Vocational Education

Education that creates a readiness for specific training or work opportunities. Preparing the student with an employable skill.


Limitations

1. This study was limited to the library material available from Northern Michigan University; namely, the Learning Resources Center and the professional libraries of Dr. Robert N. Hanson and Dr. Marjorie A. McKee.

2. The letters of inquiry were limited to those individuals recommended by Mr. Robert Kennon, Supervisor of the Disadvantaged and Handicapped Unit, Michigan Department of Education, Lansing, Michigan, and the Educational Services Department of Michigan Bell Telephone Company, Marquette, Michigan.

3. Interviews were limited to schools having some type of training program in their curriculum and which were located in the central and western part of the Upper Peninsula of Michigan.

Delimitations

1. This study was delimited to organizations and schools which have employable skill training programs for the mentally and physically handicapped students.

2. This study was delimited to public high schools which are offering programs for employable skills for the mentally and physically handicapped.
CHAPTER II

PROCEDURES

Several conferences were held with Dr. Marjorie McKee, Assistant Professor, Education Department, Northern Michigan University, to obtain her advise as well as permission to use materials from her professional library. She also suggested the names of several industries which may be conducting training programs for the mentally and physically handicapped.

Mr. Robert Kennon, who is the Supervisor of the Disadvantaged and Handicapped Unit for the Michigan Department of Education, Lansing, Michigan, was contacted by letter and telephone for sources of information. Mr. Kennon provided the addresses of individuals in the State of Michigan who are involved with programs for the mentally and physically handicapped. Other sources of information were obtained from the Educational Services Department of Michigan Bell Telephone Company, Marquette, Michigan. Twenty letters were mailed, requesting information and literature on existing programs and reference to anyone else active in this area. The list of addresses is included in the Appendix. From the 20 letters mailed, 16 replies were received.

A review was made of most of the material available at the Learning Resources Center, Northern Michigan University, on the subject of educating and training the handicapped. Sources were obtained from the Business Education Index, 1963 to 1971, and the Education Index, 1968 to 1971.
Some of the periodicals that were not available at the Learning Resources Center were obtained from the professional library of Dr. Robert W. Hanson.

Several interviews were conducted in the central and western part of the Upper Peninsula of Michigan. These were with Mr. Philip Pfannenstiel, Mr. William Korpela, and Mr. Thomas Ferguson from the Gogebic-Ontonogan Intermediate School District; Mr. Paul Ollila from the Copper Country Intermediate School District; Mr. Joseph Cvengros, Special Education, Wakefield High School, Wakefield, Michigan; Mr. Cornelius Janzen, Marquette-Alger Intermediate School Distric; and Mr. John Sormunen, Marquette-Alger Intermediate School District. The lack of existing programs prevented the conducting of more interviews.

Five categories of mentally and physically handicapped to be included in the study were identified. They are: the educable mentally retarded, the slow learner, the visually impaired, the hearing impaired, and the crippled and health impaired.

Information on some of the programs in operation in various parts of the United States was separated into the category of handicapped for which they have been implemented. Information about these programs was received from the individuals contacted or from the library materials. They include REACH in Southern Illinois; COLT in Baltimore, Maryland; COP in Chicago, Illinois; The Saginaw Rehabilitation Center, Saginaw, Michigan; The League for the Handicapped in Detroit, Michigan; Allen Park Public School program for the Deaf, Ann Arbor, Michigan; Hawaii School for the Deaf and the Blind, Honolulu, Hawaii; Correlated Curriculum Program in New York City; Two Year Pretechnical in Richmond, California; and the Gogebic-Ontonogan Intermediate School District, Bergland, Michigan.
Articles in periodicals were reviewed concerning the individual experiences teachers have had in training the handicapped. This information was grouped according to the categories of handicapped used in this study. Recommendations for future programs were taken from this information.

