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Effects of an Interview Guide on the Accuracy of Ratings for Applicants with Disabilities

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EFFECTS OF AN INTERVIEW GUIDE ON THE ACCURACY OF RATINGS FOR APPLICANTS WITH DISABILITIES

by

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ABSTRACT

EFFECTS OF AN INTERVIEW GUIDE ON THE ACCURACY OF RATINGS FOR APPLICANTS WITH DISABILITIES.

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Old Dominion University, 1998
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The problem of bias in the employment interview for applicants with disabilities was addressed with research to identify if a decision aid can increase the decision making accuracy of interviewers. A survey designed to allow participants to rate applicants with five disabilities for three jobs (with three essential functions listed for each job) was used to assess rating accuracy of two groups. Participants who received the decision aid in the form of a Guide to Interviewing People with Selected Disabilities were expected to have more rating accuracy than those participants without access to the Guide. Accuracy was assessed by comparing participant ratings to target scores generated by an expert panel. Participants who received the Guide did not make more accurate ratings than the participants who completed the survey without access to the Guide, but it is likely that the results are a function of the limitations of the training rather than the Guide. Raters were significantly less accurate when rating the applicant with multiple sclerosis, as hypothesized. However, raters were also significantly less accurate for the applicant with a hearing impairment, despite their familiarity with the disability. The significantly lenient rating may be a function of the raters not considering the intense hearing requirements of the job tasks as seriously as did the experts. The practical implications for these findings are discussed with respect to interviewing applicants with disabilities.

I dedicate this work to three people who share my name and my multiple year effort toward the goal of Ph.D. Most importantly, my parents, whom I love, respect, and hope to make proud. My mom, Mary W. Greenwald, who told me I could do whatever I wanted to do and then helped me figure out what that was. She has been my mother, best friend, role model, cheerleader, and so much more. My dad, John R. Greenwald, who showed me the way by being the first Greenwald to get a Ph.D. He was there for me from the minute I came into this world to provide a helping hand, a word of advice, or a really bad pun. Finally, to Bill Mergen, a man who was brought to me by a random number table: Thanks for living through the rest of graduate school with me. It has been a burden to you, but you have shown your inherent patience and your abiding love for me every step of the way.

I thank you three with this dedication, even as I recognize that my words are insufficient to show the depth of my feelings. I love you.

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What we obtain too cheap we esteem too lightly; 'tis dearness only that gives everything its value (Thomas Paine). I could not do a project of this magnitude alone. I have many people to thank and recognize for their help.

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CHAPTER I

INTRODUCTION

People with disabilities comprised 23.5% of the United States' population of persons 15 years and older in 1991-1992 (U.S. Bureau of the Census, 1994). It is estimated that there are more than 18 million adults with disabilities who are of working age (Macan & Hayes, 1995). Some people with disabilities are unable to work because their disability or illness is severe or at odds with what they are trained to do. Others would like to work, but are not hired for jobs they are able to do because they are not perceived as desirable or able employees. Still others are underemployed, that is, they are more educated and more experienced than their job requires. These persons may enter the workforce underemployed or become that way because they are not perceived as promotable.

Unemployment and underemployment of people with disabilities negatively affects the United States' economy. For example, in the population of people aged 25 to 64, 20% of people with disabilities who have a high school education work full-time, compared with 66% of people with no disability. For those with a college education, 32% of the people with disabilities are employed full-time, compared to 79% of people without disabilities. People with work disabilities are also under represented in the upper income levels and over represented in the lower income levels (Storck & Thompson-Hoffman, 1991).

This dissertation uses the following style manual: American Psychological Association. (1994). Publication manual of the American Psychological Association (4th ed.). Washington, DC: Author.

Legislation and disability in the workplace

The concern about the differential treatment of people with disabilities is not academic. The United States Congress has passed legislation twice in 20 years that protects people with disabilities from discrimination. There are prescriptions for every barrier a person with a disability might face in our society, from public accommodations (e.g., telecommunications and transportation) to hiring practices.

The Rehabilitation Act of 1973 was passed to ensure that people with disabilities were not unfairly discriminated against by the federal government or its contractors. An affirmative action element was also included that required federal agencies and contractors to hire qualified people with disabilities.

The Americans with Disabilities Act of 1990 (referred to as ADA) is an extension of the Rehabilitation Act and was written and passed by Congress to address the utilization of people with disabilities in the private sector of our economy. ADA is far-reaching in that all United States employers (with over 15 employees) are required to ensure fair treatment of qualified individuals with a disability. This includes case-by-case consideration of requests from qualified applicants or incumbents for reasonable accommodations and the responsibility of the employer to incur cost for reasonable accommodation.

The Rehabilitation Act of 1973 caused employers to begin integrating people with disabilities into the workplace. One result was that companies hired people with disabilities, but channeled them into particular job categories, where they remained underemployed because of lower rates of upward occupational mobility (Johnson, 1993).

Title I of the ADA was crafted, in part, to address the problem of channeling

people with disabilities into certain occupations or job titles. ADA forbids designating certain jobs as disability jobs and requires employers to treat each applicant with a disability as an individual with unique qualifications and accommodation needs. Despite its prohibition of employment discrimination in the selection and placement of individuals with a disability, ADA does not have an affirmative action component; therefore, employers are still left to decide whether to choose a qualified applicant with a disability over a qualified applicant without a disability. The paradox in ADA is that each applicant must be treated as an individual, with individual abilities and tailored accommodations, but organizations need to have selection programs that are standardized and fair to all applicants for all jobs.

ADA imposes certain requirements on employers in all areas of the hiring process, including recruiting, writing job descriptions, designing application forms, administering tests and interviews, and making hiring decisions. All parts of the process must be made accessible to people with disabilities, and job-related requirements must be the basis for all hiring decisions.

When considering applicants with disabilities, employers are expected to consider several aspects of the person and job. ADA defines a qualified individual with a disability as a person who is capable of carrying out the essential functions of a job with or without reasonable accommodation. So employers must determine the essential functions for each job, and what other functions (called marginal duties) are preferred but not required. ADA defines an essential function as a fundamental duty for which the job exists.

Employers must also decide whether the applicant is qualified to do those essential functions, except for any limitations imposed by a disability. If a disability prevents

performance of an essential function, then the employer must decide if there is an accommodation that would aid the applicant to perform the essential function. Finally, if an accommodation is identified, the employer must decide if providing it is reasonable, or an undue financial hardship on the company.

In some organizations, these decisions are made in the course of an employment interview. The employment interview remains as a popular method of selecting applicants, and it is unlikely that an employer will hire an applicant with a disability without investigating reasonable accommodations in a face-to-face format (Arvey & Campion, 1982; Ash, 1992; Dipboye, 1994). Macan and Hayes (1995) speculate that organizations may depend on the interview even more as testing accommodations required by disability legislation create concerns regarding the effect of these accommodations on the validity and reliability of cognitive tests. Accommodations such as extending time limits or having assistants aid the deaf are of less concern in an interview situation because they should not significantly affect the reliability, validity, and fairness of the interview process. However, the effects of applicant disability on interviewer perceptions and decision making must be considered.

Making a decision about an applicant with a disability is a complex process. Interviewers may lack the knowledge that is required to understand all of the criteria in the hiring situation when disabilities are involved. This knowledge includes (a) the nature of appropriate questions (e.g., "will you be able to travel on short business trips 3 to 5 times a year?"), (b) questions which are against the law (e.g., "have you ever received worker's compensation?"), (c) the capabilities and limitations of persons with specific disabilities, (d) what reasonable accommodations are available in the organization or can be created

for each job and disability, and (e) the essential functions that are required for everyone versus the marginal duties that cannot be required of the person with a disability. In addition to knowledge requirements, an interviewer must be able to weight and combine the information that is elicited in an interview in appropriate ways. Without a format that structures the combining of information about the applicant, a disability is weighted so it has a disproportionate and stereotypical impact. A structure for organizing the relevant qualifications and experience of the applicant should include only the job-related aspects of the disability.

Interviewer decision making

Rowe (1984) suggested that most interviewers make decisions in a simple way, without much use of decision trees or other decision models that weigh the costs and benefits associated with applicant characteristics and abilities. In fact, Rowe hypothesized that interviewers just search for information that confirms categories assigned to the applicant during the initial impression. This is referred to by Dipboye (1994) as cognitive categorization.

When not following proper decision making strategies, people tend to use stereotypes and other biases that limit accuracy. Hattrup (1995) suggested that people depend on stereotypes most when information about a target is missing or ambiguous. People have a need for cognitive economy, and choose low effort strategies whenever possible to compensate for their limited cognitive processing capacity. When stereotypes are assigned, decision makers can rely on them rather than trying to acquire more information and overload their limited cognitive capacity. Although Hattrup focused on the effects of stereotypes on information acquisition, his research is related to work

evaluations of people who tend to be stereotyped, such as women, Blacks, and people with disabilities.

The literature on the biases of interviewers is extensive (Arvey & Campion, 1982; Harris, 1989). Typical errors include contrast bias, primacy/recency effects, similar-to-me effect, and first impression error. Contrast bias occurs when an interviewer compares an interviewee to the previous applicant and makes decisions about his or her abilities based on that comparison instead of more objective criteria. Primacy/recency effects occur when the interviewer can remember only certain applicants (the first or the last applicant interviewed) or certain information (the first or the last answer given) when making a decision.

Similar-to-me and first impression errors are very likely to occur in situations where interviewers without disabilities are interviewing applicants with disabilities. Interviewers would not identify and see themselves as similar to an applicant with disabilities, and therefore would probably not recommend that applicant for hire, regardless of qualification. First impression error occurs when a first impression overwhelms all information that follows. Some early research on the employment interview done by Springbett showed that professional interviewers made their decision about the applicant in the first four minutes of the interview, and that the decision was rarely affected by the remainder of the interview, especially if the decision was negative (Webster, 1982). If an interviewer allows the first impression (and related stereotypes) of illness or handicap to block subsequent evidence that the applicant with a disability has all of the abilities necessary to do the job, then accuracy and validity of the interview are compromised.

The problem with interviewers allowing stereotypes and biases to determine the outcome of an interview is that the true abilities of the applicant may not have been given sufficient weight, and an incorrect decision is made.

Decision making and structure

A way to deal with the tendency of interviewers to allow stereotypes and biases to dominate the decision process is to provide a structure that makes them consider relevant individual aspects of an applicant carefully before a final judgment. There is evidence that this approach is successful, both from the literature on structured interviews, and the literature on decision aids.

In order to aid the selection decision making process and control bias, many companies have chosen to develop a selection process that is fair, standardized for all applicants, and is job-related. This type of selection process is looked upon by the Equal Employment Opportunity Commission and the courts as legally defensible (Arvey, 1979). Some companies choose to use cognitive ability tests to be fair and standardized, whereas other companies use the interview. One popular way of controlling for errors in the interview is to use a method that limits the discretion of interviewers. The structured interview format controls the interviewer by standardizing the questions that are asked and the way that answers are scored.

Recent reviews and meta-analyses show that a structured interview based on a high quality job analysis and administered by a trained interviewer has validity that approaches that of cognitive ability tests (Conway & Jako, 1995; Harris, 1989; McDaniel, Whetzel, Schmidt & Maurer, 1994; Weisner & Cronshaw, 1988). A structured interview is characterized by job-related questions developed from job analysis, a standardized

format that is presented to every applicant, and rating scales anchored by predetermined answers.

Maurer and Fay (1988) suggested that structured interviews are more valid than unstructured interviews because the cognitive demands on the interviewer are lower due to the standardized questions and the more mechanical scoring (compared to the subjective scoring of the unstructured interview).

Wright, Lichtenfels, and Pursell (1989) conducted a meta-analysis of structured interviews and found that, compared to Hunter and Hunter's finding of low validity (i.e., 0.14) for the unstructured interview format, the structured interview had an estimated validity of 0.39 (corrected for predictor and criterion unreliability). Similarly, Weisner and Cronshaw's (1988) meta-analysis found that structured interviews had validity of 0.62 compared to the validity of unstructured interviews at 0.31 (corrected for restriction of range and criterion unreliability).

Another way to impose structure on an interviewer is to provide a decision aid. MacGregor, Lichtenstein, and Slovic (1988) demonstrated that increasing the structure of decision making with a decision aid improved the accuracy and consistency of decision makers' performance. The structure was increased through decomposition, which is breaking a problem into a series of smaller problems that are more easily understood and judged.

Lyness and Cornelius (1982) also found that in a performance rating situation, the decomposition strategy with data combined by algorithm was superior to holistic judgments and clinically combined data. As the complexity of a decision and the amount of information that is part of the decision increase, decomposition strategies improve the

ability of people to make overall judgments.

The problem to be investigated in the present research is how interviewer decision making can be improved to avoid dependence on stereotypes or other biases for people with disabilities while making selection decisions.

Decision points in the interview process

The interview process traditionally has four main decision points. First, with preinterview information about the job requirements and the applicant, the interviewer makes a decision about the value of interviewing the applicant for the position. The second decision point actually consists of many sequential decisions as the interviewer conducts the interview. The interviewer in a structured interview situation is making decisions about ratings for each standardized question, whereas the interviewer in an unstructured interview situation is making judgments about each answer and which question to ask next.

The third decision point is a judgment of overall fit between the applicant and the job (i.e., should we hire this applicant?). If the interviewer must choose between two or more applicants, there is a fourth decision point, which is the final choice among the applicants.

Interviewers are required to make these decisions based on information about the applicants (e.g., education, experience, abilities), requirements of the job that applicants are interviewing for, and other organizational considerations (e.g., organizational "fit"). The information must be considered according to criteria that are changing or not well specified for the interviewer. It is obvious that there are many factors already impacting the decision making process before the disability factor is added.

ADA and the decision points

ADA restricts the type of questions that can be asked of applicants at each decision point in the interview process. At no time in the preoffer stage may applicants be asked if they have a disability, and interviewers must consider carefully how applicants with disabilities that are evident or disclosed are able to do the essential functions. This requirement adds complexity to the interview decision process, especially if applicants with disabilities are not questioned in enough detail to identify their abilities or if the essential functions are never discussed in detail.

ADA requirements do not specifically prescribe how to go about accomplishing a careful and fair way of questioning applicants with disabilities. One possible strategy for the interview process is suggested here. This strategy describes ADA requirements at the decision points of the interview to ensure that all necessary information is included.

First, at the preinterview stage, the interviewer must be sure to gather information about the essential functions and marginal duties of the job for which the applicant is interviewing. These functions should be fairly detailed, including such information as working conditions (e.g., required travel, fixed hours, physical plant). The interviewer should also be familiar with a disability and the associated accommodations if an applicant has self-identified as having a disability. Then, the interviewer can make the decision to interview based on knowledge of the job and disability.

At the second decision point, additional steps are required at the beginning of the interview. First, every applicant should be questioned about his or her ability to do the essential functions of the job. If an applicant has a disability that is visible or self-identified, the interviewer must estimate an applicant's ability to do the essential functions

given the disability. Second, if an applicant is unable to meet a job requirement due to a disability, an investigation into reasonable accommodations should be made. If any applicant is not qualified for the job due to an inability to perform the essential functions, then the interview does not proceed. These sub-steps in the second decision point are the focus of the present research. Specifically, does providing interviewers with decision structure improve the accuracy of their decisions about the ability of an applicant with a disability to perform essential functions?

If an applicant is established as qualified, the interviewer asks questions in a structured or unstructured format to determine the fit and level of qualifications of an applicant. The decisions made here provide information for the third decision point.

The third decision point is the overall decision the interviewer must make about whether to hire the applicant. This decision point is subject to bias if the interviewer allows negative stereotypes about a disability overwhelm all of the job-related information gathered for the applicant.

The fourth decision point is faced if there are two or more acceptable applicants for one position. This decision point may be especially difficult if the interviewer must compare an applicant with a disability to an applicant without a disability. ADA does not require affirmative action for people with disabilities, so the interviewer must decide based on qualifications. If the applicant with a disability is not selected, however, the reasons must be job-related and carefully documented.

The quality of decisions may be improved at each of these points by adding structure. Structure can take the form of decision aids that provide information about disabilities and accommodations, as well as structured questions based on a good job

analysis and standardized for all applicants.

Most research regarding the hiring of people with disabilities has been limited to surveys of employer attitudes. The employment interview literature relating directly to people with disabilities is described in the following section. After that section, the problem and hypotheses for the present research are presented.

Interviewer decisions for applicants with disabilities

Limited research has been done on the decision making processes of interviewers relating to people with disabilities. The only research dealing directly with structure and decision making accuracy for applicants with disabilities was done by Miller (1991). She developed a structured survey that provides descriptions of five applicants with disabilities, three jobs, and three essential functions for each job. An expert panel rated each applicant for their ability to do the essential functions, with or without a reasonable accommodation. Graduate student participants rated the same information, and a comparison of the expert and student ratings showed significant differences. The students perceived the applicants with visual and hearing impairments as significantly less able to do the jobs when compared to the expert panel ratings, and the applicants with multiple sclerosis and epilepsy as significantly more able to do the jobs when compared to the expert panel ratings. The applicant who used a wheelchair was the most accurately rated applicant, with no significant differences between the student and expert raters.

Miller's (1991) research had some limitations. Primarily, her use of graduate students instead of experienced interviewers led to data collection from participants who were not familiar with the jobs or essential functions in the survey. The decomposition of the jobs into essential functions was the extent of the provided structure. Clearly, this

research needs to be expanded to identify how people who conduct interviews in the workplace perceive applicants with disabilities, and if interviewer accuracy can be improved using decision aids.

Other research about people with disabilities in the employment interview focuses on whether bias against applicants with disabilities exists, and what the causes of the bias might be. Macan and Dipboye (1988) investigated the effect of disclosure of a disability on an interviewer. They found that for an applicant in a wheelchair who did not disclose his disability in a telephone interview prior to the face-to-face interview, the evaluations were more favorable than for the applicant who did disclose. However, the applicant who did not disclose the disability prior to it becoming obvious was perceived as less honest than other applicants, and was less likely to be selected for the job. Overall, the applicants with disabilities were selected for jobs less than able-bodied applicants, despite their more favorable interview ratings. Macan and Dipboye suggest that societal norms regarding sympathy for people with disabilities makes the ratings favorable, but the personal consequences an interviewer will face if the employee does not succeed keeps people with disabilities from being selected.

One proposed model of interviewer thinking is the interaction between an interviewer and applicant (Macan & Hayes, 1995). Macan and Hayes suggest that interviewers form opinions of applicants based on paper credentials and interview presentation; applicants sense and respond to these opinions by acting in ways that confirm the opinions, which results in a self-fulfilling prophecy.

