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Frequency of Job Skills Deemed Critical by Employers Appearing on the Individualized Education Plans (IEPs) of Moderately Retarded Students

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FREQUENCY OF JOB SKILLS DEEMED CRITICAL BY EMPLOYERS
APPEARING ON THE INDIVIDUALIZED EDUCATION PLANS
(IEPs) OF MODERATELY RETARDED STUDENTS

by

Linda Dagen McCrea

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Special Education

Western Michigan University
Kalamazoo, Michigan
December 1991

FREQUENCY OF JOB SKILLS DEEMED CRITICAL BY EMPLOYERS
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(IEPs) OF MODERATELY RETARDED STUDENTS

Linda Dagen McCrea, Ed.D.

Western Michigan University, 1991

The successful employment of moderately retarded students is dependent upon an educational program which is focused upon employment as an expected outcome. The purpose of this study was to examine the relative frequency that work-related skills deemed critical by employers appear on the exiting Individualized Education Plans (IEPs) of moderately retarded students (i.e., those labeled trainable mentally impaired students [TMI] in the state of Michigan).

An extensive literature review was conducted and found 49 job skills and/or work behaviors that employers view as critical for job success. An expert group sorted these critical job skills into three work-related behavior categories. The sort process was validated by a second expert group. There were 331 exit IEPs submitted by 23 intermediate school districts (ISDs) in the state of Michigan. Each IEP was coded, according to the job skill(s) which were found being addressed. An advanced doctoral student in special education validated the coding process.

Frequencies and percentages were found for each of the 49 employer designated job skills. The 10 most frequently addressed job skills were found primarily in Category 2--Work-Related Abilities,

whereas the 10 least frequently addressed job skills were found primarily in Category 3--Interpersonal Skills. However, the job skills in Category 1--Personality Characteristics--were evenly distributed throughout the frequency rankings. Comparisons were made between gender and the 49 job skills, resulting in three significant discrepancies, and between the ISDs and the 49 job skills, resulting in 7 job skills which were addressed frequently in the review of literature as well as by the participating ISDs.

Recommendations and implications included: for the ISDs, a list of eight critical job skills which should be incorporated into the IEPs of moderately retarded students; for the field of special education, a rationale for the use of employment specialists; for the employers, a suggestion to become co-trainers with employment specialists; and for teacher preparation programs, a list of skills which special educators should have upon graduation.

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Western Michigan University, 1991

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DEDICATION

The dissertation is dedicated to my parents,
whose sacrifices made my first degree possible:

Charles (Pat) and Donna (Hoover) Dagen;

and to my husband and children,

whose sacrifices made my last degrees a reality:

Robert Douglas McCrea, Jr.

Robert Douglas McCrea, III

Patricia Donan McCrea

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Acknowledgments--Continued

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Most of all I wish to express to all who read this, if it were not for my faith in God, knowing that through Him I can do all things, the doctoral program and dissertation would never have been undertaken (Proverbs 3:5,6).

Linda Dagen McCrea

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CHAPTER I

INTRODUCTION

Inasmuch as education has as its fundamental purpose to prepare all students to lead productive and fulfilling lives (Benz & Halpern, 1987; Siegel & Sleeter, 1991; White, 1987), it could be assumed that upon completion of their schooling students would be prepared to begin full-time competitive employment and/or to pursue other postsecondary options. Thus exiting students should have acquired the skills necessary to live independently and to become individuals who participate fully in the mainstream adult world (Siegel & Sleeter, 1991; Wehman et al., 1989; Wisniewski, Alper, & Schloss, 1991). However, the change in roles from being a student to a productive member in the adult world of employment, a "difficult environment" even under the best of circumstances (Siegel & Sleeter, 1991, p. 27), has not been typically occurring for mentally retarded young adults (Hasazi, Gordon, Roe, et al., 1985). This situation has become a major concern for parents, advocates, and professionals in the field (Berkeell & Brown, 1989; Everson & Moon, 1987; Goldstein, 1988; Repetto, White, & Snauwaert, 1990).

The role employment plays in independent functioning is quite significant and is directly related to the value society places on an individual (Miller, LaFollette, & Green, 1990). According to several authors, an individual's success and quality of life are in

fact measured in terms of paid employment (Rhodes, Ramsing, & Hill, 1987; Weicker, 1987). Employment not only provides economic independence, but also (a) serves as an essential key to successful integration into community life (Weicker, 1987), (b) aids in the development of greater personal independence, (c) enhances the individual's self-concept, and (d) allows for interpersonal relationships to occur (Kiernan, Schalock, & Knutson, 1989).

Since the enactment of the Education for All Handicapped Children Act (PL 94-142) in 1975, integration rather than segregation has become the focus of special education (Hallahan & Kauffman, 1990; Weicker, 1987) with the underlying philosophy that special education students will be empowered with the potential to survive independently in adult environments (Siegel & Sleeter, 1991). Yet exiting special education students frequently experience difficulties with their community adjustment, including limited finances, restricted opportunities for additional education, inadequate living conditions, and a variety of social and personal problems ranging from being lonely to being victimized, due to the lack of a support network (Halpern, 1990).

According to Will (1984), then the Associate Secretary of the Office of Special Education and Rehabilitative Services, approximately 300,000 students exit the school systems annually who have received special education services. As she stated, special education is "an outcome-oriented process encompassing a broad array of services and experiences that lead to employment" (Will, 1984, p. 2). Numerous studies have documented that in spite of the

various programs and legislation that have been designed to meet their academic, vocational, and support service needs, once out of school, mentally retarded young adults, especially those labeled moderately retarded, still experience high rates of unemployment and are considerably underrepresented in the work force (Hasazi, Gordon, & Roe, 1985; McDonnell, Hardman, & Hightower, 1989; Mithaug, Horiuchi, & Fanning, 1985; Rusch & Phelps, 1987; Stark & Kiernan, 1986; Wehman, Moon, & McCarthy, 1986; Weisenstein & Koshman, 1991). As Edgar (1987) so aptly phrased it, "our success to date has been less than spectacular" (p. 559).

Due to the results of these studies and others, the Office of Special Education and Rehabilitative Services has made the transition of special education graduates from school to work one of its top priorities (Will, 1984). Research data indicate that competitive employment can be achieved for these students providing that the factors that contribute to job maintenance and termination are addressed in their educational programs (Bullis & Foss, 1986b; Chamberlain, 1988; Foss & Peterson, 1981; Greenspan & Shoultz, 1981; Hanley-Maxwell, Rusch, Chadsey-Rusch, & Renzaglia, 1986; Wehman, Hill, et al., 1985). Questions have been raised as to how special education will accomplish this task.

First, will there be jobs available for these students once they have exited their school program? The decline of the younger work force has already begun to impact specific businesses. Fast food, hospitality, and/or service-oriented businesses are currently looking to populations that have not been considered to be a large

part of their potential labor market such as the disadvantaged, the elderly, and the mentally retarded (Kiernan et al., 1989; Stark & Goldsbury, 1988).

Second, will the mentally retarded young adults have the work-related skills necessary to be successfully employed? The current employment trend demands that this question be addressed specifically. No matter how confident special educators are that they are teaching what employers want in an employee, the unemployment and underemployment figures for this population indicate that an "incorrect path is being pursued" (Retish, 1989, p. 37).

In conjunction with the second major question above, are two other related questions. First, what specific skills do employers view as critical for employees to possess in order to be successful on the job? And secondly, are those specific skills being addressed in the educational programs of students who are labeled moderately retarded? Addressing these questions from the employers' point of view will have a significant impact on the future employability success of students who are moderately retarded.

Problem

Successful employment of individuals with retardation, especially those labeled moderately retarded, has been a major topic in the literature during recent years (Kranstover, Thurlow, & Bruininks, 1989). The successful transition from school to work for this population is dependent upon an educational program that is employer-and-employment driven (Retish, 1989). Recognizing this,

schools generally incorporate some vocational and/or work-related skills into the Individualized Education Plans (IEPs) of their students. If the attempt to incorporate vocational skills is being made, but students are still unemployed, perhaps there are skills which are essential to employment that are being omitted from their programs (Campbell, Hensel, Hudson, Schwartz, & Sealander, 1987). Therefore, the purpose of this study was to examine the relative frequency that work-related skills deemed critical by employers appear on the Individualized Education Plans (IEPs) of students who are moderately retarded (i.e., those labeled trainable mentally impaired students [TMI] in the state of Michigan).

Research Question

Are the work-related objectives that appear on IEPs of TMI (moderately retarded students) students consistent with skills that employers have judged critical for job success? Secondary questions will address which work-related skills were addressed most frequently on the IEPs and which were addressed with less frequency.

Definitions

The following definitions are included because of their relevancy to the research.

Employment: For purposes of this paper, employment is considered to be work that is done for wages and that produces valued goods and services (Wisniewski et al., 1991).

Individualized Education Plan (IEP): PL 94-142 requires an IEP to be drawn up by the educational team for each exceptional child; the IEP must include present educational performance, instructional goals, educational services to be provided, and criteria and procedures for determining that the instructional objectives are being met (Hallahan & Kauffman, 1990). It should be noted that Michigan defines an IEP as an Individualized Education Program. However, for the purposes of this study the first definition will be the one used.

Intermediate school district (ISD): Michigan defines this as a corporate body established under the school code. The ISD functions as an extension downward of the federal and state operations, but works much closer with the local school districts within its body.

Moderate retardation: A classification used by the American Association on Mental Retardation to specify an individual who scores 3 to 4.5 standard deviations below the mean as determined through intellectual assessment and whose IQ test score is between 40 and 55; corresponds to the educators' label of trainable retarded (Hallahan & Kauffman, 1990).

Trainable mentally impaired (TMI): Michigan rules define a TMI student as one who rates 3 to 4.5 standard deviations below the mean as determined through intellectual assessment; displays a lack of development primarily in the cognitive domain; and demonstrates an impairment of adaptive behavior. This categorical (school) label directly corresponds to those individuals labeled by other states and agencies as *moderately mentally retarded (impaired)*.

Transition: A process of change that enables a student with disabilities to achieve employment upon graduation from a special education program.

CHAPTER II

REVIEW OF LITERATURE

This chapter provides information from a review of literature focusing on the employability of students with moderate retardation. The review is subdivided into the following sections: (a) employability focus in education, (b) employment opportunities, and (c) employability issues.

Employability Focus in Education

In 1984, Madeline Will, then Associate Secretary for the Office of Special Education and Rehabilitative Services, indicated that approximately 300,000 students exit our school systems annually who have received special education services. As she stated, special education is "an outcome-oriented process encompassing a broad array of services and experiences that lead to employment" (Will, 1984, p. 2). Or, as one article summarized, "the efficacy of special education programs is determined by the quality of life of its graduates" (Wisniewski et al., 1991, p. 43). One measure of that quality is the employability of those graduates. Thus employability has become a major concern and has been addressed by legislators, school systems, and special educators (Berkell & Brown, 1989; Everson & Moon, 1987; Repetto et al., 1990).

Legislators

Legislators have underscored the importance of the employability issue of special education graduates by enacting several pieces of legislation. Such legislation provides greater vocational options for young adults with mental retardation (Hasazi & Clark, 1988). The Carl D. Perkins Vocational Act of 1984 (PL 98-454) requires that all students with handicaps be informed of and allowed equal access to enrollment in vocational education (Sec. 204(a)(1)). After a student is enrolled in a vocational program, counseling services must be provided to facilitate the transition from school to employment. Whenever necessary adaptations should occur within the curriculum, instruction, and/or facilities in collaboration with special education personnel (Sec. 204(c)(1)) (Hasazi & Clark, 1988). Weicker (1987) cited another law passed by Congress which has had an impact on employability, the Rehabilitation Act Amendments of 1986 (PL 99-506). The "overall purpose of this law is to promote employment, an outcome which benefits all" (Weicker, 1987, p. 8).

Additional pieces of legislation have also had an effect on special education. The Education of All Handicapped Children Act Amendments of 1986 (PL 99-457) reauthorized mandated transitional programs. The act's purposes were expanded to enhance vocational and life skills, as well as increase integration within community settings (Weicker, 1987). The Individuals With Disabilities Act of 1990 (IDEA) provided a new definition of transition services (Sec. 602(a)(19)) and adds to the overall definition of Individualized

Education Programs (IEPs). IEPs must now include a statement of needed transition services for special education students beginning no later than age 16 and at age 14 when appropriate (Sec. 300.346(d)).

Anticipating that changes were to occur in federal legislation, Michigan revised its laws in 1987 in an attempt to address the employability issue. Michigan law requires each school district to include a written statement in each student's IEP beginning at age 12, indicating that the individualized educational planning committee (IEPC) has taken into consideration the prevocational/vocational needs of the student (R 340.1721e, Rule 21e.(3)(g)).

Many other states have begun to include an individualized transition plan (ITP) as a required component within the individual IEP (Repetto et al., 1990); however, Michigan does not currently have an ITP procedure in place.

School Systems

The second constituency concerned with employment of special education graduates are school systems. School systems are "becoming increasingly aware of their obligation to provide services which enhance employment opportunities for students with disabilities" (Weisenstein & Koshman, 1991, p. 67). Consequently, the emphasis of secondary special education is shifting from isolated self-contained programs to the implementation of curriculums that are integrated and community-based, as well as functional (Wisniewski et al., 1991), and that provide the greatest benefit to students in their

adult lives (Benz & Halpern, 1986; Halpern, 1990; Rusch, McNair, & DeStefano, 1988).

Secondary special education programs have been designed to help students learn to manage varied environments. Therefore, an expected outcome for this population is the ability to function in an employment situation (an adult environment), by applying the knowledge and specific strategies they acquired while in school (Cobb & Hasazi, 1987; Kranstover et al., 1989; Steere, Wood, Panscofar, & Butterworth, 1990; Wehman et al., 1989). Such knowledge and strategies are acquired through community-based vocational training, vocational education classes, and paid work experiences (Hasazi & Clark, 1988). In addition, these experiences provide other work-related skills that benefit special education students. Such skills include the development of values, attitudes, habits, human relationships, and daily living skills (Sitlington, 1981).

