

Research Article

An Exploratory Study of the Elements of Successful Service Dog Partnerships in the Workplace

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Received 16 September 2013; Accepted 1 November 2013

Academic Editors: J. McDougall and C. Zwingmann

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The use of service or assistance dogs has increased over the past three decades but is still considered by many to be an emerging concept for assisting people with disabilities to navigate a number of environments. This is predominately due to the minimal research that has been done on the effect and promising practices. One area, employment, has been completely overlooked in research related to service dogs. This research project undertook an exploratory study to gather data on the elements of service dog partnerships that have been successful in the workplace. A structured methodology using mixed methods was used to gather ideas from a diverse group of stakeholders, people with service dogs, trainers, vocational rehabilitation counselors, and other healthcare professionals, to form a common framework for addressing the issue in future research and development of interventions. The results identified 68 elements that respondents perceived and rated to be important or highly important to the phenomenon. They were categorized into six clusters: (1) dog preparation, (2) monitoring, (3) employee competence, (4) legal knowledge, (5) information and education, and (6) coworker preparation. The discussion identified key points that might support the development of successful employment outcomes for people working with service dogs.

1. Introduction

Service animals provide support for people with disabilities at a level we could not have foreseen just decades ago. They have expanded our understanding of the variety of tasks that can be done, different types of people with disabilities who can be served, and the effect of the animal on the lives of people with disabilities. Given this capacity, many people with significant disabilities are seeking entry into the workplace with their animals in an effort to allow themselves to benefit from the more normal rhythm of life afforded to others [1]. That is creating a challenge for employers and employees alike as they navigate the legal and social implications of animals in the workplace and work to understand the validity of the service [2].

The terminology used to label specific types of work dogs perform for people with disabilities has not even been standardized. At present, Assistance Dogs International (n.d.) defines three types of assistance dogs: (1) guide dogs for the blind and the visually impaired, (2) hearing dogs for the deaf and hard of hearing, and (3) service dogs for people with

disabilities other than those related to vision or hearing [3]. The third category broadens into distinctions of trained dogs such as medical response, mobility assistance, psychiatric service, and seizure response. These dogs are trained to work with people who use power or manual wheelchairs, have balance issues, have various types of autism, need seizure alert or response, need to be alerted to other medical issues like low blood sugar, or have psychiatric disabilities.

The staff of the Job Accommodation Network, a service of the Office of Disability Employment Policy of the U.S. Department of Labor, field thousands of inquiries about workplace accommodations from employers every year, including questions about service animals. According to the staff, the calls include inquiries about more than the traditional guide dog, hearing, or mobility support animal. The majority is now focused on uncharted territory for employers, such as justifying an animal as a reasonable accommodation in the workplace for people with mental health disorders and hidden disabilities (personal communication, Hendricks).

There exist anecdotal stories of why employers may be concerned about having a dog in the workplace. These include

issues around allergens, potential for disruptive behavior, employee phobias, and liability. A rising concern promoted in the media is the possible proliferation of people falsely identifying their dog as a service animal to go on public transportation, into businesses and restaurants [4]. One would expect employers to become skeptical as well, especially given the variety of emerging breeds of dogs and reasons people use them. The traditional perception that service animals were Golden Retrievers, Labradors, and German Shepherds are being challenged as Papillons, Great Danes, and a host of other dog breeds and mixed breeds are trained to serve. They are also serving people who experience extreme vertigo, migraines, epilepsy, diabetes, and other medical conditions that limit activities of daily living. The changes are occurring faster than in the past. For instance, guide dogs for people who are blind had an official start shortly after World War I but those for mobility limitations did not follow for another 40 years. Hearing, psychiatric service, autism, and medical alert dogs, among others, have been a much more recent occurrences. Now, people are even using other animals such as monkeys, horses, cats, and birds to provide service and support.

The Americans with Disabilities Act has provided guidance around legal rights and limits to the use of a service dog in the workplace and related environments, such as transportation, public access, and housing. Yet there is little research based information about what it means and requires for a service dog partnership to navigate these environments successfully.

Federal law defines service animal as, “any dog that is individually trained to do work or perform tasks for the benefit of an individual with a disability, including a physical, sensory, psychiatric, intellectual, or other mental disability. Other species of animals, whether wild or domestic, trained or untrained, are not service animals for the purposes of this definition. The work or tasks performed by a service animal must be directly related to the individual’s disability” (DOJ, n.d.).

