

Customized Employment: Changing what it means to be qualified in the workforce for transition-aged youth and young adults

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Abstract. Current school-to-career transition practices are not leading to sufficient levels of competitive employment and post-secondary education outcomes for youth and young adults with significant disabilities despite progressive mandates and policy improvements in federal and state secondary and post-secondary education, vocational rehabilitation, and workforce development services. To address this concern, a coalition in a Twin Cities suburban area established an “interagency community of practice” to explore systems change opportunities and to improve school-to-career outcomes. The Anoka County Transition & Customized Employment (TCE) Project was designed to inject an “employment-first” philosophy into transition practices by introducing a range of customized employment strategies. After a five-year project demonstration period, TCE had enrolled 475 young people with various disabilities from seven autonomous school districts. An independent evaluation of TCE’s performance revealed that 62% of all enrolled students had individualized job placements in the workforce at competitive wages. In addition, competitive employment wage outcomes were attained by 72% of all enrolled “out-of-school” participants including high school graduates, youth completing their Individualized Education Program (IEP) academic objectives, and secondary education dropouts.

Keywords: Customized employment, transition, collaboration, students with disabilities, youth with disabilities

1. Introduction

The Anoka County Transition & Customized Employment (TCE) Project is an interagency partnership between the Anoka County Workforce Center’s core agencies, seven local school districts serving Anoka County, Minnesota, Anoka County Social Services, PACER (Parent Advocacy Coalition for Education Rights) Center, and Rise, Incorporated (a private, non-profit supported employment provider). TCE was funded by a grant from the Department of Labor, Office of Disability Employment Policy (DOL/ODEP). The

ODEP initiative supported model programs throughout the country that were designed to increase One-Stop Career Centers’ capacities to provide seamless and quality employment services for people with disabilities.

According to the National Organization on Disability’s 2004 survey, 35 percent of all individuals with disabilities ages 18 through 64 are employed either full-time or part-time, in comparison to 78 percent of persons without disabilities [8]. It is toward the narrowing of this gap that the TCE Project was introduced to impact systems change locally that would improve the employment prospects of an emerging generation of youth and young adults with disabilities. TCE’s mission focused on providing customized employment opportunities to youth with significant disabilities that could facilitate successful post-school educational and competitive employment outcomes.

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Specifically, the Project was designed to address the school-to-career transition, competitive job placement, and wage self-sufficiency needs of young adults with significant disabilities receiving educational assistance through Individualized Education Programs (IEPs).

A coalition of Anoka County's public and private service providers was formed and met to explore new opportunities to improve local school-to-career outcomes. A fundamental premise was to examine whether adoption of customized employment and strengths-based practices could impact the number of young adults with disabilities in the community's labor force or in post-secondary education opportunities that resulted in careers of choice. The TCE Project was designed to activate a program of interagency initiatives that would:

1. Encourage students with disabilities to work, because employment is crucial to successful adult transition and offers life structures, social relationships, personal achievement, and income that are vital to wellness, self-esteem, and self-sufficiency.
2. Educate students and their families about strategies that facilitate paid, integrated competitive employment and promote successful transitions from school to productive roles as citizens of their communities.
3. Promote choice making, self-determination, and self-reliance to increase the integration of students within everyday community environments.
4. Be provided without regard to race, culture, national origin, ethnicity, religion, gender, age, sexual preference, or nature of disability.

This article will focus on TCE's transition strategies as well as the results obtained by its interagency partners with regard to the outcome measures established by the Project. These outcomes were defined by its core partners to track overall performance of the Project and serve as a basis for reporting the specific outcomes of all youth served.

2. Methodology

2.1. Participants

Across the five years of the program, beginning in 2001, transition and customized employment services were delivered by TCE's partner agencies and staff to a total of 475 transition-aged students and young adults with disabilities. Priority students for the TCE Project

were unemployed students ages 18–24 with significant disabilities. TCE served youth and young adults with a broad array of diagnosed disabilities including developmental and intellectual disabilities, serious mental illnesses and behavioral health challenges, traumatic brain injuries, sensory disabilities, and complex health and physical challenges.

Annual enrollment information: The total number of participants enrolled in TCE varied each year during the five-year project period. Of the total number, 202 (42.5%) were enrollees who participated in one year only; 264 (55.6%) enrollees received services in more than one program year; and 9 (1.9%) were individuals who exited the program and then re-entered. It is notable, however, that many more participants were served annually due to individual participants continuing in Project services after their initial enrollment year, termed 'program continuants'.