Special Educators

At the same time legislators and school systems are attempting to enhance the employability of special education graduates, special educators themselves are also addressing this issue. Special educators have a special responsibility, for it is their task to implement the programs and curriculums decided upon by their respective school systems. In the past, attitudes held by special educators toward employment may have been a factor that severely limited the success rate of young adults with mental retardation in securing and maintaining employment. However, research today indicates that

educators have positive attitudes regarding the appropriateness of employment of persons with severe handicaps and the employability potential of these same individuals (Schmilken & Berkell, 1989). Benz and Halpern (1986) found that 62% of the special education administrators surveyed believed that students with handicaps could and should be prepared by their school districts to make the transition to work. This study also noted that secondary special education teachers should be the ones responsible for coordinating transition.

Special educators are displaying a continual interest in the long-term value of the services they are providing (Okolo & Sitlington, 1988; Weicker, 1987). These educators play a key role by operationalizing school curriculums that incorporate academics and social skills into actual work experiences (Eigenbrood & Retish, 1988; Everson & Moon, 1987; Hudson, Schwartz, Sealander, Campbell, & Hansel, 1988; Montague, 1988; Siegel & Sleeter, 1991; Storey & Mank, 1989).

Summary

Legislators have been enacting legislation that deals specifically with the special education student's involvement in vocational education. In response to these laws, school systems are developing appropriate and functional curriculums for this population. Special educators have in turn realized the need to offer functional curriculums, work cooperatively with vocational education by assisting in vocational assessment, implement career developmental models, and

work toward training the student for employment (Elrod & Sorgenfrei, 1988; Halpern, 1985; Hasazi, Gordon, & Roe, 1985; McDonnell, Wilcox, & Boles, 1986, Storey & Mank, 1989; Wehman et al., 1986). A further question which must be addressed is: Will there be jobs available for special education students once they have completed their individual special education programs, especially the moderately retarded?

Employment Opportunities

Legislators, school systems, and special educators have each done their part to enhance the employability of special education graduates. However, the employability of students who are moderately retarded typically depends upon the general employment climate. The following three factors affect the employment climate for this population: (1) the number of workers in the labor force, (2) the state of the economy, and (3) the willingness and attitudes of employers to employ them (Stark & Goldsbury, 1988).

Labor Force

Statistics concerning the population growth of the United States are indicating: (a) a decline from the 9.3% growth rate in 1983 to a 5.9% growth rate in the year 2000, (b) a change in the distribution of age categories (the percentage of those over 65 has increased dramatically since 1960), (c) a shortage in the work force due to early retirements, (d) a decrease in the next 5 years of the 20- to 24-year-old labor force (Kiernan et al., 1989; Stark &

Goldsbury, 1988), and (e) an overall decrease in the number of persons in the larger age bracket of 15 to 44 years (Linari & Belmont, 1986).

The decline of the younger work force has already begun to impact specific businesses. For example, the National Restaurant Association (cited in Stark & Goldsbury, 1988) has stated that the restaurant industry is short some 200,000 workers. Fast food, hospitality, and/or service-oriented businesses are currently looking to populations that in the past have not been considered to be a large part of their potential labor market (i.e., the disadvantaged, the elderly, and the handicapped) (Kiernan et al., 1989; Schallock, McGaughey, & Kiernan, 1989; Stark & Kiernan, 1986).

Projections are that nearly four out of five new jobs will be in service industries by the year 2000. According to Linari and Belmont (1986), the largest demand for workers is anticipated in the retail trades, followed by business services, new construction, eating and drinking establishments, hospitals, wholesale trade, miscellaneous business services, and medical and professional services. These authors stated "whereas high technology careers will expand considerably, more conventional occupations will have the greatest increase in actual number of jobs" (Linari & Belmont, 1986, p. 36).

Benz and Halpern (1986) and Gaylord-Ross et al. (1988) found that three broad occupational categories offer the greatest employment opportunities in the coming decade for moderately retarded students. These are: clerical and sales (e.g., sales clerk, stock

clerk, or gift wrapper), service occupations (e.g., food and beverage preparation, janitorial, laundry, bus boy, dishwasher, or cook), and benchwork occupations (e.g., small parts assembly, repair, or sewing). These particular occupational categories are within the scope of abilities of moderately retarded students, and studies have shown that these students can be gainfully employed in these areas (Bullis & Foss, 1986a; Chamberlain, 1988; Hanley-Maxwell et al., 1986). Employment, therefore, should continue to be plentiful for this population of moderately retarded individuals (Linari & Belmont, 1986).

Economy

Although projections concerning the labor force are favorable to the moderately retarded population, another aspect of employability for these students to be considered is the present state of the economy. Several studies have indicated that the economy is entering a recovery phase that should last for a few years. It will then enter a phase characterized by improved economic conditions caused by technological developments (Ferguson & Ferguson, 1986; Kiernan & Stark, 1986; Stark & Goldsbury, 1988). As the economy shifts to a service-oriented, information, and high technology emphasis, more jobs will be created at the extremes of the labor force. The largest group of employees will contain retail sales clerks, fast-food workers, and janitors (Ferguson & Ferguson, 1986). The employment possibilities are promising for moderately retarded students, but

only if students possess the skills necessary to do an appropriate job.

Employer Attitudes

If economic conditions are improving and jobs continue to be available for the moderately retarded population, another important factor relevant to their employment will be the attitude of employers regarding their work potential. Recently two studies were conducted that probed this factor. Chamberlain (1988) interviewed employers who had previously hired individuals with mental retardation and those who had not. Results of this research demonstrated that 96% of those employers interviewed responded positively to the idea of hiring the mentally retarded. The participants for this study were representative of those businesses which have in the past hired the moderately retarded population (i.e., health, manufacturing, retail, and service).

The second study interviewed employers who employed a large number of part-time workers. Specifically these employers represented the service industries (Eigenbrood & Retish, 1988). The entire subject pool either agreed or strongly agreed that special education graduates could work successfully in their respective businesses and 87% replied that they would hire these individuals. Less than 10% of the employers indicated that most special education graduates would not hold jobs in the future. The results of these studies demonstrate that employers have positive attitudes toward the employability potential of special education graduates.

Summary

Projections of the future predict a sustained economic growth with some improvement in our standards of living, but at a slower rate (Ferguson & Ferguson, 1986; Stark & Goldsbury, 1988). Second, it appears that there will be a sufficient number of jobs available for all those students who possess the necessary skills to do an appropriate job, thereby creating the strong possibility that there will be significant increases in the number of jobs available for those students labeled moderately retarded (Stark & Goldsbury, 1988). And third, research shows that employers are willing to hire and have positive attitudes toward the work potential of this population (Chamberlain, 1988; Eigenbrood & Retish, 1988; Shafer, Hill, Seyfarth, & Wehman, 1987). The external factors affecting the employability of moderately retarded students seem to have been addressed. Unfortunately this population of students experiences high rates of unemployment.

Employability Issues

"Despite the fact that great progress has been made in post placement training, many special education students continue to be unsuccessful in competitive employment settings" (Hanley-Maxwell et al., 1986, p. 45). Research documents that young adults with mental retardation continue to experience a variety of problems on the job (Foss & Peterson, 1981).

The current literature has focused on two separate employment aspects of students who are moderately retarded. First, follow-up studies have been conducted to obtain the employment/unemployment rates for this population. And second, studies have investigated students with moderate retardation who were initially successful in obtaining jobs, yet experienced various problems that resulted in termination.

Employment/Unemployment Statistics

Numerous follow-up studies have been conducted that focus on the unemployment/employment rates of students who have exited special education programs. Very few of these studies have focused on any one specific population of students. For purposes of this research, only follow-up studies specifically identifying the moderately retarded population will be discussed.

Hasazi, Gordon, and Roe (1985) found that those students labeled moderately retarded were only employed 14% of the time with the majority of this group working in part-time positions. Another study conducted in 1985 found a slightly higher employment rate (21%) for those individuals labeled moderately or severely mentally retarded (Wehman, Hill, et al., 1985).

The following studies found higher employment figures for moderately retarded students, but primarily in part-time and/or sheltered environments. In 1986, Schalock et al. examined the employment status of students who were moderately retarded. Their results showed an employment rate of 58%. However, over half of these

students were placed in sheltered workshops. Similar findings were reported by Thurlow, Bruininks, and Lange (1990) who documented an employment rate of 42% for moderately retarded students, but this was doing part-time work in sheltered settings. Wise and Matthews (1987) examined mild/moderate mentally retarded students and found that 67% were employed. The type of employment was not mentioned in this study.

Recent studies involving students labeled moderately retarded have continued to support prior research findings. Less than 9% of the students from this population are competitively employed (Troolin & House, 1988) with the overwhelming majority (65%-72%) of them working in part-time positions (Frank, Sitlington, Cooper, & Cool, 1990; Haring & Lovett, 1990a).

To summarize, the results of these studies range from 14% of the students who are moderately retarded being employed to 67% (which translates into an unemployment rate ranging from 33% to 86%). It should be noted that the more recent the study, the greater the number of moderately retarded students are employed. However, research indicates the majority of this population of students is still only employed part-time and most frequently in sheltered environments, even though research data indicate that competitive employment can be achieved for these students (Bullis & Foss, 1986b; Chamberlain, 1988; Hanley-Maxwell et al, 1986; Wehman, Hill, et al., 1985).

Job Terminations

Another body of research has focused on a different aspect of employability for the moderately retarded population, that of job termination(s). There are many instances when special education students are hired for competitive jobs, only to lose them after a period of time. Research has identified probable causes for their job retention problems. Causes center in four major areas: (1) social behaviors, (2) production behaviors, (3) work-related skills, and (4) personal attributes. These are elaborated below.

Social Behaviors

A multitude of studies have found social behaviors to be the major reason for job termination. These behaviors include: poor relationships with supervisors and co-workers; inappropriate interactions and poor interpersonal skills (Agran, 1987; Hanley-Maxwell et al., 1986; Lignugaris/Kraft, Salzberg, Rule, & Stowitschek, 1988; Montague, 1988; Richardson, Koller, & Katz, 1988; Shafer et al., 1987; Schalock et al., 1989; Schalock, et al., 1986; Wehman, Hill, Wood, & Parent, 1987).

Several authors have identified some of the social behaviors as character traits. For example, character traits may include: too many absences, failure to call in, tardiness, stealing, walking off the job, lying, general uncooperative behavior in the workplace, and lack of awareness/understanding of other people and work settings (Hill, Wehman, Hill, & Goodall, 1986; Kiernan et al., 1989; Wehman &

Kregel, 1989; Wehman, Moon, Everson, Wood, & Barcus, 1988). Aberrant behaviors that were either bizarre or aggressive were also listed as social reasons for termination by many researchers, such as insubordination, noncompliance, and physical or verbal abuse (Cheney & Foss, 1984; Gaylord-Ross et al., 1988; Hanley-Maxwell et al., 1986; Schalock & Lilley, 1986; Wehman & Kregel, 1989).

Production Behaviors

A second major area regarding probable cause of job termination focused on production behaviors. Specific production behaviors were described as: low speed and accuracy, poor quality of work, a lack of independence, not completing work assignments, working slowly, and easily distracted (Cheney & Foss, 1984; Gaylord-Ross et al., 1988; Hanley-Maxwell et al., 1986; Kiernan et al., 1989; Montague, 1988; Shafer et al., 1987; Schalock & Lilley, 1986; Schalock et al., 1989; Wehman & Kregel, 1989).

Work-Related Skills

Work-related skills comprise the third category of causes that often lead to job terminations of students who are moderately retarded. Specific work-related skills found in the literature included: not following directions (Cheney & Foss, 1984; Hanley-Maxwell et al., 1986), requiring continual prompting and needing more supervision (Shafer et al., 1987; Wehman et al., 1987; Wehman & Kregel, 1989), and failure to acknowledge the authority of the

supervisor and failure to respond appropriately to supervisor correction and/or criticism (Wehman & Kregel, 1989).

Personal Attributes

The final category pertaining to job retention problems of moderately retarded students is entitled personal attributes. The following characteristics comprise this category: inappropriate appearance (Hill et al., 1986; Kiernan et al., 1989; Schalock & Lilley, 1986); employee does not want to work, has poor work attitudes, and a low motivation level (Schalock & Lilley, 1986; Wehman et al., 1988); lacks physical stamina (Schalock & Lilley, 1986); and the employee fails to improve, lacks knowledge of the job, and is poorly matched with the job (Kiernan et al., 1989; Wehman et al., 1988).

Summary

Successful employment of individuals with retardation, especially those labeled moderately retarded, has been a major topic in the literature during recent years (Kranstover et al., 1989). Legislators, school systems, and special educators have each done their part to enhance the employability of special education graduates. "Despite the fact that great progress has been made in postplacement training, many special education students continue to be unsuccessful in competitive employment settings" (Hanley-Maxwell et al., 1986, p. 45).

Follow-up studies continue to demonstrate that high rates of unemployment are experienced by the population labeled moderately retarded. Further, studies have investigated moderately retarded students who were successful initially obtaining employment, yet encountered various problems that eventually led to their jobs being terminated. Researchers have questioned why these situations still exist and have begun to probe different approaches to this complex problem. In their study, Campbell et al., (1987) stated that an "agreement between employees and their employers as to the presence or absence of certain skills in the work setting might facilitate a successful work experience" (p. 85). Once employed, moderately retarded students should be able to remain employed.

The successful transition from school to work for this population is dependent upon an educational program that is employer-and-employment driven (Retish, 1989). Recognizing this, schools generally incorporate some vocational and/or work-related skills into the individualized Education Plans (IEPs) of their students. If the attempt to incorporate vocational skills is being made, but students are still unemployed, perhaps there are skills which are essential to employment that are being omitted from their programs (Campbell et al., 1987). Therefore, the purpose of this study was to examine the relative frequency that work-related skills deemed critical by employers appear on the Individualized Education Plans (IEPs) of moderately retarded students (i.e., those labeled trainable mentally impaired [TMI] in the state of Michigan).

CHAPTER III

METHODOLOGY

This research occurred in four phases: (1) Phase 1--Determination of Job Skills, as found in the literature; (2) Phase 2--Subject Selection; (3) Phase 3--Coding the Records (IEPs); and (4) Phase 4--Data Analysis. The discussion of each phase follows.

Phase 1--Determination of Job Skills

The purpose of this phase was to develop a comprehensive list of job skills and/or work behaviors that employers have viewed as critical for job success. Several studies served as models in this process (Foss & Peterson, 1981; Nelson & Lignugaris/Kraft, 1989; Peterson & Foss, 1980; Williams, 1990).

