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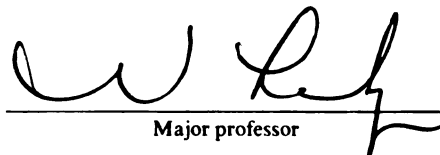
ANALYSIS OF CONSUMER SATISFACTION WITH PROJECTS WITH  
INDUSTRY PROGRAMS

presented by

Frances J. Saroki

has been accepted towards fulfillment  
of the requirements for

Ph.D. degree in Rehabilitation Counselor  
Education

  
Major professor

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**ANALYSIS OF CONSUMER SATISFACTION WITH PROJECTS WITH INDUSTRY  
PROGRAMS**

**By**

**Frances J. Saroki**

**A DISSERTATION**

**Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of**

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## **ABSTRACT**

### **ANALYSIS OF CONSUMER SATISFACTION WITH PROJECT WITH INDUSTRY PROGRAMS**

By

Frances J. Saroki

A national survey of Projects with Industry was conducted in order to unfold the consumer perspective by identifying the level of consumer choice in the rehabilitation process and satisfaction with program services and employment. Furthermore, this study explored the relationships between choice and satisfaction with program services and employment that may impact employment retention and advancement of people with disabilities.

A correlational research design, using an Internet survey approach, was utilized with a pool of individuals with disabilities who were either former graduates or current students of computer technology training programs at eight selected training facilities across the United States and Canada. Participants included 66 individuals, two individuals reported no direct involvement in the program and two individuals submitted their responses twice, thus yielding 62 useable respondents. Data was collected using Web questionnaires. Participants were asked to complete the Consumer Choice Questionnaire, Consumer Satisfaction Questionnaire, Minnesota Satisfaction Questionnaire, and Demographic Questionnaire located at [www.gisd.com/survey](http://www.gisd.com/survey). The

final sample of respondents consisted predominantly of white males with an average age of 37 with a physical disability.

Results of this study indicated that graduates and students of rehabilitation programs in computer technology and information processing experienced considerable level of choice in the selection of employment goals and were satisfied with the program services and their jobs. Correlation analysis revealed significant relationships between level of choice and satisfaction with program services and satisfaction with program services and employment. Results were presented and discussed according to their implications for rehabilitation practice, education, and future research. The findings of this study suggest that PWI programs are meeting legislative mandates and program goals.

I dedicate my final academic milestone to my loving mom, Victoria, caring and generous dad, Jamil, and wonderful sister Vivian. Without your unconditional love and understanding I would never have had the strength to pursue such an endeavor.

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## TABLE OF CONTENTS

LIST OF TABLES .....	vi
CHAPTER 1	
INTRODUCTION .....	1
Statement and Significance of the Problem .....	8
Purpose of the Study .....	10
Definition of Terms .....	12
CHAPTER 2	
REVIEW OF LITERATURE .....	14
Rehabilitation and Employment: Issues and Trends .....	14
Work .....	14
Rehabilitation and Placement History .....	15
Labor Market and Work Environment Changes and Projections .....	17
Implication of Labor Market Changes and Trends for Rehabilitation ..	18
Person-Environment Fit Model .....	20
Theory of Work Adjustment .....	20
Job Satisfaction .....	23
Retention and Career Advancement .....	24
Consumer Involvement and Choice .....	25
Current Issues Impacting PWI Projects .....	29
History and Program Information .....	29
PWI Models .....	33
PWI Employment Outcomes .....	34
PWI Evaluations .....	37
Program Evaluation .....	41
Consumer Satisfaction .....	43
Summary .....	45
CHAPTER 3	
METHODOLOGY .....	47
Participants .....	48
Description of the Sample .....	48
Sampling Procedures .....	48
Instrumentation .....	50
Consumer Choice Questionnaire .....	50
Consumer Satisfaction Questionnaire .....	51
Minnesota Satisfaction Questionnaire .....	53

Procedures .....	54
Design .....	54
Data Collection .....	54
Data Analysis .....	58
<b>CHAPTER 4</b>	
<b>RESULTS .....</b>	<b>61</b>
Sample and Procedures .....	61
Measures of Satisfaction .....	63
Choice .....	67
PWI Program Services .....	68
Employment .....	73
Feedback on Measures .....	76
Analyses .....	76
Correlation of Measures .....	76
Differences According to Demographic Characteristics .....	77
Summary .....	80
<b>CHAPTER 5</b>	
<b>DISCUSSION .....</b>	<b>81</b>
Findings .....	81
Measures of Satisfaction .....	82
Choice .....	82
PWI Program Services .....	84
Employment .....	86
Relationships Between Consumer Choice and Satisfaction with Program Services and Employment .....	88
Choice and PWI Program Services .....	88
PWI Program Services and Employment .....	88
Choice and Employment .....	89
Differences on Measures According to Demographic Characteristics ..	90
Summary of Findings .....	90
Limitations .....	91
Implications .....	93
Future Research .....	93
Practice .....	97
Education .....	98
Conclusions .....	99
<b>APPENDICES .....</b>	<b>100</b>
Appendix A: Research Models .....	101
Appendix B: PWI Rules and Regulations Annual Evaluation .....	102



Appendix C: Evaluation Standards for PWI Programs Part 379 .....	108
Appendix D: Consumer Choice Questionnaire .....	109
Appendix E: Demographic Questionnaire .....	111
Appendix F: Research Packet ... ..	115
Appendix G: Research Web Site .....	118
REFERENCES .....	120

## LIST OF TABLES

Table	Page
1. Demographic Characteristics of the Sample . . . . .	64
2. Cronbach's Alphas for Measures of Consumer Satisfaction . . . . .	66
3. Sample Mean and Standard Deviation for Consumer Satisfaction Measures . . . .	67
4. Consumer Choice Questionnaire Item Mean and Standard Deviation for the Total Sample . . . . .	69
5. Consumer Satisfaction Questionnaire Item Mean and Standard Deviation for the Total Sample . . . . .	72
6. Minnesota Satisfaction Questionnaire Item Mean and Standard Deviation . . . . .	74
7. Nonparametric Correlation Coefficients for Measures of Consumer Choice and Satisfaction with Program Services and Employment . . . . .	77
8. Nonparametric Correlation Coefficients for Measures of Consumer Choice and Satisfaction with Program Services and Employment for the Employed Subgroup.	77
9. Nonparametric Correlation Coefficients for Measures of Consumer Satisfaction with Program Services, Choice, Employment, and Demographic Characteristics . . . . .	79

## Chapter I

### INTRODUCTION

A key challenge for men and women throughout the ages has been the art and science of making a living. The United States offers the freedom and opportunity to apply one's attributes to many different types of jobs. However, there are no guarantees of finding a match between the qualifications of an individual with the requirements of employers. This is especially true in recent years, where an increasingly competitive global market has resulted in an estimated 5.6 million unemployed Americans (Bureau of Labor Statistics, 2002). Even more disturbing is the persistent gap in the level of labor market participation between Americans with and without disabilities (National Organization on Disability, 2000). Many individuals with disabilities, particularly those with severe disabilities, have both lower employment and higher underemployment rates than those without disabilities, despite periods of optimistic labor market forecasts (Hale, Hayghe, & McNeil, 1998).

The Louis Harris (2000) poll estimated that only 32% of individuals with disabilities between the ages of 18 and 64 work full or part-time, compared to 81% of the nondisabled population. Furthermore, more than two-thirds of Americans with disabilities who were not employed indicated that they would prefer to work. In addition, persons with disabilities have lower earnings and are almost three times as likely as people without disabilities to live in poverty. Income from disability benefits and other nonemployment income generally does not make up for the lack of employment income (Kruse, 1998; National Organization on Disability, 2000).

Work is a significant life role that helps meet both economic and psychological parity (e.g., self-esteem, sense of being a part of society) (Freedman & Fesko, 1995; Szymanski & Parker, 1996) and fulfills expectations of society (Walls & Fullmer, 1997). Public officials have fought to reinforce society's value of work. President George Bush signed into law the 1990 Americans with Disabilities Act (ADA) intended to provide full equality for people with disabilities, especially as it pertained to employment. Senator Max Cleland (D-GA) called on all Americans to help accomplish the goals of the ADA and to do more to convey the talents and abilities of individuals with disabilities who want to work and contribute to the nation (cited in Thackeray, 2000). Alan A. Reich, President of the National Organization on Disability (NOD) (2000), declares closing the employment gap as America's disability agenda for the new millennium. Employment of persons with disabilities is a key concern of a number of existing and proposed rehabilitation programs and policies, as well as a substantial amount of current research (Kruse, 1998).

The basic philosophical tenet of rehabilitation counseling has been to assist individuals with disabilities to find meaningful employment and live and contribute as part of society (Gilbride, Stensrud, & Johnson, 1994). Since the early 20<sup>th</sup> century, job placement has been an important element of service provision in the vocational rehabilitation process (Wright, 1980). It is through the delivery of placement services that the ultimate goal of vocational rehabilitation is achieved (i.e., placing individuals with disabilities into competitive employment) (Rubin & Roessler, 2000). Yet, the persisting rates of unemployment and underemployment of people with disabilities remains as a major challenge to rehabilitation in the 21<sup>st</sup> century (Fabian, 1999).

The 21<sup>st</sup> century brings many changes to the nature of the world of work including: (a) workplace responses to an increasingly competitive global environment, (b) technological advances, (c) shift in labor market demand from manufacturing to service occupations, (d) requisition for improved skills by participants in the labor market (Department of Labor, 1999), and (e) development of effective consultation skills and partnerships with employers as a service delivery mechanism (Institute on Rehabilitation Issues, 1997). The workforce implication of these changes is that getting and maintaining work is different than it was a decade ago (Szymanski, 1999). Shifting demands also translate to re-conceptualizing the role played by service providers. The context for achieving improved employment outcomes for people with disabilities has changed to the extent that in order for rehabilitation services to have significant impact and value, greater emphasis needs to be placed on (a) responding to the needs, expectations, and concerns of the workplace, (b) working cooperatively and collaboratively with the consumer and the employer (Institute on Rehabilitation Issues, 1997; Rollins, 1999), and (c) helping people with disabilities secure more than a job, and instead assist them with identifying and maintaining satisfying careers (Fabian, 1999; Szymanski, 1999; Wehman & Kregel, 1998).

One particular approach to proactively manage some of the impacts of the changes and better meet the employment needs of individuals with disabilities is through career planning (Rumrill & Roessler, 1999; Szymanski, 1999). Both Szymanski (1999) and Fabian (1999) conclude that meeting new challenges in the work environment means shifting the focus from immediate job placement (e.g., quick fixes) to a long-term career development focus for individuals with disabilities, including individuals with serious

mental health disorders. This is in contrast to the traditional approach that has generally viewed placement as the first job match between what a person is capable of doing to a job opening in the labor market. The traditional approach has generally translated to an entry-level position and an end-state of the rehabilitation counselor/consumer relationship (Rumrill & Roessler, 1999; Salomone, 1996).

Placement outcomes need to be re-conceptualized to include providing the necessary services to ensure employment retention and advancement (Habeck, 1999; Szymanski, 1999). Employment retention is a function of the co-responsiveness between workers and the work environment (i.e., Person-Environment dynamic interaction model) (Dawis & Lofquist, 1984). In particular, the Minnesota Theory of Work Adjustment (MTWA) posits that the interaction between traits and environments is predictive of employment success and satisfaction (Brown, 1990b; Lawson, 1993) and thus should be considered in the career counseling process (Szymanski, Hershenson, Enright, & Ettinger, 1996). Geyer and Schroedel (1998) also recommend investigating variables predictive of employment satisfaction. Studies have shown that consumers with lower levels of job satisfaction are more inclined to be searching for other employment options (Moblely, 1982). Thus, measuring the salience of experiences on the job (e.g., employment satisfaction) may help service providers intervene earlier on and identify more appropriate job matches, which in turn may impact the employment retention and advancement of people with disabilities.

The Rehabilitation Act of 1973 and subsequent Amendments also underscored the emphasis on high quality placements through increasing consumer involvement in the overall delivery of rehabilitation services (Rubin & Roessler, 2000). According to Walls

and Fullmer (1997) “[t]he primary purpose of vocational rehabilitation is to empower consumers with disabilities to obtain and maintain competitive employment and meaningful careers” (p. 15). Both the 1992 and 1998 Amendments to the Rehabilitation Act advanced consumer empowerment by increasing consumer control and choice (i.e., informed choice) in determining and selecting their career goals to maximize employment and economic self-sufficiency (Parker & Szymanski, 1998).

Consumers need to play a central role in the rehabilitation process to experience personal satisfaction and greater quality of life (Kosciulek, 1999). Active consumer involvement is considered as one of the key elements in most successful career development interventions (Szymanski, 1999). Intervention research has supported the effectiveness of more consumer involvement in career decision-making (Bolton & Akridge, 1995; Oliver & Spokane, 1988; Phillips, 1992; Szymanski, Hershenson, Ettinger, & Enright, 1996).

Studies have also shown that the more consumers experience personal choice and control in out-of-home activities, the happier they are with their lives in general, demonstrating a significant positive correlation between desired control and life satisfaction (Boschen, 1996; Fossati, 1990). Majumder, Walls, and Fullmer (1998) found a significant positive relationship between consumer involvement and employment outcomes. Consumers with competitive work histories had greater percentages of involvement in the rehabilitation process than did those who had no work histories. Thus, ensuring more consumer involvement and career decision making may help to enhance rehabilitation outcomes in the 21<sup>st</sup> century. However, measuring the level of consumer choice in making career decisions in the rehabilitation process has been more

of a challenge. Further investigation is warranted to better understand the possible nature of the relationship between consumer choice and employment outcomes.

In addition to increasing consumer involvement and choice, the Amendments to the Rehabilitation Act also underscored closer affiliations with employers. Achieving more successful outcomes involves narrowing the gap between rehabilitation and the business community. Creating a mutual partnership will better serve all the key stakeholders (e.g., individuals with disabilities, rehabilitation professionals, and employers) in achieving quality outcomes (Institute on Rehabilitation Issues, 1983; ARPCT, 2001; Fraser, 1999; Harles, 2002; Hayward, Reisner, Tashjian, & LeBlanc, 1986; Institute on Rehabilitation Issues, 1997; Reisner, Hayward, & Hastings, 1983).

Projects with Industry (PWI) offer a contemporary model of the partnership between rehabilitation and business and industry. PWI is not new to rehabilitation, and in fact, federally funded PWI projects have been in existence since the 1968 Amendments to the Rehabilitation Act. The national PWI projects were designed to assist people with disabilities to obtain training and competitive employment in the private competitive market (PWI Rules and Regulations, 34 C.F.R. Part 379, 1999). It was the first time in history whereby legislation mandated a concept of a formal partnership to encourage more collaborative and cooperative participation of business and industry in the rehabilitation process.

Over the years, PWI programs have expanded, both in number and scope of services provided, to help manage and meet the changing times and needs of employers through a Business Advisory Council (BAC), also referred to as the backbone of the PWI program (Fraser, 1999). The partnership concept of continuous commitment aligns the



needs and interests of employers (business and industry), people with disabilities, rehabilitation professionals, and government alike, to accomplish a shared goal (Institute on Rehabilitation Issues, 1983). The skills training model, one example of a PWI model, practiced by members of the Association of Rehabilitation Programs in Computer Technology (ARPCT), relies heavily on business community involvement. It is the extensive business participation that has contributed to the success of the ARPCT program model (ARPCT, 2002).

Another distinguishing feature of this unique rehabilitation program is the strong emphasis on evaluation. Federally funded PWI programs have stringent annual reporting requirements found under section 379.21 (a) (5) to document the process and outcomes of each project (Fraser, 1999). Evaluation of such programs may help to: (a) justify the program's existence, (b) promote the continuing development and growth of the field, (c) insure that consumers are obtaining quality services, and (d) assess whether the program is meeting the needs of consumers (Slaven, 1997). Program evaluation is a practical approach to accountability and a vehicle used to measure program activity toward the goal of continuous improvement (Blair & Maynard, 1991). Program evaluation is also receiving greater attention from accrediting bodies as a required component for accreditation of rehabilitation facilities.

The mission of the Commission on Accreditation of Rehabilitation Facilities (CARF) is to assure that programs demonstrate certain standards of practice set by the industry. The accrediting association outlines the various components and criteria recommended for program evaluation, from plan initiation to dissemination of findings. CARF specifies the need for both process and outcome evaluation systems, including

measuring consumer satisfaction (CARF Standards Manual and Interpretive Guidelines for Behavioral Health, 1997), an aspect not required of currently federally funded PWI evaluations.

Consumer satisfaction is an important intervening variable between the service provisions and the desired outcomes (Greenfield & Attkisson, 1989). For PWI projects to be successful and better equipped to respond to consumers, it is important that they achieve a reasonable level of consumer satisfaction (Slaven, 1997). Therefore, the assessment of consumer satisfaction is one important component of a comprehensive evaluation system, one that may be predictive of future job retention.

#### Statement and Significance of the Problem

Research on PWI programs has been limited, especially as it relates to empirical studies of PWI projects (Reisner, Hayward, & Hastings, 1983). Hayward, Reisner, Tashjian, and LeBlanc (1986) concur that research generating quantitative data to verify the performance of specific projects is limited, yet needed. Hess and Perry (1986) suggest that the research can lead to more effective service provisions to assist people with disabilities, and recommends applying the research findings to practice needs. What the literature does indicate is the lack of attention to measuring the level of consumer satisfaction of PWI programs as a vehicle to provide feedback about PWI functioning and overall effectiveness.

In all of the evaluations and research conducted within PWI to measure the effectiveness and efficiency of the program, only one study (Houser & Chase, 1993) was found to assess the employment satisfaction of individuals with disabilities who received services from PWI programs. Acknowledging a consumer's feelings about a job is vital

because it can help the counselor better assess appropriate person-environment (P-E) fit and help problem solve and intervene early in the process in hopes of positively impacting the retention level of the worker (Geyer & Schroedel, 1998). Longer employment tenure is predicted by early satisfaction with the job (Xie, Dain, Becker, & Drake, 1997). To-date, there have been only a few studies to describe the relationships between consumer satisfaction with program services and choice to employment outcomes. No study has been found that looks at these combined variables in relation to employment satisfaction.

Even the most recent Request For Proposal (RFP) to conduct an evaluation of PWI projects from the U.S. Department of Education, Rehabilitation Services Administration (RSA) issued on May 18, 2000, did not include any request for a formal empirical investigation of consumer satisfaction at any level. RSA is seeking to evaluate currently federally funded PWI programs in terms of (a) the types of employment outcomes, (b) their interaction with local business communities, (c) the types of individuals served, (d) the relationships between State Vocational Rehabilitation agencies and PWI projects, (e) the impact of PWI Standards on projects, (f) the services provided by PWI projects, (g) the extent to which projects utilize the PWI model, and (h) the feedback for identifying possible changes to the PWI model (Kay, 2000). The RFP did not include evaluating the importance of consumer satisfaction with (a) decision-making and choice in the rehabilitation process, (b) PWI service delivery, or (c) employment in the overall evaluation of PWI projects. Consumer satisfaction is generally assessed by compiling a brief non-standardized set of generic questions regarding the individual's satisfaction with a situation or an experience. A more practical approach to

accountability and program evaluation involves measuring consumer satisfaction with various components of service delivery and outcomes.