Gender and ethnicity: The participant group, demographically speaking, was predominantly male of European-American descent, with 'high-incidence' disabilities that are more frequently occurring in the population. The gender of the participant group is characterized as 62% male and 38% female. Participants predominantly were Caucasian (91%); the remaining ethnicities represented were African American, Asian, Hispanic, American Indian or Alaska Native, Multi- or Bi-Racial with relatively equal proportions of the remaining nine percent of the participants.

Disability types: All individuals enrolled in the TCE Project were identified according to primary disability. The disability categories used to track participants were based on 13 disability categories of the Individuals with Disabilities Education Act (IDEA), namely, Physical Health, Emotional Behavioral Disorder (EBD), Blind/Visual Impairment, Deaf/Hearing Impairment, Speech/Language Impairment, Deaf/Blindness, Mental Retardation/Developmental Delay (MR/DD), Specific Learning Disability (SLD), Autism, Attention Deficit Hyperactive Disorder/Attention Deficit Disorder (AD-HD/ADD), Traumatic Brain Injury (TBI), Multiple Disability (MD), and Other Health Impairment (OHI). Individuals with each of these identified disabilities participated in the TCE Project.

Using the nomenclature of both the adult services community and that of IDEA, the most widely represented disability category was by participants having "psychiatric disabilities or mental health issues." Another large category comprised those with Mental Retardation/ Developmental Disabilities (MR/DD), and the third largest was students with learning dis-

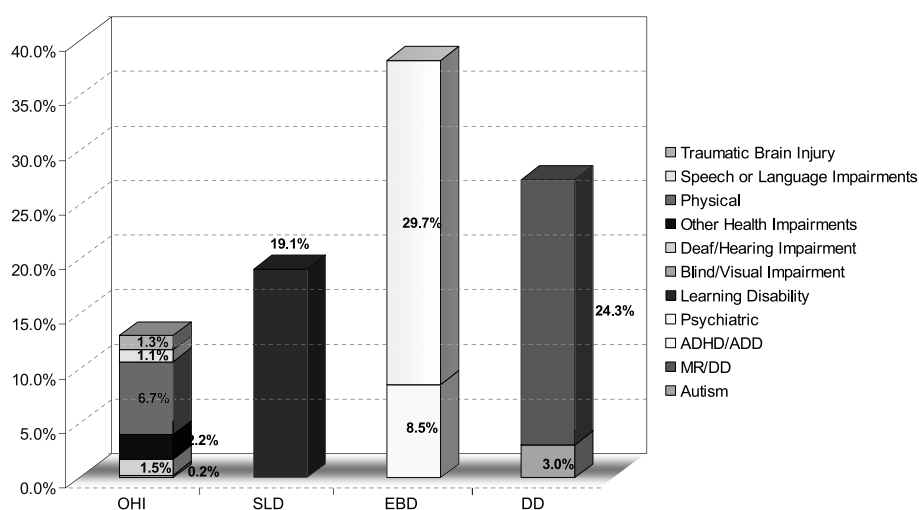


Fig. 1. Percent of participants served by disability category and disability group.

abilities. Alternatively, each of the following disability categories was represented by fewer than two percent (2%) of the participant population: deaf/blindness, blindness/visual impairment, speech or language impairments, traumatic brain injury, and deafness/hearing impairment. Figure 1 displays the categories in their groups, and their relative proportions within the participant population. For ease of comparisons, and to reflect the manner by which the professionals conceptualized the services provided for the participants, these 13 disability categories were clustered into four larger disability groups: Developmental Disabilities, Emotional Behavioral Disabilities, Other Health Impairments, and Learning Disabilities.

2.2. Out of school youth demographics

The out-of-school youth represents a sub-population of TCE participants who were no longer attending high school. This population of participants, numbering 204 individuals in all, was of particular interest, since outcome measurement for this cohort demonstrates how effectively the educational and adult human services systems are working together to impact successful transitions to competitive employment and adult community living in Anoka County. This segment of TCE's Project participants, demographically speaking, was predominantly male and of European-American descent, with high-incidence disabilities – much like the participant population as a whole.

Gender and ethnicity: The gender of the out-of-school participant subgroup is characterized as 66% male and 34% female. Ethnicity proportions are indi-

cated as follows: Caucasian, 90.2%; African American, 0.5%; Asian, 1%; Hispanic, 1%; American Indian or Alaska Native, 0.5%; Multi- or Bi-Racial, 1%; and Other, 1.5%; ethnicity data on 9 participants was unavailable.