Generation of Skills

An extensive review of the literature was conducted using an on-line computer search. The first data base accessed was Educational Resources Information Center (ERIC), which contains over 400,000 journal annotations and 300,000 education related document abstracts. The second data base was Exceptional Child Education Resources (ECER), which supplements ERIC and contains more than 70,000 abstracts of published literature in special education (Barnett, 1990).

In order to access information from the data bases, specific descriptors were used. The descriptors were found in the Thesaurus of ERIC Descriptors (Houston, 1990). Various combinations of descriptors were used in order to fully access the pertinent information contained within the data bases. Such combinations were: special education and mental retardation; mental retardation and employment; mental retardation and community integration; mental retardation, employment, and job skills; mental retardation, employer-employee relationship, and employer attitudes; and mental retardation, employability, and job training. References located using the data bases were also used as cross references for any additional studies which had not previously been identified.

A decision was made to examine the most current references, specifically those studies which were reported during the past 10 years (1981-1991). One hundred and seventy-five individual references between 1981 and 1991 were found that addressed social skills, interpersonal skills, work-related skills, work behaviors, work adjustment, and reasons for job terminations. The identified references were located in journals, books, doctoral dissertations, abstracts, and microfiche; but the majority were found in journal publications.

Sorting of Job Skills

A two-step process was followed to obtain a comprehensive list of job skills. The first step involved closely examining the 175 references, of which 56 articles were found that dealt specifically

with job skills that employers had viewed as critical for job success. Each article was assigned a code number. As a specific job skill was found, it was placed on a composite list of job skills with the article's corresponding code number beside it. This procedure was the one utilized by Peterson and Foss (1980). As the same job skills were often mentioned in more than one article, a table containing a composite list of skills and their corresponding frequencies was developed. From the reviewed articles, 49 separate job and/or work behavior skills were identified using this process (see Appendix A).

The second step in this process used a sorting procedure that previous researchers had developed for grouping various competencies and behaviors (Blackhurst, MacArthur, & Byrom, 1987; Montague, 1988; Williams, 1990). The 49 skills were typed individually onto index cards. The packet of cards was given to an expert group of three people. These individuals were selected on the basis of their credentials, as well as their professional and/or work experiences, who represented the fields of special education, vocational education, and business. The group consisted of a former special education director, a professor from vocational education, and a business manager. The researcher assigned the three experts, as a group, the task of sorting the 49 skills into work-related behavior categories and to assign each category a title. The group was directed to sort into a minimum of three to a maximum of eight categories. This direction was given (a) to prevent a sort with only two categories on one extreme, and (b) to discourage the use of too many categories

which would be unmanageable.

After a considerable amount of collaboration, the expert group sorted the 49 skills into three work-related behavior categories which they titled: Category 1--Personality Characteristics, Category 2--Work-Related Abilities, and Category 3--Interpersonal Skills (see Table 1).

A third step in this process was to validate the categories. After the expert group had sorted and established the three categories, a second group of two experts was formed for validation purposes (Montague, 1988). These individuals, selected based upon their careers and work experiences, represented the field of vocational education and business. The group consisted of a vocational instructor and a supervisor from a local company. This group was assigned the task of sorting the 49 original job skills, using the first expert group's designated categories. In the second sorting of the skills into the three categories, there were three discrepancies found from the initial sort. These were: Job Skill 48--accepts criticism, responds appropriately to supervisor correction--which was placed in Category 1 rather than Category 3; Job Skill 30--knows how to conduct self during interviews--which was placed in Category 3 rather than Category 2; and Job Skill 49--performs without undue anxiety in the presence of the supervisor--which was placed in Category 1 rather than Category 3. The researcher noted that the same three job skill descriptors had been discussed at considerable length by the first expert group as well. The second expert group viewed Job Skill 48 and Job Skill 49 more as an

Table 1
Work-Related Behavior Categories

Personality characteristics	Work related abilities	Interpersonal skills
1. Positive work habits	12. Student attitude matched to job	31. Maintaining work relationships with the supervisor without overly friendly or hostile behavior
2. Maintains acceptable appearance	13. Good attendance record; being on time to work and from breaks; punctuality	32. Works without being unduly distracted by the behavior or presence of others
3. Maintains a sense of humor	14. Works without complaining	33. Adjusts to changes in the routine; accepts new supervisors
4. Pleasantness	15. Interest in the job	34. Responds appropriately to questions and statements
5. Works independently	16. Ability to follow directions; follows company procedures; follows work rules	35. Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks)
6. Self-sufficiency	17. Ability to use transportation	36. Ability to help co-workers; offers assistance to co-workers as needed
7. Motivation to work	18. Being able to read and write	37. Initiating contact with the supervisor when necessary

Table 1--Continued

Personality characteristics	Work related abilities	Interpersonal skills
8. Dependability	19. Being able to complete job applications	38. Speaks clearly; ability to communicate ideas
9. Initiative	20. Understands the work routine	39. Ability to ask for assistance; to clarify instructions; willingness to ask for help
10. Problem-solving skills	21. Attends to job task consistently	40. Ability to resolve personal concerns; handles teasing and provoking
11. Physical stamina	22. Completes all work assignments	41. Works without disturbing others
	23. Takes care of equipment and materials; neatness on the job	42. Refrain from exhibiting irritating behaviors; behave sexually in ways consistent with social norms; controls aggressive behavior
	24. Job knowledge	43. Works cooperatively on group tasks
	25. Appropriate quality of work	44. Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills
	26. Appropriate quantity of work	45. Ability to communicate basic needs

Table 1--Continued

Personality characteristics	Work related abilities	Interpersonal skills
	27. Being responsible on the job	46. Refrain from stealing others' money or property
	28. Good safety record; reading and following community signs and safety signs	47. Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job
	29. Meets standards for quality of work; meets standards for rate of work performance; efficiency; productivity	48. Accepts criticism; responds appropriately to supervisor correction
	30. Knows how to conduct self during interviews	49. Performs without undue anxiety in the presence of the supervisor

individual response to a situation, whereas the first expert group viewed these job skills as dependent upon interaction with another person, thus designating them an interpersonal skill. It should be noted that the first expert group defined the skills within the Interpersonal Skills Category as those skills pertaining to any type of communication between persons. Job Skill 30 was determined by the first expert group to be a work-related ability; however, the second expert group decided that it was an interpersonal skill. Since there were only three discrepancies, it was decided to retain the first expert group's sort.

Upon completion of the validation, the 49 job skills were numbered sequentially beginning with the first job skill (01) in the first category and finishing with the last job skill (49) in the last category. (See Table 1.)

Phase 2--Selection of Subjects

The subjects for this study were moderately retarded students or, as labeled in the state of Michigan, trainable mentally impaired (TMI) students who exited their special education programs during the years 1988, 1989, and 1990, due to graduation or having been "aged-out" (reaching the age of 25). This population of students was selected because of their well documented employability problems and, inasmuch as Michigan currently is educating its TMI population in work and/or developmental centers, locating their records was a relatively uncomplicated task. These centers are typically located within and administered by the intermediate school districts (ISDs).

The exit Individualized Education Plans (IEPs) for these students served as the source of data for this study.

ISD Selection Procedure

According to current enrollment figures compiled by the Special Education Services Unit in the Michigan Department of Education (1990), there are approximately 6,300 TMI students enrolled in special education programs throughout the state. Using these statistics, it was projected that each ISD would average at least two TMI students exiting their school programs annually. By requesting exit IEPs for 3 consecutive years (1988, 1989, and 1990), it was projected that each ISD would contribute a minimum of six IEPs for review. By sampling 25 ISDs from the lower peninsula, it was projected that a minimum of 150 records would be generated for the study. It was decided to sample only the lower peninsula since the upper peninsula is sparsely populated. The 50 ISDs located in the lower peninsula were listed alphabetically and numbered sequentially beginning with 01 through 50. Using the 50 two-digit numbers in conjunction with a table of random numbers, the 25 ISDs were then selected.

ISD Contacts

Initial contacts were made by phone to the selected districts to ascertain the appropriate contact person, to explain the study to him or her, and to secure his or her support in this endeavor. A follow-up letter to confirm his or her commitment was sent 2 weeks

following the initial phone call. Accompanying the letter was an abstract of the study and a return mailer (see Appendix B). Eleven ISDs responded to the initial mailing.

One month after the follow-up letter was mailed, a second letter was sent to prompt those specific individuals who had not supplied the requested records (see Appendix C). An additional nine ISDs responded after the second reminder. A final reminder was sent 6 weeks later to the remaining five ISDs (see Appendix D). Within the next month, three ISDs responded. It was determined at that time to begin the data analysis without the remaining two ISDs. The 23 intermediate school districts who participated provided the study with 331 exit IEPs. (See Appendix E.)

Phase 3--Coding the Records (IEPs)

As discussed previously, the successful transition from school to work for the moderately retarded population is dependent upon an educational program that is employer-and-employment driven (Retish, 1989). Recognizing this, schools generally incorporate some vocational and/or work-related skills into the Individualized Education Plans of their students. These records could thus be examined to ascertain the relative frequency that work-related skills deemed critical by employers appear on the Individualized Education Plans (IEPs) of students who are moderately retarded (TMI).

Initial Coding

Each IEP record was coded initially using a three digit identification number and the number of the intermediate school district of the student. The IEPs were then analyzed by the researcher to determine which job skills from those identified by the review of literature were indicated. As a job skill was found in the IEP, the code number for the skill was written in the margin next to the skill. (Samples of coded IEPs are located in Appendix F.)

Validation of Initial Coding Process

Upon completing the coding process using the list of 49 job skills, 25 IEPs (at least one record from each participating ISD) were randomly selected for validation purposes. The researcher provided an advanced doctoral student in special education with an explanation of the study, the coding procedures, and the list of 49 job skills. The doctoral student was provided with 25 of the original IEPs with the researcher's job skill codes masked. The doctoral student then analyzed and coded the selected records using the above coding procedures.

The researcher then removed the masking and comparisons were made between the researcher's initial coding and the doctoral student's coding. Percentages were calculated for each of the 25 IEPs. This was accomplished by counting the total number of job skills coded by the doctoral student and dividing that number of the total number of job skills coded by the researcher (e.g., doctoral student

= 8; researcher = 10; 8/10 = 80%). The 25 percentages were totaled, averaged, and resulted in an agreement rate of 90%. Discrepancies were discussed, evaluated, and consensus attained.

There were two primary discrepancies that were consistently found during the coding process; an example of each follows. First, when an IEP objective stated "interacts appropriately with supervisors and co-workers," the student and the researcher used the following job skill codes:

Job Skill 31--Maintaining work relationships with the supervisor without overly friendly or hostile behavior.

Job Skill 35--Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks).

Job Skill 44--Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills.

Job Skill 47--Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job.

However, in addition to those skills listed above, the doctoral student included the following job skills:

Job Skill 36--Ability to help co-workers; offers assistance to co-workers as needed.

Job Skill 37--Initiating contact with the supervisor when necessary.

Job Skill 48--Accepts criticism; responds appropriately to supervisor correction.

While coding, the researcher adhered to the philosophy not to "read more" into the instructional objective than what was actually written. In the example provided above, the researcher believed that the doctoral student was "reading more" into the objective than what was actually written as Job Skills 36, 37, and 48 address specific behaviors.

The second primary discrepancy concerned work habits. For example, an objective would state "to improve work habits." The researcher's code was Job Skill 1--positive work habits, whereas the doctoral student added:

Job Skill 16--Ability to follow directions; follows company procedures; follows work rules.

Job Skill 20--Understands the work routine.

Job Skill 21--Attends to job tasks consistently.

Job Skill 25--Appropriate quality of work.

Job Skill 26--Appropriate quantity of work.

Perhaps the writer of the IEP interpreted the objective in the same manner as the doctoral student; however, that information was not readily available. It should be noted that the researcher interpreted Job Skill 1 as to improve job skills; work behavior skills, work habits, work skills; and work attitudes and behaviors.

Because an agreement rate of 90% had been obtained, even though two primary discrepancies were found, the researcher chose to retain the original approach to the coding process. The process was thus judged to be sufficiently valid. (See Appendix G.)

Transcribing Codes to Data Sheets

After each record was coded and validated, all pertinent information (i.e., demographics and job skills) from the IEPs was transcribed onto test scanning sheets. One sheet was used for each IEP record. The first nine lines on the sheets were used to identify each specific record: three digit identification number (001), gender (1 = male, 2 = female), year of exit (88, 89, or 90), ISD number (10 to 25), and region number (1 to 4). Job skills were then coded using one line for each of the 49 skills (0 = job skill not addressed, 1 = job skill addressed). The completed scanning sheets were taken to a testing center where the data were read into a computer file for statistical analysis.

Verifying the accuracy of the data was accomplished by examining computer printouts of the data and editing the discrepancies prior to any analysis being conducted.

Phase 4--Data Analysis

The purpose of this study was to examine the relative frequency that work-related skills deemed critical by employers appear on the Individualized Education Plans of moderately retarded students. Therefore, frequencies were calculated for each job skill. Because of the nature of the study and its use of frequency data, more sophisticated statistical techniques were not warranted.

However, post hoc analysis used a test of significance. Significance of the difference between two independent proportions was

used to determine if differences existed between gender and job skills.

CHAPTER IV

RESULTS OF THE STUDY

The purpose of this study was to examine the frequency that work-related skills deemed critical by employers appear on the Individualized Education Plans (IEPs) of moderately retarded students (i.e., those labeled trainable mentally impaired (TMI) in the state of Michigan).

Question Addressed

Are the work-related objectives that appear on the IEPs of moderately retarded students (TMI) consistent with skills that employers have judged critical for job success?

Results of Data Collection

Of the 25 randomly selected intermediate school districts (ISDs), 23 responded contributing a total of 331 IEP records. Originally it was assumed that every ISD would be able to contribute at least six IEPs, based on a minimum of two IEPs for each of the 3 years requested (1988, 1989, and 1990). However, there were six ISDs which sent less than six IEPs and five ISDs which contributed more than 25 IEPs. Of the 331 IEPs submitted for examination, 194 were written for male students, while 137 were written for female students.

Analysis of Data

Table 2 contains the frequencies and percentages for each of the 49 employer designated job skills. For example, from the sample pool of 331 IEP records submitted, Job Skill 1--positive work habits--was found on 101 of those IEP records, or on 30.5% of the total IEPs submitted for analysis.