### Purpose of the Study

The 1998 Amendments to the Rehabilitation Act provided additional accountable statutory changes on PWI projects. These changes were intended to (a) increase the employment and retention (i.e., attainment of competitive employment by a person who has maintained employment for a period beyond 90 days) of individuals with disabilities, (b) enhance consumer choice, and (c) increase program accountability (PWI Rules and Regulations, 34 C.F.R. Part 379, 1999).

As governing bodies continue to demand more program accountability measures, one of the greatest challenges faced in today's rehabilitation organizational climate is the absolute necessity of evidencing value for services (Buchanan, Woodruff, Gates, McKinley, Ellis, & Levesque, 1998). In today's marketplace, quality has become an expectation of funding sources and consumers alike. Stakeholders are demanding quality outcomes and accrediting bodies are requiring performance data (McKinley, Parmer, Saint-Armand, Harbin, Roulston, Ellis, & Buchanan, 1998). The continuous quality improvement movement prevails in order to improve service delivery and identify strategies that enhance consumer services to achieve more successful outcomes.

Consumers bring unique perceptions and expectations that can be used to evaluate service quality and satisfaction. Achieving consumer satisfaction at various levels (e.g., program services, choice, and employment) and resolving consumer complaints require that providers dedicate time to understanding their consumers' needs (Oxler, 1997).

Therefore, the purpose of this investigation was to unfold the consumer perspective by:

(a) identifying the level of consumer choice in the rehabilitation process and satisfaction with PWI program services and employment and (b) empirically testing relationships between the constructs (i.e., choice and program satisfaction) and employment satisfaction that may impact employment retention and advancement of people with disabilities. See Appendix A for a two-model depiction of the research. The specific research questions addressed in this study were as follows:

1. What are the reported levels of consumer choice in the rehabilitation process and satisfaction with PWI program services and employment?
2. Is there a relationship between consumer choice in the rehabilitation process and satisfaction with PWI program services?
3. Is there a relationship between consumer satisfaction with PWI program services and employment?
4. Is there a relationship between consumer choice in the rehabilitation process and employment satisfaction?
5. Is there a relationship between consumer choice and satisfaction with PWI program services to employment satisfaction?
6. Do reported levels of consumer choice in the rehabilitation process and satisfaction with program services and employment vary according to demographic characteristics of consumers?

To address these research questions a correlational research design, using an Internet survey approach, was utilized with a pool of participants with disabilities who were either students or graduates of rehabilitation computer technology programs.

## Definition of Terms

Consumer: Any individual who (a) has a physical or mental impairment which for such individual constitutes or results in a substantial impediment to employment and (b) can benefit in terms of an employment outcome from vocational rehabilitation services provided pursuant to title I, III, or VI (State Vocational Rehabilitation Services Program Regulations, 34 C.F.R. Part 361, 1999). A person with a disability is a person who has any restrictions or lack of ability to perform an activity in the manner or within the range considered normal for a human being (World Health Organization, 1980).

Satisfaction: An affect—or feeling and emotion—resulting from one’s evaluation of the situation (Dawis, 1994). The manner in which an individual perceives items or situations as meeting one’s needs and desires.

Employment Satisfaction: The extent of the perceived correspondence or fit between the needs of the individual worker and the reinforcers (i.e., ways in which the job can meet the individual’s needs and value requirements) provided by the work environment (Breedon, 1993; Lawson, 1993). An individual’s appraisal of the extent to which the work environment fulfills one’s own requirements and desires (McClelland, 1986).

Choice: The perceived control in one’s life (Skinner, 1995) and the feeling of self-determination (Rigby, Deci, Patrick, & Ryan, 1992). Additional means to operationalize consumer decision making and choice within the rehabilitation process includes looking at whether the consumer is (a) a partner in the rehabilitation process and made aware of relevant options, (b) sharing responsibility for identifying options, (c) an equal partner to the necessary research to identify and analyze options and understand the implications of each, (d) being heard with respect to one’s point of view, (e) informed that choices are

not “informed” choices unless they are based on the pool of options remaining after the possibilities have been identified, considered, and less preferable options discarded by the consumer, (f) given the benefit of the doubt when things are uncertain, (g) allowed to stretch to take some risks, to actualize potential, (h) taken seriously regardless of the severity of disability standing in the way, and (i) given the right to choose an employment goal that is consistent with one’s interests, strengths, priorities, and disability needs (Institute on Rehabilitation Issues, 1995).

Career Advancement: Services that develop specific job skills beyond those required by the position currently held by an individual with a disability to assist the individual to compete for a promotion or achieve an advanced position (PWI Rules and Regulations, 34 C.F.R. Part 361, Sec. 379.5 (b) (1), A, 1999).

Competitive Employment: As the placement outcome under the PWI program, it is work in the competitive labor market that is performed on a full-time or part-time basis in an integrated setting, and for which an individual is compensated at or above the minimum wage, but not less than the customary or usual wage and terms and benefits provided by the employer for the same or similar work performed by individuals who are not disabled (PWI Rules and Regulations, 34 C.F.R. Sec. 379.5 (b) (2) (I) (ii), A, 1999).

Retention: Attainment of competitive employment by a person who has received services from a PWI project and has maintained employment for a period of at least 90 days with follow up periods at 3 and 9 months (PWI Rules and Regulations, 34 C.F.R. Sec. 379.5, 1999).

## Chapter 2

### REVIEW OF LITERATURE

In this section, a comprehensive literature review was conducted to illuminate ideas, theoretical frameworks, methodological approaches, and results of previous research to provide a context for the current investigation. Literature was reviewed in the following areas to support the need for more empirical research in this area: rehabilitation and employment issues and trends, person-environment fit models, consumer involvement and choice, PWI programs, and consumer satisfaction.

#### Rehabilitation and Employment: Issues and Trends

##### Work.

Work is a means whereby one achieves a place within the community of humankind (Szymanski & Parker, 1996). Madeleine Will (1984), then Assistant Secretary of the Office of Special Education and Rehabilitation Services, indicated that employment is critical to the lives of most Americans, regardless of the type of work (e.g., specialized, entry level or supported). The opportunity to be a part of the work force creates profitable societal outcomes and personal gains (Rusch, 1986).

The value placed on work goes beyond any arbitrary listing of criteria. The value is measured by the quality of life experienced by the individual (McLoughlin, Garner, & Callahan, 1987). The intrinsic rewards of self-esteem and social inclusion may outweigh any monetary gains obtained from work (Freedman & Fesko, 1995). However, many individuals have not experienced any type of gain associated with the potential of work,



especially people with disabilities, because they continue to be denied fundamental opportunities to work (Rusch, 1986).

There are more than 54 million American men, woman, and children with disabilities (NOD, 2001) that comprise a significant heterogeneous minority in the United States (Szymanski, Ryan, Merz, Trevino, & Johnston-Rodriguez, 1996). They represent a very diverse population with substantial variation in the degree of severity and functional limitation that can impact employment (e.g., age of acquisition, work personality, and work competencies) (Szymanski & Hershenson, 1998). It is estimated that two-thirds of working age Americans with disabilities (i.e., ages 18-64) have remained unemployed over the past few decades, even though more than two-thirds of the same category surveyed reported wanting to work (Louis Harris & Associates, 1994, 1998; NOD, 2000).

The data is even more dismal for individuals with more serious mental health disorders (Fabian, 1999). According to the National Institute on Disability and Rehabilitation Research (1992) approximately 80-90% of individuals with more serious mental health disorders were not employed. The persistent rate of unemployment and underemployment of people with disabilities remains a major concern (Fabian, 1999), even with legislative mandates promoting more equal opportunities for people with disabilities.

#### Rehabilitation and placement history.

The enactment of the Soldier's Rehabilitation Act of 1918 launched the first federal program for vocational rehabilitation of people with disabilities (Rubin & Roessler, 2000). The act authorized services to help veterans with disabilities seek and

obtain employment, a central tenet to the vocational rehabilitation process (Gilbride, Stensrud, & Johnson, 1994; Institute on Rehabilitation Issues, 1983; Salomone, 1996), and one of many original provisions of the public rehabilitation program (Gilbride, Stensrud, & Johnson, 1994; Rubin & Roessler, 2000; Stensrud, Millington, & Gilbride, 1997; Wright, 1980). Job placement has been considered one of the primary professional functions of the rehabilitation counselor (Leahy, Szymanski, & Linkowski, 1993; Millington, Butterworth, Fesko, & McCarthy, 1998; Roessler & Rubin, 1992) in both the public and private sectors of rehabilitation practice.

The Rehabilitation Act of 1920 [P.L. 66-236] authorized placement services to individuals with physical disabilities and was later broadened to serve individuals with mental and emotional disabilities by the Vocational Rehabilitation Amendments of 1943 [P.L. 78-113] (Jenkins, Patterson, & Szymanski, 1998). The Rehabilitation Act of 1973 and subsequent Amendments have assisted in making tremendous strides toward assisting people with disabilities first “find” and second “maintain” employment, the latter being emphasized more in the 21<sup>st</sup> century (Danek et al., 1996).

The Americans with Disabilities Act of 1990 [ADA, Sec. 102(a)] prohibited discrimination against a qualified individual with a disability in all aspects of the employment process (e.g., application, hiring, compensation) (Danek et al., 1996). Subsequently, the 1992 Amendments to the Rehabilitation Act of 1973 placed an increased emphasis on employment as an outcome. According to the Commissioner of RSA, (Schroeder, 1995), the Amendments “[m]andated that all individuals would be presumed to benefit from services in terms of employment” (p. 10).

More recently, the Workforce Investment Act (WIA), a comprehensive job training bill, included the 1998 Amendments to the Rehabilitation Act of 1973 in Title IV of the WIA. The Amendments were written to help create greater opportunities for people with disabilities to prepare for, secure, maintain, and regain employment (Kirk, 1998). The goal of WIA was to increase employment, retention, earnings, and occupational skills of people with disabilities. Thus, achieving the above goals would help to improve the quality of the workforce and enhance the productivity and competitiveness of the United States (Kirk, 1998). In response, the rehabilitation community has urged practitioners to focus on helping to secure more appropriate competitive employment for people with disabilities in today's labor market to promote more equal opportunities (Ford & Swett, 1999).

#### Labor market and work environment changes and projections.

The world of work is vast with an estimated American labor force participation of 133.5 million (Bureau of Labor Statistics, 2002). According to the U.S. Department of Labor Bureau of Labor Statistics (2000) 1998-2008 employment projections, the American work force is expected to increase by 14%. The population of working age America is growing. The labor force for individuals between the ages of 45-64 will grow the fastest as the baby boomers enter the 35-50 age range where the risk of work disability increases (National Academy of Social Insurance, 1996).

Service producing industries (e.g., computer and data processing, health services, residential care, management, public relations, and personnel supply services) will account for nearly all of the job growth offsetting significant declines in manufacturing. The five fastest growing occupations are expected in information technology (U.S.

Department of Labor, 1999). Professional specialty occupations are projected to increase the fastest followed by service; executive, administrative, and managerial; technicians and related support; and marketing and sales. Employment requiring continuing education and training is projected to grow faster than the 14% average for all occupations. In particular, occupations requiring an associate's degree are expected to grow 31% faster than all others (U.S. Department of Labor, 1999).

In addition to labor market changes, there have been many rapid and fundamental changes in the work environment, including global competition, new and advancing technologies, and new demands from various stakeholders (Institute on Rehabilitation Issues, 1997); Szymanski, 1999). The organizational response to some of these changes have included greater downsizing and more outsourcing of non-core support activities to help meet cost and quality requirements (Habeck, 1996). Employers are also considering more home based employee options while at the same time demanding greater skill levels. Employers are asking employees to be able to multi-task and have higher or wider band skills, especially as it relates to computer skills (Fraser, 1999).

#### Implication of labor market changes and trends for rehabilitation.

The recent job market is characterized as complex and structurally evolving (Fraser, 1999). The changes in the work environment have many implications for rehabilitation practitioners helping people with disabilities become active labor force participants. The changes in the nature of work have shifted from (a) production to knowledge and service jobs with an emphasis on education and (b) task and volume to process and value (Hammer & Champy, 1993).

The shift from manufacturing to service occupations has increased the importance of cognitive and interpersonal skills for even entry level positions (Wilson, 1997). This means that workers will have to adapt quickly to the changing environments, learn new skills, upgrade current skills, and change the way they interact with coworkers and supervisors (Peterson, 1996). Moreover, workers will need to make more decisions on their own, work as members of teams, and organize around the work process (Ryan, 1995).

The structural changes in the labor market further highlight issues relevant to employment opportunities for people with disabilities. The shift from manufacturing to service sector implies greater difficulties in securing employment for some individuals. Livneh and Male (1993) identified six functional realms of major disability categories and the vocational impacts of each. Individuals with structural abnormalities that impact cognition or behavior may operate better under simpler routine job tasks versus constant use of independent judgement. For individuals with social-structural and social-affective realms, interpersonal relationships may be difficult to sustain. Thus, the advent of greater service opportunities would limit the employment possibilities for certain groups of individuals (e.g., individuals with social anxiety and acting out behaviors).

Furthermore, the increase in interpersonal demands for in-person service jobs and the value placed on high skill levels and education coupled with the advancing technology (Ford & Swett, 1999) does have implication for other groups of individuals with disabilities. For example, individuals with cognitive processing and cognitive affective limitations may have greater challenges facing employment due to their limited

education and skill levels (National Academy of Social Insurance, 1996) which becomes more difficult to accommodate.

In addition, the surge of corporate restructuring and outsourcing has altered the workplace requirements. These changes have resulted in less job security and retention, overworked employees, and higher risk of job distress which in turn has changed the career patterns for many individuals (Szymanski, 1999).

The labor market participation of persons with disabilities is further influenced by many other factors (e.g., competition across populations, availability of health insurance, legislative initiatives, and negative attitudes) given the systems and ecological nature of rehabilitation counseling (Fraser, 1999). More successful outcomes will be achieved through a better understanding of system approaches and P-E fit that reflect the labor market, individual needs and involvement, and resources (Habeck & Szymanski, 1999; Hershenson, 1998; Szymanski, 1999).

### Person-Environment Fit Model

#### Theory of work adjustment.

Models of P-E fit are ubiquitous in vocational psychology. The first theorist to propose such a model was Plato (Tinsley, 2000). However, Parsons (1909), was the first to apply the P-E theory in vocational psychology for the modern era. Later, in the 1950s and 1960s, Lofquist, Dawis and Holland refined the P-E fit model (Tinsley, 2000).

Over a 100 investigations of P-E fit models have been reported in the literature (Tinsley, 2000). The research literature supports the conclusion that the P-E fit model provides a valid and useful way of thinking about the interaction between the person and the environment and leads to a more effective and stable labor force (Tinsley, 2000).

Most of the P-E models are characterized by two broad areas of corresponding person and job constructs (e.g., satisfaction and satisfactoriness) (Tinsley, 2000). In its simplest form, fit theories involve (a) measurement of the person on a relevant array of dimensions, (b) measurement of the environment on an array of dimensions, (c) measurement of an outcome, and (d) assessment of the fit between the person and the environment (Hesketh, 2000).

The P-E model implies a developmental dynamic process that evolves over time which is explicitly stated in the Minnesota Theory of Work Adjustment developed by Dawis and Lofquist (1964) (Tinsley, 2000). Work focusing on the application of the MTWA model has continued over the past 5 decades (Lofquist & Dawis, 1991). The MTWA stands as the most thoroughly investigated and widely applied P-E fit model developed (Tinsley, 2000). Salomone's (1993) review of the career counseling and development literature found the MTWA as an important model of work adjustment, one to be used as a basis for understanding career choice (Hesketh, 2000).

The MTWA was among the first to formulate an account of vocational behavior in terms that were more appropriate for people with disabilities, including individuals with mental retardation, and the vocational rehabilitation process (Melchiori & Church, 1997; Szymanski, et al., 1996). The concern for individuals with disabilities needing services and the efficacy of intervention strategies for assisting them was a foremost consideration (Rounds, Dawis, & Lofquist, 1987). The earliest and most extensive evaluations of the effectiveness of rehabilitation services also came from the MTWA (Tenoypr, 1993). The MTWA has claimed many precedents in attempts to (a) build a theory of work adjustment, (b) build a framework for effective career counseling

practices in dealing with diversity, and (c) improve career opportunities for all individuals (Tenoypr, 1993). The instrumentation (e.g., Minnesota Importance Questionnaire, Minnesota Satisfaction Questionnaire) developed through the MTWA is considered to be exemplar (Tinsley, 2000).

The MTWA is reflected in the rehabilitation model of service delivery. The matching constructs of the MTWA include the work values and abilities on the person side of the P-E equation and the reinforcer factors and ability requirements on the environment side. The theory specifies three key constructs: (a) work personality (e.g., abilities, needs, values, personality style, and adjustment style); (b) work environments (e.g., ability requirements, reinforcer systems, and environmental style); and (c) indicators of work adjustment (e.g., satisfaction, satisfactoriness, and tenure) which requires the correspondence between work personality and work environment. The correspondence between ability needs and reinforcers lead to job satisfaction, while the correspondence between abilities and ability requirements lead to satisfactoriness (Dawis & Lofquist, 1984).

More specifically stated, the extent to which the work environment fulfills the needs of the worker helps determine if the worker is satisfied. The extent to which the worker fulfills the requirements of the job helps to determine if the worker is deemed satisfactory. Both satisfaction and satisfactoriness lead to job tenure (e.g., length of stay, turnover, and commitment) (Tenoypr, 1993). Tenure is a function of the correspondence between abilities and requirements, and values and reinforcers (Breedon, 1993).

From this process and outcome view of vocational rehabilitation, personal satisfaction, acceptable performance, and job maintenance characterize the adjusted



employee. The P-E fit is a key factor in determining the individual's self-assessed level of satisfaction and control (Livneh, 1987). Furthermore, assessing the P-E fit not only contributes to satisfaction and tenure, but also to measures of career success (e.g., salary and job level) (Bretz & Judge, 1994) and effectiveness of delivered services (Geyer & Schroedel, 1998).

#### Job satisfaction.

The MTWA model posits that important work related outcomes (e.g., job satisfaction and tenure) can be predicted by the congruence between the characteristics of the person and desires and attributes of the work environment (Holland, 1985a; Livneh, 1987). Research on job satisfaction has focused mainly on determinates of satisfaction and fit between the worker and the job (McClelland, 1986). Correlates of job satisfaction have included complexity and variety of tasks, autonomy and control, pay and other economic rewards, feelings of competence, and relationships among workers (Mortimer, 1979). However, there still exists little information about the characteristics that affect job behaviors, job satisfaction, burnout, and turnover among people with disabilities (Blankertz & Robinson, 1996).

Employment satisfaction was studied among 322 employed alumnus, from 47 special college programs, who were deaf or hard of hearing. Both the overall job satisfaction and job search behavior was measured using one question studied by Scarepello and Campbell (1983) and Hom and Griffeth (1991). The results indicated a significant negative correlation between job satisfaction and job search behavior. The implications of the findings to rehabilitation practice suggest that counselors need to be aware of consumer's feelings about jobs because they are in a position to help consumers

work through the problems that may stimulate dissatisfaction and ultimately impact job tenure and advancement (Geyer & Schroedel, 1998).