Macan and Hayes (1995) studied real applicants and interviewers and found that interviewers' pre-interview impressions and impressions of interview presentation were

predictors of post-interview evaluations. Interviewers who reported more contact with people with disabilities reported higher preinterview and interview impressions and higher postinterview evaluations.

Macan and Hayes (1995) found evidence that applicants with disabilities who discuss job-related aspects of their disability and encourage interviewers to ask questions about the impairment were seen as better applicants. It is difficult to identify whether applicants who are self-confident and comfortable with their disability are more likely to identify and discuss their disability. It is possible that these applicants are more desirable because of their self-confidence and not because the disability is discussed during the interview. This is related to Krefting and Brief's (1976) suggestion that employment problems for some people with disabilities may be due to unfavorable characteristics not related to their disability.

However, Macan and Hayes (1995) used participants in an interview program geared to hire people with disabilities, so some of these findings may not be relevant to typical hiring situations where an applicant with a disability is competing for a job with nondisabled applicants. The interviewers knew prior to the interviews that all applicants had disabilities, and in many cases had past experience with people with disabilities.

A series of attribution studies identified the important effect of cause of a disability on perception of an applicant. Bordieri and Drehmer (1986) presented evidence that the type and cause of disability affect interviewer ratings. Supervisors and managers reading simulated applicant information preferred to hire people with disabilities that are self-evident and externally caused. Hidden disabilities (e.g., mental illness, epilepsy, and chronic back pain) or those that are caused by the person with the disability were seen as

less desirable.

Bordieri, Drehmer, and Comninel (1988) showed that applicants with lower back pain were negatively rated for hiring decisions when compared with applicants who had no injury. In addition, applicants who were presumed to have caused their own back injury were more negatively rated than those who were seen as blameless for their injury. Thus, factors other than qualifications affected hiring decisions.

Bordieri, Drehmer, and Taricone (1990) found that applicants with cancer received lower hiring recommendations from supervisor and manager participants than did an applicant with pneumonia, and even lower ratings when the cancer was perceived as caused by the applicant. Interestingly, survival rates for the four cancers did not appear to be considered by the participants, as the applicant with liver cancer (who was described as having a 3% five-year survival rate) was recommended for hire at the same rate as the applicant with pneumonia (the control).

Cesare and Varvel (1994) found that applicants with disabilities received greater mean interview ratings than their nondisabled counterparts in videotaped and scripted interviews regardless of qualification. Qualified applicants did better than nonqualified applicants, so the raters (who were actual employment interviewers) were apparently able to identify good applicants.

As Cesare and Varvel's (1994) findings are counter to the suggestion of unfair discrimination in much of the rehabilitation literature (Bowman, 1987; Johnson, Greenwood, & Schriner, 1988; Minskoff, Sautter, Hoffman, & Hawks, 1987), there is some question that the interviewers may have been sensitized to or trained in the guidelines of the Americans with Disabilities Act. Also, the disability manipulation was

achieved by having the applicant seated in a wheelchair or a regular chair. No mention was made in the scripted interview of a particular disability or limitations the applicant might have, so it is possible that the raters assumed that there were no job-related implications of the wheelchair. The raters may have given extra points to the applicant in the wheelchair because of stereotypes such as people with disabilities are brave, work hard to overcome their disability, and are loyal to a company who will hire them (Bordieri & Drehmer, 1986; Cesare & Varvel, 1994; Krefting & Brief, 1976). Also, because this situation had no implications for the raters' organizations, they may have been answering in a socially desirable way. As suggested by Webster (1982) and other researchers (Arvey & Campion, 1982; Dipboye, 1994; Macan & Dipboye, 1988), interviewers will minimize the chance of making the mistake of hiring an unacceptable applicant when there are personal repercussions, but when these interviewers are not under pressure, they will give different ratings.

Cesare, Tannenbaum, and Dalessio (1990) investigated interviewer decision making with undergraduate participants. They found that raters reacted to the different disabilities with varied evaluations of applicant qualification and likability. This supports the contention of Rose and Brief (1979) that research with various disabilities should not group those disabilities together for research purposes, because raters react differently to each disability.

Rose and Brief (1979) found that although applicants with disabilities were recommended for hire at the same rate as applicants without disabilities, the person with epilepsy was expected to establish better relationships with customers and coworkers than the amputee and the applicant without a disability. These findings are also not typical of

the research that finds employers reporting unwillingness to hire people with disabilities (Arvey, 1979; Baker, 1974; Jamero, 1979; Nagi, McBroom, & Collette, 1971).

Two concerns with Rose and Brief's (1979) study are that undergraduates and not actual interviewers were used to rate applicants, and the applicant was highly qualified. The experience limitations of the subject population and the high level of qualifications for the applicant may explain why no unfair discrimination occurred, because people with disabilities are currently underemployed and it is possible that being highly qualified is seen as compensating for having a disability. In contrast, Cesare et al. (1990) purposely devised a moderately qualified candidate in order to make the candidate most susceptible to rater errors. It is clear from the variety of results, that the method for collecting data from interviewers about people with disabilities and other moderators can have a large impact on the outcome of the research.

In summary, no researcher other than Miller (1991) has investigated the effects of structure on the accuracy of decision makers with respect to applicants with disabilities. Her investigation limited structure to the decomposition of decisions. Her measures of accuracy were comparisons of target scores generated by experts to the participants' ratings.

The remainder of the reviewed research on the employment of people with disabilities showed the manipulation of factors that could affect interviewers' perceptions of applicants with disabilities (e.g., disability type, cause, and disclosure of a disability). However, the measures were simple comparisons of hiring rates for applicants with disabilities or without disabilities. These comparisons were used by the researchers to make inferences about decision maker accuracy.

For applicants without disabilities, researchers have provided interviewers with ways to avoid stereotypes and biases in the form of structure, but they have considered structure rather broadly. Structure for interviewers is provided in the form of structured interviews, to control bias by standardizing the questions asked and the way the answers are scored. Researchers in performance appraisal and other areas have used decision aids to provide another sort of structure by clarifying what information to use and how to combine that information through the decomposition strategy. The implications of the performance appraisal research suggest that by providing a structure for the process of an interview, interviewers will consider the correct information at the correct time, instead of allowing negative stereotypes or other biases to overwhelm the job-related information about a person's disability.

Problem for present research

The second decision point in the interview process requires an interviewer to make a decision about an applicant's ability to do the essential functions. Although this is typically done in a face-to-face interview situation, the focus of this research is on the accuracy of the decisions made by managers when presented with essential function and disability information. The manipulated variable is whether the participant receives the Guide to Interviewing People with Selected Disabilities. The Guide provides information about the five disabilities covered in this study, ADA rules regarding interviewing and discrimination, and guidelines for how to interview a person with a disability. This information should introduce additional structure into an uncertain situation, and aid the decision making of participants.

Typically, interviewers have been given no specific guidelines regarding the linking

of classes of disabilities with the essential functions of jobs. Although this lack of guidelines is meant to provide the most hiring flexibility for an individual with a disability, it adds confusion and perhaps even unintended discrimination to a selection decision. If the interviewer does not have enough information, the qualified applicant with a disability may never be recommended for consideration at the next step of the selection process, which is where reasonable accommodations are typically assessed. On the other hand, interviewers who lack sufficient information may recommend unqualified applicants with disabilities to the next step of the process. Either outcome burdens the selection system and may provide illegal treatment for people with disabilities. Investigating a way to increase the accuracy of managers' ratings for applicants with disabilities is the first step toward identifying a solution to the problem of inaccurate decision making strategies in managers.

Research Hypotheses

It is hypothesized that interviewers who use the Guide will make fewer errors when rating applicants with disabilities because of the additional structure that is provided in the form of information. It is also hypothesized that when raters do not have access to the Guide, applicants with less familiar disabilities (such as multiple sclerosis and epilepsy) will not receive accurate ratings of their abilities or required accommodations because the raters lack sufficient knowledge about the disability. In addition, it is expected that ratings will vary by job and disability due to the differences intentionally created in the job and disability descriptions.

CHAPTER II

METHOD

Participants

Thirty-eight management employees from a telecommunications company participated. Criteria for participation were that a manager (a) must supervise employees who work in the jobs surveyed in this research, (b) must be able to volunteer time (approximately 1 hr and 30 min) away from the job, and (c) must be able to attend a data collection meeting at the same time as other managers available at the same location.

Participants were asked about their interviewing experience and their familiarity with five disabilities. Only seven of the 38 managers indicated that they had some experience interviewing persons with a disability. The results for the familiarity questions are in Table 1. As shown in the table, most managers were somewhat familiar with the disabilities.

The participants received compensation in the form of a chance to receive a $50 coupon to a restaurant of their choice. The participants were assured that the information recorded on the surveys was not be linked to them personally in any way, in order to maintain confidentiality. They were told that data would only be reported in aggregate form to the company. Information gathered for the purpose of registering participants for the chance to win the coupon was kept separate from the research data.

Measures

The measures used were a Demographic Information Survey, the Disabilities, Jobs, and Essential Functions Survey (DJEFS), and a Manipulation Check. The manipulation was achieved with the Guide to Interviewing People with Selected

Table 1

Participants' (N = 38) Familiarity with Each of the Five Disabilities

Number of Participants:	Epilepsy	Hearing Impairment	Multiple Sclerosis	Uses a wheelchair	Visual Impairment
Know person well with	5	19	6	4	11
Very familiar with	3	6	1	1	3
Somewhat familiar with	28	31	27	23	32
Not at all familiar with	7	1	10	14	3

Disabilities and a control article (Caudron, 1996).

Demographic Information Survey. The Demographic Information Survey (see Appendix A) contained questions regarding the participant's gender, age, ethnic origin, current job title, interviewing experience and frequency, and familiarity with the jobs and disabilities in the DJEFS questionnaire. This information was used to describe the participants. The Demographic Information Survey did not ask for participants' names.

Disabilities, Jobs, and Essential Functions Survey. The DJEFS (see Appendix B) was adapted from the measure developed by Miller (1991). The survey asks participants to consider five applicants for three jobs.

Each applicant is judged by each participant for three jobs. Each job is defined with three essential functions and the participant must decide if the applicant can do each essential function. The participant makes independent ratings for each essential function

on a 3-point scale where 1 represents "can perform function," 2 represents "can perform function with accommodation," and 3 represents "cannot perform function." Participants are not asked to give an overall judgment of whether or not to hire the applicant.

Miller's (1991) survey format was altered in the following ways. The instructions were elaborated and kept separate from the survey (see Appendix C). The descriptions of the disabilities were the same, but the identities of the applicants were changed from general (e.g., Applicant A) to initials and a last name (e.g., A. J. Anders). Thus, the identities are still gender-, age-, and race-neutral, but are more personalized. Also, the description for the applicant who is paraplegic was changed to the applicant who uses a wheelchair. This change was made on the advice of accommodation and disability experts in the telecommunications company, who suggested that the term paraplegia is pejorative. The jobs and associated essential functions were different from the ones developed by Miller because the industry was changed from retail sales to telecommunications.

Disabilities. On the DJEFS, participants evaluate five applicants: a person who is visually impaired; a person with a hearing impairment; a person who uses a wheelchair; a person with multiple sclerosis; and a person with epilepsy. Respectively, these disabilities represent two sensory disabilities, a physical disability, a degenerative motor impairment, and a hidden disability.

Each disability is described in one short paragraph in which the abilities and limitations are at moderate and common levels of occurrence. For the disabilities with which participants may be less familiar (e.g., multiple sclerosis and epilepsy), the descriptions include one or two sentences about typical symptoms and treatment for those disabilities. The cause of the disability is only mentioned in two cases: The person who

uses a wheelchair was in an accident 10 years ago, and the person with epilepsy was diagnosed after a severe head injury 5 years ago. Blame for the injuries is not assigned.

The descriptions control the possible moderating effects of the variables of age, gender, education, and job experience by not providing that information. Further, the participants receive instruction that all applicants have similar educational backgrounds and sufficient job experience to qualify them to do the work.

Jobs. The job titles chosen for the DJEFS were Operator, Consultant, and Technician. These jobs are filled in the company with applicants who go through a set of selection tests and a final decision-making interview by the hiring department manager. In addition, the jobs are distinct from each other so that the participants must make different decisions for each applicant and disability (i.e., not all applicants can be chosen for all jobs) to achieve decision accuracy.

Essential Functions. Each job is described in the DJEFS by three essential functions chosen from current job descriptions on file at the company. The company job descriptions contain 7 to 14 essential functions, and an expert panel (described in the target score development section) helped to determine the final three essential functions for the three jobs.

Guide to Interviewing People with Selected Disabilities. This booklet (see Appendix D) presents information about the disabilities: visual impairment, hearing impairment, uses a wheelchair, multiple sclerosis, and epilepsy. The Guide presents basic information about the Americans with Disabilities Act of 1990, especially as it relates to hiring people with disabilities. A chapter describing the steps in the interview process provides suggestions for questions to ask at each step. These questions help the

interviewer to identify what information is important to obtain, and what decisions are to be made with that information. Another chapter covers the basic symptoms of the five disabilities, including the range of ability that comes with the particular disability and some general advice for interacting with a person who has that disability in an interview setting.

Manipulation Check. This survey (see Appendix E) was handed out with the Guide to Interviewing People with Selected Disabilities, and was used to evaluate if participants read and understood the information contained in the Guide and if participants in the no guide condition knew an unusual amount about disabilities and ADA. The Check contained ten multiple choice questions that asked the participant to evaluate what an interviewee with a certain disability could be asked, what essential functions and marginal duties are, and whether people with disabilities must be hired instead of an equally qualified applicant with no disability.

Design

The research employed a 2 x 3 x 5 x 3 x 3 mixed factorial design that includes the between-subjects factors of guide (guide or no-guide) and rater job (Operator Supervisor, Consultant Supervisor, and Technician Supervisor), and within-subjects factors for five disabilities, three jobs, and three essential job functions nested within jobs.

Nineteen participants received the Guide and the related Manipulation Check survey prior to completing the DJEFS questionnaire. The remaining 19 participants completed the Manipulation Check survey and the DJEFS without access to the Guide. The within-subjects factors of disabilities, jobs, and essential functions nested in jobs are measured by the DJEFS questionnaire. The five disabilities are: epilepsy, paraplegia, multiple sclerosis, hearing impairment, and visual impairment. The three jobs are:

Operator, Consultant, and Technician. Each job had three essential functions listed on the DJEFS questionnaire, which are specifically listed in the survey instructions.

Target score development

A panel of four experts generated target scores for evaluating the accuracy of ratings by participants (cf. Dickinson, 1987). These experts included a specialist in the telecommunications company who makes reasonable accommodation decisions for applicants with disabilities, two specialists who make testing accommodation decisions, and a manager who is president of the disabilities council within the company.

Target scores were generated for the three jobs and the associated essential functions. The expert panel was presented with the DJEFS in the same format as the participants except that the number of essential functions for each job was not limited to three, but ranged from five to seven essential functions for each job.

Before the experts generated ratings, the researcher familiarized them with the disabilities, the jobs, and the essential functions. The experts discussed the disabilities, jobs, and essential functions to ensure a common understanding. Once all experts were comfortable with the information, the rating process began. The experts made individual ratings as to whether a person with each disability could perform the essential functions and if accommodation was necessary. Although the experts had nearly unanimous agreement in their individual ratings, following these individual ratings, consensus discussions were led by the researcher. The discussions produced final ratings for each disability and essential function. The consensus ratings served as target scores for evaluating the rating accuracy of the research participants (cf. Dickinson, 1987).

Once the target scores were obtained, the researcher conducted a discussion with

the experts to select three essential functions for each job for the final version of the DJEFS. The experts were instructed to consider whether the essential functions could be performed by applicants with the five disabilities. The researcher emphasized that the panel should identify essential functions where performance varies by disability for each job. After the discussion, the researcher made the final decisions for selecting three essential functions for each job. The target scores for each essential function are in Appendix F.

The individual expert ratings for the selected essential functions were analyzed with a 4 x 5 x 3 x 3 analysis of variance. The independent variables were Experts, Disability, Job, and Essential Functions/Job. As noted by Dickinson (1987), the analysis of individual expert ratings serves to establish a lower bound for the quality of target scores. The quality of consensus ratings are equal to or greater than the quality of the individual ratings.

A summary of the analysis is shown in Table 2. The experts had nearly unanimous agreement in their initial ratings. This agreement is reflected by the zero values for mean squares (MS) for the Experts effect and its interactions with the remaining effects.

The significant Disability and Job effects indicate that the target scores possess convergent validity. Convergent validity suggests that the experts were able to differentiate between the five disabilities and the three jobs. Post hoc Newman-Keuls tests showed that the experts rated the applicants with multiple sclerosis, epilepsy, and a wheelchair as significantly more able than the applicants with the vision and hearing disability. Comments by the experts during the discussion session indicated that they were concerned that the vision and hearing disabilities were too severe for effective functioning

Table 2

Summary of the Analysis of Variance Results for DJEFS Target Scores

Source	df	MS	F-ratio
Experts (E)	3	0.00	
Disabilities (D)	4	8.53	99999.99*
E x D	12	0.00	
Jobs (J)	2	7.20	99999.99*
E x J	6	0.00	
D x J	8	8.53	99999.99*
E x D x J	24	0.00	
Functions/Jobs (F/J)	6	3.20	99999.99*
E x F/J	18	0.00	
D x F/J	24	0.53	99999.99*
E x D x F/J	72	0.00	

*$p < .01$

of the applicants in telephone company jobs for several reasons. Regarding the visual disability, operators and consultants work with computers and databases to give customers information and, in the case of consultants, enter or change service orders. It was suggested by the experts that there may be some way of providing visual accommodations through special software that reads the information on the screen to the operator or consultant. The experts felt that this may be impractical due to the need for the operators and consultants to listen to the customer while simultaneously entering data. For technicians, color vision and the ability to see and work with fine wires is critical.

Regarding the hearing disability, operators and consultants must interact with

customers on the phone, and many time the voices of the customers are difficult to understand due to accents, anger, bad speaking habits, or confusion of the speaker. The operators and consultants must provide excellent, accurate customer service in a short amount of time, and difficulty hearing is not acceptable or, many times, possible to accommodate. Technicians are required to listen to tones and "noise" on phone lines, in addition to interacting with customers and coworkers over phone lines.

