

# Workplace accommodations: Occupational therapists as mediators in the interactive process

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**Abstract.** Employers are required under the Americans with Disabilities Act to provide qualified individuals with disabilities workplace accommodations if needed to enable their performance of essential job functions, maintain successful employment and effectively contribute to the workforce and society. The Equal Employment Opportunity Commission and many federal courts recommend an “interactive process” between the employee and employer, to facilitate effective accommodations. Research demonstrates, however, that often the parties to the process are uncertain of their roles and responsibilities. Similarly, court decisions have not uniformly clarified the specific requirements of the interactive process or alternate best practices to achieve an effective outcome. This article asserts that an occupational therapist with special training in ergonomics may make a significant contribution to identifying and implementing effective workplace accommodations, by mediating the interactive process between employer and employee. This unique role is illuminated by examination of the occupational therapist’s professional expertise implementing a successful accommodation (case study) contrasted with an unsuccessful accommodation process that required litigation to resolve. Furthermore, we discuss the role of legal mediation principles in the occupational therapist’s practice, suggesting ways to improve accommodation outcomes and avoid litigation. Recommendations for future research and practice are presented.

**Keywords:** Workplace accommodations, interactive process, mediation, ergonomics

## 1. Introduction

The Americans with Disabilities Act of 1990 (ADA) [1] provides that qualified employees with disabilities are entitled to reasonable workplace accommodations to perform the essential functions of their jobs. The value of workplace accommodations, as well as the challenges in providing them, is discussed wide-

ly in the literature [12,43,46,49,50,65]. This article explores how the accommodations process may be improved with the greater knowledge and expertise of an occupational therapist (OT) trained in ergonomics. The Equal Employment Opportunity Commission (EEOC), which is responsible for implementing the employment provisions of the ADA, recommends an “interactive process” between the employee and employer, wherein the parties are expected to cooperate with collaborative dialogue and problem solving to identify and implement appropriate accommodations. However, facilitating such a process is a challenge, especially when parties to the interactive process are uncertain of their roles and responsibilities.

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A review of ADA employment discrimination court rulings suggests that failed accommodations negatively impact employer-employee communication and trust, and generate unnecessary costs to all parties [46,55]. A consistent, effective process would ensure benefits for both parties, greater productivity from all employees, and equal opportunities for professional growth and advancement.

Frequently, court rulings in ADA accommodation cases rely on expert testimony from the medical world, which focuses on the person's impairment and the job functions they may not be able to perform. Moreover, judicial application of the interactive process is not consistent [3]. This environment creates an opportunity to introduce a more systematic approach that emphasizes participation, collaboration, and expert knowledge of the accommodation process. A recent change in the World Health Organization's (WHO) International Classification of Disability, Function and Health ("ICF"), supports the call for a consistent interactive process with its emphasis on the interaction between a person and their environment, and the conception of the environment as facilitator (or barrier) to participation in work and other major roles in society [31,66].

This article discusses key aspects of the interactive process in the workplace that impact the effective resolution of an employee's need for accommodation. It advances a model for a consistent interactive process, facilitated by the OT's technical expertise and use of mediation principles. We demonstrate this facilitated process with a case study of a successful accommodation contrasted with an unsuccessful accommodation process that required extensive litigation to resolve [39]. In Part I of this paper we overview the benefits, resources and challenges of implementing reasonable accommodations. Part II discusses the role of an interactive process in making accommodations. Part III presents models of practice and the role of OTs that are best suited for enhancing the success of the interactive process. In Part IV we analyze the use of an interactive process through two contrasting case studies. We conclude with recommendations for OTs, employers and employees with disabilities, and future directions for research.

## 2. Workplace accommodations

The ADA protects qualified job applicants and employees with physical or mental impairments from disability-based discrimination [1] (§ 12112(a)-(b)).

The ADA requires employers to provide reasonable accommodations to qualified individuals with disabilities if necessary to assist an employee perform essential job functions, unless providing the accommodation poses an undue hardship for the employer [1,6]. The ADA's statutory provision for reasonable accommodation is central to fulfilling the Congressional mandate that people with disabilities are included in the workforce and have equal opportunity for self-determination and economic independence [23]. Research has shown that workplace accommodations enable persons with disabilities to perform essential job functions, and challenge the assumptions that they are inherently unqualified for or less productive in employment [12,34,52,67]. Employers with fewer than fifteen employees are exempt from the ADA's employment provisions [1] (§ 12111(5)(A)).

Technical assistance agencies and programs provide assistance to employers in this process, the most recognizable of which are: the Job Accommodation Network (JAN), a project funded by the US Department of Labor's Office of Disability Employment Policy [43]; Employee Assistance Programs [37]; the federal Computer/Electronic Accommodations Program [61]; and the IT Accessibility and Workforce initiative of the US General Services Administration [63]. These programs were established to help employers with the challenge of providing suitable workplace accommodations [37]. They generate a wide range of technical expertise and understanding of the needs of people with disabilities and their employers.

Since 1990, the range of effective accommodations has been enhanced through significant technological advances [36]. For instance, promising innovations include Human-Computer-Interaction systems that provide individualized accommodation solutions for people with diverse disabilities. The enhancement of cell-phones that combine miniature mobile technology with text and live captioning enhances the independence of people with hearing, mental, and cognitive impairments that need support for effective communication. Navigation solutions, such as Global Positioning Systems, promote the independence of people with visual and intellectual impairments [36].

Studies show that employers may benefit from implementing accommodations to retain current employees, rather than hiring new workers. Approximately half of all implemented accommodations have either very little or no cost, and when calculating their indirect benefits (e.g., not having to hire and retrain workers) were found to be highly cost-effective [27,33,37].

47,59,61]. Accommodations are particularly low cost, beneficial, and effective, when a successful interactive process occurs between the employee with a disability and employer [7,15,30,60,62].

