

Project SEARCH: A demand-side model of high school transition

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Abstract. Community work experience and coordinated transition services are recognized as key factors in successful school-to-work transitions for young people with disabilities. However, although federal law now mandates transition assistance, such services are not consistently available. Consequently, youth with disabilities often miss out on opportunities to develop the work habits, communication skills and attitudes that employers look for when making hiring decisions.

In this article we describe the Project SEARCH High School Transition Program, an employer-based intervention for high school students with significant disabilities whose main goal is competitive employment. The program combines real-life work experience with training in employability and independent living skills. Individualized placement assistance is provided as an integral part of the program. The hallmark of this demand-side model is complete immersion in the workplace. This facilitates a seamless integration of classroom instruction and on-the-job training and support that cannot be achieved with occasional workplace visits or simulated work environments. The program also demonstrates a novel collaborative approach that brings the education system, employers, and rehabilitation services together in unique ways to create a productive and comprehensive transition experience for students.

Keywords: Special education, transitions, youth with disabilities, employment, employability

1. Introduction

Michael loves working with computers and was recently hired as a clerk performing data entry and credit report retrieval at a bank. He started out in a filing position and, because he impressed his supervisor with a high level of accuracy and an ability to catch errors, he eventually added data entry and other computer-related tasks to his regular work responsibilities. But Michael's story is not a typical example of an ambitious young person entering and advancing in the workforce. In fact, his employer remarked that when he first met Michael, he would not have thought him capable of the work he now does on a daily basis. Unfortunately,

many people – at first glance – might share this impression of Michael's potential: Michael has Down syndrome with the added difficulties of a speech impediment.

Typically, young people like Michael, if they are employed at all, are steered towards jobs like bagging groceries or washing dishes. But Michael was involved in Project SEARCH, a program that is guided by the understanding that the talents and interests of people with disabilities are as varied and individual as they are among any group. Because Michael spent an entire school year in the bank experiencing various jobs, he had sufficient time and opportunity to demonstrate his capability and learn new skills while his potential employer observed. Michael participated at the work-site 20 hours a week for nearly eight months, gaining over 500 hours of real work experience and job-skill training. With the added benefit of a supportive and persistent family, Michael is now employed in a job

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where he can maximize his potential, do work he loves, and make a unique contribution to his organization.

Tracey is another Project SEARCH student who, unlike Michael, does not have the advantage of supportive family members. She lives in a group home where her behavioral issues have been a problem in the past. Yet, although Tracey is deaf and has cerebral palsy with significant mental retardation, she was recently hired to stock kitchenettes on patient floors at a hospital. Tracey's story illustrates the importance of the team approach, which is integral to the Project SEARCH method, in facilitating the linkages that help students overcome barriers to successful employment.

Tracey's gait and posture are affected by cerebral palsy, although she does not need a wheelchair. When she was nearing high school graduation her Individualized Education Program (IEP) team advised her against a standard career technical program due to her limited physical functioning, and suggested she try Project SEARCH. In her first month with Project SEARCH, Tracey had difficulties understanding instructions and keeping up with the physical demands of the program. Each day she was exhausted by 10:00 and wanted to sleep! Instead of concluding that she was inappropriate for the program, the on-site teacher pulled together the resources and expertise of the IEP team members, including the case manager, the interpreter, Tracey's rehabilitation services counselor and a physical therapist. Together, they recognized a need for a medication adjustment to address her problems with stamina and concentration. With this adjustment Tracey's stamina did indeed increase with time. With the added assistance of repetitive practice, and coaching from her interpreter on appropriate behaviors, she has developed job and life skills. She is now working part time in a position with real responsibilities that would have been beyond her reach without the holistic support services and opportunity for a prolonged job-trial period that she received through the Project SEARCH High School Transition Program.

The case scenarios above illustrate the benefits that the Project SEARCH High School Transition Program offers students with significant disabilities. In this paper, we will describe the history and methodology of this novel demand-side transition model, and discuss it in the context of traditional transition models, other demand-side programs, and current thinking on best practices.

2. Current concepts in transition

2.1. Definition of transition

Transition is a comprehensive term that encompasses all of the adjustments and changes needed for a youth to successfully adopt adult roles [24]. All young people can benefit from structured transition planning, but for youths with disabilities, transitional programs must specifically address the chronically poor outcomes in employment and social integration experienced by this group [15].

Ideally, transition services should be a coordinated effort of multiple agencies to support the individual across the many aspects of life, including independent living and adjustment to life in the community [16]. The Individuals with Disabilities Education Act (IDEA) of 1997 (reauthorized in 2004) states that transition services should be based on the individual student's needs and interests [1]. According to Section 602 (30)(C), transition services include "instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation" [1].