The other effect that indicates the target scores possess convergent validity is the significant Job effect. A post hoc Newman-Keuls test showed that experts rated the technician job as significantly different from the operator and consultant jobs, which was expected. The technician job is quite varied in task requirements and the type of customer service delivered. Technicians must be able to trouble-shoot line problems, do phone line installation and repair, work outdoors, and interact with customers at the customer's premises. Operators and consultants interact with customers by telephone only, and must be able to work with records in computer databases while speaking and listening to the customer. The experts did not rate the operator and consultant positions as significantly different, although the jobs require some different skills. The consultants work with customers at length, asking many questions, setting up orders, trouble-shooting line problems, and selling features such as Call Waiting. Operators work quickly, with little customer interaction, to identify and give the requested listing. They have longer interactions with customers who need collect calls or special services, but these services are done more often by computers than human operators. The experts, however, saw that the three tasks presented for the two jobs did not require significantly different abilities.

The significant Disability x Job, and Disability x Essential Functions/Job

interactions indicate discriminant validity. That is, the experts were able to differentiate among the disabilities across the essential functions for each of the jobs. For the Disability x Job interaction, a post hoc Newman-Keuls test showed that the operator and consultant positions were rated similarly, and were different from the technician job in terms of the applicants with disabilities who were able to do the jobs. For the operator and consultant positions, the applicant who uses a wheelchair, the applicant with multiple sclerosis, and the applicant with epilepsy were rated as able to do the jobs, with an average score of 1.0 (can perform function). The applicants with visual and hearing impairments were rated as significantly less able to do the jobs of operator and consultant. These jobs are, as mentioned before, highly dependent on hearing the customer over a phone line, and simultaneously working with computer databases. Accommodations were suggested for the visual impairment, but the applicant with the hearing impairment was rated with an average score of 3.0 (cannot perform function).

The only applicant who was rated as able to do the technician job was the applicant with a hearing impairment. Apparently, the experts believed that the technician job did not have hearing requirements in the tasks that were presented. All other applicants were rated as significantly different from the applicant with a hearing impairment in their ability to do the technician job. The applicant with the visual impairment was rated as unable to do the job, and the average ratings for the other applicants were between 2.0 (can do with accommodation) and 3.0 (cannot perform function). The applicant with the wheelchair would have difficulty performing work at customer's premises when people do not typically have homes that are wheelchair accessible. The experts were concerned about the ability of the applicants with multiple

sclerosis and epilepsy to be safe in the extremely dangerous job of technician if they experienced tremors or seizures.

The Newman-Keuls post hoc analysis of the interaction effect of Disability x Essential Functions/Job delineates further the ratings of the experts. As mentioned above, the applicant with the visual impairment was rated as able to do the tasks of the operator and consultant jobs with accommodation, but the applicant with the hearing impairment was judged as unable to do the job tasks of the operator and consultant positions. For the technician position, the applicant with the vision impairment was rated as unable to do any of the tasks. The interesting finding is that the experts rated the applicant who uses a wheelchair, the applicant with multiple sclerosis, and the applicant with epilepsy as able to do the third task of the technician job, but unable to do the first two tasks. The difference in the third task is that it is a customer service task, where the technician is required to communicate clearly with the customer about the service and the billing. The experts indicated with their comments that the customer service element of the technician position is easily performed by these applicants, but cannot be separated in the work place from the physical and safety requirements as technicians must work alone.

The presence of these effects, which show convergent and discriminant validity, indicate that the target scores are of high quality (Dickinson, 1987).

Procedure

The researcher made telephone calls to potential participants and asked them if they were interested in participating. When two or more managers from a location agreed to participate, a survey meeting was scheduled for a convenient time for all participants.

Twelve survey meetings were conducted, ranging in group size from 2 to 5

participants. Each group was assigned either to: 1) guide condition, where participants read the Guide to Interviewing People with Selected Disabilities prior to completing the Manipulation Check survey and DJEFS, or 2) no guide condition, where participants read a control article (Caudron, 1996) prior to completing the Manipulation Check survey and DJEFS.

Groups were assigned to the conditions to obtain approximately equal numbers of participants who served as managers of the three types of employees considered in the DJEFS (i.e., Operator, Consultant, Technician). See Table 3 for the exact numbers of participants assigned to the conditions.

In the guide condition, participants filled out the informed consent form (see Appendix G). As part of the informed consent process, participants were told of the general purpose of the study, their rights as participants, and how confidentiality of the information was to be maintained. They were also told that the research was being conducted in questionnaire form because it would not be legal to judge actual applicants on disability alone, and that the focus of this research was on the effects of various disabilities on decision making.

After giving informed consent, the participants were then administered the Demographic Information Survey.

The participants were next given the Guide to Interviewing People with Selected Disabilities and asked to read the guide. They were told that there was no need to memorize any information as they would have access to their guide throughout the rest of the meeting. The participants were given approximately 20 min to read and study the Guide. Participants were encouraged to study independently.

Table 3

Assignment of Participants to Condition by Rater Job

Job of Participant	Guide Condition	No Guide Condition	Total
Operator Supervisor	7	7	14
Consultant Supervisor	6	5	11
Technician Supervisor	6	7	13
Total	19	19	38

Next, participants completed the Manipulation Check survey and handed it to the researcher.

Finally, a short (approximately 10 min) training workshop was led by the researcher to emphasize the facts presented in the Guide. In the workshop, participants read the instructions for the DJEFS and completed a sample rating item. The ratings for the sample item were discussed by the group of participants. Once the researcher was sure that the group understood the basics of the sample item, three more sample items were distributed, rated, and discussed (see Appendix H).

This workshop served the purpose of ensuring that the Guide was understood by the participants, and that they had the appropriate frame of reference to complete the DJEFS. Frame-of-reference training has been shown to have success in imparting common rater conceptualization and increasing rater accuracy (Latham, Wexley & Pursell, 1975; Woehr & Huffcutt, 1994).

After the workshop was completed, the participants were given the DJEFS. They were urged to treat the hypothetical applicants seriously and to provide a rating for each

essential function. They were cautioned to work independently and allowed to begin. This survey period was not time limited, but lasted approximately 30 min.

After all surveys were completed and returned to the researcher, the participants were debriefed. They were warned not to discuss the research with anyone who had been scheduled to participate but had not yet completed the surveys. Finally, participants filled out their raffle tickets to win the restaurant gift certificate.

In the no-guide condition, the participants experienced the same procedure as for the guide condition participants, except they did not receive the Guide and training workshop. Rather, a 20 min study period was administered during which they read an article unrelated to disabilities or decision making (Caudron, 1996). The article presented information about the difficulty of human resources managers to find qualified workers with the necessary skills in a marketplace where unemployment is at record lows and available workers lack basic skills.

After all participants finished reading the article, a 5 min discussion was facilitated by the researcher asking participants how relevant or realistic the article's information was for the telecommunications company.

After all participants had a chance to comment briefly, the researcher announced that it was time to complete a series of surveys. First, participants were given the Manipulation Check and instructed to do their best by using what information they might already know about disabilities. Next, they were administered the DJEFS instructions and completed a sample rating item. The sample item was discussed by the participants as a group, however, the researcher did not lead the discussion or provide additional sample items.

CHAPTER III

RESULTS

Overview

The results are presented in three sections. The first section describes the analysis of the manipulation check survey to evaluate knowledge about hiring employees with disabilities. The second section concerns ratings of applicant ability to perform essential functions. These results reflect the influence of the experimental design factors on mean ratings. The final section describes the accuracy of participant ratings in comparison to expert ratings. These results reflect the influence of experimental design factors on rating accuracy.

Manipulation Check

The scores on the manipulation check survey were the number correct out of 10 multiple choice questions. These questions explored the knowledge of interviewers about interviewing an applicant with a disability. Specifically, participants were asked whether certain questions were acceptable for applicants with disabilities, whether applicants with disabilities must be hired, and what were essential functions and marginal duties. There was a significant difference between the guide and no guide conditions (t (36) = 2.73, p<.05) to indicate that the raters in the guide condition scored significantly better on the manipulation check. The mean score of the guide group (M = 6.74) was greater than the mean score of the no guide group (M = 5.63), but the small difference between the two means suggests that the no guide group had substantial knowledge about interviewing an applicant with a disability.

DJEFS Ratings

A summary of the analysis of variance conducted on the DJEFS ratings is shown in Table 4. As mentioned previously, the score values for ratings are: 1 = can perform function, 2 = can perform function with accommodation, and 3 = cannot perform function. Therefore, lower mean scores indicate that raters believe the applicant is able to do the function, and higher mean scores indicate that the applicant is unable to do the function.

The guide condition was not significantly different from the no guide condition ($p>.05$). This finding indicates that the guide did not have an overall effect on the ratings. However, there was a significant interaction of Guide x Function/Jobs ($F(17,192)=31.25$, $p<.05$) to suggest that the raters in the guide and no guide conditions rated the essential functions somewhat differently for the three jobs.

A Newman-Keuls post hoc analysis (Winer, Brown & Michels, 1991) indicated several significant differences ($p<.05$) among the interaction means shown in Table 5 to reveal the nature of the interaction. For the operator job, the functions were not rated differently within the guide and no guide conditions. For the consultant job, functions 2 and 3 were rated significantly differently in the guide condition, whereas these functions were rated similarly in the no guide condition. For the technician job, function 3 was rated significantly differently than functions 1 and 2 in the guide and no guide conditions. Thus, the interaction is due to a minor difference between the guide and no guide mean ratings for the consultant job. Clearly, the interaction must be considered weak and possibly significant due to chance tendencies.

The analysis of variance shows a significant Disability main effect ($F(4, 128) = 35.00$, $p<.05$) to indicate that raters differentiated among the five applicants with

Table 4

Summary of the Analysis of Variance Results for DJEFS Rater Scores

Source	df	MS	F-ratio
Between Raters			
Guide (G)	1	3.65	1.15
Rater Job (S)	2	1.12	0.35
G x S	2	2.44	0.77
Rater (R)/G x S	32	3.18	
Within Raters			
Disabilities (D)	4	60.65	35.00*
D x G	4	4.05	2.34
D x S	8	2.07	1.20
D x G x S	8	1.99	1.15
D x R/G x S	128	1.73	
Jobs (J)	2	46.94	79.37*
J x G	2	0.13	0.21
J x S	8	13.24	25.48*
J x G x S	4	0.91	1.54
J x R/G x S	64	0.59	
D x J	14	32.57	54.65*
D x J x G	8	0.52	0.88
D x J x S	16	0.73	1.22
D x J x G x S	89	6.32	10.61*
D x J x R/G x S	256	0.60	
Functions/Jobs (F/J)	8	15.37	62.31*
F/J x G	17	7.70	31.25*
F/J x S	12	0.14	0.55

Table 4 Continued

Source	df	MS	F-ratio
F/J x G x S	12	0.07	1.29
F/J x R/G x S	192	0.25	
D x F/J	44	11.49	79.32*
D x F/J x G	24	0.18	1.25
D x F/J x S	48	0.14	0.98
D x F/J x G x S	48	0.10	0.70
D x F/J x R/G x S	768	0.15	

* $p<.05$.

disabilities. A Newman-Keuls post hoc analysis indicated that the applicant with the visual impairment ($M = 2.35$), and the applicant with multiple sclerosis ($M = 2.20$) were not rated significantly differently from each other, but were rated as significantly less able than the remaining three applicants with disabilities to perform essential functions. Further, the remaining three applicants with disabilities differed significantly from each other. The applicant with the hearing impairment ($M = 1.89$) was rated as less able to perform essential functions than the applicant who uses a wheelchair ($M = 1.68$). The applicant with epilepsy ($M = 1.29$) was rated as significantly more able to do the essential functions than all other applicants.

The significant Job main effect ($F(2, 64) = 79.37$, $p<.05$) indicates that raters differentiated among the three jobs in terms of the candidates' ability to perform them. A Newman-Keuls post hoc analysis revealed that the raters believed the applicants are least able to do the technician job, which had a significantly greater mean ($M = 2.20$) than the operator job ($M = 1.79$) and the consultant job ($M = 1.65$). Further, raters perceived the

Table 5

Means of DJEFS Ratings for the Guide by Function/Job Interaction

Job and Function	Guide	No Guide
Operator		
Function 1	1.73 (.75)	1.85 (.87)
Function 2	1.69 (.73)	1.85 (.87)
Function 3	1.84 (.82)	1.79 (.86)
Consultant		
Function 1	1.58 (.71)	1.66 (.84)
Function 2	1.51 (.71)	1.68 (.87)
Function 3	1.76 (.80)	1.72 (.86)
Technician		
Function 1	2.21 (.90)	2.43 (.86)
Function 2	2.29 (.85)	2.48 (.80)
Function 3	1.92 (.93)	1.88 (.93)

Note. Standard deviations appear in parentheses.

applicants with disabilities as significantly less able to perform the duties of the operator job than the duties of the consultant job.

A significant Rater Job x Job interaction ($F(8, 64) = 25.48$, $p<.05$) indicates that the Job ratings differ by the job incumbents that the rater supervises (i.e., operators, consultants, or technicians). The means are shown in Table 6.

A Newman-Keuls post hoc analysis revealed that the interaction was due to the consultant supervisors rating the consultant job significantly higher (less able to be performed) than did the operator and technician supervisors. The consultant supervisors also rated the technician job significantly lower than the operator supervisors. The three

Table 6

Means of DJEFS Ratings for the Rater Job by Job Interaction

Rater Job	Operator	Consultant	Technician
Operator Supervisor	1.81 (.81)	1.60 (.78)	2.30 (.85)
Consultant Supervisor	1.86 (.83)	1.80 (.83)	2.08 (.93)
Technician Supervisor	1.71 (.82)	1.58 (.79)	2.20 (.93)

Note. Standard deviations are in parentheses.

types of supervisors did not differ in their ratings of the operator job. In sum, the interaction was primarily due to the ratings of consultant supervisors being significantly different from those provided by the operator and technician supervisors.

A significant Disability x Job interaction ($F(14, 256) = 54.65$, $p<.05$) indicates that the ratings of the applicants with disabilities varied by the jobs for which they were being rated. The means in Table 7 indicate that the raters perceived the applicant with epilepsy as most able to do all jobs.

The Newman-Keuls post hoc analysis revealed that for the operator and consultant jobs, the applicant with epilepsy and the applicant who uses a wheelchair were rated as significantly more able to do these jobs than the remaining applicants. This pattern of significance varied for the technician job; for this job the applicant with epilepsy and the applicant with a hearing impairment were perceived to be significantly more able to perform this job than the remaining applicants. The applicant with a visual impairment and the applicant with multiple sclerosis were generally perceived to be less able to perform all jobs.

For all disabilities but the hearing impairment, the applicants were rated as

Table 7

Means of DJEFS Ratings for Disability by Job Interaction

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator	2.24 (.61)	1.21 (.42)	2.23 (.68)	2.14 (.98)	1.14 (.40)
Consultant	2.12 (.75)	1.21 (.42)	1.77 (.73)	2.03 (.99)	1.11 (.32)
Technician	2.69 (.68)	2.60 (.71)	1.68 (.85)	2.43 (.86)	1.62 (.79)

Note. Standard deviations are in parentheses.

significantly less able to do the technician job than the operator or consultant jobs. The applicant with a hearing impairment was rated as significantly less able to do the operator job as compared to the consultant and technician jobs. Apparently, similar to the experts, the raters perceived that the applicant with a hearing impairment in an operator job would have a very difficult time understanding a customer on the telephone who was talking in a short interaction with no context (making speech difficult to understand). In contrast, a consultant job requires interaction with customers over a longer period, and perhaps the raters believed that the applicant with a hearing impairment could use the context of the conversation to handle most of the information correctly. Further, the technician job allows face-to-face contact with a customer and provides the applicant with the hearing impairment with the best chance of understanding the customer.

A significant Function/Job effect ($F(8,192) = 62.31$, $p<.05$) indicates that the raters differentiated among the essential functions for the jobs. Table 8 shows the means.

A post hoc Newman-Keuls analysis revealed the nature of the interaction. The function means for the operator job did not differ significantly, whereas the functions for

Table 8

Means of DJEFS Ratings for the Function/Job Interaction

Job	Function 1	Function 2	Function 3
Operator	1.79 (.82)	1.77 (.81)	1.82 (.84)
Consultant	1.62 (.78)	1.60 (.80)	1.74 (.83)
Technician	2.32 (.88)	2.39 (.83)	1.90 (.93)

Note. Standard deviations are in parentheses.

the consultant and technician jobs showed significant differences. For the consultant job, function 3 was rated significantly higher than function 2; for the technician job, function 3 was rated significantly lower than function 2. Raters may have perceived that the consultant function 3 is more difficult because of the visual and fine motor skill requirements for operating a computer terminal as compared to the customer service requirements of consultant function 2. The technician function 3 is also a customer service function, and may be perceived as possible for most of the applicants to do easily.

The Newman-Keuls analysis also showed that functions 1 and 2 for the technician job were rated significantly higher than functions 1 and 2 for the consultant and operator jobs. Moreover, function 3 for the technician job was rated significantly higher than function 3 for the operator job. Perhaps raters perceived that technical functions are more difficult to perform by persons with disabilities because they must be performed at customers premises, which are often not accommodating of special needs. Also, the technician job is often performed outdoors, in conditions that require a person to be reasonably fit and in control of his or her body. Whether the technician function is a technical repair or trouble-shooting task or communicating with the customer (function

3), the conditions of the work apparently outweigh any other consideration. The operator and consultant jobs are performed indoors at computers while the incumbent is talking on a headset and listening to a customer.

The analysis showed two significant interactions related to Function/Job: Guide x Function/Job (discussed previously), and Disability x Function/Job ($F(44,768) = 79.32$, $p<.05$). The Disability x Function/Job interaction indicates that the ratings of the applicants with disabilities varied by the functions for each job. The means are shown in Table 9.

A Newman-Keuls analysis of the interaction means revealed a pattern of significance similar to that found for the Disability x Job interaction. That is, for the operator and consultant job functions, applicants with epilepsy and who use a wheelchair were rated as significantly more able to do the functions than other applicants. For the technician job functions, however, the applicants with epilepsy and with a hearing impairment were rated as significantly more able to do the job than other applicants. The Disability x Functions/Job interaction was due to slight magnitudinal differences in function 3 means for the three jobs. For example, the function 3 means for the technician job have smaller differences than the means for functions 1 and 2. Nonetheless, the pattern of significance among function 3 means agrees with the pattern found for functions 1 and 2.

