EMPLOYABILITY SKILLS RATED IMPORTANT BY EMPLOYERS AND EXHIBITED BY HIGH SCHOOL STUDENTS WITH MILD MENTAL RETARDATION

by

LINDA PERRY PRITCHETT

(Under the direction of Dr. Helen C. Hall)

ABSTRACT

The purpose of this study was to determine the importance of selected employability skills and the frequency with which these skills were exhibited by adolescents with mild mental retardation as rated by employers of high school students with mild mental retardation in career-technical work-based programs in Middle Georgia. A self-developed questionnaire determined the importance of 28 employability skills, the influence of demographic factors on employers' ratings, and the relationship between the rated importance and rated frequency that the skills were exhibited by students. Findings were based on data collected from 61employers.

Employability skills were divided into four subsets: basic academic skills, interpersonal skills, job specific skills, and basic work ethic skills. Skills in the basic work ethic subset were rated most important. Interpersonal skills had the second highest ratings. The basic academic skills subset had the lowest ratings. All of the subsets had ratings that indicated the skills were necessary for continued employment. *Exercise*

honesty was the highest rated individual employability skill with *use basic computer skills* the lowest rated individual skill.

Type of company had the greatest influence on the importance ratings of the employability skills, being statistically significant for the ratings of 12 employability skills. Whether the company was located in an urban or rural area was significant for six of the employability skills.

A statistically significant difference existed between the rated importance of the skills and the rated frequency the skills were exhibited for the basic academic skills subset, the interpersonal skills subset, the job specific skills subset, and the basic work ethic skills subset. For each subset the skills were rated as more important than the frequency with which they were exhibited.

INDEX WORDS: Employability Skills, Mild Mental Retardation, Basic Academic Skills, Interpersonal Skills, Job Specific Skills, Work Ethic Skills

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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

ATHENS, GEORGIA

2002

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May 2002

DEDICATION

First, I would like to thank God for the people He has placed in my life who have loved and supported me. Without my family members I would never have reached the goal of completing my doctorate.

To my parents, James and Eudora Perry, I dedicate this dissertation. Having grown up in the rural south during the Depression, they knew that education was the key to a better life. They made countless sacrifices to make sure that their children had opportunities that had not been available to them. Eight high school diplomas, three associate degrees, six baccalaureate degrees, four master's degrees, two specialist's degrees, and one doctorate stand as a witness to the importance my parents placed on education for their children. My only regret is that Mother died a few months before I finished this degree.

Next, I dedicate this dissertation to my children, Amy Linda, David Edward, and Jenny Eudora. They grew up thinking that Mother went to class one night a week. There were times that they, too, made sacrifices in order for me to continue my education. I am proud of the fine young people they have become and the education they have acquired at Mercer University, the Georgia Institute of Technology, and the University of Georgia. They are passing on their educational legacy to the grandchildren: Charlton Edward, Samantha Gabrielle, Mary Collier, and Mary Evelyn.

And last, but not least, I dedicate this dissertation to my husband, Harry Edward. When we married at Christmas of my junior year in college, he promised that he would help me finish my education. Neither of us dreamed that it would be a 32-year commitment. During the last four years he has driven me to classes on Saturdays so I could sleep, copied untold pages from journals in the library, helped carry dozens of books from the library to the car, and proofread thousands of pages of dissertation revisions. Thank you, Harry. Together we made it!

ACKNOWLEDGMENT

I would like to acknowledge and thank the many professionals who have assisted and encouraged me in the completion of my doctoral program.

To Dr. Helen Hall, my major professor, I am most indebted. When I first met with her about the possibility of beginning the program, she was very encouraging and made the degree seem so attainable. When I became discouraged and stressed, she reminded me of the progress I had made and assured me that I could accomplish this goal. She has read and reread this dissertation, offering beneficial suggestions to improve my work. Her guidance, support, and encouragement have kept me focused on my goal.

I would also like to thank the other members of my committee, Dr. Karen Jones, Dr. Jay Rojewski, Dr. Myra Womble, and Dr. John Scott. They have caused me to think, to focus my ideas, and to contemplate the effect that my work may have on the education of young people. I would also like to thank all the professors in the Department of Occupational Studies who have been willing to teach at “non-traditional” times. The varied schedule of classes has allowed those of us who work in the field to increase our educations. Most of us would never have been able to return to the University of Georgia as full-time students.

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CHAPTER I

INTRODUCTION

> Schools cannot create jobs. They cannot train workers for 20,000 occupations. But progressive school systems, through instruction in vocational guidance, can bring to their pupils an understanding of the changing patterns in modern vocations. Only through such instruction and counseling can intelligent plans for a career be formulated. (Chapman, 1937, p. vii)

Chapman's words are still true today. The 20th century saw a tremendous change in the American work force. At the turn of the 20th century, 80% of Americans lived and worked on farms. Within a few years after the end of World War II, manufacturing dominated American business. Global competition and lower wages in developing countries caused another major shift in the economy by the 1970s. For the first time, a majority of Americans were employed in service industries (Akabas, 1990; Krieg, Brown, & Ballard, 1995). The rapid growth of technologies in the late 1980s and 1990s refocused American industry toward technology (Dutton, 1996; Wirth, 1993).

No longer is a strong back and a willingness to work a guarantee of successful employment (U. S. Department of Labor, 1991). Brainpower is replacing brawn. Our individual and national well-being depends on developing a work force that can think for a living (National Center for Education Statistics, 1991). Today's adolescents must be willing and able to adapt to a variety of employment situations (Phelps, Hernandez-Gantes, Jones, Sanchez, & Nieri, 1995; U.S. Department of Labor, U.S. Department of

Education, & U. S. Department of Commerce, 1989). Young workers must have the skills to continue learning throughout their careers, because a young person entering the work force in the 21th century can expect to have about four to six major job changes over the course of his or her working life (Hershenson & Syzmanski, 1992; U. S. Department of Labor & U. S. Department of Education, 1988). The American workforce is both mobile and diverse. During a 40-year career, workers will not only have to adapt to a variety of supervisors, but also to co-workers who will not share the same backgrounds (Bloch, 1996; Brown, 1997).

Since 1983, there have been a number of major reports on the skills needed by the modern workforce (Commission on the Skills of the American Work Force, 1990; CPR Human Resources Executive Program, 1983; Johnston & Packer, 1987; National Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; U. S. Department of Commerce, U. S. Department of Education, U. S. Department of Labor, National Institute of Literacy, & Small Business Administration, 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989). Although each study labeled needed skills differently, the reports indicated four major skills areas in which workers need to be successful: *basic academic skills* including reading, writing, mathematics, communication, reasoning, and computer technology; *interpersonal skills* including working on teams, and working cooperatively with people of different personalities, races, gender, and authority levels; *job specific skills* including being able to adapt to change and perform multiple tasks; and *basic work*

ethic skills including flexibility, adaptability, self-direction, attendance, punctuality, motivation, positive attitude, and wearing proper attire

Public high schools today serve students with a wide range of disabilities from those with profound disabilities to those with mild, correctable disabilities. By high school age, 70% to 80% of all special education students are classified as learning disabled, mildly mentally retarded, or emotionally disturbed (Edgar, 1993). Although most special education students lose their labels of mentally retarded, learning disabled, and behaviorally impaired once they leave high school, their problems continue. The unemployment rates for people with all types of disabilities have been reported to be from 50% to 70% (Botuck & Levy, 1998; Edgar; Wagner & Blackorby, 1996; Wehman, 1993). When reported separately, the employment rate for persons with mild mental retardation tends to be lower than for other disability groups. Edgar questioned whether or not high school programs provided for mildly mentally retarded students are of any benefit.

Expectations of employers who hire students classified as mildly mentally retarded by the Georgia Department of Education and served through the "Program for Exceptional Children" in 10 Middle Georgia school systems will be the focus of this study. Students with mild mental retardation have intellectual functioning that can range from an upper IQ limit of approximately 70 to a lower IQ limit of approximately 55. The students also have deficits in adaptive behavior that significantly limit effectiveness in meeting the standards of maturation, learning, personal independence or social responsibility and especially school performance that is expected of the individual's age-

level and cultural group, as determined by clinical judgement (Division for Exceptional Students, 1994).

One of the major goals of education is to prepare all students to successfully enter the work force (Coyle-Williams, 1990; Feldman & Gordon, 1996; Kerka, 1997; Lewis, 1990; Tilson, Luecking, & West, 1996). Education must not only prepare students to obtain employment, but even more importantly, students must be prepared to sustain employment (Murry & Machell, 1994). In modern society, work not only provides financial support, but also helps provide a sense of identity and self-worth (Murry & Machell; Wehman, 1993). Most people would choose to work even if they were financially secure. Likewise, most people with disabilities would also prefer to be employed even though they may be receiving government benefits (Akabas, 1990; Murry & Machell; Wika & Rudrud, 1992).

Although educators recognize the need to prepare students for successful employment (Feldman & Gordon, 1996; Rojewski, Lynch, & Smith, 1992; Schmidt, Lynch, & Frantz, 1988), many of the skills desired by employers are not being taught in the schools (U. S. Department of Labor et al., 1989; U. S. Department of Labor, 1991; Wehman, 1993). Instruction must be redesigned to increase career awareness, academic skills, vocational skills, interpersonal skills, and work ethic (Benz, 1996). However, the needs of students with disabilities are so great and varied that schools cannot meet all of the needs. Businesses that will employ students with disabilities must be willing to work with the schools by communicating the types of employee abilities needed and the necessary work skills (Clark, 1993; Psacharopoulos, 1997; Wehman, 1990). Then,

education must design programs to help students develop the skills that are needed (Brand, 1992; Halloran, 1993).

Although most employers express a need for the same basic skills in all employees, characteristics of a business can sometimes present special requirements. The urban or rural location of the business sometimes presents special circumstances that influence needs and the problems exhibited by the students in the local schools. Repetto (1990) reported that urban areas are facing a decline in population while, at the same time, facing an increase in the number of at-risk adolescents being served in the schools. These two circumstances make it more difficult for industries located in urban areas to find qualified employees. Conroy (1997) found that in rural areas young people have difficulty finding ideal jobs. Often the jobs that are available do not parallel those desired. Skills needed in available jobs must be considered by local school personnel when planning programs so that students will have the skills necessary to be successful in employment. Immediately after high school, young people are most open to the risk of unemployment and underemployment (Arum & Shavit, 1995). Tailoring high school programs to available jobs in the community can help young people during this crucial stage of an employment career.

Most young workers aged 15-29 years are employed in small firms (Gray & Wang, 1989). Johnston and Packer (1987) found that the credentials necessary to obtain entry-level employment varied depending on the size of the employing company. Smaller businesses generally operate with tighter financial restraints and often offer very little formal training. Entry-level employees must be prepared to do the jobs when hired. Diska and Rogers (1996) found that business characteristics such as industry type and prior

experience in hiring persons with disabilities affected employers' concerns when hiring employees with special needs. Employers who had knowingly hired a person with a disability in the past had lower levels of concern about hiring persons with disabilities. Businesses that hire persons with disabilities are not representative of the firms in a given geographical area (Walls & Fullmer, 1997; Zadny, 1980). Educational services and social services are over-represented as employment sites for persons with disabilities.

The type of disability a person exhibits influences the likelihood of employment (Combs & Omvig, 1986; Edgar, 1993; Fuqua, Rathbun, & Gade, 1984; Wagner & Blackorby, 1996). The label of mental retardation caused more concern for employers than other disabilities (Combs & Omvig; Fuqua et al.). Many students with disabilities drop out of school, and many students with disabilities who stay in school do not earn regular high school diplomas (Halloran, 1993; Steere, Rose, & Gregory, 1996). Lack of a regular high school diploma may hinder the employment of adults with some companies.

In the past 20 years there has been an increase in the number of students with disabilities served in secondary vocational programs (Lewis, 1990; Lotto, 1986; Schmidt et al., 1988). With a smaller number of young people entering the workforce and the passage of the Americans With Disabilities Act, new job opportunities are opening for workers with disabilities (Akabas, 1990; Meers, 1992). If appropriate training is provided for students with special needs, their capacity for competitive employment is greatly enhanced (Meers; Murry & Machell, 1994). Due to the nature and complexity of the instruction needed for students with disabilities to be successful in competitive employment, intervention must begin before the secondary school years. Competencies

in employability skills, career exploration, community living, and independent living must be addressed (Murry & Machell).

Research has been done on the problems non-college bound young people face in obtaining and being successful in employment (Chartrand & Rose, 1996; Edgar, 1993; Mertens, 1986; Wagner & Blackorby, 1996; Wehman, 1990; 1993). Persons with mental retardation often display behaviors and response deficits that conflict with employer expectations and employment norms. The deficits can be categorized as social factors such as behavior and appearance and non-social factors such as inadequate productivity and lack of work ethic (Rusch, Mithaug, & Flexer, 1986). In order to prepare persons with mental retardation to be successful in competitive employment, a detailed assessment of the specific skills needed in a variety of employment settings must be conducted (Bates, 1986; Dever & Knapczyk, 1997; Finch & Crunkilton, 1993).

Purpose of Study

The purpose of this study was to determine the importance of selected employability skills and the frequency with which these skills were exhibited by adolescents with mild mental retardation as rated by employers of high school students with mild mental retardation in career-technical work-based programs in Middle Georgia. Results of the study may be used by high school teachers to develop curricula and instructional techniques that will help students master the skills desired by local employers, thereby improving the chance of students with mild mental retardation of being successfully employed after graduation.

Research Questions

Specifically, the purpose of the study was addressed through the following research questions:

1. What is the rated importance of selected employability skills for entry-level employees as determined by employers of high school students with mild mental retardation in career-technical work-based learning programs in Middle Georgia?

2. Is there a statistically significant difference in the importance of basic academic, interpersonal, job specific, and basic work ethic skills rated as important by employers who hire high school students with mild mental retardation based on the following independent variables:

   A. type of industry as defined by Standard Industry Classification?

   B. size of industry based on the number of employees?

   C. urban or rural location of the industry?

   D. gender of the responding supervisors?

   E. number of years of experience responding supervisors have had in present positions?

   F. positions of the respondents?

3. Is there a statistically significant difference in the importance of the basic academic, interpersonal, job specific, and basic work ethic skills rated as important by the employers who hire high school students with mild mental retardation and the frequency of skills exhibited by the students?

Theoretical Framework

Vocational theories provide a systematic manner to look at and conceptualize vocational behavior (Gimenes, 1990). Numerous vocational theories have been developed to serve as guides for the study of vocational behavior. More than 90 percent of the working-age population in the United States have no vocationally-relevant disabilities. Most theories of vocational behavior have evolved from studies of individuals without disabilities (Hershenson, 1996a, 1996b; Hershenson & Szymanski, 1992). Many of the theories of vocational behavior focus on the constructs of occupational choice and career development, not on work adjustment (Hershenson & Szymanski).

The presence of a disability presents a risk factor for vocational behavior (Hanley-Maxwell, Szymanski, & Owens-Johnson, 1998; Rojewski, 1994). Disabilities often limit interaction between individuals and their environments. The interaction between the individual and the environment is a factor in most vocational behavior theories (Hershenson & Szymanski, 1992). Individuals with disabilities may not have the freedom to choose and plan their preferred occupations (Chartrand & Rose, 1996). Career maturity has been found to be highly correlated with intelligence (Lawrence & Brown, 1976).

Hershenson's work adjustment theory was developed specifically for persons with disabilities. The purpose of the theory was to address adjustment to the work process itself, independent of the occupation in which the work was performed. Hershenson's theory also used elements of career development theories outlined by others (Hershenson & Szymanski, 1992; Szymanski & Hershenson, 1998). Hershenson's work adjustment

model has two essential elements: the *person* and the *person's environment*. Hershenson conceptualizes three successively developing interactive domains: *work personality, work competencies*, and *work goals*. During a person's life time the three domains develop in sequence. Ideally these domains should occur within certain chronological ages, but chronological maturity does not imply vocational development. These stages continue to develop throughout the life span and are not irrevocably molded by the environment in which they initially developed. Changes in one stage often necessitate changes in the other stages (Hershenson, 1968, 1979, 1984, 1996a, 1996b).

The interaction between the developmental stages of the worker and the working environment is called *work adjustment*. Work adjustment as conceptualized by Hershenson has three elements: work role behavior defined as appropriate behavior in the work setting, task performance defined as quality and quantity of work output, and worker satisfaction defined as gratification resulting from one's work (Hershenson, 1996a, 1996b; Hershenson & Szymanski, 1992). The employability skills selected for the present study focused on the elements of work role behavior and task performance. In summary, according to Hershenson's theory, which is the theoretical basis for this study, regardless of the job chosen, an individual who exhibits appropriate behavior and satisfactorily performs the job tasks can be successful.

Employability Skills

Since 1983, a number of reports have been published that emphasize the skills employers viewed as essential for the future work force. This study will use these reports as a framework for conceptualizing skills perceived by employers as needed by workers they hire. These studies are *Basic Skills in the U. S. Workforce* (CPR Human Resources

Executive Program, 1983), *Workforce 2000* (Johnston & Packer, 1987), *The Bottom Line: Basic Skills in the Workforce* (U. S. Department of Labor & U. S. Department of Education, 1988), *Building a Quality Workforce* (U. S. Department of Labor et al., 1989), *America's Choice: High Skills or Low Wages* (Commission on the Skills of the American Workforce, 1990), *The National Education Goals Report* (National Education Goals Panel, 1990), *What Work Requires of Schools* (U. S. Department of Labor, 1991), *Education Counts* (National Center for Education Statistics, 1991), *Framework for the Future* (National Association of State Boards of Education, 1995), and *21st Century Skills for 21st Century Jobs* (U. S. Department of Commerce et al., 1999). The present study used the basic academic skills, interpersonal skills, job specific skills, and basic work ethic skills identified in these national reports as the basis to determine the rated importance of the skills by Middle Georgia employers, to determine if the rated importance of the skills was influenced by certain demographic variables of the businesses and respondents, and to determine if there was a difference in the rated importance of the skills and the rated frequency with which the skills were exhibited by the young people.

Significance of Study

For over 20 years federal legislation has mandated free, appropriate education for students with mental retardation. For even longer, federal vocational legislation has addressed the needs of students with mental retardation and other disabilities. Yet, studies show that students with mild mental retardation are not prepared to meet the demands of employment (Edgar, 1993; Murry & Matchell, 1994; Wagner & Blackorby, 1996; Wehman, 1990, 1993).

Of workers with disabilities, individuals with mental retardation are among the most difficult workers to place on job sites (Combs & Omvig, 1986; Edgar, 1993; Fuqua et al., 1984; Wagner & Blackorby, 1996). Employers hiring students with mild mental retardation are the logical source from which to determine the skills needed by high school graduates with mental retardation in order to be successful in the work force (Dever & Knapczyk, 1997; Finch & Crunkilton, 1993). The jobs held by individuals with mental retardation are not representative of the jobs in the community (Diska & Rogers, 1996; Walls & Fullmer, 1997; White & Bond, 1992; Zadny, 1980), and often studies of skills needed by employees concentrate on jobs that will not be available to individuals with mental retardation. Jobs in rural areas (Conroy, 1997) and small cities of Georgia are not always representative of jobs in large metropolitan areas or other areas of the country. Studies of the skills needed for individuals with mental retardation should concentrate on businesses and industries that hire individuals with mental retardation (Hartonnian & Van Scotter, 1996). Therefore, results of this study can enhance the body of knowledge being developed by numerous studies of the skills needed to be successful in the modern workplace by focusing on job opportunities in rural areas and small cities that are currently available to individuals with mental retardation.

This study is significant to the future development of curriculum by enhancing the ability of school systems in rural areas and small cities to strengthen their vocational program for students with special needs (Meers, 1992; Murry & Machell, 1994). Subsequent to the study, alternative curriculum, teaching strategies, and processes can be developed to strength the programs and provide greater opportunities for students to be successful. Programs can be tailored to skills employers consider most important for

employment (Arum & Shavit, 1995). Implications from this research may also be beneficial for the development and refinement of alternate programs including providing beginning vocational programming to students in elementary and middle grades (Murry & Machell).

Summary

In today's increasing service oriented workplace, young people must be willing and able to adapt to a variety of employment situations, co-workers, and customers (Akabas, 1990; Bloch, 1996; Brown, 1997; Phelps et al., 1995). One of the major goals of education is to prepare students to enter and be successful in the workplace (Feldman & Gordon, 1996; Kerka, 1997; Tilson et al., 1996). High schools are not providing students with mild mental retardation an education that prepares them to be successful in the new workplace (Edgar, 1993; Botuck & Levy, 1998). Instruction must be adapted to increase the relevant employability skills of young people with mild mental retardation (Benz, 1996).

Mild mental retardation is a disability that presents a risk factor for vocational behavior (Hanley-Maxwell et al., 1998; Rojewski, 1994). Young people with mild mental retardation may not always have the freedom to choose and plan their preferred occupations (Chartrand & Rose, 1996). Hershenson's work adjustment theory addressed adjustment to the work situation independent of the occupation in which the work was performed (Hershenson 1968, 1979, 1984, 1996a, 1996b) and was the theory that guided this study. The skills young people with mild mental retardation need in order to be successful with employment opportunities available to them in the Middle Georgia area were the focus of this study.

Chapter II

REVIEW OF LITERATURE

The present study focused on the entry level skills rated to be most important by employers of high school students with mental retardation. Chapter II presents a review of literature relevant to the variables and concepts of interest. Areas of review included the purpose of work; the purpose of education; the need for cooperation between education and business; definitions and nature of mental retardation; legislation affecting career-technical (vocational) special education; theories of career choice; national reports on workplace skills; personal traits and skills needed by young workers; variables that influence the employment of persons with disabilities; career-technical decision making for students with mental retardation; and curriculum.

Purpose of Work

The ability and opportunity to work are major life activities and indicators of adulthood in our society. Most adults organize their lives around their work and gain their greatest identity from their occupations (Akabas, 1990; Florian, 1982; Kiernan, Schalock, & Knutson 1989; Murry & Machell, 1994). For most adults working is an economic necessity providing the means to secure basic necessities (Florian; Kiernan et al.). People across different age groups indicate that they would work even if they were assured of an adequate income without employment (Akabas). Even among persons with disabilities, the majority would prefer to work if opportunities were available (Akabas; Kiernan et al.; Wika & Rudrud, 1992).

In addition to economic benefits, employment provides opportunities for socialization (Akabas, 1990; Florian, 1982; Kiernan et al., 1989; Wika & Rudrud, 1992); contributes to society (Murry & Machell, 1994); provides a sense of self-worth (Akabas; Florian; Kiernan et al.; Wehman, 1993); provides a productive activity every day (Wehman); establishes adult identity (Florian; Murry & Machell); and enhances independence (Florian; Kiernan et al.; Murry & Machell; Wehman). Technological advances have made most work opportunities less physical, and modern social programs have made the consequences of not working less costly. As a result, in addition to providing for physiological needs, most workers expect their work situation to be interesting, meaningful, personally satisfying, and limited to only a part of their day (Akabas).

The development of modern social programs has provided disincentives for working. Tax-free cash, Social Security benefits, Supplemental Social Insurance payments, food stamps, and Medicaid have made it possible for some persons to survive without working (Howard, 1995; Walls & Fullmer, 1997). The more benefits an individual receives while not working, the higher the financial and intrinsic benefits of working must be in order to make working desirable (Walls & Fullmer).

Sometimes the meaning of work is related to social class and gender (Super, 1990). Women show an increasing inclination to work outside the home and are finding more opportunities open to them (Howard, 1995). They are, however, still far from equal to men both in terms of pay and opportunity. Failure in the work world and the availability of government programs have resulted in the low work activity of some poor individuals (Akabas, 1990). Generally, though, poor people identify their self-esteem

with work as strongly as do non-poor people. Even among semi-skilled workers, work is not seen as necessary for purely economic reasons, but as fulfilling in itself (Florian, 1982). Some individuals see work as drudgery while others see it as liberation. Work may be viewed as unobtainable by some who have been raised in dire poverty or as irrelevant by some who have been raised with the expectations of support without working (Super, 1990).

Purpose of Education

> The fundamental purpose of education in any society is to maintain its cultural heritage and to improve both society and the individual. Thus, the nature of schooling and the form it takes are defined within the content of a particular society. In the United States education serves to promote the interrelated goals of self-development, citizenship, and employment. (Hartoonian & Van Scotter, 1996, p. 555)

Education is a major topic in the United States–quality, cost, curriculum emphasis, environment, and assessment. Whatever the pathway, education is expected to produce self-supporting adults (Tilson et al., 1996; Wika & Rudrud, 1992). Solid basic skills that allow individuals to take advantage of specialized training are expected (Psacharopoulos, 1997). Schools cannot address only basic skills. Many children come to schools today with serious social, physical, psychological, and economic needs that education must address (Murry & Machell, 1994). Education today must be made more relevant to today's work, community, and family life environments (Phelps et al., 1995; U. S. Department of Labor, 1991).

Career-technical education shares with general education the goal of the good life. Career-technical education strives to prepare students for a working life so that the students can reach the goals of self-determination, self-realization, and self-integration (Lewis, 1990). The opportunity to prepare for a good life should be available to all diverse student populations. All students have the same basic rights to equal opportunities to all school programs (Rojewski et al., 1992). Students with disabilities have a legal right to expect their education to help them obtain their career-technical, residential, and community goals (Rusch, Szymanski, & Chadsey-Rusch, 1992).