Xie, Dain, Becker, and Drake (1997) examined competitive employment retention among individuals with psychiatric disabilities. Data were gathered from the New Hampshire Supported Employment Study that compared two different models of supported employment using a randomized clinical trial with 143 unemployed adults with mental illness. One program offered integrated vocational and mental health services within the same agency and focused on quick job searches. The less successful program offered a brokered service model in which separate agencies provided both the vocational and mental health services. Participants were interviewed at two intervals: (a) study entry to obtain demographic information and (b) time when consumers entered competitive employment to assess the level of job satisfaction and work environment either 10 days or 1 month after a job placement. A total of 85 participants obtained an initial competitive job. Both the Minnesota Job Satisfaction Questionnaire short form and the Work Environment Scale were used to measure satisfaction in the study. The results indicated that early consumer satisfaction gained from the job is a predictor of tenure on the job.

#### Retention and Career Advancement

Finding a job is very different from keeping a job. Job retention has received little attention in career counseling theory and practice (Hershenson, 1996). According to Gilbride and Stensrud (1999) helping individuals with disabilities retain jobs is the most successful form of rehabilitation. The traditional model of a successful closure (e.g., status 26) in a state-federal rehabilitation program involves the placement of an

individual with a disability into an employment situation generally followed by a follow-up period of 1 to 3 months. However, this approach has not been yielding the desired outcomes by rehabilitation agencies for consumers and prospective employers (Rollins, 1999). Retention issues must be met in order to meet the employer's goal for productivity and the consumer's goal for career advancement, thereby requiring a longer term perspective about outcomes in the service delivery process (Rollins, 1999).

Career development provides both the process involved in finding employment and the lifelong outcome of retention (Szymanski et al., 1996). Career development services need to be designed to empower the person's ability to choose, obtain, and maintain competitive employment in accordance with one's long-term career goals (Rumrill & Roessler, 1999; Walls & Fullmer, 1997). Implementing a career development approach to closure can help improve the post employment outcomes of individuals with disabilities. More specifically, employing the construct of career adjustment and post employment intervention consistent with career development theories and consumer's practical needs will yield greater employment retention (Rumrill & Roessler, 1999).

A key element involved in most successful career development interventions is the active consumer involvement (Blustein, 1992; Salomone, 1996; Szymanski, 1999; Szymanski et al., 1996). Career planning then becomes a process whereby individuals need to become actively engaged, well informed, and in control of the process, even after the rehabilitation service providers are no longer available (Szymanski et al., 1996).

#### Consumer Involvement and Choice

The active involvement of consumers is critical for vocational rehabilitation programs to remain viable (Institute on Rehabilitation Issues, 1995). Empowering

individuals with disabilities translates to providing opportunities to make choices concerning one's own path in life (Kosciulek, 1999). According to Vash (1995), choice is considered to be what life on earth is all about whereby one lives with the consequences and learns from the experiences. Allowing people to make choices about their own life is very important and should be afforded to all individuals, including persons with disabilities (Vash, 1995).

People with disabilities have organized their views and strategies around the assumption that they should be the ones to determine the future direction of rehabilitation policy and the provision of services (Bolton & Brookings, 1996). The goal of the consumer movement has been social justice and acceptance of people with disabilities (Majumder, Walls, & Fullmer, 1998). People with disabilities are now advocating for a greater degree of choice and demanding more autonomy and control over their environment, as evidenced by the increasing and popular independent living movement (Boschen, 1996).

Consumer involvement and choice have become the focus in rehabilitation legislation. The Rehabilitation Act of 1973 emphasized the joint involvement of the consumer and counselor throughout the rehabilitation process and mandated consumer involvement in the state's agency policy development (Rubin & Roessler, 2000). The 1992 and 1998 Amendments to the Rehabilitation Act of 1973 intended to strengthen the level of consumer involvement in the rehabilitation process and maximize employment and economic self-sufficiency (Majumder, Walls, & Fullmer, 1998). Public rehabilitation agencies are bound by federal regulations to provide documentation on how each consumer will have the opportunities to make informed choices concerning their

long-term vocational goals and services that contribute to securing competitive employment (Majumder, Walls, & Fullmer, 1998).

The recent Amendments to the Rehabilitation Act of 1973 and the growing strength of the consumer movement have placed greater focus on consumer choice and control in the rehabilitation process. The processes of choice and career development are central to the essence of rehabilitation (Merz & Szymanski, 1997; Salomone, 1996; Szymanski et al., 1996). The active involvement of the consumer in the career decision making is very important (Szymanski et al., 1996) and may have a significant impact on the individual, as well as the overall outcomes.

Most theorists agree that people are happier and feel intrinsically motivated when they have the opportunity to exercise choice and control (e.g., internal locus of control) over their lives (Weiner, 1986; Woolfolk, 1998). Researchers have found a positive relationship between exercising more choice over one's life with life satisfaction (Boschen, 1996) and employment outcomes (Majumder, Walls, & Fullmer, 1998). However, limited research exists that examines the issues of consumer choice and control and satisfaction levels among people with disabilities (Boschen, 1996).

By way of contrast, when people feel they are not in control (e.g., external locus of control), they believe that people and forces outside of themselves control their lives (Woolfolk, 1998). Locus of control can be influenced by the behaviors of others, such as the continuing discrimination against people with disabilities. Outside influences can affect one's perception of their ability to control their lives (Beane, 1991). People who feel they have no control may experience learned helplessness (Seligman, 1975) and diminished self-esteem and self-efficacy (Weiner, 1986; Woolfolk, 1998). Individuals

with a low sense of self-efficacy tend to set lower goals, be more afraid of failure, and do not persist when encountering difficulties (Weiner, 1986). Locus of control can thus impact securing and maintaining meaningful employment outcomes for people with disabilities.

Boschen (1996) studied 82 individuals with spinal cord injuries, ages 18 to 35, to examine their life satisfaction, residential satisfaction, locus of control, and their correlates. Measures to assess life satisfaction were drawn from the Quality of Life survey (Institute for Behavioral Research, 1981) and mailed to the participants. Life satisfaction was positively correlated with self-concept, health status, income level, resident satisfaction, locus of control, residential choice, and control. The results supported the importance of having counselors pay more attention to the issues of choice and control when assisting individuals with disabilities in discussing life plans and service goals in order to attain more positive long-term outcomes.

Majumder, Walls, and Fullmer (1998) investigated the impact of consumer involvement in designing and delivering vocational rehabilitation services. Case narratives of 104 vocational rehabilitation consumers ( $N = 44$  successful rehabilitants and  $N = 60$  non-rehabilitants) during fiscal year 1996-1997 were scored and interpreted to determine the proportion of employment related target words that were indicative of consumers both with and without any involvement in the employment decision making process. A content analysis software, plus hand scoring, was used to analyze the data.

The results revealed that consumers with competitive employment histories had greater percentages of involvement in the rehabilitation process than did those who had no work histories. The researchers concluded that while other methods of content

analysis could be more appropriate and account for other factors that may contribute to the reported findings, the value of furthering the research on consumer involvement in employment decisions is one that needs to be explored and better understood.

The changes imposed by the new labor market demands and the changing expectations of consumers in terms of choice and control in the employment process has broadened and intensified the demands placed on rehabilitation counselors (Ford & Swett, 1999). Implementing effective approaches to include consumer involvement and decision making has not been easy, and many individuals with disabilities continue to be denied opportunities to make choices about their employment goals (Ford & Swett, 1999).

More emphasis and action needs to be undertaken to allow people with disabilities the fundamental opportunity to decide on major life decisions (e.g., employment) which in turn may impact the retention and career advancement of people with disabilities. Along with supporting and making informed choice work is the need for more empirical research to demonstrate the effectiveness of such service provisions toward the goal of continuous improvement in the 21<sup>st</sup> century (Majumder, Walls, & Fullmer, 1998).

#### Current Issues Impacting PWI Projects

##### History and program information.

One rehabilitation program that has been successful in attaining competitive employment closure rates among people with disabilities, including people with more significant disabilities, has been the PWI program (Institute on Rehabilitation Issues, 1983). The PWI program is embedded in rehabilitation. PWI programs were initially created by the 1968 Amendments to the Vocational Rehabilitation Act (Wright, 1980).

The PWI projects are authorized by title VI—Employment Opportunities for Individuals with Disabilities, Part B—Projects With Industry, Section 621 of the Rehabilitation Act of 1973 and administered by the Rehabilitation Services Administration (RSA) (PWI Rules and Regulations, 34 C.F.R. Part 379, 1999). Over the years, PWI programs have been shaped by a number of statutory and regulatory actions (Kay, 2000).

The national PWI projects were designed to serve as a federal vehicle to encourage more participation of business and industry in the rehabilitation process. One way this has been achieved is through the current mandatory establishment of BACs. BACs are designed to provide the mechanism for private sector members to be part of the policy making process, as well as providing advice on available jobs and training requirements in the real world (Kay, 2000). This connectedness of the business community is considered to be of great benefit to the rehabilitation field, in terms of achieving more desirable outcomes for people with disabilities, including people with more severe disabilities (Fraser, 1999; Institute on Rehabilitation Issues, 1983).

The goal of the PWI program is to provide appropriate training and experience in realistic work settings for people with disabilities to help prepare them for employment in the competitive labor market (Kay, 2000). More specifically, the purpose of the PWI program is to: (a) create and expand job and career opportunities for individuals with disabilities in the competitive labor market by engaging the talent and leadership of private industry as partners in the rehabilitation process, (b) identify competitive job and career opportunities and the skills needed to perform these jobs, (c) create practical settings for job readiness and job training programs, and (d) provide job placement and career advancement (PWI Rules and Regulations, 34 C.F.R. Sec. 379.1, 1999).



Presently, there are over 125 PWI projects funded by the federal government, as compared with 99 projects in fiscal year 1999 (Kay, 2000; Harles, 2002). Persons eligible for services under the PWI program primarily include individuals with a disability or a significant disability that requires vocational services to prepare for, secure, retain, or regain employment. The determination of eligibility is consistent with section 102(a) of the Rehabilitation Act of 1973, as amended (PWI Rules and Regulations, 34 C.F.R. Sec. 379.3, 1999).

Services generally provided by PWI projects include intake and evaluation, prevocational counseling, training to enhance job seeking skills, vocational training, job development, and job placement. Services to employers generally include job site modification, equipment modification, application of rehabilitation technology, and employee recruitment (PWI Program Biennial Evaluation Report, 84 C.F.D.A. 234, 1994).

The Secretary of the Department of Education, in consultation with the Secretary of Labor and with the appropriate designated State unit or units, makes and awards continuation grants based upon the procedures in 34 CFR Part 75. Federal PWI grants are limited to 80% of the costs of projects (PWI Rules and Regulations, 34 C.F.R. Sec. 379.40, 1999). From the inception of the program in 1970, the amount of appropriation from Congress was \$900,000 (PWI Program Biennial Evaluation Report, 84 C.F.D.A. 234, 1994). The appropriations reached \$22,071,000 in fiscal year 1994 and have remained at the same level ever since (Kay, 2000).

Each grantee under a PWI project is required to meet the following criteria: (a) provide for the establishment of a BAC, composed of representatives of private industry,

business concerns, organized labor, individuals with disabilities and their representatives, and a representative of the appropriate Designated State Unit that will identify job and career availability within the community consistent with the current and projected local employment opportunities identified by the local workforce investment board for the community under section 118 (b) (1) (B) of the Workforce Investment Act of 1998; BACs are required to identify the skills necessary to perform those jobs and careers in fields related to the job and career availability identified in Sec. 379.10 (a) (1) either: (a) training programs designed to develop appropriate job and career skills or (b) job placement programs designed to identify and develop job placement and career advancement opportunities; (b) provide job development, job placement, and career advancement services; (c) arrange for the provision of, or provide for the following: (1) training in realistic work settings to prepare individuals with disabilities for employment and career advancement in the competitive labor market and (2) to the extent practicable, the modification of any facilities or equipment of the employer involved that are to be used by individuals with disabilities under this program; and (d) provide individuals with disabilities with supportive services that are necessary to permit them to maintain the employment and career advancement for which they have received training under this program (PWI Rules and Regulations, 34 C.F.R. Sec. 379.10, 1999). In addition, each grantee under Sec. 379.21(a) (5) must submit data for its annual evaluation of project operations 60 days after the end of each project year (see Appendix B).

Upon enactment of the 1986 Amendments to the Rehabilitation Act, program compliance indicators were designed to be used to implement the seven program evaluation standards (see Appendix C) initially required by the 1984 Amendments to the

Rehabilitation Act (Kay, 2000). The program compliance indicators measure the effectiveness of individual grantees. Grantees are required to report on the following indicators: (a) individuals with significant disabilities served, (b) unemployed served, (c) cost per placement, (d) projected cost per placement, (e) placement rate, (f) projected placement rate, (g) change in earnings, (h) percent placed who have significant disabilities, and (i) percent unemployed. Minimal performance levels and ranges are used to measure the effectiveness of each program grantee (PWI Rules and Regulations, 34 C.F.R. Sec. 379.53, 1999). According to Fraser (1999), director of the PWI project and professor at the University of Washington, "...this federal discretionary program is evaluated stringently, and there is considerable pressure on project staff to effect very solid placements or 'rehabilitations' for their clientele" (p. 343).

The 1998 Amendments [P.L. 105-220] made even more accountable statutory changes to the PWI program. The changes were intended to (a) increase the employment and employment retention of individuals with disabilities, (b) enhance consumer choice, (c) enhance program accountability, and (d) improve the coordination between employment and training programs through statewide and local workforce investment systems (PWI Rules and Regulations, 34 C.F.R. Part 379, 1999). The changes also meant slightly different reporting requirements (e.g., keeping data on employment retention) (Kay, 2000).

#### PWI models.

PWI projects have varying characteristics and models based upon their geographic, philosophic, and management characteristics. The three primary models include (a) job placement, (b) work adjustment, and (c) skills training. The skills training

model provides skill-based training prior to placement for individuals with disabilities to compete for higher paying jobs such as those in computer technology (Institute on Rehabilitation Issues, 1983).

ARPCT is an international non-profit organization dedicated to providing quality training and placement services for people with disabilities. The primary purpose of this organization is to promote communication and support among programs designed to train and place individuals with disabilities in careers related to information technology. The goal is to help people with disabilities become successful employees and more productive citizens. ARPCT projects place individuals with disabilities in some of the highest paid jobs in information and technology careers, and focus on educating the corporate industry about the benefits of hiring graduates from the programs (ARPCT, 2002).

#### PWI employment outcomes.

Limited empirical research has been conducted on PWI projects (Hayward, Reisner, Tashjian, & LeBlanc, 1986). Many more anecdotal studies and descriptive papers have been cited in the area dating back to the early 1970s. There have been some published manuals and resources for individuals interested in operating under the auspices of a PWI program. A possible explanation for the lack of an empirical research base may be a result of the focus and involvement of the business sector in the service equation, thereby paying less attention to gathering empirical data and focusing more on practical applications and strategies to achieve the desired outcomes. There also appears to be a lack of knowledge by both professionals and employers about such a rehabilitation program designed to assist people with disabilities in their return to work goals (Houser & Chase, 1989).

Although there is a general lack of awareness of PWI programs, there appears to be much that can be learned from this type of rehabilitation program. According to Harles (1992), present executive director of the International Association of Business, Industry and Rehabilitation (INABIR), the PWI program has been and continues to be one of the most effective and efficient means of securing employment opportunities for people with disabilities. Houser and Chase (1989) in their review of the Massachusetts PWI program, also reported the potential benefits of such a program to assist people with disabilities maintain competitive employment. In addition, employers may gain useful information and resources from PWI programs to help individuals with disabilities return to work (Ogren & Smith, 1986).

In the first National Conference on Effective Employment Strategies for Individuals with Disabilities (1996), RSA Commissioner Shroeder addressed the need to identify and implement more effective strategies to help reduce the 67% unemployment rate among individuals with disabilities who want to work and contribute to society. The conference was designed as one of a series of events in RSA employment initiatives. Of the 150 organizations submitting proposals for the conference, 42 were selected on the merits of incorporating effective employment strategies with people with disabilities. Four of the 30 separate workshops discussed various PWI projects (RSA, 1996).

The partnership between the WORKNET PWI and the State Vocational Rehabilitation Program of Nebraska and Iowa documented their 13 year success with over 4,000 placements of individuals with disabilities. The WORKNET PWI exceeded its job placement goals from fiscal years 1992 to 1996 by 16%. Average salaries earned for full-time employment ranged from \$8,840 to \$41,500 per year. Cost per placement

was below the national average with a 4 year average of \$1,304.49 per placement (Hays, 1996).

The Partnering for Placement PWI collaboration between centers for independent living and the Industry Labor Council of the National Center for Disability Services placement rate for its first 4 years of program operation (i.e., 10/1/91 to 9/30/95) totaled 964 individuals with disabilities. Of the total, 792 individuals had severe disabilities and 661 were unemployed for 6 or more months. The average weekly wage earned for those individuals placed was \$222.00 (Day, Fernandez, Geller, Lee, Miles-Davis, Osbourne, & Young, 1996).

The Ladders to Success PWI partnership with the Ohio Restaurant Association and the Ohio Rehabilitation Services Commission placed 88 out of 129 individuals with disabilities in full-time and part-time positions earning from minimum wage to \$12.85 per hour. Most of the individuals placed had no recent work experience and many had never worked before. Approximately one third of the consumers counted on Social Security Disability Insurance (SSDI) or Supplemental Security Income (SSI) for their subsistence. The average cost per placement was \$1,737.13 (Blosser, Carozza, Downs, Hemmer, Rice, & Scott, 1996).

The Connecticut International Association of Machinists Center for Administering Rehabilitation and Employment Services PWI cooperative agreement with the Bureau of Rehabilitation Services served 144 consumers in the 1994 to 1995 program year. Of the total served, 105 were placed into competitive employment. Of the total placed, 97% were severely disabled and 87% of those were unemployed for at least 6

months. The actual cost per placement was \$1,700 (Burgess, Porriello, Reilly, & Rieman, 1996).

According to Harold Kay, Director of Evaluation, Office of Special Education and Rehabilitation Services, in fiscal year 1999, PWI programs served a total of 13,726 individuals with disabilities, and approximately 59% (8,099) were placed in competitive employment. The average increase in weekly earnings for that year (\$226) exceeded the 1999 target of \$209. Programs reported that 87% of the individuals served and 58% of the individuals placed were individuals with significant disabilities; 70% of individuals served and 69% of individuals placed had been unemployed at least 6 months at the time of project entry (Kay, 2000). The descriptive data also substantiates that some PWI programs have been providing effective employment strategies for assisting individuals with mild and more severe disabilities achieve employment outcomes with moderate cost per placement.

#### PWI evaluations.

Evaluation of PWI projects has been a focal point ever since the start of the program. Fountain (1978) evaluated 15 PWI projects to determine whether and to what extent PWI projects were following legislative mandates. Some of the first recommendations to better assess PWI effectiveness were being explored. In 1979, a group of Urban Resource Consultants presented concepts for an ongoing evaluation system for assessment of program effectiveness and efficiency referred to as Systems Evaluation of PWI (Urban Resources Consultants, 1979).

A few years later, the Department of Education, Office of Planning, Budget and Evaluation sponsored one of the first formal evaluations of PWI projects. The study

conducted by Reisner, Hayward, and Hastings (1983) sought to (a) evaluate the characteristics of all the existing PWI projects, (b) investigate which project types were most effective in achieving PWI goals, and (c) identify the relative effectiveness and replicability of projects operated by national trade associations. RSA documents were reviewed, interviews were held with individuals familiar with the operation of PWI programs (e.g., RSA staff and other Education offices, Congressional committees), and on-site visits were held with seven PWI project sites around the country. The site visits included interviews with project directors, placement and training specialists, advisory council members, employers, PWI consumers, and representatives of state rehabilitation agencies.