Table 2
Frequency and Percent of Job Skills Addressed
(N = 331)

Employer designated job skills	Frequency	%
Category 1--Personality Characteristics		
1. Positive work habits	101	30.50
2. Maintains acceptable appearance	109	32.90
3. Maintains a sense of humor	6	1.80
4. Pleasantness	11	3.30
5. Works independently	91	27.50
6. Self-sufficiency	32	9.70
7. Motivation to work	13	3.90
8. Dependability	6	1.80
9. Initiative	9	2.70
10. Problem-solving skills	11	3.30
11. Physical stamina	109	32.90

Table 2--Continued

Employer designated job skills	Frequency	%
Category 2--Work-Related Abilities		
12. Student attitude matched to job	7	2.10
13. Good attendance record; being on time to work and from breaks; punctuality	22	6.60
14. Works without complaining	0	0.00
15. Interest in the job	11	3.30
16. Ability to follow directions; follows company procedures; follows work rules	149	45.00
17. Ability to use transportation	76	23.00
18. Being able to read and write	186	56.20
19. Being able to complete job applications	33	10.00
20. Understands the work routine	228	68.90
21. Attends to job tasks consistently	225	68.00
22. Completes all work assignments	220	66.50
23. Takes care of equipment and materials; neatness on the job	81	24.50
24. Job knowledge	180	54.40
25. Appropriate quality of work	64	19.30
26. Appropriate quantity of work	64	19.30
27. Being responsible on the job	66	19.90
28. Good safety record; reading and following community signs and safety signs	181	54.70
29. Meets standards for quality of work; meets standards for rate of work performance; efficiency; productivity	72	21.80

Table 2--Continued

Employer designated job skills	Frequency	%
30. Knows how to conduct self during interviews	12	3.60
Category 3--Interpersonal Skills		
31. Maintaining work relationships with the supervisor without overly friendly or hostile behavior	58	17.50
32. Works without being unduly distracted by the behavior or presence of others	27	8.20
33. Adjusts to changes in the routine; accepts new supervisors	24	7.30
34. Responds appropriately to questions and statements	15	4.50
35. Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks)	123	37.20
36. Ability to help co-workers; offers assistance to co-workers as needed	7	2.10
37. Initiating contact with the supervisor when necessary	29	8.80
38. Speaks clearly; ability to communicate ideas	49	14.80
39. Ability to ask for assistance; to clarify instructions; willingness to ask for help	42	12.70
40. Ability to resolve personal concerns; handles teasing and provoking	1	0.30
41. Works without disturbing others	1	0.30
42. Refrain from exhibiting irritating behaviors; behave sexually in ways consistent with social norms; controls aggressive behavior	99	29.90
43. Works cooperatively on group tasks	6	1.80

Table 2--Continued

Employer designated job skills	Frequency	%
44. Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills	178	53.80
45. Ability to communicate basic needs	87	26.30
46. Refrain from stealing others' money or property	3	0.90
47. Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job	150	45.30
48. Accepts criticism; responds appropriately to supervisor correction	52	15.70
49. Performs without undue anxiety in the presence of the supervisor	1	0.30

Additional interpretations found that 48 of the 49 job skills were found to have been identified at least once. The one skill which was not identified was Job Skill 14--works without complaining, which was located in Category 2--Work-Related Abilities.

The 10 most frequently addressed job skills are listed in Table 3. The majority of these were associated with the expert group's Category 2--Work-Related Abilities. Category 2 contained 19 job skills, which the first expert group determined were all job-related attributes and were directly associated with the work site. For example, Job Skill 20--understands the work routine--and Job Skill 21--attends to job tasks consistently. Additional interpretations of Table 3 found that six out of seven of the most frequently

addressed job skills were located in Category 2, and were each identified on more than 50% of those IEP records submitted for this study.

Table 3
The 10 Most Frequently Addressed Job Skills
(N = 331)

Employer designated job skills	Frequency	%	Category
20. Understands the work routine	228	68.90	2
21. Attends to job tasks consistently	225	68.00	2
22. Completes all work assignments	220	66.50	2
18. Being able to read and write	186	56.20	2
28. Good safety record; reading and following community signs and safety signs	181	54.70	2
24. Job knowledge	180	54.40	2
44. Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills	178	53.80	3
47. Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job	150	45.30	3
16. Ability to follow directions; follows company procedures; follows work rules	149	45.00	2
35. Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks)	123	37.20	3

The 10 least frequently addressed job skills are contained in Table 4. The majority of these skills are found in the first expert group's Category 3--Interpersonal Skills. Category 3 contained 19 job skills, which the expert group defined as those skills pertaining to any type of communication or interaction between persons. Examples of such skills were Job Skill 40--ability to resolve personal concerns--or Job Skill 36--ability to help co-workers; offers assistance to co-workers as needed. Further examinations of data found Job Skill 14--works without complaining--was not identified on any IEP record submitted, even though this job skill is contained in the most frequently addressed category, Category 2--Work-Related Abilities.

In addition, four out of seven of the least frequently addressed job skills were located in Category 3 and were each identified on less than 2% of those IEP records submitted for this study. For example, Job Skill 40--ability to resolve personal concerns, Job Skill 41--works without disturbing others, and Job Skill 49--performs without undue anxiety in the presence of the supervisor--were each addressed on only one IEP submitted.

Table 5 contains the total sequential listing of job skills beginning with the most frequently cited to the least frequently cited. A comparison of the top 24 job skills (those cited with greater frequency) with the remaining 25 job skills (those cited with less frequency) found those skills cited with greater frequency were found in the expert group's Category 2--Work-Related Abilities, whereas those skills cited with less frequency were found in the

Table 4
The 10 Least Frequently Addressed Job Skills
(N = 331)

Employer designated job skills	Frequency	%	Category
14. Works without complaining	0	0.00	2
40. Ability to resolve personal concerns	1	0.30	3
41. Works without disturbing others	1	0.30	3
49. Performs without undue anxiety in the presence of the supervisor	1	0.30	3
46. Refrain from stealing others' money or property	3	0.90	3
3. Maintains a sense of humor	6	1.80	1
8. Dependability	6	1.80	1
43. Works cooperatively on group tasks	6	1.80	3
12. Student attitude matched to job	7	2.10	2
36. Ability to help co-workers; offers assistance to co-workers as needed	7	2.10	3

expert group's Category 3--Interpersonal Skills. A closer investigation of the top 24 skills revealed 13 job skills from Category 2, 7 skills from Category 3, and 4 skills from Category 1; and investigating the remaining 25 job skills revealed 12 job skills from Category 3, 7 skills from Category 1, and 6 skills from Category 2.

Further analysis indicated that more than 30% of the IEPs used in this study addressed 13 of the job skills, at least 20% addressed 19, and 10% of the IEPs received for analysis addressed 27 of the

Table 5
 Rankings of Job Skills Addressed on IEPs From Most
 Frequently Cited to Least Frequently Cited
 (N = 331)

Rank	Employer designated job skills	Frequency	%	Category
1	Understands the work routine	228	68.90	2
2	Attends to job tasks consistently	225	68.00	2
3	Completes all work assignments	220	66.50	2
4	Being able to read and write	186	56.20	2
5	Good safety record; reading and following community signs and safety signs	181	54.70	2
6	Job knowledge	180	54.40	2
7	Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills	178	53.80	3
8	Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job	150	45.30	3
9	Ability to follow directions; follows company procedures; follows work rules	149	45.00	2
10	Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks)	123	37.20	3
11.5	Physical stamina	109	32.90	1
11.5	Maintains acceptable appearance	109	32.90	1
13	Positive work habits	101	30.50	1

Table 5--Continued

Rank	Employer designated job skills	Frequency	%	Category
14	Refrain from exhibiting irritating behaviors; behave sexually in ways consistent with social norms; controls aggressive behavior	99	29.90	3
15	Works independently	91	27.50	1
16	Ability to communicate basic needs	87	26.30	3
17	Takes care of equipment and materials; neatness on the job	81	24.50	2
18	Ability to use transportation	76	23.00	2
19	Meets standards for quality of work; meets standards for rate of work performance; efficiency; productivity	72	21.80	2
20	Being responsible on the job	66	19.90	2
21.5	Appropriate quality of work	64	19.30	2
21.5	Appropriate quantity of work	64	19.30	2
23	Maintaining work relationships with the supervisor without overly friendly or hostile behavior	58	17.50	3
24	Accepts criticism; responds appropriately to supervisor correction	52	15.70	3
25	Speaks clearly; ability to communicate ideas	49	14.80	3
26	Ability to ask for assistance; to clarify instructions; willingness to ask for help	42	12.70	3
27	Being able to complete job applications	33	10.00	2
28	Self-sufficiency	32	9.70	1

Table 5--Continued

Rank	Employer designated job skills	Frequency	%	Category
29	Initiating contact with the supervisor when necessary	29	8.80	3
30	Works without being unduly distracted by the behavior or presence of others	27	8.20	3
31	Adjusts to changes in the routine; accepts new supervisors	24	7.30	3
32	Good attendance record; being on time to work and from breaks; punctuality	22	6.60	2
33	Responds appropriately to questions and statements	15	4.50	3
34	Motivation to work	13	3.90	1
35	Knows how to conduct self during interviews	12	3.60	2
37	Pleasantness	11	3.30	1
37	Problem-solving skills	11	3.30	1
37	Interest in the job	11	3.30	2
39	Initiative	9	2.70	1
40.5	Ability to help co-workers; offers assistance to co-workers as needed	7	2.10	3
40.5	Student attitude matched to job	7	2.10	2
43	Works cooperatively on group tasks	6	1.80	3
43	Dependability	6	1.80	1
43	Maintains a sense of humor	6	1.80	1
45	Refrain from stealing others' money or property	3	0.90	3

Table 5--Continued

Rank	Employer designated job skills	Frequency	%	Category
47	Performs without undue anxiety in the presence of the supervisor	1	0.30	3
47	Works without disturbing others	1	0.30	3
47	Ability to resolve personal concerns; handles teasing and provoking	1	0.30	3
49	Works without complaining	0	0.00	2

employer designated job skills. None of the IEP records addressed all 49 job skills.

Post Hoc Analyses

Post hoc analyses were conducted to investigate possible differences between gender (male and female).

Gender by Job Skills

A test of significance of the difference between two independent proportions was used. The data were comprised of two samples drawn independently (i.e., the IEP records of male and female moderately retarded students). To illustrate, in this study the proportion of IEPs written for males which addressed Job Skill 42 was compared to the proportion of IEPs written for females which addressed Job Skill 42. The test results found three job skills which were addressed with significantly greater frequency when the IEP was written for a male rather than for a female. Job Skill 19--being

able to complete job applications--and Job Skill 36--ability to help co-workers; offers assistance to co-workers as needed--and Job Skill 48--accepts criticism; responds appropriately to supervisor correction--were each addressed significantly more often when the IEP was written for a male than for a female. (See Tables 6, 7, and 8.)

Table 6

Gender and Job Skill 19
(Male $n = 194$, Female $n = 137$)

Gender	Job Skill 19--Being able to complete job application	
	Addressed	Proportion
Male	29	0.15
Female	4	0.03

Note. $z = 3.60$, $p < .005$.

Table 7

Gender and Job Skill 36
(Male $n = 194$, Female $n = 137$)

Gender	Job Skill 36--Ability to help co-workers; offers assistance to co-workers as needed	
	Addressed	Proportion
Male	7	0.04
Female	0	0.00

Note. $z = 2.25$, $p < .05$.

Table 8
 Gender and Job Skill 48
 (Male $n = 194$, Female $n = 137$)

Gender	Job Skill 48--Accepts criticism; responds appropriately to supervisor correction	
	Addressed	Proportion
Male	38	0.20
Female	14	0.10

Note. $z = 2.31$, $p = .05$.

ISD by Job Skills

Table 9 provides the number of ISDs which addressed each of the 49 job skills. It should be noted that if an ISD addressed a job skill on only one of its submitted IEPs, it still remained part of the count.

Table 9
 A Comparison of ISDs and Job Skills

Employer designated job skills ($N = 49$)	No. of ISDs addressing job skills ($N = 23$)
1. Positive work habits	15
2. Maintains acceptable appearance	19
3. Maintains a sense of humor	3
4. Pleasantness	6

Table 9--Continued

Employer designated job skills (<u>N</u> = 49)	No. of ISDs addressing job skills (<u>N</u> = 23)
5. Works independently	9
6. Self-sufficiency	10
7. Motivation to work	5
8. Dependability	3
9. Initiative	5
10. Problem-solving skills	5
11. Physical stamina	10
12. Student attitude matched to job	4
13. Good attendance record; being on time to work and from breaks; punctuality	6
14. Works without complaining	0
15. Interest in the job	4
16. Ability to follow directions; follows company procedures; follows work rules	17
17. Ability to use transportation	8
18. Being able to read and write	20
19. Being able to complete job applications	7
20. Understands the work routine	21
21. Attends to the job tasks consistently	21
22. Completes all work assignments	20
23. Takes care of equipment and materials; neatness on the job	13
24. Job knowledge	19

Table 9--Continued

Employer designated job skills (<u>N</u> = 49)	No. of ISDs addressing job skills (<u>N</u> = 23)
25. Appropriate quality of work	12
26. Appropriate quantity of work	10
27. Being responsible on the job	8
28. Good safety record; reading and following community signs and safety signs	19
29. Meets standards for quality of work; meets standards for rate of work performance; efficiency; productivity	10
30. Knows how to conduct self during interviews	4
31. Maintaining work relationships with the supervisor without overly friendly or hostile behavior	8
32. Works without being unduly distracted by the behavior or presence of others	8
33. Adjusts to changes in the routine; accepts new supervisors	5
34. Responds appropriately to questions and statements	6
35. Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks)	16
36. Ability to help co-workers; offers assist- ance to co-workers as needed	2
37. Initiating contact with the supervisor when necessary	6
38. Speaks clearly; ability to communicate ideas	9
39. Ability to ask for assistance; to clarify instructions; willingness to ask for help	6

Table 9--Continued

Employer designated job skills (<u>N</u> = 49)	No. of ISDs addressing job skills (<u>N</u> = 23)
40. Ability to resolve personal concerns; handles teasing and provoking	1
41. Works without disturbing others	1
42. Refrain from exhibiting irritating behaviors; behave sexually consistent with social norms; controls aggressive behavior	20
43. Works cooperatively on group tasks	4
44. Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills	20
45. Ability to communicate basic needs	13
46. Refrain from stealing others' money or property	3
47. Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job	18
48. Accepts criticism; responds appropriately to supervisor correction	8
49. Performs without undue anxiety in the presence of the supervisor	1

Further examination revealed 9 job skills that were addressed by 18 or more ISDs. A comparison between these 9 job skills and the 10 most frequently addressed job skills (Table 3) found two slight discrepancies. Job Skill 2--maintains acceptable appearance--was addressed by 19 ISDs, with the overall ranking of 11. Whereas Job Skill 35--interacts appropriately with co-workers and customers;

getting along well with others (during lunch and breaks)--was addressed by 16 ISDs with the overall ranking of 10; and Job Skill 16--ability to follow directions; follows company procedures; follows work rules--was addressed by 17 ISDs with the overall ranking of 9. Thus, more ISDs viewed Job Skill 2 to be a more critical job skill to address than they did Job Skills 16 and 35.