2.2. Current transition models and practices

One goal in the delivery of transition assistance is to provide the specialized services needed by the individual student in the least restrictive and most natural environment possible [8,15]. There are numerous special education models for transition services that address this goal with varying degrees of success.

The *traditional classroom* model provides preparation in employability skills strictly within the school setting with students in segregated special education classrooms. The *work-study* model combines classroom instruction with actual work experience. Often the jobs are in food or custodial services and may be limited to a few hours per day. The *transition-to-community* model is aimed at preparing the student for independent living, and includes social content in the curriculum. Individuals may participate in job-shadowing experiences or go into the workplace as part of a group of students. The *adapted career and technical* model teaches skills within a lab environment with simulated and real worksites modeling various work environments such as restaurant, hotel, or horticulture operations.

In special education practice, the available options for transition from school to work differ primarily in the degree and duration of services, supports provided, and time spent in real work environments. Generally, as needs increase and more specialization of services is required, the student becomes further removed from the integrated school and work environment. The student with minimal need of assistance may receive only adaptive support or modifications in a fully integrated school setting. Students with cognitive limitations are usually placed in special education classes with work experience taking place primarily in simulated work environments or enclave arrangements. Community work experiences are usually short-term and intermittent and do not necessarily include hands-on learning. This learning out of context can make it difficult for students to integrate life skills and job skills in a meaningful way [17].

A lack of alignment with employer needs is another shortcoming that is frequently encountered in current transition practices. The structure and priorities of the education system are the primary guiding forces in the design of most programs. Special events and daily schedules conform to the school's needs, and the needs of the business are often overlooked or cannot be accommodated. Many programs offer only minimal exposure to the work environment. However, since career-technical training becomes inconsequential if there are no jobs available in the end, education services need to establish ongoing interactions with employers [11]. In any transition program where successful competitive employment is the desired outcome, it is critical that the employers' needs be taken into account in designing services [9]. A recent emphasis on demand-side job development has promoted awareness of these issues [12], and transition initiatives such as High School/High Tech [18] and the Marriott Bridges program [9] have been developed in the interest of incorporating work experience into the transition process.

In this article, we describe the Project SEARCH High School Transition Program (PS-HST) an employer-driven, demand-side model for high school transition that was developed at Cincinnati Children's Hospital Medical Center in collaboration with the Great Oaks Institute of Technology and Career Development. Unlike most transition programs, where employability and independent-living skills are taught in a school or agency setting, the Project SEARCH classroom is physically located within the business. This allows for learning in the context of the workplace, and immediate real-life application of new skills. Many benefits for

student participants, including relevant job skills and complete community immersion, result from this program framework. In addition, with roughly 20 hours at a job site each week for most of a school year, students gain a level of exposure to the working world that is rarely available to students with disabilities. The PS-HST program differs from other demand-side models in the degree of integration of school, agency, and employer priorities and resources. Consistent with demand-side principles, the onsite presence of Project SEARCH facilitates the development of a broad range of high-quality jobs within the employer organization and helps to bring about positive systemic changes in attitudes regarding people with disabilities.

3. The project SEARCH model

3.1. Program overview

The PS-HST provides a unique school-to-work transition model for young people with significant disabilities. The program combines real-life work experience, training in employability and independent living skills, and placement assistance through an active collaboration of the education system, employers, and the Vocational Rehabilitation (VR) system (Table 1). The hallmark of the Project SEARCH model is complete immersion in the workplace (Fig. 1). Students spend their entire school day at the workplace for a full school year, facilitating a seamless integration of classroom instruction and on-the-job training and support that cannot be achieved with occasional visits to the workplace or simulated work environments. The details of the program curriculum and the specific responsibilities of the different partner organizations are described below.

3.2. History

A 1995 policy statement from the American College of Healthcare Executives asserts that, "... healthcare executives must take the lead in their organizations to increase employment opportunities for qualified persons with disabilities and to advocate on behalf of their employment to other organizations in their communities" ... [2]. Cincinnati Children's adopted this guiding principle by initiating a partnership with Great Oaks. The two organizations began their collaboration, later named Project SEARCH, with an employment program for adults with disabilities. Experience with the adult program led the partnership to