The results indicated that the PWI projects appeared to be successfully meeting the program's goals of creating private sector linkages to assist individuals with disabilities achieve competitive employment. The investigation found no single type of organization that was more successful than others in achieving PWI goals. A limitation cited by the authors included the limited amount of quantitative information available to help verify the performance of specific projects.

A year later, with the passage of the 1984 Amendments, Section 162(b) to the Rehabilitation Act, RSA Commissioner was required to conduct an evaluation of the PWI program. RSA was seeking the establishment of evaluation standards for use by PWI projects, along with conducting a nationwide program evaluation to measure the program's effectiveness. The Policy Studies Associates in Washington, D.C., conducted the nationwide evaluation in 1986. The task of the researchers was to provide information on the operations of the program and assess the level of effectiveness of the



program in meeting its goals (Hayward et al., 1986). Hess and Perry (1986) presented the findings of the comprehensive evaluation of the PWI projects.

The study covered 1983 to 1984 PWI project years. Data collection procedures included the following: (1) mail survey of the 98 project grantees, (2) interviews with a sample of employers who hired PWI participants, (3) background and service information on a sample of PWI participants, (4) interviews with a sample of PWI project directors, and (5) surveys of a sample of former and current PWI participants. The characteristics of consumers served ( $n = 16,000$ ) included individuals with (a) varying disabilities, two-thirds of which had severe disabilities (e.g., mental illness, orthopedic impairments and mental retardation); (b) minimal likelihood of having an educational level beyond high school; and (c) high likelihood of having been unemployed at the project entry, probably for at least 6 months. Services primarily provided included placement and follow-up services along with providing some form of training. Participants were typically employed in service, clerical, or sales occupations earning an average of \$171 per week (i.e., \$150 above average weekly earnings at program entry).

Employers who hired PWI participants viewed the project and its staff very positively (e.g., high employer satisfaction) and indicated they would be willing to hire additional PWI participants. The employers also recommended greater outreach to the business community and an expansion of the program. Membership in the BAC also helped to improve the projects' capacity of assisting people with disabilities obtain competitive employment.

The final report concluded that PWI programs in general were successful, and in particular, did achieve the legislative mandates to assist individuals with disabilities

obtain competitive employment. Furthermore, the results revealed (a) an efficient cost per placement figure (\$1,452), (b) consistent provision of core training and placement programs from among a diverse group of project sites, (c) success in establishing public/private partnerships, and (d) high level of coordination with the vocational rehabilitation system. Recommendations made by the Policy Studies group included the following: (1) improve distribution of PWI projects across the country, (2) adopt procedures to allow assessments of the projects, and (3) clarify areas of administrative ambiguity.

It is important to acknowledge that even with the success of PWI projects, they are not intended to replace state-federal agencies, but only complement service provisions (e.g., training and placement). More successful outcomes may result from working jointly and cooperatively between the two federally funded rehabilitation programs (Institute on Rehabilitation Issues, 1983; Leneway, 1991; Reisner et al., 1983).

In all of the evaluations and research conducted within PWI to measure the effectiveness and efficiency of the program, only one study was found to assess the job satisfaction of individuals with disabilities who received services from PWI programs (Houser & Chase, 1993). Even the most recent Request For Proposal (RFP) to conduct an evaluation of PWI projects that came from the U.S. Department of Education, Rehabilitation Services Administration in June of 2000, did not include any formal empirical investigation of consumer satisfaction at any level.

RSA was seeking to evaluate currently federally funded PWI projects in terms of (a) types of employment outcomes, (b) interaction with local business communities, (c) types of individuals served, (d) relationships between State Vocational Rehabilitation

agencies and PWI projects, (e) impacts of PWI Standards on projects, (f) services provided by PWI projects, (g) degree to which projects utilize the PWI model, and (h) possible changes made to the PWI model (Kay, 2000). The RFP did not mention assessing consumer satisfaction in the overall evaluation of PWI projects.

### Program Evaluation

Spending for social service programs is under increased scrutiny (Ford & Swett, 1999). The spiraling health care costs and limited resources for social programs have also entered a new era, one of managed care and increased accountability and productivity to consumers for treatment outcomes (Slaven, 1997). Additional contributing factors such as today's demands to respond to legislative bodies, executive branches, societal pressures for cost effective services, taxpayers, and consumers alike drives one to submit more conclusive evidence of the quality and effectiveness of the services provided (Ford & Swett, 1999).

One way of providing evidence on the quality of services is through program evaluation. Program evaluation involves collecting, analyzing, and interpreting data to make or support decisions about a service program (Hadley & Michell, 1995). Program evaluation, as a discipline, is traced back to the 1930s. Since its inception, it has evolved into a large enterprise (Hadley & Michelle, 1995). Hadley and Michelle (1995) predict that the increasing demands in accountability and cost effective concerns will eventually result in counseling agencies in general needing to conduct more program evaluation research.

Program evaluation is also receiving greater attention from accrediting bodies as a required component for accreditation of rehabilitation facilities. The mission of CARF is

to assure that programs demonstrate certain standards of practice set by the industry. It does this by establishing practical approaches to accountability and program evaluation. The accrediting association outlines the various components and criteria recommended for program evaluation, from plan initiation to dissemination of findings (CARF, 1997).

The evaluation standards from CARF are as follows: (Section 2.C Quality Improvement Systems: Outcome Evaluation),

. . . the organization ensures that information is collected and used to improve the quality of its systems and services. The organization develops and sustains comprehensive and integrated quality improvement systems that include the following: assessment of consumers' needs, desires, and preferences; ongoing assessment of quality, cost, and utilization of services; and measurement of the outcomes of services and the satisfaction of persons served. An organization should demonstrate that it uses information in an ongoing process of planning, monitoring, evaluation, and improvement of services...the organization has outcome management systems that measure program effectiveness and efficiency and consumer satisfaction (p. 36) (CARF, 1997).

CARF specifies the need for both process and outcome evaluation systems, including measuring consumer satisfaction, an aspect missing from the legislative mandates of PWI evaluation process and outcomes. Ongoing information concerning the service delivery system needs to include data regarding consumer satisfaction so that service delivery can be improved and priorities can be managed (Patrick, 1998). Consumer satisfaction is therefore one of the many evaluation criteria necessary in an effort toward a balanced program evaluation (LeVois, Nguyen, & Attkisson, 1981).

## Consumer Satisfaction

There has been a move toward incorporating consumer participation in the evaluation of human service programs (Oher, 1993). Consumer satisfaction has achieved the status of an important measurement domain in health and human service outcome evaluations. Consumer satisfaction data can yield indices of service system effectiveness for treatment outcome assessments (Attkisson & Greenfield, 1994) as well as assist in forming policy, developing programs, and justifying programs (Lamkin, 1995).

Reviews of outcome measures for health, mental health, and human services emphasize the value of the information obtained from consumer satisfaction with services (Attkisson & Greenfield, 1994). Consumers represent a potentially valid perspective which in turn helps an agency obtain more complete assessment and evaluation of the service process and outcome, yet not to be mistaken and used as a substitute for other outcome measures (Oher, 1993).

There is even a call to increase the focus on consumer satisfaction and even make it a requirement (Ford & Swett, 1999). The Rehabilitation Research and Training Center on Improving Supported Employment Outcomes for Individuals with Developmental and Other Severe disabilities (1996) also highlight the importance of incorporating consumer satisfaction as part of an overall program evaluation. Furthermore, consumer satisfaction is one means of accomplishing the growing mandate for consumer involvement in human service planning (Margolis, Sorensen, & Galano, 1977).

The literature in consumer satisfaction acknowledges the importance of and supports the use of valid and reliable consumer satisfaction questionnaires as part of a quality assurance program (Kosciulek, Rosenthal, Vessell, Accardo, & Merz, 1997;

Rentrop, Bohm, & Kissling, 1999). However, there have been a limited number of published empirical studies on client satisfaction, especially as it relates to consumers receiving services from PWI programs, as a vehicle to provide feedback about PWI functioning or effectiveness. Few satisfaction measures have been developed with good psychometric properties (Attkisson & Greenfield, 1994) and no such measures have been developed for PWI programs in particular. To date, many PWI projects assess client satisfaction by compiling a brief non-standardized set of generic questions. What has been difficult to construct is a sensitive and psychometrically adequate scale with demonstrated validity that is brief, inexpensive, and easy to administer (Attkisson & Zwick, 1982). A carefully designed standardized measure of consumer satisfaction can help develop a means for gathering information which will better assist in evaluating PWI services.

LeVois, Nguyen and Attkisson (1981) studied three factors thought to mediate consumer satisfaction: general life satisfaction, mode of administration, and psychological symptomatology. Parallel forms of the standard Client Satisfaction Questionnaire (CSQ-31) were developed (i.e., using the eight items from the CSQ-8 plus four additional items chosen randomly from the preliminary version) and administered orally and in writing to 92 consumers in two mental health day treatment programs, along with using a simple graphic instrument. Results indicated satisfaction ratings were similar to outpatient ratings found in previous studies and mediated by all three variables. The researchers recommend making special efforts to remove any influences that may bias or inhibit consumer reports of satisfaction with services.

Attkisson and Zwick (1982) investigated the effects of pretherapy orientation on psychotherapy outcome using the 18 item version of the CSQ. Results indicated that the CSQ-8 performed as well as, and often better than, the CSQ-18 as a useful brief global measure of consumer satisfaction.

Greenfield (1983) examined the role of consumer satisfaction in evaluating counseling services using the short form of the CSQ-8 with students from a large rural public institution in the Northwest. High internal consistency was found with the CSQ-3 ( $\alpha = .820$ ) and the CSQ-4 ( $\alpha = .859$ ). He found the CSQ to have excellent psychometric properties and several advantages for use in student service settings.

Nguyen, Attkisson and Stegner (1983) also conducted a series of studies to produce an efficient measure of service satisfaction. Upon investigation they found the two versions of the CSQ (i.e., CSQ-18 and CSQ-8) to have nearly identical average item means and variances (3.08 and 3.02 respectively). The CSQ-8 was correlated with client and therapist global ratings. The findings relating satisfaction to service utilization and outcome suggested further evidence for the construct validity of the two versions of the CSQ. The authors conclude from the empirical studies that service satisfaction could be related to symptom level, demographic characteristics, and type and extent of service utilization.

### Summary

The literature review provided a context for the overriding concern and challenge for the rehabilitation profession to provide more effective and meaningful employment outcomes for people with disabilities and empower people with disabilities to make informed major life decisions. The literature review further substantiated the importance

of evaluating consumer choice in the rehabilitation process and satisfaction with service programs and employment as part of a quality assurance program. A study such as this was necessary to help determine the relationships between consumer choice and satisfaction with program services and employment to assist in developing more effective strategies to increase the retention and advancement of people with disabilities in the 21<sup>st</sup> century.



## Chapter 3

### METHODOLOGY

This chapter presents the methods that were used to collect and analyze the data needed to answer the research questions. The topics include: participants, instruments, research design, data collection procedures, and data analysis.

The purpose of this study was to unfold the consumer perspective by: (a) identifying the level of consumer choice in the rehabilitation process and satisfaction with PWI program services and employment and (b) empirically testing relationships between the constructs (i.e., choice and program satisfaction) and employment satisfaction that may impact employment retention and advancement of people with disabilities. The specific research questions addressed in this study were as follows:

1. What are the reported levels of consumer choice in the rehabilitation process and satisfaction with PWI program services and employment?
2. Is there a relationship between consumer choice in the rehabilitation process and consumer satisfaction with PWI program services?
3. Is there a relationship between consumer satisfaction with PWI program services and employment?
4. Is there a relationship between consumer choice in the rehabilitation process and employment satisfaction?
5. Is there a relationship between consumer choice and satisfaction with PWI program services to employment satisfaction?

6. Do reported levels of consumer choice in the rehabilitation process and satisfaction with program services and employment vary according to demographic characteristics of consumers?

To address these research questions a correlational research design, using an Internet survey approach, was utilized with a pool of participants who were either enrolled in or graduates of PWI rehabilitation computer technology and information processing training programs.

### Participants

#### Description of sample.

The sample used in this investigation consisted of participants drawn from a nationwide accessible population of consumers from PWI rehabilitation programs in computer technology. The initial design called for sampling graduates of rehabilitation programs in computer technology who were competitively employed. The sample was extended to include current students due to the low response rate. Tremendous effort and time was expended on locating programs to participate, with minimal results. There was difficulty in locating programs to participate. The source used for sample frame construction was the list of current and former consumers who received services from ARPCT member organizational projects who volunteered their participation in the study.

#### Sampling procedures.

A single stage sampling design for this population was employed in this investigation (Creswell, 1994). The 40 ARPCT member organizations were solicited to participate in the study. Contact was initially made with ARPCT President, Steve Lawrence, to inform him of the study's purpose and procedures, and to discuss ARPCTs

endorsement of the study. Subsequently, the ARPCT President sent several electronic notices to all 40 member organizations inviting their participation in this research. Two ARPCT projects (Salt Lake Community College and Computer Training for People with Disabilities) initially volunteered to participate in the research. In order to recruit more participation in the study, ongoing correspondence was maintained with ARPCT President and all the 40 ARPCT member organizations. Several e-mails were sent to member organizations explaining the purpose and procedures of the study along with a request to participate in the investigation. Specific questions concerning the research by member organizations were fielded. Member organizations were also informed that confidentiality of participants was guaranteed and that group (e.g., project) comparisons were not part of the research design in hopes of soliciting more participation. Personal telephone contacts were also conducted with each member organization to encourage participation in the study. Exhaustive measures were taken to recruit additional volunteers. Subsequent to numerous effort, the following ARPCT member organizations volunteered to participate (Open Learning Agency, Goodwill Industries of the Southern Piedmont, Computer Technology Program, Louisiana State University, Hire Potential, and Michigan Career and Technical Institute).

The initial design called for a systematic random sampling procedure to ensure a more representative sample of the population, however, a convenience sampling procedure (e.g., enlisting volunteers to participate in the study) was used as a result of the extreme difficulty in recruiting participants from rehabilitation programs in computer technology. All current and former consumers were sampled comprising the accessible population.

In terms of the sample size, the minimal acceptable number of participants for a correlational study is 30 (Gay, 1992). According to Cohen (1992), when relationships among variables are studied within one group, the power suggests a sample size of 68 participants, with a medium effect size of .15 and significance criteria at the .10 alpha level. This analysis guided the study in terms of the required number of participants to select.

### Instrumentation

Limited research has been conducted to identify PWI consumer choice and satisfaction with program services and employment. No research has been conducted to investigate these possible relationships with the PWI population. A careful review of both published and unpublished sources was conducted to identify appropriate, sensitive, and psychometrically adequate scales with demonstrated reliability and validity to measure the constructs of interest for this investigation.

A four part self-report questionnaire was used in the study to measure the level of consumer choice in the rehabilitation process and satisfaction with program services and employment consisting of the following: (a) Consumer Choice Questionnaire, (b) Consumer Satisfaction Questionnaire, (c) Minnesota Satisfaction Questionnaire, and (d) Demographic Questionnaire. Each of the instruments is discussed separately, and copies of each instrument are provided in Appendix D and E.

### Consumer Choice Questionnaire

The Research and Training Center (RTC) at the University at Wisconsin-Stout (2000) developed the 26-item Consumer Choice Questionnaire (CCQ-26). The primary use of the CCQ is to measure the level of consumer decision making and choice in the

rehabilitation process and in selecting employment goals. Response choices include the following five point Likert-type scale: 0 = None, 1 = A Little, 2 = Some, 3 = Quite a Bit, and 4 = Very Much. No psychometric properties on the instrument are available at this time and it continues to be in development.

### Consumer Satisfaction Questionnaire

Larsen, Attkisson, Hargreaves and Nguyen (1979) developed an eight item Client Satisfaction Questionnaire (CSQ-8) designed to measure general satisfaction with one or more services or service components using a Likert-scale. The CSQ has received frequent citations in scientific and professional literature and has been adopted extensively for applied use within human service settings and in research (Attkisson & Greenfield, 1994). The primary use of the CSQ is to assess the aggregate satisfaction from groups of respondents. In addition, it is used as an outcome performance indicator for service organizations and has been adopted nationally and internationally by investigators and service program personnel for scientific work, quality assurance, program planning, and evaluation studies as a useful evaluative tool (Attkisson & Greenfield, 1994).

The CSQ has been used with various sub-populations, including individuals with severe mental disabilities, and in a wide range of health and human service agencies (e.g., community mental health agencies, community based treatment programs and residential settings, alcohol abuse treatment programs, employee assistance programs, case management for individuals with severe mental disorders, AIDS self-support and psychoeducational groups, and health maintenance organizations) (Attkisson &

Greenfield, 1994). The CSQ has been translated into other languages and performed equivalently across several national and cultural groups (Attkisson & Greenfield, 1994).

In regards to psychometric properties, the CSQ has a high level of internal consistency and consumer acceptability (Cronbach's alpha coefficient range from .83-.93), and moderately high item-total correlation, which suggest scales measure a global satisfaction construct. Construct validity of the CSQ is enhanced by high correlations found between it and other satisfaction instruments that use different strategies to measure the same construct. Discriminant validity of the CSQ is enhanced by the low relationships typically observed between satisfaction and other variables (Attkisson & Greenfield, 1994).

The CSQ can also be easily supplemented by open-ended questions or items of special interest to a particular service program, without undue time demand on consumers. The additional appended items can help to increase the richness of the information obtained, encourage more feedback from consumers specific to certain project needs, and enhance the value and use of the results (Attkisson & Greenfield, 1994; Larsen et al., 1979).

The administration of the CSQ-8 takes from 3 to 8 minutes to complete. The CSQ covers eight conceptual item scales of consumer satisfaction including the following: (1) quality of service, (2) kind or type of service, (3) outcome of service, (4) amount, length, or quantity of service, (5) procedures, (6) support staff, (7) treatment staff, and (8) general satisfaction (Larsen et al., 1979).

### Minnesota Satisfaction Questionnaire

The Minnesota Studies, and in particular the Minnesota Theory of Work Adjustment, was one of the first to specifically focus on people with disabilities and their work adjustment (Salomone, 1993). Weiss, Dawis, England and Lofquist (1967) developed the 20 item Minnesota Satisfaction Questionnaire (MSQ-20) designed to measure an employee's satisfaction with a job. The MSQ provides more specific information on the various aspects of a job which individuals find rewarding than do more general scales. The MSQ has been found to be useful in exploring client vocational needs, in counseling follow-up studies, and in generating information about reinforcers inherent in specific jobs (Weiss, Dawis, England, & Lofquist, 1967).

The MSQ short form consists of 20 items from the MSQ long-form that best represent each of the 20 scales. Factor analysis of the 20 items resulted in two factors—Intrinsic and Extrinsic. Response choices include the following four point Likert-type scale: 1 = Very Satisfied, 2 = Satisfied, 3 = Neither Satisfied nor Dissatisfied, and 4 = Very Dissatisfied .

The reliability for the overall general scale is .90; the intrinsic scale is reported to be .86 and extrinsic scale at .80. The administration time takes around 5 minutes to complete. The 20 items that measure job satisfaction include the following: (1) ability utilization, (2) achievement, (3) activity, (4) advancement, (5) authority, (6) company policies, (7) compensation, (8) co-workers, (9) creativity, (10) independence, (11) moral values, (12) recognition, (13) responsibility, (14) security, (15) social service, (16) social status, (17) supervision—human relations, (18) supervision—technical, (19) variety, and (20) working conditions.