According to the Department of Justice (n.d.), “examples of work or tasks include, but are not limited to, assisting individuals who are blind or have low vision with navigation and other tasks, alerting individuals who are deaf or hard of hearing to the presence of people or sounds, providing nonviolent protection or rescue work, pulling a wheelchair, assisting an individual during a seizure, alerting individuals to the presence of allergens, retrieving items such as medicine or the telephone, providing physical support and assistance with balance and stability to individuals with mobility disabilities, and helping persons with psychiatric and neurological disabilities by preventing or interrupting impulsive or destructive behaviors. The crime deterrent effects of an animal’s presence and the provision of emotional support, well-being, comfort, or companionship do not constitute work or tasks for the purposes of this definition.” These tasks and their applicability to the workplace as a reasonable accommodation is a concern of larger proportions than just a decade ago.

The use of service animals can be considered a reasonable accommodation in employment settings by law as well as

an opportunity for increased independence in educational and the general community environments. The key word in the former sentence is “can.” The ADA requires that service animal use by a person with a disability be allowed public access, but Title I, the employment section of the ADA does not require employers to allow employees to bring their service animals to work. Instead, it is considered a form of reasonable accommodation. Although, on the other hand, Title I expands the options available to people who wish to use a service animal as they do not limit the definition to dogs.

Expanded use of service animals to support people with disabilities in community participation and employment needs promising practices that will inform policies and procedures and possibly regulation. Data-driven approaches are needed to navigate the expectations of defining reasonable accommodation in the workplace, a significantly underresearched phenomenon even in service dog use.

The goal of this paper is to provide a foundation for understanding the role of service dogs in the lives of people with disabilities and the practices that may allow for appropriate access and positive outcomes in the workplace. Dogs were chosen because they have a longer history than other animals in providing services for people with disabilities. A study was conducted with funding from the National Institute on Disability and Rehabilitation Research’s Switzer Distinguished Rehabilitation Research Fellowship. The study undertook a mixed methods form of structural conceptualization to assess the complex issues from the perspective and needs of a diverse group of stakeholders and generated a graphic depiction of major concepts.

The primary research question that was posed for the study was “*What elements are present in the process of creating successful service dog partnerships in the workplace?*” In addition, there was an investigation of the relative importance of specific recommended elements to the overall process.

2. Method

2.1. Participants. Participants were recruited through listservs and membership lists of Assistance Dog International, International Association of Assistance Dog Partners, followers of the International Assistance Dog Week pages, and State vocational rehabilitation agencies in the Mid-Atlantic, southern and western regions. A snowball sampling approach was used to reach a larger group. In each contact made with individuals associated with these organizations, they were asked to forward the request to participation to others in their network that met the participation criteria.

Participation was limited to include only individuals who were experienced with the use of service dogs in the workplace either as handler, service dog trainer, vocational rehabilitation counselor, or health care professional. The population was constrained to experience with hearing dogs for the deaf and hard of hearing, service dogs that provide mobility and stability assistance, seizure alert or response, and other medical issues such as diabetic alert medical service dogs for people with disabilities other than those related to vision or hearing. Those whose experience focused on

service dogs for people with low vision or blindness were excluded due to their differences in training as well as level of experience.

The seminal work of Trochim recommended 10 to 20 people as a suitable participant size in the concept mapping system (1989). For this study, this was applied to the subpopulations, seeking a minimum of 10 participants who had experience with mobility/stability and hearing assistance dogs and 10 who had experience with medical alert service dogs, to include psychiatric. This minimum was also applied to the roles of service dog user, trainer, vocational rehabilitation counselor, other healthcare professional, and employers.

Sixty-eight (68) individuals participated in the process. The largest group was service dog users ($n = 38$; 56%). Predominately, the experience was with dogs who provide mobility/stability assistance ($n = 37$; 54%). This is not surprising, as one would expect the number of handlers or users to outnumber the number of trainers and vocational rehabilitation counselors. There is a longer history of training mobility and stability dogs than medical alert dogs as well. Further information on the participant demographics is provided in Table 1.

Of the 68 participants, 64 completed the demographic questions, 24 participated in the brainstorming exercise, 10 sorted the elements once the brainstorming was completed, and 40 finished rating the overall importance of the elements in the overall process. Individuals may have participated in more than one activity.

2.2. Research Design. An integrative mixed methods research design geared toward exploratory research was used in this study [5–7], specifically concept mapping pattern matching. Trochim [8] provided the following definition of *concept mapping*: “a pictorial representation of the group’s thinking which displays all of the ideas of the group relative to the topic at hand, shows how these ideas are related to each other, and optionally, shows which ideas are more relevant, or appropriate” (p. 2). This type of design is especially useful when no formal hypotheses important exist and allows for potential hypotheses to be generated from the findings. It is also a method that, when examined across a range of projects, has been shown to yield reliable results [9].

