

Transition from School to Competitive Employment: Illustrations of Competence for Two Young Women with Severe Mental Retardation

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In this article, two young women with severe mental retardation obtained competitive employment and were supported through the use of an employment specialist and coworkers. Although neither woman had a history of work in paid employment, both were at a transition stage from public school and needed unique specialized assistance to procure and maintain employment. There are thousands of other women with severe mental disabilities who could benefit from the supports that were provided to these two individuals in the workplace. This article provides the process and design of such supports.

Supported employment emerged during the early 1980s as an alternative to other rehabilitation models that had been unsuccessful in assisting individuals with severe or significant disabilities to obtain or maintain competitive employment. Since then a growing number of employment illustrations and promising developments have occurred for individuals with significant disabilities who previously have not had equitable access to community-integrated competitive employment (Revell, Wehman, Kregel, West, & Rayfield, 1994; Wehman, Revell, & Kregel, 1996). In addition, the number of organizations and agencies designed to provide supported employment services has grown from 324 in fiscal year 1986 to approximately 3,700 in FY 1995 (Wehman, Revell, & Kregel, 1997). Since the early 1990s, these supported employment organizations and agencies, through offering individualized work supports and assistance both at and away from the employment site, have become a primary

national resource for assisting people with the most significant disabilities to achieve competitive employment. Yet, almost universally, there continues to be a serious omission in the participation of people who are truly severely intellectually disabled in many of these programs (Kregel, Wehman, & Banks, 1989; Wehman & Kregel, 1995). Further, there has been a greater emphasis on the participation of men rather than women in most rehabilitation programs, including supported employment.

Therefore, when conducting a comprehensive review of progress in the 1990s, there is evidence of both positive and negative rehabilitation trends. On the positive side, the growth in the number of supported employment service providers has been tremendous. In most communities across the United States, there are multiple supported employment service providers, thereby creating a situation where people with disabilities can select the provider of their choice. These local organizations and agencies

are assisting individuals with disabilities to move from nonproductive day activity programs to community-integrated paid employment. However, one negative rehabilitation trend that is also becoming very apparent is that individuals with severe and profound mental retardation, significant autism, severe sensory impairments, and multiple physical disabilities still are not *fully* participating and remain underrepresented in the world of business (Mank, 1994; Wehman & Kregel, 1995)

There are at least two significant reasons that explain this lack of participation. First, the vast majority of service providers generally do not believe that people who are labeled as having severe/profound intellectual or physical disabilities can obtain and maintain real jobs in the business community. Sufficient demonstrations of their potential for employment have not occurred in enough communities and, therefore, high levels of skepticism continue to exist. The second reason is related to the limited experience and expertise among the many new supported employment service providers. That is, they believe in the employment potential of people with significant disabilities but do not know how to provide these services in a business setting. If supported employment is going to continue to grow and expand, there must be increased demonstrations of competitive employment success among people with

severe intellectual or physical disabilities, as well as the provision of adequate personnel training to the newly developing supported employment service providers.

This article provides an in-depth look at two young women with severe mental retardation who obtained competitive employment with support from their families, employment specialist, and co-workers while attending public school. One individual continues in her public school program, and the other woman recently completed her time in school. These two case studies were selected because of the complexity of their jobs, the job training process, and the long-term support arrangements that were necessary to achieve employment success. In addition, the length of employment tenure, as well as the variety of employment issues and concerns, demonstrate some of the costs associated with various implementation strategies. Both young women were employed using a customer-driven approach to supported employment (Brooke, Inge, Armstrong, & Wehman, 1997; Brooke, Wehman, Inge, & Parent, 1995). The following section is a description of the model as it was implemented.

Customer-Driven Supported Employment

In earlier publications, the supported work model of competitive employment was described in some detail (Moon, Goodall, Barcus, & Brooke, 1986; Wehman & Kregel, 1985). It is important to note that one of the distinguishing features of supported employment that sets it apart from other rehabilitation models is the presence of long-term follow-along support. New to supported employment since the early 1990s is an increasing emphasis on the role of the customer (e.g., the person with a disability). Customers of supported employment services must be viewed in terms of their abilities, strengths, and interests, rather than in terms of their disabilities. Each individual and family must determine personal employment goals and receive

assistance in assembling the supports necessary to achieve those employment goals. Brooke et al. (1995) identified the major components of a customer-driven approach to supported employment. A brief synopsis of this model follows.

Service Provider Selection

A key factor related to employment retention is the rapport that is established between the direct service provider and the new employee. Customers should interview the multiple supported employment programs available in the community to determine which is to receive their business. Once a provider is selected, the customer should interview the direct service staff to determine which employment specialist is best suited to meet his or her needs.

Customer Profile

The intent of supported employment has always been to provide a vocational support option for those individuals who were screened out of traditional rehabilitation programs. The customer-driven approach moves away from concepts that exclude individuals from employment. It is critical for the service provider to spend time with the customer. This time is used to determine personal strengths, concerns, desires, and anticipated employment outcomes. In addition, conducting short situational assessments in real-work environments, implementing person-centered planning sessions, and identifying possible community and business supports will assist supported employment service providers in ensuring high-quality outcomes and customer satisfaction.

Employment Selection

Compiling and analyzing the information gathered during the customer profile phase with the information collected on the local community businesses is the only way to ensure a successful employment start. Too often, months elapse between the time that the service provider

completes the customer profile and when he or she performs a detailed job analysis on a prospective employment position. Choice in supported employment dictates that all supported employment customers should be presented with a variety of experiences, options, and supports to achieve career goals. When a job opening occurs, service providers may not carefully analyze the unique features related to the business and the individual. Rushing to fill job openings causes service providers to exclude the customer in the employment selection phase.

Implementing a customer-driven approach calls for the service provider to be concerned with long-term employment success by assisting the customer in organizing and achieving a desirable plan for the future. Service providers must involve their customers in every aspect of the employment selection process. For instance, jobs often are found through family and friends. Customers of supported employment programs need to network and use their contacts while the service providers assist with coordinating and implementing support strategies.