Providing workplace accommodation is a dynamic task. It challenges commonly used practices and held assumptions [62]. Unfortunately, current accommodation practices frequently breakdown or are unsuccessful because employers lack essential knowledge, inaccurately perceive accommodations as too costly [16,50,52], hold negative attitudes about employing people with disabilities, fail to implement accommodations or abandon them within the early months of adoption, provide an unsupportive corporate culture, or the parties fail to communicate effectively [4,35,49,50,55,60,65,67]. Employers with past experience in employing individuals with disabilities are more willing to provide accommodations [62].

Studies of “resistance strategies” help to identify the readiness levels of negotiating parties and optimal periods to proceed in the evaluation and intervention of workplace accommodations. Analyzing relevant case law, Sullivan [57] identified strategies used by some employers to influence the process in their favor. These strategies were confirmed by qualitative research [19] and are known to experienced ergonomists. They include generating fear of reprisal, giving misinformation, pejorative labeling of requesters as “lazy” or “trouble makers,” and telling requesters that accommodations would take a long time and would do little good.

On the other hand, Sullivan [57] identified employee strategies that caused breakdowns in this process: 1) failing to respond to an employer’s initial steps in formulating accommodations, 2) failing to provide medical information reasonably necessary, 3) being loud, abrasive or argumentative, or 4) resigning prior to completing the interactive process. Moreover, Frank and Bellini [19] concluded that the main barriers to successful accommodations are betrayal and broken trust, the overall aversive effect of facing an exhausting multitude of barriers, and fear of retaliation. Courts also criticize employers for not conducting the process in a timely manner, which leads to unnecessary fatigue of the parties, the employee’s growing anxiety due to the uncertainty of future employment, and further loss of trust between the parties [47]. These factors often lead to unnecessary and costly disputes and litigation [11]. In the next Part we discuss the role of the interactive process for improving accommodation outcomes.

### 3. The interactive process

Determining and implementing workplace accommodations is a multifaceted and demanding social process. Its success depends significantly on the participating parties’ willingness to engage with each other, tolerance for diversity, and responsiveness [21]. Technological advances, innovative workplace strategies, and changes in health and severity of disability require ongoing evaluation and modification of accommodations [37,50]. Implementing quality, beneficial, and cost-effective accommodations is not a simple matter of finding suitable assistive technology or removing physical barriers, but requires mutual understanding between employer and employee about individual capabilities and qualifications, business needs and resources, and known effective accommodation strategies. Open communications that prioritize and demonstrate equal value for the individuals involved further enhance job satisfaction [2,21].

The EEOC encourages the use of an interactive process to identify and implement successful and reasonable accommodations. To provide assistance to employers and employees in utilizing this process, the EEOC has promulgated regulations [70] (§§ 1630.1–1630.16, 1640, 1641) and interpretive guidance [70] (pt. 1630, App.).

The EEOC’s interpretive guidance outlines four steps involved in an interactive process:

When a qualified individual with a disability has requested a reasonable accommodation to assist in the performance of a job, the employer, using a problem solving approach, *should*:

- (1) Analyze the particular job involved and determine its purpose and essential functions;
- (2) Consult with the individual with a disability to ascertain the precise job-related limitations imposed by the individual’s disability and how those limitations could be overcome with a reasonable accommodation;
- (3) In consultation with the individual to be accommodated, identify potential accommodations and assess the effectiveness each would have in enabling the individual to perform the essential functions of the position; and
- (4) Consider the preference of the individual to be accommodated and select and implement the accommodation that is most appropriate for both the employee and the employer [?] (pt. 1630, App. § 1630.9).

This process implies that quality communications between employer and employee are essential. However, this guidance is not legally binding on employers [20]. Although the EEOC refers to the interactive process in its binding regulations for implementing the ADA, it does so without providing specific details. Rather, the regulations state:

To determine the appropriate reasonable accommodation it may be necessary for the covered entity to initiate an informal, interactive process with the qualified individual with a disability in need of the accommodation. This process should identify the precise limitations resulting from the disability and potential reasonable accommodations that could overcome those limitations [70] (§ 1630.2(o)(3)).

Unlike other ADA regulations, which either specifically define a term such as “employer” or “substantially limits” [70] (§ 1630.2(f) & (j)), or articulate a required practice or prohibited action under the ADA [70] (see, e.g., § 1630.7), the EEOC is comparatively unclear about the “interactive process”. It is only suggestive. Consequently, the courts have given varying degrees of deference to the EEOC regulations, not uniformly recognizing the importance of, requiring, or hinging any liability on a party for failing to engage in an interactive process [3, Cite Rosenthal, 2007].

The US Courts of Appeals are divided into three camps: those that require an interactive process, those that find no duty to interact, and those that take a case-by-case approach to determining whether a party is liable for failing to engage in the interactive process [Cite Rosenthal, 2007]. According to Rosenthal [41], the Third, Fifth, Seventh, and Ninth Circuit Courts of Appeals find a duty to engage in an interactive process, triggered by the request for a reasonable accommodation. The Tenth and Eleventh Circuits consider the interactive process only a recommendation. The First and Eighth Circuits acknowledged that in some cases it will be necessary to impose liability on a party when an evaluation of their behavior shows an unreasonable lack of effort or bad faith causing a failure to provide a reasonable accommodation [41].

While guidelines such as those provided by the EEOC are informative, their non-binding nature and inconsistent application in court rulings contribute to an atmosphere where employers and employees with disabilities are uncertain regarding their rights and responsibilities [3]. This ambiguity was demonstrated by the US Supreme Court’s 2001 decision in *US Airways, Inc. v. Barnett*, involving job reassignment as a potential accommodation under the ADA. In *Bar-*

*nett*, the Supreme Court declined to address whether the parties were required under the ADA to engage in an interactive process, or even if they had done so [5]. Without clear guidance from the Supreme Court, lower courts examine the facts at hand and may weigh the efforts made by each party, but are reluctant to mandate participation in an interactive process [3].