A significant Guide x Rater Job x Disability x Job interaction ($F(89,256) = 10.61$, $p<.05$) indicates that the ratings of the applicants with disabilities varied by guide, rater job, and job. A Newman-Keuls analysis revealed that the significance of the interaction was due to the way in which the applicant with a hearing impairment was rated by the

Table 9

Means of DJEFS Ratings for the Disability by Function/Job Interaction

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator					
Function 1	2.34 (.58)	1.24 (.98)	2.13 (.41)	2.10 (.34)	1.13 (.85)
Function 2	2.36 (.54)	1.24 (.99)	2.16 (.37)	2.00 (.31)	1.10 (.84)
Function 3	2.00 (.66)	1.18 (.93)	2.39 (.46)	2.32 (.31)	1.18 (.87)
Consultant					
Function 1	2.08 (.43)	1.21 (.34)	1.74 (.69)	1.95 (.32)	1.13 (.83)
Function 2	1.95 (.43)	1.16 (.31)	1.76 (.75)	2.00 (.36)	1.10 (.71)
Function 3	2.34 (.39)	1.29 (.51)	1.82 (.77)	2.13 (.91)	1.10 (.97)
Technician					
Function 1	2.95 (.70)	2.87 (.75)	1.63 (1.01)	2.50 (.34)	1.66 (.81)
Function 2	2.92 (.68)	2.87 (.80)	1.71 (1.01)	2.63 (.34)	1.82 (.80)
Function 3	2.21 (.64)	2.05 (.67)	1.68 (.99)	2.16 (.93)	1.39 (.72)

Note. Standard deviations are in parentheses.

supervisors in the guide and no guide conditions.

An examination of the means (shown in Appendix I) and the Newman-Keuls analysis showed two consistent patterns. First, the supervisors saw no significant differences in how the applicants with the disabilities of visual impairment, multiple sclerosis, and epilepsy were able to perform the three jobs. This result was replicated for all combinations of rater job and guide condition; that is, supervisors from all three job categories and both guide and no guide conditions rated each of these applicants as equally able across the three jobs. Second, all three types of supervisors in both the guide

and no guide conditions rated the applicant who uses a wheelchair as significantly less able to do the technician job than the operator and consultant jobs.

The four way interaction was due to the supervisors rating the applicant with the hearing impairment differently in the guide and no guide condition. In the guide condition, the applicant was not rated differently in the capacity to perform the three jobs. However, in the no guide condition, the operator supervisors saw the applicant with a hearing impairment as significantly less able to do the technician job ($\underline{M} = 2.71$) than the consultant job ($\underline{M} = 1.48$), whereas the consultant supervisors saw the applicant as significantly less able to perform the operator job ($\underline{M} = 2.33$) than the technician job ($\underline{M} = 1.33$). Indeed, the consultant supervisors saw the applicant with a hearing impairment as significantly more able to perform the technician job than did the operator supervisors. Finally, the technician supervisors saw no difference in the ability of the applicant with the hearing impairment to perform the three jobs. Thus, the interaction is due to a minor difference between the operator and consultant supervisors mean ratings of the applicant with a hearing impairment in the no guide condition. Clearly, the interaction must be considered weak and possibly significant due to chance tendencies.

Rating Accuracy

The accuracy of ratings is described by orthonormal contrasts between the rater scores and the target scores (Dickinson, Hedge, Johnson & Silverhart, 1990). To calculate the orthonormal contrasts, each target score is subtracted from the corresponding rater score, and the sum is divided by the square root of 2 to adjust for scale effects. Therefore, a negative contrast indicates a lenient rating (i.e., raters believe the applicant is more able to perform the essential functions than the experts' ratings

indicate), and a positive contrast indicates a conservative rating (i.e., raters believe the applicant is less able to perform the essential functions than the experts' ratings indicate). An analysis of variance was conducted on the orthonormal contrasts, and the results are shown in Table 10. Accuracy for an effect is indicated by a lack of statistical significance and contrast values near zero (i.e., there is a close match between the rater score and the target score).

The analysis of variance indicated a nonsignificant main effect for Guide ($p>.05$). This finding suggests that the guide did not increase rating accuracy, although the mean of the contrasts for the two groups show that the guide group ($M = .02$) was more accurate that the no guide group ($M = .09$).

The analysis of variance indicated a significant interaction effect for the Guide by Essential Functions/Job ($F(17,192) = 21.99$, $p<.05$). This interaction suggests that the raters in the guide and no guide conditions rated essential functions within the three jobs with differing accuracy. The interaction means are shown in Table 11.

A Newman-Keuls post hoc analysis of the interaction means revealed a pattern of significance similar to that obtained for the analysis of the ratings. For the operator job, no mean differences in accuracy for the functions were found in guide and no guide conditions. For the consultant job, functions 2 and 3 were rated significantly differently in accuracy in the guide condition but not in the no guide condition. For the technical job, function 3 was rated significantly differently in accuracy compared to functions 1 and 2 in guide and no guide conditions. Clearly, similar to the ratings results, the interaction pattern of accuracy ratings between the guide and no guide groups must be considered weak and possibly significant due to chance tendencies.

Table 10

Summary of the Analysis of Variance Results for DJEFS Orthonormal Contrasts

Source	df	MS	F-ratio
Between Raters			
Guide (G)	1	1.82	1.15
Rater Job (S)	2	0.56	0.35
G x S	2	1.22	0.77
Rater (R)/G x S	32	1.59	
Within Raters			
Disabilities (D)	4	34.55	39.88*
D x G	4	2.03	2.32
D x S	8	1.04	1.19
D x G x S	8	0.99	1.15
D x R/G x S	128	0.87	
Jobs (J)	2	2.77	9.37*
J x G	2	0.06	0.21
J x S	8	1.44	4.88*
J x G x S	4	0.46	1.54
J x R/G x S	64	0.30	
D x J	14	23.17	77.74*
D x J x G	8	0.26	0.88
D x J x S	16	0.36	1.22
D x J x G x S	89	4.24	14.24*
D x J x R/G x S	256	0.30	
Functions/Jobs (F/J)	8	5.26	42.64*
F/J x G	17	2.71	21.99*
F/J x S	12	0.07	0.55

Table 10 Continued

Source	df	MS	F-ratio
F/J x G x S	12	0.04	0.29
F/J x R/G x S	192	0.12	
D x F/J	44	9.58	132.37*
D x F/J x G	24	0.09	1.25
D x F/J x S	48	0.07	0.98
D x F/J x G x S	48	0.05	0.70
D x F/J x R/G x S	768	0.07	

* $p<.05$.

A significant effect was found for the Disability main effect ($F(4,128) = 39.88$, $p<.05$) which indicates that the raters evaluated the applicants with disabilities differently than did the experts. A Newman-Keuls post hoc analysis shows that raters were accurate for the applicant with a visual impairment ($M = .01$) and the applicant with epilepsy ($M = -.11$), which do not have means significantly different from each other. The raters gave the applicant with a hearing impairment a mean rating ($M= -.31$) significantly different from the remaining applicants, and it is lenient as compared to the experts' rating. The raters are more conservative than the experts for the applicant in a wheelchair, and the mean accuracy rating ($M = .16$) is significantly different from the means for the remaining applicants. The applicant with multiple sclerosis received the most conservative mean accuracy rating ($M = .53$), which was also significantly different from the mean accuracy ratings given to the remaining applicants.

The significant Job main effect ($F(2, 64) = 9.37$, $p<.05$) indicates that raters differed in rating accuracy among the three jobs. A Newman-Keuls post hoc analysis

Table 11

Mean Orthonormal Contrasts between Ratings and Target Scores for the Guide by Function/Job Interaction

Job and Function	Guide	No Guide
Operator		
Function 1	.09 (.61)	.18 (.66)
Function 2	.07 (.58)	.18 (.64)
Function 3	.17 (.62)	.13 (.65)
Consultant		
Function 1	-.02 (.62)	.05 (.76)
Function 2	-.07 (.68)	.06 (.73)
Function 3	.11 (.67)	.08 (.75)
Technician		
Function 1	-.28 (.63)	-.12 (.67)
Function 2	-.22 (.61)	-.08 (.63)
Function 3	.36 (.78)	.34 (.80)

Note. Standard deviations appear in parentheses. Mean orthogonal contrasts near zero reflect greater accuracy.

revealed a significant difference between the operator job and the consultant and technician jobs. The operator job was rated somewhat conservatively ($M = .14$), and the consultant ($M = .04$) and technician jobs ($M = .00$) were rated fairly accurately.

A significant Rater Job x Job interaction ($F(8, 64) = 4.88$, $p<.05$) indicates that rating accuracy differed by the job the rater does (supervise operators, consultants, or technicians). The means are shown in Table 12.

Table 12

Mean Orthonormal Contrasts between Ratings and Target Scores for the Rater Job by Job Interaction

Rater Job	Operator	Consultant	Technician
Operator Supervisor	.15 (.55)	-.00 (.68)	.07 (.77)
Consultant Supervisor	.18 (.69)	.14 (.77)	-.08 (.71)
Technician Supervisor	.08 (.65)	-.01 (.67)	.00 (.73)

Note. Standard deviations are in parentheses. Mean orthogonal contrasts near zero reflect greater accuracy.

A Newman-Keuls post hoc analysis revealed the nature of the interaction. The consultant supervisors differed in their pattern of rating accuracy compared to the remaining types of supervisors. Specifically, the consultant supervisors rated the operator and technical jobs significantly differently in accuracy. Furthermore, the consultant supervisors differed in accuracy from the operator supervisors in rating the technical job.

A significant Disability x Job interaction ($F(14, 256) = 77.74$, $p<.05$) indicates that the disabilities were rated with differing accuracy depending on the job. The means for this interaction are shown in Table 13.

A Newman-Keuls post hoc analysis revealed a complex nature for this interaction. Applicants with the disabilities of epilepsy, multiple sclerosis, and hearing impairment were rated differently in accuracy for the operator and consultant jobs compared to the technical job. However, the nature of the differences in accuracy varied by disability. The

Table 13

Mean Orthonormal Contrasts between Ratings and Target Scores for the Disability by Job Interaction

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator	.17 (.43)	.16 (.29)	-.55 (.48)	.81 (.68)	.10 (.28)
Consultant	.09 (.53)	.16 (.29)	-.87 (.52)	.73 (.71)	.08 (.23)
Technician	-.22 (.48)	.19 (.58)	.48 (.59)	.07 (.80)	-.50 (.78)

Note. Standard deviations are in parentheses. Mean orthogonal contrasts near zero reflect greater accuracy.

applicant with epilepsy was rated slightly conservatively for the operator and consultant jobs but highly leniently for the technician job. In comparison, the applicant with multiple sclerosis was rated strongly conservatively for the operator and consultant jobs and slightly conservatively for the technician job. In contradistinction, the applicant with the hearing impairment was rated highly leniently for the operator and consultant jobs and strongly conservatively for the technician job.

The Newman-Keuls analysis also revealed that the applicant using a wheelchair was not rated differently in accuracy for the three jobs. Further, the applicant with the visual impairment was rated differently in accuracy only for the operator and technician jobs. The rating for the operator job was moderately conservative and for the technician job moderately lenient.

Regarding the conservative ratings for the applicant with epilepsy for the operator and consultant jobs and lenient ratings for the technician job, raters commented that they

were concerned that a seizure might occur during a call and have a negative impact on a customer. Surprisingly, raters were less concerned than the experts about the applicant with epilepsy doing the dangerous work of the technician. This may be evidence of some raters' lack of knowledge about the technician job requirements.

The pattern for the applicant with the hearing impairment indicates that the raters were less concerned than the experts that the applicant would have difficulty hearing customers on the telephone for the operator and consultant jobs. On the other hand, the raters believed that for the technician job the applicant needs to be able to hear more than believed by the experts.

A significant Function/Job effect ($F(8,192) = 42.64$, $p<.05$) showed that the raters were more accurate for the functions of some jobs than others. The ratings (see Table 14) for the functions of the consultant job were the most accurate, the ratings for the functions of the operator job were consistently conservative, and the ratings for the technician job were mixed. For the technician job, functions 1 and 2 were rated more leniently than by the experts, and function 3 more conservatively than functions for the operator and consultant jobs.

A Newman-Keuls analysis showed that the interaction was due to a pattern of no significant differences in rating accuracy for the functions of the operator job, whereas functions 1 and 2 differed significantly differently in accuracy compared to function 3 for the consultant and technician jobs.

The analysis showed two significant interactions related to Function/Job; Guide x Function/Job (discussed previously), and Disability x Function/Job ($F(44,768) = 132.37$, $p<.05$). The Disability x Function/Job interaction indicates that the ratings of the

Table 14

Mean Orthonormal Contrasts between Ratings and Target Scores for the Function/Job Interaction

Job	Function 1	Function 2	Function 3
Operator	.13 (.64)	.12 (.61)	.15 (.64)
Consultant	.01 (.70)	-.00 (.71)	.10 (.71)
Technician	-.19 (.66)	-.15 (.62)	.35 (.79)

Note. Standard deviations are in parentheses. Mean orthogonal contrasts near zero reflect greater accuracy.

applicants with disabilities were conservative or lenient depending on the functions for each job. The ratings are shown in Table 15.

A Newman-Keuls analysis of the interaction ratings revealed a pattern of significance similar to that found for the Disability x Job interaction. That is, the applicants with disabilities were rated differently in accuracy for the operator and consultant jobs compared to the technical job, and the nature of the differences in accuracy varied by disability. The applicant with the hearing impairment was rated very leniently for the operator and consultant jobs, and moderately conservatively for the technician job functions. The applicants with the disabilities of uses a wheelchair, multiple sclerosis, and epilepsy were rated conservatively (to different degrees) for the operator and consultant jobs and technician function 3, and leniently for the technician functions 1 and 2. The applicant with multiple sclerosis was rated the most conservatively, and the applicant who uses a wheelchair was rated slightly more conservatively than the applicant with epilepsy. The applicant with a visual impairment was rated conservatively on operator functions 1

Table 15

Mean Orthonormal Contrasts between Ratings and Target Scores for the Disability by Function/Job Interaction

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator					
Function 1	.24 (.41)	.17 (.69)	-.61 (.29)	.78 (.24)	.09 (.60)
Function 2	.26 (.38)	.17 (.70)	-.60 (.26)	.71 (.22)	.07 (.59)
Function 3	.00 (.46)	.13 (.66)	-.43 (.32)	.93 (.22)	.13 (.62)
Consultant					
Function 1	.06 (.30)	.15 (.24)	-.89 (.48)	.67 (.23)	.09 (.58)
Function 2	-.04 (.30)	.11 (.22)	-.87 (.53)	.71 (.25)	.07 (.50)
Function 3	.24 (.28)	.20 (.36)	-.84 (.54)	.80 (.64)	.07 (.69)
Technician					
Function 1	-.04 (.50)	-.09 (.53)	.45 (.72)	-.35 (.24)	-.95 (.58)
Function 2	-.06 (.48)	-.09 (.57)	.50 (.72)	-.26 (.24)	-.84 (.57)
Function 3	-.56 (.45)	.74 (.47)	.48 (.70)	.82 (.66)	.28 (.51)

Note. Standard deviations are in parentheses. Mean orthogonal contrasts near zero reflect greater accuracy.

and 2 and consultant functions 1 and 3, and leniently on consultant function 2 and all technician functions.

A significant Guide x Rater Job x Disability x Job interaction ($F(89,256) = 14.24$, $p<.05$) indicates that the accuracy of the raters for the applicants with disabilities varied by guide, rater job, and job. A Newman-Keuls analysis showed that the significance of the interaction was due to a significant difference in the pattern of accuracy by the raters for

the applicants with multiple sclerosis and with epilepsy in the guide and no guide conditions.

An examination of the means (shown in Appendix J) and the Newman-Keuls analysis revealed that in general, the supervisors had similar patterns of accuracy in their ratings of the applicants with a visual impairment and with a wheelchair. This result was replicated in all combinations of rater job and the guide and no guide conditions; that is, supervisors from all three jobs were not significantly different in their accuracy across jobs for the applicants with a visual impairment and with a wheelchair in the guide and no guide conditions.

The accuracy of the ratings for the applicant with a hearing impairment differed in significance based on the job, but the pattern was repeated across the job of the rater and guide conditions. The pattern was to rate the technician job differently from the operator and consultant jobs. The technician job was rated conservatively, whereas the operator and consultant jobs were rated leniently.

For the applicant with multiple sclerosis, the pattern of significance for accuracy ratings varied with the job of the rater and the guide condition, although the pattern of accuracy was the same in that the ratings were conservative for the operator and consultant jobs and closer to accurate for the technician job. All supervisors in the no guide condition rated the applicant with multiple sclerosis significantly more conservatively for the operator and consultant jobs than the technician job. However, only the consultant supervisors in the guide condition rated the applicant with multiple sclerosis significantly more conservatively for the operator ($\underline{M}$ = .98) and consultant ($\underline{M}$ = 1.06) jobs than the technician job ($\underline{M}$ = .00).

For the applicant with epilepsy, the pattern of accuracy was the same for all supervisors and both guide conditions; that is, the applicant was rated fairly accurately for the operator and consultant jobs, and leniently for the technician job. Only the ratings of the technician supervisors in the no guide condition failed to show significant differences in accuracy between the operator and consultant jobs compared to the technician job.

In sum, it appears that the interaction was significant due to differences in the patterns of rating accuracy for applicants with multiple sclerosis and epilepsy. However, the difference in the pattern of significance for the applicant with epilepsy was relatively minor between the guide and no guide conditions in rating applicants and may be significant due to chance tendencies. In contrast, the differences in the pattern of significance was much stronger in rating the applicant with multiple sclerosis. The guide condition improved accuracy for operator and technician supervisors, but did not improve the accuracy of the consultant supervisors. All supervisors in the no guide condition, supervisors consistently rated the applicant with multiple sclerosis significantly less accurately for the operator and consultant jobs compared to the technician job.

CHAPTER IV

FINDINGS AND INTERPRETATIONS

The purpose of this research was to investigate the effect of an interview guide on the accuracy of ratings made to the Disabilities, Jobs, and Essential Functions Survey (DJEFS). Previous research regarding the selection of people with disabilities for jobs is limited, and except for Miller's (1991) research using the DJEFS, does not include investigations of rater accuracy. This study expanded Miller's research by adding: 1) more structure in the form of the interview guide, 2) training for the raters who read the guide, and 3) raters who were supervisors instead of students.

Overview

It was hypothesized that the Guide would produce more accurate ratings. It was also hypothesized that raters would have more accurate ratings for the disabilities that were most familiar to them, such as hearing impairment, visual impairment, and using a wheelchair. Additionally, raters were expected to find differences among the jobs and the associated functions for the various disabilities.