Information on the teacher's role in the programs for the handicapped was reviewed, and this information was inserted into the suitable chapters.
CHAPTER III

THE EDUCABLE MENTALLY RETARDED

The definition of the educable mentally retarded, as referred to in this study, is one who has the ability to learn, but will advance very slowly and will not achieve at as high a level as other students. Their rate of intellectual growth ranges from 50 to 75 percent of normal growth. The large majority of educable students will achieve maximally at the sixth grade level. This group consist of 2 to 3 percent of the general population.¹

The special education programs at the elementary level provide the child with basic education, personal and emotional adjustment, and social adjustment. This type of education should also be carried into the secondary school, but the emphasis at this level should be on aiding the student to becoming economically independent.

While the early experiences in manual skills areas are provided at the primary and elementary levels, they should be taught in relation to the activities and experiences of the children. The areas of jobs and the specific concepts, knowledges, and skills required should be confined to the secondary classes when the material is meaningful and has rather immediate value.²

The next consideration is to identify the types of programs that should be offered to this type of student. More specifically, the


concerned educator might ask, "What general vocational experiences should be included in every Special Education pupil's program? How does one select the most valuable vocational experience for each pupil while compensating for his individual differences?"1

A great deal of consideration must be given these questions. In addition, the student's capabilities and potentialities must be determined so that a program will be implemented which can be individualized for the student. As Donald Merachnik says:

Handicapped students usually possess one or more areas of interest or skill development, which are more highly developed than others. The assessment of work potential should focus on these strengths. It is important to realize, however, that handicapped students should not be compared directly to non-handicapped students since they probably have been subjected to numerous restrictions which may have hindered exploratory experiences leading to interest and skill development.

Handicapped individuals differ from non-handicapped individuals because of the restrictions imposed by the handicapped condition (in addition to the handicap itself). These handicapped might be physical (as in the case of the below-the-knee amputation, mental (as in the case of the educable mental retardate), . . . educational (as in the case of the slow learner, etc., or in any combination of the above.2

Most mentally retarded students who have attended Special Education classes at the elementary level have been taught to count, do simple addition, read at about the third grade level, and write or print. They also have been taught to respect authority, to listen attentively, to be responsible, and about the different methods of transportation. Also,


experiences which assist the student in improving physical coordination, if needed, would be helpful in making the student employable.

Attitude toward work and work-related activities, such as punctuality and courtesy, are other necessary qualities for the student in entering the work world. These skills and attitudes need to be stressed at all levels of instruction—elementary, junior high, and senior high.

Instructional experiences would involve a variety of methods and materials. Use different methods and materials to suit individual pupils. Through the use of appropriate materials, help the student gain confidence to succeed.¹

Several areas are very suitable to the mentally retarded student. One of these areas is the field of business. Some reasons for this are: business training involves ordered "learning by doing," which can be adapted to an individual pace. Many skills require machine manipulation (appealing to the physical style learner), and much of business teaching employs multisensory techniques (a boon for those students who are, for the most part, non-readers).²

Office machines are a probable area for student training. Adding machines can help the student to learn to perform certain mathematical functions because they involve rote performance instead of mental calculations. Typewriters are another potential machine for the handicapped. "They can help the student in learning the alphabet, the numbers, and the ability to read and type words that look alike."³


³James E. McNally and Gerald Kohler, "Two Motivators for the Mentally Retarded," The Instructor, LXXXVII (June/July, 1968), 42.
There are other programs that might be suitable, such as: file clerk, general office clerk, duplicating machine operator, receptionist, and shipping and receiving clerk. Five public schools in Baltimore, Maryland, started an office occupations training program called Comprehensive Office Laboratory Training Program, or COLT. The schools had long been committed to the philosophy that every student leaving senior high school should be prepared for continuing education or the world of work. Unfortunately, all students aren't capable of this; and it was for this student that COLT was implemented. This program is highly individualized and the students are allowed to work at their own pace. Integration of typewriting, filing, business English, business mathematics, and human relations in a job-oriented curriculum is their objective.\(^1\)

The Bureau of Business Education, Chicago Public Schools, has developed a three-year core program called Clerical Office Procedures, or COP, to better meet the needs of certain special-needs students for training for careers in business. The program is intended for students who are academically disadvantaged but who can be made employable. The business subjects offered in the first two years provide suitable training for low-level office work. If the student remains in school, his office skills can be refined and new skills introduced in the eleventh and twelfth grades.\(^2\)

The Gogebic-Ontonogan Intermediate School District, the Copper Country Intermediate School District, and the Marquette Public Schools


(all in Michigan) are but a few in the process of developing various clerical programs.