Need for Cooperation Between Education and Business

Business and education have been joined together in partnerships since the late 1800s. The nature of the relationship has changed over the ensuing years. The early involvement of business was often philanthropically based–providing curriculum materials, incentives for students, extra equipment, field-trip sites, and money for extra benefits for students and teachers (Lankard, 1995a).

During the past 20 years the nature of the relationship between education and business has changed usually leading to a more formalized involvement (Lankard, 1995a). Many young people leaving secondary school are not prepared for the modern work places, spending several years after high school floundering before finding steady employment after thirty years of age (Osterman, 1995). Faced with a poorly prepared work force, businesses became more involved in the educational process (Lankard). Schools have been faced with a more diverse student population, students with a wider range of disabilities, money restrictions, higher drop out rates, and decreasing confidence of the community (Lankard; Nicol, Carleton, & Wallace, 1996).

No one group can solve all the problems of today's young people. Businesses must communicate their needs to education and be willing to help prepare young workers who can meet the needs of the modern workplace (Brand, 1992). Business and industry are education's largest consumers (Nicol et al., 1996). Working together education and business can tailor their partnerships to meet each others' needs and maintain a long-term relationship that will improve the education and lives of young workers (Young, Rosati, Vandergoot, 1986). Business and education have joined partnerships of various types to achieve their individual and combined goals (Lankard, 1995a). Partnership programs have a school-based learning component, a work-based component, and activities that connect the two (Brown, 1998).

In order for a relationship to be a partnership, both education and business must benefit. For businesses to become involved in a long-term commitment with education, they must see benefits that they feel affect their productivity and profit line and enable them to be more competitive (Lankard, 1995a; Tilson et al., 1996). Benefits to businesses include improved public relations (Gayton, 1996; Lankard; Nicol et al., 1996); better prepared entry-level employees (Clark, 1993; Gayton; Lankard; Nicol et al.; Tilson et al.; Wehman, 1990); decreased training cost (Gayton; Krieg et al., 1995; Lankard); increased productivity (Gayton; Lankard); lower employee turnover (Gayton); and more relevant curricula in the schools (Clark; Gayton; Nicol et al.; Tilson et al.; Wehman 1990).

The needs of businesses and industries are an important focus of education. The needs of the learners, however, must be the primary focus of education (Migal, 1996). Advantages to students for business-education partnerships include strengthened academic skills (Migal); earned wages (Migal; Tilson et al., 1996; Wehman, 1990);

opportunities to learn from skilled professionals (Kerka, 1997; Krieg et al., 1995; Migal; Nicol et al., 1996; Tilson et al.); support from adult employers or mentors (Clark 1993; Migal); opportunities to explore career options (Clark; Krieg et al.; Migal); increased ability to see the connection between school and the workplace (Gayton, 1996; Kerka; Migal); chances to learn workplace social skills (Clark; Gayton; Nicol et al.); and access to new technology and equipment (Clark; Lankard, 1995a; Nicol et al.).

Improved cooperation between business and education improves the general community. A more prepared workforce strengthens the potential for greater economic development, improves the stability and growth of the entire community, and increases local confidence and support for education (Lankard 1995a; Nicol et al., 1996).

Definitions and Nature of Mental Retardation

Mental retardation is a severe and permanent disability. Many terms have been used to describe mental retardation including intellectual disabilities, mentally deficient, mentally handicapped, and developmental disabilities. Mental retardation is the dominate term used by professionals in the field and in federal legislation (Hickson, Blackman, & Reis, 1995; Jones, 1996; Thomas, 1996) and is the term used in this study.

Many definitions have been developed for mental retardation, often reflecting the source and the purpose of the definition. In 1992, the American Association on Mental Retardation (Luckasson, Coulter, Polloway, Reiss, Schalock, Snell, Spitalnik, & Stark, 1992) published the following definition:

> Mental retardation refers to substantial limitations in present functioning. It is characterized by significantly sub-average intellectual functioning, existing concurrently with related limitations in two or more of the following applicable

> adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure and work. (p.5)

The American Association on Mental Retardation definition is widely used as an introduction to mental retardation, but the wording introduces several debates. Kirk, Gallagher, and Anastasiow (2000) define intellectual competence as a person's ability to grasp new ideas rapidly and see more associations between ideas, the cognitive strategies that a person can use to deal with difficult tasks, and the amount of context-specific content and know-how a person possesses. Intelligence testing is subject to inaccuracies and debate but is a critical component in identifying and placing students with mental retardation (Jones, 1996; Thomas, 1996). The standard unit of measurement for intelligence is the intelligence quotient (IQ). Intelligence quotient (IQ) is defined as a rough numerical comparison of a person's level of mental functioning with that of other persons (Jones). The American Association on Mental Retardation's use of the term sub-average has been the source of much debate. The guideline of two standard deviations below the mean-an IQ of 70 or below- is frequently used to determine the presence of mental retardation (Hickson et al., 1995; Jones; Thomas).

Persons diagnosed as having mental retardation have been classified in numerous ways in the years since mental retardation was first identified. Historically, the severity of the mental retardation a person was identified as having was based solely on IQ score. Intelligence quotient scores are still frequently used as guidelines, but the classifications of mental retardation are determined primarily by the amount of support the individual requires in order to achieve academic and independent living skills (Hickson et al., 1995;

Jones, 1996; Thomas, 1996). Classifications are used primarily to serve as a guideline to make curriculum choices based on the level of conceptual and behavioral functioning expected at each level, and to make administrative placement and support decisions for students at each level (Hickson et al.). The state of Georgia currently used the following classifications: mildly mentally impaired (MID); moderately impaired (MOID); severely impaired (SID); and profoundly impaired (PID) (Division for Exceptional Students, 1994).

Regardless of how intelligence is defined or measured, the most significant learning characteristics of persons with mental retardation are diminished intelligence and the generally poor ability to learn (Thomas, 1996). Diminished intelligence and a generally poor ability to learn prevent an individual from performing tasks on a normal level in almost all areas, particularly in the classroom, because almost everything done in the classroom requires intelligence. Individuals with mental retardation will never be able to achieve at the same level as average classmates regardless of the additional time they may remain in school. Students identified as being mentally retarded fall progressively further behind classmates, because the limitations imposed by mental retardation prevent the individual from making a year or more of progress for each year they receive intensive special education services. Optimum achievement of students classified as mildly mentally retarded would be one-half to three-quarters of an academic year for each academic year they spend in school. The optimum achievement would place students with mild mental retardation on a 6th grade level after the standard 12 years of public school. Most students do not achieve a 6th grade level of accomplishment functioning more on a 2nd to 4th grade level (Hickson et al., 1995; Jones, 1996).

The 1992 American Association of Mental Retardation's definition list specific adaptive skill areas that may be affected by mental retardation (Luckasson et al., 1992). Adaptive skills or adaptive behavior is defined as, "the effectiveness or degree with which the individual meets the standards of personal independence and social responsibility expected of his age and social group" (Jones, 1996, p. 61). Translating adaptive behavior into practical terms is difficult. Guidelines to determine measurement techniques, procedures, and cut off points in the skills areas vary from organization to organization. Difficulties in skills areas are a serious problem for people with mental retardation, but the most serious problem is the overall diminished ability to learn. If not for the diminished ability to learn, many problems could be overcome with education (Jones; Thomas, 1996).

The reference to the developmental period in the American Association of Mental Retardation's definition (Luckasson et al., 1992) has been impractical and unproductive (Thomas, 1996). Individuals with mild mental retardation generally develop motor, social, and language skills at a slower rate than their non-disabled peers. They seldom exhibit physical characteristics associated with mental retardation, and, as a result, mental retardation is often not suspected until the student begins to have learning and behavioral problems in the structured academic setting (Jones, 1996). Mental retardation does not disappear when a person reaches a certain age. Students identified as mildly mentally retarded often have serious adjustment problems as adults. Many of the same limitations imposed on an individual in the school program are imposed on adults in their employment and other life goals (Clark & Kolstoe, 1995; Jones; Thomas).

A broad range of ability and achievement exists among individuals with mental retardation (Thomas, 1996). To place arbitrary limitations on a person with mental retardation would be unethical. To assume an individual has abilities he or she does not have is unfair and ineffective. Determining the limitations and abilities of individuals with mental retardation is particularly difficult, because they fall behind their peers in any type of program (Clark & Kolstoe, 1995; Thomas).

Students classified as mentally retarded are alike in only two characteristics: their tested intelligence quotient is two or more standard deviations below the mean of 100 and their adaptive behavior is deficit in two or more of the identified areas of adaptive behavior. However, general characteristics of students identified as mentally retarded can be noted (Clark & Kolstoe, 1995; Hickson et al., 1995; Jones, 1996; Thomas, 1996). Students with mental retardation may exhibit predictable and generally poor abilities to learn, suffer from both long- and short-term memory deficits, have difficulty reasoning effectively, exhibit poor generalization skills, generally are greatly influenced by others, have difficulty dealing effectively with abstract concepts, have limited attention spans, and are likely to have mild to sever deficits in communication skills. There is a wide variability in the degrees to which an individual exhibits any or all of these characteristics.

Public high schools today serve students with a wide range or disabilities from students with profound disabilities to students with mild, correctable disabilities. By high school age, 70% to 80% of all special education students are classified as learning disabled, mildly mentally retarded, or emotionally disturbed (Edgar, 1993; Jones, 1996). Students classified as mildly mentally retarded by the Georgia Department of Education

and served through the "Program for Exceptional Children" in 10 Middle Georgia school systems will be the focus of the present study. Students identified as mildly mentally retarded have intellectual functioning that can range from an upper IQ limit of approximately 70 to a lower IQ limit of approximately 55 with deficits in adaptive behavior that significantly limit the individuals' effectiveness in meeting the standards of maturation, learning, personal independence, social responsibility, and especially school performance that are expected of the individuals' age-level and cultural groups, as determined by clinical judgement (Division for Exceptional Students, 1994).

Legislation Affecting Career-Technical Special Education

Legislation supporting the career-technical education of students with mental retardation falls under three broad areas: education for students with disabilities, career-technical education, and vocational rehabilitation (Clark & Kolstoe, 1995; Szymanski, Hanley-Maxwell, & Asselin, 1992). The service delivery systems for career-technical programs for students with disabilities emanate from federal legislation and are influenced by state legislation and regulations (Szymanski, Hanley-Maxwell et al.).

In the 1918 Smith-Hughes Act, Congress created the Federal Board for Vocational Education under the terms of the Vocational Education Act and established precedence for future legislation that would create programs to assist dislocated industrial workers to develop new skills for new jobs (Switzer, 1969; Szymanski, Hanley-Maxwell et al., 1992). The 1920 Smith-Fess Act added the civilian rehabilitation program under the Federal Board (Szymanski, Hanley-Maxwell et al.). As the needs and emphases of society changed, different legislative acts were passed to authorize and expand coverage to persons with disabilities.

The present Vocational Rehabilitation programs are authorized under the Rehabilitation Act of l971 (PL 94-112) and its amendments (Szymanski, Hanley-Maxwell el al., 1992). The federal agency, Rehabilitation Service Administration, provides funds to state vocational rehabilitation agencies which, in turn, deliver the services. Vocational Rehabilitation is an eligibility program. The individual must have a physical or mental disability that is a handicap to employment and be expected to benefit in terms of employment from such services. If the need for services exceeds the available resources, the program must first serve persons with severe disabilities with an order of selection specified in the state plan. Some services may not be available without cost.

Section 503 of the Rehabilitation Act of 1973 provided employment opportunities for individuals with disabilities (Clark & Kolstoe,1995). Section 503 required employers receiving federal contracts to develop a plan to recruit, hire, train, and advance in employment individuals with disabilities. Also required were reasonable accommodation for workers with disabilities. Section 504 of the law stated that persons with disabilities could not be excluded from programs receiving federal funds simply based on their disabling conditions (Jones, 1996).

Vocational Rehabilitation serves eligible people of all ages, including those who have acquired a disability after their high school years (Szymanski, Hanley-Maxwell et al., 1992). The primary services provided include evaluation of rehabilitation potential, counseling, job placement, physical and mental restoration services, and career-technical and other training services, including supported employment. Vocational Rehabilitation services are provided in educational institutions, places of employment, rehabilitation

facilities, private homes, and hospitals. No mandate requires that services be provided in the least restrictive environment.

Career-technical education legislation also has its roots in the 1917 Smith-Hughes Act which established programs in agriculture, trade and industry, homemaking, and teacher training (Szymanski, Hanley-Maxwell et al., 1992). Not until The Vocational Education Act of 1963 (PL 88-210) were individuals with special needs recognized as needing assistance to be successful in regular career-technical programs. However, few students with special needs were served in career-technical programs under this law. Students with special needs were divided into two distinct categories-disadvantaged individuals and handicapped individuals. The term for handicapped individuals has since been changed to *individuals with disabilities* (Clark & Kolstoe, 1995).

The Vocational Education Amendments of 1968 (PL 90-576) used basically the same definitions as the 1963 legislation, but PL 90-576 appropriated money to implement the provisions (Clark & Kolstoe, 1995). Separate programs were discouraged and students were expected to be served in the regular programs with appropriate support services and resources provided.

The Education Amendment of 1976 (PL 94-482) related to regulations stated in PL 94-142 (Clark & Kolstoe, 1995). Public Law 94-482 assured that disadvantaged individuals and individuals with disabilities were granted equal access to programs and services designed to prepare students for employment or continuing career-technical education. Set-asides continued to be mandated with money to be used to assist students with disabilities in the regular program whenever possible. The specific nature of the career-technical program goals for each student were to be planned and implemented

according to the least restrictive environment and Individual Education Plan (IEP) provisions of PL 94-142.

The Carl D. Perkins Vocational Education Act (PL 98-524), signed in 1984, was the next major legislation affecting career-technical programs for youths with disabilities (Clark & Kolstoe, 1995; Jones, 1996). The law had two broad themes: making career-technical education accessible to all persons and improving the quality of career-technical education to provide the workforce the skills needed to improve productivity and promote economic growth. The law also changed the definitions from PL 94-482 and increased the population eligible for services. This law provided set-asides for the disadvantaged and disabled to ensure certain services and activities were provided for them. Programs and services for students with disabilities had to be coordinated with their individualized education plan (Clark & Kolstoe).

The Carl D. Perkins Vocational Education and Applied Technology Act of 1990 (PL 101-392) eliminated set-aside funding for students with disabilities and other special populations (Clark & Kolstoe, 1995; Szymanski, Hanley-Maxwell et al., 1992). Appropriations were directed to programs with the highest percentages of special needs populations. The law provided a clear mandate that services for students with disabilities would continue. The law required career assessment, guidance counseling, and career development activities for students with disabilities designed to help students with disabilities select appropriate career-technical programs, determine what modification might be needed for success, and facilitate transition planning. Programs receiving federal funds were required to evaluate their programs annually. As part of the

evaluation, an evaluation of the progress of individuals who are members of special populations was required.

The Carl D. Perkins Vocational and Applied Technology Act of 1998 strengthened provisions for guidance and counseling (Association for Career and Technical Education, 2000). This legislation sought to improve gender equality under the terms "nontraditional training and employment." Special populations are also served under this definition. Guidelines were also introduced to increase state accountability and make certain that special populations have equal access to recruitment, enrollment, and placement activities.

Career-technical education for students with disabilities is an entitlement program (Szymanski, Hanley-Maxwell et al., 1992). Any student identified as needing special services and enrolled in a career-technical program is guaranteed services. The career-technical education system serves students at the secondary, post-secondary, and adult levels. Career-technical education programs include not only courses of study in career-technical education but also cooperative education, apprenticeship programs, and career guidance and counseling, as well as modifications needed for participation in career-technical programs. Career-technical education legislation mandates that services be provided in the least restrictive environment. The majority of students with special needs are served in integrated or mainstream settings, although some students with severe disabilities can be served in self-contained classes. Services are provided by career-technical special needs personnel, resource or supplementary personnel, career-technical evaluators, career-technical teachers, and job placement specialists. The type of personnel involved is determined by the program and placement.

Special education services are currently authorized under The Education of the Handicapped Act of 1975 (PL 94-142) (Clark & Kolstoe, 1995; Szymanski, Hanley-Maxwell et al., 1992). The law mandates that all school systems must make provisions for all children with disabilities to have a free and appropriate public education in the least restrictive environment. School systems must provide all identified children with an education designed to met their needs and abilities as well as other services necessary to enable the student to benefit from the educational program. Six general themes are contained in this law: free, appropriate education; individualized education plan; access to records; right of due process; placement in the least restrictive environment; and non-discriminatory testing (Clark & Kolstoe; Jones, 1996).

The Individuals with Disabilities Education Act of 1990 (IDEA, PL 101-476) made significant additions and changes to PL 94-142 (Clark & Kolstoe, 1995; Jones, 1996). In the context of secondary education, the law added rehabilitation counseling services to be provided by qualified personnel in sessions that focused on career development, employment preparation, achieving independence, and integration in the workplace and community. Transition planning for students age 16 and older were mandated. The law explicitly mandated that transition services be based on the needs, preferences, and interests of the students and, when appropriate, included a functional assessment. The emphasis on assessment moved from a diagnostic function for identification and classification to a basis for individual education and transition planning. IDEA clearly stated that the delivery of transition services was not the sole responsibility of the school, but that the school was responsible for ensuring that the needed services were provided (Clark & Kolstoe).

The Individuals with Disabilities Education Act of 1996 (PL 105-17) addressed the concerns of the general education community, as well as families and advocates of children with disabilities (Stodden, 1998). The law sought to strengthen the educational and transitional opportunities for students with mild disabilities. Planning for post-school transition was to start earlier, generic career and career-technical education programs coordinated with transitional activities for youth with mild disabilities, and secondary school academic career-technical curriculum requirements viewed as part of transition planning. A new focus on accountability for establishing and measuring student results was placed in all parts of the legislation.

Special education services are an entitlement, and all students who have been determined to have a disability that results in a need for special education and related services must be served (Szymanski, Hanley-Maxwell et al., 1992). The individual's potential to benefit from the services is not a condition of eligibility. Individuals can be served from birth through age 21. In addition to specialized instruction, related services such as speech, counseling, supported employment, and transportation are offered as needed. Special education services are provided by special education, regular education, and related services personnel. Special education services are evaluated in terms of compliance with regulations.

In addition to special education, vocational rehabilitation, and career-technical education laws, educational services for individuals with disabilities have been influenced by work force and civil rights laws (Clark & Kolstoe, 1995). The Comprehensive Employment and Training Act of 1973 (PL 93-203) was passed to aid economically disadvantaged people with job training. A 1978 amendment (PL 95-524)

included provisions for people with disabilities to be served. Programs under these laws were required to be actively involved with agencies providing training and employment opportunities. Many special education teachers used the program to further the training of students who lacked either the skills or the maturity to go directly into competitive employment.

In 1982, Comprehensive Employment and Training Act was replaced by PL 97-300, The Job Training Partnership Act (Clark & Kolstoe, 1995). This program was primarily designed to serve disadvantaged people, but allowed up to 10% of the people served to be persons with disabilities. Funds were to be used for activities such as job searches, counseling, remedial education, on-the-job training, advanced career training, programs to develop work habits, work experiences, and follow-up activities.

The 1990 American With Disabilities Act (ADA) guaranteed equal opportunity and access to Americans with disabilities (Jones, 1996). ADA ensures nondiscrimination in a range of activities including individual employment, transportation, public access, state and local governments, and telecommunications.

Theories of Career Choice

Vocational theories provide a systematic manner to look at and conceptualize vocational behavior (Gimenes, 1990). The theories address the manner in which vocational choices are made, implemented, and changed. Most vocational theories focus on the constructs of occupational choice and career development, not on work adjustment (Hershenson & Szymanski, 1992). Many theories consider the satisfaction and frustrations that vocational decision making can provide (Osipow, 1967, 1994). Theory constitutes a conceptual framework that anchors and structures knowledge so that the

knowledge can be generalized from one situation to another (Simon & Thyer, 1994).

The presence of disabilities present risk factors for vocational development (Hanley-Maxwell et al., 1998; Rojewski, 1994). Vocational development involves the interaction of individual, contextual, mediating, environmental, and outcome factors over the life span of the individual (Hanley-Maxwell et al.). The presence of disabilities often limits individuals' interactions with their environments (Hershenson & Szymanski, 1992). Limited interactions result in restrained vocational development.

Osipow (1967) lists seven general statements about career development: career development is systematic; career development has a psychological basis; career development has a cultural basis; the total person is involved in career development, the person possesses multi-potentiality for careers; career development is sequential and characterized by change, and career development is stressful.

Since World War II the number of career development theories has increased (Osipow, 1967, 1994). Theories differ regarding the types of influences on the selection of an occupation, and each family of theories tends to emphasize one type of influence to the exclusion of other influences. Some theories view vocational choice as a specific decision made at a given time. Other theories view the choice of an occupation as only one step in a series of decisions, each influenced by previously made decisions and influenced by multiple factors (Gimenes, 1990).

At the present time, three of the most popular are career choice theories, vocational development theories, and work adjustment theories (Gimenes, 1990; Hershenson & Szymanski, 1992; Szymanski, Turner, & Hershenson, 1992). Each category represents several different theories. This review will examine one of the best

known theory examples for each career theory category in an effort to determine the suitability of the theory for use with students with mental retardation.

Career Choice Theory

Career choice theories are primarily concerned with the given point in time when individuals make decisions about their occupations (Gimenes, 1990; Hershenson & Szymanski, 1992; Szymanski, Turner, & Hershenson, 1992; Szymanski, Hershenson, Enright, & Ettinger, 1996). Holland presents one of the best known career choice vocational theories. The general assumption of Holland's theory is that individuals select occupations based on the potentiality for satisfaction of their psychological needs (Gimenes, 1990; Hershenson & Szymanski; Szymanski, Turner et al.; Szymanski et al., 1996).

Holland's theory identifies into six broad personality types (Gimenes, 1990; Hershenson & Szymanski, 1992). *Realistic* people prefer concrete, hands-on activities and may lack interpersonal skills. Many realistic people select skilled and technical trades. *Investigative* personalities are analytical, intellectual, abstract, and task oriented, but may lack leadership skills. They often become scientists, computer programmers, and mathematicians. *Artistic* people are imaginative, self-expressive, independent, and extroverted, but may lack clerical skills. Artistic people become musicians, sculptors, painters, or authors. *Social* personalities are concerned with social problems, religious activities, and educational needs, but may lack mechanical or scientific ability. They become counselors, teachers, social workers, nurses, and ministers. *Enterprising* personalities are extroverted, aggressive, and adventurous, but may lack scientific ability. They use their verbal skills in leadership roles to dominate or persuade others.

Enterprising people become managers, lawyers, and sales people. *Conventional* people are practical, well-controlled, sociable, conservative, and generally follow the rules. They prefer structured tasks and often become clerical workers, tellers, and accountants.

Individuals' personality types develop out of the persons' inherited factors; experiences with peers, family, and friends of person's social classes and physical environments; and individual forces (Gimenes, 1990; Hershenson & Szymanski, 1992; Szymanski, Turner et al., 1992; Szymanski et al., 1996). If individuals develop strong orientations out of these factors, there is greater likelihood of satisfaction in corresponding occupational environments. If weak orientations, or no preferred orientations develop, there is less likelihood of vocational satisfaction.

Individuals are attracted to occupations in the same personality type occupational environments (Gimenes 1990; Hershenson & Szymanski, 1992; Holland, 1996; Kotrlik & Harrison, 1989; Szymanski, Turner et al., 1992). The role demand in the same personality type occupational environments meet their personal needs, permits expression of their personalities, allows the exercise of their skills and abilities, and provides them with satisfaction. Behavior is determined by an interaction between personality and environment. If preferred occupational choices are blocked and individuals must move down in the hierarchy of choices, the likelihood of unsuitable choices increases. A high degree of accurate knowledge about people's interests and personalities, the environment, and various occupations contributes to the adequacy of people's vocational choices. Intelligence is seen as less important than personalities and interests (Gimenes).

Vocational Development Theory

Vocational development theories consider vocational development as one aspect of general development (Gimenes, 1990; Hershenson & Szymanski, 1992). Vocational development is seen as a lifelong process of developing work values; establishing vocational identities; learning about opportunities; and trying out roles in school, leisure, and work environments. The theory considers which factors motivate or impede specific decisions. Vocational decision making is a long term process with each step affected by previous decisions, various people and conditions in the environment, as well as personal needs and attributes. Vocational choice is a series of mini-decisions of varying importance that add up to what appears to be one major decision (Super, 1990).

Super's Life-Span, Life-Space Theory is one of the broadest and most widely accepted theories of vocational development (Gimenes, 1990; Hershenson & Szymanski, 1992; Szymanski, Turner et al., 1992). The theory combines elements of developmental, differential, social, personality, and phenomenological psychology with self-concept and learning theory. Super combines situational and personal determinates with life roles and life stages. His theory focuses on four elements of vocational development: vocational life stages, vocational maturity, the translating of self-concept into vocational self-concept, and career patterns. Super's theory uses a multiple approach to career development and can provide a framework that accommodates and modifies theories by other researchers (Herr, 1996). Super's theory also accommodates the necessary compromises persons must make due to limiting environmental factors.