In addition, customers are beginning to assist in the job analysis process to glean specific information about the business. Regardless of whether the customer, family member, friend, or direct service provider finds the job, it is critical to complete a job analysis to ensure that the employment situation matches the customer's career plans. With the customer-driven approach, it is the responsibility of the customer, not the service provider, to choose the employment opportunities by using the information gathered from the employment site and customer profile.

Job Site Training and Support

Detailed job duty analysis, identification and use of community and workplace supports, systematic instruction, compensatory strategies, orientation training, and workplace accommodations have always been vital to a well-developed job site training and support plan. If supported employment programs are

going to serve people with the most significant disabilities, direct service providers must use the existing technology and best practices that have been described extensively in the literature.

When using a customer-driven approach to supported employment, the customer is involved in all the decisions regarding his or her training. Customers should assist in the development of the job duty analysis and task analysis, selection of instructional procedures, design and purchase of assistive devices, and identification and design of compensatory strategies to ensure that they are directing their own careers.

Long-Term Support

In the past, some customers of supported employment services have voiced their concerns about the follow-along visits from the employment specialist. Typically, issues centered on the intrusive practices used by some employment specialists to monitor the employee's progress. Too often, supported employment participants have found these practices to be stigmatizing in the business setting.

The intended goal of long-term supports is to assist the customer in the identification and provision of supports and extended services necessary to maintain and enhance the person's position as a valued member of the workforce. Supported employment customers, employers, and direct service providers need to determine individualized strategies for providing supports that will assist in career advancement and ultimately facilitate long-term job satisfaction for both the customer and the employer. This shift in decision making and control away from the service provider to the customer signals the most exciting feature of the customer-driven approach to supported employment.

In the following two case studies, the major elements described so far are portrayed. Following these presentations is a general discussion section that reviews each of these chronological cases in a larger perspective.

Case Study 1: Karen

Assessment. Karen is an 18-year-old young woman with a diagnosis of severe mental retardation and autism (see Note). She attends high school in her community and participates in an educational program designed around a self-contained classroom. Karen has limited expressive language; however, she typically repeats the last word said if she is agreeable to the specific statement or question. Often, she responds by saying no, although that is not what she means. Her body language is an indicator of her desired choice and/or willingness to participate in an activity. Karen requires assistance with her personal and independent living needs, which include such areas as dressing, hygiene, and meal preparation. She eats without support but requires assistance with cutting her food and occasional reminders regarding proper etiquette and table manners.

Information gathered during the initial home visit reflected a young woman who spends the majority of her time with her family or at school. Occasionally, Karen attends a camp, as a vacation during the summer and as family respite throughout the year. Despite these camp visits, Karen was described by her family as unaccustomed to interacting with people unfamiliar to her, and she appeared to be extremely timid and shy during the interview. It was reported that Karen attended family functions, church, and school activities. However, within each environment, Karen's family reported that she was directly supervised by a family member or a trusted staff person from school.

Further home visits revealed that Karen had extremely limited responsibilities at home and spent much of her free time lying on her bed and refusing to leave her bedroom. These home visit assessment periods were crucial due to Karen's inability to verbally express her employment interests. In addition, home visits gave Karen and the employment specialist an opportunity to get to know each other and develop a relationship. The information gathered during the visits assisted in determining the range of

employment possibilities that Karen might enjoy.

Following a series of home visits, Karen participated in a community assessment. During this assessment, she visited the local mall and ate lunch at her favorite Chinese restaurant. In addition, Karen participated in three separate situational work assessments. The first and second situational assessments were conducted at a hotel in both the laundry and the housekeeping departments. The third situational work assessment was conducted at a restaurant where Karen operated an industrial dish machine.

A school-based assessment was also conducted by the supported employment service provider. During this period, Karen was observed in her classroom and in the school cafeteria during her unpaid work experience. Observational data were collected, school records were reviewed, and informal interviews were conducted with her parents, teacher, and classroom aides. From these data, it was determined that Karen would be successful in an employment situation where she could use her hands to complete repetitious duties of one or two steps. An ideal work culture would include a business where the employees were team oriented and where co-workers worked in close proximity to each other. Figure 1 is an example of the instrument used during the initial assessment.

Employer Selection. Job search activities with Karen occurred during a 3-month period. After conducting a careful job analysis, the employment specialist was able to work with a local restaurant supervisor to obtain a part-time food preparation position paying above minimum wage, commensurate with co-workers. To determine if the position at the Spaghetti Warehouse Restaurant was a good job match for Karen, she was provided the opportunity to make several visits to the business. It was established with the employer that these visits were necessary for Karen to become acclimated to the environment, her co-workers, and her job duties. During these visits, Karen's reactions and responses were

Please overlay your letterhead in this space. The letterhead should designate the supported employment provider, not a state agency that represents more than one provider. Take care not to cover the page number designation or the title of the form. Also, do not change the layout of the form in any way.

Customer Screening Form (Revised 9/97)

Consumer name: _____ Staff completing form: _____
 Social Security #: _____ I.D. code: _____
 Date of screening (month/day/year): / /
 Types of screening: Initial Ongoing/employment Ongoing/unemployment
 Total number of hours per week presently working _____ Months per year _____

General Directions: PLEASE DO NOT LEAVE ANY ITEM UNANSWERED

Indicate the most appropriate response for each item based on observation of the consumer and interviews with individuals who know the consumer (i.e., family members, adult service providers, school personnel, employers).