Disability: The 204 individuals who were not in school during their participation in the TCE Project belonged to the following disability groups: 33.3% were in the DD group, 33.8% were in the EBD group, 17.2% were in the LD group, and 15.7% were in the OHI group; data as to disability group membership was missing for 6 participants.

2.3. Project innovations

The traditional focus of special education, vocational rehabilitation, and adult community services is often driven by services that address identified deficiencies or shortcomings of youth arising from their disability conditions. Instead, TCE was designed by its partners to focus on strength-based practices. In other words, TCE's over-arching vision and goal was to identify and market each individual's strengths to community businesses and industries. This change in policy and strategy was intended to increase the number of transition-age youth who received opportunities to work in integrated jobs at competitive wages. TCE used an "employment-first" strategy and competitive employment was viewed as the default option for every student regardless of the severity of his or her diagnosed disability.

In providing TCE's wide array of services, many innovations were launched around the practice of facil-

itating placement and ensuring a "goodness-of-fit" for youth with disabilities. These innovations were developed in-practice, through a process of "Discovery" in which participants expressed information about their job interests and strengths, professionals listening to and recognizing the goals and possibilities of participants, and the co-creation of, and collaboration around, strategic services to support individuals in addressing barriers to obtaining job success. A clear and practical example of a training service innovation was the provision of an adaptive driver education-training course, due to participants experiencing limited public transportation access in Anoka County and the challenge this barrier presented for many job seekers. The rationale for this service is that, ultimately, obtaining a driver's license creates greater mobility, and with it independence, thereby widening opportunities and a likelihood of securing career and employment goals.

TCE also launched skill development opportunities through customized training arrangements made with Anoka Technical College. An emerging training opportunity in the health care industry (e.g., Certified Nursing Assistant Training) grew out of locally expressed labor needs by employers for skilled workers who can demonstrate CNA skills and certification prior to employment. A customized training program was planned and implemented to accommodate the learning needs of youth with disabilities and the course included a "hands-on" work experiences with community health care providers. The program not only produced a number of certified nursing assistants for the labor force but also provided a foundation for placing other youth in customized jobs within health care settings based on specific job skills acquired (e.g., escort aides).

In keeping with TCE's philosophy of community integration of individuals with disabilities, community resources were explored and negotiated to provide other training opportunities for developing unique job-specific competencies. The Builders Association of the Twin Cities (BATC) and Cement Mason Union Local 633 were engaged to offer apprenticeships and specialized skills development for TCE participants with interests in trade occupations.

Finally, new capacities were developed to accommodate some participants' desires to exercise self-determination, initiative, and self-management. TCE launched new local capacities to support self-employment interests and entrepreneurial goals of youth and young adults. The development of micro-enterprise opportunities was an important component of establishing new career tracks for some individuals

with disabilities. Resources were accessed, and the River City Express coffee kiosk in an Anoka County public building was established, employing up to seven of TCE's participants during three of TCE's project years.

Interagency collaboration: The Project offered responsive education and technical consultation to support business leaders in recruiting, hiring, training, supervising, and supporting their employees with disabilities. TCE's core partners established formal interagency agreements and memoranda of understanding (MOUs) to articulate individual agency roles, sharing of funding resources, blending of technical staff expertise, and organizing a strategic alliance to work collectively toward a common vision and purpose. These interagency agreements galvanized a work plan with mutually shared goals as well as reporting of outcome results for all eligible youth and young adults enrolled and served by one or more of TCE's organizational partners. The plan incorporated strategic services provided to all participating school districts by customized employment specialists who were project staff. Further, the plan included critical services from existing agency professionals supporting the secondary and post-secondary education, youth employment, vocational rehabilitation, supported employment, and adult transitional service needs of enrolled participants. Many daily activities of TCE's Project staff included:

- coordinating intake and enrollment with school work coordinators,
- meeting with prospective participants, meeting with Rehabilitation Services (RS) counselors and social workers, meeting with other Workforce Center staff,
- coordinating adult diagnostic disability testing where appropriate,
- coordinating customized training with post-secondary school representatives businesses, and union representatives, and
- assisting in the process of coordinating adult transition and community support services with secondary providers.