In addition to the skills required for employment, it is suggested that the student be given training in proper dress, an appreciation of social mores, managing their bodies, striving for achievable goals, relating to authority, communication skills, and consumer education.¹

Numerous localities have started Health Occupations programs for the mentally retarded which include nurses aides, orderlies, laundry helpers, carriers (those who transport patients from one unit of the hospital to another in a professional manner), in addition to the jobs of kitchen help and janitorial services.

Another area of training includes Simple Bench Assembly, which simulates a factory situation where the students may demonstrate certain abilities, such as discrimination in size, shape, form and color. This would lead to employment in packaging, sorting, stockroom work, assembly line, salvage, inspection, etc.² Auto body repair and auto mechanics programs include the repair of automotive vehicle bodies and automotive mechanical and electronic equipment. A carpenter's helper or construction worker assists in repairing equipment and in performing structural woodwork on buildings. Florist helpers assist in the planting and care of plants and carpet layer's helpers assist in laying carpeting on floors and stairs. The graphic area includes

¹Elkan E. Snyder, "Defining the Curriculum for the Terminal Education and Training of Mentally Retarded Adolescents in Secondary School Classes," pp. 5, 7, 8. (Mimeographed)

activities occurring in organizations involved in printing and publishing. Hotel and motel workers assist in providing services to guests in hotels and motels. Landscaping includes general activities in contracted landscaping; painting includes performance in painting operations, interior and exterior; and retailing is an area where the student would assist in activities of selling which would occur in business firms engaged primarily in sales.¹ These programs have been tried on a small scale and are believed to be suitable for the retarded student. Later studies would prove their success.

CHAPTER IV

THE SLOW LEARNER

The slow learner is described as a person having an intellectual development of 70 to 95 percent of normal intellectual growth and is limited to a maximum mental age of from 12 to $14\frac{1}{2}$ years. Physically, the slow learners tend to be slightly inferior in development; have a greater incidence of poor health and physical defects; and are slightly inferior in coordination, speed, and accuracy of movement.\(^1\) Slow learners are the highest intellectual group of retarded children and are the largest in number. They form the 15 to 17 percent of the school population that cannot quite keep up with normal children.\(^2\)

The slow learner is often the student who drops out of school because of the frustration of keeping up with other students. They tend to be more self-centered and withdrawn, have lower standards of workmanship, and lack self-confidence but have unrealistic levels of aspirations. They do give superior attention to monotonous tasks but become quite apathetic when the task becomes purposeless or difficult.\(^3\) It is possible, however, to integrate these students into the classrooms very well if individualized instruction is provided.

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In addition to the same kind of training offered to the educable mentally retarded, some comments are appropriate for specific tasks. Typewriting is a skill that the slow learner can learn to do well. As with the educable mentally retarded, this should be taught with much repetition. Speed should not be emphasized too greatly. The student should be given attainable goals and should be exposed to all types of production work, not only straight-copy work.

It has been my experience that these slow learners can learn the entire typewriting program if the teacher believes in them.\(^1\) The standards must be held high, however, or else they will not be employable.

Recordkeeping, on the other hand, is not recommended for the slow learners in the same manner as typewriting. Recordkeeping requires a variety of tasks to be performed, decisions to be made, and a variety of general rules and principles to be applied. The tasks which prove troublesome are computational duties, correspondence duties, and the processing of confidential information. Some parts of recordkeeping, such as cash clerk or invoice clerk duties, would be feasible because these would not force the student to do too many tasks simultaneously.\(^2\)

In 1961, a program was implemented in two high schools in Richmond, California, which allowed students who failed in academic courses in high school, but who showed aptitude in mechanical ability, to study in a two-year pretechnical course at Cogswell Polytech.

\(^1\)Marilyn Stenson, "Buckle Up and Teach the Slow Learner in Typewriting," \textit{Typewriting News}, Spring, 1968, p. 3.