1. Availability (Circle Yes or No for each item.):
- | | | | |
|--------------------|----------|---------------------|----------|
| Will work weekends | Yes / No | Will work part time | Yes / No |
| Will work evenings | Yes / No | Will work full time | Yes / No |
- Specifics/comments: _____
2. Transportation (Circle Yes or No for each item.):
- | | | | |
|---------------------------------------|----------|--|----------|
| Transportation available | Yes / No | Family will transport | Yes / No |
| Access to specialized travel services | Yes / No | Provides own transportation (bike, car, walks, etc.) | Yes/ No |
| Lives on bus route | Yes / No | | |
- Specifics/comments: _____
3. Strength (lifting and carrying):
- | | | | |
|-----------------|--------------------|-----------------------|-------------------|
| Poor (< 10 lbs) | Fair (10 - 20 lbs) | Average (30 - 40 lbs) | Strong (> 50 lbs) |
|-----------------|--------------------|-----------------------|-------------------|
- Specifics/Comments: _____
4. Endurance (without breaks):
- | | | | |
|-----------------|-------------------|-------------------|----------------------|
| Works < 2 hours | Works 2 - 3 hours | Works 3 - 4 hours | ____ Works > 4 hours |
|-----------------|-------------------|-------------------|----------------------|
- Specifics/comments: _____

5. Orienting:
- | | | | | |
|-----------------|----------|---------------|----------------|----------------------|
| Small area only | One room | Several rooms | Building- wide | Building and grounds |
|-----------------|----------|---------------|----------------|----------------------|
- Specifics/comments: _____
6. Physical mobility:
- | | | | |
|-----------------------|-----------------|------------------------|-------------------------|
| Sit/stand in one area | Fair ambulation | Stairs/minor obstacles | Full physical abilities |
|-----------------------|-----------------|------------------------|-------------------------|
- Specifics/comments: _____
7. Independent work rate (no prompts):
- | | | | |
|-----------|---------------------|-----------------------------------|---------------------|
| Slow pace | Steady/average pace | Above average/sometimes fast pace | Continual fast pace |
|-----------|---------------------|-----------------------------------|---------------------|
- Specifics/comments: _____
8. Appearance:
- | | |
|----------------------|--|
| Unkempt/poor hygiene | ____ Neat/clean but clothing unmatched |
| Unkempt/clean | Neat/clean and clothing matched |
- Specifics/comments: _____
9. Communication:
- | | |
|----------------------|---|
| Uses sounds/gestures | Speaks unclearly |
| Uses key words/signs | Communicates clearly, intelligible to strangers |
- Specifics/comments: _____
10. Appropriate social interactions:
- | | |
|--------------------------------|--|
| Rarely interacts appropriately | Initiates social interactions infrequently |
| Polite, responses appropriate | Initiates social interactions frequently |
- Specifics/comments: _____
11. Unusual behavior:
- | | | |
|------------------------|-----------------------|----------------------|
| Many unusual behaviors | Few unusual behaviors | No unusual behaviors |
|------------------------|-----------------------|----------------------|
- Specifics/comments: _____
12. Attention to task/perseverance:
- | | |
|--|---|
| Frequent prompts required | _ Intermittent prompts/low supervision required |
| Intermittent prompts/high supervision required | Infrequent prompts/low supervision required |
- Specifics/comments: _____
13. Independent sequencing of job duties:
- | | |
|----------------------------------|--|
| Cannot perform tasks in sequence | ____ Performs 4 - 6 task in sequence |
| Performs 2 - 3 task in sequence | _ Performs 7 or more tasks in sequence |
- Specifics/comments: _____

FIGURE 1. Customer screening form.

figure continues)

closely observed. On the first visit, Karen entered the work area and immediately began performing many of the targeted tasks for the food preparation position. Karen appeared comfortable interacting with co-workers when requested to share work tasks. During a subsequent visit, Karen demonstrated a similar positive response to both the work environment and the employees at the restaurant. Following this positive experience, Karen participated in a formal interview process and was hired as a part-time food preparation employee. Karen's willingness to complete her work duties was the guiding indicator used to determine her employment selection and continues to be used to signal employment satisfaction. During the interview, an immediate work accommodation was agreed upon, providing Karen with a flexible work schedule.

Initial Training Progress. Karen required assistance getting ready to begin her work routine. This included such tasks as taking off her coat; using the employee locker; clocking in; putting on her hair net, apron, and gloves; and setting up the work station. The manager identified several co-workers who would routinely assist Karen with these activities. Each co-worker was asked if he or she was interested in serving as work support, and each person agreed to assist. In addition, the kitchen manager ordered a time card with a magnetic strip for scanning, thereby eliminating the need to teach Karen to use a computer with a complex entry system for clocking in and out at the beginning and end of her workday.

Karen's job involving the breading of food items was divided into two parts. The first part involved covering all food items (ravioli, eggplant, chicken, or veal) with flour and then placing these food items into an egg batter. The second part required placing the egg-battered food items into a mixture of bread crumbs, patting each item, and placing the prepared items on a tray. A task analysis was developed and systematic instruction was delivered to teach Karen to complete these job duties. However, because

Karen demonstrated some tactile defensive behaviors, it was difficult for the employment specialist to use physical assistance. In addition, due to the excessive mess that was created when working with the egg batter, Karen's employment specialist decided to focus initial training on the dry steps of the task analysis. This was continued until Karen increased her comfort level with the new environment and instructional assistance. A chaining technique was used that required performing the last and first steps together to give Karen a sense of flow and movement from part one to part two. Once Karen demonstrated some skill acquisition in this area, the second and next-to-last steps were added. This process continued by working from the ends of the task analysis toward the middle. The middle step of the task, which involved the liquid egg batter, did not occur until Karen was accepting physical assistance and maintaining good hand control. All steps of the task were added by the end of the first 30 days of training.

Coinciding with these strides in skill acquisition, Karen began to exhibit certain behaviors, including running away from the work area, excessive laughter, kicking, crying, and refusing to come into the building. However, as Karen's work competence increased, these behaviors dissipated. Within the next 30 days, Karen could independently perform the second part of her job for brief periods while the employment specialist increased her physical proximity to be approximately 10 feet away from Karen (known as "fading"). As the employment specialist "faded," Karen began looking for assistance once she completed a task. To assist Karen with the initiation of the next task, co-workers in the immediate area provided verbal praise and a verbal prompt for the next task. Once Karen initiated work, the employment specialist would begin to provide systematic instruction for the next job task.