#### 4. Models of practice

Professionals use several models of knowledge to understand the challenges of including a person with a disability in the workplace and the variables in implementing workplace accommodations. This Part examines how skills in mediation, ergonomics, and occupational therapy may improve the implementation of the interactive process. The practical implementation of these practices is discussed and demonstrated in Part IV.

##### 4.1. Mediation and dispute resolution practice

Alternative dispute resolution (ADR), a method of resolving disputes using non-judicial mechanisms (e.g., mediation or arbitration), is favored by courts and popular among would-be litigants as it is less expensive, intimidating, and time consuming, and more responsive to case-specific needs than a traditional bench or jury trial [8,22]. While there are different ADR methods, each focuses on communication between the disputing parties and often involves a neutral third party or expert who assists in defining the issues, overcoming communication barriers, and exploring different options to achieve resolution [22]. In some cases, the neutral third party will conduct an investigation of the dispute and prepare a report and recommendation for its resolution [22]. In labor and employment, ADR is commonly used in the context of collective bargaining agreement negotiations, but also may be used as a means to resolve grievances [22].

One method of ADR that adapts well to the interactive process is Transformative Mediation [17,64]. The aim and outcome of this mediating process is not merely resolution, but “to gain greater clarity about each parties’ goals, resources, options, and preferences, . . . to support the parties own process of making clear and deliberate decisions,” and to recognize of each party’s needs, concerns, values, and reasons for the solutions they seek [17, p. 264].

Incorporating Transformative Mediation into the interactive process, in addition to making accommodations, provides a psychosocial contribution that will positively affect other problems and conflicts the employer and employee may face in the future. Additionally, both the employer and employee benefit from improvements in their awareness of resources, analyses of the options, and improved communication with one another.

The writings of courts and legal scholars that adopt the EEOC's position further delineate the legal perspective on the interactive process using the mediating principles mentioned, showing that neither party will benefit from summarily dismissing the other side. Rather, both benefit from meeting with each other, reaching out to necessary informants to become knowledgeable about the employee's condition and essential job skills, identifying and considering multiple accommodation alternatives, involving human resource or other relevant personnel, and documenting the ultimate resolution in the most cost-effective manner [4,14,25].

Moreover, using ADR in the interactive process may help maintain confidentiality, the employee continuing to work, and the employer avoiding monetary damages as a result of hostile responses to accommodation requests [58]. It is important that the mediator is familiar with the ADA, skilled in facilitative mediation, and knowledgeable of the medical, technical, and legal context of the situation [40]. It is our contention that an OT trained in ergonomics would successfully meet these criteria and has been an underutilized resource in this area.

#### *4.2. The ergonomist and the ICF model*

Ergonomists define their job as "the design and evaluation of tasks, jobs, products, environments and systems in order to make them compatible with the needs, abilities and limitations of people" (International Ergonomic Association, IEA, 2000). This definition emphasizes the importance of expertise in analyzing the human-system interface "in order to optimize human well-being and overall system performance" [28]. An ergonomist is a practitioner of human factors, who applies his/her knowledge to the analysis, design, testing, and evaluation of products, processes, and environments in the workplace, and to maximize worker productivity and reduce fatigue and discomfort [9]. Ergonomics is a young multi-disciplinary area of expertise that originally included engineers who focused on identifying hazards at work. In the recent decades, it

has been opened to occupational medicine and rehabilitation experts to be further applied to accommodations process on a continuum, from prevention and protecting employees from unnecessary risk, to accommodating qualified employees with disabilities [12,29,57]. This development in ergonomics has opened significant opportunity to enhance health and participation in the labor market.

The WHO's recent paradigm shift from the traditional medical model of disability to the ICF model [31,66] calls for ergonomics and occupational therapy to adapt their concepts and practices to the ICF model. The ICF model views disability as a socially-created phenomenon and not as a linear problem or attribute of the person. The ICF model further explains disability as created by an interaction between various health conditions and an inflexible environment, and brought about by the attitudes or features of the social and physical environment [31,66].

The preliminary ICF describes function and health with a disease or disorder. The ICF can be also used *visa versa* to describe work related factors influencing the health of employees, demonstrates how environmental conditions reduce participation and create a gap between capability in an optimal environment and the actual performance of a person. This may lead to cumulative disorders, or be mitigated by ergonomics on a continuum of prevention or intervention programs [26, 30].

The traditional engineer ergonomist has many tools to analyze the risks at the work environment and to suggest sophisticated accommodations, mainly in the industry. In accommodation process for a person with disability an OT with training in ergonomics should be involved. The added value of the OT is the knowledge of disability and function, and the focus on the interaction among the person, activities, and environment, emphasizing social participation and well being [68,69]. They contribute to an interactive process through expertise in occupation and job analysis, and in assessing the person's function and participation in classes of occupations and in the workplace [30,56]. Recent trends in OT definitions, literature, educational programs, and research tools emphasize a client-centered approach to help a person affect change and successfully negotiate relevant facilitators and barriers in the work environment [16,34]. Tables 1 and 2 illustrate the interactive 'problem-solving' process from the perspective of an occupational therapist implementing solutions between the employer and the employee, rather than a "problem management" approach. OT mediation of the interac-