### Demographic Questionnaire

An original demographic questionnaire was used in this study to obtain information on the personal characteristics of the participants, including the following: age, gender, ethnicity, disability type, educational level, employment history, job title, job tenure, and pay scale. Participants were also asked about their overall satisfaction with the administration of Internet surveys. A combination of forced choice and fill-in response categories were used in this section.

### Procedures

#### Design.

The intent of this study was to begin to look at the relationships between consumer choice and satisfaction with program services and employment, thereby expanding our understanding of the experience of people with disabilities from PWI projects. A correlational research design using a descriptive opinion survey method was employed for this study. This study utilized self-report measures that have generally been used to gather information that can not be readily obtained by other methods (Babbie, 1995; Dillman, 1978). Given the nature and intent of this investigation (i.e., to obtain information from a consumer perspective), the consumers of services were the only stakeholders from which to evaluate the satisfaction with choice, program services, and employment.

#### Data collection.

A survey data collection method was chosen for this investigation because of its: (a) ability in obtaining a representative sample from the population, (b) likelihood that selected respondents will reply, (c) likelihood of avoiding social desirability bias, (d)



medium response rate, and (e) cost effectiveness (Dillman, 1978). The delivery method of the survey research (i.e., Internet) was chosen because of the specific training (computer technology and information processing) and prospective occupations (e.g., information technology) of the sample. Familiarity with computer operations and the Internet, along with easy access, made this an appropriate medium to gather participant survey data.

The Internet is rapidly becoming accessible to a representative segment of the U.S. population with upwards of 70 million U.S. households (e.g., people 18 to 54) subscribing to Internet services at home (Decision Analyst, 2002). Computer and Internet access in recent years has paved the way to many possibilities and research opportunities. As access to the Internet becomes more common, the feasibility of gathering Internet survey data becomes more reasonable. Some of the advantages to the design and administration of self-administered Internet questionnaires include: (a) potential to overcome international boundaries and achieve more representative groups, (b) appeal and means to attract large number of respondents with Internet access, (c) reduced time for survey implementation, and (d) near complete elimination of paper, postage, and data entry costs (Dillman, 2000).

Another advantage to conducting Internet surveys is the sense of anonymity and confidentiality that may encourage more participants to respond and be more candid in their responses. This is particularly important for consumer satisfaction feedback. The respondent's experience is of great concern in conducting an evaluation of the program.

Pre-testing of the instruments and packet of materials was conducted on March 27, 2001, to identify construction defects and therefore test the questionnaires as well as

the questions. The pre-testing followed the Total Design Method (TDM) procedures as described by Dillman (1978): (1) prior to the pretest, every effort was made to produce a complete packet of information that looks final and (2) the questionnaires were evaluated in the following areas: (a) whether it will accomplish the study objectives, (b) construct representativeness, (c) clarity, and (d) wording.

The pre-test group consisted of individuals from the population surveyed ( $n = 5$ ) to provide insight into prospective respondent reactions (e.g., difficulties that may have resulted in inaccurate responses or no participation at all). Feedback was solicited on such items as clarity of instructions and questions, readability, appeal of the questionnaire and packet, and average time for completing the questionnaires (e.g., 12 to 18 minutes). This information was used to revise the instruments prior to final dissemination to the entire sample.

Procedures were developed for the initial two volunteer ARPCT projects. A packet of information was mailed and sent electronically to the President of ARPCT who disseminated the information to the participants gathered onsite. The packet included the following information: (a) contact names and numbers, (b) instructions on how to assign participant user identification and password, (d) participant assignment grid, and (d) color coded respondent information (see Appendix F). Fifteen complete research packets were also mailed in the event of difficulty arising from the use of Internet surveys (e.g., technology). The subsequent volunteer sites were provided with general information concerning the study, this included the Web address, user identification number, and password required to participate in the research. A few projects also requested paper

copies of the above information to disseminate to current and former graduates of the program.

Each ARPCT volunteer site was assigned general user identification grouping (e.g., 1000, 2000, 3000). Each participant was then assigned a specific four-digit user identification number (e.g., 1001, 1002, 1003) and password (i.e., survey) to enter the surveys linked to the research site located on the World Wide Web (i.e., <http://www.gisd.com/survey>).

The public Web site included the transmittal letter, instructions, and final questionnaires (see Appendix G). Extensive programming was involved in preparing the material for online administration. The transmittal letter (e.g., consent form) was carefully designed to create a positive first impression by including the following: (a) graphic illustration, (b) purpose of the questionnaire, (c) value of individual input, (d) how the information will be used, (e) assurance of confidentiality, (f) any needed directions, (g) the name and address of the study sponsor, and (h) who to contact for questions (Dillman, 1978).

Participants were provided with the address to the Web site, user identification number, and password. Each participant was asked to complete the questionnaires that measure the level of consumer choice in the rehabilitation process, satisfaction with program services and employment, including a demographic section, taking approximately 12 to 18 minutes to complete online. The questionnaires linked to the Web site were password protected. To open the survey links, participants were asked to enter a user identification number and password. Once participants completed and submitted the questionnaires, responses were sent electronically to the researcher's e-mail

address. The e-mail contained the date and time of submission, user identification number, and participant responses to the questions.

Returns of the questionnaires were monitored daily and reviewed for completeness. All correspondence was coded for anonymity and re-submissions to avoid double counting individual respondent surveys. User identification numbers returned as undeliverable were recorded in the tracking book. A computer generated tracking book was constructed and a hard copy printed. Data for the present study was collected between May 31, 2001 and March 15, 2002.

### Data Analysis

Data was collected by means of four Internet questionnaires containing a total of 77 items. The majority of these were Likert-type items. Other questions asked for factual information, such as gender, ethnicity, and educational level. The data obtained from the survey responses was analyzed using the SPSS software package. Frequencies, means, standard deviations, and correlations were performed to address the research questions. The initial design called for using multiple regression analysis and multivariate analysis of covariance (MANCOVA), however, due to the low response rate, nonparametric tests were performed to more adequately address the research questions. Descriptive statistics were computed on the sample characteristics from the data collected on the demographic questionnaire. Frequencies for the following categorical variables were computed: (1) gender, (2) ethnicity, (3) disability type, (4) educational level, and (5) current job title. Mean scores and standard deviations were computed for the continuous variables age and work history, as well as for each of the satisfaction measures (Consumer Satisfaction Questionnaire, Consumer Choice Questionnaire,

Minnesota Satisfaction Questionnaire). Distribution of scores was examined for normality by computing scores of skewness and kurtosis. The .10 level of significance was used as a rejection level on all statistical analyses.

In responding to the first research question, determining the level of consumer choice in the rehabilitation process and satisfaction with PWI program services and employment, descriptive statistics (e.g., mean and standard deviation) were computed for each item on the questionnaires according to the participant responses to the Likert-type items.

A Pearson product-moment coefficient of correlation was initially designed to be used to respond to the subsequent three questions to determine the existence of a relationship between (a) consumer choice and satisfaction with PWI program services, (b) consumer satisfaction with PWI program services and employment, and (c) consumer choice and employment satisfaction. Instead, the Spearman rho was used due to the small sample size. Information was gathered to determine the magnitude and direction (positive or negative) of the relationships to explain human behavior and predict likely outcomes, but will not yield cause or effect relationships (Fraenkel & Wallen, 1996).

The initial design called for using multiple regression analysis to respond to the fifth research question to examine the separate and collective contributions of the two independent variables (i.e., choice and satisfaction with program services) to the variation of the dependent variable (i.e., employment satisfaction). Given the variation in the numerical scoring of the measures, z scores were computed for each of the measures. A stepwise multiple regression method was to be employed to identify which variables contributed the most unique variance in the equation and in what order (Heppner,

Kivlighan, & Wampold, 1992). However, as a result of the small sample size, the model could not be appropriately analyzed.

An important preliminary step was taken in order to respond to the sixth question to determine if differences on demographic characteristics varied according to reported levels of consumer choice and satisfaction with program services and employment. A series of MANCOVAs were designed to be conducted to test for differences among the means by calculating a specific value, Wilk's lambda. The dependent variables for these analyses were the mean scores on the participant's responses to the Likert-type measures. The independent variables for these analyses were: (1) gender, (2) age, (3) disability type, (4) ethnicity, (5) educational level, and (6) number of years employed in the labor market. As a result of the small sample size, a Spearman rho and Mann-Whitney U test was used to test for differences between the satisfaction measures and the demographic characteristics.

## Chapter 4

### RESULTS

#### Sample and Procedures

The participants in this study consisted of 66 individuals with disabilities who were either current or former consumers at Computer Technologies Program, California; Computer-Training for People with Disabilities, Denver; Goodwill Industries of the Southern Piedmont, North Carolina; HirePotential, Denver; Louisiana State University, Louisiana; Michigan Department of Career Technical Institute, Michigan; Open Learning Agency, Canada; and Salt Lake Community College, Utah. These ARPCT member programs represent public and private agencies and businesses, technical schools, colleges and universities, and community based rehabilitation organizations all dedicated to providing quality computer training and placement services for people with disabilities. Of the total participating organizations, two are federally funded PWI projects. Examples of the type of computer based training offered through the member organizations include computer programming, administrative networking, and office system training. The duration of the courses and programs ranged from 4 months to 1 year. ARPCT member organizations rely on business involvement through the establishment of Business Advisory Councils to help bridge the employment needs of the industry (ARPCT, 2002).

Of the total respondents, two (3%) were returned as duplicates and two (3%) were returned with notes indicating that they were the instructor and director of the program and therefore excluded. This yielded 62 useable respondents who consented to

participate and complete the Internet surveys. The Ns on the three measures of satisfaction and demographic questionnaire do not compute to 62 due to missing data.

Table 1 provides a breakdown of the sample by demographic characteristics.

The total sample consisted of 80% males ( $n = 44$ ) and 20% females ( $n = 11$ ) and was predominately Caucasian (76.4%,  $n = 42$ ). The ages of the participants ranged from 19 to 61, with a mean age of 37.65 years. When looking at the distribution of the ages of participants using a histogram there existed an outlier, one participant was 61 years old with the next closest participant's age being 53.

In terms of education, 58.2% ( $n = 32$ ) of the sample indicated that the high school/GED or post-secondary vocational training was the highest degree earned and 38.2% ( $n = 21$ ) indicated having an associates or bachelors degree.

The type of disability most frequently cited was physical (43.6%,  $n = 24$ ) and 20% ( $n = 11$ ) indicated having more than one disability. The majority of participants in this study were consumers of at least one additional service agency. Respondents reported receiving services also from state-federal vocational rehabilitation (69.4%,  $n = 25$ ) and social security or ticket to work (25%,  $n = 6$ ).

The sample consisted of 53.1% students ( $n = 26$ ) of rehabilitation computer training programs and 46.9% graduates ( $n = 23$ ), primarily within the past few years. This Ns did not compute to 62 due to missing data. Most of the respondents with jobs secured them independently or through friends, family (35%,  $n = 7$ ) or with the help of the rehabilitation staff (30%,  $n = 6$ ), and examples of positions held were analyst/programmer ( $n = 7$ ), disability lab coordinator ( $n = 1$ ), test lab consultant ( $n = 1$ ), and warehouse developer ( $n = 1$ ). The length of employment ranged from 1 to 62 months



( $n=20$ ), with a mean of 16.7 months. The average hours worked per week was 33.7 ( $n=20$ ). The earnings ranged from \$5.00 to \$48.00 ( $n=14$ ) per hour with an average of \$16.79 per hour.

Of the respondents, 48.3% ( $n=14$ ) indicated receiving the necessary skills from the training program to perform their job duties, 37.9% ( $n=11$ ) indicated receiving some of the skills from the training program, and 13.8% ( $n=4$ ) indicated receiving no skills from the training program to perform their job duties. When asked whether or not their current job is consistent with their long-term employment goals, 29.6% ( $n=8$ ) of the participants reported yes, 40.7% ( $n=11$ ) indicated somewhat, and 29.6% ( $n=8$ ) said no.

In regards to respondents' overall experience with online survey administration, 77.7% ( $n=28$ ) indicated having a “good” or “excellent” experience with taking Internet surveys, 19.4% ( $n=7$ ) found the experience “fair,” and 2.8% ( $n=1$ ) indicated having a poor experience. Completing surveys online was by far the most preferred completion method (94.4%,  $n=34$ ).

Open-ended items revealed convenience, ease, and speed as the most frequently cited reasons for liking Internet surveys, and least appealing features of Internet surveys were not enough choice options, inability to modify responses, and accessibility issues.

#### Measures of Satisfaction

In order to address the first research question, three measures were used to assess level of consumer choice and satisfaction with program services and employment. All the measures were reviewed for internal consistency, reliability. Table 2 presents the Cronbach's alphas for each measure. The coefficient alphas for the Consumer Choice Questionnaire (choice) is .96, Consumer Satisfaction Questionnaire (general) is .92, and

Table 1

## Demographic Characteristics of the Sample

Variable	<i>N</i>	Valid %
Gender		
Male	44	80.0
Female	11	20.0
Race/ethnicity		
African american	1	1.8
Asian american	3	5.5
European american/white	42	76.4
Latino	2	3.6
Middle eastern	2	3.6
Native american	2	3.6
Multiple ethnicity	1	1.8
Other	2	3.6
Age		
19 – 25	8	14.5
26 – 30	5	9.1
31 – 35	8	14.5
36 – 40	9	16.4
41 – 45	14	25.5
46 – 50	7	12.7
51 – 55	3	5.5
56 +	1	1.8
Educational level		
Master or higher	1	1.8
Bachelors	10	18.2
Associates	11	20.0
Post secondary vocational training	17	30.9
High school/ged	15	27.3
Other	1	1.8

Table 1 (cont'd).

Disability type		
Developmental	1	1.8
Hearing	4	7.3
Physical	24	43.6
Mental and/or emotional	7	12.7
Visual	5	9.1
Multiple	11	20.0
Other	3	5.5
Job title		
Analyst	1	1.6
Applications analyst/programmer I	1	1.6
Assistant systems developer	1	1.6
Director	1	1.6
Disability lab coordinator	1	1.6
Fleet systems information analyst	1	1.6
IT	1	1.6
Parking supervisor	1	1.6
Programmer	1	1.6
Programmer analyst	1	1.6
Receptionist	1	1.6
Tape librarian	1	1.6
Teacher	1	1.6
Test lab consultant	1	1.6
Warehouse developer	1	1.6
Warehouse worker	1	1.6
How obtained current job		
Returned to job with prior employer	1	5.0
Rehabilitation staff helped find the job	6	30.0
Job found independently or through friends, family	7	35.0
Other	6	30.0
Agency assistance		
No agency	5	13.9
Vocational rehabilitation	17	47.2
Social security or ticket to work	1	2.8
Multiple	8	22.2
Other	5	13.9

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Note. The Ns do not compute to 62 due to missing data.

Table 2

## Cronbach's Alphas for Measures of Consumer Satisfaction

Measure	Number of Items	Alpha
Consumer Choice Questionnaire	26	.9582
Consumer Satisfaction Questionnaire	8	.9231
Minnesota Satisfaction Questionnaire	20	.9668

Minnesota Satisfaction Questionnaire (employment) is .97. The scales were internally consistent.

There was significant missing data with the MSQ. To avoid losing any more data than necessary, the scoring procedure was slightly changed for each measure. When creating total scores, there must be a score on every item. When scoring this way, all data from any participant whom did not respond to one or more of the items are dropped completely. To avoid this problem, the average score on all items to which participants responded was calculated. The high internal reliability of the scales, with strong correlation between all item scores and the total score, supported using this scoring procedure, and losing a small to moderate number of responses should not significantly change the mean score. Where a participant answered half or more of the items, the participant was given a score, but where a participant answered less than half the items, that participant's score was dropped since it was not considered representative of how that

person would respond on the complete scale. Furthermore, averaging item scores is the same as obtaining a total score in that multiplying the average score by the number of items yields a total score. Table 3 provides the mean and standard deviation for each of the measures.

Table 3

Sample Mean and Standard Deviation for Consumer Satisfaction Measures

Measure	<i>N</i>	<i>M</i>	<i>SD</i>
Consumer Choice Questionnaire	51 - 53	2.38 (2.56)	.87 (.75)
Consumer Satisfaction Questionnaire	60	3.22 (3.28)	.59 (.59)
Minnesota Satisfaction Questionnaire	22 - 23	3.44	.84

Note. Means and standard deviations listed in parenthesis indicate the scores for the employed subgroup.

### Choice

Scores on the Consumer Choice Questionnaire ( $n = 51$  to  $53$  depending on the item) ranged from  $0 = \text{No Level of Choice}$  to  $4 = \text{Very Much Level of Choice}$ . The sample yielded a mean item score of  $2.38$  with a standard deviation of  $.87$  and  $2.56$  and  $.75$  respectively for the employed subgroup ( $n = 20$  to  $22$  depending on the item).

Item means ranged from  $1.73$  to  $3.19$  ( $1.95$  to  $3.45$  for the employed subgroup). Participants indicated that they experienced considerable choice with selecting the training program ( $M = 3.19$ ), future career goals ( $M = 3.17$ ), general career interests ( $M =$

3.04), and identifying specific job goal ( $M= 2.91$ ). Respondents indicated lower level of choice with involvement of family members or other advocates in the employment goal ( $M= 1.73$ ), selection of specific staff members (1.85), location of job ( $M= 1.92$ ), jobs to try out before getting a permanent job ( $M= 2.06$ ), and resources and services needed to achieve job goals beyond those agency could provide (e.g., independent living needs, financial needs) ( $M= 2.06$ ). Table 4 provides the mean and standard deviation for each item.

#### PWI Program Services

Scores on the Consumer Satisfaction Questionnaire ( $n= 60$ ) ranged from 1 (low satisfaction) to 4 (high satisfaction). The sample yielded a mean item score of 3.22 with a standard deviation of .59 for the total respondents and 3.28 and .59 respectively for the subgroup ( $n= 23$ ) of individuals who fit the criteria of being employed. This mean is comparable with values found in previous studies of individuals seeking services from mental health agencies. Item means ranged from 3.08 to 3.38 (3.13 to 3.48 for the employed subgroup). Participants indicated they would highly recommend the program if a friend were in need of similar help ( $M= 3.38$ ), they would come back to the program if they were to seek help again ( $M= 3.32$ ), and rated the quality of service as high ( $M= 3.28$ ). Lower satisfaction ratings were found with the overall general satisfaction with services received ( $M= 3.08$ ) and extent program met needs ( $M= 3.10$ ). Table 5 provides the mean and standard deviation for each item.

Table 4

Consumer Choice Questionnaire Item Mean and Standard Deviation for the Total Sample

Item	<i>N</i>	<i>M</i>		<i>SD</i>	
	Total (Employed)	Total (Employed)	Total (Employed)	Total (Employed)	Total (Employed)
1. This agency as your service provider?	53 (22)	2.23	(2.14)	1.50	(1.55)
2. Your short-term job goal?	53 (22)	2.68	(2.73)	1.24	(1.24)
3. Jobs to try out before getting A permanent job?	52 (22)	2.06	(2.23)	1.43	(1.38)
4. The training program you Participated in?	53 (22)	3.19	(3.32)	.94	(.94)
5. The location of your job (in the town/part of town you prefer)?	50 (21)	1.92	(2.05)	1.44	(1.46)
6. Evaluation processes you completed (e.g., job modifications, transportation)?	52 (22)	2.13	(2.41)	1.40	(1.33)
7. Your long-term goals?	51 (21)	2.69	(3.10)	1.16	(.94)
8. Ways to overcome potential job barriers (e.g., job modifications, transportation)?	52 (22)	2.37	(2.55)	1.28	(1.30)
9. The specific services you needed in this agency?	52 (22)	2.67	(2.95)	1.04	(.78)
10. A job with the benefits you Would like (e.g., health insurance, vacation)?	51 (21)	2.12	(2.19)	1.50	(1.60)
11. Your general career interests?	52 (22)	3.04	(3.18)	.93	(1.01)

Table 4 (cont'd).