Individualized Education Plans are seldom identical; as the name implies they are designed for individuals. However, a close examination of the data revealed that there were nine job skills addressed on every IEP submitted by their respective ISDs. Table 10 lists those job skills, along with the number of ISDs which viewed these particular job skills important enough to be addressed by everyone exiting their district.

Of the 10 most frequently addressed job skills (Table 3), the four most frequently addressed job skills were not addressed by four ISDs; however, 10 of the intermediate school districts included these job skills in every IEP each submitted.

An additional observation pertained to four of the least frequently addressed job skills. Job Skill 40--ability to resolve personal concerns--and Job Skill 41--works without disturbing others--were addressed on only one IEP and were addressed by the same ISD. Whereas Job Skill 49--performs without undue anxiety in the presence of the supervisor--was addressed only once but by a different ISD, and Job Skill 46--refrain from stealing others' money or property--was addressed three times on IEPs by three totally different ISDs.

Table 10
Job Skills Addressed

Employer designated job skills	No. of ISDs
11. Physical stamina	1
18. Being able to read and write	2
20. Understands the work routine	4
21. Attends to job tasks consistently	3
22. Completes all work assignments	3
24. Job knowledge	2
28. Good safety record; reading and following community signs and safety signs	3
44. Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills	4
47. Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job	2

ISD by ISD

Comparisons between ISDs were not conducted due to the number of IEPs each contributed (i.e., either too few or a great many; see Table 11) and due to the fact that the original purpose of this study did not include a comparison of individual ISDs.

Region by Region

It also should be noted that comparisons did not occur between the four regions within which the ISDs are located. The rationale

Table 11
Randomly Selected ISDs and Data Collected

ISDs (<u>N</u> = 23)	IEPs submitted (<u>N</u> = 331)
1. Barry County	2
2. Bay-Arenac	19
3. Berrien	27
4. Branch	6
5. Calhoun	10
6. Cheboygan-Otsego-Presque Isle (COP)	9
7. Clare-Gladwin	11
8. Eaton	6
9. Genessee	56
10. Gratiot-Isabella	5
11. Hillsdale	4
12. Ingham	40
13. Ionia	12
14. Iosco	5
16. Lenawee	14
17. Livingston	7
19. Mason-Lake	8
20. Mecosta-Osceola	3
21. Muskegon	28
22. Newago-Oceana	6
23. Oakland	38

Table 11--Continued

	ISDs (<u>N</u> = 23)	IEPs submitted (<u>N</u> = 331)
24. Tuscola		8
25. VanBuren		7

for this was that only the lower peninsula ISDs formed the population pool which automatically eliminated seven ISDs from Region 1 and the two ISDs that did not respond were located within Region 4, which left only two ISDs responding from that region. Therefore, any comparisons would have been biased in favor of Regions 2 and 3 (e.g., Region 1 = 4 ISDs, Region 2 = 8 ISDs, Region 3 = 9 ISDs, and Region 4 = 2 ISDs). (See Appendix H.)

Conclusions

The work-related objectives that appear on IEPs of moderately retarded students (TMI) in the state of Michigan are not consistent with job skills that employers have judged critical for job success. An examination of the most frequently addressed job skills found only 7 of the 49 which were addressed on more than 50% of those IEPs submitted. Further analysis indicated more than 30% of the IEPs addressed only 13 of the 49 employer designated job skills; 20% addressed only 19; and a mere 10% of the IEPs received addressed 27 of the 49 job skills. None of the IEPs addressed all 49 skills.

CHAPTER V

DISCUSSION

Presented in this chapter are a summary of the research; the conclusions; a discussion of the results; the limitations of the study; and recommendations and implications to intermediate school districts, to the field of special education and special educators, to employers, and to teacher preparation programs.

Summary

Successful employment of individuals with retardation, especially those labeled moderately retarded, has been a major topic in the literature during recent years (Kranstover et al., 1989). Legislators, school systems, and special educators have each done their part to enhance the employability of special education graduates. "Despite the fact that great progress has been made in post placement training, many special education students continue to be unsuccessful in competitive employment settings" (Hanley-Maxwell et al., 1986, p. 45).

The successful transition from school to work for this population is dependent upon an educational program that is employer-and-employment driven (Retish, 1989). Recognizing this, schools generally incorporate some vocational and/or work-related skills into the Individualized Education Plans (IEPs) of their students. If the

attempt to incorporate vocational skills is being made, but students are still unemployed, perhaps there are skills which are essential to employment that are being omitted from their programs (Campbell et al., 1987). Therefore, the purpose of this study was to examine the frequency that work-related skills deemed critical by employers appear on the Individualized Education Plans (IEPs) of moderately retarded students (i.e., those labeled trainable mentally impaired (TMI) in the state of Michigan).

Conclusions

The work-related objectives that appear on IEPs of moderately retarded students (TMI) in the state of Michigan are not consistent with job skills that employers have judged critical for job success. An examination of the most frequently addressed job skills found only 7 of the 49 which were addressed on more than 50% of those IEPs submitted. Further analysis indicated more than 30% of the IEPs addressed only 13 of the 49 employer designated job skills, 20% addressed only 19, and a mere 10% of the IEPs received addressed 27 of the 49 job skills. None of the IEPs addressed all 49 skills.

Discussion of the Results

Skills Most Frequently Addressed

By examining the frequency that each job skill was addressed on IEPs, 10 employer designated job skills surfaced that were addressed most often. The majority of these were associated with the expert

group's Category 2--Work-Related Abilities. Category 2, as defined by the first expert group, were all job-related attributes and were directly associated with the work site.

Additional interpretations found that six out of seven of the most frequently addressed job skills were located in Category 2 and were each identified on more than 50% of those IEP records submitted for this study. A further investigation of the top 24 job skills (those cited with greater frequency) were also found in the expert group's Category 2--Work-Related Abilities.

These findings agree with prior research studies. The Chamberlain (1988) study compared two groups of employers--those employers who had previously hired adults with disabilities and those employers who had not. This study utilized four job categories with each containing five job skill descriptors. The category ranked number one by the two employer groups was the work-related category, and "getting along well with others" was the highest ranked individual job skill.

Another study which expanded on Chamberlain's (1988) original work investigated employers who either hired adults with disabilities or were in businesses that traditionally hired those individuals, and a group of special educators who were located in the same demographic area as the employers (McCrea, in press). Results of this study found that the number one ranked category was work-related and the number one ranked job skill was "getting along well with others." It should be noted that in the present study Job Skill 35--interacts appropriately with co-workers and customers;

getting along well with others (during lunch and breaks)--was also one of the 10 most frequently addressed job skills. It would appear that special educators within the state of Michigan at least recognize the importance of including those skills that pertain to work-related abilities on the IEP records of their students who are moderately retarded (TMI).

Skills Least Frequently Addressed

A closer investigation of the least frequently addressed skills revealed that the six least frequently addressed job skills on IEPs were also the least frequently addressed in the literature (see Appendix A). These job skills were:

Category 1, Job Skill 3--Maintains a sense of humor.

Category 2, Job Skill 14--Works without complaining.

Category 3, Job Skill 40--Ability to resolve personal concerns.

Category 3, Job Skill 41--Works without disturbing others.

Category 3, Job Skill 46--Refrain from stealing others' money or property.

Category 3, Job Skill 49--Performs without undue anxiety in the presence of the supervisor.

However, the remaining four of the least frequently addressed job skills were found extensively in the literature (see Appendix A). These job skills were:

Category 1, Job Skill 8--Dependability.

Category 2, Job Skill 12--Student attitude matched to job.

Category 3, Job Skill 43--Works cooperatively on group tasks.

Category 3, Job Skill 36--Ability to help co-workers; offers assistance to co-workers as needed.

The majority of the least frequently addressed job skills was found in the first expert group's Category 3--Interpersonal Skills. Category 3 was defined by the expert group as those skills pertaining to any type of communication or interaction between persons. In addition, four out of seven of the least frequently addressed job skills were located in Category 3 and were each identified on less than 2% of those IEP records submitted for this study. After examining the 25 least frequently addressed job skills, the majority were also found in Category 3.

These results present several hypotheses. First, perhaps it is not possible to teach interpersonal skills to this particular population of students. Second, possibly these particular skills are more apt to be acquired in an employment climate rather than in an educational environment. And third, maybe it is not absolutely critical to attempt to address these specific skills to this population of students.

Gender by Job Skills

There were three job skills which were addressed with significantly greater frequency when the IEP record was written for a male student who was moderately retarded rather than for a female student (see Tables 6, 7, and 8). Results would indicate that ISDs view these skills as being more critical for a male student to possess rather than female, especially:

Job Skill 19--Being able to complete job applications.

Job Skill 36--Ability to help co-workers; offers assistance to co-workers as needed.

Job Skill 48--Accepts criticism; responds appropriately to supervisor correction.

These findings suggest two possible hypotheses: (1) the three skills that are addressed more frequently for males are job skills that females do not need to be successful on the job; or (2) perhaps these particular females already possess these job skills and, therefore, the necessity for addressing them does not exist.

Job Skill 48 should be examined closer. This particular job skill was found extensively in the literature; however, when it was found on IEPs, it was also addressed more frequently on IEPs written for males than those written for females (see Appendix A). Some possible (stereotypic) reasons for this occurring include: (a) males have a more difficult time accepting criticism and/or responding appropriately to correction than do females, possibly due to their personalities or the projected "male image"; (b) males traditionally have had more problems in this area than do females; or (c) males found in this study had perhaps exhibited these tendencies in the past, thus the IEP reflected the need to address them.

ISD by Job Skills

The results found in Table 9 (i.e., the number of ISDs which addressed each of the 49 job skills) and Table 10 (i.e., the nine job skills which were addressed on every IEP submitted by their

respective ISDs) were compared to the frequency that each job skill was mentioned in the review of literature (see Appendix A). This comparison found several job skills that were addressed frequently in the review of literature as well as by the participating ISDs. These job skills included:

Job Skill 1--Positive work habits.

Job Skill 2--Maintains acceptable appearance.

Job Skill 16--Ability to follow directions; follows company procedures; follows work rules.

Job Skill 29--Meets standards for quality of work; meets standards for rate of work performance; efficiency; productivity.

Job Skill 35--Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks).

Job Skill 44--Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills.

Job Skill 47--Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job.

The seven job skills listed above are those which employers have indicated in the literature they want a future employee to possess. These same job skills are consistently being addressed by the ISDs which participated in this study, which is an excellent accomplishment. However, there were 42 other job skills mentioned in the literature which also need to be addressed.

Limitations of the Study

There were three major limitations of this study: the generalizability of the study, the individual IEP records, and the interpretation of data. First, generalizability of this study and its results was limited to the state of Michigan and to those particular intermediate school districts which participated. However, to increase the generalizability of this study a random sampling procedure was followed. By obtaining a participation rate of 92% (i.e., 23 ISDs out of the possible 25 ISDs responded) and a total of 331 exit IEPs, the researcher was confident that the results reflect the "state of affairs" in Michigan.

Second, the IEPs that were submitted for examination may not have been truly representative of all the work-related objectives and/or job skills addressed in the educational programs of students who are moderately retarded. These objectives might well have been expanded to include additional job skills by the instructors. However, the research question specifically addressed only those work-related skills found on IEPs; any additional skills which may or may not have been addressed would not have an effect on the results of this study.

And third, interpretations may limit any study since they are based on individual judgments and/or biases. This particular study was not unique in that respect. The coding of data might well have been different had (a) an employer, as well as a special educator coded the IEP records; (b) an employer provided his or her

interpretation of each job skill prior to the initial coding process; and/or (c) a more liberal interpretation of the job skills (i.e., reading more into the objectives than what was actually written) rather than the conservative approach that was chosen. To compensate for this potential limitation, the study used (a) two expert groups with diverse backgrounds, (b) an advanced doctoral student to validate the coding procedure, and (c) a consistent method of interpreting data.

In spite of these potential limitations, the researcher was confident that the results presented were accurate and truly represented the state of affairs in Michigan. Therefore, the statement was made that the work-related objectives that appear on IEPs of moderately retarded students (TMI) in the state of Michigan are not consistent with job skills that employers have judged critical for job success.

Recommendations and Implications

Recommendations and/or implications were written for the benefit of four constituencies: the intermediate school districts which participated in this study; in general, the field of special education and special educators; employers; and teacher preparation programs. A discussion of each follows.

For the ISDs

There were seven job skills found which were consistently addressed by the ISDs which participated in this study. However,

there are many more which the literature has identified as needing to be addressed with the same amount of consistency. Such skills would include:

Job Skill 13--Good attendance record; being on time to work and from breaks; punctuality.

Job Skill 5--Works independently.

Job Skill 25--Appropriate quality of work.

Job Skill 26--Appropriate quantity of work.

Job Skill 7--Motivation to work.

Job Skill 39--Ability to ask for assistance; to clarify instructions; willingness to ask for help.

Job Skill 48--Accepts criticism; responds appropriately to supervisor correction.

Job Skill 31--Maintaining work relationships with the supervisor without overly friendly or hostile behavior.

A recommendation for the 23 ISDs which participated in this study would be to address in the IEP records of moderately retarded students (TMI) those skills listed above which could be incorporated into their existing educational programs. For example, by insisting that these particular students become accountable for their own actions early in their school programs (e.g., reporting to class on time and calling in when sick or arriving late), Job Skill 13--good attendance record; being on time to work and from breaks; punctuality--could become a part of the moderately retarded's repertoire of work-related abilities. Additional job skills, such as dependability, working cooperatively with others, interpersonal relationships,

problem solving, and asking for assistance when necessary, could be encouraged beginning with the elementary years.