Table 1
Specific responsibilities of project SEARCH partners

Organization	Specific Activities	Resources/Personnel Provided
Education (School or School System)	<ul style="list-style-type: none"> – Student recruitment – Program Management (curriculum, billing, documentation and evaluation) – Relationship with local Department of Vocational Rehabilitation – Accommodations and adaptations – Arrange for additional student needs (with affiliated school) such as interpreter, Orientation and Mobility – Transportation/Travel Training Instructor, Speech, OT, PT, SST, etc. 	<ul style="list-style-type: none"> – Job Coaches (Can be part-time employees, 1:4 job coach-to-student ratio required) – Instructor for each program site – Instructional materials (refunctional academics, transition/job development/job readiness) – Uniforms (if needed for individual work site locations) – Student liability insurance – CARF Accreditation (required for RSC involvement)
Employer (Program Sites)	<ul style="list-style-type: none"> – Participate in program evaluation – Provide input for student evaluations – Public Relations – Specific workplace requirements (e.g. TB and drug screen, badging, etc.) 	<ul style="list-style-type: none"> – Overhead (space, phone, etc.) – Classroom space with basic furnishings – Contact person (Employer Liaison) – Job sites (for worksite rotations) – Shuttle service to off-site locations
Vocational Rehabilitation System	<ul style="list-style-type: none"> – VR counselor participates in student evaluations and job development process 	<ul style="list-style-type: none"> – VR Counselor for each student – Partial funding for job coaching and job development

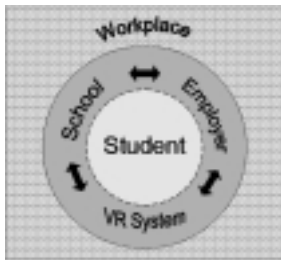


Fig. 1. The Project SEARCH High School Transition Program effectively integrates the resources and services of the partner organizations; a school or school system, an employer or employers, and the Vocational Rehabilitation (VR) system, to provide a holistic transition experience for students. Total workplace immersion is a hallmark of the program.

identify the need for, and to develop a youth program: the PS-HST.

Both organizations were motivated to create a successful program, and both brought valuable skills and resources to the project. Great Oaks provided expertise in career-technical training for youth with disabilities, and had an interest in creating new training opportunities in community settings for youths with more significant disabilities. Hospital leaders were committed to workforce diversity and in demonstrating leadership in the area of employment for people with disabilities. In addition, the hospital was inherently an ideal setting for the development of a community-based work exploration program. First, healthcare is a growing industry with many hiring opportunities in support positions that are defined as entry-level. Second, a large hospital is a microcosm of the working world – in many ways

resembling a small city – and provides a wide variety of jobs for students to explore. Some skills acquired in a hospital are highly specialized for the healthcare field, but many (e.g. filing, food service, building maintenance, grounds keeping) are directly transferable to other industries. While Project SEARCH was pioneered in, and remains primarily focused on employment in the healthcare industry, the model is applicable to other employment sectors. In fact, in addition to several hospitals, Project SEARCH currently operates High School Transition Program sites in banks, a university, and a county park system.

3.3. Program eligibility

The PS-HST serves students who are 18 to 22 years of age. Specifically, these are students with significant cognitive and/or physical disabilities, such as Down syndrome; cerebral palsy; and visual, speech, and learning impairments, who are on an Individualized Education Program (IEP), have completed all of their high school credits and graduation requirements, and have deferred graduation status. The most important eligibility criterion is a desire to achieve competitive employment (Table 2).

IDEA (2004) mandates that continued education and transition services be provided for young people with disabilities beyond the traditional four years of high school [1]. This can be facilitated through deferred graduation, a key concept in funding the PS-HST program [19]. With deferred graduation, students with dis-

Table 2
Project SEARCH high school transition program eligibility criteria

Minimum Requirements for Eligibility:

- 18–22 years old
- In last year of high school eligibility (completed academic requirements, participating in deferred graduation)
- Desires to work in the community
- Willing to access independent transportation options
- Exhibits basic communication skills
- Demonstrates appropriate social, grooming, and hygiene skills
- Has independent toileting and feeding skills
- Can pass drug screen and felony check*
- Has updated immunizations*

*These are required for hospital work, but may not be essential in other work settings.

abilities who have completed their academic requirements can participate with their peers in the important social ritual of the high school graduation ceremony. However, they receive a blank diploma and, thus, remain eligible to continue in the educational process and take advantage of additional high school training programs or career technical programs. Because of the legal provisions and enhanced emphasis on transition services in IDEA 2004, the school system can continue to receive local, state and federal funding for these students until the students 22nd birthday (in Ohio – the maximum age differs across the country).

3.4. Chronological description of the school year

Students attend the PS-HST for a full school year. Each PS-HST program site is based at a local business. The business provides access to an onsite classroom that can accommodate up to 12 students. Each site is staffed by a teacher and 3 job coaches (or a sufficient number to achieve a 4:1 student-to-coach ratio). The required credentials for Project SEARCH teachers (in Ohio) include a special education certificate and a transition-to-work endorsement. Project SEARCH works with an Advisory Board that includes Project SEARCH teachers and co-directors, additional special education experts, Vocational Rehabilitation counselors, employer representatives, parents, and students with disabilities. This Advisory Board plays a critical role in curriculum review, competencies needed for employment, student selection and continuous program improvement. An overview of the critical components of the curriculum is provided in Table 3.