Super identified five vocational life stages: *growth*-birth to age 14 during which time individuals become aware of the roles of work in society; *exploration* ages 15-24

during which time individuals explore career options, begin to focus on careers that hold the most interest, and formulate identities; *establishment* ages 24-44 during which time individuals select careers and become more stable in chosen occupations; *maintenance* ages 45-64 during which time individuals have settled into occupations and are concerned with maintaining or advancing in present jobs; and *decline* age 65+ during which time individuals change the activities they have been accustomed to engaging in, especially vocational activities. All individuals proceed through the same general vocational life stages, but the age limits are very flexible. Individuals may also recycle through developmental stages when events occur that require the individuals to re-examine their career goals (Gimenes, 1990; Hershenson & Szymanski, 1992; Levinson, 1998; Rojewski, Maddy-Bernstein, Meers, Jones, & West, 1996; Super 1981, 1990)

Super visualized career maturity as a combination of physical, psychological, and social characteristics (Gimenes, 1990; Hershenson & Szymanski, 1992; Levinson, 1998; Super 1981, 1990). Career maturity includes the degree of successes persons have in coping with the demands of the environment at any given life stages. Career maturity also includes the degree of successes persons have in coping with the tasks they are confronted with because of biological and physical developments and the demands society expects of those who have reached certain stages of development. Career maturity encompasses both affective and cognitive skills .

Vocational self-concept is the product of the interaction of inherited aptitudes; physical makeup; opportunity to observe and play various roles; the extend to which behaviors meet with approval of superiors and peers; and compromises between individuals and social factors, self-concepts and reality (Gimenes, 1990; Hershenson &

Szymanski, 1992; Levinson, 1998; Super 1981, 1990). Super's concept of career patterns are the occupational levels attained and the sequences, frequencies, and durations of trial and stable jobs. The career patterns are determined by the individuals' parental socioeconomic levels, mental abilities, educational levels, skills, personalities, career maturity levels, and opportunities to which individuals were exposed. Work satisfactions and life satisfactions depend on the extent to which individuals find adequate outlets for abilities, needs, values, interests, personality traits, and self-concepts. Most people find their satisfactions in work, but some find their satisfactions in other areas such as leisure activities or homemaking.

Work Adjustment Theory

Work adjustment theories address the individuals' adjustments to the work processes independent of the particular occupation in which the work is performed (Hershenson, 1996a, 1996b; Hershenson & Szymanksi, 1992). Hershenson's Work Adjustment Theory was specifically designed to be applicable to persons with disabilities, although the theory can be applied to persons without disabilities. The two principle elements of the theory are the person and the person's environment (Hershenson & Szymanski, 1992; Szymanski, Turner et al., 1992; Szymanski et al., 1996; Szymanski & Hershenson, 1998). The theory is developmental in nature with three sequential domains as the individual reacts to his/her environment (Hershenson, 1996a, 1996b; Hershenson & Langbauer, 1973; Hershenson & Szymanski; Szymanski, Turner et al., 1992; Szymanski et al., 1996; Szymanski & Hershenson). Hershenson conceived vocational development as a decision-making process that begins to narrow the range of

occupational possibilities and, then, strengthens the possibilities which remain (Hershenson & Roth, 1966).

The first domain of the work adjustment theory, *work personality,* primarily develops during the pre-school years (Hershenson, 1984, 1996a, 1996b; Hershenson & Szymanski, 1992; Szymanski, Turner et al., 1992; Szymanski et al., 1996; Szymanski & Hershenson, 1998). The families are the primary developmental influences. Hershenson divides work personality into three domains: the persons' self-concepts as workers, the persons' work related needs and values, and the persons' systems of work motivation.

The focal area of development during the school years is the domain of *work competencies* (Hershenson, 1984; Hershenson & Szymanski, 1992; Szymanski, Turner et al., 1992; Szymanski et al., 1996; Szymanski & Hershenson, 1998). The work competency domain consists are three elements: work habits such as promptness, neatness, and reliability; physical and mental skills applicable to jobs such as reading, math, and vocational skills; and interpersonal skills relevant to the work setting. Work competencies are primarily shaped when individuals are assessed on their abilities to meet the physical, mental, and social demands of the school environment. Disabilities have their initial influence on the domain of work competencies, but the influence spreads to work personality and work goals. The impact of the disabilities depends on the extent to which the disabilities interfere with individuals' abilities to meet the demands of the school environment.

As the individuals anticipate leaving the school settings and entering the work place, the third domain, appropriate crystallized *work goals*, develops (Hershenson, 1984; Hershenson & Szymanski, 1992; Szymanski, Turner et al., 1992; Szymanski et al., 1996;

Szymanski & Hershenson, 1998). Work goals are primarily influenced by persons' peers and reference groups.

Each successive domain is influenced by and influences the domain or domains that have been the focal point of previous development (Hershenson, 1984, 1996a, 1996b; Hershenson & Szymanski, 1992; Szymanski, Turner et al., 1992; Szymanski et al., 1996; Szymanski & Hershenson, 1998). All the domains continue to develop and interact throughout the individuals' lives and are not irrevocably influenced by the environment which initially influenced the domain. Any change in one domain generally precipitates changes in the other two domains. The primary environmental influences are not completely independent of each other. The families influence the school environment individuals will have, and the school influences the peers and reference groups of the individuals. The experiences individuals have in each domain shape how successful the individuals will be in that domain and influence the successes in seceding domains.

The interaction of work personality, work competencies, and work goals and the work environment is called work adjustment (Hershenson, 1996a, 1996b; Szymanski & Hershenson, 1998). Work adjustment, as conceptualized by Hershenson, has three components: task performance-quality and quantity of work output; work role behavior-behavior appropriate to the work setting such as getting to work on time, getting along with supervisors, and following instructions; and work satisfaction-the individual's personal degree of satisfaction derived from the work setting.

Application of Theories to Various Groups

No specific vocational theory has been proven to be more beneficial than others to people with or without disabilities (Wolffe, 1997). Most vocational theories present the

ideal representation of vocational development and were originally developed for the white, male, middle class individuals in professional or managerial occupations (Osipow, 1967). The theories have less to do with the vocational development of the poor, minority, female, or disabled. Many people do not have the luxury of planning and choosing a preferred career (Chartrand & Rose, 1996). Many of the jobs frequently held by non-white, non-male individuals are dirty or demeaning and to suggest that the job represents individuals' personalities would be insulting (Osipow, 1967).

Studies seeking to evaluate the influences of gender, culture, race, socioeconomic status, presence of disabilities, and community environment on vocational decisions have produced conflicting results (Conroy, 1997; Davy & Stoppard, 1993; Kotrlik & Harrison, 1989; Lawrence & Brown, 1976; McWhirter, Hackett, & Bandalos, 1998; Melchiori & Church, 1997; Ryan, Tracey, & Rounds, 1996; Vondracek & Skorikov, 1997). Studies have also shown a difference in what young people would like to achieve and what they expect to achieve (McWhirter et al.). What young people expect to achieve is sometimes unrealistic when variables such as past academic achievement, location, and availability of jobs are taken into consideration (Conroy).

Lawrence and Brown (1976) developed a multiple regression procedure to further understand the relationship of self-concept, intelligence, socioeconomic status, race, and gender to career maturity as measured by the Career Maturity Inventory. In Lawrence and Brown's study of high school seniors, Super's self-concept theory appeared to have more validity when referring to European American males than to females or African Americans of both genders. The best set of predictors for the total group was intelligence,

gender, socioeconomic status, and race. Intelligence, race, or gender had a greater effect than socioeconomic status and self-concept.

Vondracek and Skorikov (1997) did not find gender, socioeconomic status, grade level, or academic performance to be a factor in their study of the role of leisure, school, and work activities in the formation of interest and vocational identity in middle school and high school students. They used a self-report measure to gather information from junior and high school students in a rural community. The school experience plays a dominating role in the formation of vocational identity in adolescents but may not be adequate to prepare youth for realistic decisions regarding their work-related abilities, interest, and performance. High school students may be mislead by school experiences and lack of feedback for their potential for doing well in a given occupation. Students' self-assessments may be primarily due to what they like to do because few have the opportunity to engage in realistic work activities. Students who express a positive attitude and openness to a wide range of activities tend to express a willing to explore a wide range of work activities. Exploration of a wide range of work activities encourages greater confidence in one's ability to succeed in a wide range of occupations.

Ryan et al. (1996) used a modified form of Holland's Vocational Preference Inventory to measure vocational interest of high school students in an urban high school. The interest structure of African American and European American high school students appeared to be similar based on Holland's structure of vocational interest. No difference was indicated in the structure of interest between low- and high-SES groups. The results seemed to support the applicability of Holland's model across ethnic and SES groups. When ethnicity and SES were paired, the low-SES African American group was a better

fit than the high-SES African American group. No differences were indicated between the low-SES and high-SES European American groups.

Ryan et al.'s (1996) study did indicate that gender differences occurred in Holland's structure of interest. Females in general, as well as European American females, fit Holland's model better than males or European American males. Both European males and females fit the model, and there was no difference in the fit between African American males and females. Low-SES African American females were a better fit with the model than low-SES African American males. The conflicting results of the study make it difficult to draw any conclusion as to the effect of gender and SES on the application of Holland's interest structure on African American students.

Among rural high school students, gender, father's occupation, average earned grades, and having knowledge about a job and its opportunities were the most important predictors of a young person's stated ideal job (Conroy, 1997). The majority of the young people aspired to professional jobs and expected high salaries, with more females than males aspiring to high status jobs. Placing more importance on knowledge of a job and its opportunities was related to the choice of a higher status ideal job. The stated ideal job and the jobs available were not consistent with the stated desire of many of the students to remain in a geographical area.

Kotrlik and Harrison (1989) conducted a study of Louisiana high school students to determine which persons influenced occupational choices and which factors were most important in the choices. Students in 43 schools, stratified by school size and culturally diverse geographic areas, were surveyed using a closed-form questionnaire. The mother, father, person in the occupation, and friend, in that order, were listed as the most

influential. The top five factors that were important to the students in selecting careers were interest in the work, working conditions, personal satisfaction, salary or wages, and availability of jobs. The majority of students had been advised to go to college after high school, with a higher percentage being advised to go to college by their teachers rather than by their parents or guidance counselor. Standardized test scores, job availability for college graduates, and other factors appeared to make college an unrealistic goal for the majority of high school graduates.

Melchiori and Church (1997) addressed the vocational needs and satisfaction of supported employees identified as having mental retardation by comparing the supported employees and their non-disabled co-workers to determine if the groups differed in their expressed vocational needs. Using a modified card-sort administration procedure with a Likert scale format, the investigator read the need statement. The respondent placed the card under the appropriate heading corresponding to the importance the respondent placed on the need. The needs organized under the comfort value–activity, independence, variety, compensation, security, and working conditions– showed no significant differences between the two groups. Supported employees did express a greater desire for recognition. Co-workers expressed a greater need for creativity, responsibility, and availability of quality supervision defined as human relations. There were no significant differences in the areas of ability utilization, achievement, advancement, altruism in relationship to co-workers and social service, and technical supervision. The results indicated that the supported workers were probably better described as similar rather than unique or different from their non-disabled co-workers in regard to their vocational needs. In general, the supervisors did not know the feelings of their workers. The extent

to which the workers met the needs of the job was the determining factor in placement successes of the supported employees, not the employee satisfaction with the job.

The role of culture on the vocational expectations of high school students has been documented (McWhirter et al., 1998). Predictors of the educational and career expectations of Mexican American high school females included socioeconomic status, acculturation, academic achievement, gender role attitudes, parental and teacher support, family and career commitment, and perceptions of barriers. The model of educational plans and career expectations developed for Mexican American females fit the data from a study of the educational plans and career expectations for Mexican American males better than the data from a study of the educational plans and career expectations for European American females did. There were some differences in the expectations for Mexican American females and Mexican American males indicating a difference based on gender, but the difference based on culture appeared to be stronger.

Vocational Theories and Young Persons with Mental Retardation

It is not realistic to expect any single vocational theory to explain all aspects of career development (Gottfredson, 1996). Different theories were developed to focus on different aspects of vocational development and to answer different questions concerning development (Holland, 1996). Some practitioners question the usefulness of career theory for actual practice (Savickas & Walsh, 1996). Other counselors may become so immersed in a theory that they are insensitive to the individual client's vocational aspirations and do not listen to the client's feelings and goals (Holland). Many of the questions raised by theories are more interesting to practitioners than to clients who are more interested in selecting a job in which they can do well and find happiness.

The realities of the work world allow for a wide range of personalities within most jobs and occupations (Hershenson, 1974; Szymanski & Hershenson, 1998). Individuals with disabilities form a diverse, internally heterogeneous group with regards to personality types and functional limitations. There are few unique considerations in the vocational guidance of persons with disabilities. Career theories utilize five constructs: individual background, work personality, work competencies, work choice, and work adjustment. Background determines work personality, work competencies, and work choice which interact with one another to produce work adjustment. Functional limitations affect work competencies most directly. Although there are variations among individuals with a given disability, some particular chronic conditions have certain fairly consistent limitations.

Mental retardation presents career development and selection problems that physical and emotional disabilities usually do not. Intelligence quotient (IQ) scores should never by interpreted in isolation, but below average IQ scores are correlated with several vocational difficulties (Levinson, 1998). IQ is positively correlated with the number of years of formal education a person has, thus the greater likelihood a person has the educational requirements for high status/high pay occupations. Individuals with higher IQ scores tend to master a task more quickly and to perform the task more quickly and with fewer errors. IQ scores are correlated with vocational/career maturity and more accurate self-knowledge. The higher an individual's IQ score, the more likely they are to make realistic and informed career choices. Persons with higher IQ scores are more likely to find and keep a job as long as they do not exhibit poor attitudes, behaviors, and social skills (Levinson).

Although there are elements of Holland's Trait Theory and Super's Theory of Vocational Development that can be used to help students with mental retardation prepare for vocations, there are many elements of vocational decision-making that preclude either theory from being the dominate theory used (Hershenson & Szymanski, 1992; Szymanski & Hershenson, 1998). The elements include the nature of the disability, limited availability of jobs especially in rural areas, the limited experiences of many of the students, and the reluctance of employers to hire individuals with disabilities. Hershenson's work adjustment theory allows for these factors by emphasizing that vocational success is due to an individual learning the skills and behaviors needed on a particular job the person with a disability has acquired.

Holland's trait and factor theory has limitations in the application to persons with mental retardation primarily due to the emphasis on individual traits and the importance of early experiences in the development of personality types (Hershenson & Szymanski, 1992; Szymanski & Hershenson, 1998). Possibilities of job modifications usually do not enter into the association process, thus limiting the interest of an individual with mental retardation. Limited experiences in childhood and adolescence may increase the difficulty an individual has in making informed choices among items on vocational assessment instruments based on Holland's theory. However, because instruments based on Holland's theory are easy to administer and score, they are frequently used with persons with mental retardation. Additional assessments of career maturity and considerations of job modifications should be used in addition to the instruments. Pre-assessment instruction on self-assessment and the requirements of different occupations

can increase the likelihood of a realistic evaluation based on Holland's theory (Harrington, 1997).

Super's vocational development theory offers a framework to address the career development needs of persons with mental retardation (Hershenson & Szymanski, 1992; Szymanski & Hershenson, 1998). Many young people with mental retardation have had limited experiences in early life. Super's theory can help counselors recognize the developmental level of the young people in order to develop plans to remediate experiential and knowledge difficulties. Many adolescents and adults with mental retardation do not advance beyond the fantasy sub-step (4 to 10 years old) of the *growth* vocational stage (Levinson, 1998). Underdeveloped stages can result in difficulties at later stages (Super, 1990). In some individuals with mental retardation the critical self-concept skills and occupational awareness never develop sufficiently to allow realistic career choices to be made (Levinson; Super). Many individual with mental retardation never reach the stage of career maturity where they can successfully cope with the tasks that society expects of people who have reached a given biological or social stage.

An individual's knowledge of his or her abilities, interest, and personality is essential in Super's theory (Harrington, 1997). Cognitive and experiential limitations of individuals with mental retardation often impedes this self-knowledge. Individuals with mental retardation often must compromise their vocational goals more so than individuals without mental retardation. Although most men and women focus their personality organization on their work or occupation, for some people, this focus is peripheral or non-existent (Super, 1990). Individuals with disabilities focus their personality organization on other activities such as leisure activities and homemaking.

Hershenson's work adjustment theory was designed to specifically apply to persons with disabilities. Although most disabilities initially impact work competencies, the impact rapidly spreads to work personality and work goals (Hershenson & Szymanski, 1992; Szymanski and Hershenson, 1998). For persons with mental retardation, the nature and severity of the disability influences its impact of the development of work personality. Despite limited experiences, environments, opportunities, and options, individuals with disabilities can develop traits and skills needed to be successful in the components of work role behavior and task performance (Hershenson & Szymanski, 1992).

Work adjustment theories go beyond the choice of a job or occupation and address the construct of employability–the ability to keep a job once hired (Hershenson, 1974, 1996a, 1996b). All people have the ability to perform some type of useful work. People also have individual needs they hope will be satisfied by work (Harrington, 1997). In optimum situations, the individual will be satisfied with the work environment and the work environment will be satisfied with the individual.

In reality some occupations offer little in terms of satisfaction except a salary (Harrington, 1997). The work adjustment theory emphasizes job maintenance skills such as knowing how to keep and advance in a job; understanding the employers' and co-workers' expectations; understanding how expectations can change over time; adjusting to changes in supervision, duties, schedules, and other key features of employment; and adjusting to new work environments. Included in the work adjustment theory are good work habits and self-discipline (Wolffe, 1997). As with the general population, there is so much variation among individuals with mental retardation that no one theory of

vocational choice, vocational development, or work adjustment can be applied to all persons with mental retardation (Hershenson & Szymanski, 1992).

National Reports on Workplace Skills

Major national reports on skills business leaders and educators perceive to be important for success in the modern workforce served as the conceptual framework used to guide the present study (Commission on the Skills of the American Work Force, 1990; CPR Human Resources Executive Program, 1983; Johnston & Packer, 1987; National Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; U. S. Department of Commerce et al., 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989). The framework served as a guide in the review of reports conducted to determine the perceptions of businesses of the skills persons with various disabilities need in order to be successful in competitive employment. The framework also served as a guide in the development of the instrument used in the present study.

Since 1983, there have been a number of major reports on the skills needed by the modern workforce (Commission on the Skills of the American Work Force, 1990; CPR Human Resources Executive Program, 1983; Johnston & Packer, 1987; National Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; U. S. Department of Commerce et al., 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989). Although each report labeled needed skills differently, all the reports indicated four major skills areas in which

workers need to be successful. These major skills areas are *basic academic skills* including reading, writing, math, communication, reasoning, and computer skills; *interpersonal skills* including working on teams, and working cooperatively with people of different personalities, races, gender, and authority levels; *job specific skills* including being able to adapt to change, to use job specific tools, and to perform multiple tasks; and *basic work ethic skills* including flexibility, adaptability, self-direction, attendance, punctuality, motivation, positive attitude, and proper attire.

In 1983 the CPR Human Resources Executive Program published a report contrasting the perceptions of business, labor, and public education entitled *Basic Skills in the U. S. Work Force.* The program surveyed 314 industry, school, and union officials to determine their perceptions of the skills needed by the American workforce. Business and union officials identified speaking/listening, mathematics, and science skills as the skills most often deficient, versus reading skills usually cited by educators. Writing and reasoning competencies were also frequently noted to be deficient. Even if employees have the skills needed to do their present jobs, employers and union officials both stated that lack of basic skills often limits job advancement. One respondent noted that workers who will succeed in the work force are people who have learned to learn.

Industry, school, and union respondents frequently suggested human relations and work behavior as essential skills, including punctuality, no absenteeism, appropriate attire, and ability to work within group settings. One executive noted, "90% of our terminations are due to poor human relations training and upbringing . . . Too many . . . people are late and absent too often . . . and disrupt work (routines)" (CPR Human Resources Executive Program, 1983).

In 1987 the Hudson Institute undertook a project to develop information concerning the many changes that are reshaping our economy and society (Johnston & Packer, 1987). The report of that study was entitled *Workforce 2000.* The Institute gathered data in the areas of future skill requirements of the economy, the impacts of women and older workers on the economy, the shift to services, the impact of immigration, the demographics of the future workforce, economic scenarios, future social and political changes, workplace literacy, and the dynamics of the international economy. The authors combined the findings into a report designed to provide basic information on the job market to be used to evaluate current policies and undertake new policy initiatives. The report was developed under the financial sponsorship of the U. S. Department of Labor but was designed to also be used by business, labor, the schools, and state and local governments to reflect on how well they can meet the challenges of the future labor force.

Johnson & Packer (1987) reported that millions of new jobs were being created. In terms of absolute numbers, the biggest job creation categories for the future include service--cooks, nursing aids, servers, and janitors; administrative support--secretaries, clerks, and computer operators; and marketing and sales--cashiers. Most of these jobs require only modest levels of skills, but all require employees to be able to read and understand directions, add and subtract, and speak and think clearly. Today's jobs that are in the middle skills distribution will be the low skills jobs of tomorrow. In the future, there will be very few unskilled jobs.

The typical workplace is becoming smaller and most new jobs will be in small businesses (Johnston & Packer, 1987). Training is less likely to be offered by small

businesses due to the cost. Schools must prepare youth in basic employability skills such as math, language, and reasoning skills in order for them to be successful in the workplace without further training by the employer. The fastest growing jobs require much higher skills, while the slowly-growing jobs require less.

The need for improved basic skills in the workplace was the focus of *The Bottom Line: Basic Skills in the Workplace* (U. S. Department of Labor & U. S. Department of Education, 1988). Sixty-five percent of the companies participating reported that basic skills deficiencies limited the job advances of their high school graduate employees and 73 percent reported that such deficiencies inhibited the advancement of non-graduates.

The term basic skills, as used by employers, typically included not only the ability to read and write but also computation, communication, and problem solving skills (U. S. Department of Labor & U. S. Department of Education, 1988). Business leaders emphasized that such habits as self-discipline, reliability, perseverance, accepting responsibility, and respecting the rights of others were needed for successful employment. Business leaders also stated that employees need to develop their analytical reasoning abilities to more readily be able to transfer their experiences from one job to another.

Building a Quality Workforce (U. S. Department of Labor et al., 1989) sought to identify the specific needs of the business community for employee preparation in order to foster a better understanding between business, education, and government leaders about deficiencies in the skills of entry level workers and suggest methods to overcome these deficiencies. One-on-one consultations with representatives from business and education plus community employer/school forums were held throughout the nation.

Business leaders represented both small and large businesses, urban and rural settings, a variety of industries, and a variety of levels or responsibility within the industries. Education leaders represented a cross-section of educational institutions from kindergarten to college.

The project found a widening gap between the perceived needs of businesses and the capabilities of entrants to the workforce (U. S. Department of Labor et al., 1989). Employers expressed a practically unanimous concern regarding the competencies of entry level workers in the areas of reading, writing, mathematics, communication, problem solving, teamwork, initiative, and adaptability. Other areas of concern included self-discipline, absenteeism, acceptance of responsibility, reliability, the work ethic, ability to operate with a minimum of moderate supervision, ability to think creatively, computer literacy, and attitude.

Educators participating in the project agreed with business leaders about the overall goals of education and the skills needed by businesses, but a majority of the educators maintained that graduates were well-prepared for entry level positions (U. S. Department of Labor et al., 1989). Business and education representatives stressed the need to reduce the isolation of their worlds so that business can do a better job of anticipating future workforce needs and communicating these needs to educators. The report concluded that education must institute reform efforts to better understand the needs of business and develop new strategies to provide a quality workforce.

In the late 1980s the Commission on the Skills of the American Workforce visited hundreds of American firms in all sectors of the economy and interviewed thousands of employers, personnel managers, production supervisors, and workers (Commission on

the Skills of the American Workforce, 1990). The commission sought to understand what American jobs demand, what employers expect, and how expectations are likely to change in the future. *America's Choice: high skills or low wages!* stated that the majority of employers felt that the education and skill levels of American workers roughly matched the demands of their jobs. When businesses complained about the quality of their applicants, few talked about the kinds of skills learned in school. The primary concern of 80% of employers was friendly workers with a good work ethic and appropriate social behavior: 'reliable,' 'a good attitude,' 'pleasant appearance,'and 'a good personality.' A few business leaders were worried about literacy and basic math skills and were frustrated that employees could not read a production schedule or follow an instruction card. About 15% of the employers mentioned a shortage of employees with occupation specific skills--most in chronically underpaid "women's" occupations and traditional craft trades. The study found little evidence of a far-reaching desire among employers for a more educated workforce.

The second part of *America's Choice: high skills or low wages!* (Commission on the Skills of the American Workforce, 1990) looked at the changes that must be made in American businesses if the businesses are to remain competitive on a global scale. The authors believed that industry and education must reconsider the skills and competencies needed by the emerging workforce if America is to maintain its performance standard. If not, America will become divided between those with high skills who will continue to demand high wages and those with low skills who will not be able to command wages that will allow them to pursue the American dream.

As part of a joint effort between the National School Boards Association and the U. S. Department of Education, the National Education Goals Panel (1990) released *National Education Goals.* The report grew out of a series of three two-day meetings of school board representatives from seven states and staff members from the National School Boards Association, the National Governor's Association, the Council of Chief State School Officers, and the U. S. Department of Education. Six goals, designed to shape educational reform efforts for the 1990s, were adopted. Although all the goals are important, Goal 3, Student Achievement and Citizenship, and Goal 5, Adult Literacy and Life Long Learning, more directly relate to skills needed by employers.