Educational programs should be providing instruction that is consistent with those job skills that employers view as critical for job success and to offer the programs in integrated (community-based) work-related settings. There is a definite need for school curricula to become more relevant to the world of work.

For Special Education and Special Educators

Special education programming should begin to utilize employment specialists and/or job coaches at work sites. These individuals, who are paid by and work for the districts, provide the ongoing support necessary by matching students to specific jobs, by analyzing the work assignments as well as the work environment, and by offering on site training (Wisniewski et al., 1991). In addition, these specialists would address at the job site those job skills that employers view as critical for job success, especially those which are addressed extensively in the literature, but which are often neglected on the IEP records of those students who are moderately retarded (TMI).

Employment specialists have the potential to stage situations at the job site, which would be difficult to demonstrate in a classroom setting. For example, Job Skill 48--accepts criticism; responds appropriately to supervisor correction--the specialist could arrange in conjunction with the supervisor, a job-related situation that required the supervisor to correct or to criticize the

student's work behaviors. Immediately following any reaction or response by the student, the specialist would either (a) reinforce his or her appropriate behavior or (b) provide him or her with the necessary training that would include modeling of the appropriate response or behavior.

This particular population of students (moderately retarded), due to the nature of their impairment, have a difficult time generalizing from one situation to another. Therefore, demonstrating a skill in the actual environment where it is used or required would be more practical, rather than attempting to teach the same skill in a classroom setting.

In conjunction with the specialists and coaches, secondary special educators must also be able to communicate with employers to enhance an effective transition for those young adults who are moderately retarded. Special educators should begin to focus the district's curriculum toward those jobs which actually exist in their particular community.

For the Employers

Employers who have the potential to hire the moderately retarded might consider developing a partnership with job coaches and/or employment specialists that would serve as liaisons between the employer and the employee and/or the school and the employer (Cobb, Hasazi, Collins, & Salembier, 1988). The two groups would mutually benefit from such an arrangement. If jobs are available and these particular students are needed to become a part of the

labor force, then perhaps specialists would help employers understand this population better.

By working in conjunction with specialists, employers become co-trainers who share in the responsibility of training the employee who is moderately retarded. Employers would thus be better able to understand their limitations and behaviors and be able to place them in work settings that are consistent with their capabilities. This would increase their potential job tenure.

For Teacher Preparation Programs

A major implication surfaced which affects the preparation programs for special educators. Due to the numbers of moderately retarded students who exit school systems annually, the existing high rates of unemployment and/or underemployment for this population, and the current legislation which requires vocational programs for these students, change must take place in the preparation of special educators, particularly those at the secondary level. Preparation programs should begin graduating special educators who have the capability (a) to facilitate the transition process from school to work; (b) to integrate career goals into the curriculum; (c) to develop curricula that is "employment-and-employer-driven" (Retish, 1989, p. 38); (d) to communicate with potential employers; (e) to become proficient in vocational training, with a focus on critical job skills; and (f) to develop a working knowledge of various employment programs.

APPENDICES

Appendix A
Job Skills Located by the Review of Literature

Job Skills Located by the Review of Literature

Employer designated job skill	Mentioned in articles
1. Positive work habits	11, 19, 24, 28, 38, 39, 40, 41, 42, 47, 50, 51, 52, 56
2. Maintains acceptable appearance	9, 13, 20, 25, 26, 29
3. Maintains a sense of humor	13
4. Pleasantness	25
5. Works independently	9, 12, 13, 21, 23, 25, 28, 33, 39, 41, 42, 43, 44
6. Self-sufficiency	23, 39
7. Motivation to work	12, 26, 30, 33, 34, 35, 36, 37
8. Dependability	35, 38, 40
9. Initiative	35
10. Problem solving skills	23, 38, 40
11. Physical stamina	20, 25, 26, 28, 47, 48
12. Student attitude matched to job	27, 30, 33, 34, 37, 47, 48
13. Good attendance record; being on time to work and from breaks; punctuality	2, 4, 5, 8, 9, 18, 20, 28, 29, 32, 33, 34, 35, 38, 40
14. Works without complaining	13
15. Interest in the job	25, 33, 34
16. Ability to follow directions; follows company procedures; follows work rules	1, 2, 9, 11, 13, 15, 23, 25, 54, 55
17. Ability to use transportation	20
18. Being able to read and write	7, 25, 28

Job Skills--Continued

Employer designated job skill	Mentioned in articles
19. Being able to complete job applications	29
20. Understands the work routine	13, 25
21. Attends to job tasks consistently	9, 18, 21
22. Completes all work assignments	8, 9
23. Takes care of equipment and materials; neatness on the job	9, 21, 25
24. Job knowledge	35
25. Appropriate quality of work	2, 5, 6, 8, 10, 12, 14, 25, 26, 31, 33, 34, 35
26. Appropriate quantity of work	2, 5, 6, 8, 10, 12, 14, 25, 26, 31, 33, 34, 35
27. Being responsible on the job	29
28. Good safety record; reading and following community signs and safety signs	8, 25
29. Meets standards for quality of work; meets standards for rate of work performance; efficiency; productivity	2, 4, 5, 6, 8, 9, 10, 12, 14, 26, 31, 33, 34, 35, 45
30. Knows how to conduct self during interviews	29
31. Maintaining work relationships with the supervisor without overly friendly or hostile behavior	3, 13, 33, 34, 47, 48, 53
32. Works without being unduly distracted by the behavior or presence of others	13
33. Adjusts to changes in the routine; accepts new supervisors	9, 13, 25

Job Skills--Continued

Employer designated job skill	Mentioned in articles
34. Responds appropriately to questions and statements	25
35. Interacts appropriately with co-workers and customers; getting along well with others (during lunch and breaks)	4, 9, 13, 19, 25, 50, 51, 52, 53
36. Ability to help co-workers; offers assistance to co-workers as needed	1, 13, 23, 51, 52, 55
37. Initiating contact with the supervisor when necessary	25
38. Speaks clearly; ability to communicate ideas	3, 15, 20, 24, 28
39. Ability to ask for assistance; to clarify instructions; willingness to ask for help	1, 11, 13, 25, 28, 32, 54, 55
40. Ability to resolve personal concerns; handles teasing and provoking	11
41. Works without disturbing others	13, 35
42. Refrain from exhibiting irritating behaviors; behave sexually in ways consistent with social norms; controls aggressive behavior	13, 14, 25, 26, 29, 33, 34, 43, 44, 45, 46, 47, 48, 49
43. Works cooperatively on group tasks	3, 13, 51, 52
44. Social skills; being able to display a socially acceptable attitude; interpersonal skills; interpersonal communication skills	13, 15, 18, 19, 24, 25, 28, 47, 56
45. Ability to communicate basic needs	13, 25, 28, 32, 54, 55
46. Refrain from stealing others' money or property	13

Job Skills--Continued

Employer designated job skill	Mentioned in articles
47. Being sociable and initiating appropriate contacts; interacting appropriately with co-workers while on the job	2, 5, 6, 7, 12, 13, 16, 17, 18, 25, 29, 35, 53
48. Accepts criticism; responds appropriately to supervisor correction	3, 9, 11, 13, 14, 23, 25
49. Performs without undue anxiety in the presence of the supervisor	13

Articles Used in Obtaining Job Skills

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Appendix B
First Letter to Intermediate School
Districts and Proposal

College of Education
Department of Special Education

Kalamazoo Michigan 49006-5194
616.357.5935

WESTERN MICHIGAN UNIVERSITY

May 10, 1991

ISD
Name and Title
Center Name
Address
City, Michigan Zip

Dear Name:

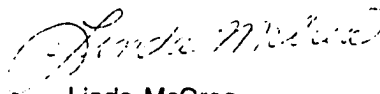
This is a follow-up letter to our phone conversation April 29, 1991. Thank you again for your willingness to participate in my study. As you may recall, I am Linda McCrea, a Western Michigan University doctoral student, currently working as an intern with the Michigan Department of Education, Special Education Services (SES). Your program was randomly selected as part of a research study addressing work-related skills currently being taught to trainable mentally impaired (TMI) students.

As part of my study, I am requesting copies of IEPs for TMI students who have exited your program during the years 1988, 1989, and 1990, due to graduation or "aged-out" (reaching the age of 26). In order to maintain anonymity, the students' names or other personal identifying characteristics included on the IEPs should be deleted with the exception of gender. For research purposes, your district will be assigned an identifying number as well as a number for each TMI student (i.e. student #4 from ISD #20, Center #2).

This research project is being sponsored in part by Special Education Services in cooperation with Western Michigan University. A summary of the obtained results will be sent to each participating intermediate school district.

Thank you in advance for your cooperation and participation in this project.

Sincerely,



Linda McCrea

The purpose of this study will be to examine the relative frequency that work-related skills deemed critical by employers will appear on the exiting individualized education programs (IEPs) of trainable mentally impaired (TMI) students. A descriptive study will address a primary question: Do the work-related objectives that appear on exit IEPs of TMI students match with skills that employers have judged critical for job success? An extensive literature review will be performed to ascertain job skills and behaviors that employers view as critical for job success. To minimize researcher bias an expert panel will group the critical job skills into work-related behavior clusters (3 to 8). A second panel will group the skills into the first panel's designated clusters, thereby providing a reliability and a validity check. The clusters will then be compared to the vocationally related objectives appearing on the exit IEPs for students identified as TMI for the years 1988, 1989, and 1990. A frequency distribution will be constructed for each cluster, as well as chi square analyses with consistencies and discrepancies graphically presented.

The study will extend the knowledge base for secondary programming in special education and may also demonstrate to school systems the need to reexamine the goals and objectives of secondary TMI students in order to complement the future needs of employers.

Procedures:

A random sample of 25 ISDs from the lower peninsula of Michigan will be chosen for this analysis. The exit IEPs of their TMI students for the years 1988-1990 should generate approximately 150 IEPs to examine, according to the information gathered from the Michigan Department of Education Special Education Services.

Phone calls will then be made to the selected ISDs to ascertain the appropriate contact person, to explain the study to them, and to determine the most feasible and expeditious way for the researcher to obtain the requested information (by mail or in person). Follow-up procedures will be conducted regardless of the preferred method of response. Each district will receive a summary of the results upon the completion of the study.

Appendix C
Second Letter

June 12, 1991

Dear

Now that the school year is over, I hope to be hearing from you soon. You are a very important part of a research study that will impact the field of special education.

Please return as soon as possible (in the envelope previously provided), the exit IEPs of *your TMI students for the years 1988, 1989, and 1990 with students' names deleted* to protect their anonymity.

This project is being sponsored by Special Education Services in cooperation with Western Michigan University. A summary of obtained results will be sent to you when the research is concluded.

Your cooperation is vital and greatly appreciated.

Sincerely,

Linda McCrea

Appendix D
Third Letter

September 4, 1991

Dear

Now that the summer is over, I hope to be hearing from you very soon. You are a very important part of a research study that will impact the field of special education.

Please return as soon as possible (in the envelope previously provided), the exit IEPs of your TMI students for the years 1988, 1989, and 1990 with students' names deleted to protect their anonymity.

This project is being sponsored by Special Education Services in cooperation with Western Michigan University. A summary of the obtained results will be sent to you when the research is concluded.

Your cooperation is vital and greatly appreciated.

Sincerely,

Linda McCrea
Office: 616-387-5955
Home: 616-979-4775

Appendix E
List of 23 ISDs Participating

ISDs Participating

1. Barry County
2. Bay-Arenac
3. Berrien
4. Branch
5. Calhoun
6. Cheboygan-Otsego-Presque
Isle (COP)
7. Clare-Gladwin
8. Eaton
9. Genessee
10. Gratiot-Isabella
11. Hillsdale
12. Ingham
13. Ionia
14. Iosco
16. Lenawee
17. Livingston
19. Mason-Lake
20. Mecosta-Osceola
21. Muskegon
22. Newago-Oceana
23. Oakland
24. Tuscola
25. VanBuren

Appendix F
Samples of IEPs Coded by Researcher

White: Program
Maize: Student
Pink: Parent
Goldenrod: S.E.
Provider(s)

Page 1

038

INDIVIDUALIZED EDUCATIONAL PLANNING COMMITTEE MEETING REPORT

Date of IEPC 3-9-89

Name of Student: _____ Birth Date: 1-12-63 Sex: M

Address: _____ Phone: _____

Parent/Guardian _____

Parent/Guardian _____

School District _____

Parent/Guardian of IEPC by _____

Purpose of IEPC

MET Report required

- Initial
- 3-Year Re-evaluation
- Transfer

MET Report options

- Annual IEP Review
- Change in Educational Status
- Other Exit due to age



E1:

- based upon: Multidisciplinary
- Termination Reports (Attached)

1/3/89

Student is: Eligible for Special Education Programs/Services

Not Eligible for Special Education Programs/Services

I.Q. scores for MI Categories (WAIS-R) FS = 61-67

Primary I
Secondary

340.17
340.17
340.17

cc: EDDM-V.

Name _____

Date 3/9/87

ANNUAL GOALS AND SHORT-TERM INSTRUCTIONAL OBJECTIVES

(selected at IEPC meeting, attached to IEP, and used with performance objectives from the Special Education Curriculum)
The criterion for each short-term instructional objective (IO) will be 100% of the performance objectives selected unless otherwise specified.