3.4.1. Admissions, orientation, and assessment

Students are referred to the program through their schools and apply in the winter and spring of the school year prior to entering the program. The selection pro-

cess is carried out by Project SEARCH teachers and co-directors with input from the host business and Advisory Board members. Students are notified of their acceptance in the spring before entering the program. Student preparation in the spring prior to the beginning of school includes a tour of the workplace with visits to potential work sites. During the summer, teachers make home visits. These visits are an opportunity for students to create a connection with their teachers so that they will find a familiar face when they enter a new environment at the start of the school year. It is also a time when the teachers can discuss program goals and expectations with students and their parents and observe the home environment. A picnic with Project SEARCH staff, students and their families is another important summer orientation event that helps to foster a sense of community and establish a supportive cohort system among the students.

Transportation to the PS-HST program site is another issue that is addressed in the summer. Students are strongly encouraged to travel independently. The PS-HST teacher works with the student and their family to begin travel training (utilizing public transportation if available) over the summer, but the student's school district is ultimately responsible for providing travel training or making other arrangements if independent travel is not possible.

The PS-HST program includes an ongoing, dynamic student assessment that begins with the application process, and continues throughout worksite rotations and job placement. Assessment tools are completed in the student's previous school and included in the application packet. These tools are used throughout the process and include a Multi-Factored Evaluation, an Individual Education Plan (containing "Present Levels of Performance"), and checklists detailing employability skills, information regarding attendance, discipline, career experiences, first community jobs, and volunteer

Table 3
Critical components of the project SEARCH high school transition program

Program Component	Purpose
Development and implementation of a customized career exploration package	3–4 Work experiences to learn job skills, social skills, task completion, problem solving.
Instruction and support of a job coach during work experiences	One-on-one or small group instruction allows intense and frequent instruction of basic and higher level concepts.
Assessment for adaptive equipment	Performed by a physical/occupational therapist or assistive technologist to recommend and plan adaptations for each work site. Adaptations may be transferable to other sites.
Linkages to community services and agencies	Provides ongoing support system to promote success after program completion. May include case management, healthcare services, interpreters, mental health and behavioral counseling, job coaching, follow-along employment services and residential opportunities.
Functional curriculum	Gives students necessary skills to be successful as adults living and working independently (e.g. money management, social skills, and adult-living skills).
Compilation of a Portfolio	Documents the students work experiences, skills gained and career plan.
Additional Support	On-site staff to assist students, e.g. sign language interpreters.

activities. Written communication skills are assessed through a short paragraph that students write about their goals and expectations relating to PS-HST.

During the first few weeks of the program, the students participate in “paper and pencil” exercises to create interest inventories and vocational checklists that are customized to the specific workplace (e.g. a hospital, bank, etc.). The instructor uses observations made during hands-on orientation and way-finding activities to assess memory, judgment, communication, teamwork and problem-solving skills, as well as flexibility and initiative. The instructor synthesizes all this information to adapt the curriculum and plan worksite experiences to match specific student needs and skills (e.g. ability to utilize a shuttle for travel from one building to another).

A new cycle of assessment and feedback begins with each worksite rotation. The students receive continuous formal and informal evaluation from the Project SEARCH instructor and job coaches. Additionally, they receive a formal departmental review at least once during the rotation.

3.4.2. Classroom curriculum

Throughout the school year, the day begins with a one-hour classroom lesson based on a functional curriculum that stresses employability and independent-living skills [20]. Classroom activities are designed around six major focus areas: Working Responsibly, Communicating Effectively, Solving Problems and Thinking Skillfully, Planning and Managing a Career, Applying Technology, and Managing Resources.

Nutrition, budgeting, and workplace attitude are examples of the specific topics covered. The curriculum

is flexible and allows teachers to design lessons around the core topics and to adjust the curriculum based on specific student and employer needs. For example, in the beginning of the year lessons are focused on general skills needed to function in the workplace, that is, learning the layout and how to travel independently within the facility, making good choices in the cafeteria, and appropriate dress and grooming. In addition, the curriculum can be customized to the students’ specific interests and aptitudes and final job goal to insure a meaningful and successful experience. Each student will acquire work skills in specific areas such as filing, computer work, stocking, etc. that will lead to employment. These skills are addressed both in the curriculum and at the worksite rotations.