As a result of Karen's improvement in skill acquisition and stamina, her work hours also increased. Although this was an excellent sign of success, the longer workday caused Karen to experience some fatigue. A break was then added

to Karen's new work schedule, to be taken at the same time as one of her co-workers. The employment specialist continued to "fade" from Karen as she maintained her work performance. "Fading" from the job site began in the second month of employment during the morning set-up and afternoon clean-up portions of Karen's schedule. Co-workers served as the primary work support for Karen, replacing the support of the employment specialist.

Expanding Work Supports. There are several performance areas that Karen was able to independently accomplish with support that have replaced the direct intervention of the employment specialist. First, she independently leaves the school bus or her parent's car and enters the building by ringing the doorbell. A manager or co-worker then signals the bus driver or her parent that she is safely inside the restaurant. Second, Karen engages the assistance of a co-worker to help her get ready for work and initiate the first work task. The third performance area involves co-worker assistance with preparing her to leave work.

As Karen's work competence increased, her job duties were expanded to include new menu items added to Karen's food preparation list. As Karen's speed increased, she began to take responsibility for other work tasks to include (a) collecting dirty dishes and taking them to the sink area, (b) delivering food trays to the wrapping area, and (c) moving all trays into the cold storage area. Because most job duties in the restaurant are performed as a team, it became natural for Karen to receive verbal prompts when she stopped between job tasks or needed assistance returning to her workstation.

As a result of the team spirit that is present at this restaurant, Karen continues to be comfortable interacting with her co-workers, participating in employee meetings, and sharing in social activities outside of work. When Karen's co-workers experience down time at work, they have begun to demonstrate new job tasks to Karen. This is a natural part of the work culture at this restaurant that is applied to all new employees.

Data Collection. Data collection during the first 60 days of training indicated that the primary level of assistance that Karen needed to complete work tasks was physical prompting with hand-over-hand instruction. A daily log documented work acquisition in such areas as time on task, number of steps attempted in the task, success of the chaining strategy, production rate, and Karen's reaction to food items. At the end of 60 days, Karen no longer required physical assistance, was responding primarily to verbal and gestural prompts, and demonstrated that she knew the sequence of steps to be performed within a work task.

Further analysis of these data revealed that when breading eggplant and ravioli, Karen was able to perform part one with 53% accuracy and part two with 64% accuracy. Due to difficulty with handling the chicken and veal, the employment specialist performed a portion of this task until Karen's handling proficiency increased with these food items. At a 90-day review, work acquisition data revealed that Karen was completing part one of the eggplant/ravioli breading task with 67% accuracy and part two with 85% accuracy. A comparison of the data between 60 and 90 days represents a performance increase of 14% in part one and 21% in part two. Again, as Karen's performance increased, the employment specialist gradually increased her physical distance away from Karen's workstation. After 120 days of work, the employment specialist's intervention was limited to speed issues and not skill acquisition. Although Karen had demonstrated that she knew the sequence of steps involved in the job task, she experienced poor production due to the lack of self-initiation between steps. The employment specialist and Karen continued to work on this area, and time studies were conducted to document Karen's improvement.

Karen continues to demonstrate competence with independent job performance. After 8 months of employment, the employment specialist was able to reduce her presence for 65% of Karen's total working hours. At 10 months, Karen's job duties were restructured to increase task acquisition. As the employ-

ment specialist continued on her "fading" schedule, co-workers were requested to reinforce Karen for on-task behavior. Time studies revealed that Karen's coworkers were not able to deliver reinforcement on a prescribed schedule and that another strategy was needed. To promote independence, the employment specialist developed an audiotape that provided prompting cues and positive reinforcement based on time study results. The tape, recorded in the employment specialist's voice, provided prompting cues (which were familiar to Karen) every 30 seconds. Each prompt was followed by a reinforcement phrase, also familiar to Karen, every 15 seconds. The sequence repeated using the continuous loop function on a personal cassette player. Co-workers were responsible for clipping the tape player on Karen's pants, placing the headphones on her ears, and checking the volume and battery operation daily. This tape has enabled Karen to stay on task, to self-initiate, and to meet company production standards.

Case Study 2: Lisa

Assessment. Lisa is a 22-year-old Chinese-American woman with a diagnosis of moderate to severe mental retardation (see Note). She resides with her parents and actively participates in many cultural activities and organizations. Recently, Lisa graduated from a public high school where she received supported employment services as part of her community-based vocational education program. Lisa was placed in two paid jobs prior to exiting the public school system.

It was learned during initial screening activities that barriers to employment for Lisa may include her limited speech, her history of refusing to participate in activities, and a lack of toileting skills. During the first home visit, Lisa refused to leave her bedroom and meet her employment specialists. Following this experience, the employment specialists recognized that a strong and positive relationship between them and Lisa was going to prove critical to long-term employment success. Further, the employment specialists real-

ized that the relationship would have to be built at Lisa's pace, involving activities that she enjoyed. As part of her community assessment, the employment specialists initially spent time with Lisa at her home playing basketball in the driveway. Eventually, Lisa agreed to ride in a car with the employment specialists to play basketball at a local park. After this experience, Lisa was eager to go with the employment specialists to explore other community locations such as the mall and restaurants.

While in school, Lisa had numerous school- and community-based work experiences where she demonstrated an interest in working in a kitchen and at a children's day care center. Yet her mother believed that Lisa would enjoy bagging groceries. Using this information, the employment specialists scheduled two situational assessments for Lisa, including a dietary department at a school and a grocery store checkout line for bagging groceries. After successfully completing the dietary department situational assessment, a job opening became available at a local public school cafeteria. Lisa was offered the position, and she and her family accepted the job even though she had not completed all her situational assessment activities. Later, Lisa was able to explore her interests and abilities during a grocery store bagging assessment. Table 1 is a description of the information collected during the various assessments.