INDEPENDENT / FUNCTIONAL LIVING

- ANNUAL GOAL I: LEARNS SELF-CARE SKILLS
 - IO-A Learns eating skills
 - IO-B Learns toileting skills
 - IO-C Learns dressing skills
 - IO-D Learns personal grooming skills (hands, face, nose, hair, teeth, body)
- ANNUAL GOAL II: LEARNS ABOUT HEALTH AND SAFETY *27*
 - IO-A Learns advanced hygiene skills (deodorant, shaving, fingernails, etc.)
 - IO-B Learns how to prevent and treat illnesses
 - IO-C Learns indoor and outdoor safety procedures
 - IO-D Learns first aid skills
 - IO-E Learns about drug, alcohol and tobacco abuse
- ANNUAL GOAL III: LEARNS ABOUT PERSONAL AND FAMILY RELATIONSHIPS
 - IO-A Learns about family life
 - IO-B Learns about dating, marriage, divorce
 - IO-C Learns about parenting
- ANNUAL GOAL IV: LEARNS ABOUT REPRODUCTIVE HEALTH
 - IO-A Learns about reproduction
 - IO-B Learns about family planning
 - IO-C Learns about sexually transmitted diseases
- ANNUAL GOAL V: LEARNS HOMEMAKING SKILLS
 - IO-A Learns clothing care skills (including laundering, shopping, mending, sewing)
 - IO-B Learns to plan and prepare meals (including nutrition, grocery shopping, table setting, and clean-up)
 - IO-C Learns housecleaning skills
 - IO-D Learns home maintenance/repair skills
- ANNUAL GOAL VI: LEARNS TO USE COMMUNITY FACILITIES AND TRANSPORTATION
 - IO-A Learns behavioral and conversation skills necessary for community mobility
 - IO-B Increases mobility in community (walking, biking, riding in bus, taxi, car)
 - IO-C Uses community buildings (doors, stairs, elevators, restrooms, telephones, drinking fountains, vending machines)
 - IO-D Uses community facilities/shops (post office, barber shop, restaurants, etc.)
 - IO-E Learns how to use community services
 - IO-F Learns driver's education readiness skills
- ANNUAL GOAL VII: LEARNS PERSONAL BUSINESS SKILLS
 - IO-A Learns budgeting skills
 - IO-B Learns about banking and credit
 - IO-C Learns about insurance, contracts, warranties, taxes, etc.
 - IO-D Learns about renting and buying housing, furnishings, cars
- ANNUAL GOAL VIII: LEARNS LEISURE AND RECREATION SKILLS
 - IO-A Learns early play and playground skills (balls, wheelt toys, etc.)
 - IO-B Learns leisure time skills (toys, board games, crafts, entertainment, excursions)
 - IO-C Improves physical fitness (exercise, walking, jogging, swimming)
 - IO-D Learns individual/team sports

CAREER PREPARATION

- ANNUAL GOAL I: IMPROVES EMPLOYMENT READINESS
 - IO-A Learns information about different careers
 - IO-B Learns job application, interview and selection skills
- ANNUAL GOAL II: DEMONSTRATES APPROPRIATE WORK HABITS
 - IO-A Accepts responsibility in work environment
 - IO-B Interacts appropriately with supervisors and co-workers *44 47 35 31*
- ANNUAL GOAL III: LEARNS PREVOCAATIONAL COGNITIVE SKILLS GENERIC TO MOST VOCATIONS
 - IO-A Learns occupational reading and writing skills
 - IO-B Reads dials, diagrams, maps and charts
 - IO-C Learns basic math concepts (decimals, fractions, ratios, etc.)
 - IO-D Performs mathematical calculations
 - IO-E Learns measurement skills
- ANNUAL GOAL IV: LEARNS GENERAL PREVOCAATIONAL MOTOR SKILLS
 - IO-A Demonstrates physical strength, stamina, and mobility
 - IO-B Demonstrates coordination and dexterity
- ANNUAL GOAL V: PERFORMS PREVOCAATIONAL TASKS
 - IO-A Learns assembly/packaging skills
 - IO-B Learns clerical skills
 - IO-C Learns food service skills *20 21 22 24*
 - IO-D Learns basic cleaning skills
 - IO-E Learns plant/lawn care skills
 - IO-F Uses tools to construct/repair simple items
 - IO-G Learns car maintenance skills

SPECIAL EDUCATION VOCATIONAL TRAINING

(All programs must be approved in ISD Plan or by the ISD)

- ANNUAL GOAL I: PARTICIPATES IN SPECIAL VOCATIONAL PROGRAM / INDIVIDUAL VOCATIONAL TRAINING PLAN
 - IO-A Learns appropriate work habits
 - IO-B Completes minimal vocational skills

ADDITIONAL ANNUAL GOAL(S) AND SHORT-TERM INSTRUCTIONAL OBJECTIVES

EVALUATION PROCEDURE AND SCHEDULE:
 The methods and criteria described in the Special Education Curriculum will be used to evaluate progress on a continuous basis.
 Other evaluation procedure(s) and schedule(s), if any.

Rev 268

186

F 262

10/7/88
Date of IEPC Meeting

10/7/88
Date of MET

NAME: _____

DATE OF BIRTH: _____

SEX: _____

RACE: _____

RELIGION: _____

ADDRESS: _____

CITY: _____

STATE: _____

ZIP: _____

PHONE: _____

S.S.# _____

Current Grade _____

Language in Home English _____

PURPOSE OF IEPC

- Initial
- Review
- Comprehensive Reevaluation
- Change of Status
- Other _____

EVALUATION METHODS/TESTS, DATES, AND RESULTS
 (Required for initial and reevaluation)

Evaluation Methods/Tests	Date
NAIS-R V=59 P=54 FS=54	9/17/86
WJAT word R= 1.5g 1Sp 1.3g 1 Math 1.2g	9/17/86
PIAT 3-0 G	9/17/86
Key-Math Masony 1.8 G 1 Math 1.0 G 1 Tone 2.3g	9/17/86

DETERMINATION OF ELIGIBILITY

Based on information presented, the IEPC determines this student to be:

- Eligible for special education. Indicate: (1) Primary Impairment (2) Any other impairment
 - R340.1705 Educable Mentally Impaired
 - R340.1703 Severely Mentally Impaired
 - R340.1706 Emotionally Impaired
 - R340.1704 Trainable Mentally Impaired
 - R340.1713 Specific Learning Disability
 - R340.1714 Severely Multiply Impaired
 - R340.1710 Speech and Language Impaired
 - R340.1715 Autistic Impaired
 - R340.1709 Physical/Otherwise Health Impaired
 - R340.1707 Hearing Impaired
 - Deaf
 - R340.1711 Preprimary Impaired
 - R340.1708 Visually Impaired
 - Blind
- Not eligible for special education.

EXIT INFORMATION

Exit Date: ___/___/___ Exit Reason: 1 2 3 5 7 8 Anticipated Service Upon Exit: _____

Alternate Phone Number: _____

Date _____

ANNUAL GOALS AND SHORT-TERM INSTRUCTIONAL OBJECTIVES

INDEPENDENT/FUNCTIONAL LIVING

ANNUAL GOAL I LEARNS SELF-CARE SKILLS

10-A Learns eating skills
10-B Learns toileting skills
10-C Learns dressing skills
10-D Learns personal grooming skills (hands, face, nose, hair, teeth, body)
10-E _____

ANNUAL GOAL II LEARNS ABOUT HEALTH AND SAFETY

4	E	Y
4	E	Y
4	E	Y

10-A Learns advanced hygiene skills (deodorant, shaving, fingernails, etc.)
10-B Learns how to prevent and treat illnesses
10-C Learns indoor and outdoor safety procedures
10-D Learns first aid skills
10-E Learns about drug, alcohol and tobacco abuse
10-F _____

ANNUAL GOAL III LEARNS ABOUT PERSONAL AND FAMILY RELATIONSHIPS

1	E	W
1	E	W
1	E	W

10-A Learns about family life
10-B Learns about dating, marriage, divorce
10-C Learns about parenting
10-D _____

ANNUAL GOAL IV LEARNS ABOUT REPRODUCTIVE HEALTH

1	E	W
1	E	W
1	E	W

10-A Learns about reproduction
10-B Learns about family planning
10-C Learns about sexually transmitted diseases
10-D _____

ANNUAL GOAL V LEARNS HOMEMAKING SKILLS

4	E	Y
1	E	Y
4	E	Y

10-A Learns clothing care skills (including laundering, shopping, mending, sewing)
10-B Learns to plan and prepare meals (including nutrition, grocery shopping, table setting, and clean-up)
10-C Learns housecleaning skills
10-D Learns home maintenance/repair skills
10-E _____

ANNUAL GOAL VI LEARNS TO USE COMMUNITY FACILITIES

1	B	Y
1	B	Y
1	B	Y
1	B	Y

10-A Learns behavioral and conversation skills necessary for community mobility
10-B Increases mobility in community (walking, biking, riding in bus, taxi, car)
10-C Uses community buildings (doors, stairs, elevators, restrooms, telephones, drinking fountains, vending machines)
10-D Uses community facilities/shops (post office, barber shop, restaurants, etc.)
10-E Learns how to use community services
10-F Learns driver's education readiness skills
10-G _____

ANNUAL GOAL VII LEARNS PERSONAL BUSINESS SKILLS

10-A Learns budgeting skills
10-B Learns about banking and credit
10-C Learns about insurance, contracts, warranties, taxes, etc.
10-D Learns about renting and buying housing, furnishings, cars
10-E _____

ANNUAL GOAL VIII LEARNS LEISURE AND RECREATION SKILLS

1	B	Y

10-A Learns early play and playground skills (balls, wheelttoys, etc.)
10-B Learns leisure time skills (toys, board games, crafts, entertainment, excursions)
10-C Improves physical fitness (exercise, walking, jogging, swimming)
10-D Learns individual/team sports
10-E _____

CAREER PREPARATION

ANNUAL GOAL I IMPROVES EMPLOYMENT READINESS

1	B	X

10-A Learns information about different careers
10-B Learns job application, interview and selection skills
10-C _____

ANNUAL GOAL II DEMONSTRATES APPROPRIATE WORK HABITS

3	B	Y
3	B	Y

10-A Accepts responsibility in work environment
10-B Interacts appropriately with supervisors and co-workers
10-C _____

ANNUAL GOAL III LEARNS PREVOCCATIONAL COGNITIVE SKILLS GENERIC TO MOST VOCATIONS

10-A Learns occupational reading and writing skills
10-B Reads dials, diagrams, maps and charts
10-C Learns basic math concepts (decimals, fractions, ratios, etc.)
10-D Performs mathematical calculations
10-E Learns measurement skills
10-F _____

ANNUAL GOAL IV LEARNS GENERAL PREVOCCATIONAL MOTOR SKILLS

3	B	X
3	B	X

10-A Demonstrates physical strength, stamina, and mobility
10-B Demonstrates coordination and dexterity
10-C _____

ANNUAL GOAL V PERFORMS PREVOCCATIONAL TASKS

3	S	Y

10-A Learns commercial arts skills
10-B Learns graphic arts skills
10-C Learns food preparation skills
10-D Learns wood shop skills
10-E Learns machine trade skills
10-F Learns basic auto body and fender skills
10-G Learns welding skills
10-H Learns health and people services
10-I _____

ADDITIONAL ANNUAL GOAL(S) AND SHORT-TERM INSTRUCTIONAL OBJECTIVES

24
27
02
11
23
20
21
22

35
38
44
47
17
10-B also

For each IO selected, the number and letters in the boxes indicate the criterion, evaluation procedure, and schedule to be followed.

CRITERION:
1 75 % of the time
2 _____ % on test
3 _____ times out of _____ trials
4 90% PO's selected

EVALUATION PROCEDURE:
A Standardized Tests
B Systematic Observation
C Pre- and Post-Tests
D Teacher-Made Tests
E Informal Obs.
F _____

EVALUATION SCHEDULE:
T Weekly
U Monthly
V At end of semester
W By 5/25/89
X On a continuous basis
Y End of instructional unit
Z _____

ANNUAL GOALS AND SHORT-TERM INSTRUCTIONAL OBJECTIVES

MATHEMATICS

ANNUAL GOAL I: LEARNS MATHEMATICS SKILLS

10-A	Learns basic math concepts
10-B	Learns addition skills
10-C	Learns subtraction skills
10-D	Learns multiplication skills
10-E	Learns division skills
10-F	Learns fraction skills
10-G	Learns decimal and percent skills
10-H	Learns measurement skills
10-I	Learns metric measurement skills
10-J	Learns money skills
10-K	Learns time skills
10-L	Learns calendar skills
10-M	Learns calculator skills
10-N	Learns to solve story problems and think logically
10-O	

LANGUAGE ARTS

ANNUAL GOAL I: IMPROVES WRITTEN EXPRESSION SKILLS

10-A	Improves handwriting
10-B	Improves spelling skills
10-C	Learns punctuation skills
10-D	Learns grammar skills
10-E	Learns composition skills
10-F	

ANNUAL GOAL II: IMPROVES READING SKILLS

10-A	Improves phonetic and word analysis skills
10-B	Learns sight word recognition skills
10-C	Improves reading skills using visual-auditory-kinesthetic-tactile approach
10-D	Improves reading comprehension
10-E	

ANNUAL GOAL III: LEARNS CRITICAL INFORMATION

10-A	Learns personal information
10-B	Learns telephone directory/map skills
10-C	Learns critical vocabulary
10-D	

ANNUAL GOAL IV: LEARNS REFERENCE SKILLS

10-A	Learns dictionary skills
10-B	Learns library skills
10-C	

ANNUAL GOAL V: LEARNS ORAL LANGUAGE SKILLS

10-A	Learns conversation skills
10-B	Learns skills related to group discussions and oral presentations
10-C	Improves memory/direction-following skills
10-D	Learns conceptual language skills
10-E	

SOCIAL SKILLS

ANNUAL GOAL I: IMPROVES SELF-CONCEPT

10-A	Increases self-awareness
10-B	Expresses feelings appropriately
10-C	Participates in group discussions/activities
10-D	

ANNUAL GOAL II: IMPROVES INTERPERSONAL RELATIONSHIPS

10-A	Uses conversation skills
10-B	Improves peer interaction
10-C	Improves interaction with adults
10-D	

ANNUAL GOAL III: LEARNS INDEPENDENT/RESPONSIBLE BEHAVIOR

10-A	Responds to positive reinforcement
10-B	Exercises self-control
10-C	Accepts responsibility and takes initiative
10-D	

ANNUAL GOAL IV: IMPROVES WORK HABITS

10-A	Follows directions, rules, and procedures
10-B	Completes tasks
10-C	

SUPPORT FOR ACADEMIC SUBJECTS

ANNUAL GOAL I: PASSES ACADEMIC SUBJECTS

10-A	Uses special materials/equipment provided by teacher as needed to complete course work
10-B	Studies for and passes course tests
10-C	Completes class assignments
10-D	Completes homework assignments
10-E	Participates in class discussions
10-F	Follows directions, rules, and procedures
10-G	

ADAPTIVE EQUIPMENT/ALTERNATIVE PROCEDURES

ANNUAL GOAL I: USES ADAPTIVE EQUIPMENT

10-A	Uses a wheelchair
10-B	Uses a walker
10-C	Uses crutches/cane
10-D	Wears brace/splint
10-E	Learns pre-cane/cane skills
10-F	Uses amplification devices
10-G	Uses other adaptive devices (e.g. prosthetic hand)
10-H	

ANNUAL GOAL II: USES ALTERNATIVE PROCEDURES/EQUIPMENT FOR LEARNING

10-A	Learns sign language
10-B	Learns to use communication boards
10-C	Learns to use electronic devices/computers to communicate/learn
10-D	Learns to type
10-E	Learns skills related to Braille, abacus, auditory learning, visual efficiency, signature
10-F	Learns to use equipment designed for the visually impaired
10-G	

ADDITIONAL ANNUAL GOAL(S) AND SHORT-TERM INSTRUCTIONAL OBJECTIVES

For each IO selected, the number and letters in the boxes indicate the criterion, evaluation procedure, and schedule to be followed.