As an example of correlated lessons, a student making a model of the Golden Gate Bridge in shop would learn about the mechanical skill needs in science, study measurements and slide rule in mathematics, learn technical terminology and write descriptions of shop activities in English class. As a result, formerly unrelated subjects become relevant and the student was motivated to learn.¹

Impressed by the achievement of students in Richmond's plan, a two-year pretechnical program was developed in New York City. Then, a four-year plan for the nonacademic student, the Correlated Curriculum Program was formulated. It was different than the general course because it offered the slow learner a program that was career centered. Students explore the opportunities in business, health, and industry before making career choices. In business career classes, the introductory skill levels are developed into basic skill levels at the second level—to intensive career training at the third level. Students are trained on a cooperative basis on the fourth level. Students are trained in all job areas in business by the laboratory approach. The curriculum is structured with the old saying, "I hear and I forget. I see and I remember. I do and I understand," and although text/workbooks are used, the text is minimal.²

These students can learn, and programs like these can be included in all public schools to provide this group of students a share of the education provided to others.

²Ibid.
CHAPTER V

THE VISUALLY IMPAIRED

The visually impaired have been classified into two groups—the blind and the partially sighted. The blind student is one who has so little vision that the senses of touch and hearing must be substituted for sight when teaching. Braille is most commonly used by these students. The partially sighted are able to utilize some remaining vision for learning. Special materials, instructional procedures, and conditions are incorporated to accommodate the student. There are few blind and partially sighted persons in the general population by comparison with the mentally retarded. There are approximately three blind and six partially sighted students out of every thousand.¹

Residential schools have had the main responsibility for educating and training the blind and partially sighted. Since approximately 1962, the enrollment of these students in the public schools has been increasing. The residential schools had several disadvantages that have promoted the increases in the public schools. The residential schools separate the student from his parents, brothers, and sisters; the sighted world and the emotional adjustment to it; and the competition and cooperation of the sighted world which he will have to enter eventually. The public school teachers have received help from the instructors of the blind in

planning the programs and for providing, as necessary, specialized instruction appropriate to the blind child's needs.\textsuperscript{1}

The typewriter provides the visually handicapped with an excellent tool of communication. There are some phases of this training that are more difficult, such as inserting paper in the correct place, detecting errors, and erasing errors. These can be overcome and, since the sightless usually have keen senses of hearing and feeling, they will substitute these senses. The blind typist competes at no disadvantage in speed or accuracy, because good typing is done largely by touch.

When the blind child begins to type at an early age, his use of this channel to normal living helps avoid a build-up of the feeling that he is less capable than others. He need not be limited by the frustration of very slow or illegible handwriting, or of having to ask others to write for him.\textsuperscript{2}

Blind students have been attending public schools, have been taught by resource teachers to learn Braille, the use of canes for travel, and typing. They can work independently from a Braille edition of the textbooks. Books are now available for algebra, geometry, English, science, history, government, home economics, health, youth problems, and American problems.

Tapes, records, etc., can also be utilized in the instruction. In typing, especially, audio teaching aids will be most beneficial. As for other equipment, manual typewriters can be used but the electric typewriters are much easier for blind students.

Adaptations that must be made in teaching a blind student are few in number and easy to make. Blindness does not imply lack of


\textsuperscript{2}Doris M. Willoughby, "Blind Children Type By Touch," The Balance Sheet, LI (January, 1970), 213.
mental ability, poor coordination, or emotional maladjustment. It is well to note, however, that with improper attitudes and lack of training, these problems and others may develop needlessly. The successful teacher must show his blind student that, while blindness is a substantial nuisance, with proper training and attitudes it need be no more than that.¹

The visually handicapped students have been educated in the public school very well. The capabilities of these students is not as limited as some would think. They have also been able to adjust to the work world very well.

¹Ibid., 215.
CHAPTER VI

THE HEARING IMPAIRED

The hearing impaired are also divided into two groups—the deaf and the hard of hearing. Students are considered deaf when their sense of hearing is non-functional for ordinary purposes. There are two classes in this group, based on the time when loss of hearing occurred: 1) the congenitally deaf, those who were born deaf; and 2) the adventitiously deaf, those who were born with normal hearing but whose hearing has become non-functional, due to illness or accident.¹

Education can be provided that will include both groups by offering programs that would be possible for both. By individualizing, the student can get maximum benefit from the learning.