For this research, there was a need to establish a baseline understanding of what was occurring in successful service dog partnerships in the workplace from the perspective of those with experience. The structured methodology we used gathers ideas from a diverse group of stakeholders to form a common framework for addressing the issue while simultaneously creating potential hypotheses for future research. In the representation of the participants as a geography of thought, engaging different communities of interest, the methodology allows us to create a new quantitative framework out of a qualitative process [10].

The process started with preparation and selection of participants, to include gathering of quantitative data to provide a demographic portrait of the participant pool. Online, asynchronous group processes allowed for generation of ideas through brainstorming. The statements are then synthesized

TABLE 1: Demographic characteristics of participants with service dog experience ($N = 68$).

Participant Question	Option	Frequency	%
Primary role	Person who uses a service dog	38	55.88%
	Service dog trainer	11	16.18%
	Vocational rehabilitation counselor	12	17.65%
	Employer (to include human resources personnel, or supervisors)	0	0.00%
	Other health care professional	3	4.41%
	Did not respond	4	5.88%
	68	100.00%	
Primary type of service dog in experience	Hearing assistance	8	11.76%
	Mobility/stability assistance	37	54.41%
	Psychiatric/psychological service	13	19.12%
	Seizure alert/response	1	1.47%
	Diabetic alert	2	2.94%
	Other medical response	3	4.41%
	Did not respond	4	5.88%
68	100.00%		
Experience with service dogs	1	21	30.88%
	2–5	27	39.71%
	6–10	3	4.41%
	11–20	6	8.82%
	More than 20	7	10.29%
	Did not respond	4	5.88%
68	100.00%		

Note. Experience is measured in number of service dog partnerships in the workplace the respondent has been part of, as a trainer, handler, vocational rehabilitation counselor, or healthcare professional.

and sorted into clusters according to commonality. The ideas are rated according to variables of interest, then analyzed with multivariate statistics such as multidimensional scaling and cluster analysis [11].

2.3. Data Collection. In the announcement sent to prospective participants, a link (url) was provided for a web-based survey with an open-ended question. They were first asked to respond to the demographic questions, self-identifying as meeting the participation criteria. Then they were asked to brainstorm responses to the focus prompt *What elements are important to a successful service dog partnership in the workplace?* Data was collected from 24 participants who submitted individually with anonymity. The brainstorming website was updated in real time so participants could see ideas as they were generated. Members of the research team then refined the statements to remove duplicate statements,

TABLE 2: Brainstormed elements of successful service dog partnerships in the workplace organized by clusters ($N = 68$).

Cluster	Id #	Statement	Bridging
(1) Dog preparation			0.50
	1	The dog is well behaved; controlled by vocal command.	0.33
	38	That the service dog has received training appropriate for the specific workplace.	0.47
	39	Maintenance of behavior and task completion is expected of the service dog team.	0.49
	41	The use of service dog program trainers to do annual maintenance checks and address problems as they occur.	0.70
Count = 4, Std. Dev. = 0.13, Variance = 0.02, Min = 0.33, Max = 0.70, Median = 0.48.			
(2) Monitoring			0.30
	17	The person who is bringing the dog into the workplace must take responsibility for the dog's behavior and reinforce appropriate boundaries with colleagues.	0.31
	33	The employee provides proper physical maintenance of the animal, to include grooming, bathing, and feeding to minimize smells and shedding.	0.00
	36	That the employee assumes responsibility to balance the need to interact with the dog throughout the workplace, maintain appropriate work productivity, and minimize disruption of the worksite.	0.27
	43	The person with the service dog needs to be able to reinforce the dog's skills and use a "no excuse for bad behavior" policy.	0.27
	48	A willingness of both the dog and the employee to work together.	0.61
	58	The ability to cite examples of how a service dog benefits may benefit the employer, through reduction in stress among employees, public relations, and so forth.	0.33
	60	An understanding of the employee/applicant's knowledge of training and dog handling.	0.21
	61	The dog's ability to be invisibly present at work (not distracting or stressed).	0.52
	62	Employee/applicant ability to maintain training rules and regulations in order to maintain the dog's behavior around colleagues and others.	0.15
Count = 9, Std. Dev. = 0.17, Variance = 0.03, Min = 0.00, Max = 0.61, Median = 0.61.			
(3) Employee competence			0.18
	3	An understanding by the service dog owner that permission to have a service dog in the workplace must be agreed upon by the employer prior to the dog entering the workplace.	0.23
	12	For those who are already working, having a discussion with the employer as part of the decision to obtain a service dog.	0.30
	25	That the employee or job applicant is able to articulate a well-founded argument for the use of a service dog in the workplace as a reasonable accommodation.	0.07
	26	The employee or job applicant is able to articulate the specific job related or supportive task(s) that will include the service dog.	0.07
	31	The employee or job applicant is able to outline specific needs of the animal in the workplace, including breaks for walks, water, food, and bathroom breaks.	0.18
	34	An understanding of the consequences if the employee does not maintain proper control or maintenance of the service dog.	0.22
	37	The job applicant with a service dog is prepared to address behavior of interviewers that reveals a lack of understanding of service dog etiquette, that is, petting the dog.	0.12
	40	If the dog has been owner trained, that the handler has written documentation of the training which may include obedience classes, special sessions with trainers, and reinforcement procedures.	0.16
	46	That the dog is identifiable through the use of a service dog vest, cape, or harness.	0.24
56	A process for ensuring the dog handler can provide testing and certification or evidence of training which establishes the dog is a service dog.	0.27	
66	A procedure for addressing alternative accommodations\if the dog is not able to be present (e.g., during illness).	0.17	