Employment customization: One of the challenges faced by TCE's interagency partners over the five-year demonstration period was to help the community better understand the concept of "customized employment." For many professionals in the educational and rehabilitation fields, the use of conventional job search and employment development strategies is the primary or only path to competitive employment. However, the

use of emerging customized and supported employment practices creates alternative pathways and capacities for businesses to employ youth and young adults with significant disabilities in integrated work settings at competitive wages.

TCE's Project staff worked within the defined parameters of customized employment as defined by ODEP in 2001. Customization of employment is "individualizing the relationship between a job seeker or an employee and an employer in ways that meet the needs of both" [9]. It is based on an individual determination of the interests, strengths, and needs of the person with a disability, and is also designed to meet specific economic needs of an employer or the self-employment business selected by the employee [10].

Staff training: Specialized training was required for all TCE staff due to their complex, integrated roles as providers of multiple job supports for Project participants. Customized employment is an emerging model of strategic practices leading to the identification, discovery, development, and marketing of the unique interests and abilities of each individual served. This required TCE staff to develop cutting-edge skill sets that are substantively different from job placement practices using a more standardized job search and application process.

In contrast, the staff's purpose, as well as the TCE Project's purpose, was to introduce strategies of employment customization to increase and widen opportunities for students with the most significant disabilities who are traditionally underrepresented in the community's labor force. Staff experiences documented that most participants did require substantial levels of transition support to achieve their post-secondary and competitive employment objectives. Transition supports often included the need for coordination of job assessment and discovery, career planning, medical or mental health treatment, substance abuse counseling, housing and supported living assistance, transportation assistance, and customized job skill training or vocational education preparation before an active job search process could begin. Also, staff development included a nurturing of marketing skills to advance customized employment proposals to business leaders so positions were better matched to the identified strengths of individuals with the most complex job support needs. Elements of training for TCE staff and collaborating agency professionals involved a blend of formal instructional methods as well as ongoing experiential skill building. These training activities included the following:

1. Instruction and guidance by national experts on assorted customized employment practices (e.g., job- or task-carving, job creation, self-employment, micro-enterprises, etc.);
2. Information about the regional economy, job market, and their relationship to job development and career counseling;
3. Familiarization with features of the job search resources in Anoka County, such as the WorkForce Center online Job Bank system;
4. Acquaintance with access services such as American Sign Language interpreter services;
5. Development of marketing skills to create both interest and understanding about how businesses can benefit by hiring people with disabilities in customized jobs;
6. Mentoring and consultation about customized employment practices to ensure quality services were provided consistently by Project staff and collaborating professionals; and
7. Development of creative problem-solving knowledge in the areas of student assessment, career discovery, adult transition services, and customized employment.

The initial project design, in which staff members were appointed to serve in teams based on participants' disability type, was also transformed into designated service teams for each school district. Staff turnover in the early years of the Project was also a challenge and required additional training resources. Finally, TCE staff members were expected to demonstrate advanced communication and collaboration skills in order to facilitate Project participants' utilization of community resources. For example, students with developmental disabilities must meet very clear eligibility criteria for mandated adult services like county case management; alternatively, students with mental health disabilities must establish a need for county case management services through a blend of diagnostic disability testing and vocational assessment. As the core goal of TCE was to maximize transition into adult community living and employment for all referred youth and young adults needing assistance, TCE staff transformed a blend of information and training into experiential knowledge in order to facilitate these focused outcome objectives.

Job placement: Job placement services included a range of staff-supported job development, participant-initiated job search, as well as active negotiation of customized employment on behalf of participants. Specific job development strategies chosen to support enrolled students were driven by choices and decisions

made by each student and with support from members of his or her IEP team. In other cases, decisions were made by out-of-school youth (i.e., dropouts) with support from members of interdisciplinary teams supporting each participant.

The first approach details a listing of available positions as discovered from businesses discerning their labor needs and then identifying possible opportunities for enrolled participants. The second strategy was based on a self-directed model for participants, with professionals offering active support and feedback to participants throughout the job search process. Finally, the job development process included the preparation and marketing of customized employment proposals to employers. These proposals included “negotiated” job duties or created functions based on identification of tasks that participants could perform. In this strategy, new job descriptions were created for participants based on identified business needs and negotiated job duties well matched to the strengths of a participant. Portfolio assistance guidance was provided to participants around materials that are typically included in the job-seeking process. This assistance included the development of résumés, cover letters, and completion of job applications and other related materials.