Employer Selection: Job 1. Lisa and her family were delighted when she was offered competitive employment at a local public school cafeteria. In particular, the family felt secure knowing that the employer had some experience with supported employment and appeared to be sensitive to Lisa's needs, and that it was a safe environment. Further, Lisa had demonstrated that she enjoyed the work scope during her assessment and appeared eager to begin work. A minimum wage starting salary was agreed upon, for a total of 10 hours per week during the lunchtime rush. This short work schedule was ideal for Lisa, allowing her to eat lunch at her home school, obtain assis-

TABLE 1
Customer Situational Assessment Summary Form

Item	Consumer/parent (Initial screening)	Other (Community assessment)	Situational Assessment I (School kitchen)	Situational Assessment II (Grocery store)	Situational Assessment III
Consumer: Lisa Employment Specialist: Mary Date: DIRECTIONS: Indicate the response for each item in the appropriate category based on information gathered from the consumers, parents, other key persons, and observations during the community and situational assessments. For each item, describe the behavior, characteristic, or activity. When applicable, include the frequency of its occurrence and the environment where it occurs (antecedent, consequences, location, people, etc.).					
Strength, lifting, and carrying <ul style="list-style-type: none"> • Poor (< 10 lbs) • Fair (10-29 lbs) • Average (30-40 lbs) • Strong (> 50 lbs) 	Average 30-40 lbs	Very strong; throws basketball very hard	More than 10 lbs observed; carried trays from lunch room	Nothing heavier than 10 lbs observed	
Endurance <ul style="list-style-type: none"> • Works < 2 hours • Works 2-3 hours • Works 3-5 hours • Works > 4 hours 	3-4 hours	Observed for more than 2 hours; a lot of energy	Observed for 2 hours; no difficulty	Worked 3 hours and took her home due to a toileting accident	
Orienting <ul style="list-style-type: none"> • Small area only • One room • Several rooms • Building-wide • Building and grounds 	Several rooms	Observed at home and at the park, and walked through the mall	Several rooms: kitchen and lunch room	Only one area observed	
Physical mobility <ul style="list-style-type: none"> • Sit/stand in one area • Fair ambulation • Stairs/minor obstacles • Physical abilities 	Full physical abilities observed	Full physical abilities; no limitations observed	Full physical abilities	Full physical abilities	
Independent work rate (no prompts) <ul style="list-style-type: none"> • Slow pace • Steady/average pace • Above average/sometimes fast pace • Continual fast pace 	Above average/sometimes fast pace	Fast pace observed in activity of basketball	Steady pace	Slow in beginning, stopped several times for no apparent reason	
Appearance <ul style="list-style-type: none"> • Unkempt/poor hygiene • Unkempt/clean • Neat/clean but clothing unmatched • Neat/clean and clothing matched 	Neat/clean and clothing matched	Clean/neat; parents assisted	Neat/clean and clothing matched	Neat/clean and clothing matched	
Communication <ul style="list-style-type: none"> • Uses sounds/gestures • Uses key words/signs • Speaks unclearly • Communicates clearly intelligible to strangers 	Uses key words/signs, very difficult to understand	Sounds/gestures; no use of words observed	Said words when prompted	Used key words, said words instructed to use, such as "thank you"	
Social interactions <ul style="list-style-type: none"> • Rarely interacts appropriately • Polite, responses are appropriate • Initiates social interactions infrequently 	Rarely interacts appropriately	Some running away; interacted politely but indifferently	None observed	Smiled a lot; did not always respond to people; stared at people she knew; stopped working to stare	

(table continues)

(TABLE 1 continued)

Item	Consumer/parent (Initial screening)	Other (Community assessment)	Situational Assessment I (School kitchen)	Situational Assessment II (Grocery store)	Situational Assessment III
<ul style="list-style-type: none"> • Initiates social interactions frequently 					
<p>Attention to task/perseverance</p> <ul style="list-style-type: none"> • Frequent prompts required • Intermittent prompts/high supervision • Intermittent prompts/low supervision • Infrequent prompts/low supervision 	Frequent prompts required	Prompted to throw ball; bounced ball independently; no prompts required	Physical prompts needed; some gestural responses; easily distracted	Frequent prompts required; sometimes responds to verbal prompts, but mostly gestural and physical prompts needed	
<p>Independent sequencing of job duties</p> <ul style="list-style-type: none"> • Cannot perform tasks in sequence • Performs 2-3 tasks in sequence • Performs 4-6 tasks in sequence • Performs 7 or more tasks in sequence 	Performs 2-3 tasks in a sequence	3 (+) tasks in a sequence: observed bounced ball, shot ball, ran after ball	Observed 2 tasks in a sequence: picked up tray, placed in rack	Observed 2-3 tasks in sequence: pushed button on conveyor belt, took item, placed in bag	
<p>Initiative/motivation</p> <ul style="list-style-type: none"> • Always seeks work • Sometimes volunteers • Waits for directions • Avoids next task 	Waits for direction	Showed initiative with ball	Waited for direction	Waited for direction	
<p>Adapting to change</p> <ul style="list-style-type: none"> • Adapts to change • Adapts to change with some difficulty • Adapts to change with great difficulty • Rigid routine required 	Adapts to change with great difficulty	Adapted from home court to court at park	Change not observed	Adapted with difficulty; many trials before change	
<p>Reinforcement needs</p> <ul style="list-style-type: none"> • Frequently required • Daily • Weekly • Paycheck sufficient 	Paycheck sufficient	None required	Lots of verbal praise	Frequent reinforcement needed in beginning; verbal praise and high-5s given	
<p>Level of support</p> <ul style="list-style-type: none"> • Very supportive of work • Supportive of work with reservations • Indifferent about work • Negative about work 	Family very supportive of work	Family very supportive of activity	Very supportive	Very supportive; mother reports Lisa enjoys going to work	
<p>Discrimination skills</p> <ul style="list-style-type: none"> • Cannot distinguish between work supplies • Distinguishes between work supplies with an external cue • Distinguishes between work supplies 	Cannot distinguish between work supplies	Discrimination skills not observed	No change in supplies	Cannot distinguish between hot, cold, dry, wet, breakable, and cleaning products	
<p>Time awareness</p> <ul style="list-style-type: none"> • Unaware of time and clock function • Identifies breaks/lunch 	Unaware of time and clock function	Did not respond when asked, "What time is it?"	None observed	Unaware of time	