Goal 3 can be divided into three major components: increase student competence over complex subject matter, ensure that students learn to use their minds, and engender a sense of responsibility (National Education Goals Panel, 1990). Students need to know both declarative knowledge (who, what, when, where, and why) and procedural knowledge (how-to). As students acquire knowledge they must also learn to reason, solve problems, apply knowledge, communicate, think critically, think creatively, and regulate themselves. Students must be taught to accept responsibility for their actions. Opportunities should be provided for young people to identify, plan, and execute tasks that need to be completed.

Accomplishing Goal 3 will make accomplishing Goal 5 possible. Goal 5, developing a more literate population, is a societal need as well as an individual need (National Education Goals Panel, 1990). A young person with inadequate academic skills may be able to obtain a job but will find job advancement more difficult. The rapid rate of change in the workplace means that even current technical skills are no guarantee of

successful future employment. Students need training in interpersonal, communication, and motivational skills that will enable them to take charge of their own lifelong learning.

In 1991 the Secretary's Commission on Achieving Necessary Skills (SCANS) released *What Work Requires of Schools* (U. S. Department of Labor, 1991). The Commission had been asked to examine the demands of the workplace and whether the young people of America are capable of meeting the current and future workplace demands. The Commission spent 12 months talking to business owners, public employers, people who manage employees daily, union officials, and workers on the assembly line and at their desk. The SCANS report found that over one-half of America's young people leave school without the knowledge foundation required to find and hold a good job in an internationally competitive economy.

One of the goals of the SCANS report was to define the skills needed for employment in the modern economy (U. S. Department of Labor, 1991). The report paralleled National Goals #3 and #5 (National Education Goals Panel, 1990) which addressed skills students and adults must know in order to earn a decent living. The SCANS report identified five competencies and a three-part foundation of skills and personal qualities that form the basis of job-performance.

The first competency identified by SCANS is that workers be able to identify, organize, plan, and allocate the resources of time, money, material and facilities, and human resources (U. S. Department of Labor, 1991). Next, workers must be able to work with others by participating as a member of a team, teaching others new skills, serving clients/customers, exercising leadership, negotiating, and working with diversity. In order to use information, workers must be able to acquire and evaluate it, organize and

maintain it, interpret and communicate it, and use computers to process it. To be successful in today's complex workplace, workers must understand complex inter-relationships. Workers must understand the system, monitor and correct their performance, suggest improvements, and develop alternative systems. The last competency is the ability to work with a variety of technologies. Workers need to select the correct technology, apply it to the task at hand, and maintain and troubleshoot the equipment.

In order to successfully acquire the five SCANS competencies, workers need a three-part foundation (U. S. Department of Labor, 1991). First, workers must have the basic skills of reading, writing, using mathematical techniques, listening, and speaking. Second, they must know how to think: thinking creatively, making decisions, solving problems, visualizing, knowing how to learn, and reasoning. Third, successful workers will display personal qualities of responsibility, self-esteem, sociability, self-management, integrity, and honesty.

Education Counts (National Center for Education Statistics, 1991) sought to develop a comprehensive education indicator information system capable of monitoring the health of the educational system. A panel of teachers, analysts, school administrators, employers, and academicians suggested six issue areas around which to develop a system of indicators. One of the areas, learner-outcomes, related to the skills students need in order to find their place in the local community.

Three major concepts were suggested to guide the development of indicators in the area of learner-outcomes (National Center for Education Statistics, 1991). Core content covers the repertoire of facts and knowledge grounded in traditional subject

matter. Integrative reasoning skills cut across knowledge in specific fields–the ability to reason about and apply insight to complex issues. Attitudes and dispositions deal with human qualities of honesty, tolerance, a sense of community, self-determination, teamwork, cooperative learning, commitment to craft, and attitudes toward learning.

In 1995 the National Association of State Boards of Education published its report *Framework for the Future.* A study group comprised of 15 state board of education members heard from researchers, federal and state policy makers, representatives of community-based organizations, and parents and students. The resulting report was based on the premise that teaching and learning in our public schools must undergo dramatic changes to link education, career preparation, and economic development. Success in the workplace demands continuing changes in the skills of workers. Successful employees must begin their careers with a higher degree of literacy and other skills, plus be able to continue to learn and grow on the job and throughout their lives.

To successfully handle changes in the work environment, employees must have a broader base of knowledge, more creativity and communication skills, and the ability to transfer knowledge from one area to another (National Association of State Boards of Education, 1995). There is a growing gap between what is being taught on school campuses and what is needed in the workplace. Many graduates lack an awareness of how to apply their knowledge to workplace situations, retrieve information, solve problems, work in teams with colleagues, or adapt to workplace cultures that demand new types of skills and disciplines. Often education's preoccupation with basic academic skills produces a lack of interest in anything beyond the classroom doors. These skills are no longer enough. No longer can schools prepare students for specific lifetime jobs.

Today students must be prepared with skills and knowledge that can be transferred across a wide range of work situations.

In l999 the U. S. Department of Commerce et al. released *21st Century Skills for 21st Century Jobs,* a report compiled from research, speeches, statistics, and reports of private and government organizations. The report indicated that global competition, the internet, and widespread use of technology will create new challenges for employers and workers in the 21st Century. In 1997, professionals made up about 20 percent of the workforce, more than 60 percent were skilled workers, and less than 20 percent were unskilled workers. If the trend of the past fifty years continues, the need for skilled workers will increase and the need for unskilled workers will decrease. Not only will new jobs require more advanced skills, but most current jobs will have changed at a rapid pace.

The demand for skilled workers is not just a future need. The need for skilled workers increases every day (U. S. Department of Commerce et al., 1999). Employers seek a variety of skills including the basic skills of reading, writing, computation, and technical computer skills that can frequently be upgraded. New systems of management and organization, as well as employee-customer interactions, require communication skills, analytical skills, problem-solving and creative thinking, interpersonal skills, the ability to negotiate and influence, and self-management. Employees must, also, acquire new knowledge and skills specifically related to the company's products and services.

Personal Traits and Skills Needed by Young Workers

Many of the personal traits and skills displayed by young workers are not the traits and skills acceptable to businesses (U. S. Department of Labor & U. S. Department

of Education, 1988). An intensive review of related literature identified skills perceived to be important by employers in many fields. The identified skills are important for entry level workers who are mentally retarded as well as workers who are not mentally retarded. Employment opportunities for persons with mental retardation do not exist in isolation from businesses, industry, and the workforce in general. Workers identified as having mental retardation, especially mild mental retardation, must meet the same standards as other workers (Wehman, 1993). The present study will use four categories of skills: *basic academic skills, interpersonal skills, job specific skills, and basic work ethic skills*. The acquisition of these skills enables individuals to develop self-confidence and motivation, to meet the challenges of work successfully, and to survive and even prosper in the workplace (Bhaerman & Spill, 1988).

Basic academic skills are academic skills generally considered to be taught in elementary and secondary schools. The basic skills considered in the present study are: use written communication, use oral communication, use math to solve problems, listen carefully, read and understand information, solve problems, and show willingness to learn new information and skills.

Interpersonal skills are skills that allow a worker to get along and work with supervisors, co-workers, and customers. Today's workplace is becoming more diversified (Tilson et al., 1996). To be successful in the modern workforce, a person must be able to work with persons of different races, gender, religious beliefs, and nationalities. The interpersonal skills considered for the present study are: work well with others, dress and groom appropriately, show respect to others, ask for help when needed, accept criticism, meet public, and act cheerful and friendly.

Job specific skills are the skills needed by workers in a particular industry and vary by occupation. The type and size of the industry influence the specific job skills employers expect a new employee to posses when first hired (Diska & Rogers, 1996; Gray & Wang, 1989; Levy, Jessop, Rimmerman, Levy, 1991; Walls & Fulmer, 1997). Skills needed in an industry may change rapidly, so most industries expect employees to be able to adapt to change and perform multiple tasks. Job specific skills considered for the present study are: use appropriate tools, use basic computer skills, transfer skills from one job to another, perform acceptable quality of work, maintain acceptable pace of work, follow directions, and work with minimum supervision.

Basic work ethics skills can be defined as attitudes and beliefs that support hard work and holds individuals personally accountable and responsible for the work that they do (Hill & Petty, 1995). Hill (1996) found a significant difference in the basic work ethic displayed by employed workers and career-technical education students. The basic work ethic categories used by Hill's study were: interpersonal skills, initiative, and being dependable. Basic work ethic skills considered for the present study are: take initiative, display dependability, exercise honesty, come to work everyday, come to work on time, have a positive attitude, and be conscientious.

Basic Academic Skills

The need for strong basic academic skills in most occupations has been well documented. There is a relationship between the basic academic skills of workers and the economic well being of not only the workers, but also the entire country (Coyle-Williams, 1990; U. S. Department of Labor & U. S. Department of Education, 1988). The Secretary's Commission on Achieving Necessary Skills (U. S. Department of Labor,

1991) listed reading, writing, speaking, listening, knowing math concepts, knowing how to learn, and reasoning as basic academic skills that are needed to successfully build work competencies. Basic academic skills are needed as building blocks for problem-solving, thinking creatively and critically, making decisions based on complex information, and transferring and making connections between previous and current learning (U. S. Department of Labor & U. S. Department of Education, 1988). In many areas of the modern workplace, workers are being given more responsibility to make decisions. They must know how to gather and use information (U. S. Department of Labor).

The seriousness of deficits in basic academic skills is readily apparent in the technical workforce. In many technical areas, the complexity of the job demands basic skills beyond the academic skills included in basic literacy. Given the rapid pace of advancement in technology, basic academic skills are needed just to keep technological skills current. Increased basic academic skills are also needed in the expanding service sector as more service jobs are impacted by technology (Custer & Claiborne, 1995).

Custer and Claiborne (1992, 1995) conducted two studies to determine the perceived relative importance of basic, technical, and employability skills by employers and teachers in the trade and industry and health occupations fields. The skills in each area were matched with each skill in the remaining two areas. Custer and Claiborne (1995) found that when employers in trade and industry and health occupations areas were asked to choose the more important skills between basic academic skills and technical skills, the employers chose basic skills as the most important. Similar findings were made when trade and industry and health occupations teachers were asked to

choose between basic academic and technical skills (Custer & Claiborne, 1992). The teachers chose basic academic skills over technical skills, but the difference was not statistically significant. In addition to the traditional areas of reading, writing, and math, Custer and Claiborne (1992, 1995) considered thinking critically and creatively, decision making, problem solving, and life long learning as basic skills needed by modern workers.

As part of a longitudinal study of young people born in Great Britain in 1970, Bynner (1997) found that when the young people were 21, writing and spelling were the most often self-reported basic skills deficit areas. The results of tests revealed that math problems were more widespread. The finding may have indicated that more workers were aware of writing and spelling problems because writing and spelling were more important on their jobs. One of the most serious implications of low basic skills was that students with low basic skills were more likely to drop out before completing school which lead to unskilled jobs and periods of unemployment. Skill difficulties were also associated with measurable degrees of depression and reduced self-esteem. Young adults with low basic skills tend to identify with occupations where basic skills are not deemed as important. The acquisition of basic skills seems to be critical in acquiring and retaining employment.

Not all studies indicate that basic skills are determining factors in the acquisition of employment. Employers who knowingly hire employees with mental retardation do not seem to consider the employees' lack of basic skills a hindrance to employment (Baumeister & Morris, 1992; Wika & Rudrud, 1992). The employment statuses of high school students in South Dakota who completed the School Transition to Employment

Partnership curriculum were analyzed to determine if there were any differences in the reading ability, math ability, and IQ of the students who successfully found employment and the students who did not find employment. After completion of the vocational program that included school-based and community-based instruction, reading ability, math ability, and IQ did not differ significantly between the students who obtained competitive employment and those who did not obtain employment.

Foss and Bostwick (1981) used individuals who were mentally retarded as the primary source of information in their study of the major problems of adults who are mentally retarded. The adults, as well as their service providers, identified the problems they perceived to be the most important. Neither the adults with mental retardation nor their service providers mentioned the lack of basic skills as one of the top 5 needs of the adults living in the community. The service providers did mention the limited availability of jobs and stereotypical jobs as a problem faced by persons with mental retardation living in the community. Lack of basic skills could be a factor in the jobs available to persons with mental retardation.

Millington, Szymanski, and Hanley-Maxwell (1994) surveyed employers in Wisconsin to determine what underlying factors influenced employers' selections for entry-level jobs. Employers in the control group were asked to rate qualities used in considering hiring applicants. Employers in the experimental groups were asked to rate qualities used in considering hiring applicants who were identified as mentally retarded. When asked to rate qualities used in considering hiring applicants identified as having mental retardation, employers identified understanding verbal instructions as the most important basic skill and performing math computations as the least important. Other

basic skills ranked important were reasoning skills, organizational skills, understanding written documents, oral communication, and making decisions. The employers ranked basic skills as less important when considering hiring applicants identified as being mentally retarded than when hiring other applicants. The researchers had assumed that employers would consider applicants in both groups for the same jobs, but the difference in concern for the applicants' basic skills indicated that the applicants identified as being mentally retarded and the applicants not so identified were being considered for different jobs. Employers may have considered intelligence when matching applicants to jobs which resulted in pairing people who happened to be mentally retarded with jobs requiring a lower level of basic skills.

Diska and Rogers (1996) conducted a survey of companies in the Boston area that had more than 20 employees to determine specific concerns of the employers about hiring persons with psychiatric disabilities. A 39-item instrument using a Likert scale was developed to be used in telephone interviews with the person in charge of hiring for each company. Employers did not indicate a great deal of concern about applicants identified as having a psychiatric disability possessing adequate academic skills. The employers were much more concerned about the symptomatic and behavioral manifestations of the psychiatric disorder, the effects of medication, and the general deportment of the person in the job setting. The findings indicated that employers recognized the differences between the effects and problems of mental retardation and psychiatric disabilities.

The management-skilled worker hierarchy of some companies does not require the skilled workers to use or even possess high academic skills (Weisman, 1993). In one company new employees are trained on simulated production work and rarely use writing

or computational skills. The production workers are isolated from tasks deemed too difficult or complex. Marginally skilled production workers, however, produce some of the most advanced computer systems in the world.

Interpersonal Skills

When the majority of employers indicated concern about skills shortages, the skills they typically have in mind are work ethic and social skills such as reliability, a good attitude, pleasant appearance, and a good personality (Commission on Skills of the American Workforce, 1990). The SCANS report (U. S. Department of Labor, 1991) defined competencies as what people actually do at work. The report identified sociability and responsibility as the two behavior characteristics on which people build the competencies of working with diversity, serving clients and customers, and participating as a team member.

Teachers in the career-technical areas of trade and industry and health occupations perceived employability skills to be more important for students when entering the work force than basic skills or technical skills (Custer & Claiborne, 1992). Employability skills were defined as the personal qualitites that individuals bring to the workplace and include the interpersonal skills of working in teams and working with people of diverse cultures. Teachers across all the variables of educational level, work experience before teaching, level of students taught, teaching area, and teaching experience perceived employability skills to be the most important. Teachers of adult learners felt that their students needed less emphasis on employability skills than did the teachers of secondary and post-secondary students. Teachers with previous work experience in business and industry recalled problems employees had getting along with

others in the workplace. Teachers on all levels perceived the need to focus on employability skills in their programs, but felt inadequate and ill-prepared to do so. Teachers in trade and industry perceived their students to have more problems with employability skills than teachers in the health occupations area.

Employers in trade and industry and health occupations areas also perceived employability skills to be the most important when contrasted with both basic and technical skills (Custer & Claiborne, 1995). Employers perceived employability skills to be the most important skill cluster regardless of service area, responsibility type, years of work experience, company size, educational level and occupational classification. The two Custer and Claiborne studies (1992, 1995) emphasize the critical need for employability skill development in classrooms and laboratories.

Millington et al. (1994) found that of the sixty qualities used to consider hiring or rejecting applicants for hire, participating as a team member had the fifth highest mean score behind only inability to do the job, absenteeism, dishonesty, and trustworthiness. Other important interpersonal skills identified were: conflict resolution, inappropriate social behavior, poor response to criticism, courteousness, sensitivity to the needs of others, friendliness, well groomed, tolerant of frustration, self-control, understanding of the workplace culture, and knowing what customers expect. All of the interpersonal skills were rated important or very important.

High school students who completed a vocational program for students with disabilities and obtained competitive employment were rated significantly higher on the interpersonal skills of attitude/behavior, appearance, and interpersonal relations (Baumeister & Morris, 1992; Wika & Rudrud, 1992). Students rated higher on

interpersonal skills were more likely to be hired by their employer during the work-based portion of their educational program regardless of whether the program was located in a rural or urban area.

Two areas of concern for employers regarding the hiring of persons identified as having psychiatric disabilities are symptomatology defined as the symptomatic and behavioral manifestations of the psychiatric disorder and the effects of medication and work personality defined as the general deportment of the person in the job setting (Diska & Rogers, 1996). The symptomatology factor explained 45.9% of the variance and included the interpersonal skills of becoming violent, withdrawing into his or her own world, having poor grooming skills, exhibiting bizarre behaviors, maintaining emotional stability, leaving personal problems outside work, and responding to criticism. The work performance factor included respecting authority, getting along with coworkers and supervisors, and communicating with others. Employers were concerned workers identified as having psychiatric disorders would exhibit behaviors that would be disruptive to the daily routine of the workplace.

Adults with a diagnosis of mental retardation, as well as their service providers, identified several needs the adults had that involve interpersonal skills (Foss & Bostwick, 1981). When the adults were asked to identify their biggest problems in obtaining and sustaining employment, getting along with the boss was ranked third. When asked their biggest problems in social relationships, finding or keeping friends ranked first and talking to groups of friends ranked second. Both of these problems have implications for interpersonal relationships on the job. The service providers identified the lack of social skills necessary for tenure after placement as the third most important problem adults

identified as being mentally retarded have with employment. Listed under the heading of social relationship were the problems of lack adequate emotional maturity in relating to other people and lack adequate interpersonal communication skills for forming or maintaining personal relationships.

In some employment situations, interpersonal skills are considered more important than basic academic skills (Weisman, 1993). At New United Motors Manufacturing Incorporated of Fremont, California, a joint venture of the General Motors Corporation and Toyota, written English is not required. Some employees cannot read, write, or do basic math, yet the plant is considered very efficient and productive. Team orientation and interpersonal skills are considered the most valuable skills, and the management feels the two skills compensate for the educational deficiencies of the production work force.

Job Specific Skills

The emphasis employers put on basic academic, interpersonal, and basic work ethic skills does not mean that technical or job specific skills are unimportant (Imel, 1999; Custer & Claiborne, 1995). The emphasis placed on job specific skills often depends on the vocational area and skill level of the job. The modern job market is becoming more technologically advanced (U. S. Department of Commerce et al., 1999). In 1959 20% of the jobs were professional, 20% skilled, and 60% unskilled. By 1997 20% were professional, 60% skilled, and 20% unskilled. Employers' emphasis on employability skills simply indicates that the presence of job specific skills will not compensate for the lack of competencies in other areas.

Four of the five domains of competencies listed in SCANS report (U. S. Department of Labor, 1991) cover job specific skills. The four domains are resources–identifying, organizing, planning, and allocating time, money, materials, and workers; information skills–using computers to process information and acquiring and evaluation, organizing and maintaining, and interpreting and communication information; systems skills–understanding systems, monitoring and correcting system performance, and improving and designing systems; and technology utilization skills– selecting technology, applying technology to a task, and maintaining and troubleshooting technology.

Custer and Claiborne (1992, 1995) labeled job specific skills "technical skills" and broadly defined them as the specific knowledge and capabilities necessary to function in a job or occupation. Employers and educators felt that the technical competencies must remain fundamental to the preparation of the future workforce. Although educators felt that it was more important for employees to possess good basic and employability skills, the educators saw their primary responsibility as providing instruction on technical skills, the focus and mission of career-technical programs (Custer & Claiborne, 1992). The nature of the tasks completed in an occupation also affected the perception educators in that field have toward the importance of job specific skills as evidenced by the difference of opinions expressed by instructors in the health occupations and trade and industry fields.

The finding that employers rated basic and employability skills ahead of technical skills cannot be interpreted to mean that technical skills are not important (Custer & Claiborne, 1995). The study was done with a forced choice format. The employees were

all graduates of career-technical programs which taught the job specific skills the employees needed on their jobs. The employers in the health occupations field expressed a higher satisfaction level with the technical skills possessed by their employees who had been required to obtain professional licenses before entering the workforce.

Entry level workers with good job specific skills are more important to small companies than to large companies, especially the companies in the technical fields (Gray & Wang, 1989). Labor shortages are not caused by lack of workers, but by a lack of workers who possess the skills needed by businesses. Small firms cannot afford to absorb the cost of training new employees. Small firms create most of the new jobs, so entry level employees must obtain satisfactory job specific skills before entering the workforce.

The inability to do the job was the second greatest concern employers had when hiring new employees (Millington et al., 1994). Dishonesty was the only area of greater concern. Other headings covering an employee's ability to perform the tasks for a specific job were ability to understand verbal instructions, understand job procedure, know what supervisors expect, stay on schedule, use tools and machines, know job tools and machines, know what customers expect, appreciate safety concerns, be safety conscious, meet physical demands of the job, and require too much support. Safety was a major concern with both safety concern items receiving a mean score that placed them in the area of very important.

Diska and Rogers (1996) labeled their category of concerns about job specific skills as "work performance". Being able to perform job tasks, being able to produce an acceptable quality of work, being able to produce an acceptable quantity of work, being

able to tolerate the working conditions, possessing adequate academic skills, and being able to perform job tasks safely were the skills listed in the work performance category. The social services sector was found to be the most hospitable environment for employees with psychiatric disabilities with transportation, communication, and utilities the least hospitable. Job demands in the two industries may account for much of the difference in the two sectors' concerns about hiring persons with psychiatric disabilities.

Adults identified as having mental retardation felt that working fast enough was one of their major employability skills problems (Foss & Bostwick, 1981). The service providers listed difficulty handling on-the-job pressures such as working independently or meeting industrial standards as a difficulty they felt the adults identified as having mental retardation experienced on the job. Working fast enough could be included under the heading of on-the-job pressures. Job completion was also a factor in the ability of high school students who were labeled mentally retarded to obtain competitive employment after training (Baumeister & Morris, 1992; Wika & Rudrud, 1992).

Skill standards are already in place for many United States industries including the standards for automobile mechanics, accountants, welders, and air traffic controllers (Lankard, 1995b). Other industries are considering developing standards to reduce the gap between the existing skills and the desired skills in their industries. Skill standards developed by professional associations can improve worker competence thereby improving the products and services the workers provide, providing portable employment credentials for workers who relocate, and serving as a guide for vocational teachers and programs.

Basic Work Ethic Skills

The SCANS report (U. S. Department of Labor, 1991) listed the personal qualities of responsibility, self-esteem, integrity, honesty, and self-management as foundation skills on which to build the competencies or skills actually used in the workplace. The personal qualities listed are among the qualities identified as the basic work ethic skills.

Dependability, defined as absenteeism, tardiness, dishonesty, and trustworthiness, was the area of greatest concern to employers in hiring workers whether or not the label of mental retardation was present (Millington et al., 1994). Dependability was the only area of concern with an average mean score above 4.0 indicating a perception of very important. Other skills considered important to employers and generally listed under the heading of basic work ethic included self-control and conscientiousness.

Punctuality and attendance were also correlated with employment for students with disabilities at the end of high school career-technical programs designed to teach basic work ethics (Baumeister & Morris, 1992; Wika & Rudrud, 1992). Adults identified as having mental retardation listed getting to work on time as their second major problem with employment (Foss & Bostwick, 1981).

Custer and Claiborne (1992, 1995) included showing up regularly and on time and caring about work quality under the heading of employability skills. The maturity and work experience of students were found to affect their work ethic. Teachers (Custer & Claiborne, 1992) perceived students from rural areas to have a stronger work ethic due to most students in rural areas having work responsibilities at an earlier age.

Diska and Rogers (1996) listed basic work ethic factors under the headings of symptomatology and work personality. Symptomatology included lacking initiative and

lacking enthusiasm. Work personality included being on time, taking pride in his or her work, showing up for scheduled shifts, and being reliable.

Characteristics of at-risk youth put them at odds with employment characteristics identified under the heading of basic work ethic (Hill & Rojewski, 1999). The authors conducted a study of ninth-grade students enrolled in a career pathways class at a midwestern metropolitan high school. Respondents were asked to provide information concerning their at-risk behaviors and to complete the Occupational Work Ethic Inventory (Petty, 1993). For the study, work ethic was defined as being dependable, interpersonal skills, and initiative. Poor attendance habits, lack of interest, and discipline problems characterize at-risk behavior at school and often carried over to places of employment. Statistically significant differences were found in work ethic for students classified as not at-risk, moderately at-risk, and at-risk. Being dependable was the factor underlying the differences. Females reported being more dependable than males.

Hill (1996) compared the work ethic attributes of students enrolled in career-technical education with the attributes of adults employed full-time in private and government jobs. No difference was found in the interpersonal skills of the two groups, but the adults employed full- time scored higher on the attributes of initiative and being dependable. Females scored higher on all three attributes than males scored.

Based on the studies reviewed, the business community perceived that the schools are not adequately preparing young people to meet the needs and expectations of the modern workplace. Problems cited include lack of serious work ethic; lack of understanding of the real value of work; poor work habits and attitudes; inadequate reading, writing, and computer skills; poor punctuality; lack of motivation, commitment,

and initiative; poor personal appearance; inability to express themselves; and inadequate preparation for the type of work sought (Charner, 1988; Rhoder & French, 1999).