Specific accommodations were proposed where necessary to ensure a proper fit between a job candidate and the employment duties and setting. This included but was not limited to the use of personal assistance, assistive technology, language interpreting, and/or on-the-job coaching assistance. In addition, TCE’s staff managed the need for customized supports away from the workplace that directly impacted on the employability of participants such as access to affordable housing and supported living services, learning to use public transportation, organizing child care arrangements for single mothers, and accessing critical health care services. An element of transition into integrated jobs in the workforce is the maintenance of health and medical benefits and other incomes to permit community living. Therefore, job placement services included practical support in the area of public benefits planning. Also, TCE’s Project staff used temporary, time-limited wage subsidies for some entry-level positions to facilitate a participant’s entry into the workforce and offer an interested employer ample opportunity to “test drive” the concept of customizing employment.

Job-site support and follow-up services: Job coach services focused on job retention and involved on-the-job activities, either with a visible staff presence in the workplace or ‘behind the scenes’ work. The purpose

of these services were to provide opportunities for participants to actively practice skills and meet job performance expectations as defined by each of TCE’s business partners. Support team members offered rapid-response interventions for participants and their employers to address problems as they arose. While initial difficulties in the workplace are not uncommon for many first-time employees with or without disabilities, these interventions were provided to minimize the impact of such difficulties on the work experiences of participants. Follow-up services, provided after people are placed in competitive and customized jobs, assisted participants in maintaining employment through the engagement of natural job support strategies. The purpose of the service was to shift the fundamental focus of job support away from community employment providers to the employing businesses by increasing employers’ comfort levels and expertise in supervising their employees with disabilities.

A number of youth and young adults had access to supported employment delivered by adult service providers based on disability eligibility. These services ensured ongoing supports to qualified individuals and to their employers after leaving secondary education programs. Also, supported employment services offered opportunities for career advancement and job progression for youth working in their first adult employment experience.

Resources: Resources included a wide range of supports to ensure stability in a job placement. One source that participants could access was the Workforce Center’s Job Resource Center services, which were wide-ranging, including workshops on many topics such as public benefits planning, disability self-management, networking, and many others. A concern in transitioning to employment is the maintenance of health and medical benefits and other incomes to permit community living. Therefore, resource provision included the practical resource of wage subsidies for some entry-level positions. Because wage subsidies are not counted under financial benefits rules, this temporary enhancement of income served to facilitate entry into the workforce at relatively low wages while preserving new employees’ medical benefits during this transition.

2.4. Data collection

The University of Minnesota’s Institute on Community Integration (ICI) was responsible for reporting TCE’s outcome measures and for all evaluation activities. To accomplish these tasks, the ICI implemented

Table 1
TCE outcome measures

– Number of students served	– Types of career employment positions obtained
– Average number of hours worked per week	– Job retention rates
– Average hourly rate of all students working in competitive employment	– Percent of students in postsecondary education programs
– Percent of students obtaining competitive employment	– Average number of hours worked per week for TCE graduates
– Percent of students in employer-based training and jobs	– Average hourly rate of graduates working
	– Job retention rates for graduates

an evaluation plan consisting of multiple forms of data collection and analysis activities over the five-year duration of the TCE Project. One approach consistently applied was the ongoing analysis of the Outcome Information System Database (OISD). The OISD was developed to track, monitor, analyze, and report various outcomes of high importance to TCE's partners and funding entities. In addition to the OISD, other data collection and evaluation activities such as survey and focus group interviews were used by the ICI to address various components critical to the monitoring process. The TCE Project's outcome measures represent various benchmarks for tracking overall progress and reporting performance outcomes obtained by all enrolled participants. As such the measures represent a combination of evaluation strategies. These measures can be found in Table 1.

3. Results

The types of employment in which TCE participants engaged included competitive employment and "non-competitive employment." Competitive employment included a minimum wage standard with full inclusion into the population of employees at any company in the workforce. The youth who achieved competitive employment outcomes throughout the program worked in the following ODEP job categories: accommodation and food service (25%), health care and social assistance (32%), retail trade (18%), and other services (10%); other categories each comprised approximately 5% or less, totaling approximately 15% in six other categories.

"Non-competitive employment" included temporary, integrated work experiences subsidized on a time-limited basis to encourage competitive employment. Job positions that were considered non-competitive employment in effect formed a pool of transitory customized work experience and training positions in a "temp-to-hire" model. All work experience positions were developed to meet the individual interests and strengths of each enrolled participant, and they were not developed as renewable training slots into which

to place people repeatedly. The ultimate goal was to encourage business leaders to consider and weigh the benefits of customized employment through direct, hands-on experience with people uniquely suited to offer skilled work in the areas for which they were looking. Youth working in non-competitive employment positions received pay through wage subsidies on a temporary trial basis. By agreement, employers would subsequently hire and assume these customized positions including their pay and benefits to non-subsidized levels.