Decision steps	Consulting employee	Consulting employer	Mediating
1. Define the problem and validate the issues that impede participation at work	Gathering information: <ul style="list-style-type: none"> <li>– The person's rate of participation and his/her definition of the problem</li> <li>– Personal, medical and occupational history and documentations</li> <li>– Values; goals and expectations</li> </ul>	Gathering information: <ul style="list-style-type: none"> <li>– The employee's rate of participation and problem definition</li> <li>– Occupational and medical history and documentations</li> <li>– Attitudes and experience</li> <li>– Values; goals and expectations</li> </ul>	<ul style="list-style-type: none"> <li>– Raising awareness and preparing for the interactive process</li> <li>– Setting ways for communication</li> <li>– Coordinating with other professionals and family involved</li> <li>– Reducing symptoms &amp; negative attitudes</li> </ul>
2. Select a Theoretical model for practice	<ul style="list-style-type: none"> <li>– Client-centered approach</li> <li>– Combine medical and social models in an interactive process</li> <li>– Elaborate methods of negotiating and problem solving</li> </ul>	<ul style="list-style-type: none"> <li>– Client-centered method</li> <li>– Listen and contribute to concepts appropriately</li> <li>– Emphasize problem solving methods, costs and benefits</li> </ul>	<ul style="list-style-type: none"> <li>– Transformative Mediation emphasizing, empowering, and acknowledging each other</li> <li>– Simultaneous information gathering and negotiation</li> </ul>
3. In order to analyze the interaction select assessments of the person, job functions, and environmental conditions (physical & human)	<ul style="list-style-type: none"> <li>– Conduct standard assessments and observations regarding work functions</li> <li>– Interview the client for self-appraisal of the assessments and consequences</li> </ul>	<ul style="list-style-type: none"> <li>– Identifying job demands and job conditions; essential and marginal job functions;</li> <li>– Risk evaluation; health and safety issues; policies; regulations and attitudes</li> </ul>	<ul style="list-style-type: none"> <li>– Share the data of the assessments;</li> <li>– Clarify goals, interests and gaps between the parties, and dispute in light of the assessments</li> </ul>
4. Identify strengths and resources	<ul style="list-style-type: none"> <li>– Following the assessments discuss and list facilitators and barriers in person, environment, &amp; job</li> <li>– Identify readiness and rejection for change</li> </ul>	<ul style="list-style-type: none"> <li>– Following the assessments discuss facilitators and barriers in person, environment &amp; job</li> <li>– Identify corporate culture support, and rejection for change</li> </ul>	<ul style="list-style-type: none"> <li>– Mapping the resources available and missing for both parties</li> <li>– Discuss a plan and optional consequences for each decision</li> </ul>

ive process may be most effective when both parties make a good faith effort to engage in the process, and the OT and accommodations are funded by an independent service or agency.

## 5. Application & Discussion

In this Part we first analyze a case study of a successful accommodation facilitated by an OT utilizing ergonomic and mediating principles. Second, we analyze *Phelps v. Optima Health*, a decision of the First Circuit Court of Appeals to understand how the accommodation process failed. Finally, we apply the expertise of the OT with training in ergonomics and using Transformative Mediation to demonstrate how these tools would better facilitate the interactive process in *Phelps*. Recall that effective communication and active engagement with good faith are essential to the interactive process.

### 5.1. Case study – OT mediated accommodation

Mr. S. is a 46 year old, successful electrical engineer, who has been working for 16 years in a small and well-known private engineering company. He was in charge of many building projects, from the planning stage, through installing and inspecting complex electrical systems at building sites. A benign tumor was removed from his second cervical vertebrae, leaving him with a significant disability following a long rehabilitation process. All of his deep and superficial sensation from his neck downwards is diminished, and his left extremities remain painful and stiff. He has had to learn to move and use his body with external clues, facilitated by vision and hearing.

Mr. S's personal motivation to go back to work and his support network are extraordinary. His employer wants him back to work with effective reasonable accommodations. The interactive process began at the rehabilitation hospital, and by inviting Mr. S. to collect information and discuss the various aspects of returning to work, including having lost the ability to perform

Table 2

Intervention – the OT's role in facilitating the interactive process

Decision steps	Consulting employee	Consulting employer	Mediating
1. Negotiate target outcomes	<ul style="list-style-type: none"> <li>– Negotiate various levels of measurable outcomes (i.e. functional, personal, social)</li> </ul>	<ul style="list-style-type: none"> <li>– Negotiate various levels of measurable outcomes (i.e. productivity, cost-effectiveness, ADA compliance, satisfaction)</li> </ul>	<ul style="list-style-type: none"> <li>– Negotiate creative new optional accommodations and identify red signs for impossible changes</li> </ul>
2. Implementation of plans	<ul style="list-style-type: none"> <li>– Identify optional accommodations and support; check match with employee needs</li> <li>– Identify partners to the process and their attitudes</li> <li>– Identify steps, responsibilities, budget, policy,</li> <li>– Examine optional accommodations Training and assistance during changes</li> </ul>	<ul style="list-style-type: none"> <li>– Identify optional accommodations and support, and check their fit to the employer</li> <li>– Identify partners to the process and their attitudes</li> <li>– Identify steps, responsibilities, budget, policy,</li> <li>– Examine optional accommodations</li> <li>– Training and assistance during changes</li> </ul>	<ul style="list-style-type: none"> <li>– Empowerment and encouragement for seeking funding; peers and union support</li> <li>– Consultation with engineers and policy makers for solutions</li> <li>– Negotiate for options and their risk and price</li> <li>– Creating a plan for follow-up</li> </ul>
3. Evaluate outcomes	<ul style="list-style-type: none"> <li>– Comparing participation to the initial evaluation and measuring evidence-based improvement in function</li> <li>– Self-satisfaction from the process, the participation and the accommodation</li> <li>– Evaluation of the decision making process</li> </ul>	<ul style="list-style-type: none"> <li>– Comparing effectiveness and productivity to the initial evaluation</li> <li>– Usability contribution of accommodations for others</li> <li>– Employer's satisfaction from the process, participation and accommodation</li> <li>– Evaluation of the decision making process</li> </ul>	<ul style="list-style-type: none"> <li>– Searching for direct and indirect cost – effective analysis</li> <li>– Evaluate the mediation process</li> <li>– Discuss litigation consequences for each choice</li> <li>– Emphasize the outcome of this cycle of mediation as part of on-going communication &amp; accommodations</li> </ul>

many of his prior job tasks. These first experiences of the employer and Mr. S in the interactive process established the important basis of good faith and communication. During visits to the workplace, Mr. S presented the broad information he gathered: medical and occupational therapy, legal, insurance and financial, family, and optional technologies. For these discussions the employer gathered information about the consequences of Mr. S's absence, his alternative contributions under a new job description, and financial, legal and business factors.