All students in high schools are not being offered organized curricula or guidance programs to help them develop the skills needed in the modern workplace (Bloch, 1996). At-risk students are often not perceived as needing nor are they offered the same experiences as college-bound students. Large segments of the high school population are not being served in organized workforce preparation programs. The push for greater emphasis in high schools on skills needed for college often weaken the push for greater workforce preparation for students who are not college bound.

High drop out rates and disappointing employment outcomes for students with disabilities clearly indicate the need for better employment preparation for students with disabilities (Edgar, 1993; Wagner & Blackorby, 1996). Educators who work with students identified as having mild mental retardation must be diligent in their efforts to provide a quality vocational program for their students. Conducting community assessments of employment opportunities available to students with mild mental retardation (Clark, 1993; Ehrsten & Izzo, 1988; Halloran, 1993; Wehman, 1990; White & Bond, 1992), identifying skills needed by the students to be successful in local employment (Clark; Elksnin, Elksnin, & Sabornie, 1994; Halloran; Krieg et al., 1995; Rhoder & French, 1999), developing curricula to prepare students to meet the needs of local employers (Clark; Krieg et al.; Patton, de la Garza, & Harmon, 1997;Wika & Rudrud, 1992), and providing work experiences in supported environments (Clark; Krieg et al.; Patton et al.; Rhoder & French; Wika & Rudrud) have been found to improve the

chances of students with mild mental retardation to be successful in the modern workplace.

Variables Influencing the Employment of Persons With Disabilities

The survey of related literature identified several characteristics of businesses and employers that were significant in the employment of young workers and workers identified as having a disability. Influential characteristics included the urban or rural location of the company, the size of the company based on the number of employees, the presence of an official policy regarding the employment of persons with disabilities, the type of business, and the respondent's gender and work history. Employee characteristics that influence employment were type of disability and educational level.

The size of the firm has been found to be an important factor in the employment of workers aged 15-29 and of workers identified as having disabilities (Custer & Claiborne, 1995; Gray & Wang, 1989; Levy, Jessop, Rimmerman, & Levy, 1991; Nietupski, Hamre-Nietupski, VanderHart, & Fishback, 1996; Zadney, 1980). Zadny found that larger companies were more likely to be contacted by state agencies serving persons with disabilities about job openings. The finding suggested that efforts to place persons with disabilities are concentrated on larger companies which, in turn, may account for the fact that persons with disabilities are more likely to be employed by large companies. Few of the companies contacted concerning the employment of persons with disabilities objected to the contact. Companies that had hired larger numbers of new employees were more likely to have hired persons with disabilities than companies that had hired only a few new employees.

Among the largest companies in the United States, the larger the company, the more likely the company was to hire workers with disabilities. Among companies with fewer than 3500 employees, only 28.6% had hired workers with disabilities in the last three years. In companies with over 25,000 employees, 77.8% had hired workers with disabilities in the same time period (Levy et al., 1991). Companies with established policies in regard to hiring persons with disabilities were more likely to have hired persons with disabilities in recent months (Diska & Rogers, 1996; Levy et al.). Larger companies are more likely to have an official policy (Levy et al.).

An analysis of the Youth Cohort data from the National Longitudinal Study found in 1986 that 40.7% of workers between the ages of 21-29 were employed in firms with less than 20 employees, 25.6% in firms with 20-99 employees, 19.7% in firms with 100-499 employees, and 13.8% in firms with 500+ employees (Gray & Wang, 1989). Although more males and females worked in firms with less than 20 employees, 15% of females worked in firms with over 500 employees while only 13% of the males did. Firms of less than 20 employees employed the largest number of European Americans, Hispanic Americans, and African Americans. The percentage of European Americans in the smallest firms was larger than the percentage of African-Americans or Hispanic Americans, while the percentage of African Americans was higher in firms over 500 employees than that of European Americans or Hispanic Americans. High school drop-outs were more likely to be employed in firms with less than 20 employees. In locations with higher unemployment rates, young workers were more likely to be employed in small firms. The urban or rural location of firms was not statistically significant in the distribution of young workers among firms of various sizes.

Company size can be a factor related to the type of jobs available and the skills required for the jobs. Large companies may be able to provide jobs on many different skill levels, providing positions for unskilled laborers, while many small companies require workers with an array of technical and personal skills (Cluster & Claiborne, 1995). Larger companies are more likely to provide formal training programs (Carnevale, 1995; Gray & Wang, 1989).

The businesses that hire young people and workers with disabilities are not representative of the businesses available in the community (Diska & Rogers, 1996; Rojewski, 1997; Walls & Fullmer, 1997; White & Bond, 1992; Wika & Rudrud, 1992; Zadny, 1980). Diska and Rogers found the social services sector to be the most hospitable working environment for person with psychiatric disabilities. Employers in the transportation, communication, and utilities sector expressed the greatest concern in hiring workers with disabilities. Although the students completing a vocational program for students with disabilities were employed in a variety of jobs and occupations, the most common placements were in custodial/janitorial/ housekeeping; food services; clerical/office/file clerk; and dishwasher/kitchen help (Wika & Rudrud). In one large urban area, instructional sites for students with disabilities included auto garages, hotels, fast food restaurants, nursing homes, veterinary clinics, hospitals, health clubs, and car washes (White & Bond).

Top jobs for rehabilitation consumers have been found to be janitors, chefs/cooks, attendants, porters/cleaners, kitchen workers, and steno/typing (Walls & Fullmer, 1997). The top five jobs secured by the rehabilitants required relatively lower training and skill levels. When the top 50 occupations engaged in by the rehabilitants were considered,

however, many required extensive training including motor vehicle mechanic; registered nurse; administrative specializations; accountants, auditors, and related; and typists.

Not only are the types of firms that hired rehabilitation clients not representative of the ones available in the area, but that with the exception of educational and social services, the types of firms providing employment varied from one locale to another (Zadny, 1980). There is some variation in the percentages of young people employed in various occupations based on socioeconomic status. However, among both adolescents at-risk and those not at-risk, approximately one-third are employed in fast food restaurants with grocery clerk the next most common occupation. Services, sales, and general office occupations also employ large numbers of adolescents (Rojewski, 1997).

The rural or urban location of a community affect the employment opportunities for young people (Arum & Shavit, 1995; Baumeister & Morris, 1992; Conroy, 1997; Rojewski, 1990; White & Bond, 1992). Rural areas near metropolitan areas may differ from remote rural areas (Harmon, 1998). In many rural areas there are limited numbers of jobs and occupations available. The jobs available may not match the jobs desired by the young workers (Baumeister & Morris; Conroy; Rojewski). The lack of availability of more desirable jobs makes it difficult to encourage higher skill levels in students which, in turn, may discourage companies from locating in an area (Harmon). Workers in rural areas are also more likely to be unemployed (Arum & Shavit). Even when employment sites are available, transportation problems may prevent young people from being able to take advantage of the opportunities (Baumeister & Morris; Rojewski).

Rural areas often encourage personal relationships that enhance the job opportunities for students with disabilities. Employers who know students may be more

willing to give them the opportunity for employment, and may be more willing to work with helping the students be successful on the job (Finley, 1994). Students in rural areas are more likely to have had early exposure to work (Custer & Claiborne, 1992). Because programs in rural areas tend to be smaller and cannot offer as wide a variety of vocational programs in the classroom, a greater emphasis may be placed on partnerships with local businesses and industries (Rojewski, 1990).

Urban areas provide a wider range of job opportunities for workers (Arum & Shavit, 1995; Diska & Rogers, 1996; White & Bond, 1992). Many of the routine, nonmanual jobs frequently acquired by workers with disabilities are more likely to be available in urban areas (Arum & Shavit). Unless the area is a large metropolitan area, however, some types of job opportunities are still very limited or unavailable (Diska & Rogers). The wider range of job opportunities and larger school populations present both an opportunity and a challenge to vocational programs for students with disabilities. The increase in opportunities for training and employment in urban areas is often offset by the larger number of students needing services (White & Bond).

Levy et al. (1991) did not find a significant difference in the employers' feelings concerning the employment of persons with disabilities based on the employers' education level, gender, or number of years in present positions. The group of respondents in the study was predominately highly educated, white males with many years of experience. Respondents with a wider variety of demographic characteristics might express significantly different feelings concerning the employment of persons with disabilities. Nietupski et al. (1996) found that female employers held slightly more positive perceptions of hiring employees with disabilities although the difference was not

significant. Employers were more positive about hiring workers with disabilities if they had hired workers with disabilities before, especially if the previous experience had been positive (Levy et al.; Nietupski et al.).

Two employee characteristics that affect the employment of workers with special needs are level of education and type of disability. Many employers use a high school diploma as a screening device in employing new entry level employees. Most students with disabilities enter high school expecting to graduate (Sinclair, Christenson, Evelo & Hurley, 1998). America's drop-out rate is around 24% and students with disabilities tend to drop out of secondary school at a higher rate than students without disabilities (Wehman, 1993; Wagner & Blackorby, 1996). Many students with disabilities who remain in secondary schools do not earn enough academic credits or cannot pass state mandated competency tests and, therefore, receive a Certificate of Performance instead of a high school diploma (Halloran, 1993; Steere et al., 1996; Wehman). Students who remain in high school for four or more years may represent a group of people who are more persistent in obtaining skills needed for employment than those who drop-out and are, therefore, more successful in their employment (Fabian, Lent, & Willis, 1998).

The nature of an individual's disabilities can influence the likelihood of employment and the types of employment available to the individuals (Edgar, 1993; Wagner & Blackorby, 1996; Wehman, 1990). Employers stated that they would hire applicants with disabilities if the applicants were the most qualified. One-third of the employers would give preference to the applicants with disabilities if both applicants were equally qualified, but few would hire workers with a disability if they were less

qualified. Many employees hedged their responses by stating that the jobs at issue, the applicants' disabilities, or both would be factors in the decisions (Zadny, 1980).

The concerns potential employers have about hiring persons with disabilities appear to be influenced more by the types of disables, than by the types of industries (Combs & Omvig, 1986; Fuqua et al.,1984; Hartlage & Roland, 1971). No workers with disabilities were easy to place, but potential employees with blindness or mental retardation caused the most concern (Combs & Omvig; Fuqua et al.). Not all studies differentiate among different levels of mental ability, which makes comparisons of employer concerns difficult. The top five areas of greatest concern regarding hiring those with mental retardation are ability to handle new situation, need for supervision, productivity, emotional stability, and accident rate (Fuqua et al.).

Millington et al. (1994) found that employers in a variety of manufacturing industries and financial institutions considered the same criteria in selecting employees whether or not the candidate was mentally retarded. The most important criteria for employers were expectations of dependability; organizational demands; and job knowledge, skills, and abilities. Employability concerns and perceptions of fundamental skills seemed to be the most affected by the presence of mental retardation. The finding that employers had lower perceptions of criteria for entry-level employees in the presence of mental retardation made the researchers speculate that the employers were considering different entry level jobs or were assuming a supported employment specialist would be provided.

Walls and Fullmer (1997) found that the top five jobs for vocational rehabilitation clients identified as having mental retardation closely aligned with the top five for all

clients. The top five jobs for clients with mental retardation were kitchen workers, janitors, chefs/cooks, porters/cleaners, and packaging. Although not high paying or high status jobs, these areas represent a large number of entry level jobs.

Studies on the skills needed for entry level employees designated as having mild mental disabilities need to be concentrated on industries that hire the students. Often researchers want to concentrate on potentially high paying jobs. This is a dangerous trend, because no country can promise high-paying, high-skill jobs to all its workers. The increasingly service-oriented economy requires people with a wide range of jobs skills, including many humble, low-paying jobs (Hartonnian & Van Scotter, 1996). Vocational achievement of individuals with mental retardation will be influenced by the interaction of individuals aptitudes and choices, training and related services available to the individuals, and the condition of the local labor market (Walls & Fullmer, 1997).

Career-Technical Decision Making for Students With Mental Retardation

One of the important concerns of educational, employment, and transition planning for students with mental retardation has been the issue of who controls the decision-making processes. Over the past few years the emphasis has shifted from the school and adult service agencies controlling the process to self-determination by individuals with disabilities. This change has occurred partly due to the demands of individuals with disabilities to be in control of their own lives, discouraging post-secondary outcomes for students with disabilities, and federal initiatives promoting greater involvement of individuals with disabilities (Wehmeyer, 1996). Recent federal legislation clearly indicates that individuals with disabilities, along with the families, are

to be included in the decision making process (Hasazi, Furney, & Destefano, 1999; Knoblauch & McLane, 1999).

Studies on best practices in preparing students with mental retardation for post-secondary living identify family involvement as a major factor in the successful transition of the student into independent adult living (Browning, Dunn, & Brown, 1993; Fabian et al., 1998; Furney, Hasazi, & Destefano, 1997; Kohler, 1993, 1998; Patton et al., 1997; Wehman 1993). Traditionally the term family has meant parents but may also include siblings, significant others, or even social acquaintances important to the individuals with disabilities (Devlieger & Trach, 1999; Knoblauch & McLane, 1999; Morningstar, Turnbull, & Turnbull, 1996; Steere et al., 1996). The families are constant factors in the lives of individuals with disabilities while professionals and services vary over the years (Parette, Brotherson, & Huer, 2000; Steere et al.). Families and social acquaintances generally provide a strong base of support for the individuals with disabilities (Borgen & Amundson, 1995; Lankard, 1993; Moringstar et al.).

Devlieger & Trach (1999) found that when the schools and adult agencies exerted the most control over the planning, the results were most often sheltered employment. Personal or parental control most often resulted in community employment or continuing education. Frequently the outcomes of employment cannot be explained simply by the severity of the disabilities. The social and personal supports of the individuals must be considered emphasizing the importance of the families.

Unfortunately, strong family supports are not always available. Students may not live with family members or simply may want to make their own decisions (Morningstar et al., 1996). Some families are not receptive to transition planning for employment,

because they are unfamiliar with the concept or see employment as a threat to academic learning (Brown, 1998). Family values and ethnicity also influence the families' reactions to individuals with disabilities, their feelings of responsibility toward the individuals, and educational planning for the individuals' future (Lankard, 1993; Morningstar et al.; Parette et al., 2000; Steere et al., 1996).

Some families find long-term planning unsettling and have difficulty in actively participating in the individuals with disabilities' program (Repetto & Correa, 1996). Families may have participated more actively when the individuals were younger, but have been discouraged by poor communication with professionals or have been made to feel unneeded or unwanted by the schools or service agencies.

In some instances, the relationships between individuals with disabilities and the families have negative effects on transition planning. Family influences can limit choices being considered by individuals and reinforce beliefs of incompetency (Devlieger & Trach, 1999). Family involvement can result in conflicts because of differences in the goals of the individuals and families (Everson & Zhang, 2000).

The lives of people with disabilities should be the center of attention in planning for transition and future employment (Devlieger & Trach, 1999; Hasazi et al., 1999). Individuals with disabilities must be given opportunities to make choices and decisions about their own preferences and goals (Browning et al., 1993). The tasks are not always easy to accomplish. Individuals with disabilities may lack communication skills and social skills to be able or willing to express their needs during the early stages of planning (Everson & Zhang, 2000). Changes in plans may have to be made as the

individuals mature and change their goals. Some behaviors and personality characteristics may also inhibit the individuals' abilities to work in planning groups.

There are several areas the planning committees consisting of family members, the individuals, other people of importance to the individuals, and service providers need to consider in helping the individuals set employment goals. Important areas that have been identified in the literature include: identifying jobs of interest to the individuals (Brown, 1998; Devlieger & Trach, 1999; Hasazi et al., 1999; Patton et al., 1997; Wehman, 1993); setting realistic goals for the future (Patton et al.); assessing the students' aptitudes for different occupations (Brown; Kohler, 1993); evaluating realistic opportunities in the community (Patton et al.; White & Bond, 1992; Steere et al., 1996; Wehman); considering available transportation (Patton et al.); considering the possibility of independent mobility (Wehman); developing plans for the student to learn self-management (Browning et al., 1993) and self-advocacy skills (Borgen & Amundson, 1995; Hasazi et al.; Patton et al.; Wehman); and developing multiple plans to increase the students' chances of successes (Borgen & Amundson).

For many students with disabilities, the predominate influences on their career visions are the families including the extended families. The career influences are often informal with career interest primarily due to family members engaging in similar careers. Most students have not had any formal discussions on careers with family members (Morningstar et al., 1996).

School-based career-technical experiences do not seem to have as much influence on student career decisions as educators might believe (Morningstar et al., 1996). Students look to family members and other significant people in their personal lives for

guidance and support. Students do not appear to perceive much connection between school career-technical experiences and future planning. Educators need to consider ways to involve students with disabilities and their families in more appealing and relevant career planning.

Curriculum

The most important part of an educational program is the curriculum (West, Taymans, & Gopal, 1997). Without a good curriculum, students will not receive a meaningful education. The term curriculum has been defined and used in many ways. Curriculum traditionally has been used to describe the planned activities taught in a particular class. The term has also been used to describe all learning experiences and activities a student has under the direction of the school (Finch & Crunkilton, 1993; Hickson et al., 1995; Thomas, 1996). Because learners with mental retardation must be carefully taught concepts and skills other learners acquire incidentally (Dever & Knapczyk, 1997; Hickson et al.; Thomas), the traditional definition of curriculum will be used to guide the present study. Dever and Knapczyk define curriculum as:

> A curriculum is a list of objectives leading to a set of curriculum goals that defines the content of instruction for a school or other mental retardation service agency. The objectives in a curriculum are organized into pathways that link each of the objectives to one or more of the goals. (p. 47)

Dever and Knapczyk define curriculum goals as the behavioral end points of the curriculum. Pathways of objectives is the sequenced list of skills that progress toward a goal or set of goals.

Curriculum and instruction are related but are not the same thing. Curriculum is broad- based, long-term planning that takes place before instruction. Instruction is the sequence of planned activities that take place between the instructor and learner (Dever & Knapczyk, 1997; Finch & Crunkilton, 1993; Thomas, 1996). Depending on the concepts or skills being taught, the instruction may be directed to an entire class or individualized for a particular student (Dever & Knapczyk; Thomas).

The first step in developing curriculum for a specific program or course is to specify the aim of the instruction. The statement indicates what the learners will be at the end of the instruction and establishes the final outcome of the instruction. An example of an instructionally useful aim is "The student will become a certified nursing assistant". Individual learners may not accomplish that aim, but most will benefit from the instruction even if they do not complete the curriculum (Dever & Knapczyk, 1997).

The next step is to state the operational goals of the instruction. The operational goals, or skill clusters, tell what the learner will be able to do after the instruction. By knowing the desired end goals, instructors can plan curriculum for individual schools or classes (Dever & Knapczyk, 1997).

After the aim and curriculum goals of instruction have been determined, curriculum can be developed to help learners obtain those goals. At this stage, the curriculum is a list of skills the learner needs to master to reach the instructional aim. The list of skills is used to write specific objectives, sequence the objectives, determine student needs, develop curriculum materials, and plan evaluations (Finch & Crunkilton, 1993).

The main goal of any curriculum is to provide a functional education for the learners. The goal may be a strict academic education that leads to post-secondary college studies; the goal may be a vocational and academic education that leads to a post-secondary vocational education; or the goal may be an academic and vocational education for students interested in immediate employment after high school (Hanley-Maxwell et al., 1998).

Curriculum Development for the Education of Students With Mental Retardation

The literature suggests that the needs of students identified as mentally retarded are not being met by current instructional programs (Edgar, 1993; Jones, 1996; Wagner & Blackorby, 1996). Much of the current instruction focuses on remedial education instead of preparation to live in the community (Clark & Kolstoe, 1995; Dever & Knapczyk, 1997; Edgar). Three different orientations exist on which to base curriculum decisions for students with mental retardation. The first is academic remediation. Most elementary programs for students with mental retardation are based on this orientation as are many secondary programs. Students' skills deficits are identified and instruction provided to increase performance in the identified areas. The second orientation is maintenance. Tutorial help is provided to enable students to accomplish greater successes in the regular classrooms. The emphasis is to improve skills in the short term and does not consider whether or not the material learned is relevant to the students' future needs. The third orientation is adult outcomes. The emphasis is placed on preparing students to be successful in post-secondary adult environments. The emphasis is moved from academic deficits to combining vocational training, social skills instruction, and academic help directed toward the students' current skills needs and future life demands

(Polloway, Patton, Epstein, & Smith, 1993). A consensus does not exists among professionals who work with individuals with mental retardation as to which orientation is best, but many professionals who work with individuals with mental retardation believe that the service programs for people with mental retardation should be re-conceptualized to help the students take control of their lives and function as independently as possible in their communities (Clark & Kolstoe; Dever & Knapczyk; Edgar; Halpern, 1992; Thomas, 1996; Wehman, 1990). Dever and Knapczyk define independence as:

> exhibiting behavior patterns appropriate to the settings that are normally frequented by others of the individual's age and social status using only the assistance and supports used by the others while behaving in such a manner that the individual is not perceived as requiring assistance because of his behavior. (p. 34)

Curriculum in most educational programs is designed to provide students with the skills and concepts needed to pursue postsecondary education. Curriculum goals and objectives have been predetermined. The explicitly stated goals give teachers a clear focus from which to provide instruction. Instruction in one grade builds on the information students were taught in a lower grade. Most of the curriculum goals in regular education classrooms are the same nationwide (Dever & Knapczyk, 1997; Thomas, 1996).

For most students with mental retardation, their public school education is their terminal formal education due to the limitations imposed on them by mental retardation (Thomas, 1996). People with mental retardation have difficulty with all academic tasks

and achieving success under even the most ideal situations (Clark & Kolstoe, 1995; Hickson et al., 1995; Thomas). Students with mental retardation can be expected to only acquire a fraction of the skills and concepts acquired by students without mental retardation in a year's time (Hickson et al.). Providing high school students with mental retardation needed instruction and experiences in life skills development and transition without a specific curriculum in place to make sure important areas of instruction are not neglected would be extremely difficult (Browning et al., 1993; Clark & Kolstoe).

Instruction in special education classrooms has typically been oriented towards the individual and on problems exhibited by the individual and not on the content of the instruction or the environment within which the person must operate (Dever & Knapczyk, 1997; Levy et al., 1991). Teachers often lacked clear goals and objectives on which to focus their instruction with curriculum often determined by individual teachers (Dever & Knapczyk). As a result, instruction provided by one teacher might not have prepared students for the instruction provided by another teacher or in another grade (Clark & Kolstoe, 1995; Dever & Knapczyk; Hickson et al., 1995). With a clear comprehensive curriculum in place, Individual Education Program (IEP) committees can select short-term goals and instructional strategies most appropriate for an individual student with mental retardation. The committee can carefully prioritize the skills and concepts based on the student's present level of performance, demonstrated ability, interests, needs, and goals (Clark & Kolstoe; Dever & Knapczyk; Hickson et al.; Thomas, 1996).

Dever & Knapczyk (1997) have developed the following definition of mental retardation designed to provide direction for clear service delivery: "A person with

mental retardation is someone who requires specific training in skills that most people acquire incidently and which skills enable such people to live in the mainstream of the community without supervision" (p. 26). Proper instruction enables persons with mental retardation to make the same types of choices about self-determination that other adults in the community make without undue reliance on others.

Elementary students with mental retardation should be taught as many academic skills as possible in settings where other students are educated (Dever & Knapczyk, 1997). Higher academic skills allow students with mental retardation to interact on a more equal footing with their peers who do not have mental retardation. Individuals identified under the definition of mental retardation generally learn academic skills that are less than the normal sixth grade level by their late teens, but many are capable of learning skills that would enable them to function with social and vocational adequacy with proper education and training.

As the students who have mental retardation reach secondary school level, the focus of instruction should turn from what other students do to what adults in the community do. As much as possible, instruction should take place in settings where the students will use the skills as adults (Dever & Knapczyk, 1997; Halpern, 1992). The areas of curriculum for secondary students with mental retardation are personal/social skills, independent living, occupational adjustment and skills, and academic skills (Clark 1993; West et al., 1997). Curriculum decisions should be based on helping students learn skills that will maximize independent adult lives (Hanley-Maxwell & Szymanski, 1992) and allow the students to be successful in multiple life settings (Handley-Maxwell et al., 1998).

Curriculum Development for Career and Technical Education

Curriculum development for career and technical areas follows the same general steps as curriculum development for other academic areas. No other area, however, has as great an emphasis placed on the development of a curriculum that is relevant in terms of student and community needs (Finch & Crunkilton, 1993). Curriculum in career and technical areas must not focus only on the educational process, but also on the tangible results of that process. The career and technical curriculum deals directly with helping the students develop a broad range of skills, attitudes, knowledge, and values that prepare the students for successful employment in a particular locale.

Curriculum development in career and technical areas must be responsive to community needs with consideration given to future as well as present needs (Finch & Crunkilton, 1993). Educators must look at the needs of entire industries, businesses, and employers at large. Valuable information about curriculum and future employment needs can be provided by considering a broader picture than may be discovered through contact with individual employers.

Employers would also find it a productive investment to inform educators of their needs and assist the schools in providing an education that will help students meet those needs (Finch & Crunkilton, 1993). Career and technical education cannot operate in an isolated school setting. Curriculum must focus simultaneously on what the students know and what the students can do. In order to be successful, the curriculum must prepare individuals to enter and be successful in the work world.