(table continues)

(TABLE 1 continued)

Item	Consumer/parent (Initial screening)	Other (Community assessment)	Situational Assessment I (School kitchen)	Situational Assessment II (Grocery store)	Situational Assessment III
<ul style="list-style-type: none"> • Can tell time to the hour • Can tell time in hr/min 					
Independent street crossing <ul style="list-style-type: none"> • None • Two-lane street (with or without light) • Four-lane street (with or without light) 	None reported	Needed assistance in parking lot	None observed	Unaware of cars in parking lot	
Handling criticism/stress <ul style="list-style-type: none"> • Resistive/argumentative • Withdraws into silence • Accepts criticism/does not change 	Accepts criticism, changes behavior	Not observed	Not observed	Does not seem affected by criticism or stress; did not move faster as groceries piled up	
Acts/speaks aggressively <ul style="list-style-type: none"> • Hourly • Daily • Weekly • Monthly • Never 	Never	Not observed	Not observed	Pinched arm of coach when physically prompted	
Travel skills <ul style="list-style-type: none"> • Requires bus training • Uses bus independently (with or without transfers) • Able to make own travel arrangements 	None	Not observed	Not observed	Not observed	
Unusual behavior <ul style="list-style-type: none"> • None • Few • Many 	Few	Giggling, staring, running away	Nothing unusual observed	Would not sit during break time; would shout "good job" while working	
Work experience <ul style="list-style-type: none"> • Employment site • Job tasks performed • Dates, hours, wages 	School- and community-based work experiences	N/A	N/A	N/A	
Physical limitations <ul style="list-style-type: none"> • Impairment • Medications • Medical restrictions 	None	None observed or reported	No limitations observed	No limitations observed	
Responding to survival words <ul style="list-style-type: none"> • Street signs • Restrooms • Danger 	None	None observed	None observed	Did not identify restroom sign for women on the bathroom door	
Leisure skills/interests	Basketball, television, out to eat	Enjoyed basketball, liked ice cream	Not observed or explored	Mother mentioned Lisa participates in bowling and horseback riding activities	
Chores or responsibilities	Helps around the house when parents ask	N/A	Mother reported Lisa helps put dishes away at home	N/A	

(table continues)

(TABLE 1 continued)

Item	Consumer/parent (Initial screening)	Other (Community assessment)	Situational Assessment I (School kitchen)	Situational Assessment II (Grocery store)	Situational Assessment III
Activities, foods, items that are reinforcing	Likes to buy sodas from the machine at school	Liked ice cream cone at McDonald's	N/A	N/A	
Money skills <ul style="list-style-type: none"> • Discriminates between coins • Makes minor purchases • Makes major purchases • Amount of spending money given to consumer • Willingness of family to give consumer money from paycheck 	Learning to recognize coins; makes minor purchases	None observed; parents sent money on outing	None observed	None observed	
Asking for assistance <ul style="list-style-type: none"> • Peers • Co-workers • Acquaintances • People in authority 	Does not ask	Not observed	No help requested	Does not ask for help; may walk away	
Other comments	No bathroom toileting skills reported; soils clothing	Appeared to have a good time; got in car to go to park after playing basketball at home; put ball in car first to prompt her to get in; became more interactive as assessment went on	Assessment went well; Lisa was able to complete tasks as demonstrated with assistance; participated in all activities	Does not appear to have basic skills to perform bagging tasks; discrimination and speed needed; minimal attention to task; fascinated with customers, which caused high distraction	

tance from her teacher in using the bathroom, and then travel to her job.

Initial Training Progress: Job 1. Lisa's primary job duties at the cafeteria included collecting serving trays from the lunch room, operating the dish machine, storing clean supplies, and mopping the work area. Her initial training was conducted by a peer mentor, a student with a disability who was leaving the job. Lisa responded well to the mentor's demonstrations and instructions on how to complete the job. A kitchen supervisor monitored the training and provided assistance when needed. The training was observed by the employment specialist, who provided assistance and collected task analytic data on the instruction being implemented.

Expanding Supports: Job 1. The employment specialist was replaced by a

graduate assistant completing an internship program for his degree. The graduate assistant was trained in systematic instruction and had the opportunity to get to know the job and Lisa before attempting to become actively involved. Lisa accepted instruction from the graduate assistant and demonstrated progress in the completion of her job duties. Initially, transportation to and from work was provided by Lisa's parents; however, a driver was later hired to provide transportation services. Lisa's parents did not want her employment to disrupt her in-school activities and preferred that she work after school, on weekends, and during the summer. Because this job was not available during those periods, Lisa opted to resign from her job after 2 months.

Data Collection: Job 1. Data were collected from observations made by the

peer mentor, the kitchen supervisor, and the graduate assistant. Using the System of Least Intrusive Prompts, instruction was provided to Lisa across job duties. Initially, Lisa completed tray collection, dish machine operation, and tray storage with a combination of gestural and modeling levels of assistance, paired with verbal assistance. A physical level of assistance was needed to complete the mopping job duties. Often during the initial stage of instruction, the employment specialist would have to stand in the doorway to prevent Lisa from wandering away from her work area. Data did not demonstrate independent performance on skill acquisition or on-task behavior prior to resignation.