The data were analyzed in two ways: Participants' ratings of the items on the DJEFS survey, and the accuracy of their ratings when compared to expert ratings. Although the pattern of results was essentially the same for both analyses, it is interesting to note that both provide a distinct way of looking at the data. The ratings results indicate how the raters placed each applicant on the continuum from "can perform the function" to "cannot perform the function." The accuracy results highlight the differences among the raters and the experts in the way that each group viewed the applicants on that continuum.

The raters in the guide condition did not perform significantly differently from the

raters in the no guide condition on the DJEFS for either analysis. Further, the applicants with disabilities were not rated as hypothesized. The most accurately rated were the applicants with a vision impairment and epilepsy, whereas the applicant with hearing impairment was rated leniently, and the applicants with multiple sclerosis and a wheelchair were rated very conservatively. However, the raters were able to differentiate between the jobs, functions, and disabilities in their ratings, as hypothesized.

The following discussion will examine these results in detail and interpret them in the context of the research hypotheses. Also presented are limitations and practical implications of the research, suggestions for future research, and overall conclusions.

Guide

It was hypothesized that raters who read the Guide would make fewer errors when rating applicants with disabilities because of the additional structure that is provided in the form of information. The Guide did not have the anticipated effect, and there are several possible explanations of this result. First, some participants commented during the research that they were familiar with ADA requirements and accommodations implemented at the telecommunications company. In addition to knowing about examples of employee accommodations, raters likely believed that employees who have a disability are valued by the organization. Such knowledge and beliefs may have affected the ratings. Second, it is possible that the training discussion was so limited in time and scope that it did not add incremental value to the directions on the DJEFS for the group who read the Guide. Clearly, future research should consider ways to improve the effectiveness of participant training.

Disability

It was also hypothesized that when raters did not have access to the Guide, applicants with less familiar disabilities (such as multiple sclerosis and epilepsy) would not receive accurate ratings of their abilities because the raters lack sufficient knowledge about the disability. Because there was no significant effect for the Guide, this hypothesis must be considered for the group of raters as a whole. The hypothesis was partially supported in that all raters were more accurate for some disabilities.

The disabilities rated most accurately were those of visual impairment and epilepsy. The accurate ratings of the visual impairment were encouraging because it was hypothesized that the visual impairment is one with which raters would be familiar. The jobs rated, especially the technician job, have very clear vision requirements and it was probably easy for raters to rate accurately the applicant who was visually impaired. The accurate ratings for the applicant with epilepsy were not expected, because it was hypothesized to be a disability unfamiliar to raters. However, anecdotal evidence gathered during the data collection point to epilepsy as a disability that had been accommodated at the company, and many participants had heard of the accommodations. Thus, raters were able to make accurate decisions about the job tasks for an applicant with epilepsy.

The applicant with the visual impairment was rated as significantly less able to perform the essential functions than other applicants and the applicant with epilepsy was rated as significantly more able to do the essential functions than all other applicants. As these were the most accurately rated applicants, it is possible that the accuracy stemmed from the fact that these applicants were at the extremes of the ability requirements for the telecommunications jobs.

The raters were lenient for the applicant with multiple sclerosis. Again, this only partially supported the hypothesis. It was expected that the applicant with multiple sclerosis would not receive accurate ratings. The raters did rate the applicant with multiple sclerosis as significantly less able to perform the functions than the other applicants, but were still lenient compared to the expert ratings. It is possible that the raters were unfamiliar with the disability, and were reluctant to rate the applicant with multiple sclerosis as completely unable to perform the functions of the various jobs.

In contrast, the applicant with a hearing impairment was not rated accurately, but conservatively. The raters gave ratings that placed the applicant with a hearing impairment in the middle of the applicants for ability to perform the essential functions. It is possible that the intensive hearing requirements of the telephone company jobs led the raters to be more conservative in their judgments than the expert panel. The description of the applicant with the hearing impairment included a comment about the need for face-to-face communication, which some raters noted is not possible in the operator and consultant jobs. Also, the raters may not have been familiar with all of the technological accommodations available to applicants with a hearing impairment.

As previously mentioned, the applicant with epilepsy was rated very accurately, and as the most able of the applicants to do the job tasks. Although it was hypothesized that raters would not be familiar with the disability of epilepsy, it is possible that the accommodations made for employees with epilepsy were known well enough to raters to aid their decision making. Many of the raters indicated to the researcher after returning the survey that they were familiar with accommodations for technicians with epilepsy. Also, it is possible that the job tasks were easy to rate, as most would be simple to do for

a person who has rarely occurring seizures. Other tasks, such as climbing a pole to do technical wiring work, would be too dangerous for a person with epilepsy to do if he or she might experience a seizure.

The findings in the present research do not completely match the findings by Miller (1991) for the DJEFS with retail jobs. Like Miller's raters, the participants rated the applicant with a hearing impairment conservatively and the applicant with multiple sclerosis leniently. Unlike Miller's raters, participants in the present research rated the applicants with the visual impairment and epilepsy most accurately. Miller's raters perceived the applicant with the visual impairment as significantly less able to do the jobs when compared to the expert panel ratings, and the applicant with epilepsy as significantly more able to do the jobs when compared to the expert panel ratings. It is clear that the job tasks rated affected rater perceptions of the applicants with disabilities.

The applicant who uses a wheelchair was the most accurately rated applicant in Miller's research, which was supported by Cesare and Varvel's (1994) finding that an applicant using a wheelchair is not rated differently from an applicant seated in a regular chair. In the present research, the applicant who uses a wheelchair was leniently rated, and also rated as more able to do the job tasks than all applicants but the applicant with epilepsy. It is possible that this result occurred due to the nature of two of the three jobs rated. The operator and consultant positions are desk-bound jobs that primarily require upper body movement (typing, viewing computer screen, and talking to customers by phone) and raters may have perceived that the tasks presented on the DJEFS were easy for the applicant who uses a wheelchair to do. Thus the lenient ratings may have resulted because two thirds of the tasks may have appeared to the raters to be easy for the

applicant to do.

Finally, the present research supports past findings (Krefting & Brief, 1976; Rose & Brief, 1979; and Cesare, Tannenbaum, and Dalessio, 1990) that raters react differently to each disability, which calls for research that specifically treats various disabilities as separate. By selecting one disability to represent how raters perceive all disabilities, a researcher is restricting the true range of abilities and situations that would occur in the workplace.

Job and Functions

The hypothesis that ratings would vary by job and disability was supported. These results were expected due to the differences intentionally designed into the DJEFS survey. The three telecommunications jobs were selected to provide a variety of job tasks that would appear distinct to the raters. The jobs were familiar to raters and had a large number of incumbents and supervisors. The disabilities were selected to provide a range of abilities for the raters to judge. Two of the disabilities were sensory (hearing and vision), one was a degenerative motor impairment (multiple sclerosis), one a physical disability (uses a wheelchair), and one was a hidden disability (epilepsy).

As with the expert panel, the raters were able to differentiate between jobs and functions and disabilities. The significant Disabilities effect suggests convergent validity, that is, the participants were able to differentiate between the five disabilities. The significant Disabilities x Jobs interaction and the significant Disabilities by Essential Function/Jobs interaction are indicative of discriminant validity. These interactions show that the participants were able to differentiate among the disabilities across jobs and across essential functions.

Ancillary findings

An interesting finding that was not hypothesized was the interaction between the rater's job and the rated job. This interaction was investigated in an effort to confirm that raters from one area of the company did not have better information about the Americans with Disabilities Act than raters from another area. However, the result was that the rater's job did have an effect. The technician supervisors were the most accurate decision makers of the three groups, which is interesting given their lack of formal ADA training. However, the technician supervisors may have the best understanding of the requirements of the three jobs in the company, because comments made by the supervisors of consultants indicated their lack of understanding of the technician job requirements. The consultant supervisors were lenient for the technician job, but the operator supervisors made accurate ratings for the technician job. The most interesting finding was the conservative tendency of the operator and consultant supervisors for rating the operator and consultant jobs. Most of the consultant supervisors had received some interviewing and ADA training, but they had the least accurate ratings of the three groups. They may have been responding to the need to make the job more complex than it appeared in the limited description allowed by the DJEFS format of three tasks per job.

Limitations

The primary limitation in this research is the weakness of the training. The original focus of the research was to make the Guide an aid to support decision making in interviewers. Frame-of-reference training was added to the methodology to provide participants skill in using the Guide. As the training did not cause participants in the guide condition to rate more accurately, it is suggested that the training be improved. A more

useful training module probably should include specific links between each disability and job task in order to prepare the interviewers to make consistent and fair decisions. For example, although the trainer did present the correct ratings for the sample items, an explanation for the reasoning of these ratings would also provide the participants with a decision making strategy. Futhermore, providing the participants with more opportunities to make practice ratings would confirm their understanding of the decision making strategy.

Another limitation occurred with the descriptions of the people with disabilities. The descriptions were vague in areas critical to the telephone company jobs that were not obvious until much of the data had been collected. For example, the applicant with a hearing impairment was described as needing face-to-face contact to enhance understanding, but the description did not clearly state that lip reading was necessary for the applicant to be able to understand the speaker. The raters were in the position of making a decision about the applicants for job tasks that required talking with a customer by telephone, without knowing whether the applicant could hear well enough to understand a customer without lip reading. This is a decision that primarily affected the operator and consultant jobs specifically because of the nature of those jobs. All tasks for these two jobs required phone contact with the customer. These two job descriptions could be improved, and clearly, if jobs other than the three in this study are used in future research they should be thoroughly tested.

A related limitation is that applicants were described on paper instead of presented in person. This choice was not made lightly. Collecting data with busy supervisors required minimizing the time for research participation. However, the use of paper

descriptions probably made the ratings less realistic than they would have been if the participants had experienced an actual interview situation. However, it is possible that the paper presentation may have taken the pressure off of the supervisors and allowed them to be more honest and less affected by personal differences of the applicants.

Practical Implications

This research presents an encouraging picture of the possibilities for using a Guide in the workplace to aid interviewers in their task of interviewing applicants with obvious or disclosed disabilities. The results suggest that the Guide would be a useful tool with sufficient training to support its use. Thorough interviewer training regarding specific abilities of applicants with various disabilities is not typically done in organizations for two reasons. First, the ADA directive that applicants must not be classed according to disability, but considered individually for their own abilities and skills has made many organizations depend upon an ADA specialist to make the final decision in conjunction with the applicant and his or her doctor. Second, training for interviewers on ADA and specific disabilities takes an organization's commitment of time and money for development and delivery, and many organizations do not even have a formal interviewing format in place.

The lack of decision making training for managers is in direct contrast to the need of managers for this training due to their common practice of making hiring decisions. If left to their own devices, managers are likely to develop inappropriate decision strategies. As mentioned previously, anecdotal evidence from the research participants suggests that people enjoy having extensive guidance and information available to them. A few participants commented that it gave them information that had an impact on their personal

life. One participant explained that his son had a severe hearing impairment, but that he had never perceived his son as having a disability. The participant had been concerned about the ability of his son to find a job, but once he learned that his son was protected by ADA from unfair discrimination, he felt that his situation was not as impossible as he had feared.

Another significant piece of anecdotal evidence is that information about how people with disabilities are accommodated in a large organization becomes widely known. Several times the researcher was told that a participant felt comfortable answering some of the survey items because he or she had knowledge about how a person with that disability had been accommodated by the organization in the past. Although ADA does not permit an interviewer to make a hiring decision by considering all people with a certain disability as having the same abilities, it is permissible and useful for interviewers to have a common understanding of how to accommodate individuals for an organization's jobs. This reinforces the need for an organization to provide the Guide and the appropriate training for managers instead of taking the chance that they will rely on information they have heard through unofficial sources. The managers may make decisions based on an inaccurate understanding of the reasoning behind an accommodation.

Future Research

Based on the limitations of the present research, the primary suggestion for future research is to develop a more detailed training for the interviewers, based on a close linkage between job tasks and applicant abilities. This training, once its value is shown in research, could be a valuable addition as a segment of current interviewer training in an organization.

Another direction for future research is to extend the findings to management and sales positions. The value of investigating management and sales tasks results from the less concrete nature of the requirements of those jobs. For example, management positions may require leadership ability and sales positions require persuasiveness. These job requirements, although critical to the performance of the job, are more difficult to measure and thus are more susceptible to biases and inaccurate decisions for applicants with disabilities.

An additional direction for future researchers to consider is industries other than telecommunications. A useful industry to investigate is the fast growing field of information technology. Demand for information technology analysts is growing faster than the supply, and the ability to select qualified applicants regardless of disability is critical to the success in this industry.

Conclusions

The present research has contributed a significant addition to the literature regarding the accuracy of ratings for people with disabilities. In a field study with telecommunications supervisors, accurate ratings were found to depend on the disability being rated, and the job for which it is rated. This finding has replicated past literature which identified that people with disabilities are rated differently depending on their disability, but has extended the literature by confirming that the accuracy of ratings also differs. Thus, ADA and interviewer training for supervisors or anyone who has an effect on hiring decisions must take into account their need to have detailed information instead of generalized rules. Guidance from various sources can be used to aid in the decision making for an applicant with a disability.

The present research also shows that supervisors who have a complete and specific understanding of the job requirements can be successful at making accurate hiring decisions about applicants with disabilities. This is valuable information in the current era characterized by recent downsizing, a growing shortage of highly skilled people, and lawsuits. By providing supervisors with appropriate structure, they can play a role in the hiring of the best qualified applicants without exposing their organization to losses from legal action.

This research is useful for three reasons. First, it is generalizable to other organizations. A large number of telecommunications organizations could apply these results directly to operator, consultant (service representative), and technician jobs. In addition, any organization with job tasks such as talking on the phone while entering data on a computer terminal, customer service, and technical wiring (electricians and cable installers) would be able to consider those tasks as closely related to the tasks in the research. Thus, the organization could identify the need to provide interviewers with detailed information and appropriate training to understand the fit of an applicant with a disability.

Second, the Disabilities, Jobs, and Essential Functions Survey (DJEFS) is a useful tool for other researchers who wish to investigate the accuracy of raters for applicants with disabilities. DJEFS is a tool that can be tailored to any industry or set of jobs in order to establish accuracy of raters.

Third, the methodology of comparing participants' ratings with expert panel ratings is useful for identifying accuracy of raters. Using expert ratings to train interviewers to make accurate decisions for applicants with disabilities would add great

value to the understanding and ability of the interviewers.

Research such as the present study points to ways in which people with disabilities can be fairly and accurately assessed and integrated into the workforce. Many people in our society are affected in some way by disability, whether it is that of a coworker, friend, family member, or self. Furthermore, as the population ages, the number of people in the workforce with disabilities will grow. Employers who provide reasonable accommodations for employees who become disabled will prevent the loss of years of experience and skills. If a current employee with a disability can be accepted and accommodated, then perhaps employers, interviewers, and coworkers can learn to accept new employees with disabilities. Staffing shortages force us to look for new, unexplored possibilities, and the often overlooked population of people with disabilities is a potential source.

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APPENDIX A

DEMOGRAPHIC INFORMATION SURVEY

Demographic Information Survey

Please answer the following questions by placing a checkmark (or X) in the blank next to your response. Remember: We need this information strictly for the purpose of describing the participants as a diverse group and understanding group results. At no time will this information be used in an individual way to identify you in the research report or to the company. Your data will be kept confidential at all times. For that reason, please do not write your name on this, or any, of the research pages. Your data will be related by a number only.

Sex: _____ Female _____ Male

Race: _____ African American
_____ American Indian/ Alaskan Native
_____ Asian/ Pacific Islander
_____ Hispanic
_____ White
_____ Other: _____

Age: _____ 30 and younger
_____ 31 - 40
_____ 41 - 50
_____ 51 and older

Current Job Title: _____

If you don't regularly interview but you do make hiring decisions, please answer the questions below for hiring decisions and check (or X) here ____. If your job does not include either interviewing or making hiring decisions, skip ahead to "Are you..."

Number of interviews you have administered in the past month:
_____ None
_____ 1
_____ More than 1

Estimate the number of interviews you have administered in the last year:
_____ less than 12 (less than 1 per month on average)
_____ 12 to 18
_____ 18 to 24
_____ 24 or more (2 or more per month on average)

Estimate the time you have been interviewing (making hiring decisions):
____years ____months

What interviewer training have you had? (check more than one if you have had more than one type)

_____on-the-job only
_____MSI training
_____MSI recalibration
_____BA How to Interview
_____Other_____
_____None

Are you close to anyone (friend, coworker, or family member) who has one of the following disabilities? (Circle yes or no.)

Epilepsy	yes	no
Hearing Impairment/Deafness	yes	no
Multiple Sclerosis	yes	no
Paraplegia	yes	no
Visual Impairment/Blindness	yes	no

Using this scale, rate how familiar you are with disabilities below:

1) Not at all: I have little understanding of symptoms or causes of this disability. I would not be able to describe this disability.

2) Somewhat: I know some symptoms or a little about the causes of this disability. I could accurately describe a limited (average) amount about this disability.

3) Very: I know an extensive amount about the symptoms and causes of this disability. I could accurately describe almost everything about this disability.

	Not at all	Somewhat	Very
Epilepsy	1	2	3
Hearing Impairment/Deafness	1	2	3
Multiple Sclerosis	1	2	3
Paraplegia	1	2	3
Visual Impairment/Blindness	1	2	3

APPENDIX B

DISABILITIES, JOB, AND ESSENTIAL FUNCTIONS SURVEY (DJEFS)

Note: The page numbers have been altered to fit the dissertation document. Participants saw page numbers starting with 1 on the first page of rating tasks.

#_____

Disabilities, Jobs, and Essential Functions Survey
(DJEFS)

Remember, for each essential job function, <u>circle</u> the number that applies to your choice of CAN PERFORM FUNCTION, CAN PERFORM FUNCTION WITH ACCOMMODATION, or CANNOT PERFORM FUNCTION.

If you choose CAN PERFORM FUNCTION WITH ACCOMMODATION, explain the nature the accommodation you have in mind.

Please do not leave blanks. It is important to have a decision for each possible choice because it increases the ease and quality of the analysis.

To protect your confidentiality, do not write your name anywhere on this survey.