Employment outcome data indicate that approximately 62% of all transition-aged students and youth enrolled at some point throughout the program worked in paid, integrated competitive employment. That is, 293 individuals worked in integrated jobs that paid at, or above, the federal minimum wage of \$5.15 an hour. It must be clarified that some of those participants who worked in integrated 'competitive employment' jobs also, at another point, were working in subsidized positions. In total, 229 participants worked in positions for which they received a pay subsidy or approximately 48% of the total population of TCE participants. Of these 229 individuals in subsidized positions, approximately 52% (N = 119) successfully transitioned into competitive employment positions.

Competitive and customized employment outcomes obtained by TCE's participants only included individualized, jobs in integrated settings at competitive wages and benefits paid directly by the hiring company. Alternatively, TCE also proposed ideas and negotiated job tasks for some participants that were customized to their unique interests, strengths, and abilities. This process resulted in negotiated job descriptions and duties – the matching of individual tasks to the identified skill sets of specific employees. Job carving and job creation practices were specific tools used to negotiate opportunities for job candidates with limited abilities and complex job support needs.

Employment categories by disability: In spotlighting another dynamic about the employment of participants, the comparisons were examined among the disability groupings regarding types of employment, and unemployment. Figure 2 depicts the numbers and relative

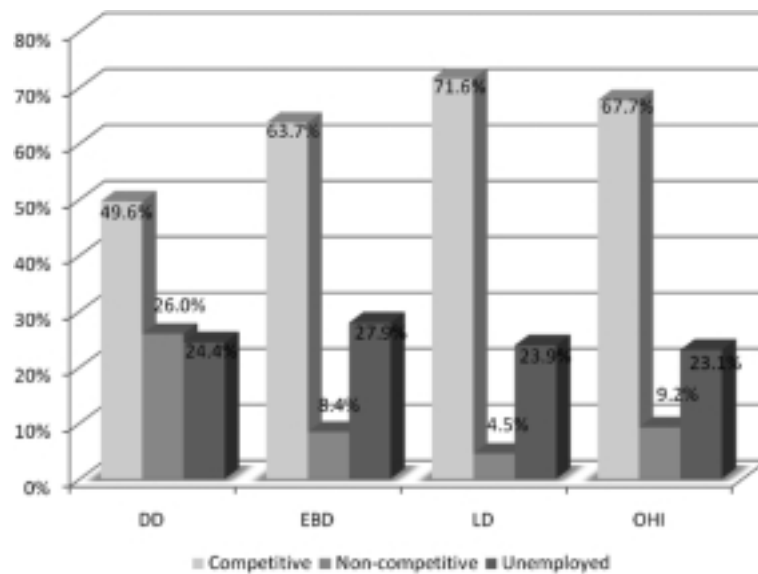


Fig. 2. Employment types for all participants by disability.

proportions of each group participating in each type of employment or unemployment.

Among the various disability clusters or groups, the LD group had the highest proportion with approximately 72% of its participants obtaining competitive employment. Alternatively, the DD group had the lowest proportion with approximately 50% of its participants obtaining competitive employment. The other two groups, the EBD group and the OHI group, had similar proportions of participants in competitive employment: 63% and 67.7%, respectively. The DD group had the largest proportion of its participants, 26%, in non-competitive employment. Other groups' relative proportions measured less than 10%. Approximately one-quarter of all participants were unemployed at the end of their participation in the Project, with a narrow range of 23.1% of the OHI group to 27.9% of the EBD group.

Wage outcomes: A purpose of the TCE Project was to facilitate student and youth participation in gainful employment in the workforce, with wages and benefits packages resembling the generic population at this stage of life. An indication of program effectiveness may be conveyed through a review of participant outcomes for those in competitive employment, including hourly wages, hours worked per week, and longevity of employment. These data are displayed in Table 2.