An independent and objective OT (this article's first author who practices in Israel) was involved at this early stage through state funding for evaluating Mr. S's work performance. During the evaluation Mr. S. became more aware of the functional consequences of his diminished sensations in the work context (i.e., not feeling the keyboard keys, clicking unintentionally on the mouse, difficulty selecting keys on the cell-phone, writing quick notes during phone calls). He was trained to use an adapted optimal workstation for the activities he believed he would need. As a result, Mr. S set a

goal to get back to his work gradually, working half time in the new administrative job, and driving to work independently.

In the next phase of the interactive process, the OT mediated the accommodation process with a job analysis and risk evaluation, identifying Mr. S's strengths and the activities he can perform independently in his new situation; exploring with the employer an optional job description; considering alternative accommodations; and advocating the employer's limitations (Table 1). The employer wanted to capitalize on Mr. S's extensive experience and excellent relations with customers. As result of the interactive process a new job description was defined for Mr. S, coordinating the planning team for specific projects, preparing and negotiating budget proposals and problems with clients, and ordering supplies.

Additionally, the independent OT met with Mr. S and his employer at the workplace, and discussed appropriate activities and gradual part time work, an accessible location for his office, and infrastructure accommodations made by the employer involving technology



Fig. 1. Modified workstation.

and furniture funded mainly by Israeli National Insurance. Five years after this accommodation process took place, Mr. S. continues working successfully and meeting his employer's expectations. Flexibility and good communication remain essential. Figure 1 presents the modified workstation, providing Mr. S. with the necessary support for his body and arms (#1). He uses a small inclined keyboard providing visual and auditory feedback with every key stroke (#2), joystick mouse (#3) and an external switch to click using the left hand (#4), a headset for the telephone operated on the computer (#5), and other equipment that suit the new activities. On his desk he leaves a written message (#6), requesting that no one moves any items on his desk, because small changes may impede his work. This is symbolic of the important role of the worker in explaining his needs within the interactive process, showing he can contribute significantly with accommodations and positive attitudes.

### 5.2. Description of the case: *Phelps v. Optima Health*

In *Phelps v. Optima Health* [39], Phelps worked as a staff nurse for the Catholic Medical Center (CMC) from 1979 until 1983, at which time she injured her back and discontinued employment. CMC rehired Phelps in 1989 as a "per diem relief nurse" in their rehabilitation unit [39, p. 25]. Congruent to a medical model prognosis, Phelps was restricted by her physician from lifting more than twenty pounds. The manager of the

rehabilitation unit evaluated the job demands of a staff nurse and the environmental risk factors at her workplace, which revealed that Phelps's disability prevented her from carrying out the essential job functions of a staff nurse.

As often happens, her direct manager did not exhaust accommodation ideas, a practice recommended by the Job Accommodation Network [42], and instead created the position of "medication nurse" for Phelps,<sup>1</sup> which did not involve lifting heavy objects [39, p. 25]. Due to a temporary shortage of nurses, Phelps was asked to stop working as a medication nurse and undertake patient care tasks in 1995. Unable to perform the normal tasks of a staff nurse, she shared her patient load with her sister who also worked in the rehabilitation unit. Phelps created her own accommodations with her sister carrying out the essential job functions she was unable to perform. This new arrangement was not officially reported to human resources or the Employee Health Department, but was unofficially approved by the rehabilitation unit manager.

In 1997, the nurse manager for the rehabilitation unit was replaced; the new manager requested that Phelps provide her with a recent physician's report documenting her specific physical limitations. The report indicated Phelps was unable to lift fifty pounds; conse-

<sup>1</sup>The court noted that the ADA does not require an employer to create a new position for a qualified employee with a disability.

quently Phelps' new manager dismissed her from her position in the rehabilitation unit. Phelps, however, remained employed by CMC and immediately met with the human resources manager to discuss an internal transfer to a new position compatible with her physical limitations. Phelps indicated she required the same pay and scheduling flexibility that she had in her previous position. The CMC terminated Phelps in 1998 without re-employing her. The Court of Appeals ruled in favor of the CMC finding no discrimination under the ADA, since Phelps could not perform the essential functions of her job with or without accommodation.

The court determined that:

Phelps was not actively engaged in the interactive process: she turned down several job opportunities suggested by L'Heureux (the HR manager) and placed significant conditions on her reassignment severely limiting CMC's flexibility. Moreover, the evidence indicates that CMC offered Phelps several potential alternatives, began the interactive process immediately after Phelps's dismissal, returned her phone calls and letters promptly, and generally acted in good faith [39, p. 28].

The *Phelps* case illustrates a common dispute in work accommodation cases – a back problem and inability to lift a minimum weight – and a matter in which OTs are known for their expertise. In *Phelps*, it is unclear whether the interactive process was exhausted before litigation, or either party effectively engaged the process in good faith. Hence, several questions arise: Was the accommodation process comprehensive and interactive in this case? Could it gain preventative advantages by an ergonomist mediating an interactive process?

### 5.3. *Ergonomist as a mediator in the Interactive Process*

The two cases presented illuminate the complex interaction between the employees' strength and limitations, the essential job functions, and the work environment within the limitations of business needs that facilitated or hindered the employee's participation in work. A successful interactive process depends on both the employee and employer providing critical information. The employee is expected to provide relevant information about work participation and disability, the activities he/she can perform, and facilitators and barriers to performing the essential job functions. The employer should be candid about business needs and resources, the costs of replacing the employee, and the employee's unique strengths.

As in the case of Mr. S, these issues may be explored, measured and mediated by the ergonomist who gathers personal, medical and occupational information. OTs with a background in ergonomics are uniquely trained to collect this data, and to explore and determine work related problems, values, goals, and expectations collaboratively with the individual [56]. OTs help define the employee's readiness to work and inform the determination whether to disclose the disability [18]. They also support the individual's decisions and goal setting through standard assessments and observations regarding function at work, self appraisal of functioning, and observations in actual functioning (Table 1). As for the employer's needs, the ergonomist may base the job analysis on evidence, either through assessments, observations, interviews or through data bases like the O\*Net.