TABLE 2: Continued.

Cluster	Id #	Statement	Bridging
	68	That there is a procedure for verifying that the dog has had appropriate vaccinations and health maintenance. Count = 12, Std. Dev. = 0.07, Variance = 0.01, Min = 0.07, Max = 0.30, Median = 0.17.	0.15
(4) Legal knowledge			0.25
	4	An informed understanding by employer and employee or applicant of the parameters, including limits, regarding the person with disabilities' legal rights, both state and federal, to the use of service dogs in the workplace.	0.21
	5	An understanding among employer, supervisor, and coworkers of practices that are legally deemed discriminatory.	0.18
	6	An informed understanding of the employer's legal responsibilities and rights related to the decisions associated with a service dog team in the workplace.	0.18
	7	An informed understanding of any related insurance and workers compensation implications and requirements of the employer.	0.33
	8	Clear communication between supervisor and employee regarding needs of both parties related to work performance standards.	0.16
	9	An established collaborative procedure for communication within the workplace among coworkers, service dog partner and any related customer interaction, and so forth, regarding issues, problems, and suggestions.	0.25
	13	A supportive procedure for allowing the employee to participate in an intensive 2 to 4 week training program with a new service dog.	0.24
	15	A procedure for establishing options in response to coworkers who are allergic to animals.	0.30
	16	A procedure for establishing areas within the workplace that a service dog cannot go.	0.31
	28	If the person will work in an office setting, workspace is provided that is close to a door or out of high traffic areas.	0.34
	35	The employer understands the need for and the process used to address misbehavior by the dog, to include having a private or quiet place to address the issue.	0.24
	54	Protocols for human resource departments in large companies or agencies to use when interviewing people with service dogs.	0.18
	55	A system for allowing "play breaks" for the service dog to exercise and "blow off" the energy they bottle up in the work environment.	0.42
	64	A system for notifying potential customers of the presence of a service dog in the place of business.	0.21
	65	Standard operating procedures in place to effectively distinguish between service dogs and pets to prevent other employees from attempting to bring nonservice dogs into work environment.	0.33
	67	Flexibility to allow the dog handler to have time to address any health problems that arise for the service dog (use of sick leave). Count = 16, Std. Dev. = 0.08, Variance = 0.01, Min = 0.14, Max = 0.42, Median = 0.31.	0.14
(5) Information and education			0.47
	2	If the type of job may require the service dog to go into environments other than one workplace, the dog/handler team needs a means to educate in different professional settings.	0.67
	18	Training and information for employers on what it means to have a service dog in the workplace.	0.45
	22	A willingness on the part of employer to consider allowing a service dog at work and not immediately deny access on potentially unfounded concerns.	0.20
	27	A job analysis is done to determine the specific tasks associated with the position, identification of those tasks that need accommodation and where the dog will provide assistance.	0.54
	42	To have the service dog trainer initially assess the workplace and provide suggestions for problem areas.	1.00
	44	The knowledge that service dogs in the workplace break down barriers and facilitate positive social interactions and workplace relationships.	0.29

TABLE 2: Continued.