At the Special Study Institute in Vocational Education for the Deaf in Ann Arbor, Michigan, on August 11, 1971, Gates and Clarq presented a summary which included the following:

History indicates that employment of deaf people will not happen by chance. In general, deaf people have not achieved employment circumstances commensurate with their interests, motivations, skills, and achievements. Employment of the deaf generally is characterized by unemployment, underemployment, and job frustration.

The end of any vocational education program must necessarily be the development of technical and social competence, which will

facilitate such entry and additionally provide accommodation to the larger world in which people must live. The first step in the developmental process is, therefore, one of identifying the cluster of occupations and jobs within such clusters where a deaf person with appropriate education and training can find meaningful employment. Of equal importance is identifying the distinctiveness of the student in terms of interests, motivations, aptitude, and achievements.

The third step is to determine the experiences which will take students from where they are to where they must be in order to obtain meaningful employment and job mobility, i.e., our ultimate criterion of program success.¹

As in the training of any of the handicapped, potential employment must be taken into consideration. However, there are many fields that would be suitable and have been used. Among these are auto mechanics and body repair, chemical, pharmaceutical, printing, food services, health occupations, cosmetology, nursing, and many others.²

In a survey done by Loretta Ann McDonald³ of the Hawaii School for the Deaf and the Blind, Honolulu, Hawaii, data were assembled that would give educators of the deaf an overall view of the extent and nature of offerings in business courses in schools for the deaf. The conclusions were as follows:

1. Schools for the deaf provide various skill subjects in business education, usually revolving around a core of typewriting, operation of the spirit and stencil duplicators, use of the card punch machine, full-key and ten-key adding-listing machines, and filing.


²Ibid., p. 29.

2. Business curricula in high schools for the students who have no problem with hearing include, in addition to those skill subjects provided in schools for the deaf, offerings in non-skill subjects, such as general business, business arithmetic or business mathematics, business law, business English, economics, and bookkeeping.

The recommendations were to include subjects such as found in regular high schools when planning for the hearing impaired. These include general business and recordkeeping or elementary bookkeeping, in addition to the previously mentioned subjects.

In order to provide training for the deaf and hard of hearing, the unique needs of each student must be understood and met. This calls for a high quality staff but it does not necessarily involve excessive expenditures for the school.
CHAPTER VII

THE CRIPPLED AND THE HEALTH IMPAIRED

The students in this category have limited abilities in self-mobility, in fitting into the classroom, and in using materials for learning because of muscular and neuromuscular handicaps. These conditions include cerebral palsy, muscular dystrophy, multiple sclerosis, poliomyelitis, spina bifida, paraplegia, and heart conditions.

Some students have limited abilities similar to those listed above due to skeletal deformities. Examples include club foot, congenital dislocation of the hip, scoliosis (curvature of the spine), bone cysts, tumors, and conditions caused by accidents.

Other students have limited strength, vitality, and alertness for school work due to chronic health problems. These include heart conditions, tuberculosis, rheumatic fever, nephritis, infectious hepatitis, infectious mononucleosis, asthma, hemophilia, epilepsy, leukemia, and diabetes. There are approximately 20 such students who suffer from one of these disorders out of every 1,000.1

Education or training of the physically handicapped would probably be easier if it were offered in a hospital or institution, but the experience of attending a public school is valuable to both the handicapped and the non-handicapped. Putting an intelligent and

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emotionally stable child in a school other than a normal one could do permanent damage to his emotional stability. The presence of a pupil who is courageously carrying on in spite of his condition may actually be an inspiration to the other students.

The Institute of the Crippled and Disabled has this motto, "To teach him to use what he has, to substitute where he has not, to build up the skills of the body and the strength of the spirit." This motto can very satisfactorily express the duties of the teacher in her relationship with the physically handicapped students in her class.