Two key and connected legal concepts are within the expertise of ergonomists' interventions in the workplace: determining essential job functions and reasonable accommodations as demonstrated in Table 2.

Mr. S's case demonstrates that an objective professional mediator may achieve better results preventing litigation and maintaining an experienced worker [29, 30]. The *Phelps* case shows how broken communication may lead to misperceptions of the ADA protections. Phelps argued that her employer reasonably could have accommodated her by allowing her to continue to share lifting duties with other nurses. However, the court noted that employers are not required under the law to exempt an employee from performing essential job functions; nor are they required to create a new job for the employee, which CMC did do. In this case, an objective professional mediator may have helped to clarify the rights and responsibilities of the parties, to develop a more realistic expectation of work conditions, and avoid litigation [11].

The case of Mr. S. demonstrates how interactive communication and mutual cost benefit decision making may achieve better results for both parties: the ergonomist may facilitate an effective dialogue in the transformative mediation model, consulting the employer and employee to understand their goals, interests and priorities (see Table 1 supra). The ergonomist may utilize his or hers unique skills and expertise to listen, recognize, comprehend, and communicate these matters between the parties, and guide a dialogue toward a common resolution [8,17]. The employer gains from the ergonomist's evidence-based job demand analysis and measures of the employee's performance with and without various accommodations. This also assists an employer to conduct risk analysis and to implement injury preventative programs for all workers.

## 6. Recommendations and conclusions

Employers and persons with disabilities are likely to enjoy successful employment outcomes through increased knowledge and information sharing. Proactive policies that allow for matching between employees' needs and job skills and available resources may help to bridge the gap between current and state of the art accommodations. Positive corporate cultures (i.e., the attitudes, policies, and practices of a business and its employees) are important to embrace open communications, goal exploration and sharing, and the employee's active involvement in the accommodation selection and decision-making process [52,53,59].

The potential for and importance of workplace accommodations for qualified individuals with disabilities is clear in light of developments in human rights, technological innovations, and changing perceptions of the environmental barriers and facilitators for inclusion in work and in society at large. Effective workplace accommodations are essential for the economic independence and self-determination of people with disabilities, and to maintain a productive workforce.

This article aimed to further the dialogue about the ADA as understood by the courts and informed by the social model of disability to better understand the implementation of effective workplace accommodations. We incorporate concepts from mediation to demonstrate how ergonomists may serve as particularly useful facilitators in the ADA's interactive process. This conceptual study suggests the need for greater use of employer-employee mediation principles facilitated by the experience of qualified ergonomists to promote quality communications, openness, and well-informed decision making.

It is still a conceptual change for most employers to view the implementation of accommodations through the interactive process [24], which also calls for further education and training of ergonomists to master those skills (i.e., using Transformative Mediation). This change hopefully will lead to new research and knowledge about the interactive process in practice, as illustrated by the difficulties encountered in the *Phelps* case, such as lack of communication and analytical breakdowns, and the long-term success of Mr. S's accommodations.

There also is a need to develop more systematic assessments of the interactive process to address questions such as: Who participated in the decision making process? Was the employer or direct supervisor involved? What are each party's goals, interests and

resources? Has the documentation covered the components of an interactive process mentioned? What accommodations are suggested and what options discussed? What are the communication patterns in the interactive process between the employer and employee? How long did the process take? In what circumstances do lawyers become involved and what escalates such disputes? These questions may be assessed over time for different employers and involving persons with a range of disabilities. The long-term goal is to enhance the operation of the interactive process to facilitate greater success with effective accommodations for qualified workers with disabilities.

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## References

- [1] Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. §§ 12101 et seq, 2000.
- [2] S.H. Akabas and L.B. Gates, The Role of Employee Assistance Programs in Supporting Workers with Mental Health Conditions. *New York Work Exchange: A project of the Coalition of Voluntary Mental Health Agencies*, retrieved July 27, 2006, from <http://www.cvmha.org/ccrr/projects/eap-report.pdf>, 2002.
- [3] J.R. Autry, Reasonable Accommodation Under the ADA: Are Employers Required to Participate in the Interactive Process? The Courts Say "Yes" But the Law Says "No," *Chicago-Kent Law Review* **79** (2004), 665–697.
- [4] A.M. Barancik, Determining Reasonable Accommodations Under the ADA: Why Courts Should Require Employers to Participate in an "Interactive Process," *Loyola University-Chicago Law Journal* **30** (1999), 513–549.
- [5] *Barnett v. US Air, Inc.*, 228 F.3d 1105 (9th Cir. 2000), *cert. granted*, 69 USLW 3530, 69 USLW 3665, 69 USLW 3670, 70 USLW 3034, (US Apr. 16, 2001) (NO. 00-1250).
- [6] P. Blanck, E. Hill, C.D. Siegel and M. Waterstone. *Disability civil rights law and policy*. MN: Thomson/West, St. Paul, MN 2004.