The schools, however, must accept the responsibility to plan and implement a curriculum that meets the needs of both the students and businesses (Finch & Crunkilton,

1993). The first step in planning a career-technical curriculum is to assess school related data–present career and technical programming and enrollment, students' interests, the successes of former students, projected future enrollments, and facilities available. The second step is to assess community related data–community boundaries, population trends, current and emerging sources of employment, and projected labor supply and demand. Additional limitations placed on the curriculum developer include the time and money available; internal and external pressure; federal, state, and local content requirements; skills needed by employers; and levels at which content will be provided.

Several curriculum content determination strategies are commonly used (Finch & Crunkilton, 1993). The philosophical basis uses a specific philosophy as a foundation for content decisions. This strategy is more often used to develop curriculum content for academic areas. Introspection uses a group of instructors in an area to examine ongoing vocational programs, related literature, and personal experience to develop an outline of needed knowledge and skills in a particular vocational area. A variant of introspection is the DACUM (Developing A CurriculUM) approach. DACUM uses a committee of 10 to 12 persons who are experts in a particular occupation to develop a single-sheet skill profile to present the skills of an entire occupation.

Task analysis is a widespread content determination strategy (Finch & Crunkilton, 1993). A worker's job is broken down into duties. Duties are rewritten into tasks which are work activity units consisting of two or more distinct steps. This method is detailed and time consuming, but task analyses have already been prepared on many jobs and may be available for use by the curriculum developer. The Delphi technique has also been found to be useful in determining the most and least relevant content in an area.

The method is also useful in curriculum development for a new occupation that has few workers. Individual experts identify and then rate content that should be included in the curriculum. A series of questionnaires are mailed to each individual assuring anonymity but also requiring a considerable amount of time and commitment from the panel members.

Summary

Most adults need to work (Florian, 1982; Kiernan et al., 1989; Wilka & Rudrud, 1992) and want to work (Akabas, 1990; Kiernan et al.; Wehman, 1993). Although government programs have made it possible for many to survive without working (Howard, 1995; Walls & Fullmer, 1997), many people view work as providing more that just financial rewards (Akabas; Florian; Kiernan et al.; Murry & Machell, 1994; Wehman). Social class, gender, and previous work success influence how people view work (Super, 1990).

In the United States, education is the main pathway to work opportunities and is expected to produce self-supporting adults (Tilson et al., 1996; Wilka & Rudrud, 1992). Education today must be relevant to today's workplace (Phelps et al., 1995), and vocational education strives to prepare students to be successful in the modern workplace (Lewis, 1990). All students have a legal right to equal opportunities for education (Rojewski et al., 1992).

Businesses and schools must work together to prepare young workers (Brand, 1992). Business and industry are education's largest consumers (Nicol et al., 1996). When business and education cooperate with each other, young workers will be able to

meet the demands of the workplace as well as fulfill their own personal goals of self-sufficiency (Lankard, 1995a).

Mental retardation is a severe and permanent disability (Hickson et al, 1995; Jones, 1996; Thomas, 1996). Persons who are mentally retarded have a diminished intelligence and a generally poor ability to learn (Thomas). Individuals with mental retardation are, however, an extremely heterogenous group. Education must strive to help each individual fulfill his/her potential and goals.

Legislation supporting vocational education for students with mental retardation falls under three broad areas: education for students with disabilities, vocational education, and vocational rehabilitation (Clark & Kolstoe, 1995; Szymanski, Hanley-Maxwell et al., 1992). Each area has numerous legislative acts that provide education and employment opportunities for students with mental retardation. Students and adults with mental retardation can use services provided in the legislation to improve their chances to be successful in the modern workplace.

Most vocational theories focus on the constructs of occupation choice, career development, or work adjustment (Hershenson & Szymanski, 1992). Individuals with disabilities often have limited opportunities to interact with their environments, which in turn limits the applicability of occupational choice and career development theories. Hershenson's work adjustment theory focuses on the individual's adjustment to the work process independent of the particular occupation in which the work is performed (Hershenson, 1996a, 1996b). The theory was specifically designed to be applicable to persons with disabilities. Hershenson (1974, 1996a, 1996b) goes beyond the choice of an occupation and addresses the ability of the individual to keep a job once hired.

There have been numerous reports and studies done on the skills needed by the modern workforce (Bhaerman & Spill, 1988; Charner, 1988; Commission on the Skills of the American Work Force, 1990; Coyle-Williams, 1990; CPR Human Resources Executive Program, 1983; Custer & Claiborne, 1992, 1995; Diska & Rogers, 1996; Foss & Bostwick, 1981; Gray & Wang, 1989; Hill, 1996; Hill & Rojewski, 1999; Johnston & Packer, 1987; Millington et al., 1994; National Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; Rhoder & French, 1999; Tilson et al., 1996; U. S. Department of Commerce et al., 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989; Weisman, 1993; Wika & Rudrud, 1992). Each study or report labeled needed skills differently, but all the reports indicated four major skills areas in which workers need to be successful. The major skill areas are *basic academic skills* including using written communication, using oral communication, using math to solve problems, listening carefully, reading and understanding information, solving problems, and showing willingness to learn new skills and information; *interpersonal skills* including working well with others, dressing and grooming appropriately, showing respect to others, asking for help when needed, accepting criticism, meeting the public, and acting cheerful and friendly; *job specific skills* including using appropriate tools, using basic computer skills, transferring skills from one job to another, performing acceptable quality work, maintaining an acceptable pace of work, following directions, and working with minimum supervision; and *basic work ethic* skills including taking initiative, displaying dependability, exercising honesty, coming to work everyday, coming to work on time, having a positive attitude, and being

conscientious . The business community perceives that schools are not adequately preparing young people to meet the needs and expectations of the modern workplace (Charner, 1988; Rhoder & French, 1999). High drop-out rates and disappointing employment outcomes for students with disabilities clearly indicate the need for better employment preparation for students with disabilities (Edgar, 1993; Wagner & Blackorby, 1996).

There are several characteristics of businesses and employers that are significant in the employment of young workers and workers identified as having a disability. Influential characteristics include the urban or rural location of the company (Arum & Shavit, 1995; Baumeister & Morris, 1992; Conroy, 1997; Harmon, 1998; Rojewski, 1990; White & Bond, 1992), the size of the company based on the number of employees (Custer & Claiborne, 1995; Gray & Wang, 1989; Levy et al., 1991; Nietupski et al., 1996; Zadny, 1980), the presence of an official policy regarding the employment of persons with disabilities (Diska & Rogers, 1996; Levy et al.), the type of business (Diska & Rogers; Rojewski, 1997; Walls & Fullmer, 1997; White & Bond; Wika & Rudrud, 1992; Zadny), and the respondent's gender and work history (Finley, 1994; Levy et al.; Nietupski et al.).

Demands of individuals with disabilities to be in control of their own lives, discouraging post-secondary outcomes for students with disabilities, and federal initiatives promoting greater involvement of individuals with disabilities have shifted the decision-making process from service providers to individuals with disabilities (Wehmeyer, 1996). Personal or parental control of the decision-making process has more often resulted in community employment or continued education for young people with

disabilities (Devlieger & Trach, 1999). The lives of people with disabilities should be the center of attention in planning for transition and future employment.

The most important part of an educational program is the curriculum (West et al., 1997). A curriculum is a list of objectives used to set curriculum goals that guide the content of instruction for a school (Dever & Knapczyk, 1997). The main goal of any curriculum is to provide a functional education for the learners (Hanley-Maxwell et al., 1998). Curriculum designed for students with mental retardation should help the students take control of their lives and function as independently as possible in their communities (Clark & Kolstoe, 1995; Dever & Knapzcyk; Edgar, 1993; Halpern, 1992; Thomas, 1996; Wehman, 1990). Vocational curriculum deals directly with helping the students develop a broad range of skills, attitudes, knowledge, and values that prepare the students for successful employment in a particular locale (Finch & Crunkilton, 1993).

CHAPTER III

METHOD

Chapter III presents the research design and procedures used for this study. Major sections of Chapter III include purpose of study, research design, location and respondents of study, questionnaire, design of the questionnaire, validity, reliability, pilot testing, data collection, and data analysis.

Purpose of Study

The purpose of this study was to determine the importance of selected employability skills and the frequency with which these skills were exhibited by adolescents with mild mental retardation as rated by employers of high school students with mild mental retardation in career-technical work-based programs in Middle Georgia.

The purpose of the study was addressed through the following research questions:

1. What is the rated importance of selected employability skills for entry level employees as determined by employers of high school students with mild mental retardation in career-technical work-based learning programs in Middle Georgia?

2. Is there a statistically significant difference in the importance of basic academic, interpersonal, job specific, and basic work ethic skills rated as important by employers who hire students with mild mental retardation based on the following independent variables:

   A. type of industry as defined by Standard Industry Classification?

   B. size of industry based on the number of employees?

C. urban or rural location of the industry?

D. gender of the responding supervisors?

E. number of years of experience responding supervisors have had in present positions?

F. position of the respondents?

3. Is there a statistically significant difference in the importance of the basic academic, interpersonal, job specific, and basic work ethic skills rated as important by the employers who hire high school students with mild mental retardation and the frequency of skills exhibited by the students?

Research Design

Causal-comparative methodology was used in this study. Causal-comparative research is done "to explore relationships between different phenomena" (Gall, Borg, & Gall, 1996, p. 380). It seeks to discover possible causes and effects after the causes "have exerted their effect on another variable" (p. 383). The students with mild mental retardation were already employed in various industries in the Middle Georgia area. No attempt was made to place the students in businesses and industries based on the type of industry, size of the industry, location of the industry, gender of the supervisor, position of the supervisor, and number of years of experience the supervisor had in the present position. The study sought to determine the relationship between the independent variables and the rated importance of the employability skills.

A survey was used to collect data for the study. Surveys are a common way to collect information directly from people about ideas, feelings, attributes, attitudes, behaviors, beliefs, and social, educational, and financial backgrounds which can be used

to make comparisons between groups (Dillman, 1978; Fink & Kosecoff, 1998). Due to the number of employers surveyed and the geographical locations of the employers, the self-administered mailed survey was selected as the method of data collection. Surveys are frequently used in educational research with mailed questionnaires the most typical method of data collection (Dillman; Gall et al.,1996; Gay,1996).

Surveys have been used in studies seeking to determine employer perceptions of skills needed by employees (Custer & Claiborne, 1995; Diska & Rogers, 1996), the characteristics of businesses that employ individuals with disabilities and supervisors who work with individuals having disabilities, and the attitudes of employers toward employees with disabilities. Surveys have also been used to study employment opportunities for adults with mental retardation (Combs & Omvig, 1986; Fuqua et al., 1984; Hartlage & Roland, 1971; Millington et al., 1994).

Location and Respondents of the Study

The target population for this study was composed of employers in Georgia who hire high school students identified as mildly mentally retarded. Due to realistic accessibility constraints, respondents were employers who hired students participating in work-based learning programs provided through the "Program for Exceptional Children" in a 10-county region in Middle Georgia. The counties included were Johnson, Twiggs, Baldwin, Bibb, Laurens, Dodge, Wilkinson, Bleckley, Wheeler, and Treutlen. In the geographic area of interest there are 16 high schools in 11 school systems. Seven counties have one high school each with enrollments ranging from 303 to 937 (Georgia High School Association, undated). Baldwin County has one high school with an enrollment of 1635. The Laurens County and Dublin City systems together have three

high schools with a total enrollment of 2568. The Bibb County system has 5 high schools with a combined enrollment of almost 7400.

One method of selecting employers who hire a specific group of students is to obtain the names of the employers from the teachers in charge of the program of interest (Custer & Claiborne, 1995). For the present study, the names and addresses of each school in the designated counties were obtained. The principal of each school was sent a letter (see Appendix A) asking permission to contact teachers in charge of the "Program for Exceptional Children" work-based learning programs. A letter to teachers (see Appendix B) asking for the names of businesses that employ the students designated as mildly mentally retarded (Division for Exceptional Students, 1994) was enclosed. Names of students were not requested. The career-technical programs were identified by names of supervising teachers and high schools where the programs were located. After a two-week period, principals who had not responded were contacted by phone. Additional letters were sent to principals who indicated that they had not received the letters. Verbal permission to contact the teachers was obtained from all the principals. Letters (see Appendix B) were sent directly to the "Program for Exceptional Children" lead teachers in the schools from which no responses had been received. Seventy-three employers were identified. Because of the limited number of employers who were identified, the entire sample was used for the study.

Letters introducing the study and requesting the employers' participation (see Appendix C) were sent to the employers with the questionnaire (see Appendix D). Forty questionnaires were returned during the initial two-week period. Personal contacts were made via visits or telephone calls to the employers who had not responded. A second

packet was provided to each employer who had misplaced the questionnaire. A second packet was also sent to the non-responding employers with whom personal contact could not be made. Twenty-one additional questionnaires were received for a total participation of 61 employers (83.5 percent).

Questionnaire

A review of the literature and available instruments did not yield a suitable questionnaire. The literature did provide lists of skills perceived to be important for entry level workers and demographic information concerning employers and industries that hire young people and persons with disabilities. The literature also revealed that one of the most useful types of measurement scales is the Likert-type scale which asks an individual to respond to a series of statements by selecting a number that corresponds to the degree with which the individual agrees or disagrees with the statement (Gay, 1996). The Likert-type scale is frequently used in educational research (Dillman, 1978; Fowler, 1995; Gall et al., 1996; Gay).

Employability skills are skills needed by entry-level employees in occupations that are frequently available to persons who are mentally retarded. The list of employability skills perceived by employers in different industries as important for entry level employees with and without various disabilities identified from a review of literature (Bhaerman & Spill, 1988; Charner, 1988; Commission on the Skills of the American Work Force, 1990; CPR Human Resources Executive Program, 1983; Custer & Claiborne, 1992, 1995; Diska & Rogers, 1996; Hill, 1996; Millington et al., 1994; National Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; Rhoder & French, 1999; U. S.

Department of Commerce et al., 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989; Wika & Rudrud, 1992) was used to select skills for inclusion on the questionnaire. Although reports and research studies reviewed labeled needed skills differently, four major skills areas were indicated: *basic academic skills, interpersonal skills, job specific skills, and basic work ethic skills.* Seven of the most frequently mentioned skills were selected to be included under each skill area. The criteria for selection of skills for each area was that the skills selected were identified in 67% or more of the reports or studies reviewed (see Appendix E). The resulting list of employability skills was submitted to a panel of experts consisting of three educators with five or more years each of experience supervising work-based learning programs, one college professor with experience in preparation of vocational teachers, and three employers who have hired adolescents for work-based learning programs but who will not be in this study. The panel reviewed the instrument to determine if the skills were representative of the skills needed by adolescent workers. The panel was also asked to determine if each skill was representative of the sub-scale to which it was assigned. The placement of skills in subsets was approved by at least four of the seven panel members.

The employability skills selected were grouped into the following sub-scales: *basic academic skills* including using written communication, using oral communication, using math to solve problems, listening carefully, reading and understanding information, solving problems, and showing willingness to learn new information and skills; *interpersonal skills* including working well with others, dressing and grooming appropriately, showing respect to others, asking for help when needed, accepting

criticism, meeting the public, and acting cheerful and friendly; *job specific skills* including using appropriate tools, using basic computer skills, transferring skills from one job to another, performing acceptable quality work, maintaining an acceptable pace of work, following directions, and working with minium supervision; and *basic work ethic skills* including taking initiative, displaying dependability, exercising honesty, coming to work everyday, coming to work on time, having a positive attitude, and being conscientious.

Design of the Questionnaire

A questionnaire (see Appendix D) was developed for this study. An analysis of the questionnaire helped determine the rated importance of employability skills by the employers, determine if the rated importance was influenced by selected demographic variables of the industry or supervisor, and compare the skills desired by the employers and the skills exhibited by young workers.

The questionnaire was composed of two parts. Part I contained Likert-type scales of the importance of the skills for entry-level employees and of the frequency high school students exhibit the skills. Part II requested demographic information about the industry and the individual completing the questionnaire.

On Part I, respondents were asked to respond to two Likert-type scales for each of the 28 employability skills listed. In order to evoke answers concerning respondents' perceptions, they were asked to indicate the strength of their opinions based on a five-point scale (Fowler, 1995). The general principle for setting the number of categories for a response was that more categories allowed more valid information to be obtained. However, there appeared to be real limits to the extent to which people could use

additional categories on scales to provide additional meaningful information. Little valid information could have been provided by using more than 10 categories with 5 to 7 categories being as many as most respondents could use meaningfully. Fewer scale points allowed respondents to retain all the response categories without frequently referring to the written labels. The categories on a continuum should allow respondents to place their feelings in a category from most negative to most positive (Fowler, 1988). When asking the extent of agreement, a 5-point scale is preferred (Gall et al., 1996) and was selected for use in the study.

The first scale requested employers to rate the importance of skills for entry level employees. When placing responses on an ordinal measure, higher numbers are generally seen as a more positive response than lower numbers (Fowler, 1995). The scale contained five scale points: 1=unnecessary for continuing employment, 2=somewhat important for continuing employment, 3=important for continuing employment, 4=very importance for continuing employment, and 5=essential for continuing employment. The second scale requested employers to rate the frequency with which high school students exhibited employability skills. The scale contained five categories: 1=rarely exhibit skill, 2=exhibit skill less than half the time, 3=exhibit skill about half the time, 4=exhibit skill more than half the time, and 5=almost always exhibit skill. Two columns, one to the left of the employability skills for the rated importance of the skills and one to the right of the employability skills for the rated frequency of the skills, listed the numbers for the Likert-type scales.

On Part II, respondents were asked to provide demographic information concerning themselves and their companies. Respondents were asked to provide their

titles, gender, and years of experience in their present positions. Demographic information requested concerning the company included the number of employees, type of industry, and county in which the industry was located. A review of literature indicated that these variables influenced the perceptions of employers and the availability of employment for adolescents and persons with disabilities (Arum & Shavit, 1995; Baumeister & Morris, 1992; Carnevale, 1995; Conroy, 1997; Custer & Claiborne, 1992, 1995; Diska & Rogers, 1996; Finley, 1994; Gray & Wang, 1989; Harmon, 1998; Levy et al., 1991; Nietupski et al., 1996; Rojewski, 1990, 1997; Walls & Fullmer, 1997; White & Bond, 1992; Wika & Rudrud, 1992; Zadny, 1980).

The questionnaire was designed to be mailed to respondents. Each respondent received a packet containing a cover letter (see Appendix D), directions for completing the questionnaire, the questionnaire, a pre-addressed stamped envelope, and a credit card sized magnet as a token of appreciation and incentive for participation (Dillman, 1978; Gall et al., 1996; Gay, 1996; Fink & Kosecoff, 1998; Shackleton & Wild, 1982). The identity of the person or group from whom the questionnaire was sent has been found to increase the return rate of the instrument (Dillman; Gall et al.; Young et al., 1986). Therefore, the cover letter was sent on University of Georgia letterhead stationary.

Validity, Reliability, and Pilot Testing

Validity

Relevant professional literature was reviewed to determine skills desired by employers for entry level employees (Bhaerman & Spill, 1988; Charner, 1988; Commission on the Skills of the American Work Force, 1990; Coyle-Williams, 1990; CPR Human Resources Executive Program, 1983; Custer & Claiborne, 1992, 1995;

Diska & Rogers, 1996; Foss & Bostwick, 1981; Gray & Wang, 1989; Hill, 1996; Hill & Rojewski, 1999; Johnston & Packer, 1987; Millington et al., 1994; National Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; Rhoder & French, 1999; Tilson et al., 1996; U. S. Department of Commerce et al., 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989; Weisman, 1993; Wika & Rudrud, 1992). The resulting list of employability skills was submitted to a panel of experts consisting of three educators with five or more years each of experience supervising work-based learning programs, one college professor with experience in preparation of vocational teachers, and three employers who were not included in this study but who have hired students in work-based learning programs. The panel reviewed the questionnaire to determine content validity. "Content validity refers to the degree to which the scores yielded by a test adequately represent the content, or conceptual domain, that these scores purport to measure" (Gall et al., 1996, p. 250). The panel was instructed to determine if the skills identified represented the skills needed by adolescent workers and if each skill was representative of the sub-scale to which it was assigned. The placement of skills in subsets was approved by at least four of the seven panel members. The use of a panel of experts to establish content validity for a newly developed instrument has been frequently used in educational research (Dillman, 1978; Fink & Kosecoff, 1998; Gall et al.; Gay, 1996).

Reliability

In order to establish the reliability of the questionnaire, the results of the pilot test were used to calculate the reliability coefficient for each skill area sub-scale using

Cronbach's coefficient alpha to determine if the questionnaire had an acceptable level of internal consistency (Fink & Kosecoff, 1998; Gall et al., 1996; Gay, 1996; Yu, 2000). Cronbach's coefficient alpha has been used in educational research when a new questionnaire has been developed resulting in binary-type data. The Cronbach's coefficient alpha for the four subsets ranged from .72 to .82 (see Table 1). A reliability coefficient of .70 or higher on the pilot test was considered acceptable for the use of the questionnaire in the present study (Cronbach's alpha, undated; Mitchell, 2000; Yu). Although the subset job specific skills did not have a reliability coefficient of .70 or higher for the study, a good analysis of test items should take the whole test into consideration (Yu).

Table 1

Cronbach's Coefficient Alpha calculated on the questionnaire

Employability skill subset	Coefficient alpha	
	Questionnaire Pilot Test	Research Study
Basic academic skills	.81	.91
Interpersonal skills	.77	.84
Job specific skills	.72	.56
Basic work ethic skills	.85	.70
Entire questionnaire	.90	.92

Pilot Testing

Face validity was addressed through a field test by employers in the local community who employ students in work-based learning programs in Laurens County. Employers were selected who provide jobs similar to those held by students in the "Program for Exceptional Children" work-based learning program, but who were not

included in the population to be surveyed. Pilot study respondents were asked to provide suggestions relative to the clarity of the directions, appeal of the format, content of the questions, appropriateness of the categorized items, and the method of response (Dillman, 1978; Fink & Kosecoff, 1998; Gall et al., 1996; Gay, 1996). One adjustment was made to the questionnaire; *accept criticism* was added to the interpersonal skills subset.

Data Collection

Following University of Georgia Human Subjects Institute Review board approval (see Appendix E), questionnaire packets were mailed to the 73 employers who had been identified by the "Program for Exceptional Children" teachers in the 10 county area of interest. The packets contained (a) a cover letter (see Appendix C), (b) the questionnaire (see Appendix D), (c) a credit card size magnet with *Proudly Helping Prepare Young Workers of Tomorrow* printed on it to acknowledge the service employers provide in preparing young people to be successful in the workplace, and (d) a self-addressed, stamped envelope in which to return the questionnaire. The cover letter contained instructions for completing the questionnaire.

Respondents were informed of the envelope coding process. The coding process was used for tracking returns only and was not used in reporting research results. Each of the identified businesses was assigned a number placed on the lower right corner of the envelope. The number did not appear on the questionnaire. Each respondent was asked to return the survey within a two-week period. At the end of that period, a phone call was made to the respondents for whom a phone number could be found. In order to reach

respondents for whom a phone number was not available, a second packet was sent. After an additional two week period, data collection was terminated.

Demographic Data of Respondents and Industries

The purpose of the demographic section of the questionnaire was to obtain information about the respondents and the businesses with reference to the independent variables used in the study. The variables for the respondents were: gender, current position, and years of experience in the current position (see Table 2). The variables for the businesses were: type of industry, number of employees currently working for the company, and urban or rural location of the business (see Table 2).

Male respondents accounted for 57.4 percent of the usable returns while 42.6 percent of the respondents were female (see Table 2). Owners of businesses (29.5%) and supervisors (24.6%) comprised over one-half the respondents. Three respondents who selected other as their current position identified themselves as Secretary II, Head Librarian, and Administrator. The years of experience in the present job ranged from one to 30. The majority of the respondents had less than 15 years of experience in their current positions.

Table 2

Demographic profile of respondents

Characteristic	Population	
	n	%
Gender		
Female	26	42.6
Male	35	57.4
Total	61	100.0
Current position		
Owner	18	29.5
General manager	9	14.8
Assistant manager	4	06.6
Supervisor	15	24.6
Company officer	2	03.3
Manager	7	11.4
Personnel manager	3	04.9
Other	3	04.9
Total	61	100.0
Years of experience in this job as of January 1, 2001		
1 to 5 years	13	21.3
6 to 10 years	15	24.6
11 to 15 years	12	19.7
16 to 20 years	9	14.8
21 to 25 years	6	09.8
26 to 30 years	6	09.8
Total	61	100.0

Retail trade and services accounted for almost 60% of the industries from which a response was received (see Table 3). Wholesale trade and finance, insurance, and real estate each had one representative industry. There were no representative industries for the mining and transportation, communication, and utilities industries. Five of the respondents identified their industries as other. Five respondents identified their

industries as social work in industry setting, college, restaurant, support services, and college campus/grounds.

Over 60% of the responding industries had 25 or fewer employees (see Table 3). Six of the industries had over 100 employees. The number of employees in the industries with over 100 employees ranged from 140 employees to 706 employees.

The ten Middle Georgia counties in the study were divided into either rural or urban counties based on their populations and percentages of citizens living in rural or urban areas (see Table 3). Six of the counties (Wilkinson, Twiggs, Wheeler, Johnson, Treutlen, Dodge, and Bleckley) were identified as rural counties because they had less than 25,000 people with more than half the people living in rural areas (Boatwright & Bachtel, 2000). Three of the counties (Bibb, Baldwin, and Laurens) were identified as urban counties because each had more than 25,000 people with more than half the people living in urban areas (Boatwright & Bachtel). The responding businesses were evenly divided between urban and rural counties.