Employer Selection: Job 2. Employment search activities were conducted by Lisa, her family, the employment specialist, and a case manager. As a

result of this team effort, an employment opening was found for a stock clerk position at a local retail store. Situational assessment data revealed that Lisa was very successful when completing repetitious type tasks, such as folding towels, or simple production activities limited to two steps. In addition, these data indicated that an optimal work environment for Lisa would be limited to a small space with few distractions. The stock clerk position seemed to fit what Lisa was looking for, although it had several job responsibilities, including ticketing merchandise, hanging clothing, and folding towels in the storeroom. As part of the interview process, Lisa had the opportunity to visit the store on several occasions to determine if she wanted to work as a stock clerk. Lisa immediately demonstrated a high level of comfort with the position and appeared eager to work. After a formal interview, Lisa was hired with a starting salary of slightly higher than minimum wage and an initial work schedule to include a 3-hour shift, 3 days per week. Although Lisa's school was willing to take Lisa to work, her mother preferred for Lisa to come home before going to work so she could eat a snack and receive assistance with toileting as needed.

Initial Training Progress: Job 2.

Prior to Lisa's first day of work, the employment specialist spent several hours at the store learning the stock clerk job tasks and developing a job duty task analysis for each of her major job duties. As with her first job, Lisa received systematic instruction to learn her job tasks. In addition, Lisa's mother purchased a variety of towels from the store so that Lisa would have an opportunity to practice folding towels at home. Lisa also practiced hanging her clothes at home and assisting her mother with the family's laundry.

Expanding Supports: Job 2. As Lisa became comfortable in her work environment, she began to move around the store independently. The employment specialist and Lisa worked with a few of Lisa's co-workers to develop

a route through the store by which she could efficiently move from the stock room to the appropriate areas on the sales floor. At the end of 2 months, the employer stated that he would increase Lisa's work as the company's seasonal business increased.

Data Collection: Job 2. Review of the initial analysis of the skill acquisition data demonstrated that Lisa primarily required physical assistance to complete her job tasks. Much of this physical assistance was delivered with hand-over-hand instruction, especially when completing tasks such as folding towels, using a pricing gun, and applying labels to garments. Within the first month of instruction, Lisa's instructional assistance moved from physical assistance toward a combination of gestural and verbal support. Throughout the training phase, Lisa remained eager and extremely cooperative in all job task areas.

Reviewing both jobs, we note that Lisa continues to be employed and has worked for a total of 5 months. Her total earnings to date are just less than \$1,000. In addition, she continues to improve her marketability in the competitive labor force as she meets new friends in the retail field.

Discussion

The two women presented in this article clearly demonstrated their abilities to obtain and maintain competitive employment. There are many factors that contribute to their success, including (a) a supportive family, (b) a well-trained employment specialist, (c) arrangement of the appropriate work supports, and (d) the opportunity to develop the work competencies at the job site. The positive outcomes that are associated with viable competitive employment for persons with severe intellectual disabilities requires a thoughtful arrangement of conditions and work supports in the business setting. We know, for example, that the constant presence of an employment specialist who does not systematically "fade" his or her assistance and stays in close prox-

imity to the employee with a disability will inhibit the entire "fading" process and create unnecessary dependence on him- or herself. In addition, the immediate and long-term infusion of supports by co-workers, first-line supervisors, and other personnel who are regularly in the work environment is critical to long-term retention of the new employee. The importance of work supports has been a well-documented fact (e.g., Wehman, 1981) that has recently become a more commonly discussed phenomenon with the increased use of natural supports (e.g., Test & Wood, 1996; West, Kregel, Hernandez, & Hock, 1997).

Both women were actively involved in selecting their jobs. The employment specialist facilitated the women's involvement by arranging the opportunity for them to get to know their new co-workers and supervisors, as well as the general work environment, prior to accepting the employment position. This was primarily accomplished by participating in a series of job site visits. Once employed, co-worker and supervisor involvement and interactions were encouraged. By seeing the new employee as a co-worker, not just a person with a disability, others within the work environment were able to feel less threatened or inadequate when lending support. These opportunities unfolded into meaningful relationships as the co-workers became invested in the trials and struggles of their peer. As a result, everyone was more likely to celebrate in successes and less likely to give up when challenging situations arose.

Establishing effective communication between the customers, co-workers, and first-line supervisors is essential. In both case studies, the young women were nonverbal and exhibited self-stimulating behaviors. The emphasis was on educating the co-workers and supervisors about the women's likes and dislikes, and their mannerisms, which indicated certain choices. The focus was then to teach colleagues how to observe the women's actions and read their intentions. There was an immediate shift in responsibility from the employment specialist to the co-workers in interpreting situations and

communicating. As an example, when Karen refused to work on one occasion, a co-worker suggested that Karen was tired and asked the employment specialist if he and Karen could go on break together and have a soda. The employment specialist told the co-worker to ask Karen directly and assisted in facilitating the conversation. Later, this break became part of Karen's daily work routine. If an open environment is created on the first day of employment, it will often be co-workers who will offer possible suggestions to make corrections or solve problems.

The most challenging requirement related to the successful implementation of Karen's and Lisa's employment achievements was that the employment specialist, family, school personnel, and adult service providers keep the commitment, perseverance, and resilience necessary to overcome the barriers that existed due to Karen's and Lisa's disabilities. Reviewing the multiple limitations experienced by both women, neither had independent toileting skills, available transportation, the ability to talk, or discrimination skills. Both women exhibited disruptive behaviors that included crying, kicking, excessive laughing, and running away. In addition, they could not self-initiate or self-monitor their activities, read, write, tell time, or travel independently from one room to another. Yet surprisingly, the challenge never had to do with these behaviors; rather, it became critically important for the employment specialist to approach each situation with an open mind and to stay creative in an effort to implement the needed support strategies as issues continually arose both at and away from the job site.