Cluster	Id #	Statement	Bridging
	45	An understanding of the fact that animals present in the workplace can ameliorate stress.	0.25
	47	An employer who understands that the service dog interaction is part of mitigating limitations associated with a disability, is a type of assistive device.	0.28
	49	The availability of educational materials about service dog teams in the workplace for potential employers and job seekers.	0.53
	50	The availability of educational workshops and information about use of service dogs in the workplace at workforce development conferences at the state and national levels.	0.59
	51	The involvement of vocational rehabilitation counselors and resources to assist both the business and individual in the modification or adaptation of the workplace.	0.39
	52	The involvement of vocational rehabilitation counselors to help with the negotiation or address any communication problems related to the use of the service dog.	0.40
	53	The awareness of the secondary benefits of having a service dog team in their corporation, which may include positive public relations.	0.41
	57	An understanding in the workplace that service dogs alert in a wide variety of ways, including sitting and staring, pawing, placing head on lap, leaning, nosing, and so forth.	0.47
	59	Dog enhances employee productivity; ensuring the dog does not distract employee from performing essential functions of the job.	0.65
	63	An understanding of what safety or health concerns for customers may exist if a dog is present at work (i.e., a service dog may not be appropriate in a kitchen).	0.33
	Count = 16, Std. Dev. = 0.19, Variance = 0.04, Min = 0.20, Max = 1.00, Median = 0.41.		
(6) Coworker preparation			0.35
	10	An employer demonstrating leadership through support of the service dog team by educating coworkers before the team enters the workplace, fielding concerns, complaints, and questions.	0.28
	11	The establishment and respecting of boundaries for the service dog, handler, coworkers, and customers.	0.38
	14	To engage workplace partners to feel a sense of ownership, pride, and support for the service dog team in a way that respects the team's autonomy and privacy.	0.43
	19	Orientation session for personnel to address the dog, breed and name, and the tasks the dog will perform.	0.59
	20	Orientation for personnel to address the roles and responsibilities of the handler in the care of the service dog.	0.52
	21	Orientation for personnel regarding the rules of service dog etiquette to include the fact that this is a service dog not a pet, speak to the person and not dog, and do not feed or pet animal without handler's permission.	0.52
	23	A tone set by the supervisor that values and appreciates what a service dog team brings to the employment setting, modeling for the entire workforce.	0.16
	24	The modeling of appropriate behavior and responses to the dog and person in the service dog team by the employer and supervisor(s).	0.35
	29	In the case of coworkers with allergies, air purifiers are provided and the work area is cleaned regularly to minimize problems related to having a dog in the workplace.	0.22
	30	In the case of coworkers or others who have a fear of dogs, a procedure for addressing ways to maximize their ability to avoid the dog.	0.18
	32	A work environment that is able to respond with flexibility to the needs of the animal.	0.21
	Count = 11, Std. Dev. = 0.14, Variance = 0.02, Min = 0.1, Max = 0.59, Median = 0.52.		

Note. The bridging value, ranging from 0 to 1, provides information on how often a statement was sorted with others that are close to it or disparate on the map. Lower bridging values indicate closer relationships while higher means there is less of a relationship between the statements in the cluster. It correlates with the average rating. Abbreviations used in the table include: Std. Dev. is standard deviation; Min. is minimum rating on a 0-1 scale; Max. is maximum rating on 0-1 scale; Median is median rating on a 0-1 scale.

clarify the language, and ensure that only one idea is represented in each.

A second call for participation was made of those who participated in the brainstorming part of the project. In order

to ensure that the demographic groups were represented, a secondary call was made to the group that represented people with disabilities who use service animals and trainers. Ten participants individually sorted the elements into clusters or

categories of common or similar elements. They were asked to create conceptual “piles” online and drag the elements into piles according to “how they seem to go together.” Forty participants then ranked each element within those categories on a Likert scale of 1 to 5 in response to the question *How important do you think this item is in the OVERALL process?* (1—not important to 5—essential).

2.4. Data Analysis. Once the ideas were generated and sorted, the participants’ work was aggregated to create a concept map using a nonmetric multidimensional scaling procedure. It arranges points representing the elements along orthogonal axes reflecting the distance between any two points, reflecting the frequency the items were sorted together. Conceptually, a small area suggests that the statements reflect a similar, probably well-defined underlying concept. Hierarchical cluster analysis was then used to draw boundaries around groups of ideas, turning them into conceptual clusters. The procedure provides a spatial representation of potentially unknown relationships among the elements and other variables [12].

The ratings regarding the participants’ perceptions of the importance of each element were average for each element and each cluster of elements. The research team was then tasked to interpret the rating maps that were chosen to most effectively present the results. They overlay the rating of importance data onto the cluster map to show which cluster of ideas was most important to the participants (see Figure 1).

All data were collected and analyzed using Concept Systems Global MAX software. This software allows stakeholders to brainstorm, sort, and provide rating input via the Internet or offline. It includes online analysis tools, creating point and cluster rating and bridging maps, pattern matches, and go zones. It is also able to perform analysis for significance.

3. Results

The brainstorming process produced 68 elements considered relevant to a successful service dog partnership (see Table 2). This was well over the required minimum of 30 to 40 statements to ensure a valid concept mapping analysis. The elements were then organized into six clusters, reflecting the following content (1) dog preparation, (2) monitoring, (3) employee competence, (4) legal knowledge, (5) information and education, and (6) coworker preparation. (see Figure 1). This model provided the maximum number of interpretable clusters without losing between-group distinctions.