These students have varied problems, and it is difficult to elaborate on them all. Although it would be a definite advantage, teachers do not have to have special training as these students can fit into the regular classroom with few modifications. These modifications will vary with each student. It takes patience and understanding on the part of both teacher and student, and the time allotted for learning may be varied.

If the teacher can help any student who is handicapped to learn a skill which will make him employable, the gap between the potentialities of a normal student and the physically handicapped has been narrowed; inequalities have been somewhat leveled.

One of the skills that can be taught to the physically handicapped is typing. The one-handed, one-fingered, no-handed, spastic, palsied, paralyzed—all can be taught to typewrite. Typewriters should be electric,

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4Ibid.
be in dependable mechanical condition, and ready for operation. They should be modified when necessary to accommodate either a certain pupil with a specific handicap or a number of pupils with the same type of handicap. For instance, if the finger and strength control are limited, a metal plate, perforated and placed 1/8 inch above the top of the keys will allow the hand to rest on the plate without triggering the type bar or service keys. A forearm rest can be attached with bars supporting the rest and extending under the cover of the typewriter and attached to the main frame. In the case of the spastic student, the entire machine can be bolted to the desk to allow him to lean on the "rest."^1

Equipment often can be obtained from the American Legion, Kiwanis, Elks, The Moose, The Lions, and other special fraternal and service groups. There are also federal funds available for equipment for special needs students. Grants are available (under the Vocational Education Act of 1963) for feasibility studies, research, and special programs. The Vocational Education Amendments of 1968 requires that each state must vote at least 10 percent of its allocations to special vocational education for the physically or mentally handicapped.

Another principle common to the teaching of typewriting (as with any other subject) to the physically, visually, the mentally handicapped student is that they all need encouragement. The physical handicap is a large obstacle to overcome, and it may be easier for this student to become frustrated while attempting to learn. Motivation, in the form of intermediate goals, should be set as the student progresses. However,

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^1Charles L. Guatney, "Learning to Type with a Handicap," The Balance Sheet, L (February, 1969), 256-60.
with common sense, a handicapped student should be given the same standards and goals as the rest of the class. This assures him that he is not being treated differently and does not destroy his confidence gained from previous learning.¹

In learning the skills, the student will usually find the best way for him to handle them. A one-handed typist will find his own method of typing. If this does not occur, the teacher can put herself into the same situations and experience the difficulty. This will enable her to help the student devise a method of operation.

In addition to the physically handicapped, we have many students who are adapting within the limits of their condition but who might even make more productive (and higher level) adaptations with specific physical or mechanical aids. For example:

The visually impaired youngster whose condition is incorrectible might increase learning efficiency with a magnifying glass device which aids low level vision; the cerebral palsied youngster with difficulty in speech may speak clearer with an electronic speaking aid that filters out speech defects; the paralyzed student gains work potential when he utilizes a motorized wheel chair; the blind person becomes more independent when he operates an electronic obstacle detector; the neurologically impaired person with serious incoordination can operate a typewriter which is altered by use of a shield which permits direct finger use in a controlled fashion.

Regardless of the handicap or its residual effects, special needs of each handicapped individual must be ascertained in light of their potential for work.²

These students do not want sympathy but a feeling of empathy. Understanding their individual problems will result in acceptance and a belief in their ability to accomplish.³

¹Ibid.


CHAPTER VIII

THE TEACHER ROLE

The teacher plays an important part in the training of the handicapped. As mentioned previously, specially trained teachers would be advantageous, but special training is not an absolute necessity. The average classroom teacher can, with patience and understanding, fit these students into the regular classroom. Modifications will have to be made, and these modifications will vary with each student.

At present, the teacher education programs have not been offering enough aid to the teacher who will be training the handicapped. According to the report, Michigan Vocational-Technical Education Personnel Needs, 1971--1975,¹ very little is being done by vocational-technical teacher education departments to conduct workshops and short courses for meeting the needs of personnel who work with the handicapped and the disadvantaged. Less than 4 percent of the workshops offered by vocational-technical teacher education departments (1969/70 through 1970/71) dealt with special needs themes. For some reason, the federal and state priorities, which emphasize vocational-technical education for the disadvantaged and handicapped, have not yet been picked up significantly by teacher educators. Perhaps the difficulty is connected to the need for acquiring staff competencies in these areas and/or securing financial resources to be able

to offer such programs. Only one of the teacher education projects for 1970/71 was in the special needs area, with reference to the vocational-technical teacher education project funds administered through the State of Michigan Vocational Education Services. Each institution makes decisions about the nature of the projects it undertakes with its share of the funds.