3.4.3. Linkages

Project SEARCH staff are familiar with community resources and routinely assist students in accessing the services they need. All students are linked with a Vocational Rehabilitation Counselor; this association permits partial funding for the job-coaching and job placement services received through the program. Other examples of linkages include the local Board of Mental Retardation/Developmental Disabilities (MRDD), psychological services, travel training, or special services related to a student’s specific disability. Additional linkages to appropriate community services are made as the need arises.

3.4.4. Worksite rotations

PS-HST students build communication and problem-solving skills, as well as job-specific skills, through worksite rotations (Fig. 2). These are unpaid student

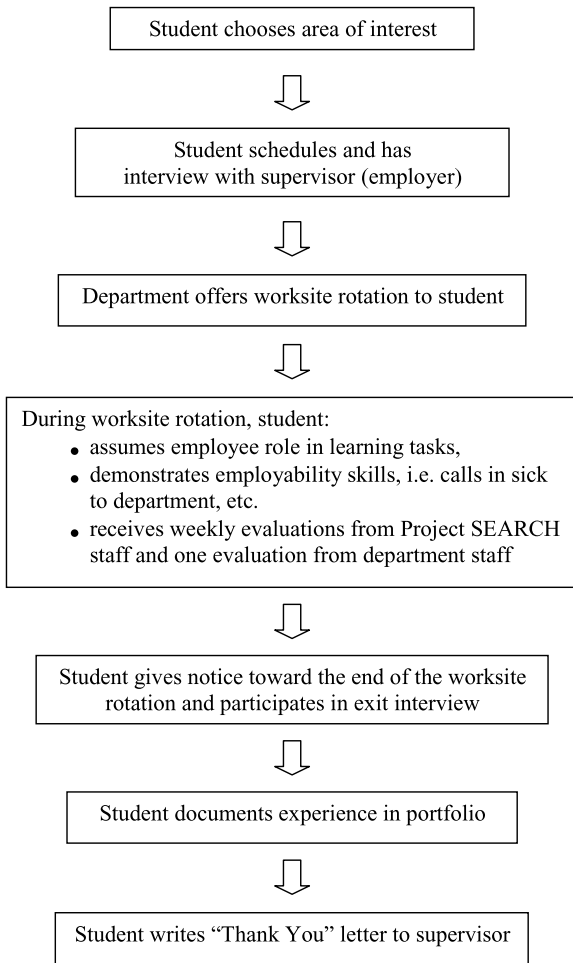


Fig. 2. The Project SEARCH worksite rotation process.

internships – analogous to the clinical rotations that are part of every medical school curriculum or the apprenticeships in other career-technical programs. Potential student worksites are identified through a continuous collaborative process involving the teacher, Project SEARCH directors, the employer liaison, and specific worksite supervisors. For the students, work rotations begin in the second month of the program, usually totaling three to four sites per student by the end of the program. Each student's first work experience is chosen by the teacher based on that student's previous work experience, interests, and skills assessment. Subsequent work rotations are chosen by the student and their IEP team. Students are required to interact with their supervisors via telephone and written communications to arrange a job interview and scheduling details. During each worksite rotation, students are responsible for notifying the department and their instructor if they are

going to be late or absent. Students receive weekly feedback from Project SEARCH and the department staff. Toward the end of each rotation, students give their "two-weeks notice" and participate in an "exit interview."

Time spent on each work experience is flexible. Students may spend several weeks to several months on each work site depending on factors such as the complexity of the job, tasks to be learned, and benefits to the student. Job coaches and department staff collaborate to provide support for students. Job coaches may be phased out when a student gains independence on certain tasks. Students may also participate in more than one work experience at a time, depending on the scheduling needs of the employer and the student. For example, a student may have a different morning and afternoon work site.

3.4.5. Job placement and community connections

Job placement can occur at any time during the program, but usually takes place within the last few months. The desired outcome for each student is competitive employment, with an emphasis on non-traditional jobs with opportunities for career advancement (Table 1). The student plays an active role in the placement process, supported by the IEP team, which meets monthly throughout the school year to define the career goal based on the student's experiences, strengths, and skills.

Once a placement opportunity is identified, the instructor or job coach performs a job site analysis and takes this information back to the IEP team. The team will decide if the job opportunity matches the student's skills and interests. The team also addresses concerns and issues, such as transportation, work environment, pace, performance requirements and safety. Upon hiring, the student's status changes to employee with all the associated responsibilities, such as different hours (possibly evening and weekend) and reporting requirements. Project SEARCH continues in a supportive role for the new hire for the remainder of the school year, providing a safety net during the initial phases of the job. However, the student's major responsibility at this point is to the new position.