The 68 items were rated according to relative importance of an element in the overall perspective regarding what may constitute a successful service dog partnership in the workplace. For each participant, cluster scores were computed using the sum of all ratings for items within a particular cluster. Table 3 illustrates the descriptive statistics by cluster of the relative importance of each item in the overall process of creating a successful service dog partnership in the workplace as rated by participants.

Noting that higher means represent a higher perceived importance rating, clusters are shown in decreasing order of perceived importance. The items comprising monitoring

TABLE 3: Importance ratings by cluster ($N = 40$).

Cluster	Count	Min	Max	Mean	Std Dev.
Monitoring	9	0.00	0.61	4.38	0.17
Dog preparation	4	0.33	0.70	4.15	0.13
Coworker preparation	11	0.16	0.59	3.97	0.14
Legal knowledge	16	0.14	0.42	3.94	0.08
Information and education	16	0.20	1.00	3.84	0.19
Employee competence	12	0.07	0.30	3.85	0.07

Note. The count is the number of elements in the cluster. Abbreviations used in the table include: Std Dev. is Standard Deviation; Min. is minimum bridging values of ratings on 0-1 scale; Max. is maximum bridging values of ratings on 0-1 scale. The bridging value, ranging from 0 to 1, provides information on how often a statement was sorted with others that are close to it or disparate on the map. Median is median rating of level of importance on a 1-5 scale.

received overall the highest rating of importance (mean = 4.38), while information and education, received the lowest rating of importance (mean = 3.84).

4. Discussion

This project sought stakeholder input to understand the elements that may exist in service dog partnerships that have been successful in the workplace. The participants, including service dog handlers and trainers, vocational rehabilitation counselors, and other healthcare professionals, generated a list of 68 items, all of which were then rated as important or highly important to the process, showing an internal consistency of the items. A limitation of the study was the researcher’s inability to engage employers in responding to the survey items. The length of the exercise, and possibly perceived liability in responding to questions, may have prevented their involvement.

The strength of the project was its use of a methodology that allowed for community-based participatory research. Concept mapping pattern matching employs various strategies to reduce researcher bias. First, the elements are generated by the study participants. Then, the sorting of the elements into meaningful categories is done by the participants which eliminates the interpretation by researchers that is inherent in a traditional qualitative process. The statistical analysis of the participant-determined sortings eliminated the need for specifying attributes to the sorting of the elements [10].

The researcher sought to establish working hypotheses on the subject of service dog use in the workplace for researchers and others seeking to design or evaluate effective employment programs. This exercise was to identify key elements that support a partnership and were not intended as a mandatory checklist. The project did not have the resources to investigate the elements in a wide participant population in the workplace, with accompanying instruments to measure validity of the findings. It is exploratory in nature.

One possible use of this data by the person who has the service dog is to develop a strategy to address any potential employer questions, spoken or unspoken. While