12. The services in your overall employment/rehabilitation program?	52 (21)	2.63	(2.81)	1.05	(1.03)
13. Your future career goals?	53 (22)	3.17	(3.45)	.89	(.80)
14. Your specific job goal?	53 (22)	2.91	(3.23)	1.06	(.97)
15. A job with the pay you would prefer?	53 (22)	2.28	(2.41)	1.38	(1.44)
16. The specific staff members You worked with at this agency?	53 (22)	1.85	(1.95)	1.50	(1.40)
17. Your initial job goal upon completion of services?	52 (22)	2.35	(2.50)	1.38	(1.18)
18. Your work shift (e.g., day, evening, full-time, part-time)?	51 (22)	2.24	(2.64)	1.53	(1.36)
19. The steps and activities in Your employment/rehabilitation program?	53 (22)	2.30	(2.50)	1.17	(1.22)
20. A job with future career growth (e.g., advancement, higher wages)?	52 (22)	2.37	(2.68)	1.43	(1.32)
21. Whether family members or other advocates were involved in your employment program?	51 (22)	1.73	(2.09)	1.48	(1.48)
22. Refusing to participate in services at this agency?	52 (22)	2.10	(2.05)	1.32	(1.43)
23. Employers and jobs of interest to you during job seeking and job interviewing activities?	51 (22)	2.10	(2.09)	1.30	(1.23)
24. Resources and services needed to achieve your job goals beyond those this agency could provide (e.g., independent living needs, financial needs)?	52 (22)	2.06	(2.55)	1.27	(1.14)



Table 4 (cont'd).

25. A job consistent with your strengths, abilities, and interests?	52 (22)	2.35 (2.45)	1.34 (1.14)
26. The specific services you wanted at this agency?	51 (20)	2.47 (2.50)	1.10 (.95)

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Note. Ns, Means, and standard deviations listed in parenthesis indicate the scores for the employed subgroup.

Table 5

Consumer Satisfaction Questionnaire Item Mean and Standard Deviation for the Total Sample ( $n = 60$ )

Item	<i>M</i>		<i>SD</i>	
	Total (Employed)		Total (Employed)	
1. How would you rate the quality of service you received?	3.28	(3.26)	.71	(.75)
2. Did you get the kind of service you wanted?	3.15	(3.13)	.66	(.63)
3. To what extent has our program met your needs?	3.10	(3.26)	.78	(.62)
4. If a friend were in need of similar help, would you recommend our program to him/her?	3.38	(3.48)	.71	(.79)
5. How satisfied are you with the amount of help you received?	3.13	(3.13)	.81	(.87)
6. Have the services you received helped you to deal more effectively with your problems?	3.28	(3.30)	.61	(.63)
7. In an overall, general sense, how satisfied are you with the service you received?	3.08	(3.22)	.77	(.74)
8. If you were to seek help again, would you come back to our program?	3.32	(3.43)	.81	(.79)

Note. Means and standard deviations listed in parenthesis indicate the scores for the employed subgroup.

## Employment

As a result of the reported confusion of participants completing the MSQ when in fact they were current students or not employed, only those respondents who reported having graduated, with job title and salary were included in the employed subgroup. Scores on the Minnesota Satisfaction Questionnaire ( $n = 22$  to  $23$  depending on the item) ranged from  $1 = \text{Very Dissatisfied}$  to  $5 = \text{Very Satisfied}$ . The sample yielded a mean item score of  $3.44$  with a standard deviation of  $.84$ .

Item means ranged from  $2.83$  to  $3.87$ . Participants indicated that they were most satisfied with being able to do things that don't go against conscience ( $M = 3.87$ ), chance to do things for other people ( $M = 3.82$ ), working conditions ( $M = 3.70$ ), and the way co-workers get along with each other ( $M = 3.70$ ). Respondents indicated that lowest job satisfaction occurred with chances for advancement on the job ( $M = 2.83$ ), pay and the amount of work involved ( $M = 2.83$ ), and the way boss handles his/her workers ( $M = 3.09$ ).

The item measures were summed to place them on the same scale as previously reported research. Intrinsic satisfaction for this sample was found to have a mean of  $43.04$  whereas the MSQ manual reports the standardized group intrinsic satisfaction was  $47.32$ . The extrinsic satisfaction of participants was found to have a mean of  $18.47$ ,  $19.37$  for the standardized group of the MSQ. Overall general satisfaction was found to be  $68.91$  compared to  $74.48$  in the standardized group reported in the MSQ manual.

Table 6 provides the mean and standard deviation for each item.

Table 6

## Minnesota Satisfaction Questionnaire Item Mean and Standard Deviation

Item	<i>N</i>	<i>M</i>	<i>SD</i>
1. Being able to keep busy all the time	23	3.70	1.02
2. The chance to work alone on the job	23	3.74	1.05
3. The chance to do different things from time to time	23	3.61	1.03
4. The chance to be “somebody” in the community	23	3.35	1.23
5. The way my boss handles his/her workers	23	3.09	1.20
6. The competence of my supervisor in making decisions	23	3.35	1.15
7. Being able to do things that don’t go against my conscience	23	3.87	1.10
8. The way my job provides for steady employment	23	3.43	1.34
9. The chance to do things for other people	22	3.82	1.10
10. The chance to tell people what to do	23	3.43	.99
11. The chance to do something that makes use of my abilities	23	3.43	1.16
12. The way company policies are put into practice	22	3.14	.94
13. My pay and the amount of work I do	23	2.83	1.07
14. The chances for advancement on this job	23	2.83	1.30
15. The freedom to use my own judgement	23	3.57	1.12

Table 6 (cont'd).

16. The chance to try my own methods of doing the job	23	3.57	1.12
17. The working conditions	23	3.70	.97
18. The way my co-workers get along with each other	23	3.70	1.11
19. The praise I get for doing a good job	22	3.23	1.07
20. The feeling of accomplishment I get from the job	23	3.52	1.12

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### Feedback on Measures

Qualitative information was gathered from the participants on each of the Internet surveys to further assess the appropriateness of the surveys and uncover any possible complications from the online administration. Text boxes were created for each of the four questionnaires and placed at the end of the page. Respondents provided the following commentary information: (a) prefer to have an “other” category and to explain some responses ( $n=3$ ), (b) a few didn’t know which “agency” was being referred to in order to properly respond to the CSQ and CCQ ( $n=3$ ), and (c) a few reported some of the items in the CCQ were awkwardly worded ( $n=2$ ). Information was gathered from member programs and a few shared that some of the items were worded awkwardly and certain questionnaires did not apply to all the respondents.

### Analyses

#### Correlation of Measures

To address research questions two through five, a Spearman rho correlation analysis was performed using the three measures of consumer choice and satisfaction with program services and employment. The Spearman rho is used when samples are relatively small ( $< 30$ ), is less subject to error than the Pearson’s product-moment formula (Williams, 1992), and results in a coefficient very close to the one which would have been obtained had a Pearson  $r$  been computed (Gay, 1992). The Spearman rho is also less sensitive to violations of normality and is adequate for ordinal data.

Consumer choice and satisfaction with program services were correlated at .541 with a  $p < .01$ . There exists some degree of positive relationship between choice and satisfaction with program services. Satisfaction with program services and employment

were correlated at .395 with  $p < .069$ . There exists a moderate degree of positive relationship between satisfaction with program services and employment. Consumer choice and employment satisfaction were correlated at .343 with  $p < .128$ . It appears there may be a low positive relationship between level of choice and employment satisfaction. Tables 7 and 8 present the relationships between the measures.

#### Differences According to Demographic Characteristics

In order to address research question five to determine whether consumer choice and satisfaction with program services and employment differ according to demographic characteristics of consumers, a Spearman rho and Mann-Whitney U nonparametric test was performed to characterize the relationship between the variables. No statistically significant relationships were found with the sample demographic characteristics on the measures. Table 9 presents the relationships between measures of satisfaction with demographic characteristics.

The Mann-Whitney U nonparametric test was used to test for differences in the mean scores of independent samples of the employed and nonemployed/other on the CSQ and CCQ. The mean rank on the CSQ for the employed and nonemployed/other was 32.13 and 29.49 respectively. This difference had a p value of  $p < .567$ , indicating that there were no reliable differences in the scores of employed and nonemployed/other in this sample. The mean rank on the CCQ for the employed and nonemployed/other was 29.84 and 24.05 respectively. This difference was not statistically significant ( $p < .173$ ), indicating that there were no reliable differences in the scores of employed and nonemployed/other in this sample.

Table 7

Nonparametric Correlation Coefficients for Measures of Consumer Choice and Satisfaction with Program Services and Employment

Spearman's rho	Choice	Program services	Employment
Choice	1.00 ( <i>n</i> = 52)		
Program services	.541*** ( <i>n</i> = 51)	1.00 ( <i>n</i> = 60)	
Employment	.343 ( <i>n</i> = 21)	.395* ( <i>n</i> = 22)	1.00 ( <i>n</i> = 23)

\*Correlation is significant at the .10 level (2 tailed)

\*\*\*Correlation is significant at the .01 level (2 tailed)

Table 8

Nonparametric Correlation Coefficients for Measures of Consumer Choice and Satisfaction with Program Services and Employment for the Employed Subgroup

Spearman's rho	Choice	Program services	Employment
Choice	1.00 ( <i>n</i> = 22)		
Program services	.688*** ( <i>n</i> = 22)	1.00 ( <i>n</i> = 23)	
Employment	.343 ( <i>n</i> = 21)	.395* ( <i>n</i> = 22)	1.00 ( <i>n</i> = 23)

\*Correlation is significant at the .10 level (2 tailed)

\*\*\*Correlation is significant at the .01 level (2 tailed)



Table 9

Nonparametric Correlation Coefficients for Measures of Consumer Choice, Satisfaction with Program Services and Employment, and Demographic Characteristics

Spearman's rho	Choie	Program services	Employment
Age	-.076 ( <i>n</i> = 50)	-.050 ( <i>n</i> = 53)	-.240 ( <i>n</i> = 23)
Education	.117 ( <i>n</i> = 50)	.045 ( <i>n</i> = 53)	.038 ( <i>n</i> = 23)
Work history	-.102 ( <i>n</i> = 50)	-.139 ( <i>n</i> = 53)	-.023 ( <i>n</i> = 23)

## Summary

In order to address the five research questions, descriptive statistics and Spearman's rho correlations were computed to measure the nature of relationship between the level of consumer choice in the rehabilitation process, satisfaction with program services and employment, and to determine if the dependent measures vary according to demographic characteristics. The total sample was composed of 62 students and graduates of PWI computer training programs who were predominantly male, with an average age of 37, and generally reported having a physical disability.

All three measures yielded high internal consistency reliability coefficients. Respondents experienced some to quite a bit of choice in the rehabilitation process ( $M=2.38$ ), felt moderate to high level of satisfaction with PWI program services ( $M=3.22$ ), and were neutral to satisfied with their jobs ( $M=3.44$ ). There were no differences in the mean scores of independent samples of employed and nonemployed/other on the CCQ ( $p < .173$ ) or the CSQ ( $p < .567$ ). When testing for relationships between the measures, the following pairs were found to have statistically significant relationships: choice and satisfaction with program services ( $.541, p < .01$ ) and satisfaction with program services and employment ( $.395, p < .069$ ). There was no statistically significant relationship between choice and employment satisfaction ( $.343, p < .128$ ). When testing to determine if levels on the measures differed according to demographic characteristics, no statistically significant relationships were found.

## Chapter 5

### DISCUSSION

This chapter presents the findings from the research questions investigated. Summaries, interpretations, limitations, and implications of the findings are discussed.

The primary purpose of this study was to begin to unfold the consumer perspective by (a) identifying the level of consumer choice in the rehabilitation process and satisfaction with PWI program services and employment and (b) empirically testing relationships between the constructs (i.e., choice and program satisfaction) and employment satisfaction that may impact employment retention and advancement of people with disabilities. First, scores on consumer choice and satisfaction with program services and employment were reported. Second, relationships between the measures were determined using a Spearman's rho correlation coefficient. Third, differences on the measures according to demographic characteristics were examined.

#### Findings

To address the research questions, a correlational research design, using self-administered electronic surveys by the World Wide Web, was utilized with a national pool of participants who were either former graduates or students of PWI computer technology and information processing training programs. There were four respondents removed from the total sample yielding 62 final respondents who consented to participate with the Internet survey research.

### Measures of Satisfaction

The first research question asked what are the reported levels of consumer choice in the rehabilitation process and satisfaction with program services and employment. It was important to identify measures that contribute to understanding the means and processes by which services produce outcomes. To validate the reliability of the three measures, Cronbach's coefficient alphas were examined to determine internal consistency. The coefficient alphas of .92 and above for all three measures constitute an acceptable level for any test suggesting sufficient internal consistency (Gay, 1992). The high internal reliability supported changing the scoring procedure for each measure from summing items scores to averaging items scores in order to avoid losing data.

#### Choice.

The scores on the Consumer Choice Questionnaire had a range of 1.73 to 3.19. The mean was 2.38 with a standard deviation of .87. There were no statistically significant differences between the employed and nonemployed/other group on the measure ( $p < .173$ ), however, the employed subgroup reported slightly higher mean (2.56) and item mean (range of 1.95 to 3.45) scores. Higher scores on choice may have resulted from the fact that the employed subgroup went through the entire rehabilitation program, whereas those who are still in the program have not yet been provided with the full array of services in reaching their employment goals and thus have had fewer opportunities to exercise more choice in the decision making process.

Despite the reported satisfaction with experiencing opportunities to make informed decisions throughout the rehabilitation process, caution is warranted in applying the findings. The reported confusion of which agency (e.g., PWI or state-federal

vocational rehabilitation) was used when responding to the CCQ items may have yielded different scores. The active involvement of consumers in the rehabilitation process may vary depending on the professional service provider and the policies set forth by the agency to provide people with disabilities the fundamental opportunity to decide on major life decisions. For example, federal regulations require state-federal vocational rehabilitation agencies to document how each consumer will have the opportunities to make informed choices concerning long-term vocational goals which may influence actively involving people with disabilities throughout the rehabilitation program.

The intended application of the CCQ is to evaluate the extent of informed choice in the selection of employment goals and rehabilitation services (RTC-Stout, 2000). The sample reported experiencing quite a bit of involvement in selecting the training program and employment goals (e.g., general career interests, specific job goal, and future career goals) and only a little to some involvement with certain aspects of the rehabilitation process (e.g., choosing staff, family members or other advocates to be involved in the employment program). Furthermore, the sample reported having some to quite a bit of involvement in choosing a job with future career growth and pay they would prefer. These findings suggest that students and graduates of rehabilitation programs in computer technology were provided with opportunities to make informed decisions and experienced a considerable level of choice in the selection of employment goals.

People with disabilities are advocating for more involvement and choice over their lives. The more individuals feel in control of their lives (e.g., internal locus of control), the greater the likelihood of enhancing one's self-esteem (Woolfolk, 1998). Furthermore, when people attribute success to internal causes (e.g., something they have

taken part of and done), they will have feelings of pride and satisfaction about their successes, have a greater sense of self-efficacy, set higher goals, and persist when encountering difficulties (Weiner, 1986). Consequently, empowering people with disabilities to take more control and responsibility for their successes and failures may positively influence rehabilitation outcomes (e.g., retention and career advancement).

#### PWI program services.

The scores on the Consumer Satisfaction Questionnaire had a range of 3.08 to 3.38. The mean was 3.22 with a standard deviation of .59. The sample of students and graduates of rehabilitation programs in computer technology were mostly satisfied with PWI program services. There were no statistically significant differences between the employed and nonemployed/other group on the measure ( $p < .567$ ), however, the employed subgroup reported slightly higher mean (3.28) and item mean (range of 3.13 to 3.48) scores. A possible explanation for this finding is that the employed subgroup received the full array of services in reaching their employment goals and therefore are slightly more satisfied with the overall services than those (e.g., students beginning the program) who have not yet received all of the services the program offers to find competitive employment. Current consumers of services may not realize the perception of full benefit.

It is very important to note that the actual level of satisfaction with PWI program services may have yielded slightly different scores given the reported confusion of which agency (e.g., PWI or state-federal vocational rehabilitation) was used when responding to the CSQ items. Both PWI projects and state-federal vocational rehabilitation programs provide services intended to enable people with disabilities to become gainfully

employed, however, the process by which they accomplish this goal varies. For example, PWI projects provide the training and experience in realistic work settings to help prepare people with disabilities find competitive employment. In addition, PWI projects work systematically with both people with disabilities and potential employers through BACs to assess the labor market conditions (e.g., supply and demand) and find a successful match. Consequently, when a person with a disability is systematically guided through the rehabilitation process by a single agency to find a job rather than going through a brokered service model in which separate agencies provide various services, that person may feel more satisfied with the nature and quality of services. Xie, Dain, Becker, and Drake (1997) found the brokered service model less successful in helping adults with disabilities find competitive employment, as compared with an integrated program that offered services within the same agency.

The usual application of the CSQ is to measure aggregate satisfaction levels of a group of consumers (Larsen et al., 1979). In order to employ the satisfaction scores as outcome service performance indicators for a service organization, it becomes critical to compare obtained scores against comparative norms collected from other similar service settings and methods. When compared with the results found from four published studies administering the CSQ-8 to a group of consumers from different ethnic backgrounds at community mental health facilities, the mean of the item means were slightly higher (e.g., average of .14) than those reported in this study (Attkisson & Greenfield, 1995).

Cronbach alpha coefficients for the CSQ-8 have ranged from .83 to .93 across several studies, which suggest that the scales are consistent and stable across a diverse range of sites, populations, and human service areas. Therefore, the findings from this

investigation suggest that consumer satisfaction with PWI program services is similar to consumer satisfaction levels of other comparable groups.

In addition, the findings provided feedback about PWI functioning and overall effectiveness. Results found in the present study of generally high satisfaction with program services suggests that participants believed PWI programs are providing appropriate training, experience, and job placement services to help prepare people with disabilities for their employment in the competitive labor market.

#### Employment.

The scores on the Minnesota Satisfaction Questionnaire had a range of 2.83 to 3.87. The mean was 3.44 with a standard deviation of .84. The subgroup of employed graduates from rehabilitation programs in computer technology were more satisfied by intrinsic measures of job satisfaction (e.g., doing things that don't go against conscience and doing things for other people) and less satisfied by extrinsic measures of job satisfaction (e.g., pay and the amount of work and chances for advancement).

The findings of less satisfaction with economic awards and advancement may be impacted by the length of employment. Nearly all of the employed respondents met the retention criteria of maintaining employment beyond 90 days. The majority of the sample was employed for less than a year and a half, which may not have yielded adequate time to appropriately adapt to the work environment. Advancement may result from sound work adjustment and adaptation and should be a concern and goal of counselors (Salomone, 1996). The continuous and dynamic process by which individuals seek to achieve and maintain correspondence with their work environment and in return



remain in the job leads to higher probability of tenure on the job and the potential of higher wages and advancement (Dawis & Lofquist, 1976).