Employment specialist burnout becomes a very real issue when professionals are in high-intensity work site situations, such as those described in this article. The real frustration arises when employment specialists are faced with limited supports to select from because the system is generally inflexible because of policy, rules, and/or customs. Due to the independent nature of the duties performed by an employment specialist, it becomes easy to feel abandoned and

alone, fighting an uphill battle. It is important for the employment specialist to seek assistance with brainstorming activities, to obtain relief at the job site, and to evaluate data to identify successes regardless of how minute they may seem.

There were a number of positive elements that developed from these two efforts that have meaning for future replications in other communities. First, the continuing demonstration of successful employment by persons with severe mental retardation is necessary to show the competence level and potential of persons labeled in this way. Even as we approach the end of the 1990s, public schools and adult programs throughout the United States and the world continue to believe that nonverbal individuals with severe mental retardation, autism, deaf/blindness, and other multiple disabilities cannot work competitively despite the fact that there have been numerous studies and reports to suggest otherwise (e.g., Wehman, 1996; Wehman, Parent, Wood, Kregel, & Inge, 1989; West, Rayfield, Clements, Unger, & Thornton, 1994).

Through demonstration efforts, it is the parents who are given the opportunity to see positive employment outcomes for their daughters and sons. These parents would otherwise have been left to make arrangements for their children's long-term care. These young adults are viewed as contributors to their community and as capable of participating fully in their day-to-day life activities. The learning that occurs at job sites such as these often opens doors to independence in areas that have never been addressed and carries over to new and higher levels of performance.

Demonstrations such as these readily identify the limitations in the system as it exists. Currently, numerous adult service providers of supported employment and school programs are not adequately equipped by staff or financial resources to provide the type and length of support necessary to allow success to occur. Too often placements are ceased because the individual with a significant disability does not appear to be making progress as rapidly as desired by professional staff.

Lack of instructional data collection, implementation of compensatory strategies, and positive behavioral programs limit the potential of these workers who could flourish with the proper supports.

By paving the way for future employment opportunities for others, the employers involved in such demonstrations become prepared to benchmark qualified employees as having more substantial disabilities. The fact that employers recognize the value and contributions that can be made by these workers when they are provided with supports sounds an alarm that professionals in the field need to hear.

ABOUT THE AUTHORS

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NOTE

The *name* of this person is fictitious, but all other information is real.

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REFERENCES

- Brooke, V., Inge, K., Armstrong, A., & Wehman, P. (Eds.) (1997). *Supported employment handbook: A customer-driven approach for persons with significant disabilities*. Richmond: Virginia Commonwealth University, Rehabilitation Research and Training Center.
- Brooke, V., Wehman, P., Inge, K., & Parent, W. (1995). Toward a customer-driven approach of supported employment. *Education and Training in Mental Retardation and Developmental Disabilities*, 30, 308-320.
- Kregel, J., Wehman, P., & Banks, P. D. (1989). The effects of consumer characteristics and type of employment model on individual outcomes in supported employment. *Journal of Applied Behavior Analysis*, 22, 407-416.
- Mank, D. (1994). The underachievement of supported employment: A call for reinvestment. *Journal of Disability Policy Studies*, 5(2), 1-24.
- Moon, M. S., Goodall, P., Barcus, M., & Brooke, V. (1986). *The supported work model of competitive employment for citizens with severe handicaps: A guide for job trainers* (Rev. ed.). Richmond: Virginia Commonwealth University, Rehabilitation Research and Training Center.
- Rehabilitation Act Amendments of 1992, P.L. 102-569, 29 U.S.C. § 701 et seq.
- Revell, W. G., Wehman, P., Kregel, J., West, M., & Rayfield, R. (1994). Supported employment for persons with severe disabilities: Positive trends in wages, models and funding. *Education and Training in Mental Retardation and Developmental Disabilities*, 29(4), 256-264.
- Test, D. W., & Wood, W. M. (1996). Natural supports in the workplace: The jury is still out. *Journal of the Association for Persons with Severe Handicaps*, 21(4), 155-173.
- Wehman, P. (1981). *Competitive employment: New horizons for severely disabled individuals*. Baltimore: Brookes.
- Wehman, P. (1996). *Life beyond the classroom: Transition strategies for young people with disabilities* (2nd ed.). Baltimore: Brookes.
- Wehman, P., & Kregel, J. (1985). A supported work approach to competitive employment of individuals with moderate to severe handicaps. *Journal of the Association for Persons with Severe Handicaps*, 10(1), 3-11.
- Wehman, P., & Kregel, J. (1995). Supported employment: At the crossroads. *Journal of The Association for Persons with Severe Handicaps*, 20(4), 286-299.
- Wehman, P., Parent, W., Wood, W., Kregel, J., & Inge, J. (1989). From school to competitive employment for young adults with mental retardation: Transition in practice. *Career Development for Exceptional Children*, 12(2), 97-105.
- Wehman, P., Revell, W. G., & Kregel, J. (1996). Supported employment from 1986-1993: A national program that works. *Focus on Autism and Other Developmental Disabilities*, 11(4), 235-242.
- Wehman, P., Revell, W. G., & Kregel, J. (1997). A decade of rapid growth and impact. In P. Wehman, J. Kregel, & M. West (Eds.), *Supported employment research: Expanding competitive employment opportunities for persons with significant disabilities* (pp. 1-17). Richmond: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- West, M., Kregel, J., Hernandez, A., & Hock, T. (1997). Everybody's doing it: A national survey of the use of natural supports in supported employment. In P. Wehman, J. Kregel, & M. West (Eds.), *Supported employment research: Expanding competitive employment opportunities for persons with significant disabilities* (pp. 98-109). Richmond, VA: Virginia Commonwealth University, Rehabilitation Research and Training Center on Supported Employment.
- West, M., Rayfield, R. G., Clements, C., Unger, D., & Thornton, D. (1994). An illustration of positive behavioral support in the workplace for individuals with severe mental retardation. *Journal of Vocational Rehabilitation*, 4(4), 265-271.