CRITERION:

1 _____ % of the time
 2 40 % on test
 3 3 times out of 2 trials
 4 90% on 100 5 trials

EVALUATION PROCEDURE:

A Standardized Tests
 B Systematic Observation
 C Pre- and Post-Tests
 D Teacher-Made Tests
 E Informal Ob
 F _____

EVALUATION SCHEDULE:

T Weekly
 U Monthly
 V At end of semester
 W By 3/25/89
 X On a continuous basis
 Y End of instructional unit
 Z _____

Appendix G
Samples of IEPs Coded by Researcher
and Doctoral Student

Note. Doctoral student codes are circled.

001
[Redacted]
[Redacted]
[Redacted]

STUDENT _____
Address _____
Parent/Guardian _____
Sex M Gr _____
Attending Building/I _____
Purpose of IEPC: _____

DETERMINATION OF EL

Evaluation Test/Procedures and Results: (Initial and Three-year Evalu:

_____ N/A _____
_____ N/A _____

Based on the evaluation procedures and test results this student is determined to be:

Eligible for special education programs and/or services Not Eligible
____ R340.1703 SMI _____ R340.1707 HI _____ R340.1711 PPI _____ R340.1704 TM1
____ R340.1708 V1 _____ R340.1713 SLD _____ R340.1705 EMI _____ R340.1709 POHI
____ R340.1714 SXI _____ R340.1706 EI _____ R340.1710 SLI _____ R340.1715 A1
(Use 1 for primary impairment; 2 for secondary.)

PROGRAMS AND SERVICES

Program/Service	R340.17	Frequency/Amount	Initiation Date	Anticipated Duration
<u>TM1</u>	<u>340.1739</u>	<u>full time</u>	<u>3-13-91</u>	<u>3-13-91/6-4-91</u>

Regular Education _____ N/A _____ Departmentalized Program(R340.1749c) _____ Yes No

Rationale for program which does not match student's eligibility: TM1 program is most appropriate to meet special needs.

Parent Signature on page 2 indicates consent for cross-categorical placement.

Teacher Consultant with matching endorsement needed for Resource Room Teacher _____ Yes No

Least restrictive environment option considered and reason for rejection: Reg Ed. or EMI program would not provide enough individual help for student.

_____ Transportation Bus to program

STUDENT _____

- Course of Study: _____ Regular Education curriculum leading to a high school diploma with special education support.
- _____ Special Education curriculum leading to a high school diploma that includes physical education, personal adjustment, pre-vocational and vocational training.
- Special Education curriculum until 26 years of age.

Physical Education with Trl class - tchr. Vocational assessment date U.A.

Prevocational/Vocational education needs (12 & older) continues to work on prevoc skills.

INDIVIDUALIZED EDUCATIONAL PROGRAM

3-13-91/6-4-91

Personnel Responsible _____ Effective Dates _____

Present Level of Performance measuring to 1" - can make change from \$5.00 with help - needs to be reminded about appropriate behavior outside of classroom. - writing skills on about 2nd grade level.

Annual Goals and Short-Term Instructional Objectives are attached. (42) 18 42

Any participant who disagrees with the committee determination must indicate the reason why the student meets or does not meet the criteria being discussed.

Reason _____

Disseminating report attached Yes ___ No

NA
Regular Education Teacher

NA
Multidisciplinary Team Member

Service Provider

Administrative Representative's signature indicates this IEP.

X

In Agreement

Parent/Guardian

WHITE: B.I.S.D.

YELLOW: Parent

PINK: Receiving School

GOLD: Special Services

M GOALS AND OBJECTIVES

2

STU

EFFECTIVE DATES

3-13-91

6-4-91

	EVALUATION	CRITERIA	SCHEDULE	
MATHEMATICS ANNUAL GOAL I: LEARNS MATHEMATICS SKILLS <input type="checkbox"/> 10-A Learns basic math concepts. <input type="checkbox"/> 10-B Learns addition skills. <input type="checkbox"/> 10-C Learns subtraction skills. <input type="checkbox"/> 10-D Learns multiplication skills. <input type="checkbox"/> 10-E Learns division skills. <input type="checkbox"/> 10-F Learns fraction skills. <input type="checkbox"/> 10-G Learns decimal and percent skills. <input checked="" type="checkbox"/> 10-H Learns measurement skills - 1" 1/2" 1/4" <input checked="" type="checkbox"/> 10-I Learns metric measurement skills. <input type="checkbox"/> 10-J Learns money skills - making change <input type="checkbox"/> 10-K Learns time skills. <input type="checkbox"/> 10-L Learns calendar skills. <input type="checkbox"/> 10-M Learns calculator skills. <input type="checkbox"/> 10-N Learns to solve story problems and think logically.	1.4	A	3-13-91	6-4
CAREER PREPARATION ANNUAL GOAL I: IMPROVES EMPLOYMENT READINESS <input type="checkbox"/> 10-A Learns information about different careers <input type="checkbox"/> 10-B Learns job application, interview and selection skills ANNUAL GOAL II: DEMONSTRATES APPROPRIATE WORK HABITS <input type="checkbox"/> 10-A Accepts responsibility in work environment <input checked="" type="checkbox"/> 10-B Interacts appropriately with supervisors and co-workers - <i>Attending classes</i>	#31 1.4	A	"	"
ANNUAL GOAL III: LEARNS PREVOCAATIONAL COGNITIVE SKILLS GENERIC TO MOST VOCATIONS <input type="checkbox"/> 10-A Learns occupational reading and writing skills. <input type="checkbox"/> 10-B Reads dials, diagrams, maps and charts <input type="checkbox"/> 10-C Learns basic math concepts (decimals, fractions, ratios, etc.) <input type="checkbox"/> 10-D Performs mathematical calculations. <input type="checkbox"/> 10-E Learns measurement skills	35 44 47			
ANNUAL GOAL IV: LEARNS GENERAL PREVOCAATIONAL MOTOR SKILLS <input type="checkbox"/> 10-A Demonstrates physical strength, stamina, and mobility <input type="checkbox"/> 10-E Demonstrates coordination and dexterity.				
ANNUAL GOAL V: PERFORMS PREVOCAATIONAL TASKS <input type="checkbox"/> 10-A Learns assembly/packaging skills <input type="checkbox"/> 10-B Learns clerical skills <input type="checkbox"/> 10-C Learns food service skills <input type="checkbox"/> 10-D Learns basic cleaning skills <input type="checkbox"/> 10-E Learns paint/lawn care skills <input type="checkbox"/> 10-F Uses tools to construct/repair simple items <input type="checkbox"/> 10-G Learns car maintenance skills				
ANNUAL GOAL VI: PARTICIPATES IN SPECIAL VOCATIONAL PROGRAM/INDIVIDUAL VOCATIONAL TRAINING PLAN <input type="checkbox"/> 10-A Learns appropriate work habits <input type="checkbox"/> 10-B Completes minimal vocational skills.	18			
Language Arts <input checked="" type="checkbox"/> Improves written Expression skills Composition - Spelling - grammar.	4	C	"	"

1. Teacher observation	4. Daily assignments	A. Demonstrated Improvement	D. % Correct
2. Standardized test	5. Frequency chart	B. Increased Grade Level	E. Occurrences
3. Teacher made test	6. Student record book	C. Demonstrated Mastery	F. Duration

Individual Vocational Training Agreement and Plan

Sc
Ph

In

Tr
Ac
Ci
Ph
Su

St

Student: _____
Address: _____
City: _____ Zip: _____
Phone: _____
S.S.# _____ Age: 25
Date of Birth: _____

Job Title: Clerk

Maximum hours per week: 6
Approximate hours per week: 2

SUN	MON	TUE	WED	THUR	FRI	SAT
				1:00 3:00		

The student will not be expected to report to the training site on days that school is not in session

Educational Goals:

Improve work habits and skills (16) (20) (21)
Improve social interaction (15) (25) (26)
Demonstrate appropriate workplace employee-employer relationship (33) (36) (37) (44) (47) (48)

Training Activities

Special demand training
Self-paced
On-site on the job training
None needed

NOTE: Additional job tasks may be added at any point during the course of training. Such tasks will appear at the end of this document.

Standards of attainment: All skills, general work behaviors and specific job activities, will be considered achieved if they are rated as satisfactory or above based on a coordinator made assessment completed by the employer.

Transportation Arrangements: When transportation is needed, it will be provided by the training site.

PUBLIC SCHOOLS
ANNUAL PLANNING COMMITTEE REPORT

226

9-14-88
10-2-89

Student
B.D.:
Address:
City:
Phone:
Parent:
Student:
Non-

Sex: male
Zip: [redacted]
Grade: ungraded

A. P

IEPC IEP Review Re-evaluation IEP

E

Teacher:

Year: IEP

C. Present level of educational performance - Additional information attached

*FUNCTIONING at 2/3 standard deviation below the mean
Cognitive: Brigrance MATH 2nd gr. Reading Primer 1st.
Adaptive Behavior: Commensurate with Cognitive Ability (CB)*

D. Eligibility - the committee determines this person to be:

Ineligible Eligible

for Special Programs and Services according to the characteristics in Rule #R340 17. (Indicate: Primary Certification = 1, Secondary Certification = 2)

SMI 03 EMI 05 HI 07 POHI 09 PPI 11 SXI 14
 TMI 04 EI 06 VI 05 S & L 10 LD 13 AI 15

E. Committee reviewed and completed annual goals/short term objectives prior to determining programs and services. Objectives from the last IEP have been reviewed.

Yes No N/A

05 - Vocational

G: (W1) STUDENT WILL EXPAND INDEPENDENT FUNCTIONING

STO: STUDENT WILL ACQUIRE DECISION MAKING TECHNIQUES

Method: Demonstration
 Criterion: GIVEN CHOICES, STUDENT WILL MAKE APPROPRIATE DECISION WITHIN 2 MINUTES.
 Schedule: Semester

10

(10)

STO: STUDENT WILL IMPROVE GROSS MOTOR SKILLS.

Method: Demonstration
 Criterion: GIVEN A REC. SET. , STUDENT WILL DEMO. APPRO. MOTOR RESPONSES W/95%ACC., 3.5 HRS WK
 Schedule: Semester

G: (W2) THE STUDENT WILL PERFORM PREVOCCATIONAL SKILLS.

STO: THE STUDENT WILL ATTAIN SKILL DEVELOPMENT BY COMPLETING A TASK

Method: Demonstration
 Criterion: GIVEN TECH. AND MTRLS, STU. WILL COMP. A 4-7 PRT TSK W/ 80% ACCURACY W/IN 45 MIN.
 Schedule: Semester

(22)

(21)

STO: THE STUDENT WILL INCREASE PROFICIENCY IN FOLLOWING DIRECTIONS.

Method: Demonstration
 Criterion: GIVEN 2-3 TEACHER DIRECTIONS, STUDENT WILL COMP. THE ASSIGNED TASK W/80% ACCURACY.
 Schedule: Semester

(16)

14
20
21
22

STO: THE STUDENT WILL IMPROVE FINE MOTOR SKILLS.

Method: Demonstration
 Criterion: GIVEN PREVOCCATIONAL TASKS, STUDENT WILL INCREASE PRODUCTION BY 15%.
 Schedule: Semester

(20)

G: (W3) THE STUDENT WILL IMPROVE SOCIAL EMOTIONAL BEHAVIOR.

STO: THE STUDENT WILL ATTEND TO TASK.

Method: Demonstration
 Criterion: GIVEN DIRECTION, STUDENT WILL REMAIN ON ASSIGNED TASK FOR 45 MINUTES.
 Schedule: Semester

(21)

48

STO: THE STUDENT WILL GENERATE NEW BEHAVIOR FROM CORRECTION.

Method: Observation
 Criterion: GIVEN A CORRECTIVE SITUATION, THE STUDENT WILL SHOW A CHANGE IN BEHAVIOR 3/5 TIMES.
 Schedule: Semester

(48)

Appendix H
Regional Map of Michigan

Regional Planning Consultant Assignment by Region



September 1991

Appendix I
Copies of Letters From Human Subjects
Institutional Review Board

Human Subjects Institutional Review Board



Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: March 20, 1991

To: Linda McCrea

From: Mary Anne Bunda, Chair

Mary Anne Bunda

Re: HSIRB Project Number 91-03-21

This letter will serve as confirmation that your research protocol, "A comparison of job skills deemed critical by employers as opposed to what is being taught to trainable mentally impaired students by our current educational systems," has been received by the HSIRB.

The subjects in the study can be characterized as the individuals who are rating the IEP's. It is clear from your protocol that the IEP's will be sanitized sufficiently to protect the handicapped individuals. However, we also need a copy of the cover letter and any rating form you are using to collect data.

It is unlikely that instrumentation is actually not applicable to your study. In any case, the Board agrees with your Chair of Special Education that this project is exempt from Board review and can be processed outside of the deadline structure. Consequently, when you provide us with information concerning the collection of data, we can consider approval.

Please submit these changes to the HSIRB, A-221 Ellsworth Hall. If you have any questions, please call Marjorie Kulpers in the HSIRB office, telephone number 387-5926.

xc: Elizabeth Patterson, Special Education
Alonzo E. Hannaford, Special Education

Human Subjects Institutional Review Board



Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: May 30, 1991

To: Linda McCrea

From: Mary Anne Bunda, Chair

Mary Anne Bunda

Re: HSIRB Project Number: 91-03-21

This letter will serve as confirmation that your research protocol, "A Comparison of Job Skills Deemed Critical by Employers . . .," has been approved under the exempt category of review by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

xc: Elizabeth Patterson, Special Education

Approval Termination: May 30, 1992

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