Upon satisfactory completion of the program (95% or better attendance, good attitude, successful skill acquisition at each job site) students receive a "Career Passport". This is a packet containing a resume, letters of recommendation, a competency profile (Table 4), any awards or special recognition received while in the

Table 4
Competency profile

Skill Category	Specific Skills/Achievements
Career Exploration	<ul style="list-style-type: none"> – Participate in three to four career exploration work sites – Demonstrate work preferences and skills attained through verbal or written expression about each placement – Make decisions about future employment based on experiences in the program – Create a professional portfolio including a list of achievements, résumé, references, pictures, and letters of recommendation
Job-Specific	<ul style="list-style-type: none"> – Achieve quality standards for each work site – Master specific tasks of each job – Maintain appropriate pace while working and complete expected quantity of work – Demonstrate 95% accuracy of tasks learned during the worksite rotations
Employability	<ul style="list-style-type: none"> – Use constructive feedback from supervisors, instructors, and job coaches to improve performance – Solves work related problems – Follows dress code of host business at each work site – Arrive and leave the workplace on time, including meals and breaks – Demonstrate a positive attitude toward work and appropriate workplace behavior – Attend class and work on a daily basis with 95% attendance – Participate in a variety of job interviewing techniques – Complete a variety of job applications – Obtain competitive employment
Communication	<ul style="list-style-type: none"> – Interact appropriately with all people in the work environment – Maintain appropriate conversation with others in the workplace – Ask for assistance, clarification, or direction when necessary – Recognize and cope with frustration in the workplace
Independent Living	<ul style="list-style-type: none"> – When available, navigate public transportation independently – Master basic personal money management skills including budgeting, check writing and maintaining a checkbook register – Utilize vending machines and other money machines – Utilize nutritional information in everyday living – Maintain appropriate personal hygiene – Demonstrates the ability to make change

program, and a Career and Technical Certificate. The certificate is a document administered by Great Oaks.

Making linkages to appropriate services in the community is another critical part of the process which helps to insure a successful transition to employment and adult life. Specific availability of services varies with the locale, but in most cases assistance with necessary adaptations required to perform a specific job, job coaching, and long-term follow along can be arranged through the local Department of Vocational Rehabilitation and/or the local Board of Mental Retardation and Developmental Disabilities (MR/DD). Locally-based and disability-specific organizations are additional sources of needed services.

3.4.6. Follow-along services/on-going support

During the hiring phase, the IEP team and the job coach are actively involved in making decisions regard-

ing levels of support, problem solving, and designing accommodations. The job coach attends orientation and works through new-hire policies and procedures with the student and family. When appropriate, the job coach may do a Benefits Analysis to guide the decision of whether to change from SSDI or SSI to the benefit plan offered by the hiring organization. This may happen after the student has been on the job for a period of time and has become eligible for health insurance. Most students will continue to utilize job coaching as they begin the status of paid employee. As traditional job coaching is phased out, on-going support is initiated. Regardless of where students find employment, the IEP team and other Project SEARCH staff members continue to assist them in creating linkages to optimize support for employment and community living.

Students who are hired within the host business site benefit from the Project SEARCH system for ongo-

ing follow-along, which promotes sustained employment and career advancement. Consistent follow along is provided by a dedicated job-retention specialist, or team of specialists, located at the worksite through a contract with the local Board of MR/DD. The size of the retention staff and the number of hours worked per week at a given workplace depends on the number of employees with disabilities hired as adults or through the High School Transition Program. The retention specialist provides an optimum level of support, to both program participants and their employers, so that problems are resolved immediately, and positive changes in job status and career advancement are facilitated.

This retention model is a cornerstone of Project SEARCH, and represents a significant difference from the traditional rehabilitation counselor/caseload system. Many advantages arise from the single innovation of using dedicated, onsite support staff to provide follow-along within a given workplace. That individual (or individuals) develops trusting relationships with managers, co-workers, and families of employees with disabilities; learns the formal and informal practices and procedures of an organization; and becomes familiar with labor needs of that organization and learns to anticipate job placement opportunities. The follow-along staff can then develop and customize new jobs that meet the business needs and match the skills of current students. They can also meet other needs by designing accommodations, retraining when new skills are required, customizing mandatory staff training (e.g. HIPAA or diversity training) for employees with disabilities, meeting ADA requirements, designing and grading new positions specifically for employees with disabilities, HR counseling, and even consultation for possible termination. In addition, an economy of scale is achieved because job-support providers can handle much larger case loads when all of their clients are at a single location. For example, the retention specialist at Cincinnati Children's works with over 60 employees with significant disabilities, many of whom have been successfully employed with her guidance for up to nine years. In contrast, a typical community-based retention specialist's caseload is limited to 20 to 25 individuals due to increased travel and orientation time.