A. J. ANDERS (VISUALLY-IMPAIRED)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 1 - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation: _____

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation: _____

Essential Job Function 3: Handling emergency calls and special assistance calls for customers.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation: _____

A. J. ANDERS (VISUALLY-IMPAIRED)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 2 - Consultant - Residence

Essential Job Function 1: Handling requests from existing or new customers for installation, disconnection, or changes of telephone systems and services.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Discussing, investigating, and resolving disputes, complaints, and inquiries regarding customers' service, billing, rates, adjustments, policies, etc.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Operating a computer terminal, including accessing multiple systems to establish, update, retrieve customer service data while simultaneously negotiating with customers and/or company employees.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

A. J. ANDERS (VISUALLY-IMPAIRED)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 3 - Technician

Essential Job Function 1: Installing, rearranging, and maintaining inside wiring, wiring at pole, and wiring in underground or building terminals. Able to perceive differences in wire and cable colors.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Contacts customers face-to-face to notify them of work being performed on their lines and when service is restored. Also communicates company policy and bills customer when appropriate. Must speak English clearly.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

B. H. BARONE (USES A WHEELCHAIR)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 1 - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Handling emergency calls and special assistance calls for customers.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

B. H. BARONE (USES A WHEELCHAIR)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 2 - Consultant - Residence

Essential Job Function 1: Handling requests from existing or new customers for installation, disconnection, or changes of telephone systems and services.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Discussing, investigating, and resolving disputes, complaints, and inquiries regarding customers' service, billing, rates, adjustments, policies, etc.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Operating a computer terminal, including accessing multiple systems to establish, update, retrieve customer service data while simultaneously negotiating with customers and/or company employees.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

B. H. BARONE (USES A WHEELCHAIR)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 3 - Technician

Essential Job Function 1: Installing, rearranging, and maintaining inside wiring, wiring at pole, and wiring in underground or building terminals. Able to perceive differences in wire and cable colors.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Contacts customers face-to-face to notify them of work being performed on their lines and when service is restored. Also communicates company policy and bills customer when appropriate. Must speak English clearly.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

C. L. COLE (HARD OF HEARING)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 1 - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Handling emergency calls and special assistance calls for customers.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

C. L. COLE (HARD OF HEARING)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 2 - Consultant - Residence

Essential Job Function 1: Handling requests from existing or new customers for installation, disconnection, or changes of telephone systems and services.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Discussing, investigating, and resolving disputes, complaints, and inquiries regarding customers' service, billing, rates, adjustments, policies, etc.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Operating a computer terminal, including accessing multiple systems to establish, update, retrieve customer service data while simultaneously negotiating with customers and/or company employees.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

C. L. COLE (HARD OF HEARING)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 3 - Technician

Essential Job Function 1: Installing, rearranging, and maintaining inside wiring, wiring at pole, and wiring in underground or building terminals. Able to perceive differences in wire and cable colors.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Contacts customers face-to-face to notify them of work being performed on their lines and when service is restored. Also communicates company policy and bills customer when appropriate. Must speak English clearly.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

D. K. DECKER (MULTIPLE SCLEROSIS)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 1 - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Handling emergency calls and special assistance calls for customers.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

D. K. DECKER (MULTIPLE SCLEROSIS)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 2 - Consultant - Residence

Essential Job Function 1: Handling requests from existing or new customers for installation, disconnection, or changes of telephone systems and services.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Discussing, investigating, and resolving disputes, complaints, and inquiries regarding customers' service, billing, rates, adjustments, policies, etc.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Operating a computer terminal, including accessing multiple systems to establish, update, retrieve customer service data while simultaneously negotiating with customers and/or company employees.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

D. K. DECKER (MULTIPLE SCLEROSIS)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 3 - Technician

Essential Job Function 1: Installing, rearranging, and maintaining inside wiring, wiring at pole, and wiring in underground or building terminals. Able to perceive differences in wire and cable colors.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Contacts customers face-to-face to notify them of work being performed on their lines and when service is restored. Also communicates company policy and bills customer when appropriate. Must speak English clearly.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

E. N. EBERHART (EPILEPSY)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 1 - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Handling emergency calls and special assistance calls for customers.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

E. N. EBERHART (EPILEPSY)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 2 - Consultant - Residence

Essential Job Function 1: Handling requests from existing or new customers for installation, disconnection, or changes of telephone systems and services.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Discussing, investigating, and resolving disputes, complaints, and inquiries regarding customers' service, billing, rates, adjustments, policies, etc.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Operating a computer terminal, including accessing multiple systems to establish, update, retrieve customer service data while simultaneously negotiating with customers and/or company employees.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

E. N. EBERHART (EPILEPSY)

Remember, for each essential job function, circle the number that applies to your choice and do not leave blanks.

JOB 3 - Technician

Essential Job Function 1: Installing, rearranging, and maintaining inside wiring, wiring at pole, and wiring in underground or building terminals. Able to perceive differences in wire and cable colors.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

Essential Job Function 3: Contacts customers face-to-face to notify them of work being performed on their lines and when service is restored. Also communicates company policy and bills customer when appropriate. Must speak English clearly.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation:_____

THE END

Thank you so much for your help with this survey.

Now that you have completed all 15 pages of questions, please go back and check each page to make sure you circled a number for each job function.

If you missed any, please complete those decisions, and then turn in this survey.

Remember, do not write your name anywhere on this survey. If you have done so, please cross it out or erase. This will help maintain the confidentiality of every person's data.

Once you turn in all of the handouts and surveys, fill out a card with your name and phone number. This card will be put into a pot, and kept completely separate from all surveys. When all data is collected, one card will be drawn for a $50 gift certificate to a restaurant of the winner's choice. Chances are approximately 1 in 60.

APPENDIX C

INSTRUCTIONS FOR THE DJEFS

Disabilities, Jobs, and Essential Functions Survey (DJEFS)

GENERAL INFORMATION

We are gathering information on hiring decisions for people with disabilities. As a person who may be required to make decisions that involve hiring a disabled person, your feedback is valuable to us.

The Americans with Disabilities Act (ADA) requires that:

- the hiring decision for a person with a disability is made solely on the applicant's ability to perform essential job functions,
- applicants are not asked if they have a disability or for details about a visible disability, and
- companies provide reasonable accommodations to aid the disabled person in performing the essential job functions.

Thus, managers must make hiring decisions based on general knowledge of various disabilities and knowledge of essential job functions.

Confidentiality:
This survey is being done to aid in the efforts to develop a process that will improve knowledge among managers who interview. The information you give us will be valuable when combined with everyone else's data to form a view of the abilities of interviewers. Your data will never be identified as yours to anyone. It will be completely confidential. In fact, make sure that you do not write your name anywhere on this form.

What you will be doing today:
In this survey, five potential job applicants are described. Each job applicant is similar in education and experience, but has a different disability. In addition, we describe three essential job functions of three jobs: Operator, Consultant, and Technician. You must decide if the applicants can or cannot perform the essential job functions. If you decide they can perform the essential job function, but need an accommodation, there is a place to describe the accommodation.

If you are very familiar with one or more of these jobs, you know that the essential functions provided are not a complete listing of tasks. We have chosen only a sample of functions for the purposes of this research. As you make your ratings, focus only on the essential job functions provided.

PLEASE TURN THE PAGE FOR SAMPLE ITEM INSTRUCTIONS.

SAMPLE ITEM INSTRUCTIONS

The sample items are provided to familiarize you with the survey. The disability, job, and job tasks in the sample items do not appear in the rest of the survey. In this survey, each job has three essential job functions. You will consider the abilities of each applicant for each job function.

Suggestions for decision-making:

- Consider only one essential job function at a time.
- Think about the abilities of the applicant listed in the description.
- Be flexible in thinking about how an applicant can do an essential job function with an accommodation.
- When thinking of accommodations, make sure you are reasonable.
- If you believe that the applicant cannot perform the function, do not be afraid to make that decision. Not all people can do all things.

Once you have made a decision, circle the number that applies:

(1) CAN PERFORM FUNCTION,
(2) CAN PERFORM FUNCTION WITH ACCOMMODATION, or
(3) CANNOT PERFORM FUNCTION.

If you select **(2) CAN PERFORM FUNCTION WITH ACCOMMODATION,** include suggestions for any accommodations you think are necessary. You do not have to write a complicated essay, but be sure that your thoughts are clear.

SAMPLE APPLICANT DESCRIPTION:
S. S. Foder was diagnosed with lupus as a teenager. People with lupus have immune systems that are not able to differentiate between foreign substances and the body's own cells and tissue. S. S. has skin rashes, joint swelling and pain, and is frequently fatigued. S. S. must avoid exposure to the sun and take medication to suppress the immune system.

SAMPLE ITEM:
Essential Job Function 1: Moving and lifting items such as ladders, tools, test equipment and cable reels, generally weighing up to 100 lbs.

1	2	3
CAN PERFORM FUNCTION	**CAN PERFORM FUNCTION WITH ACCOMMODATION**	**CANNOT PERFORM FUNCTION**

If 2, Accommodation:_____

TURN THE PAGE FOR THE SURVEY INSTRUCTIONS.

SURVEY INSTRUCTIONS

As stated before, you will be making ratings for five applicants with disabilities. You will consider each applicant for three jobs.

1) On the first three pages, you will consider whether A. J. Anders (Visually-impaired) can perform the essential job functions listed for each job: Operator (page 1 of survey), Consultant (page 2), and Technician (page 3).

2) On pages 4-6, repeat the process by considering whether B. H. Barone (Uses a wheelchair) can perform the essential job functions of the three jobs: Operator (page 4 of survey), Consultant (page 5), and Technician (page 6).

3) On pages 7-9, consider whether C. L. Cole (Hard of Hearing) can perform the essential job functions of the three jobs: Operator (page 7 of survey), Consultant (page 8), and Technician (page 9).

4) On pages 10-13, consider whether D. K. Decker (Multiple Sclerosis) can perform the essential job functions of the three jobs: Operator (page 10 of survey), Consultant (page 11), and Technician (page 12).

5) On pages 13-15, consider whether E. N. Eberhart (Epilepsy) can perform the essential job functions of the three jobs: Operator (page 13 of survey), Consultant (page 14), and Technician Supervisor (page 15).

ESSENTIAL JOB FUNCTION DESCRIPTIONS

Listed below are the essential job functions for the three jobs in this survey. Each job has three essential job functions listed, and these functions are only a representative sample of all the functions required. Make your decisions based on the provided descriptions only. These are repeated on each page.

JOB 1 - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

Essential Job Function 3: Handling emergency calls and special assistance calls for customers.

JOB 2 - Consultant - Residence

Essential Job Function 1: Handling requests from existing or new customers for installation, disconnection, or changes of telephone systems and services.

Essential Job Function 2: Discussing, investigating, and resolving disputes, complaints, and inquiries regarding customers' service, billing, rates, adjustments, policies, etc.

Essential Job Function 3: Operating a computer terminal, including accessing multiple systems to establish, update, retrieve customer service data while simultaneously negotiating with customers and/or company employees.

JOB 3 - Technician

Essential Job Function 1: Installing, rearranging, and maintaining inside wiring, wiring at pole, and wiring in underground or building terminals. Able to perceive differences in wire and cable colors.

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

Essential Job Function 3: Contacts customers face-to-face to notify them of work being performed on their lines and when service is restored. Also communicates company policy and bills customer when appropriate. Must speak English clearly.

JOB APPLICANT DESCRIPTIONS

Listed below are the five job applicants. These applicants have similar educational backgrounds and experience that qualify them to do managerial work. However, each applicant has a different disability. Please read the descriptions carefully. Make your decisions based on the descriptions; you may refer to the descriptions at any time throughout the survey.

A. J. Anders is visually impaired. A. J. is able to recognize shapes within a three-foot area, but has no vision for detail and cannot distinguish among colors. A. J. uses braille to write personal notes and can read and write text using a high-strength magnifying glass if the text is three or more inches high. A. J. is unable to drive, relies on public transportation, and uses a cane for guidance.

B. H. Barone uses a wheelchair due to spinal cord injuries sustained in an accident ten years ago. B. H. has full upper body use and drives a converted van.

C. L. Cole is hard of hearing. Although C. L. wears a high-intensity hearing aid, it is still necessary for the applicant to stand within two feet of another person when conversing. C. L. can communicate as long as speech is at a moderate pace, is clear, and background noise is minimal. Face-to-face communication is further enhanced through lip reading.

D. K. Decker was diagnosed with multiple sclerosis five years ago. Multiple sclerosis is a degenerative condition that affects the brain and spinal cord. D. K. has numerous symptoms, including intention tremor (jerky movements of the arms) and ataxia (jerky movements of the legs). Also, the applicant has a mild speech dysfunction which involves hesitation and stuttering. There have been no instances of blindness or paralysis, but both are common symptoms of multiple sclerosis in its varying stages. There is no known cause or cure, and treatment is limited to rest and physical therapy in earlier stages of the disease.

E. N. Eberhart was diagnosed with epilepsy after a severe head injury five years ago. Epilepsy is a condition that affects certain nerve cells in the brain. E. N. has experienced numerous grand mal seizures (loss of consciousness, muscle spasms, a few minutes of deep sleep) in the past but these seizures are currently under control through medication.

PLEASE BEGIN THE SURVEY. READ THE COVER PAGE, THEN START ON PAGE 1 AND GO TO PAGE 16. YOU MAY RETURN TO THIS PAGE (OR ANY OF THE INSTRUCTIONS) AT ANY TIME TO REVIEW.

APPENDIX D

GUIDE TO INTERVIEWING PEOPLE WITH SELECTED DISABILITIES

Note: The page numbers have been altered to fit the dissertation document. Participants saw page numbers starting with 1 on the first page of Chapter 1.

Guide to Interviewing People with Selected Disabilities

Catherine Q. Mergen
Bell Atlantic and
Old Dominion University
April 1997

Table of Contents

Chapter 1. The Purpose of this Guide

People with disabilities are a part of our society. They wish to work to their potential and to make a contribution.

Organizations are required by law to give fair consideration to applicants, employees, and customers with disabilities in hiring, placement, and public accommodations. We are strengthened by our diversity, and Bell Atlantic has made a commitment to consider all qualified applicants regardless of disability.

As an interviewer, you are an interface between the applicant with a disability and your organization. You must abide by the law, but you will also wish to create a good impression of the organization.

This Guide is designed to help you

- understand and meet the intent of disability laws in the interview process,
- be sensitive to the needs of applicants with disabilities, and
- make accurate decisions about the abilities of applicants with disabilties.

This Guide provides assistance by identifying

- the information you need to gather in the interview,
- when to gather the information,
- what questions to ask (and not ask) in order to gather the information, and
- when to consider information in the decision making process.

Chapter 2. How to Use this Guide

This guide provides a variety of information, and is intended to be used as a continuing resource for you.

It is a good idea to read it through in order to be familiar with the topics and the information provided. Applicants with hidden disabilities may not disclose their disability until you are in the middle of a face-to-face interview, or they may choose to wait until the job offer. Applicants are never required to disclose a disability at any time, although they are provided with an opportunity to disclose after they are on the payroll at Bell Atlantic. Applicants with visible disabilities may not disclose the disability prior to the face-to-face meeting.

If you are prepared for every applicant by knowing the necessary legal requirements, the job requirements, and the appropriate ways to interact with people with disabilities, you will not be caught by surprise. Being caught by surprise may lead to insensitive comments, illegal questions, or inappropriate decision making.

As you prepare for each interview:

- review the hiring process steps,
- review the special information about disabilities if you are preparing to interview someone who has disclosed a disability prior to the interview, and
- make sure you are familiar with general legal requirements and interaction guidelines in case the applicant discloses a disability during the interview.

Chapter 3. Legal Requirements for the Hiring Process

The Americans with Disabilities Act of 1990 (ADA) was passed by Congress to apply to all employers with more than 15 employees. The main goal is to ensure that people with disabilities have access to fair hiring practices and public accommodations. This means that you are required to administer a fair interview in addition to providing an accessible interview.

The fair interview:

ADA applies to all qualified individuals with a disability. A qualified individual with a disability is someone who meets legitimate skill, experience, education, or other requirements of an employment position that he or she holds or seeks and who can perform the essential functions of the position with or without reasonable accommodation.

An essential function is a job task that is a major part of the job, is a function that the job was created to do, or is critically important to the job even if performed infrequently. Examples include a receptionist greeting people on the phone and in person (the job was created for these tasks) and a pilot's ability to land a plane (small percentage of time, but critically important to the job).

A marginal duty is a job task that is desired, but is not a critical function of the job. Marginal duties can be reassigned to other employees, or eliminated altogether. People cannot be hired based on whether or not they can do a marginal duty.

Reasonable accommodations are required if an applicant is qualified to do a job function but needs assistance in doing it, or needs to do it in a different way. The important element is not how the job task gets done, but that the outcome is accomplished. For example, changing a desk height to accommodate a wheelchair allows a person the chance to type on a keyboard as other workers in office chairs do.

ADA specifies that job applicants are not required to disclose a disability.

Employers are not allowed to inquire about

- a disability,
- past worker's compensation or job injuries, or
- any other information that will serve only to discover a disability.

Employers are allowed to (and should) identify all applicants as qualified by asking about

- education levels,
- job experience,
- the ability of the applicant to do the job's essential functions, and
- the ability of the applicant to meet the travel, attendance, and other related requirements of the job.

An applicant with a disability must be treated as an individual, and his or her individual capabilities investigated and compared to what is required for the job. Part of the responsibility lies with the applicant to make his or her needs for an accommodation clear.

Screening out a group of people based on disability is stereotyping, and it is illegal under ADA. This includes making assumptions about what an individual with a disability can do based on your general opinions of what people with that disability can do. It is illegal to assign certain jobs as "jobs acceptable for people with _____ disability."

The accessible interview:

The location where you are administering the interview must be accessible to applicants with disabilities. This should be provided for because public buildings are required to be accessible to people with disabilities. However, if your interview location has not been made accessible, you should consider how best to accommodate people with disabilities in an interview.

Location items to check for accessibility:

- ramps for entrance to the building (if not at street level)
- elevators for going to upper floors (even if it is a split level, and the only access is a short flight of stairs, a ramp or chair lift should be provided)
- Braille markings on signs

The interview process should be accessible also. For example, if a person who is blind needs to bring a guide dog, that should be allowed. If a person with a hearing impairment needs an interpreter, that should be arranged.

The Equal Employment Opportunity Commission (EEOC) enforces ADA, and any person with a disability who believes he or she has been discriminated against because of the disability can file a complaint with the EEOC. The EEOC will investigate, and may file a lawsuit against the organization.

Chapter 4. The Interview Process

This chapter will help you prepare for the interview process. These steps can be used regardless of the type of applicant, and you are encouraged to use this process if there is no other structured process provided to you for interviewing. If you rarely make hiring or placement decisions, this method will be especially important for you.

An interview is only as good as the questions you ask.