The usual application of the MSQ is to measure satisfaction with several specific different aspects of work and the work environment (Weiss et al., 1967). To provide a point of reference for comparison purposes, similar norm groups were used. Intrinsic and extrinsic satisfaction from this investigation were found to be slightly lower than the mean of other occupations reported in the MSQ manual and those found with a similar group of people with disabilities placed by a PWI project. Overall general satisfaction was found to be 68.91 (summed mean scores) compared to 74.48 in the standardized group reported in the MSQ manual. The appropriate norm group is one that corresponds exactly to a person's job. Since there are only a limited number of norm groups at this time, the most similar norm group was that of office clerks. Some of the jobs held by graduates of rehabilitation programs in computer training vary from the norm group and therefore caution is noted in making direct interpretation of the MSQ scores.

McAfee (1986) reviewed the few studies that have been conducted on the job satisfaction of people with disabilities and found them to be satisfied with their jobs. Houser and Chase (1993) also found people with disabilities who were placed through a PWI program were highly satisfied with their jobs. Results found in the present study support these previous studies indicating graduates of rehabilitation programs in computer technology were satisfied with their jobs. Both worker and employer satisfaction lead to job retention (Tenoypr, 1993). Employers were not interviewed in the present study, however, Hayward et al. (1986) found high employer satisfaction with hiring PWI participants.

### Relationships Between Choice and Satisfaction with Program Services and Employment

To address research questions two through four, a Spearman rho correlation analysis was performed using the three measures of consumer satisfaction.

#### Choice and PWI program services.

The second research question asked if there was a relationship between consumer choice in the rehabilitation process and satisfaction with PWI program services. The analysis indicated a statistically significant correlation coefficient between level of choice and satisfaction with program services (.541,  $p < .01$ ) which reflects a true relationship and not one found by chance. The finding suggests that consumer choice is likely to have a moderate positive correlation with satisfaction with program services. There was no previous research found that investigated these constructs, however, researchers in the few studies that have been conducted on choice have generally found a positive relationship between choice and life satisfaction (Boschen, 1996). Theorists agree that people in general are happier and feel intrinsically motivated when they believe they are in control of their lives (e.g., internal locus of control) (Weiner, 1986; Woolfolk, 1998). It is possible that consumer choice causes consumer satisfaction with program services, but this study cannot form causation and these issues need to be addressed in future research.

#### PWI program services and employment.

The third research question asked if there was a relationship between consumer satisfaction with PWI program services and employment. The analysis indicated a statistically significant correlation coefficient between consumer satisfaction with program services and employment (.395,  $p < .10$ ). Consumer satisfaction with program

services is likely to have a low to moderate positive correlation with employment satisfaction. Conceptually, the more satisfied a person is with the services designed to identify job and career opportunities based on the specific needs and interest of the person, the more likely the correspondence between work personality and work environment which lead to job satisfaction (Dawis & Lofquist, 1984). The relationship between people with disabilities and work is interactive and complex and affects and is affected by many factors (e.g., individual, economic, social, political, and cultural factors), yet a central aspect to human existence (Szymanski et al., 1996). Providing more equal opportunities for the two-thirds Americans of working age with disabilities who want to work yet remain unemployed is a key philosophical tenet of rehabilitation counseling, one in which is supported and mandated by recent Amendments to the Rehabilitation Act.

#### Choice and employment.

The fourth research question asked if there was a relationship between consumer choice in the rehabilitation process and employment satisfaction. There was no statistically significant correlation coefficient between level of choice and employment satisfaction (.343,  $p < .13$ ). Given the small sample size, this relationship should not be dismissed and further investigation is warranted to better understand the nature of the relationship, which may help to create greater employment opportunities for people with disabilities. There was no previous research found exploring the relationship between choice and employment, however, Majumder, Walls, and Fullmer (1998) found a positive relationship between consumer involvement in the rehabilitation process and competitive closure rates.

The fifth research question asked if there was a relationship between consumer choice and satisfaction with PWI program services to employment satisfaction. Due to the low response rate of the employed subgroup ( $n=23$ ), a multiple regression analysis was considered an inappropriate analysis and therefore the examination of the separate and collective contributions of the independent variables (choice and satisfaction with programs service) to the variation in the dependent variable (employment satisfaction) could not be appropriately investigated.

#### Differences on the Measures According to Demographic Characteristics

The final research question asked whether there are differences in scores on measures of consumer choice and satisfaction with program services and employment depending on demographic characteristics. There were no statistically significant relationships found between the sample demographic characteristics and the three measures. The analysis was exploratory and not specifically guided by the PWI literature.

#### Summary of Findings

The goal of this research was to begin to unfold the consumer perspective by identifying the level of choice in the rehabilitation process, satisfaction with program services and employment, and empirically test relationships between the measures. The results from this study indicate that students and graduates of PWI computer technology and information processing training programs experienced considerable level of choice in the selection of employment goals, were satisfied with both PWI program services and with their jobs. There were significant relationships found with two of the four possible combinations of the measures. Level of choice is positively correlated with satisfaction

with program services, and satisfaction with program services is positively correlated with employment satisfaction. There was no significant relationship found between level of choice and employment satisfaction, and between demographic characteristics and the measures.

The findings indicate that while there is still a need for further research, this study has made some contribution toward acknowledging the consumer perspective as one important component of a comprehensive evaluation system, one that may be predictive of future job retention. In addition, the study began empirically testing key constructs that eventually may help to establish cause-and-effect relationships to help develop more effective strategies to increase the employment, retention, and advancement of people with disabilities.

### Limitations

Results from this investigation should be considered within the context of several important limitations. These limitations came from both decisions made in planning the study and issues that occurred when conducting the study. The first critical limitation concerns the generalizability of the results. The sample for this study consisted of participants drawn from a nationwide accessible population and the sample size was fairly small ( $n = 62$  nonemployed/other,  $n = 23$  employed subgroup), therefore generalizing the findings to the population is seriously limited. Soliciting participation from an accessible population also resulted in changing data collection procedures from disseminating information to a group of students and graduates who were present onsite to disseminating information to current students and mailing information to graduates. In the absence of random sampling, certain sample characteristics may have confounded the

results. The differences across persons, times, or settings, including the type and length of training, could have influenced the results. Future research might investigate the impact of these differences by tracking more students and program characteristics.

The second limitation underlying this study is the validity of using self-report methods. It was assumed that current and former consumers of PWI rehabilitation computer technology training programs have the prerequisite skills and abilities necessary to accurately and honestly assess the satisfaction with choice, program services, and employment; however, there is a question as to whether some participants may have confused the agency for which to report the satisfaction level with the CSQ and CCQ. Given the inherent differences between PWI projects and other human service programs (e.g., state-federal vocational rehabilitation), differences in consumer responses could have occurred which would impact the results from this investigation. Furthermore, there is question as to some consumers completing the MSQ when in fact they had neither graduated from the training program nor been competitively employed, therefore only those respondents who reported having graduated, job title, and salary range were included.

Finally, although the average time (12 to 18 minutes) for completing the Internet questionnaires was minimal, a limitation is recognized in the number of items comprising the Internet questionnaires ( $n= 77$ ). In addition, although tremendous effort went in programming the Internet questionnaires to address accessibility issues, a limitation is recognized in the increased risk of survey error. The technical sophistication may have made it impossible or difficult for some participants to receive and respond to the items depending on the type of computer, operating system, screen configuration, connection

speed, and type and version of the browser. Both the large number of items and technological issues surrounding this new development in survey methodology (e.g. Web survey) may have contributed to the low response rate. There may be some additional explanations for the low response rate. Member organizations may not have been required or hesitant to measure consumer satisfaction as part of a quality assurance program. Other programs reported going through major organizational changes so the timing might have been an issue contributing to the low level of participation by member organizations.

### Implications

Careful extrapolations of the conclusions from the study were made to contribute to the PWI literature. The results of this investigation appear to have potential implications with regard to future research, practice, and education.

### Future Research

It is hoped that this study will provide a stimulus for future research with broader implications for the larger population of PWI consumers. Certain noted limitations in the present study could be addressed by future research. This is a descriptive and correlational study used to describe relationships among consumer choice and satisfaction with PWI program services and employment that are of interest to the rehabilitation counseling profession. The study design does not lend itself to establishing and interpreting causal relations, but can inform the future direction of research in this area. Replication of the study is recommended with a larger PWI consumer population, using random sampling procedures, to adequately interpret the results of correlational and multiple regression analyses. Rigorous attempts to define the population of PWI

consumers could yield a sample that is representative of the larger population and therefore provide useful information about the current state of PWI rehabilitation computer based training program practice and provide a better overall picture of the field. A more heterogeneous sample is desirable because it would contain a wide variety of characteristics to which the results of the study may generalize.

Careful consideration should be given when constructing and programming Internet questionnaires. Conservative measures should be taken to design questionnaires in ways that minimize the differences between the various operating platforms, browsers, and even different version of browsers. A better solution to address accessibility issues would be to test various computers and browsers outside the organization in a variety of comparable environments. Special consideration also needs to be given to making the Web site accessible to individuals with different disabilities (e.g., people with visual impairments). For example, limiting the use of tables when designing questionnaires makes it easier for people who use screen readers. In addition, when employing Web questionnaires, include a welcome screen. The welcome screen should be (a) motivational, (b) emphasize the ease of responding, (c) clearly and explicitly instruct respondents on how to move around the site (e.g., how to proceed to the next page, next questionnaire, and go back and make changes) (Dillman, 2000), and (d) list contact information for technological complications.

The disadvantage of a mail survey is the reported low response rates. Perhaps employing waiting room surveys with a designated staff trained in soliciting voluntary participation from sampled consumers may help to increase the response rate. The staff would make the introductions to the study and then leave the room when the forms are



being completed and deposited in a ballot box. This method is supported by Greenfield & Attkisson (1994) and could be used to assess measures of choice and satisfaction with program services. In addition, given the type of training (e.g., computer technology and information processing) consumers receive from ARPCT projects and their familiarity with computers, measuring consumer choice and satisfaction with program services and employment could be conducted online. One of the national organizations (e.g., International Association of Business, Industry and Rehabilitation or ARPCT) may be interested in designing and programming Web questionnaires and offer the service to PWI organizational members. Gathering this information may provide ongoing evidence of the quality and effectiveness of the program. In addition, the information may be used with CARF and in justifying that the programs are meeting legislative mandates (e.g., increase employment, retention, earnings, consumer choice, and program accountability).

Another method committed to supporting and improving the quality of professional practice that may help to increase the low participation rate is through employing action research projects to better address the employment and retention of people with disabilities and consumer choice. Participatory research promotes empowerment through the development of common knowledge and critical awareness which may not be apparent in the dominant knowledge system and recognizes the inseparability of theory, practice, and the personal-political context (Sohng, 1995). This partnership between researchers, organizational members, and the people under study helps validate their contributions, experiences, common problems, needs, and links such experiences to political realities (Sohng, 1995). With new social and political developments and demands, there is a natural need to understand more about the issues

that emerge from the day-to-day problems of meeting the needs and goals of people with disabilities.

There are additional important areas for research that potentially can contribute to the quality of life among people with disabilities and their success in the world of work. One important research area is to use qualitative research methodology to enlighten and guide our understanding of the experiences of both service providers and people with disabilities in terms of informed choice. Establishing good theories will encourage us to look at relevant phenomenon in new and provocative ways to make connections that we might not have made before. This inductive process may inform and guide more effective intervention strategies and best practices.

A second important research area is to focus on the job satisfaction of people with various disabilities who have been placed through different types of rehabilitation agencies and systems (e.g., state-federal, private, PWI). This may help to determine the effectiveness of placement practices and to develop improved methods of placement that may result in more positive long-term outcomes for people with disabilities. Similarly, a third research focus on the job satisfaction of people with disabilities and employers would provide an assessment of the correspondence between ability needs and reinforcers (e.g., job satisfaction) and abilities and ability requirements (e.g., satisfactoriness) that lead to job retention (Dawis & Lofquist, 1984). This research focus may further help to explain the nature of the changes imposed by the new labor market demands and the changing expectations of consumers and employers.

A fourth research focus might be the establishment of career development strategies and programs to systematically improve adaptation to the world of work among

people with disabilities. Post-employment follow-up services need to be conceptualized as a developmental process rather than service delivery termination points. The general length of post-employment follow-up services by the participating ARPCT member organizations ranged from 60 days to endless. The professional rehabilitation community (Gilbride & Stensrud, 1999; Hershenson, 1996; Rollins, 1999; Rumrill & Roessler, 1999; Szymanski, 1999) supports making post-employment services available on an ongoing basis to help create more positive outcomes. Research needs to be focused on methods and training which facilitates pay increases and job promotions for persons with disabilities. Developing strategies and training for long-term on the job success may be important to achieve legislative mandates of retention and career advancement of people with disabilities.

### Practice

The results of this investigation appear to have some potential applications for professional practice. Respondents felt less involvement in choosing staff members, family members, or other advocates to be involved in the employment process and felt less satisfied with the amount of pay and chances for advancement. There may be several implications for those working with people with disabilities based upon these results. Professionals providing services to people with disabilities need to inform them of all their rights (e.g., right to refuse services, right to involve advocates, and overall right to make informed choices concerning vocational goals and services) before rendering services. Organizations can establish policies to help ensure that consumers are provided with opportunities to make informed decisions concerning their employment goals and rehabilitation program. Long-term positive outcomes (e.g., employment satisfaction,

tenure, advancement) may be improved by supporting consumers' choice and control in making major life decisions.

Rehabilitation professionals assisting people with disabilities in the career exploration and goal setting phase should clearly inform consumers of the salary ranges for different occupations and the prerequisite education, skill, and experience required to pursue higher paying jobs prior to establishing a vocational goal. Furthermore, training on how to obtain promotions should be provided to people with disabilities both during and after the placement process. Implementing career development services to empower people with disabilities may improve job retention and advancement.

### Education

The primary function of the rehabilitation counselor is to work with people with disabilities to enhance their vocational skills, coping skills, and other skills to participate as members of the community. The results of this investigation appear to have a few potential applications for rehabilitation education. One important educational area is to train rehabilitation professionals to focus on effective strategies to empower people with disabilities to make informed major life decisions and enhance their employment outcomes (e.g., retention, advancement). More successful outcomes could be achieved by acquiring the appropriate training in the following vocational counseling and employer consultation service areas: job placement strategies, follow-up and post-employment services, client job-retention skill development, and theories of career development and work adjustment. Equipping prospective rehabilitation professionals with the knowledge, skills, and experience is one mechanism to help insure more positive outcomes for people with disabilities.

## Conclusions

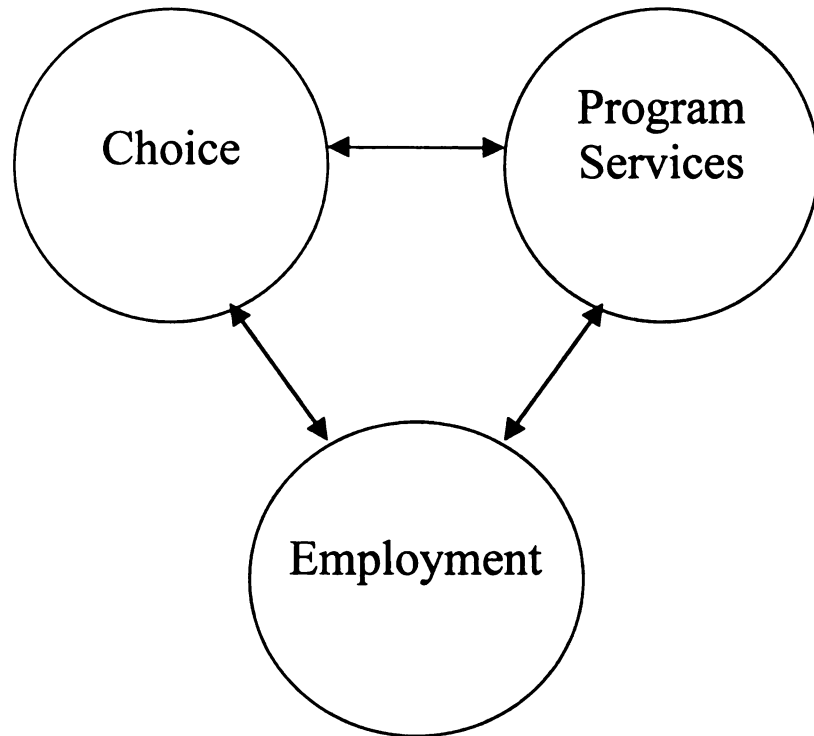
The findings from this study contributed to the rehabilitation counseling literature by beginning to explore relationships between consumer choice and satisfaction with program services and employment. The descriptive information on the current status of PWI projects with respect to critical aspects of the service delivery process (e.g., choice) and outcomes (e.g., consumer satisfaction with program services and employment) helped to determine the programs were meeting legislative mandates and program goals. Given the limited empirical research about PWI programs, continuing the research can lead to more effective service provisions to assist people with disabilities who want to work, yet remain unemployed or underemployed.

## APPENDICES

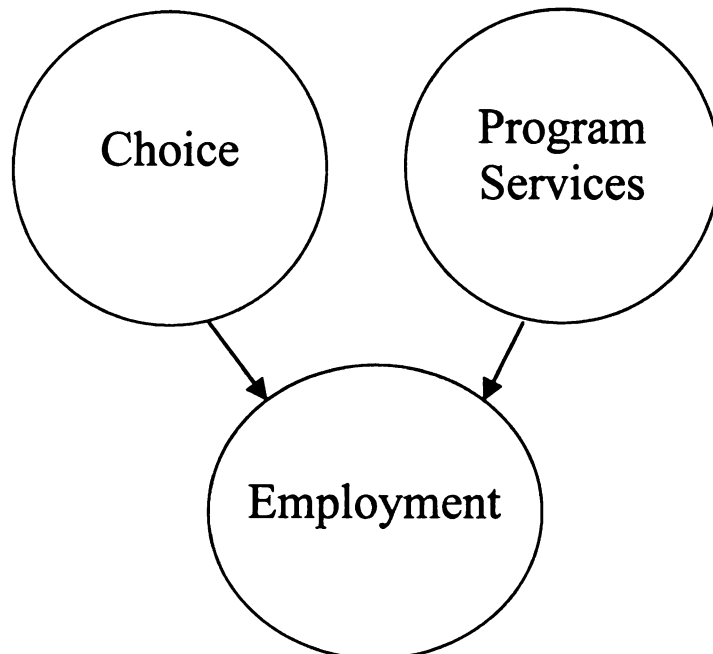
## APPENDIX A

### Research Models

#### Model 1



#### Model 2



## APPENDIX B

### PWI Rules and Regulations Annual Evaluation

#### Subpart C--How Does One Apply for an Award?

##### Sec. 379.21 What is the content of an application for an award?

(a) The grant application must include a description of--

(6) A plan to conduct annually a review and evaluation of the operation of the proposed project in accordance with the program compliance indicators and standards established in Subpart F of this part and, in conducting the review and evaluation, to collect data and information of the type described in subparagraphs (A) through (C) of section 101(a)(10) of the Act, as determined to be appropriate by the Secretary;

(b) The grant application also must include assurances from the applicant that--

(1) The project will carry out all activities required in Sec. 379.10;

(2) Individuals with disabilities who are placed by the project will receive compensation at or above the minimum wage, but not less than the customary or usual wage paid by the employer for the same or similar work performed by individuals who are not disabled;

(3) Individuals with disabilities who are placed by the project will--

(i) Be given terms and benefits of employment equal to terms and benefits that are given to similarly situated nondisabled co-workers; and

(ii) Not be segregated from their co-workers;

(4) The project will maintain any records required by the Secretary and make those records available for monitoring and audit purposes;

(5) The project will provide to the Secretary an annual evaluation report of project operations as required in Sec. 379.21(a)(6) and will submit reports in the form and detail and at the time required by the Secretary; and

(6) The applicant will comply with any requirements necessary to ensure the correctness and verification of those reports.