4. Project SEARCH and best practices

4.1. Best practices in transition

In evaluating transition practices it is useful to frame the discussion in the context of the three common el-

ements of transition models referred to as preparation, linkage, and connection/reception [13]. *Preparation* includes education and experiences that give the student knowledge, skills and confidence in reaching individualized goals. *Linkages* are those connections with a variety of agencies and organizations that provide the student with a network of supportive mechanisms to achieve their personal goals. Family involvement is also an important support mechanism [25]. The third common element, *connection*, is that final step of moving into the adult role as it pertains to employment, independent living, and participation in the community [13].

Preparing the student with moderate to severe disabilities for the transition to adulthood requires education and experiences that include social skills and skills for independent living as well as academics and career-technical training [3,5,8]. Life skills are an important part of transitions education for students with all levels of disabilities. These skills include training in the areas of social competence, employability, and participation within the community, and should be taught in a variety of settings including the classroom, the community and the workplace [8,13]. However, it is not unusual for this training to occur solely in isolated environments (such as the classroom or simulated lab). Training outside of the context of 'real life' can complicate the integration of those skills, making the experience less useful with regard to assimilation into the community. Project SEARCH addresses this concern by integrating life-skills training into real-life work experiences. Students learn life skills associated with the work culture and then have the immediate opportunity to test those skills in context. For example, in the introductory case presentations Tracey received coaching in skills of behavior adjustment, and communication that helped her adjustment to the work setting.

Career Technical (vocational) education is another element of preparation that is critical to predicting employment outcomes [3]. Research from Kent State University found that students with disabilities who completed a Career Technical program were nine times more likely to be employed than their peers who did not access vocational education [4].

In the PS-HST program, vocational education is flexible and taught in the work setting. The curriculum can be modified to address job-related issues as needed. In addition to input from the teacher and job coaches, the student also receives feedback and encouragement from managers and coworkers. In another example from the case scenarios, the flexibility of the program allowed

Michael to follow a natural and gradual progression towards the computer entry position that matched his skills and preferences.

Linkages, that is, linking students with appropriate community organizations and services prior to graduation, are essential for a successful transition to adult roles. Linkages occur on several levels. First, interagency collaboration is crucial to the continuity of services as the student moves into adulthood [5]. For example, there has been a history of breakdown in transition due to the lack of coordination between educational services and community youth services [23]. Also, the transition from student services to adult services and the community at large continues to be a problem [7, 16]. Project SEARCH is physically located within the community and works to connect each student with the resources available. The PS model is intentionally designed as a collaborative interorganizational effort linking education, business, vocational rehabilitation services, and MRDD when appropriate. Thus, linkages to adult services are made during high school, and each student benefits from a broad spectrum of expertise and a comprehensive array of community links. For example, Tracey's PS-HST team recognized a need for physical therapy and medical services and was able to link Tracey to those services.

Another important linkage is made when students and their families actively participate in the planning of services [13]. As illustrated in Michael's case, family can play a vital part in the Project SEARCH experience. Family members have a unique perspective on the student's likes and skills, and therefore can be a valuable resource in finding work experiences that best fit the student.

In addition to financial independence, employment is an important and effective means for achieving *connection* and integration into the community. Lack of experience with non-disabled co-workers and/or customers can be a barrier to a student's integration into the community [10]. Unlike traditional models of transition where students are segregated either in lab simulations or work groups, PS-HST students spend their day in an integrated work setting. The students are encouraged to participate in staff activities with co-workers, such as lunch time and staff meetings. This gives the students the feeling of inclusion into the work culture and a safe place to practice newly acquired skills.

Work experience during high school years has been found to be a strong predictor of successful employment outcomes for persons with disabilities [3,9,25]. Additionally, two or more work experiences predict

better outcomes [5,6] and give students the opportunity to explore their personal likes, dislikes, and strengths and to match those with different jobs [14,17]. Multiple work experiences also help the students grow in understanding the culture of the workplace and the social skills and work behaviors needed to maintain employment. The PS-HST model gives students the opportunity for multiple work experiences that are matched to the students' skills and interests. The students learn job skills such as interviewing, adjusting to the job culture and regulations, and working with different managers and co-workers. This diversity of experiences gives the student skills that are transferable to future work and community living.

4.2. Benefits of business involvement

Transition services have been traditionally driven by the educational system. Teacher availability and expertise determine schedules and job placement. The needs of the business organization may not be fully addressed, and work experiences become limited by the teacher's history with an employer organization. This can lead to a charity-like model, where the business "donates" the organization as a training location. The job training becomes segregated from the primary workforce and the customers, and does not necessarily lead to competitive employment opportunities within the organization.