- If you ask a question that is relevant to what the applicant will be required to do on the job, then you are meeting the requirements of most laws regarding selecting applicants.
- Anytime you ask questions that are not relevant, you are exposing yourself and the company to charges of unfair treatment.
- Keep in mind that even when asking job-relevant questions, you must be careful with the way you word the question.
- And you must be sure that you understand what job-relevant is.

For example, you may think that asking a person if they have young children at home is relevant because young children will affect their attendance, but you are not allowed to make that assumption and ask the question in that way. You are allowed to ask if they will be able to abide by the attendance policy. Similarly, you may not ask a person if they have a disability simply because you assume that the disability will affect their performance. You may only ask if they are able to (or how they would) perform the tasks that are required for the job.

The following list gives you an overview of the steps in the process that are described in this chapter. These steps will provide you with a structure that will make your interview more skilled and more job-relevant.

The interview and decision making process

Step 1: Preinterview preparation: Gather job requirements, prepare questions, rate criteria.

Step 2: Interview: Ask all applicants about job requirements, investigate job accommodations if the subject is introduced.

Step 3: Post interview judgment: Applicant is capable of meeting the job requirements, consult with a specialist if necessary for accommodation.

Step 4: Post interview decision: Compare all applicants and their abilities in a fair way to determine to applicant to hire for the job.

Step 1: Preparation for the interview

The first step in the process is as important as the steps that involve interaction with applicants. The preparation you do here will make a better interview, and you will be less nervous about what you ask an applicant.

- Have a complete list of the job requirements. These include the training and education requirements, the experience requirements, the essential job functions a person must do, and the job related travel and attendance requirements.

- Consider whether any of these requirements are not essential to the job. If a requirement is not required to accomplish the job or if it is done so rarely that it could be reassigned to another person, then the requirement should be considered a marginal duty. You may still ask an applicant if he or she can perform the marginal duty, but you may not make your hiring decision with this information.

- Rank each of the essential job requirements for importance from most to least important to performance on the job. Then assign a rating to each requirement with a number from 1 to 100, but no requirement should receive the same number as another.

- Draft a preliminary list of questions to ask that are geared at finding out if the applicant is able to do the essential functions and meets the other requirements. Once you have done this, other job interviews for the same job in the future will go more smoothly, because you have already done the prep work. You may want to consult with other supervisors who know about the job to see if they have anything to add to your list. When developing the list, spend at least 10 uninterrupted minutes thinking and writing down what comes to mind. Then spend 10 more minutes rewriting the list, eliminating similar items and items that are not job-relevant.

- Find out what you can about the applicant that is already in the system. For example, what tests have been taken and what were his or her scores. If you are told that the person has a disability, you need to review the information in this guide or consult with a human resources specialist who can tell you more about the particular disability.

- You may have a telephone interview with the applicant in the process of setting up a face-to-face interview. Be sure to ask if there are any accommodations needed for the interview, even if the applicant does not indicate a disability first. If the person indicates that an accommodation is necessary, you must find a way to meet the accommodation. If the person discloses a disability, you should make yourself familiar with the disability to prepare for the interview.

Step 2: How to conduct the interview

This step is critical because you must gather all the important information that you will use to make decisions later. This step is important for every applicant, whether that person has a disability or not. If the applicant does have a disability (either visible or disclosed to you), you should begin the interview by asking if you can be of assistance. You may need to provide some accommodation to make the interview site accessible.

- Begin the interview, for all applicants, with questions that investigate the applicants ability to do the essential job functions.
  - Focus on the result and not the means of accomplishing the essential functions.
  - Do not focus on the disability or ask questions about it
  - Ask "Are you able to lift containers that weigh 50 pounds?" or "Are you able to use a word processor?"
  - If you are in doubt that an applicant could do one of the essential functions, state what the essential function is and ask "how would you go about doing this essential function of the job?

- As the applicant answers each question, carefully record their answer next to the question. By keeping complete records of the interview, you will be able to easily remember what the applicant said when it is time to make your decision. If you are interviewing several applicants, complete records will help you tell the difference between applicants later, and will prevent you confusing what you remember about their answers. Experienced interviewers know that careful records are important for decision making and defending decisions.

- If you have questions other than those about the essential functions, ask those after the initial answers are satisfied. If it is clear that an applicant cannot do the essential functions, the interview should end. If the applicant needs an accommodation to do the essential function, you should complete the interview, and consult a specialist for help if you can't identify a reasonable accommodation.

Step 3: How to make your decision fairly

Once you have finished interviewing the applicant, review your written comments and rate the applicant on his or her ability to do each job requirement based on the answers and any evidence provided (transcripts, writing sample, references).
- For each essential job requirement, assign numbers to each applicant for each requirement. Decide the probability that the applicant could satisfy that requirement all the time (assign a 3), most of the time (assign a 2), or some of the time to never (assign a 1).

Step 4: How to decide between applicants

You are not required by ADA to hire a qualified applicant with a disability instead of an equally qualified applicant with no disability. However, applicants are rarely equally qualified. When making your decision, you must use the same standards for all applicants, that is, you should not emphasize certain attributes over other attributes depending on the applicant you are deciding on. Test scores should be considered equally, interview scores or impressions (if you are not using a standardized interview format) should be considered equally, and the applicant's ability to do the various requirements of the job should be considered equally. If there is a reason to consider an applicant with a disability as unable to do some requirements of the job, an effort must be made to ensure that there are no reasonable accommodations before using that as a reason to not accept the applicant with a disability.

One way to make sure you are considering all aspects of the applicant's abilities equally is to use an algorithm. This algorithm is simple, and frequently used by people even if they don't realize it. The key here is that you will follow the algorithm the same way each time, and keep a record on paper of your decision in order to protect the company if there are ever any questions about the decision. Hiding the way you made a decision is a sure-fire way to cause a court to question your methods and intentions.

This algorithm is very similar to the method people use when they compare the pros and cons of two (or more) choices in order to select one. You have already done the ratings:

- In Step 1 you set the importance of each job requirement (rated from 1 to 100).
- In Step 3 you assigned ratings to each applicant (1 to 3 for ability to satisfy each job requirement).
- List the job requirements and three columns to the right (see below).
- Fill in the job requirement importance rating and applicant's ability rating.
- Multiply the two numbers, divide by 100, and put the total in the third column. This is the applicant's final score. This score can be used to compare the applicant to other applicants.

	Job requirement	Rating	Applicant A ability	Total
1.	Use computer	90	3	2.7
2.	Answer calls	65	3	1.95
3.	Paperwork	30	2	.6

- Compare an applicant's total scores to another applicant's total scores for each job requirement. Remember that marginal duties are not required job functions.

Chapter 5. Disability and Etiquette

What is disability?

According to ADA, a person is considered to have a disability if that person

1) has a physical or mental impairment which substantially limits one or more of that person's major life activities
2) has a record of such an impairment, or
3) is regarded as having such an impairment

Tips on interacting appropriately

Avoid cliches and platitudes.
Don't use words or constructs that are patronizing or demeaning.
Always put people, not the disability, first. (A person with epilepsy, a person who uses a wheelchair, a person with a disability).

Avoid using any terms that refer to people as other than individuals, including:
the disabled, the handicapped
patient, victim, invalid, crippled
handicapped, physically challenged, handi-capable, differently abled
confined to ..., suffers from ..., afflicted by ...

Do not assume that people with disabilities need help, but tell them you are available to give assistance. When offering assistance, wait until it has been accepted before giving it.

Always speak directly to the person with a disability, do not assume a companion will do the communicating. If there is an interpreter, look at the person you are speaking to, and listen to the interpreter.

Do not use the person's first name unless you are invited to do so, or everyone in the group is addressed the same way.

Never ask personal questions that you wouldn't ask someone without a disability.

Never commend a person with a disability for accomplishments learned out of necessity.

Familiarize the person with where the bathroom is, where the coffee is, etc. Keep in mind that persons with disabilities have the same activities of daily living as you do. Include them. Ask if they need assistance.

Do not avoid or apologize for using phrases like "Did you hear how the meeting went?" There are not any reasonable substitutes.

Do not raise your voice, shout, or exaggerate your mouth movements. Instead, slow your speaking pace and enunciate clearly. Face the person you are speaking to at all times.

Do not compound disabilities. Just because a person has a visual impairment does not mean that he or she is also deaf or a person with mental retardation.

Do not expect people with disabilities to congratulate you for your consideration of your help. You are just behaving properly.

Chapter 6. Specific Disabilities and Interviews

This chapter describes symptoms and other information for five specific disabilities: Epilepsy, Hearing Impairment, Multiple Sclerosis, Paraplegia, and Vision Impairment. This information is meant to give you a fuller understanding of what a person with this disability may be able to do or how that person is affected. What you must remember is, every person with a disability is an individual with different abilities, symptoms, and learning capacities. The following descriptions are meant only to give you an understanding, not to define how each person with a particular disability will act or be capable of.

Epilepsy

Epilepsy is only diagnosed when a person has many seizures of undetermined cause. If seizures have a specific cause, such as a brain tumor, epilepsy is not diagnosed. Not much is known about the causes of epilepsy. Epilepsy is a disease that affects different people in different ways.

- For some, it can be controlled with medication, seizures may occur rarely, and many times the person knows when a seizure is coming. Some people have dogs trained to notify them when a seizure is imminent.
- Generally, most epileptic seizures are of short duration and do not require immediate specific care.
- There is no need for a person with epilepsy to avoid activity or rest more often than usual.
- The intelligence level of a person with epilepsy is often normal, and intelligence is unaffected by repeated seizures.
- A seizure is an episode of impairment of consciousness, which may or may not be associated with convulsive movements. There are various levels of impairment, from slight loss of consciousness that appears to only be staring into space for some seconds to complete unconsciousness. There are two types of seizures that are typically referred to: Grand mal seizure and petit mal seizure.
    - The grand mal seizure is a major motor seizure that involves sudden loss of consciousness and two phases: tonic and clonic. The tonic phase is the first phase, and the person's body becomes rigid and falls (if standing). The clonic phase follows, and includes rapid jerking muscle movements (convulsions) with labored and/or shallow breathing. The person may bite their tongue during this phase. The person may give a loud cry or shriek before the seizure begins, and post-convulsive phenomena include: sleep, weakness, nausea, severe headaches, soreness of muscles, increased irritability, impaired speech, mental confusion, and transient muscle paralysis. These phenomena can last a few seconds to 30 minutes or longer.

- The petit mal seizure typically lasts 5 to 10 seconds, and consists of the person appearing to stare vacantly into space. It is possible that the person may have jerky movements of eyes, head, or upper extremities. After the petit mal seizure, the person is alert and able to continue working.

Suggestions for interacting with a person who has epilepsy:

- Treat the person as an individual. If you are unsure of what he/she might need, ask. For example, ask "Do you have any suggestions for accommodations you might need?"

- Do not ask personal questions about the disability such as "Do seizures hurt?"

- Do not share stories about people you know or have heard of who have similar disabilities or experiences.

- Treat the person as someone who is a healthy person. Familiarize the person with where the bathroom is, where the coffee is, etc. Keep in mind that persons with disabilities have the same activities of daily living as you do. Include them. Ask if they need assistance.

Hearing Impairment/Deafness

Some people with hearing impairments have profound hearing loss and are effectively totally deaf. Many people have residual hearing that enables them to engage in some activities involving the sense of hearing.

Hearing impairment is the most prevalent physical disability. About 24 million people in America have significant hearing impairment. Causes of hearing loss range from congenital conditions to noise exposure, injuries, and disease.

There are two types of hearing loss:

- nerve deafness (sensorineural hearing loss) - the most common type, it is an abnormality of the inner ear and/or the auditory nerve, commonly resulting from age or exposure to loud noise
- conductive hearing loss - affects the outer or middle ear and results when sound waves are not properly conducted to the inner ear, commonly resulting form ear infections, punctured ear drum, or excessive ear wax.

Both types can be helped by a hearing aid, medical treatment, or surgery. If there is no residual hearing left for someone with nerve deafness, these treatments may not help.

Suggestions for interacting with someone who has a hearing impairment:

- When speaking, get the person's attention by tapping lightly on his or her shoulder or waving your hand. Do not speak until you have the person's attention.

- Always look at the person when you are speaking, even when an interpreter is present. Keep your hands and objects away from your mouth.

- Take time to communicate and allow extra time. Be sure to speak slowly and clearly. Don't exaggerate or shout.

- Maintain eye contact, and use natural gestures and facial expressions.

- Communicate in a direct manner, and verify understanding before changing the topic or ending the conversation. Never pretend to understand if you don't. Repeat or rephrase what you hear so the person can confirm or deny your understanding. Don't say, "never mind, it doesn't matter," when asked to repeat something.

Multiple Sclerosis

Multiple sclerosis (MS) is a chronic disease with variable symptoms and progression for each person who is diagnosed with this disorder.

- The onset is from adolescence to the early thirties, but most commonly in the early thirties.
- The course of the disease is extremely variable, from asymptomatic or benign to rapid deterioration and severe impairment.
- Fifty percent of the people diagnosed with MS progress to requiring walking aids or a wheelchair. This typically occurs within 15 years of the diagnosis.

The disease has no known cause, but occurs when the myelin sheath that protects the nerve fibers of the brain and spinal cord is destroyed. Then, nerve impulses to and from the brain are interrupted and distorted. Many scattered areas of the brain and spinal cord are affected.

Common symptoms of MS vary from person to person, and even relapse to relapse.

- The most common symptoms are difficulty walking and fatigue. Other symptoms include weakness, depression, paralysis, numbness, pain or tingling, difficulty in walking, disturbances of co-ordination, problems with balance, memory or concentration difficulties, and speech difficulty. Symptoms fluctuate, disappear and reappear, for no apparent reason.

- The people who have a mild or progressive form of the disease will have relapses and remissions with increased disability over time.

- People with asymptomatic or benign versions of MS have either no clinical symptoms, or symptoms with negligible and transitory effects.

- Mild versions of MS include remissions with almost complete recovery to normal functioning, but the improvements gradually lessen with the number of relapses and remissions.

- The progressive version has a steady deterioration with well delineated remissions and relapses of symptoms.

- The severe version affects 8 to 17% of people diagnosed with MS, and deterioration is rapid and terminal.

Stress is a factor that is commonly associated with causing relapses.

Suggestions for people who have multiple sclerosis:

- Do not hold onto a person's wheelchair. It is part of the person's body space. Hanging or leaning on the wheelchair is similar to hanging or leaning on a person in any chair.

- Do not grab the person's wheelchair and start pushing or pulling them without their permission. Always ask if they wish for help before moving them around.

- Offer help but wait until it is accepted before giving it. Never touch the person before he or she has told you where and how you can help. If your offer is declined, don't stay near, stay clear.

- Give people in wheelchairs a lot of space and time. Open doors and wait patiently for them to go through.

- Use words like walking or running. People using wheelchairs use these words.

- If conversation continues for more than a few minutes and it is possible to do so, sit down to share eye level. It is uncomfortable for a seated person to look straight up for a long period.

- Do not move a wheelchair out of the reach of its user.

- Do not ask personal questions about the disability such as "Were you in an accident?" or "How much does an electric wheelchair cost?" Do not share stories about people you know or have heard of who have similar disabilities.

- Speak directly to the person with the disability, not the person accompanying him/her. Identify yourself and let the person know you are speaking to him/her.

Paraplegia

More than 250,000 Americans are paralyzed as a result of injury to the spinal cord. Every year, another 7,800 people sustain a spinal cord injury as a result of motor vehicle accidents, sports-related mishaps, or crimes of violence.

Spinal cord injury results from a trauma, lesion, infection, or disease of the spinal cord that results in paralysis of certain parts of the body and corresponding loss of sensation. Paraplegia refers to paralysis of the legs and lower parts of the body, and quadriplegia refers to paralysis of the body below the neck and chest area including the arms and legs.

Paralysis is often accompanied by partial or complete loss of various body functions:

- demineralization of bone
- reduction of pulmonary functions
- impairment of the circulatory system
- dysfunction of the kidney, bladder, and bowels
- muscle spasms
- skin sores
- chronic pain

Suggestions for people who use a wheelchair:

- Do not hold onto a person's wheelchair. It is part of the person's body space. Hanging or leaning on the wheelchair is similar to hanging or leaning on a person in any chair.

- Do not grab the person's wheelchair and start pushing or pulling them without their permission. Always ask if they wish for help before moving them around.

- Offer help but wait until it is accepted before giving it. Never touch the person before he or she has told you where and how you can help. If your offer is declined, don't stay near, stay clear.

- Give people in wheelchairs a lot of space and time. Open doors and

wait patiently for them to go through.

- If conversation continues for more than a few minutes and it is possible to do so, sit down to share eye level. It is uncomfortable for a seated person to look straight up for a long period.

- Use words like walking or running. People using wheelchairs use these words.

- Do not move a wheelchair out of the reach of its user.

- Do not ask personal questions about the disability such as "Were you in an accident?" or "How much does an electric wheelchair cost?" Do not share stories about people you know or have heard of who have similar disabilities.

- Speak directly to the person with the disability, not the person accompanying him/her. Identify yourself and let the person know you are speaking to him/her.

Vision impairment/Blindness

People with vision impairments or who are blind have sufficient loss of vision to place limitations of varying severity on personal, social, or occupational pursuits. A relatively small percentage of people with vision impairments are totally blind.

The government defines "legally blind" as a person who has

- a central vision acuity of 20/200 (can see at 20 feet what a person with normal vision can see at 200 feet) or less in the better eye with corrective lenses or
- has a field of vision at that at its widest diameter faces an imaginary angle no greater than 20 degrees
- 10 percent or less of normal vision in either of these ways

Suggestions for people with a vision impairment:

- Always make your presence known, and do it before you get too close to a person with a vision impairment.

- When you enter a room occupied by a person who is blind, speak first and identify yourself by name. Don't assume that your voice will be recognized.

- When meeting a person with severe loss of vision, identify yourself and anyone who may be with you. Speak normally and indicate when you move from one place to another or need to end the conversation.

- Speak directly to the individual. If your gaze wanders, your voice follows.

- Use words, not gestures or facial expressions. Remember that the individual cannot see the nod, motion, or smile that is intended to change the meaning of your words and may take your words literally.

- Never address the individual through his or her companion or guide. The impression you convey is that the individual is unable to speak for himself or herself.

- Always leave doors and drawers as you found them - closed or open. Don't move chairs or other objects around a room that is remembered as a certain way by people with vision impairments.