Another source of help for the teacher is the special education teacher. Mr. Martin Dean, Assistant Superintendent, Special Educational Services Division, San Francisco Unified School District, says:

The plan now is to retrain regular classroom teachers so that they can understand and teach these youngsters. Those now teaching special education would move into regular classrooms and provide needed special assistance. The new policies would free the special education teachers to work with the estimated 3.6 million youngsters not now receiving special assistance or not even being sent to school by their parents.1

The secondary school teacher will have to assume many roles in providing an effective education for the handicapped. As an advisor, the teacher will have to plan a course of study and help to solve the problems that the student has. As a motivator, the teacher will manipulate situations so that the student will be motivated to achieve his potential. As an instructor, the teacher will have to decide what the student will have to accomplish in order to achieve his goal. As a disciplinarian, the teacher will have to adhere to standards so that the student will be able to compete in the world of work.

The teacher must want to teach this type of student in order to be successful. The handicapped are usually very sensitive to another’s reactions to them, and their acceptance of the instructor is based on her patience and understanding.

In addition, she must be shock-proof, not easily discouraged, emotionally stable, physically strong, have personal convictions, and have control, command, and respect of the student. Since it often takes twice as long for the special needs student to comprehend an idea or learn a skill, patience, perseverance, and a sense of humor are a requisite.  

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CHAPTER IX

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The interest of the public is shifting toward recognizing the need for educating and training the handicapped, both mental and physical. This is very important because:

The potential for economic productivity of most handicapped persons is far greater than has generally been realized by the nation or any of its components. It is true that a segment of the handicapped is not likely to be economically productive. Those who are grossly handicapped and of a profound degree of incapacity, may continue to be wards of the family or state, but this represents an extremely small percentage of the several million Americans who are now included in the definition of the handicapped.¹

The community will play an important part in training the handicapped to become productive members by recognizing the needs and identifying the jobs available. From this information, programs for training the handicapped for gainful employment can be instilled into the public classroom. Standards for the courses offered should be held as high as necessary for employment in order to prepare the student to compete on the job market. This will also encourage the student to develop to his full capacity.

Many of the states have mandatory education laws and the public schools have developed various programs to accommodate the handicapped. Many states do not have such laws or are now in the process of adopting

one. These schools are in the planning or development stages and have no reports at this time.

Programs have been in operation, such as: REACH (Raise Employment Aspirations for Children with Handicaps), which is working with eight high schools in Southern Illinois to bring the educationally and vocationally handicapped students to an employable level; the Saginaw Valley Rehabilitation Center in Saginaw, Michigan; the League for the Handicapped in Detroit, Michigan; COLT in Baltimore, Maryland; COP in Chicago, Illinois; the State Departments of Education for the various areas of disabilities, etc. These are but a few of the programs in operation. Public schools and intermediate school districts have recently developed or are in the process of developing programs. It is too soon to evaluate these programs. A study made in several years would determine the effectiveness of the programs in effect now and the ones that are presently in the development stage.

The programs that have been at the beginning stages have brought out some weaknesses, such as: lack of skill training for particular jobs;\textsuperscript{1} the examining centers for the handicapped are too sparse (students have to travel approximately 300 miles to be evaluated for reimbursable programs); employers are not willing to hire the handicapped (although they enthusiastically endorse the training of them); and the places of employment do not suit the handicapped students' limited capabilities very well. An example of the last mentioned condition: A student may be trained for a job as a typist. If the community is small, the student may not be able

\textsuperscript{1}Philip E. Pfannenstiel, "Work Experience Programs for Disadvantaged and Handicapped Youth," Annual Evaluation Report, May, 1972 (Mimeographed)
to find employment because the size of the business firms may warrant the hiring of a person who can take care of all the office work. The handicapped student may not be capable of taking care of this and does not get employed.\(^1\) Additions and revisions will have to be made in the programs. At the present, there is a great need for implementing and revising programs to help the handicapped.