Table 3

Demographic profile of responding businesses and industries

Characteristic	Population	
	n	%
Type of industry		
Agriculture, forestry, and fishing	3	04.9
Mining	0	00.0
Construction	5	08.2
Manufacturing (durable and nondurable goods)	6	09.8
Transportation, communication, and utilities	0	00.0
Wholesale trade	1	01.6
Retail trade	18	29.5
Finance, insurance, and real estate	1	01.6
Services	18	29.5
Public administration	4	06.6
Other	5	08.2
Total	61	99.9
Number of employees currently working for company		
1-25	37	60.7
26-50	10	16.4
51-75	5	8.2
76-100	3	4.9
Over 100	6	9.8
Total	61	100.0
Rural or Urban location of business		
Rural	30	49.2
Urban	31	50.8
Total	61	100.0

Data Analysis

The purpose of this study was to determine the importance of selected employability skills and the frequency skills with which these skills were exhibited by

adolescents with mild mental retardation as rated by employers of high school students with mild mental retardation in career-technical work-based programs in Middle Georgia.

Research Questions and Procedures for Analysis of the Data

1. What is the rated importance of selected employability skills for entry level employees as determined by employers of high school students with mild mental retardation in career-technical work-based learning programs in Middle Georgia?

The descriptive statistics of mean and standard deviation were used to describe the employers' ratings of the importance of basic academic, interpersonal, job specific, and basic work ethic skills (Gall et al., 1996; Gay, 1996).

2. Is there a statistically significant difference in the importance of basic academic, interpersonal, job specific, and basic work ethic skills rated as important by employers who hire students with mild mental retardation based on the following independent variables:

A. type of industry as defined by Standard Industry Classification?

B. size of industry based on the number of employees?

C. urban or rural location of the industry?

D. gender of the responding supervisor?

E. number of years experience responding supervisors have had in present positions?

F. positions of the respondents?

The mean score for each employability skill was the dependent variable. Analysis of variance (ANOVA) or *t* test (Fink & Kosecoff, 1998; Gall et al., 1996; Gay, 1996) was used to determine if there were statistically significant differences in the means based on

each independent variable. An alpha of .05 was used for this study (Cowles & Davis, 1982; Fink & Kosecoff; Gall et al.; Gay). If the omnibus F test indicated significance at the .05 value, Scheffe` Test was used to compare any and all means to determine the location of the significant difference (Post hoc testing for ANOVA, 1997). Scheffe` test is a conservative procedure (Scheffe`, undated) that can be used with unequal sample sizes (Stats: Scheffe` and Tukey Tests, undated), does not allow the probability of a Type I error to exceed the probability specified in the ANOVA (Scheffe` Test, undated), and is robust to violations of the assumptions of normality and homogeneity of variance (Scheffe` Test).

After the demographic data was received and analyzed, the decision was made to combine classifications to make results of the study more meaningful and reduce the chances of establishing statistically significant differences when, in fact, none existed. The literature suggested that each group studied should contain a minimum of 15 participants (Borg et al., 1996; Gay, 1996). The variable type of company contained 11 categories. However, 60% of the industries in the study were retail trade or services. The literature suggested that the retail and service industries employ the majority of employed high school students (Diska & Rogers, 1996; Rojewski, 1997; Walls & Fullmer, 1997; White & Bond, 1992; Wika & Rudrud, 1992). The decision was made to analyze the information received from the retail and service industries only.

The variable size of industry contained five categories. Sixty percent of the companies represented had 25 or fewer employees. The finding was consistent with other studies in the literature which suggested that most people under 25 were employed in companies with less than 25 employees (Custer & Claiborne, 1995; Gray & Wang 1989,

Levy et al., 1991; Nietupski et al., 1996). The decision was made to use two categories: companies with 1 - 25 employees and companies with 25 or more employees.

The variable current position of the respondent had eight categories. The eight categories were combined into three groups of related job descriptions: owner, manager (general manager, assistant manager, manager, and personnel manager), and supervisor (supervisor and company officer). Each group contained approximately one-third of the respondents. The variable number of years of experience of the respondent contained six categories. The categories were combined into three: 1 to 10 years which contained 28 of the respondents, 11 to 20 years which contained 21 of the respondents, and 21 to 30 years which contained 12 of the respondents.

Eta squared was calculated to determine the proportion of variability in the dependent variable that was attributable to each independent variable (Becker, 1998; Eta squared, undated; University of New England, 2000). Eta squared provided an indication of the strength of the effect the independent variable had in the tested situation.

3. Is there a statistically significant difference in the importance of the basic academic, interpersonal, job specific, and basic work ethic skills rated as important by the employers who hire high school students with mild mental retardation and the frequency of skills exhibited by the students?

Independent *t* tests compared the responses of the employers' rated importance of each subset of skills and the frequency with which each subset of skills has been exhibited by high school students (Gall et al., 1996; Gay, 1996). Alpha was set at .05.

Summary

This study sought to determine the importance of selected employability skills needed and frequency skills are exhibited by adolescents with mild mental retardation as rated by employers of high school students in vocational work-based programs in Middle Georgia. After a review of related literature, a questionnaire was developed to use in the study. Validating the questionnaire began by conducting a review of the questionnaire by high school teachers who supervised work-based learning programs, a college professor who helped prepare vocational teachers, and employers who hired high school students. The names of the employers to be included in the study were obtained from the supervisors of work-based learning programs in the high schools in the counties of interest. A pilot test was conducted by pre-testing the questionnaire with local employers who employed students in other work-based learning programs. Cronbach's coefficient alpha was used to establish the reliability of the questionnaire.

The descriptive statistics of mean and standard deviation were used to describe and compare the employers' ratings of the importance of selected employability skills. ANOVA or *t* test was used to determine if there was a statistically significant difference in the scores based on the independent variables of type of industry, location of industry, size of industry, gender of respondent, years of experience of the respondent, and position of the respondent. Alpha was set at .05 for each test of statistical significance. Post hoc analysis was made with Scheffe` test. Eta squared was calculated to determine the proportion of variability in the dependent variable that was attributable to each independent variable. Independent *t* tests were used to determine if there was a

statistically significant difference in the skills rated as important by the employers and the skills exhibited by high school students.

CHAPTER IV

FINDINGS

A number of studies and reports have been published examining the skills needed by entry-level workers (Bhaerman & Spill, 1988; Charner, 1988; Commission on the Skills of the American Work Force, 1990; Coyle-Williams, 1990; CPR Human Resources Executive Program, 1983; Custer & Claiborne, 1992, 1995; Diska & Rogers, 1996; Foss & Bostwick, 1981; Gray & Wang, 1989; Hill, 1996; Hill & Rojewski, 1999; Johnston & Packer, 1987; Millington et al., 1994; National Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; Rhoder & French, 1999; Tilson et al., 1996; U. S. Department of Commerce et al., 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989; Weisman, 1993; Wika & Rudrud, 1992). However, these studies did not specifically examine the skills needed by entry-level employees identified as being mildly mentally retarded.

New laws concerning the employment of people with disabilities and the shortage of young workers has provided more opportunities for young workers with mild mental retardation (Akabas, 1990; Meers, 1992). However, individuals with mental retardation are among the most difficult workers with disabilities to place on jobsites (Combs & Omvig, 1986; Edgar, 1993; Fuqua et al., 1984; Wagner & Blackorby, 1996). Inherent in the diagnosis of mental retardation is difficulty in learning new skills (Clark & Kolsoe, 1995; Hickson et al., 1995; Jones, 1996; Thomas, 1996). Studies have shown that

students with mild mental retardation are not prepared to meet the demands of the competitive workplace (Edgar; Murry & Machell, 1994; Wagner & Blackorby, 1996; Wehman, 1990, 1993). Educators must identify the employability skills needed in jobs available to students with mild mental retardation in order to carefully prepare the students to be successful in the students' chosen career fields.

The purpose of this study was to determine the importance of selected employability skills and the frequency with which these skills were exhibited by adolescents with mild mental retardation as rated by employers of high school students with mild mental retardation in career-technical work-based programs in Middle Georgia. Specifically, the purpose of the study was addressed through the following research questions:

1. What is the rated importance of selected employability skills for entry level employees as determined by employers of high school students with mild mental retardation in career-technical work-based learning programs in Middle Georgia?

2. Is there a statistically significant difference in the importance of basic academic, interpersonal, job specific, and basic work ethic skills rated as important by employers who hire high school students with mild mental retardation based on the following independent variables:

   A. type of industry as defined by Standard Industry Classification?

   B. size of industry based on the number of employees?

   C. urban or rural location of the industry?

   D. gender of the responding supervisors?

E. number of years of experience responding supervisors have had in present positions?

F. position of the respondents?

3. Is there a statistically significant difference in the importance of the basic academic, interpersonal, job specific, and basic work ethic skills rated as important by the employers who hire high school students with mild mental retardation and the frequency of skills exhibited by the students?

The questionnaire developed for the study was designed to investigate the rated importance of selected employability skills by employers who hire students served by the "Program for Exceptional Children" in high schools in Middle Georgia.

Research Question 1: What is the rated importance of selected employability skills for entry-level employees as determined by employers of high shcool students with mild mental retardation in career-technology work-based learning programs in Middle Georgia?

The employability skills questionnaire contained a total of 28 items in four subsets: basic academic skills, interpersonal skills, job specific skills, and basic work ethic skills. Each subset had seven items. Participants were asked to indicate the importance of each skill for entry level employees in their company on a scale of 1= unnecessary for continuing employment to 5=essential for continuing employment. Table 4 reports the descriptive statistical summary of the employers' ratings by subsets. Employability skills in the basic work ethic subset had the highest importance mean average, $M = 4.53$, $SD = .62$. The basic skills subset had the lowest mean average, $M = 3.50$, $SD = 1.05$.

Table 4.

Summary of the importance of employability skills by subsets

Item	Employability skills	Importance of skills for entry-level employees	
		M	SD
	Basic academic skills		
1.	Use written communication	3.25	1.14
5.	Use oral communication	3.69	1.07
9.	Use math to solve problems	2.87	1.30
13.	Listen carefully	4.10	.75
17.	Read and understand information	3.36	1.27
21.	Solve problems	3.48	.96
25.	Show willingness to learn new information and skills	3.75	.87
	Subset mean	3.50	1.05
	Interpersonal skills		
2.	Work well with others	4.41	.80
6.	Dress and groom appropriately	3.69	1.06
10.	Show respect to others	4.48	.67
14.	Ask for help when needed	4.26	.75
18.	Accept criticism	3.75	.85
22.	Meet public	3.46	1.40
26.	Act cheerful and friendly	3.90	1.08
	Subset mean	3.99	.94
	Job specific skills		
3.	Use appropriate tools	4.02	.89
7.	Use basic computer skills	2.54	1.27
11.	Transfer skills from one job to another	3.72	.69
15.	Perform acceptable quality of work	4.62	.55
19.	Maintain acceptable pace of work	4.30	.69
23.	Follow directions	4.67	.57
27.	Work with minimum supervision	3.95	.69
	Subset mean	3.97	.76

(table continues)

Table 4 (continued).

Item No.	Employability skills	M	SD
	Basic work ethic		
4.	Take initiative	3.97	.77
8.	Display dependability	4.74	.48
12.	Exercise honesty	4.82	.43
16.	Come to work everyday	4.69	.67
20.	Come to work on time	4.66	.54
24.	Have a positive attitude	4.44	.83
28.	Be conscientious	4.36	.63
	Subset Mean	4.53	.62

Note: 1=unnecessary for continuing employment, 2=somewhat important for continuing employment, 3=important for continuing employment, 4=very important for continuing employment, 5=essential for continuing employment.

Research Question 2: Is there a statistically significant difference in the importance of basic academic, interpersonal, job specific, and basic work ethic skills rated as important by employers who hire students with mild mental retardation based on the following independent variables:

A. type of industry as defined by Standard Industry Classification?

B. size of industry based on the number of employees?

C. urban or rural location of the industry?

D. gender of the responding supervisors?

E. number of years of experience responding supervisors have had in present positions?

F. position of the respondent?

The mean for each basic academic skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means

based on the independent variable type of industry. An alpha of .05 was set. The independent *t* test comparing the mean scores of the retail sales industry and the service industry found a significant difference between the means of the two groups for the employability skill use math to solve problems, $t(31) = 2.27$, $p < ..05$, eta squared = .99. The mean of the retail sales industry, $M = 3.67$, $SD = .97$, was significantly higher than the mean of the service industry $M = 2.73$, $SD = 1.39$.

The mean for each basic academic skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable size of industry. An alpha of .05 was set. The independent *t* test comparing the mean scores of the industries with 25 or fewer employees and the industries with more than 25 employees found a significant difference between the means of the two groups for the employability skill use written communication, $t(59) = 2.37$, $p < .05$, eta squared = .80. The mean of the industries with 25 or fewer employees, $M = 3.51$, $SD = 1.10$, was significantly higher than the mean of the industries with more than 25 employees, $M = 2.83$, $SD = 1.09$.

The mean score for each basic academic skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable location of industry. An alpha of .05 was set. The independent *t* test comparing the mean scores of the urban and rural locations found a significant difference between the means of the two groups for the employability skill use oral communication, $t(59) = 2.39$, $p < .05$, eta squared = .09. The mean of the urban industries, $M = 4.00$, $SD = 1.00$, was significantly higher than the mean of the rural industries, $M = 3.37$, $SD = 1.07$. The independent *t* test comparing the

mean scores of the urban and rural locations found a significant difference between the means of the two groups for the employability skill use math to solve problems, $t(59) = 3.20$, $p = <.05$, eta squared = .15. The mean of the urban industries, $M = 3.36$, $SD = 1.25$, was significantly higher than the mean of the rural industries, $M = 2.37$, $SD = 1.16$.

The mean for each basic academic skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable gender. An alpha of .05 was set. The independent *t* test comparing the mean scores of the male and female respondents found a significant difference between the means of the two groups for the employability skill show willingness to learn new information and skills, $t(59) = 2.28$, $p = .05$, eta squared = .08. The mean for the female respondents, $M = 4.04$, $SD = .77$, was significantly higher than the mean of the male respondents, $M = 3.54$, $SD = .89$.

The mean for each basic academic skill was the dependent variable. Analysis of variance (ANOVA) was used to determine if there were statistically significant differences in the means based on the independent variables years of experience and position of the respondents. An alpha of .05 was set. No statistically significant differences were found for the basic academic skills based on the independent variables years of experience in the present position and the position of the respondents.

The mean for each interpersonal skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable type of company. An alpha of .05 was set. The independent *t* test comparing the mean scores of the retail sales industry and the service industry found a significant difference between the means of the two groups for the

employability skill show respect for others, $t(31) = 2.04$, $p < .05$, eta squared = .88. The mean of the retail sales industry, $M = 4.78$, $SD = .43$, was significantly higher than the mean of the service industry, $M = 4.40$, $SD = .63$. The independent t test comparing the mean scores of the retail sales industry and the service industry found a significant difference between the means of the two groups for the employability skill meet public, $t(31) = 2.09$, $p < .05$, eta squared = .71. The mean of the retail sales industry, $M = 4.33$, $SD = .84$, was significantly higher than the mean of the service industry, $M = 3.73$, $SD = .80$. The independent t test comparing the mean scores of the retail sales industry and the service industry found a significant difference between the means of the two groups for the employability skill act cheerful and friendly, $t(31) = 2.22$, $p < .05$, eta squared = .61. The mean of the retail sales industry, $M = 4.61$, $SD = .50$, was significantly higher than the mean of the service industry, $M = 4.07$, $SD = .88$.

The mean for each interpersonal skill was the dependent variable. Independent t tests were used to determine if there were statistically significant differences in the means based on the independent variable size of industry. An alpha of .05 was set. No statistically significant differences were found for the interpersonal skills based on the size of the industry.

The mean for each interpersonal skill was the dependent variable. Independent t tests were used to determine if there were statistically significant differences in the means based on the independent variable location of industry. An alpha of .05 was set. The independent t test comparing the mean scores of the urban and rural industries found a significant difference between the means of the two groups for the employability skill work well with others, $t(31) = 2.06$, $p < .05$, eta squared = .07. The mean of the urban

industries, $M = 4.61$, $SD = .61$ was significantly higher than the mean of the rural industries, $M = 4.20$, $SD = .93$. The independent t test comparing the mean scores of the urban and rural industries found a significant difference between the means of the two groups for the employability skill dress and groom appropriately, $t(31) = 2.16$, $p < .05$, eta squared = .07. The mean of the urban industries, $M = 3.97$, $SD = .80$, was significantly higher than the mean of the rural industries, $M = 3.40$, $SD = 1.22$. The independent t test comparing the mean scores of the urban and rural industries found a significant difference between the means of the two groups for the employability skill show respect to others, $t(31) = 2.05$, $p = .05$, eta squared = .07. The mean of the urban industries, $M = 4.65$, $SD = .49$, was significantly higher than the mean of the rural industries, $M = 4.30$, $SD = .79$.

The mean for each interpersonal skill was the dependent variable. Independent t tests were used to determine if there were statistically significant differences in the means based on the independent variable gender of respondent. An alpha of .05 was set. No statistically significant differences were found for the interpersonal skills based on the independent variable gender of the respondent.

The mean for each interpersonal skill was the dependent variable. Analysis of variance (ANOVA) was used to determine if there were statistically significant differences in the means based on the independent variable years of experience of the respondent. An alpha of .05 was set. No statistically significant differences were found for the interpersonal skills based on the independent variable years of experience in the present position.

The mean of each interpersonal skill was the dependent variable. Analysis of variance (ANOVA) was used to determine if there were statistically significant differences in the means based on the independent variable position of the respondent. An alpha of .05 was set. A significant difference was found among the positions of the respondents for the employability skill dress and groom appropriately, $F(2,58) = 3.61$, $p < .05$, eta squared = .57. Scheffe' post hoc analysis was used to determine the nature of the differences between the positions. This analysis revealed that managers rated the skill more important, $M = 4.13$, $SD = 1.10$, than the supervisors, $M = 3.50$, $SD = .67$. The owners did not rate the skill significantly different, $M = 3.50$, $SD = 1.20$, from either of the other two groups.

The mean for each job specific skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable type of company. An alpha of .05 was set. The independent *t* test comparing the mean scores of the retail sales and service industries found a significant difference between the means of the two groups for the employability skill perform acceptable quality of work, $t(3l) = 2.04$, $p < .05$, eta squared = .88. The mean of the retail industry, $M = 4.78$, $SD = .43$, was significantly higher than the mean of the service industry, $M = 4.40$, $SD = .63$.

The mean for each job specific skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable size of the industry. An alpha of .05 was set. The independent *t* test comparing the mean scores of the industries with 25 or fewer employees and the industries with more than 25 employees found a significant difference

between the means of the two groups for the employability skill transfer skills from one job to another, $t(59) = 2.25$, $p < .05$, eta squared = .72. The mean of the industries with 25 or fewer employees, $M = 3.89$, $SD = .61$, was significantly higher than the mean of the industries with 25 or more employees, $M = 3.46$, $SD = .72$.

The mean for each job specific skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable location of industry. An alpha of .05 was set. The independent t test comparing the mean scores of the urban and rural industries found a significant difference between the means of the two groups for the employability skill use basic computer skills, $t(59) = 2.34$, $p < .05$, eta squared = .09. The mean of the urban industries, $M = 2.90$, $SD = 1.19$, was significantly higher than the mean of the rural industries, $M = 2.17$, $SD = 1.26$.

The mean for each job specific skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable gender of respondents. An alpha of .05 was set. No statistically significant differences were found for job specific skills based on the gender of the respondents.

The mean for each job specific skill was the dependent variable. Analysis of variance (ANOVA) was used to determine if there were statistically significant differences in the means based on the independent variables years of experience and position of the respondents. An alpha of .05 was set. No statistically significant differences were found for the job specific skills based on years of experience and position in the company of the respondents.

The mean for each basic work ethic skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable type of company. An alpha of .05 was set. The independent *t* test comparing the mean scores of the retail sales and service industries found a significant difference between the means of the two groups for the employability skill display dependability, $t(31) = 2.57$, $p < .05$, eta squared = .67. The mean of the retail sales industry, $M = 4.94$, $SD = .24$, was significantly higher than the mean of the service industry, $M = 4.60$, $SD = .51$.

The mean for each basic work ethic employability skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable size of industry. An alpha of .05 was set. No statistically significant differences were found for the basic work ethic skills based on the size of the industry.

The mean for each basic work ethic employability skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable location of the industry. An alpha of .05 was set. No statistically significant differences were found for the basic work ethic skills based on the location of the industry.

The mean for each basic work ethic employability skill was the dependent variable. Independent *t* tests were used to determine if there were statistically significant differences in the means based on the independent variable gender. An alpha of .05 was set. The independent *t* test comparing the mean scores of the female and male respondents found a significant difference between the means of the two groups for the

employability skill display dependability, $t(59) = 2.34$, $p < .05$, eta squared = .09. The mean of the male respondents, $M = 4.86$, $SD = .36$, was significantly higher than the mean of the female respondents, $M = 4.58$, $SD = .58$.

The mean for each basic work ethic employability skill was the dependent variable. Analysis of variance (ANOVA) was used to determine if there were statistically significant differences in the means based on the independent variables number of years of experience of the respondents and position of the respondents. An alpha of .05 was set. No statistically significant differences were found for the basic work ethic skills based on years of experience in the present position and position of the respondents.

Research Question 3: Is there a statistically significant difference in the importance of the basic academic, interpersonal, job specific, and basic work ethic skills rated as important by the employers who hire students with mild mental retardation and the frequency of skills exhibited by the students?

Independent *t* tests compared the responses of the employers' rated importance of each subset of skills and the frequency with which each subset of skills had been exhibited by high school students. Independent t tests revealed statistically significant differences between the means of the importance of the employability skills and the frequency with which the skills were considered to be exhibited for the basic academic skills subset, the interpersonal skills subset, the job specific skills subset, and the basic work ethic skills subset (see Table 5). The mean of the importance rating was significantly higher than the mean of the exhibited rating for each subset.

Table 5

Comparison of the importance of skills for entry level employees and the frequency skills are exhibited by high school students as rated by employers of students with mild mental retardation

Employability skills subset	Importance M	Importance SD	Exhibited M	Exhibited SD	*t*	p
Basic academic skills	3.50	.85	3.06	.60	5.05	.00
Interpersonal skills	3.99	.69	3.21	.66	8.77	.00
Job specific skills	3.97	.42	3.18	.60	11.20	.00
Basic work ethic skills	4.59	1.54	3.29	1.67	11.96	.00

Note: Importance Scale–1=unnecessary for continuing employment; 5=essential for continuing employment. Exhibited Scale–1=rarely exhibits skill; 5=almost always exhibits skill

Summary

This study investigated the importance of selected employability skills rated by employers who hired students with mild mental retardation in a 10-county area in Middle Georgia, and whether the rated importance was affected by selected demographic variables of the company or participating supervisor. The study also sought to determine if there were statistically significant differences in the rated importance of the skills and the frequency with which the skills were rated as exhibited by the students.

The employability skills used for the present study were selected from employability skills determined to be important by a number of studies and reports that examined the skills needed by entry-level workers (Bhaerman & Spill, 1988; Charner, 1988; Commission on the Skills of the American Work Force, 1990; Coyle-Williams, 1990; CPR Human Resources Executive Program, 1983; Custer & Claiborne, 1992, 1995; Diska & Rogers, 1996; Foss & Bostwick, 1981; Gray & Wang, 1989; Hill, 1996; Hill & Rojewski, 1999; Johnston & Packer, 1987; Millington et al., 1994; National

Association of State Boards of Education, 1995; National Center for Education Statistics, 1991; National Education Goals Panel, 1990; Rhoder & French, 1999; Tilson et al., 1996; U. S. Department of Commerce et al., 1999; U. S. Department of Labor, 1991; U. S. Department of Labor & U. S. Department of Education, 1988; U. S. Department of Labor et al., 1989; Weisman, 1993; Wika & Rudrud, 1992). To report the rated importance of the employability skills, the responses were analyzed using descriptive statistics of mean and standard deviation. To analyze differences in responses between and within the participants and industries, a series of ANOVAs and independent t tests were utilized. To analyze differences in responses between the rated importance of the skills and the frequency the skills were rated as exhibited by the students, a series of independent *t* tests were utilized.

Employability skills in the basic work ethic subset were rated as the most important by the employers. Exercise honesty was the highest rated important employability skill. Interpersonal skill was the second highest rated subset. Job specific skills was the third highest rated subset, with basic academic skills the lowest rated subset. Use basic computer skills was the lowest rated individual employability skill.

The type of industry variable was related to statistically significant differences in the largest number of employability skills. The rated importance was significantly different for the skills use math to solve problems, show respect to others, meet public, act cheerful and friendly, perform acceptable quality of work, and display dependability. The skills were more important for the retail sales industry.

There were statistically significant differences for only two employability skills based on size of industry: use written communication and transfer skills from one job to

another. The employability skills were more important to industries that employed fewer than 25 employees.

There were statistically significant differences for six of the employability skills based on location of industry: use oral communication, use math to solve problems, work well with others, dress and groom appropriately, show respect to others, and use basic computer skills. For each skill, the mean for industries located in urban areas was significantly higher than the mean for industries located in rural areas.