Whether job training takes place in the school or work setting, it is critical to future employment and transition of the student with disabilities. However, the value of that training is limited if there are not similar jobs in the community [11]. Project SEARCH provides a unique connection into employment and community living. As a collaborative (business and education) model, the worksite is not simply a training ground, but is a potential employer and advocate. Because the employer is involved in identifying potential jobs, the program is not limited to jobs traditionally considered for persons with disabilities (Table 5). As Michael's experience shows, students with disabilities are often underestimated with regard to their potential. Through the commitment of the PS-HST staff and the employer, the doors were open for Michael to find a niche where he excelled and could make a genuine contribution to that organization. In fact, his ability for detecting mistakes became a quality improvement asset for his employer.

Table 5
Program outcomes for Cincinnati Children's program site

Project SEARCH High School Transition Program Recent Graduates (2003–2005)	
Participants	23*
Percent Placed at Program End	78.3%
Average Hourly Earnings	\$7.89
Program Graduates Employed at Cincinnati Children's	
Total Current Employees	17 ^a
Average Hourly Earnings	\$7.11
Fringe Benefits	76% Eligible and Receiving
Duration of Employment	Average = 3.25 years ^b Range = 0.75 to 7.0 years
Examples of Employers/Jobs from all Project SEARCH Program Sites	
Hospital:	Bank:
Inventory Technician	Mailroom Clerk
Clinical Sterilization Technician	File Clerk
Groundskeeper	Data Entry Technician
	Credit Card Verification

*Includes only those students who participated at the Cincinnati Children's Hospital Medical Center program site. There are currently six program sites in the Greater Cincinnati area with a total capacity of 72 students/school year.

^aIncludes only those participants in the Project SEARCH Adult Employment Program who entered via the High School Transition Program.

^bSome individuals started as temporary agency employees. These data reflect their date of conversion to regular Cincinnati Children's employees.

4.2.1. Reciprocal benefits to employers

There are other examples of employer-driven high school transition programs, such as the Marriott Foundation's "Bridges" program [9,22]; but PS-HST is unique in that it was initiated in response to business concerns – philanthropy and community involvement were secondary motivations for establishing the program. The seed for Project SEARCH was planted when a nurse manager (author E.R.) at Cincinnati Children's observed that entry-level jobs in the emergency department had a high rate of turnover and poor workmanship. Often these positions were filled by college students who became bored or otherwise occupied. Because workforce needs were not being met, management sought out an alternative solution, and this solution ultimately led to Project SEARCH. As a result of this history, positions available through Project SEARCH (the High School Transition Program and the Adult Employment Program) are based on employer need and are 'real jobs' in the sense that they are jobs that would otherwise be done by non-disabled personnel [26].

Our experience suggests that Project SEARCH has resulted in tangible business benefits, such as improved turnover rates in some entry-level positions. For exam-

ple, the average longevity for all medical supply cart stockers is 2 years, while Project SEARCH clients in this position have been employed by Cincinnati Children's for an average of 4.25 years. Consistent with the principles of Universal Design [21] many of the adaptations initially put in place for persons with disabilities have made jobs easier and more efficient for everyone.

The presence of Project SEARCH at Cincinnati Children's has had an added benefit to the organization. There has been a cultural shift as more persons with disabilities can be seen throughout the hospital. They are integrated into the workforce, and participate in staff meetings and other work related activities. Other Project SEARCH sites have reported similar occurrences. Staff attitudes have also improved as they witness the barriers that PS-HST students must overcome and the work they are capable of doing.

Though difficult to measure, what may be even more significant is the visible presence of Project SEARCH to the clientele of Cincinnati Children's. Because Cincinnati Children's is a regional center for pediatric health care, it serves many children with disabilities and their families. Children and their parents, and their physicians, are able to see the valuable contribution that persons with disabilities are making, and may gain hope from that knowledge. As the director of Disabilities Services (E.R.) put it, "When you think of how many generations of children we've treated here, many of them with disabilities, it's important we show that we believe these children can be productive members of society. I think with Project SEARCH we're fulfilling that part of our obligation to be the leader in the role of advocacy and employment."

5. Conclusion

The PS-HST helps students with significant disabilities maximize their independence and achieve fulfilling employment. Students in the program gain real-life, hands-on work experience and learn important life and employability skills. In addition, by introducing young people with disabilities into a wide variety of departments throughout the workplace, the program brings about positive cultural changes within employer organizations. Employees are able to move beyond stereotypes and learn to see people with disabilities as unique individuals that can make real contributions.

The PS-HST is a popular program in the Cincinnati area, with a local reputation for good outcomes. Increasingly, the innovative approach developed by

Project SEARCH is attracting interest on a statewide and national level. Studies are needed to rigorously compare the Project SEARCH transition model to traditional education-based practices and other business-driven models with regard to cost-effectiveness and outcomes related to quality-of-life and employment.

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