In examining data pertaining to the immediate conditions of employment, wages and hours, it is important to note these data were segregated for non-competitive employment and competitive employment for at least

two reasons: 1) the TCE Project endeavored to create fidelity and ensure inclusive employment placements at competitive wages for participants, and 2) wage figures for non-competitively-employed participants were in some cases subsidized to ensure opportunities as well as competitive wages. The participants who were non-competitively-employed in work experience jobs received an average of \$5.57 per hour and worked an average of 22 hours per week. Additionally, non-competitively employed participants who retained employment for at least three months numbered 40, or approximately 54% of that group.

Considerable outcome variability is notable in the hourly wages and hours worked per week of those included in the competitive employment category. These wide variations were anticipated due to a wide range of interests, academic potential, job skills, and independence of participants enrolled in the TCE Project. To illustrate, wages ranged from a minimum of \$5.15 per hour to a maximum of \$25.00 per hour, with an average of \$8.16 per hour and a median of \$7.75 per hour. Likewise, the range of hours worked per week is as broad as that of hourly wage with a minimum of 5 hours per week and a maximum of 50 hours per week, with an average of 28 hours per week and a median of 27 hours per week.

Job retention: Job tenure is another outcome indicator for participants in competitive employment. Figure 3 shows retention rates among the disability groups. Of the 293 participants in competitive employment, approximately 81% maintained continuous employment

Table 2
Competitive employment outcomes for aggregate of TCE participants

Disability area	Number in competitive employment	Average wages (per hour)	Average work hours (per week)	Access to health insurance	Job retention at least 90 days
Developmental Disability	65	\$7.56	21.7	7	53
Emotional/Behavioral Disorder	114	\$8.46	30.4	14	90
Specific Learning Disability	63	\$8.31	30.4	9	54
Other Health Impaired	42	\$8.02	27.5	8	33
Total ¹	287	\$8.17	28.0	39	232 ¹

¹Excludes data for participants in multiple disability category; also, disability group data missing for 3 participants in competitive employment.

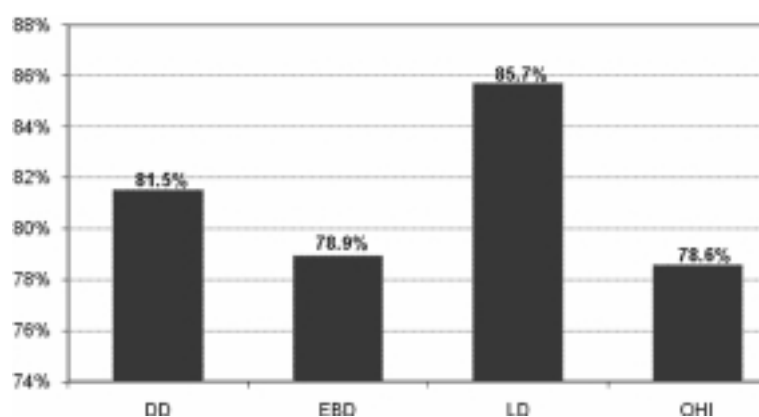


Fig. 3. Retention rates for all competitively-employed participants by disability.

for at least 3 months. Further, approximately 75% of competitively employed participants maintained their employment in positions for at least 6 months. Finally, 66% were retained in their jobs for at least 1 year.

Disability group comparisons: In addition to examining employment outcomes across time, data were partitioned into disability groups for further comparisons. As a percent of the total served, the largest disability group ($N = 114$) who accessed competitive employment was the EBD cluster with 40% of all students and youth who participated in competitive employment. The smallest proportion of those in competitive employment were in the OHI cluster (15%); the other two groups, DD and LD, comprised approximately equal halves of the 45% remaining.

Wage by disability outcomes: The disability group achieving the highest relative wage was the EBD group, at an average of \$8.46 per hour. Notably, there was moderate overlap in the wage ranges, as the EBD group wages ranged from \$5.15 to \$25.00. The LD group was very similar to the EBD group in average (\$8.31) yet had a narrower range of \$5.15 to \$14.00. The OHI group exceeded \$8.00 per hour and yet was only \$0.15 less than the average wage rate for all participants in the

competitive employment group, and had the narrowest wage range, from \$5.15 to \$13.00 per hour. As for wage comparisons, the DD group averaged the lowest wages, at \$7.56 per hour, with a range of \$5.15 to \$14.28.

The comparison of working hours for the four disability groups was similar, yielding that the DD group worked the lowest number of hours per week (approximately 22 hours), yet the EBD and the LD groups both had the highest number of hours per week: approximately 30 working hours. Also similar to the wage rate data, the OHI group was near the mean, at $27 \frac{1}{2}$ hours per week. As for the ranges of hours worked per week, all of the disability groups had almost identical ranges of a minimum of 5–7 hours per week and a maximum of 45–50 hours per week, with very similar standard deviations – this suggests that there were no outliers unduly influencing the group data, and that it was plain that more of the DD group worked a lesser amount of time than the EBD and LD groups.