In addition to efforts to prepare students for employment and to help place them into jobs, there are places called Sheltered Workshops where students who are capable of only marginal employment or have severe handicapping conditions can be employed. They are paid according to their learning abilities. When, and if, their skills and attitudes permit, they will be placed in the community. The work at the Sheltered Workshops is subcontracted from local business firms. In this way, the employee participates as an active member of the community; this provides him with a sense of achievement and belonging.\(^2\)

The Vocational Education Amendments of 1968 provide for financial aid to schools offering training for the handicapped. So that no young person will be denied an opportunity to prepare for work suiting him as an individual, the Amendments require that each state must vote at least 10 percent of its allocations to special vocational education for the mentally or physically handicapped. Many schools have taken advantage of these funds; many more are eligible.

The handicapped student can be placed into the regular classroom. In some cases, many modifications will have to be made. In others,

\(^1\)Paul Ollila, private interview held on April 6, 1972, at Hancock, Michigan.

very little will have to be modified. Each type of handicap requires training that is adapted to that particular student. Individualized instruction is necessary in order to assist the handicapped to succeed.

The teacher will be required to put that extra into teaching that is needed to aid the handicapped. A description of the student will have to be made in order to consider the type of teaching that should be offered. The facilities will have to be taken into consideration and modifications made accordingly. Resource teachers can be utilized to aid in the development of the programs and the orientation of the instructors, to teach the handicapped. Teacher educators should be prepared to offer more in-service and pre-service for those who are and who will be training the mentally and physically handicapped.

Recommendations

The majority of writers on the subject of training the mentally and physically handicapped students at the secondary level recommend the public high school classroom for this education. It will aid the student in learning to adjust to the world of work where he will have to compete with the normal employee.

The education should be on an individualized basis as the disabilities all tend to be unique. One key to success in teaching these students is to have the teacher mold the classroom instruction to fit the needs of the students.

The community is very important in the training of special-needs students. The employment needs must be recognized, and the types of jobs available must be identified. From this information, programs for training the handicapped for gainful employment can be instilled into the classroom. Standards for the courses offered should be held as high
as necessary for employment in order to prepare the student to compete on the job market. This will also encourage the student to develop to his full capacity.

Teacher educators should take the needs of the teacher who is training the handicapped into consideration by offering training sessions that will aid in adapting the training to the students' needs. Special education teachers should be utilized as resource persons for the regular classroom teacher.

The need to educate and train the physically and mentally handicapped must be emphasized. These students can be educated and trained, but it is apparent that a great many are not receiving the training they are entitled to. Education has an obligation to every student to provide him with the necessary training and skills that will allow him to become a self-respecting, self-supporting individual in our society. Our aim in educating and training the handicapped should be to teach the student to accept his handicap and then to assist him to reach as high a level of achievement as is practical for him.
APPENDIX

Letter of Inquiry to Dr. LeRoy Reynolds .................. 36
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January 11, 1972

Dr. LeRoy Reynolds  
Head of Special Education Department  
Central Michigan University  
Mt. Pleasant, Michigan 48858

Dear Dr. Reynolds:

The current trend is to increase the educational opportunities for individuals with mental and physical handicaps in order to provide them with employable skills. Much of this can be offered in the public schools at the secondary level.

I am conducting a study concerning the extent to which training of this type is currently being offered and the feasibility of implementing such programs into the public schools at the junior and senior high level.

It is my understanding that you have done much work in this area. I would appreciate any literature and information you can give me on the programs you have been conducting. If you can refer me to anyone else who has been active in this area, please send me his or her name and address.

Very truly yours,

(Mrs.) Helen E. Bruno
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Mr. Paul Ollila, Special Needs Coordinator
Copper Country Intermediate School District
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Mr. Carl Nieminen, Superintendent
West Iron County School District
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Mr. DuBois
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Mr. Ivan Ryan  
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Mr. Johan Ingold  
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Mr. Joe Hampton  
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