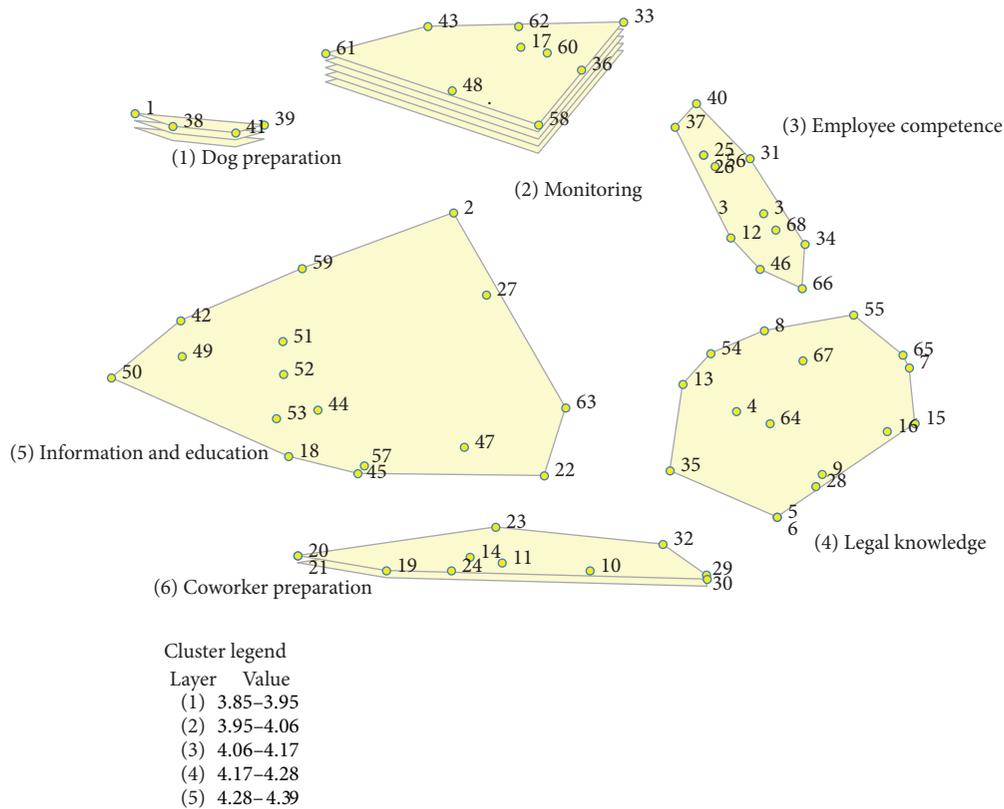


FIGURE 1: Visual depiction of the cluster rating map. The named clusters are comprised of the elements of successful service dog partnerships in the workplace. Each point number ($N = 68$) corresponds with elements listed on Table 2. The cluster legend provides the level of importance range of each cluster established by participants. Layers provide visual perspective of levels of importance.

employers were not represented in the group, the participants represented individuals who had experience negotiating with employers on behalf of people who require reasonable accommodations, as well as people who have successfully navigated with work world with their four-legged support system. Although it should be noted that the participants self-reported demographic information and were given the option to do so anonymously. So, the researcher was unable to verify the authenticity of the demographic information in all cases.

The service dog handler has control of a number of the items listed in this project, most importantly those in the monitoring category. There was overwhelming consistency among participants that this area is of high importance to a person obtaining and maintaining employment with a service dog. Addressing these with an employer would be of benefit during discussions regarding the request for a reasonable accommodation. The items focused on the responsibility of the individual with the service dog for behavior, care, and hygiene of the dog in the workplace.

It also supports the practice of many programs to require ongoing assessments of the maintenance of the partnership's skills and behaviors. Even people who have undertaken alternative training preparation for their dogs can, at a minimum, show successful completion of Public Access tests under the guidance of a trainer. An example of such a test has been made available, within an accompanying

warning, by Assistance Dogs International on their website at <http://www.assistedogsinternational.org/standards/public-access-test/>. If this is not available, there might be a benefit to identifying key informants who could provide more informal feedback of their observation of the dog's behavior and ability to perform tasks. This may be family members or a local dog trainer. Again, the intent of this recommendation is the importance of ensuring maintenance levels and not creating a restrictive requirement.

The participants rated the need for information and education as the category of least importance, although they considered it important. At this point, we must discuss problems within the brainstorming process that reflected a true need for dissemination of information to all the stakeholder groups. One survey respondent noted that, even within this group of experienced individuals, there was a lack of consistency in interpretation of the Americans with Disabilities Act with regard to service dogs and employment. Specifically, there was confusion regarding Title I.

According to the Civil Rights Division of the U.S. Department of Justice, "Title I of the Americans with Disabilities Act of 1990 prohibits private employers, State and local governments, employment agencies and labor unions from discriminating against qualified individuals with disabilities in job application procedures, hiring, firing, advancement, compensation, job training, and other terms, conditions, and

privileges of employment [13]. The ADA covers employers with 15 or more employees, including State and local governments. It also applies to employment agencies and to labor organizations.” <http://www.ada.gov/ada.title.I.htm>. The confusion appears to stem from the differences between Titles I, II, and III of the Act with regard to requiring entities to comply with requests for access with a service dog. Allowing a service dog to accompany an employee on the job, under the guidelines of Title I, is held to the expectations of “reasonable accommodation.” An employer may refuse to comply if the situation will create undue hardship.

Employers also have the right to ask for documentation of the need for the accommodation, within reason (EEOC, [14]). They can also ask if the service dog is trained but the documentation may come from a variety of sources, beyond healthcare professionals [15]. And the tasks may not be work specific but there could be needs associated with a medical condition.

Misunderstanding of these regulations can create missed opportunities for the person with a disability to forge a successful employment outcome. In order to make a strong argument for access, one needs the correct framework. More information can be found on the *ADA 2010 Revised Requirements Specific to Service Animals* as published by the Civil Rights Division of the U.S. Department of Justice. http://www.ada.gov/service_animals_2010.htm. The Job Accommodation Network provides guidelines specific to the workplace as part of the Accommodation and Compliance Series, at <http://askjan.org/media/servanim.html>.