There were statistically significant differences for two of the employability skills based on gender: show willingness to learn new information and display dependability. Show willingness to learn new information was more important to female respondents. Display dependability was more important to male respondents.

There was not a statistically significant difference for any employability skills based on years of experience. There was a statistically significant difference for only one employability skill based on the position of the respondent. The skill dress and groom appropriately was more important for managers than for supervisors.

A comparison of the importance of the employability skills for entry level employees and the frequency the skills are exhibited by high school students as rated by the employers was conducted using a series of independent t tests. For each subset of employability skills, the mean of the importance rating was significantly higher than the mean of the exhibited rating.

CHAPTER V

DISCUSSION

Introduction

This study sought to investigate and report the importance of employability skills rated by business people who hire students who are mildly mentally retarded and demographic factors of the business people and industries that influenced the rated importance of the skills. The study also sought to compare the rated importance of the skills and the frequency with which the skills were rated as exhibited by the young people. To accomplish this goal, a questionnaire was developed and pilot tested. The questionnaire requested the employers to rate the importance of 28 employability skills divided into four subsets: basic academic skills, interpersonal skills, job specific skills, and basic work ethic skills. The employers were also asked to rate the frequency with which the students exhibited the employability skills. A demographic section was included to determine the factors influencing the respondents' ratings. Teachers in the Middle Georgia area were asked to provide the names of employers who hire their students identified as being mildly mentally retarded who are enrolled in a career-technical work-based learning program. A total of 73 employers were identified. Sixty-one employers returned usable questionnaires.

The purpose of this study was to determine the importance of selected employability skills and the frequency with which these skills were exhibited by adolescents with mild mental retardation as rated by employers of high school students

with mild mental retardation in career-technical work-based programs in Middle Georgia. Letters were sent to teachers in high schools in a 10 county area of Middle Georgia requesting the names of businesses that employed their students identified as being mildly mentally retarded. A total of 61 usable questionnaires were returned for a rate of 83.5%.

The descriptive statistics of mean and standard deviation were used to describe the importance of 28 selected employability skills and the frequency with which these skills were exhibited by the students. A series of *t* tests and analysis of variance (ANOVA) procedures were used to describe the relationship between the employability skills and independent variables of type of industry, size of industry, urban or rural location of the industry, gender of the participant, position in the company of the participant, and number of years of experience in the present position of the participant. Independent t tests were used to compare the rated importance of the subsets of employability skills and the frequency with which the skills were exhibited by the students. This chapter presents a summary of findings, conclusions, implications, recommendations for practice, and recommendations for further research.

Summary of Findings

Demographic data indicated that 42.6% of the respondents were female and 57.4 % were male. Twenty-nine percent of the respondents owned their companies, 25% identified themselves as supervisors, 15% identified themselves as general managers, and 11% as managers. Other respondents identified themselves as assistant managers, personnel managers, company officers, or other. Forty-six percent of the respondents had

less than 11 years of experience in their present positions, 34% had from 11 to 20 years of experience, and 20% had over 20 years of experience.

Retail trade and services each accounted for 30% of the industries employing the students. Construction, manufacturing, public administration, and other employed from 5% to 10% of the respondents. None of the respondents were employed in the mining and transportation, communication, and utilities industries.

Over 60% of the respondents were employed in industries with fewer than 25 employees. Sixteen percent of the respondents were employed in industries with from 26 to 50 employees. Twenty percent of the respondents were employed in industries with more than 51 employees. The industries were equally divided between rural and urban locations.

The mean for the employability skills in the basic work ethic subset was higher than the means for the other subsets with honestly rated the most important skill. Four of the five highest rated skills were in the basic work ethic subset. The interpersonal skills subset had the second highest mean. Show respect for others was the highest rated skill in the interpersonal skills subset. The job specific subset had the third highest mean. Follow directions was the highest rated skill in the job specific subset. The basic academic skills had the lowest mean. Read and understand information, use written communication, and use math to solve problems were the lowest rated basic academic skills. Only use basic computer skills from the job specific subset had a lower mean score.

The literature suggested that for statistical purposes, each group studied should contain a minimum of 15 subjects, so the decision was made to combine some of the classifications of demographic information to reduce the chances of establishing

statistically significant differences when, in fact, none existed (Borg et al., l996; Gay, 1996). Two types of industries represented 60% of the responses to the questionnaire. Retail sales and services were the industries used for the variable type of industry. Type of industry provided a statistically significant difference for six of the employability skills. For each skill, the skill was more important for the retail sales industry. The variable location of the industry was statistically significant for six of the skills. For each skill, the skill was more important for industries located in urban areas.

The variables size of industry and gender were statistically significant for two employability skills. The variable years of experience was not statistically significant for any skill. Position of respondent was a statistically significant variable for one of the employability skills.

For 27 of the 28 employability skills, the mean of the importance of the skills was higher than the mean of the frequency with which the skill was exhibited. For the skill use basic computer skills, the mean on the frequency scale was higher than the mean on the importance scale. Independent t tests revealed statistically significant differences for each subset of skills between the importance of the skill and the frequency with which the skill was rated as exhibited.

Conclusions

Care must be taken in making inferences from the data because the population of the study was confined to employers identified by teachers of students with mild mental retardation in a 10-county area of Middle Georgia. The employers identified had worked with the teachers in community work-based programs supervised by the teachers. However, the demographics of the industries that employed the students were similar to

the demographics of industries that hire young people and people with disabilities in other studies (Custer & Claiborne, 1995; Diska & Rogers, 1996; Gray & Wang, 1989; Levy et al., 1991; Nietupski et al., 1996; Walls & Fullmer, 1997; White & Bond, 1992; Zadny, 1980). Therefore, the results of the present study may apply to other students and employers in Georgia.

All twenty-eight employability skills except two (use math to solve problems and use basic computer skills) had a mean of 3.00 or higher, indicating that the employers considered the skills important for continued employment. The means of the subsets were: basic academic skills, $M = 3.53$, interpersonal skills, $M = 3.99$, job specific skills, $M = 3.97$, and basic work ethic skills, $M = 4.50$.

The most important demographic variables of the respondents and industries were type of industry and location of industry. Type of industry was statistically related to ratings of six employability skills: use math to solve problems, show respect for others, meet public, act cheerful and friendly, perform acceptable quality of work, and display dependability. The skills were more important for the retail sales industry than for the service industry.

It is not clear why the skills use oral communication, use math to solve problems, work well with others, dress and groom appropriately, show respect to others, and use basic computer skills would be more important for jobs in an urban area than for jobs in a rural area. Different jobs may be available in rural and urban areas, or, as Finley (1994) suggested, employers in rural areas may be more likely to know the students personally and, therefore, be more tolerant of the students' behaviors. Although the variables size of industry, gender, years of experience, and position of supervisor have been found to be

significant in other studies of important employability skills, the four variables were significant for only two or fewer of the skills in this study (Carnevale, 1995; Custer & Claliborne, 1995; Gray & Wang, 1989; Levy et al., 1991; Nietupski et al., 1996, Zadny, 1980).

The employers rated four employability skills as being exhibited less than one-half the time: use written communication, use math to solve problems, use basic computer skills, and take initiative. None of the employability skills received a mean of four or more which would have indicated that the skill was exhibited more than one half the time. The two skills with the highest rank were exercise honesty, $M = 3.48$, $SD = .96$, and come to work every day, $M = 3.48$, $SD = .89$. The means for the importance of the employability skills were higher than the means for the frequency with which the skills were exhibited for all the skills except use basic computer skills. Independent *t* tests indicated statistically significant differences between the rated importance of each subset of skills and the rated frequency with which the skills were exhibited.

Implications

Employers in this study did not rate the employability skills as being exhibited more than one-half of the time. The employers rated the same skills as being necessary for continued employment. A statistically significant difference between the rated importance and the rated exhibition of the skills existed for each subset. The difference may have indicate that the students could have difficulty achieving long-term employment. Although basic academic skills and job specific skills were rated as important, interpersonal skills and basic work ethic skills were rated as more important. The findings of this study were similar to the findings of Baumeister and Morris (1992),

Custer and Claiborne (1992, 1995), Millington et al. (1994), and Wika and Rudrud (1992) who also found that employers rated interpersonal skills and basic work ethic skills more important for success in the work place than basic academic skills or job specific skills.

Many of the skills in the interpersonal skills and basic work ethic skills subsets are those traditionally considered to be taught by the family or social environment of the individual. However, many students identified as being mildly mentally retarded have not learned the skills (Hill & Rojewski, 1999).

In order to help the young people be more successful in the workplace, programs for students with mild mental retardation need to stress the interpersonal and basic work ethic skills. Findings of this study have implications not only for high school programs but also for elementary and middle school programs. Strategies to help students develop better interpersonal and basic work ethic skills need to be used before the students reach secondary school. Career development theories indicate that most of the skills in these two areas are developed during the childhood years (Herr, 1996; Hershenson, 1996a, 1996b; Hershenson & Szymanski, 1992; Levinson, 1998; Super, 1990; Szymanski, Turner et al., 1992) .

Recommendations for Practice

1. Findings of this study should be made available to teachers of students with mild mental retardation in elementary, middle, and secondary schools so that skills needed for continuing employment can be incorporated into daily lesson plans.

2. Findings of this study should be made available to educators preparing curriculum guides and material for use in elementary, middle, and secondary schools.

3. Findings of this study should be shared with students identified as being mildly mentally retarded in an effort to help them see the importance of the skills.

4. Findings of this study should be used with employers as part of a program to encourage cooperation between the schools and employers in helping prepare students with mild mental retardation for transition to work places.

5. Findings of this study should be shared with parents of students with mild mental retardation in order to encourage support between the families, schools, and work places in preparing students for employment.

Recommendations for Further Research

1. The present study was limited to employers in a 10-county area of Middle Georgia. Additional studies should be conducted using employers in a larger geographic area.

2. A variety of jobs are available in most industries, but not all the jobs are available to high school students with mild mental retardation. Research needs to be conducted to identify the employability skills needed for specific jobs frequently available to individuals with mild mental retardation such as those identified by Diska and Rogers (1996), Walls and Fullmer (1997),Wika and Rudrud (1992), and White and Bond (1992).

3. The employers surveyed in the present study were the employers identified by high school teachers as participating in work-based learning programs. Studies need to be conducted that include employers who hire adolescents with mild mental retardation who do not participate in work-based learning programs.

4. The independent variable location of industry was significant for six of the employability skills. Research needs to be conducted to identify reasons employers in rural and urban areas rate different employability skills to be significant for successful employment in their area.

5. There was a statistically significant difference between the importance of the employability skills and the exhibiting of the skills by high school students with mild mental retardation. Research needs to be done on different approaches to teaching the employability skills to students with mild mental retardation to determine which methods are more successful.

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APPENDIX A

LETTER TO PRINCIPALS

713 Victoria Circle
Dublin, Georgia
January 31, 2001

Principal
County High School
Street
City, Georgia Zip

Dear Principal:

As a principal in a public secondary school in Georgia, you are aware of the problems faced by students with mild mental disabilities. Many students with mild mental disabilities drop out before completing their education, and many who complete twelve years find themselves ill prepared to face the demands of the modern workplace.

This letter is to request your assistance in gathering data for a doctoral research project. I would like to contact the teacher in your school who supervises students identified as having mild mental disabilities in a work-based learning program to request the names of businesses that employ those students. Enclosed is a letter to the teacher requesting his or her assistance. **Please forward the letter to the teacher who supervises the work-based learning program in your school**. Your assistance will help me in surveying businesses in the Middle Georgia area that employ students identified as having mild mental disabilities to determine which skills employers consider the most important for entry level employees. The names of individual students will not be requested. The work-based learning program will be identified only by the name of the supervising teacher and school.

I am a teacher of students with mild mental disabilities at Dublin High School and a student in the Department of Occupational Studies at the University of Georgia. The goal of this project is to design a vocational program to help students with mild mental disabilities learn about employment opportunities in their community and acquire the basic education, work ethic, and employability and vocational skills they will need in order to be successful in their careers.

Your forwarding the letter to the teacher will be construed as permission to include your school in the study. If you desire a summary of the results of this study, please inform me via letter or telephone (912-275-3025). Your contribution to this research project will be greatly appreciated.

Sincerely,

Linda P. Pritchett

APPENDIX B

LETTER TO TEACHERS

713 Victoria Circle
Dublin, Georgia 31021
January 31, 2001

Dear Fellow Educator:

As a teacher of students with special needs in a public secondary school in Georgia, you are aware of the problems faced by students identified as having mild mental disabilities. Many of these students drop out before completing their education, and many who complete twelve years of school find themselves ill prepared to face the demands of the modern work place.

This letter is to request your assistance in gathering data for a doctoral research project. Your assistance will help me in conducting a survey of businesses in the Middle Georgia area that employ students identified as having mild mental disabilities to determine which skills the employers consider most important in entry level employees. The names of individual students are not being requested. Your work-based learning program will be identified only by your name and the name of your school.

Attached are three sheets for you to use to identify businesses that have hired students in your work-based learning program over the past two years. Because of the wide range of ability levels for students identified as having learning disabilities or behavioral disabilities, I am only requesting the names of businesses that have hired those students identified as having mild mental disabilities (MIID). If possible, I would also like to have the names of contact persons at those businesses. Accompanying this letter is a stamped, addressed envelope for the return of the attached sheets.

I am a teacher of students with mild mental disabilities at Dublin High School and a student in the Department of Occupational Studies at the University of Georgia. The goal of this project is to design a vocational program to help students with mild mental disabilities learn about the employment opportunities in their communities and acquire the basic education, work ethic, employability and vocational skills they need to be successful in the work force. The information from this survey will help me identify the skills that need to be included in such a vocational program.

Your return of these forms will be considered permission to include your program in the study. If you desire a summary of the results of this study, please send your name and address to me on a separate sheet of paper. Thank you very much for your assistance in contributing to this research project. If you have any questions, please contact me at 912-275-3025 or hpritche@nlamerica.com.

Sincerely,

Linda P. Pritchett

Name of Teacher_____
Name of School _____

Name of Business_____
Address_____
_____
Contact Person_____

Name of Business_____
Address_____
_____
Contact Person_____

Name of Business_____
Address_____
_____
Contact
Person_____

Name of Business_____
Address_____
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Name of Business_____
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Name of Business_____
Address_____
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Contact Person_____

Name of Business_____
Address_____
_____
Contact
Person_____

APPENDIX C

LETTER TO EMPLOYERS

May 1, 2001

Business Name
Respondent's Name
Street Address
City, State Zip

Dear Sir:

This letter is a request for your assistance in gathering data for a doctoral research project. I am conducting a study on the perceptions employers have of the skills young workers need to be successful in entry level jobs. The study is entitled "Employability Skill Rated as Important by Employers and Exhibited by High School Students". Your name was given to me by (Teacher) as an employer who works with her students from (Name of School). There is no risk or cost to you, and your participation is totally voluntary. Your reply will be kept confidential and will not be released in any identifiable form.

Enclosed is a short questionnaire and a stamped, self-addressed envelope. The envelope is coded for follow-up contact with the employer only. After receiving your response, the envelope will be destroyed. There is no coding on the questionnaire. Your completion and return of the questionnaire will be considered as permission by you to include your responses in the research data. Please complete and return the questionnaire by (date two weeks away). If you desire a summary of the results of this study, please check the last item on Part II of the questionnaire.

Please accept the enclosed magnet as a token of my appreciation for your taking time out of your busy schedule to respond to my questionnaire and for helping educators prepare young people to be successful in the workplace. As a vocational teacher at Dublin High School, I know that employers like you provide a service that cannot be provided by anyone else. Thank you very much for your assistance in contributing to this research project. I will be glad to answer any questions you have about the research, now or during the course of the project, and can be reached by telephone at 478-275-3025.

Sincerely,

Linda P. Pritchett
713 Victoria Circle
Dublin, Georgia 31021
Attachment
cc: Dr. Helen C. Hall, Major Professor (706-542-4472)
Research at The University of Georgia which involves human participants is carried out under the oversight of the Institutional Review Board. Questions or problems regarding these activities should be addressed to Office of Vice President for Research, Institutional Review Board/Human Subjects Office, The University of Georgia, 606A Graduate Studies Research Center, Athens, Georgia, 30602-7411. (706) 542-3199

APPENDIX D

QUESTIONNAIRE

EMPLOYABILITY SKILLS QUESTIONNAIRE

Part 1: In the center of this questionnaire is a partial listing of employability skills that have been determined to be important for entry level employees. Based on your experience as an employer of high school students in work-based learning programs, please circle the number to the left of each skill to rate the importance of each skill for entry level employees in your company. On the right side of each skill, please circle the number to rate the degree to which high school students in work-based learning programs exhibit each skill. Please rate the importance of each skill before rating the degree to which the skill is exhibited. Use the following rating scales.

1-unnecessary for continuing employment	1-rarely exhibit skill
2-somewhat important for continuing employment	2-exhibit skill less than half the time
3-important for continuing employment	3-exhibit skill about half the time
4-very important for continuing employment	4-exhibit skill more than half the time
5-essential for continuing employment	5-almost always exhibit skill

Importance of Skills for Entry Level Employees	Employability Skills	Frequency Skills Exhibited By High School Students
1 2 3 4 5	1. Use written communication	1 2 3 4 5
1 2 3 4 5	2. Work well with others	1 2 3 4 5
1 2 3 4 5	3. Use appropriate tools	1 2 3 4 5
1 2 3 4 5	4. Take initiative	1 2 3 4 5
1 2 3 4 5	5. Use oral communication	1 2 3 4 5
1 2 3 4 5	6. Dress and groom appropriately	1 2 3 4 5
1 2 3 4 5	7. Use basic computer skills	1 2 3 4 5
1 2 3 4 5	8. Display dependability	1 2 3 4 5
1 2 3 4 5	9. Use math to solve problems	1 2 3 4 5
1 2 3 4 5	10. Show respect to others	1 2 3 4 5
1 2 3 4 5	11. Transfer skills from one job to another	1 2 3 4 5
1 2 3 4 5	12. Exercise honesty	1 2 3 4 5

1-unnecessary for continuing employment	1-rarely exhibit skill
2-somewhat important for continuing employment	2-exhibit skill less than half the time
3-important for continuing employment	3-exhibit skill about half the time
4-very important for continuing employment	4-exhibit skill more than half the time
5-essential for continuing employment	5-almost always exhibit skill

Importance of Skills for Entry Level Employees	Employability Skills	Frequency Skills Exhibited By High School Students
1 2 3 4 5	13. Listen carefully	1 2 3 4 5
1 2 3 4 5	14. Ask for help when needed	1 2 3 4 5
1 2 3 4 5	15. Perform acceptable quality of work	1 2 3 4 5
1 2 3 4 5	16. Come to work everyday	1 2 3 4 5
1 2 3 4 5	17. Read and understand information	1 2 3 4 5
1 2 3 4 5	18. Accept criticism	1 2 3 4 5
1 2 3 4 5	19. Maintain acceptable pace of work	1 2 3 4 5
1 2 3 4 5	20. Come to work on time	1 2 3 4 5
1 2 3 4 5	21. Solve problems	1 2 3 4 5
1 2 3 4 5	22. Meet public	1 2 3 4 5
1 2 3 4 5	23. Follow directions	1 2 3 4 5
1 2 3 4 5	24. Have a positive attitude	1 2 3 4 5
1 2 3 4 5	25. Show willingness to learn new information and skills	1 2 3 4 5
1 2 3 4 5	26. Act cheerful and friendly	1 2 3 4 5
1 2 3 4 5	27. Work with minimum supervision	1 2 3 4 5
1 2 3 4 5	28. Be conscientious	1 2 3 4 5

Part 2: Please circle the appropriate letter or fill in the blank.

1. Your gender is:
   a. Female b. Male

2. Which of the following best describes your current position?
   a. Owner
   b. General Manager
   c. Assistant Manager
   d. Supervisor
   e. Company Officer
   f. Manager
   g. Personnel Manager
   h. Other (please specify)_____

3. How many years of experience have you had in your current position as of January 1, 2001?_____

4. What type of industry is your company?
   a. Agriculture, Forestry, and Fishing
   b. Mining
   c. Construction
   d. Manufacturing (durable and nondurable goods)
   e. Transportation, Communication, and Utilities
   f. Wholesale Trade
   g. Retail Trade
   h. Finance, Insurance, and Real Estate
   i. Services
   j. Public Administration
   k. Other:_____

5. How many employees currently work for your company? (If your company has more than one location, indicate the employees at your location only.)_____

6. In which county is your business located?_____

8. I would like a copy of the summary of this study.
   a. Yes
   b. No

APPENDIX E

SOURCES OF SELECTED EMPLOYABILITY SKILLS

REPORTS/RESEARCH STUDIES	Bhaerman & Spill	Charner	Commission on Skills of American Work Force	CPR Human Resources Executive Program	Custer & Claiborne, 1992	Custer & Claiborne, 1995	Diska & Rogers	Hill	Millington et al.	National Association of State BOE	National center for Educational Statistics	National Education Gaols Panel	Rhoder & French	U S Department of Commerce et al.	U S Department of Labor	U S Departmens of Labor &	U S Department of Labor et al.	Wika & Rudrud
EMPLOYABILITY SKILLS																		
Use written communication	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
Work well with others	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Use appropriate tools	X		X		X	X	X		X	X	X	X	X	X	X	X		
Take initiative	X	X	X				X	X	X	X	X	X	X		X	X		
Use oral communication	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
Dress and groom appropriately	X	X	X	X	X	X	X	X	X				X		X	X		X
Use basic computer skills		X	X	X	X	X			X	X	X	X	X	X	X	X	X	
Display dependability	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Use math to solve problems	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
Show respect to others	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Transfer skills from one job to another		X	X	X			X			X	X	X	X	X	X	X	X	
Exercise honesty	X	X	X	X	X	X	X	X	X	X	X		X		X	X		
Listen carefully	X	X	X	X	X	X	X		X	X	X	X	X		X	X		
Ask for help when needed	X	X	X	X	X	X	X			X		X	X	X	X	X	X	
Perform acceptable quality work	X	X	X		X	X	X		X	X			X		X	X		X
Come to work everyday	X	X		X	X	X	X	X	X		X		X		X	X		X
Read and understand information	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Accept criticism	X		X	X	X	X	X		X	X	X	X	X		X	X	X	
Maintain acceptable pace of work	X	X	X		X	X	X		X	X	X		X		X	X	X	X
Come to work on time	X			X	X	X	X	X	X	X	X		X	X	X	X		X
Solve problems	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Meet public	X	X	X		X	X	X	X	X	X	X			X	X	X	X	
Follow directions	X	X	X		X	X	X	X	X	X	X	X	X		X	X		X
Have a positive attitude	X	X	X	X	X	X	X	X	X		X	X	X		X	X		X
Show willingness to learn new information and skills	X	X	X	X	X	X			X	X	X	X	X	X	X	X		
Act cheerful and friendly	X	X	X	X	X	X		X	X	X	X	X			X	X		X
Work with minimum supervision	X	X	X	X	X	X	X	X	X	X	X		X		X	X		
Be conscientious	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	x

APPENDIX F

RESEARCH APPROVAL

The University of Georgia
Office of The Vice President for Research
DHHS Assurance ID No. : M1047

Institutional Review Board
Human Subjects Office
606A Graduate Studies Research Center
Athens, Georgia 30602-7411
(706) 542-6514; 542-3199
Fax No. (706) 542-5638

APPROVAL FORM

Date Proposal Received: 2001-03-14 **Project Number:** H2001-10548-0

Name	Title	SS Number	Dept/Phone	Address	Email
Ms. Linda P. Pritchett	MI	258787024	Occupational Studies Rivers Crossing +4809	713 Victoria Circle Dublin GA 31021 478-275-3025	hpritche@nlamerica.com
Dr. Helen C. Hall	CO	189389569	Occupational Studies 203 Rivers Crossing + 4809 542-1682		

Title of Study: Relationships Between Employability Skills Desired by Employers in Middle Georgia and Employability Skills Exhibited by High School Students with Mild Mental Retardation in Selected Georgia Schools

45 CFR 46 Category:
Administrative 2

Modifications Required for Approval and Date Completed: 2001-04-16
Clarified identity of subject population; clarified design and procedures; clarified investigator's working relationship with potential participants; modified cover letter.

Approved : 2001-04-16 Begin date : 2001-04-16 Expiration date : 2001-06-01

NOTE: Any research conducted before the approval date or after the end data collection date shown above is not covered by IRB approval, and cannot be retroactively approved.

Number Assigned by Sponsored Programs: **Funding Agency:**

Form 310 Provided: No

Your human subjects study has been approved as indicated under IRB action above.

Please be aware that it is your responsibility to inform the IRB . . .
. . . of any adverse events or unanticipated risks to the subjects or others within 24 to 72 hours; . .
. . . of any significant changes or additions to your study and obtain approval of them before they are put into effect; . . .
. . . that you need to extend the approval period beyond the expiration date shown above; . . .
. . . that you have completed your data collection as approved, within the approval period shown above, so that your file may be closed.

For additional information regarding your responsibilities as an investigtor refer to the IRB Guidelines.
For your convenience in obtaining approval of changes, extending the approval period, or closing your file, we are providing you with a blue Researcher Request form. Detach this blue form, complete it as appropriate, sign and date it, then return it to the IRB office. Keep this original approval form for your records.

Copy:
Dr. Clifton L. Smith

Julia Alexander
Chairperson, Institutional Review Board