- When assisting the person to a chair, simply guide his or her hand to the back or arm of the chair for location. If there are steps, tell the person where they are and how many. Identify curbs or other obstacles as you approach them. If the person needs the assistance of holding your arm, hold out your arm, tell them where it is, and let them make the decision about how to hold it. Do not push or pull the person. Let the person take your arm and then walk about a half step ahead of him or her.

- Treat the person as an individual. If you are unsure of what he/she might need, ask. For example, "If you need assistance, please ask. I am not sure of what to do." "Do you have any suggestions for accommodations you might need?"

- Do not avoid or apologize for using words like "look" or "see" or "I'm glad to see you again." There are not any reasonable substitutes.

- Briefly describe the physical layout of the interview room, especially the furniture arrangement. For example "As we enter the door of the interview room, straight ahead 4 feet is the armchair you will sit in. This chair is 1 foot in front of the desk I will sit behind."

- Avoid all unnecessary touching.

- Do not pet or otherwise distract a guide dog without an invitation. The dog is responsible for the safety of the blind person and is not a pet.

APPENDIX E

MANIPULATION CHECK SURVEY

Questions about Disability

Please answer the following questions to the best of your ability.

1. An essential job function for Job X requires that applicants must travel to various work locations several times a month. An applicant who is blind arrives at the interview with a guide dog. The interviewer may ask which one of the following questions?
   a. How did you become blind?
   b. How do you manage to get around?
   c. Are you able to travel to various work locations whenever required?
   d. Would being blind keep you from traveling when required?

2. If an applicant is in a wheelchair, and the interviewer is unsure whether the applicant is able to do the job tasks, when is the appropriate time to bring up the applicant's ability to do the tasks?
   a. After the applicant first refers to his/her disability.
   b. When the interviewer first sees the wheelchair.
   c. Just prior to making the job offer.
   d. After the job offer is made, prior to any medical exam requirements.

3. Does ADA require that an applicant with a disability, who is similar in ability and experience to a nondisabled applicant, be hired instead of the nondisabled applicant?
   a. Yes.
   b. No.

4. What are essential job functions?
   a. Job tasks that a worker does most often.
   b. Job tasks that a worker should do on a regular basis, but may be traded with other workers if they agree.
   c. Job tasks that a worker must do in an emergency situation.
   d. Job tasks that a worker is required to do in order to adequately perform the job.

5. When deciding whether an applicant with a disability is able to perform an essential function, what should the interviewer take into account?
   a. The applicant's abilities that were visible in the interview.
   b. A corporate list of acceptable disabilities for the job.
   c. Information from accommodation specialists and the applicant.
   d. All of the above.

6. If an applicant discloses that she is hard of hearing, what should the interviewer do?
   a. The interviewer should ask detailed questions to identify what the applicant's capabilities are, and what accommodations the applicant needs.
   b. The interviewer should ask the applicant if she has received worker's compensation and how her last employer handled her disability.
   c. The interviewer should ask if the applicant can perform the tasks that are required for the job, but never refer to the disability.
   d. The interviewer should not ask questions any differently, but just ignore the disability.

7. If the interviewer suspects that there is a disability that might prevent the applicant from performing the essential functions of the job, but the applicant has not disclosed the disability, what should the interviewer ask?
   a. How would you do this job?
   b. Do you have a disability that would prevent you from doing this job?
   c. Both of the above questions.
   d. Neither of the above questions.

8. If an internal applicant is commonly known to have carpal tunnel syndrome, what should the interviewer say when interviewing the applicant for a position that requires keyboard use?
   a. If you have carpal tunnel syndrome, this job can be very difficult, and you may want to consider applying for another job.
   b. I know that you have carpal tunnel syndrome, but I am sure you are aware that this position requires extensive keyboard use.
   c. This job requires that you use a keyboard most of the time. How will you meet that requirement?
   d. This job requires that you use a keyboard most of the time and I would like to know how you will meet that requirement on the days that your wrist hurts?

9. An employee is not required to do the marginal duties of a job if he can prove he has a disability, even if the disability does not prevent doing those duties.
   a. True.
   b. False.

10. What should an interviewer ask applicants who appear to have a disability at the beginning of an interview?
    a. Are you able to perform the following functions?
    b. Do you have any disabilities that will prevent you from performing the following functions?
    c. Do you have any disabilities that will require an accommodation?
    d. Do you know of any reason why you cannot do this job?

For the following questions, fill in the blanks with short answers.

11. An applicant with a disability is required to disclose the disability at what point of the hiring process?

_____

12. Interviewers are allowed to inquire about a disability at what point of the hiring process?

_____

13. An applicant with a disability must be provided an accessible hiring process in what ways?

_____

14. Is a company protected from accusations of unfair hiring as long as interviewers ask job-relevant questions or are there problems that can be created by asking job-relevant questions?

_____

15. What should interviewers ask all applicants?

_____

APPENDIX F

TARGET SCORES FOR ESSENTIAL FUNCTIONS USED IN DJEFS

Target Scores for Essential Functions Used in the DJEFS

SCORES: 1 = Can perform function
2 = Can perform function with accommodation
3 = Cannot perform function

JOB 1 - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	2
B.H. Barone (uses a wheelchair)	1
C.L. Cole (hard of hearing)	3
D.K. Decker (multiple sclerosis)	1
E.N. Eberhart (epilepsy)	1

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	2
B.H. Barone (uses a wheelchair)	1
C.L. Cole (hard of hearing)	3
D.K. Decker (multiple sclerosis)	1
E.N. Eberhart (epilepsy)	1

Essential Job Function 3: Handling emergency calls and special assistance calls for customers.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	2
B.H. Barone (uses a wheelchair)	1
C.L. Cole (hard of hearing)	3
D.K. Decker (multiple sclerosis)	1
E.N. Eberhart (epilepsy)	1

JOB 2 - Consultant, Residence

Essential Job Function 1: Handling requests from existing or new customers for installation, disconnection, or changes of telephone systems and services.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	2
B.H. Barone (uses a wheelchair)	1
C.L. Cole (hard of hearing)	3
D.K. Decker (multiple sclerosis)	1
E.N. Eberhart (epilepsy)	1

Essential Job Function 2: Discussing, investigating, and resolving disputes, complaints, and inquiries regarding customers' service, billing, rates, adjustments, policies, etc.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	2
B.H. Barone (uses a wheelchair)	1
C.L. Cole (hard of hearing)	3
D.K. Decker (multiple sclerosis)	1
E.N. Eberhart (epilepsy)	1

Essential Job Function 3: Operating a computer terminal, including accessing multiple systems to establish, update, retrieve customer service data while simultaneously negotiating with customers and/or company employees.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	2
B.H. Barone (uses a wheelchair)	1
C.L. Cole (hard of hearing)	3
D.K. Decker (multiple sclerosis)	1
E.N. Eberhart (epilepsy)	1

JOB 3 - Technician

Essential Job Function 1: Installing, rearranging, and maintaining inside wiring, wiring at pole, and wiring in underground or building terminals. Able to perceive differences in wire and cable colors.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	3
B.H. Barone (uses a wheelchair)	3
C.L. Cole (hard of hearing)	1
D.K. Decker (multiple sclerosis)	3
E.N. Eberhart (epilepsy)	3

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	3
B.H. Barone (uses a wheelchair)	3
C.L. Cole (hard of hearing)	1
D.K. Decker (multiple sclerosis)	3
E.N. Eberhart (epilepsy)	3

Essential Job Function 3: Contacts customers face-to-face to notify them of work being performed on their lines and when service is restored. Also communicates company policy and bills customer when appropriate. Must speak English clearly.

DISABILITY:	TARGET SCORE:
A.J. Anders (visually impaired)	3
B.H. Barone (uses a wheelchair)	1
C.L. Cole (hard of hearing)	1
D.K. Decker (multiple sclerosis)	1
E.N. Eberhart (epilepsy)	1

APPENDIX G

INFORMED CONSENT FORM FOR RESEARCH

OLD DOMINION UNIVERSITY
Department of Psychology

INFORMED CONSENT

This is to certify that I hereby agree to participate as a volunteer in a scientific investigation as a part of the educational and research program of Old Dominion University under the supervision of Dr. Terry L. Dickinson. The investigator is Catherine Mergen.

The investigation and the nature of my participation have been described and explained to me, and I understand the explanation.

However, I have been informed and do understand that some details of the study may not have been explained at this time. This procedure is sometimes necessary since advanced knowledge may affect the results. I am aware that the exact nature of the study will be explained to me during a debriefing at the end of the study.

I have been given an opportunity to ask questions, and all such questions have been answered to my satisfaction.

I understand that I am free to withhold any answer to specific items or questions in the questionnaires. I further understand that I am free to withdraw my consent and terminate my participation at any time, without penalty.

I understand that any data or answers to questions will remain confidential with regard to my identity.

I understand that I have the right to contact the Psychology Department Committee for the Protection of Human Subjects and/or the University Committee should I wish to express any opinions regarding the conduct of this study.

Print Name: _____

Signature: _____

Date: _____

APPENDIX H

SAMPLE DJEFS ITEMS FOR GUIDE GROUP TRAINING

S. S. FODER (LUPUS)

Remember, for each essential job function, **circle** the number that applies to your choice and **do not leave blanks**.

JOB - Operator

Essential Job Function 1: Accessing a video display terminal to retrieve telephone listing information from a data base and furnish it to customers who may have incomplete or inaccurate information and do not have access to the desired information or are unable to locate it in a telephone directory.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation: _____

JOB - Consultant - Residence

Essential Job Function 2: Accessing a video display terminal to assist customers from coin, non-coin, hotels and hospitals in placing local and intralata calls (e.g., person-to-person, collect, calling card calls and calls billed to a third number).

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation: _____

Job - Technician

Essential Job Function 2: Performing necessary work to connect, disconnect, test, repair and maintaining company and customer provided telephones and equipment, including working aloft.

1	2	3
CAN PERFORM FUNCTION	CAN PERFORM FUNCTION WITH ACCOMMODATION	CANNOT PERFORM FUNCTION

If 2, Accommodation: _____

APPENDIX I

MEAN RATINGS FOR GUIDE BY RATER JOB BY DISABILITY BY JOB INTERACTION

No Guide Condition

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator Supervisor					
Operator	2.28	1.00	2.11	2.33	1.28
Consultant	2.24	1.00	1.48	2.14	1.28
Technician	2.81	2.67	2.71	2.62	1.66
Consultant Supervisor					
Operator	2.33	1.20	2.33	2.47	1.00
Consultant	2.33	1.33	1.87	2.60	1.00
Technician	2.60	2.53	1.33	2.40	1.13
Technician Supervisor					
Operator	2.48	1.14	1.95	2.43	1.00
Consultant	1.95	1.14	2.00	2.14	1.00
Technician	2.71	2.62	1.38	2.62	1.81

Guide Condition

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator Supervisor					
Operator	2.28	1.38	2.19	1.62	1.05
Consultant	2.70	1.28	1.86	1.38	1.00
Technician	2.67	2.52	1.48	1.24	1.67
Consultant Supervisor					
Operator	2.11	1.28	2.00	2.39	1.50
Consultant	1.94	1.28	1.78	2.50	1.39
Technician	2.78	2.44	1.22	2.33	1.94
Technician Supervisor					
Operator	2.39	1.33	2.17	1.67	1.00
Consultant	2.00	1.33	1.67	1.55	1.00
Technician	2.56	2.78	1.78	2.33	1.39

APPENDIX J

MEAN ORTHOGONAL CONTRASTS BETWEEN TARGET SCORES AND RATINGS FOR THE GUIDE BY RATER JOB BY DISABILITY BY JOB INTERACTION

No Guide Condition

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator Supervisor					
Operator	.20	.00	-.20	.94	.20
Consultant	.17	.00	-1.08	.80	.20
Technician	-.13	.24	1.21	.20	-.47
Consultant Supervisor					
Operator	.24	.14	-.47	1.04	.00
Consultant	.24	.24	-.80	1.13	.00
Technician	-.28	.14	.24	.05	-.85
Technician Supervisor					
Operator	.03	.10	-.74	1.01	.00
Consultant	-.03	.10	-.71	.80	.00
Technician	-.20	.20	.27	.20	-.37

Guide Condition

	Visual Impairment	Uses a Wheelchair	Hearing Impairment	Multiple Sclerosis	Epilepsy
Operator Supervisor					
Operator	.20	.27	-.57	.44	.03
Consultant	.20	.20	-.80	.27	.00
Technician	-.24	.13	.34	-.07	-.47
Consultant Supervisor					
Operator	.08	.20	-.71	.98	.35
Consultant	-.04	.20	-.86	1.06	.28
Technician	-.16	.08	.16	.00	-.28
Technician Supervisor					
Operator	.28	.24	-.60	.47	.00
Consultant	.00	.24	-.94	.39	.00
Technician	-.31	.31	.55	.00	-.67

VITA

Catherine Quinn Greenwald Mergen received her Doctor of Philosophy degree in Industrial/Organizational Psychology from Old Dominion University in May of 1998. Her dissertation is titled Effects of an interview guide on the accuracy of ratings for applicants with disabilities. The chair of her dissertation committee was Dr. Terry L. Dickinson.

Prior to receiving her doctoral degree, Dr. Mergen earned a Masters of Science degree in General Psychology from Old Dominion University in May of 1992, and a Bachelor of Arts degree in Psychology from The Pennsylvania State University in May of 1989.

Dr. Mergen's thesis committee was chaired by Dr. Robert M. McIntyre. Her thesis was funded by the Army Research Institute for the Social Sciences and was published as an Army Technical Report in 1992. The title is Multiple-cue probability learning: The effects of individual differences on MCPL performance.

During her time at Old Dominion University, Dr. Mergen published an article with Dr. Mark Scerbo and David Sawin in The Journal of General Psychology. The title is The effects of subject-controlled pacing and task type upon sustained attention and subjective workload. This article may be found in volume 120 on pages 293 to 307.

Dr. Mergen is a consultant with Coopers & Lybrand, L.L.P., where she began working in August of 1997. She works in the Competency Assessment Practice in Chicago, Illinois. Her areas of specialization include selection test development, performance management system design, and competency assessment and development for Fortune 100 and government clients. Prior to her work with Coopers & Lybrand, L.L.P., she worked as a research specialist in the Selection Research department at Bell Atlantic creating an assessment process for residential technicians and the associated assessor training program.

Dr. Mergen is a member of the American Psychological Association and the Society for Industrial and Organizational Psychology.

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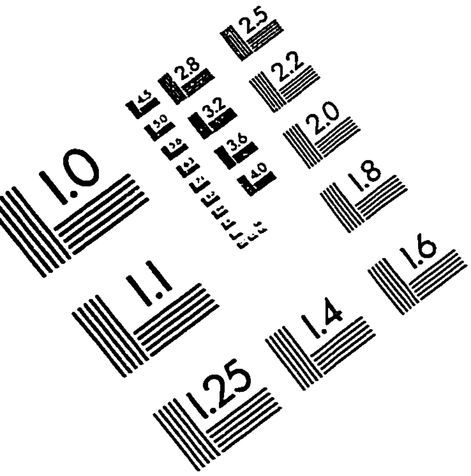
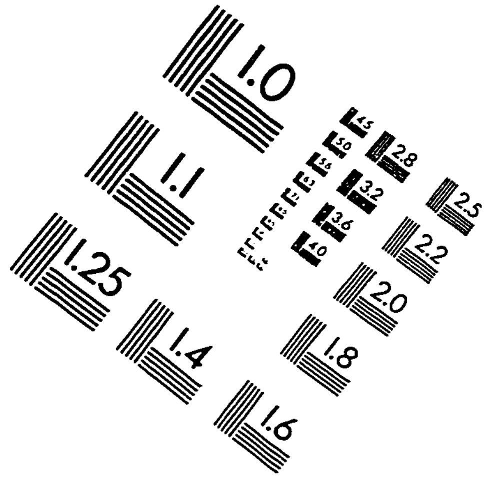
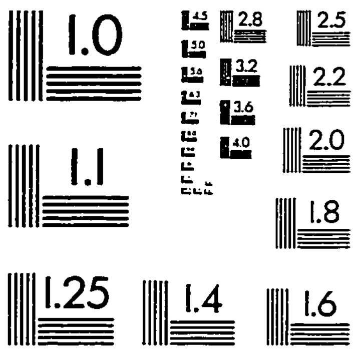
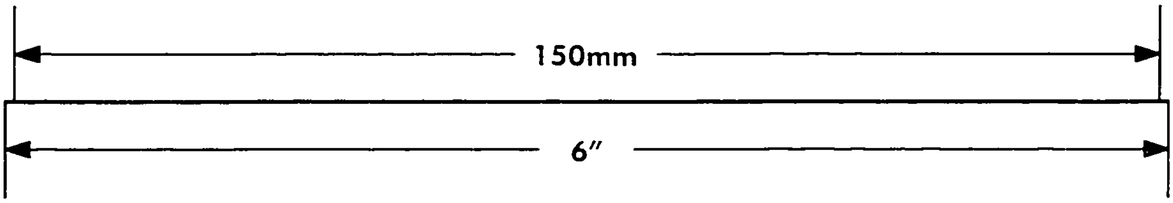
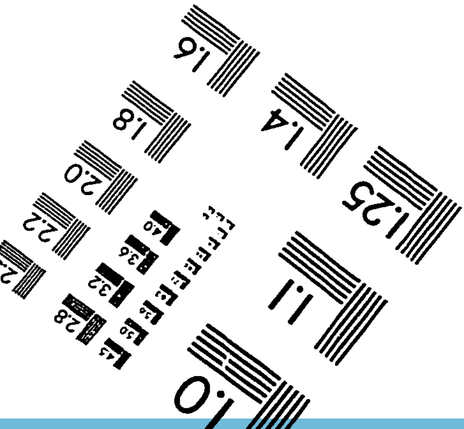
IMAGE EVALUATION TEST TARGET (QA-3)

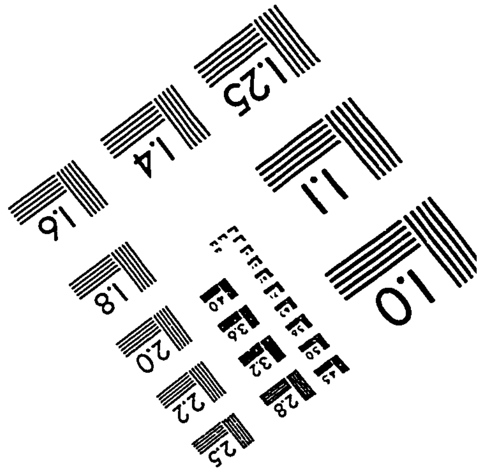












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