- [7] P. Blanck, J.H. Andersen, E.J. Wallach, J. Handley and J.P. Tenney, Implementing reasonable accommodations using ADR under the ADA: the case of a white-collar employee with bipolar mental illness, *Mental and Physical Disability Law Reporter* **18** (1994), 458.
- [8] L.B. Bingham, G. Chesmore, Y. Moon and L.M. Napoli, Mediating Employment Disputes at the United States Postal Service, *Review of Public Personnel Administration* **20**(1) (2000), 5–19.
- [9] Board of Certification in Professional Ergonomics, Certification information, Retrieved February 19, 2008 from <http://bcpe.org/info/default.asp>, 2008.
- [10] S.M. Bruyere, Occupational safety and health and disability nondiscrimination in the workplace: Complying with dual requirements, *Employment and Disability Institute Collection*, Retrieved February 29, 2008, from <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1035&context=edicollec>, 2002.
- [11] R.V. Burkhauser and D.C. Stapleton, The decline in the employment rate for people with disabilities: Bad data, bad health, or bad policy? *Journal of Vocational Rehabilitation* **20**(3) (2004), 185–201.
- [12] T.M. Butterfield and J.H. Ramseur, Research and case study findings in the area of workplace accommodations including provisions for assistive technology: a literature review, *Technology and Disability* **16**(4) (2004), 201–210.
- [13] A. Cantor, Disability in the workplace: Effective and cost-effective accommodation planning, *NATCON 1998 Conference Proceedings. Toronto*, 1998.
- [14] H.A. Comisky, Guidelines for Successfully Engaging in the Interactive Process to Find a Reasonable Accommodation Under the Americans with Disabilities Act, *Labor Lawyer* **13** (1998), 499–510.
- [15] E.S. Fabian, A. Waterworth and B. Ripke, Reasonable accommodations for workers with serious mental illness: Type, frequency, and associated outcomes, *Psychosocial Rehabilitation Journal* **17**(2) (1993), 163–172.
- [16] M. Falardeau and M.J. Durand, Negotiation-centered versus client-centered: which approach should be used, *Canadian Journal of Occupational Therapy* **69** (2002), 135–142.
- [17] J.B. Folger and R.A.B. Bush, Transformative mediation and third party intervention: Ten hallmarks of a transformative approach to practice, *Mediation Quarterly* **13**(4) (1996), 263–278.
- [18] R.L. Franche and N. Krause, Readiness for Return to Work Following Injury or Illness: Conceptualizing the Interpersonal Impact of Health Care, Workplace, and Insurance Factors, *Journal of Occupational Rehabilitation* **12**(4) (2002), 233–256.
- [19] J.J. Frank and J. Bellini, Barriers to the accommodation request process of the Americans with Disabilities Act, *Journal of Rehabilitation* **71**(2) (2005), 28–39.
- [20] General Electric Co. v. Gilbert, 429 US 125 (1976).
- [21] L.B. Gates, Workplace accommodation as a social process, *Journal of Occupational Rehabilitation* **10**(1) (2000), 85–98.
- [22] E.L. Grossman, G.K. Harnad and J.J. Shampo, Alternative Dispute Resolution, *American Jurisprudence* **4** (2nd ed.) (2008).
- [23] H. Hahn, Accommodations and the ADA: Unreasonable bias or biased reasoning? *Berkeley Journal of Employment and Labor Law* **21**(1) (2000), 166–192.
- [24] S.L. Harlan and P.M. Robert, The social construction of disability in organizations, *Work and Occupations* **25**(4) (1998), 397–435.
- [25] F. Harris and S. Springle, Cost analysis in assistive technology research, *Assistive Technology* **15** (2003), 16–27.
- [26] Y. Heerkens, J. Engels, C. Kupier, J. Van Der Gulden and R. Oostendorp, The use of the ICF to describe work related factors influencing the health of employees, *Disability and Rehabilitation* **26**(17) (2004), 1060–1066.
- [27] D.J. Hendricks, L.C. Batiste, A. Hirsh, H. Schartz and P. Blanck, Cost and Effectiveness of Accommodations in the Workplace: Preliminary Results of a Nationwide Study, *Disability Studies Quarterly* **25**(4), retrieved July 27, 2006, from [http://www.dsqr-sds.org/\\_articles.html/2005/fall/hendricks\\_etal.asp](http://www.dsqr-sds.org/_articles.html/2005/fall/hendricks_etal.asp), 2005.
- [28] International Ergonomic Association (IEA), Retrieved January, 3, 2008 from: [http://www.iea.cc/browse.php?contID=what\\_is\\_ergonomics](http://www.iea.cc/browse.php?contID=what_is_ergonomics), 2000.
- [29] K. Jacobs ed., *Ergonomics for Therapists* (2nd Edition), Butterworth-Heinemann, Newton, 1999.
- [30] K. Jacobs, Evolution of occupational therapy delivery systems: The medical model and beyond, in: *The Occupational Therapy Manager*, 4th Edition, G. McCormack, E. Jaffe and M. Goodman-Lavey eds, American Occupational Therapy Association, Bethesda, MD, 2003, 35–83.
- [31] A.M. Jette, Toward a common language for function, disability, and health, *Physical Therapy* **85**(5) (2006), 726–734.
- [32] Job Accommodation Network (2008), retrieved February 21, 2008, from <http://www.jan.wvu.edu/>.
- [33] A.J. Langton and H. Ramsuer, Enhancing employment outcomes through job accommodation and assistive technology resources and services, *Journal of Vocational Rehabilitation* **16**(1) (2001), 27–37.
- [34] M. Law ed., *Client Centered Occupational Therapy*, Slack Inc., Thorofare, N.J., 1998.
- [35] J.A. Lawrence, P. Boxer and N. Tarakeshwar, Determining Demand for EAP Services, *Employee Assistance Quarterly* **18**(1) (2002), 1–16.
- [36] R.T. Lenz and J.L. Engledow, Environmental analysis: The applicability of current theory, *Strategic Management Journal* **7**(4) (2006), 329–346.
- [37] NCD, National Council on Disability, Empowerment for American with Disability: Breaking barriers to careers full employment. Washington: National Council on Disability, 2007.
- [38] Occupational Safety and Health Act of 1970 (OSHA), 29 U.S.C. §§ 651 et seq. (2000).
- [39] *Phelps v. Optima Health*, 251 F.3d 21 (1st Cir. 2001).
- [40] P.B. Proctor, Determining ‘Reasonable Accommodation’ Under the ADA: Understanding Employer and Employee Rights and Obligations During the Interactive Process, *Southwestern University Law Review* **33** (2003), 51, 55–72.
- [41] RoJ.L. Rosenthal, The interactive process disabled: Improving the ADA and strengthening the EEOC Through the Adoption of the interactive process, *Emory Law Journal* **57** (2007), 247–278.
- [42] T.D. Saab, The Job Accommodation Process, *Job Accommodation Network*, retrieved February, 1, 2008, from <http://www.jan.wvu.edu/media/JobAccommodationProcess.html>, 2007.
- [43] T.D. Saab and L.C. Batiste, Reasonable Accommodation and the ADA Process, *Job Accommodation Network*, Retrieved March 2, 2008 from <http://www.jan.wvu.edu/media/raproc.html>, 2007.
- [44] C.J. Sandoz, OSHA and ADA: “Reasonable Accommodation” in training persons with developmental disabilities, Presented at the *Annual Convention of the American Association on Mental Retardation in Washington DC* **117** (4 June 1993).