(Approved by the Office of Management and Budget under control number 1820-0566)

(Authority: 29 U.S.C. 718(c), 795(a), 795(b), and 795(e)(1)(B))



## **Subpart F--What Compliance Indicator Requirements Must a Grantee Meet to Receive Continuation Funding?**

### **Sec. 379.50 What are the requirements for continuation funding?**

To receive a continuation award for the third or any subsequent year of a PWI grant, a grantee must adhere to the provisions of its approved application and must receive a minimum composite score of at least 70 points on the program compliance indicators contained in Sec. 379.53.

(Authority: 29 U.S.C. 795(f)(4))

### **Sec. 379.51 What are the program compliance indicators?**

The program compliance indicators implement program evaluation standards, which are contained in an appendix to this part, by establishing minimum performance levels and performance ranges in essential project areas to measure the effectiveness of individual grantees.

(Authority: 29 U.S.C. 795(d)(1) and 795(f)(1))

### **Sec. 379.52 How is grantee performance measured using the compliance indicators?**

- (a) Each compliance indicator establishes a minimum performance level.
- (b) Each compliance indicator also establishes three performance ranges with points assigned to each range. The higher the performance range, the greater the number of points assigned to that range.
- (c) If a grantee does not achieve the minimum performance level for a compliance indicator, the grantee receives no points.
- (d) If a grantee achieves or exceeds the minimum performance level, the grantee receives the points assigned to the particular performance range that corresponds to its actual level of performance.
- (e) The maximum possible composite score that a grantee can receive is 150 points.
- (f) A grantee must receive a composite score of at least 70 points to meet the evaluation standards and qualify for continuation funding.

(Authority: 29 U.S.C. 795(f)(1))

**Sec. 379.53 What are the weights, minimum performance levels, and performance ranges for each compliance indicator?**

**(a) Percent of individuals served whose disabilities are significant. (3-10 points)** A minimum of 50 percent of individuals served by the project are individuals who have significant disabilities. The performance ranges and the points assigned to each range are as follows:

**(1) 50 percent to 59 percent--3 points.**

**(2) 60 percent to 75 percent--7 points.**

**(3) 76 percent or more--10 points.**

**(b) Percent of individuals served who have been unemployed for at least six months at the time of project entry. (5-15 points)** A minimum of 50 percent of individuals served by the project have been unemployed for at least 6 months at the time of project entry. The performance ranges and the points assigned to each range are as follows:

**(1) 50 percent to 59 percent--5 points.**

**(2) 60 percent to 75 percent--10 points.**

**(3) 76 percent or more--15 points.**

**(c) Cost per placement. (8-25 points)** The average cost per placement of individuals served by the project does not exceed \$1600.00. The performance ranges and the points assigned to each range are as follows:

**(1) \$1351 to \$1600--8 points.**

**(2) \$1000 to \$1350--17 points.**

**(3) Less than \$1000-25 points.**

**(d) Projected cost per placement. (5-15 points)** The actual average cost per placement of individuals served by the project does not exceed 140 percent of the projected average cost per placement in the grantee's application. The performance ranges and the points assigned to each range are as follows:

**(1) 126 percent to 140 percent--5 points.**

**(2) 111 percent to 125 percent--10 points.**

**(3) 110 percent or less--15 points.**

**(e) Placement rate. (8-25 points)** A minimum of 40 percent of individuals served by the project are placed in competitive employment. The performance ranges and the points assigned to each range are as follows:

- (1) 40 percent to 49 percent--8 points.
- (2) 50 percent to 69 percent--17 points.
- (3) 70 percent or more--25 points.

**(f) Projected placement rate. (5-15 points)** The actual number of individuals served by the project that are placed into competitive employment is at least 50 percent of the number of individuals that the grantee projected in its grant application would be placed. The performance ranges and the points assigned to each range are as follows:

- (1) 50 percent to 74 percent--5 points.
- (2) 75 percent to 94 percent--10 points.
- (3) 95 percent or more--15 points.

**(g) Change in earnings. (7-20 points)** The earnings of individuals served by the project who are placed into competitive employment have increased by an average of at least \$75.00 a week over earnings at project entry. The performance ranges and the points assigned to each range are as follows:

- (1) \$75 to \$124--7 points.
- (2) \$125 to \$199--14 points.
- (3) \$200 or more--20 points.

**(h) Percent placed who have significant disabilities. (3-10 points)** At least 50 percent of individuals served by the project who are placed into competitive employment are individuals who have significant disabilities. The performance ranges and the points assigned to each range are as follows:

- (1) 50 percent to 59 percent--3 points.
- (2) 60 percent to 75 percent--7 points.
- (3) 76 percent or more--10 points.

**(i) Percent unemployed placed. (5-15 points)** At least 50 percent of individuals served by the project who are placed into competitive employment are individuals who were

unemployed for at least 6 months at the time of project entry. The performance ranges and the points assigned to each range are as follows:

- (1) 50 percent to 59 percent--5 points.
- (2) 60 percent to 75 percent--10 points.
- (3) 76 percent or more--15 points.

(j) Summary chart of weights and performance ranges. The following composite chart shows the weights assigned to the performance ranges for each compliance indicator.

Performance ranges:

**Indicator:**

Individuals with significant disabilities served.....	3	7	10
Unemployed served	5	10	15
Cost per placement.....	8	17	25
Projected cost per placement	5	10	15
Placement rate.....	8	17	25
Projected placement rate.....	5	10	15
Change in earnings.....	7	14	20
Percent placed who have significant disabilities.....	3	7	10
Percent unemployed placed.....	5	10	15
Total possible score	49	102	150

(Authority: 29 U.S.C. 795(f)(1))

Sec. 379.54 What are the reporting requirements for the compliance indicators?

(a) To allow the Secretary to determine whether a grantee is eligible to receive continuation funding for the third year of funding (or the second continuation award) or any subsequent year of a PWI grant, each grantee must submit data to the Secretary for the first project year or for the most recent complete project year no later than 60 days after the end of that project year, unless--

- (1) The Secretary authorizes a later submission date; or
- (2) The grantee exercises the option in paragraph (c) of this section.

(b) The Secretary uses the data provided pursuant to paragraph (a) of this section to determine if the grantee has met the program compliance indicators established in this Subpart F.

(c) If the data provided under paragraph (a) of this section for the most recent complete project year shows that a grantee has failed to achieve the minimum composite score required to meet the program compliance indicators (see Sec. 379.52(f)), the grantee may, at its option, submit data from the first six months of the current project year. The data must demonstrate that the grantee's project performance has improved sufficiently to meet the minimum composite score.

(d) The grantee must submit data submitted pursuant to paragraph (c) of this section no later than 60 days after the end of that 6 month period, unless the Secretary authorizes a later submission date.

(Approved by the Office of Management and Budget under control number 1820-0566)

(Authority: 29 U.S.C. 795(f)(2) and 795(f)(4))

## **APPENDIX C**

### **Evaluation Standards for PWI Programs Part 379**

**Standard 1: The primary objective of the project must be to assist individuals with disabilities to obtain competitive employment. The activities carried out by the project must support the accomplishment of this objective.**

**Standard 2: The project must serve individuals with disabilities that impair their capacity to obtain competitive employment. In selecting persons to receive services, priority must be given to individuals with significant disabilities.**

**Standard 3: The project must ensure the provision of services that will assist in the placement of individuals with disabilities.**

**Standard 4: Funds must be used to achieve the project's primary objective at minimum cost to the Federal Government.**

**Standard 5: The project's advisory council must provide policy guidance and assistance in the conduct of the project.**

**Standard 6: Working relationships, including partnerships, must be established with agencies and organizations to expand the project's capacity to meet its objectives.**

**Standard 7: The project must obtain positive results in assisting individuals with disabilities to obtain competitive employment.**

**(Authority: 29 U.S.C. 795(d)(1) and 795(f)(1))**

## APPENDIX D

### Consumer Choice Questionnaire

This questionnaire is designed to assess the extent of consumer choice in the selection of employment goals and rehabilitation services provided by rehabilitation programs.

**Directions:** Please circle the level of choice you experienced from 0 = None to 4 = Very Much.

<i>How much <b>"involvement"</b> did you have in choosing each of the following:</i>	<i>None</i> <b>0</b>	<i>A Little</i> <b>1</b>	<i>Some</i> <b>2</b>	<i>Quite a Bit</i> <b>3</b>	<i>Very Much</i> <b>4</b>
1. This agency as your service provider?	0	1	2	3	4
2. Your short-term job goal?	0	1	2	3	4
3. Jobs to try out before getting a permanent job?	0	1	2	3	4
4. The training program you participated in?	0	1	2	3	4
5. The location of your job (in the town/part of town you prefer)?	0	1	2	3	4
6. Evaluation processes you completed (e.g., interest tests, job try-outs)?	0	1	2	3	4
7. Your long-term job goals?	0	1	2	3	4
8. Ways to overcome potential job barriers (e.g., job modifications, transportation)?	0	1	2	3	4
9. The specific services you needed at this agency?	0	1	2	3	4
10. A job with the benefits you would like (e.g., health insurance, vacation)?	0	1	2	3	4
11. Your general career interests?	0	1	2	3	4
12. The services in your overall employment/rehabilitation program?	0	1	2	3	4
13. Your future career goals?	0	1	2	3	4
14. Your specific job goal?	0	1	2	3	4
15. A job with the pay you would prefer?	0	1	2	3	4

16. The specific staff members you worked with at this agency?	0	1	2	3	4
17. Your initial job goal upon completion of services?	0	1	2	3	4
18. Your work shift (e.g., day, evening, full-time, part-time)?	0	1	2	3	4
19. The steps and activities in your employment/rehabilitation program?	0	1	2	3	4
20. A job with future career growth (e.g., advancement, higher wages)?	0	1	2	3	4
21. Whether family members or other advocates were involved in your employment program?	0	1	2	3	4
22. Being able to refuse to participate in services at this agency?	0	1	2	3	4
23. Employers and jobs of interest to you during job seeking and job interviewing activities?	0	1	2	3	4
24. Resources and services needed to achieve your job goals beyond those this agency could provide (e.g., independent living needs, financial needs)?	0	1	2	3	4
25. A job consistent with your strengths, abilities, and interests?	0	1	2	3	4
26. The specific services you wanted at this agency?	0	1	2	3	4



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## APPENDIX E

### DEMOGRAPHIC QUESTIONNAIRE



***Finally, we would like to ask you a few questions about yourself for statistical purposes.***

**Directions: PLEASE CIRCLE AND FILL IN YOUR ANSWERS**

1. Gender? (Circle number of your answer)

1. Male
2. Female

2. When were you born?

1. Year \_\_\_\_\_

3. Ethnicity? (Circle number)

1. African American
2. Asian American
3. European American/White
4. Middle Eastern
5. Native American
6. Multiple Ethnicity (Please Specify)

7. Other, Please Specify: \_\_\_\_\_

4. Disability type? (Circle number(s))

1. Developmental
2. Hearing
3. Physical
4. Mental and/or Emotional
5. Visual
6. Substance Abuse
7. Other, Please Specify: \_\_\_\_\_

5. Highest educational level? (Circle number)

1. Masters' degree or higher
  2. Bachelor's degree
  3. Associates degree
  4. Post secondary vocational training
  5. Short-term on-the-job training
  6. High school/GED
  7. Other, Please Specify:
- 

6. What agency(s) is also helping you? (Circle number)

1. No Agency
  2. Vocational Rehabilitation
  3. Commission for the Blind
  4. One Stop Workforce
  5. Social Security or Ticket to Work
  6. Other, Please Specify:
- 

7. Current Status? (Circle number)

1. Current student
  2. Graduate of program
  3. Graduate and employed
  4. Other, Please Specify:
- 

8. Work history (total number of years employed in the labor market)?

1. \_\_\_\_\_ Years

9. What year did you graduate from the rehabilitation program in computer technology?  
(Circle number)

1. Have not graduated yet
2. Year Graduated, Please Specify: \_\_\_\_\_

**\*If you marked "NOT GRADUATED" please skip (Q10 - Q19) to Question 20.**

10. Number of jobs you have had since you completed the rehabilitation technology training program?

1. \_\_\_\_\_ Number of Jobs

11. If you are NOT working at the same job since you completed the technology training program why did you leave? (Circle number)

- |   |  |
|---|--|
| 1. Quit                                     | 5. Unsuitability of work conditions          |
| 2. Terminated or fired                      | 6. Job did not make full use of my abilities |
| 3. Chronic illness or injury                | 7. Expected or actual loss of benefits       |
| 4. Level of work demands exceeded abilities | (e.g., SSI)                                  |
|   | 8. Other, Please Specify: _____              |

12. How did you get your CURRENT job? (Circle number)

1. Returned to job with prior employer
2. Rehabilitation staff helped find the job
3. Job found independently or through friends, family
4. Other, Please Specify: \_\_\_\_\_

13. Did you obtain the skills from the rehabilitation technology training program necessary to perform your job duties? (Circle number)

1. No
2. Somewhat
3. Yes

14. What is your present job called?

1. Current Job Title: \_\_\_\_\_

15. How long have you been on your present job?

1. \_\_\_\_\_ Years \_\_\_\_\_ Months

16. What do you do on your present job?

1. Primary Job Tasks: \_\_\_\_\_

17. Number of hours you are currently working per week?

1. \_\_\_\_\_ Hours Per Week

18. What is your hourly wage?

1. \_\_\_\_\_ Hourly Wage

19. Is this job in keeping with your long-term employment goal(s)? (Circle number)

1. No
2. Somewhat
3. Yes

20. How would you rate your experience with taking the surveys online? (Circle number)

1. Poor
2. Fair
3. Good
4. Excellent

21. If you were asked to complete another survey(s), which method would you most prefer? (Circle number)

1. Mail
2. Face-to-face interview
3. Electronic (online)

22. What did you like the **MOST** about completing the surveys online?

23. What did you like the **LEAST** about completing the surveys online?

***Thank you once again.***

## APPENDIX F

### Research Packet

#### Salt Lake Community College

May 30, 2001

MSU Research

#### MSU Research Guide

Researcher - Frances Saroki

(w) 1-877-682-3638

(h) (517) 676-7045 or (248) 350-3503

(email) [sarokifr@msu.edu](mailto:sarokifr@msu.edu)

Tech Help - Mark Rosenberg

(w) (617) 734-0290

(cell phone) (617) 290-9451

(email) [rosenb10@msu.edu](mailto:rosenb10@msu.edu)

#### Electronic Version of the Research Packet

Research Web site: <http://www.gisd.com/survey>

User ID/Name: **1000 Group - see assignment below** (please assign a number to each research participant and check off as you go along)

Password: **survey** (all users have same password)

Color Code: **blue**

#### Hard Copy of the Research Packet

Color Code: **blue**

One research packet includes: **(a)** blank colored (blue) index paper; **(b)** Consent Form--**ONLY SHEET OF PAPER THAT CAN BE TORN OUT AND KEPT**, all others need to be returned; begins with "Dear Participant,..." **(c)** blue copy of the Client Satisfaction Questionnaire (*CSQ-8*); **(d)** Consumer Choice Questionnaire (*CCQ-26*); **(e)** Minnesota Satisfaction Questionnaire (*MSQ-20*); and **(f)** Demographic Questionnaire (*DQ-17*).

**Salt Lake CC  
MSU Research**

<b>Number of Research Participants</b>	<b>User ID/Names</b>	<b>✓</b>
1.	1001	
2.	1002	
3.	1003	
4.	1004	
5.	1005	
6.	1006	
7.	1007	
8.	1008	
9.	1009	
10.	1010	
11.	1011	
12.	1012	
13.	1013	
14.	1014	
15.	1015	
16.	1016	
17.	1017	
18.	1018	
19.	1019	
20.	1020	
21.	1021	
22.	1022	
23.	1023	
24.	1024	
25.	1025	
26.	1026	

***Salt Lake***

www.gisd.com/survey

User ID = **1001**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1009**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1017**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1002**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1010**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1018**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1003**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1011**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1019**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1004**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1012**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1020**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1005**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1013**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1021**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1006**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1014**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1022**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1007**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1015**

Password = **survey**

***Salt Lake***

www.gisd.com/survey

User ID = **1023**

Password = **survey**



## APPENDIX G

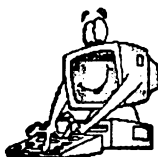
### Research Web Site

[www.gisd.com/survey](http://www.gisd.com/survey)

### ***Hello and Welcome to Research Online***

-----  
**Thank you for taking the time to complete the questionnaires. Your input *really matters* to us. Please make sure you complete ALL FOUR (4) questionnaires/surveys below and click the submit key after you are done with each one.**

***Copyright laws prohibit the copying/printing or distribution of the questionnaires.***  
-----



### **Your Input Matters**

#### **Dear Participants,**

The Association of Rehabilitation Programs in Computer Technology is an international organization of rehabilitation training programs that is dedicated to providing quality computer training and placement services for individuals with disabilities. We are interested in how well your program met your needs in order to make improvements meet the needs of all users. We therefore request your participation in a nationwide study whereby your help is requested in determining the level of satisfaction with program services you received, decision making and choice in selecting your employment goal and employment satisfaction to the attached questionnaire.

The results of the survey will be used to help improve the quality of services for you and other individuals with disabilities who participate in rehabilitation computer technology training programs. Your opinion is extremely important to us.

**All the information you provide will be kept strictly *confidential* and your *privacy* will be protected to the maximum extent allowable by law.** The analysis of the data will be in summarized form, with no individual identification. We therefore ask that you *please do not* place your name on the questionnaire to protect confidentiality.

Enclosed you will find four questionnaires. Participation is completely voluntary and you indicate your voluntary agreement to participate by completing the enclosed

questionnaires. It is expected that completion of this questionnaire will take less than 20 minutes of your time. Please consider participating in this study as ***your responses are valued and critical to the continued improvement of rehabilitation training programs and people with disabilities in general.***

Please fill out ALL four of the enclosed surveys by (date). If you have any questions about the study, or what is requested of you, please contact me at (517) 432-7712 or email me at sarokifr@msu.edu. If you have any further questions about your rights in participating in the study, you may contact the chairperson of the University Committee on Research Involving Human Subjects, David E. Wright, at (517) 355-2180.

Thank you.

Sincerely,

Frances J. Saroki, Doctoral Candidate Office of Rehabilitation and Disability Policy Studies, Michigan State University

**Click here to take the  
CLIENT SATISFACTION QUESTIONNAIRE© CSQ-8**

**Click here to take the  
CONSUMER CHOICE QUESTIONNAIRE**

**Click here to take the  
MINNESOTA SATISFACTION QUESTIONNAIRE**  
Please complete this survey (MSQ) only if you have completed your training and employed.

**Click here to take the  
DEMOGRAPHIC QUESTIONNAIRE**

Click here if you would like more information on the Association of Rehabilitation Programs in Computer Technology.

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