5. Conclusion

The number of items ($N = 68$) generated in this exercise indicates the complexity of navigating the world of work with a service dog. Yet, as the items or elements of a successful service dog partnership were clustered into six categories, there are indicators that members of the stakeholder groups, trainers, vocational rehabilitation counselors, and employers, can play a part in making it happen for and with the person with a disability. Trainers are involved in (1) dog preparation and (2), while vocational rehabilitation counselors and employers would be mostly addressing (3) employee competence, (4) legal knowledge, (5) information and education, and (6) coworker preparation.

The most important element as rated by the participants was in the area of monitoring which meant that ongoing work would be done to ensure achievement of acceptable task completion and behavior of the service dog team and monitoring to prevent any problems. Once the service dog team is trained and comfortable with their respective roles, employers and vocational rehabilitation counselors can help establish a supportive work environment with the person working with the dog using the listed elements as a guide. In all, the service dog partnership is successful when all operate with guidelines that provide recommendations for all concerned.

Future research would be of great benefit as we seek to create data-driven responses to the questions that arise

from new opportunities for people with disabilities to achieve independence and work. The benefits appear to be many and outweigh any potential barriers, with the right mix of information and innovation on the part of employers and employees alike.

Acknowledgement

This study was funded under Grant no. H133F120031 from the National Institute on Disability and Rehabilitation Research (NIDRR), the U.S. Department of Education’s Office of Special Education and Rehabilitative Services (OSERS). However, these contents do not necessarily represent the policy of the U.S. Department of Education, and no endorsement by the Federal government should be assumed.

References

- [1] D. H. Rintala, R. Matamoros, and L. L. Seitz, “Effects of assistance dogs on persons with mobility or hearing impairments: a pilot study,” *Journal of Rehabilitation Research and Development*, vol. 45, no. 4, pp. 489–504, 2008.
- [2] E. Eames, “Reasonable accommodation and assistance dogs in the workplace,” CPER No. 189, 2008, http://www.iaadp.org/work_access6.html.
- [3] Assistance Dogs International (n.d.), “Types of assistance dogs,” 2013, <http://www.assistancedogsinternational.org/about-us/types-of-assistance-dogs/>.
- [4] J. Hay, “Fake service dogs anger owners of trained pets,” *The Press Democrat*, 2013, <http://www.pressdemocrat.com/article/20130807/articles/130809625#page=1>.
- [5] V. J. Caracelli and J. C. Greene, “Data analysis strategies for mixed-method evaluation designs,” *Educational Evaluation and Policy Analysis*, vol. 15, pp. 195–207, 1993.
- [6] W. Trochim, “Concept mapping: soft science or hard art?” in *A Special Issue of Evaluation and Program Planning*, W. Trochim, Ed., vol. 12, pp. 87–110, 1989.
- [7] W. Trochim and R. Linton, “Conceptualization for evaluation and planning,” *Evaluation and Program Planning*, vol. 9, pp. 289–308, 1986.
- [8] W. M. K. Trochim, “Concept mapping. Soft science or hard art?” *Evaluation and Program Planning*, vol. 12, no. 1, pp. 87–110, 1989.
- [9] W. Trochim, “The reliability of concept mapping. Working document for paper presented at the Annual Conference of the American Evaluation Association, Dallas, Texas,” 1993, <http://www.socialresearchmethods.net/research/Reliable/reliable.htm>.
- [10] D. Truscott, B. L. Paulson, and R. D. Overall, “Studying participants’ experiences using concept mapping,” *The Alberta Journal of Educational Research*, vol. 45, no. 3, pp. 320–323, 1999.
- [11] K. M. Jackson and W. M. K. Trochim, “Concept mapping as an alternative approach for the analysis of open-ended survey responses,” *Organizational Research Methods*, vol. 5, no. 4, pp. 307–336, 2002.
- [12] L. F. Fitzgerald and L. J. Hubert, “Multidimensional scaling: some possibilities for counseling psychology,” *Journal of Counseling Psychology*, vol. 34, no. 4, pp. 469–480, 1987.
- [13] “Civil Rights Division of the U.S. Department of Justice. (n.d.). Information and technical assistance on the Americans with Disabilities Act,” 2013, <http://www.ada.gov/ada.title.I.htm>.

- [14] Equal Employment Opportunity Commission (EEOC), “EEOC enforcement guidance: reasonable accommodation and undue hardship under the Americans with Disabilities Act EEOC Notice Number 915.002,” 2013, <http://www.eeoc.gov/policy/docs/accommodation.html>.
- [15] L. C. Bastiste, “Accommodation and compliance series: service animals in the workplace, Job Accommodation Network Accommodation Ideas,” 2013, <http://askjan.org/media/servanim.html>.



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