- [45] S.L. Sauter and N.G. Swanson, An Ecological Model of musculoskeletal disorders in office work (Part 1), in *Beyond Biomechanics: psychosocial aspects of musculoskeletal disorders in office work*, S.D., Moon and S.L., Sauter eds, Hampshire, UK: Taylor Francis Publications, 1996.
- [46] E. Scalia, OSHA's Ergonomics Litigation Record: Three Strikes and It's Out, *Journal of Labor Research* **22** (2001), 55–74.
- [47] H.A. Schartz, D.J. Hendrichs and P. Blanck, Workplace accommodations: Evidence based outcomes, *Work: A Journal of Prevention, Assessment and Rehabilitation* **27** (2006), 345–354.
- [48] K. Schartz, H.A. Schartz and P. Blanck, Employment of Persons with Disabilities in Information Technology Jobs: Literature Review for "IT Works," *Behavioral Sciences and the Law* **20**(6) (2002), 637–657.
- [49] H.A. Schartz, K.M. Schartz, D.J. Hendricks and P. Blanck, Workplace accommodations: Empirical study of current employees, *Mississippi Law Journal* **75** (2006), 917–942.
- [50] M.J. Scherer and R. Glueckauf, Assessing the benefits of assistive technologies for activities and participation, *Rehabilitation Psychology* **50**(2) (2005), 132–141.
- [51] N. Schreuer, A. Rimmerman and D. Sachs, Adjustment to Severe Disability: Constructing and Examining a Cognitive and Occupational Performance Model, *International Journal of Rehabilitation Research* **29**(3) (2006), 201–207.
- [52] L. Schur, D. Kruse, J. Blasi and P. Blanck, Corporate Culture and the Experiences of Employees with Disabilities, *Berkeley Journal of Employment and Labor Law*, (in press).
- [53] S. Schwochau and P. Blanck, Does the ADA disable the disabled? More comments, *Industrial Relations* **42**(1) (2003), 67–77.
- [54] C. Serra, M.C. Rodriguez, G.L. Delclos, M. Plana, L. Gomez and F.G. Benavides, Systematic review of criteria and methods used for the assessment of fitness for work, *Occupational and Environmental Medicine* **64**(5) (2007), 304–312.
- [55] W.S. Shaw and M. Feuerstein, Generating workplace accommodations: lessons learned from the integrated case management study, *Journal of Occupational Rehabilitation* **14**(3) (2004), 216–226.
- [56] L. Shaw and H. Polatajko, An application of the occupation competence model to organizing factors associated with return to work, *Canadian Journal of Occupational Therapy* **69**(3) (2002), 158–167.
- [57] C. Sullivan, The ADA's interactive process, *Journal of the Missouri Bar* **57**(3) (2001), 116–122. Retrieved January, 28, 2007, from <http://www.mobar.org/journal/2001/mayjun/sullivan.htm>.
- [58] N. Taslitz, OSHA, ADA and the litigation of CTDs, *Managing Office Technology* **39**(3) (1994), 39–46.
- [59] J.L. Teich and J.A. Buck, Datapoints: Mental health services in employee assistance programs, 2001, *Psychiatric Services* **54**(5) (2003), 611.
- [60] S.Y. Terrell-Lindsay and B. Matthews, Computer/Electronic Accommodations Program (CAP), *Work* **18**(2) (2002), 205–206.
- [61] D.D. Unger, Workplace supports: A view from employers who have hired supported employees, *Focus on Autism and Other Developmental Disabilities* **14**(3) (1999). Retrieved February 29, 2008, from [http://www.worksupport.com/documents/proed\\_workplacesupports.pdf](http://www.worksupport.com/documents/proed_workplacesupports.pdf).
- [62] US Equal Employment Opportunity Commission, The ADA: Your responsibilities as an employer: Addendum, retrieved February 29, 2008, from <http://www.eeoc.gov/facts/ada17.html>, 2005.
- [63] US General Services Administration, IT Access for Persons with Disabilities, retrieved February 18, 2008 from <http://www.gsa.gov/Portal/gsa/ep/channelView.do?pageTypeId=8203&channelPage=%2Fep%2Fchannel%2FgsaOverview.jsp&channelId=13126>, 2007.
- [64] D.T. Wecksstein, In praise of party empowerment – and of mediator activism (Ch.4), in: *Mediation theory and practice*, J.J. Alfani, S.B., Press, J.R. Sternlight and J.B. Stulberg eds, Lexis Publications, Newark, NJ, 2000.
- [65] M. Williams, D. Sabata and J. Zolna, User needs evaluation of workplace accommodations, *Work: A Journal of Prevention, Assessment and Rehabilitation* **27** (2006), 355–362.
- [66] World Health Organization (2001), International classification of functioning, disability and health (ICF). Geneva, Switzerland.
- [67] P. Yeager, H.S. Kaye, M. Reed and T.M. Doe, Assistive technology and employment: Experiences of Californians with disabilities, *Work* **27**(4) (2006), 333–344.
- [68] S. Yalon-Chaimowitz, D. Zachs, N. Weintraub, A. Nota, N. Mazor et al., The framework and process of the occupational therapy practice in Israel. Tel-Aviv: The Israeli Occupational Therapy Association.
- [69] M.J. Youngstorm, the Occupational Therapy practice framework: The evolution of our professional language, *The American Journal of Occupational Therapy* **56**(6) (2002), 607–639.
- [70] 29 C.F.R. pt. 1630, Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act (2007).