To put these data on average wages and weekly working hours for participants into perspective, a standard was applied to wage and hour rates, set to the goal of at least \$8.00 per hour and 30 hours per week. In other words, when participants reached the threshold of these

levels, they were deemed successful in reaching their employment goals. When considering the employment outcomes of competitively employed participants, this standard provides a better sense of the relative success of participants by their disability cluster or group.

The overall findings indicate the EBD group achieved most in accordance with the goals, obtaining an average wage above the goal of \$8.00 per hour, and an average number of weekly working hours above the goal of 30 hours per week. The other group that achieved both wage and working hour goals was the LD group. Alternatively, two disability groups did not reach both goal levels. The OHI group, on average, achieved a wage level that was above \$8.00 per hour yet less than 30 hours per week. The DD group, on average, achieved levels that were less than \$8.00 per hour and less than 30 hours per week.

Year-by-year comparisons: Measurement of the relative progress of the TCE Project to adapt and respond to the emerging job placement needs of participants was examined. Data comparing the cohorts of participants within each program year and observing any trends of increasing successes from Year 1 through Year 5 of the program was measured. Overall, there was a trend of wage increases of approximately 36 cents, from Year 1's average of \$7.80 per hour to Year 5's average of \$8.16 per hour, with fluctuation across the years of the program.

The data for hours that participants worked did not seem to change and was relatively stable across the program years: Year 1 averaged 28.9 hours per week, Year 2 averaged 27.4 hours per week, Year 3 averaged 26.8 hours per week, Year 4 averaged 28.9 hours per week, and Year 5 averaged 27.6 hours per week.

A further exploration of trends across the program years demonstrates an improvement in the relative success of participants in each of these disability clusters. Figures 4 and 5 display the trend data for wages and work hours across the five program years, respectively.

The weekly hours varied little between the first year of the program (Y1) to the final year of the program (Y5), changing by only 4 hours on average (for the LD group) and only 1 hour for the OHI group. However, the wage rate showed more notable changes.

The DD group participants' average wage in Year One of the program was \$7.05 per hour, and had trended upward to a maximum of \$8.10 per hour in Year Four and ended at \$7.86 per hour in the final year of the program (Y5). Similarly, the OHI group wage in Year One averaged \$7.13 per hour, ending at \$8.37 per hour in Year Five. The EBD group average wage was fairly

similar across the program years, with a minimum of \$8.17 per hour in Year Three and a maximum of \$8.69 per hour in Year Four; the first year average was \$8.34 per hour and the final year average was \$8.49 per hour.

3.1. *Out of school youth*

Participants in the TCE Project engaged in activities of the program in various ways. While some participants were engaged simultaneously in educational activities and employment, others were no longer in school and solely in the workforce. These "out-of-school" participants, also called 'youth' interchangeably, had either completed or did not complete their high school academic programs, but in either case were on average, and by definition, older than the students in the program. The vision and intent of the TCE Project was to ensure positive transitions for young people. Therefore, TCE's partners refocused the Project's attention on this segment of the participant population to ascertain the progress of these youth with disabilities in the workforce.

TCE participants who were out-of-school had differing rates of participation in competitive and non-competitive employment, and unemployment, than the population of TCE participants as a whole. These 204 youth, a high priority for TCE, were mostly involved in competitive employment: about 72% of them. Alternatively, approximately 3% were in non-competitive employment, and about 25% of them were unemployed.

In contrast, the rate of employment for the entire population of TCE participants was approximately 75%, but the type of employment differed: 62% were in competitive employment and 13% were in non-competitive employment. However, approximately the same proportion of the out-of-school youth was unemployed, in comparison to the entire aggregate of program participants.

Examined more closely, however, the out-of-school youth also had a similar rate of employment when compared directly with the subgroup of participants who were attending high school: 75% of youth were employed in comparison to 77% of students. However, the youth had a higher rate of involvement in competitive employment than the students: 72% of youth versus 55% of students. The youth also had a lower rate of involvement with non-competitive employment: 3% of youth versus 22% of students.

Competitive employment status of out-of-school youth: Because youth with disabilities who were not otherwise in school were involved in competitive em-

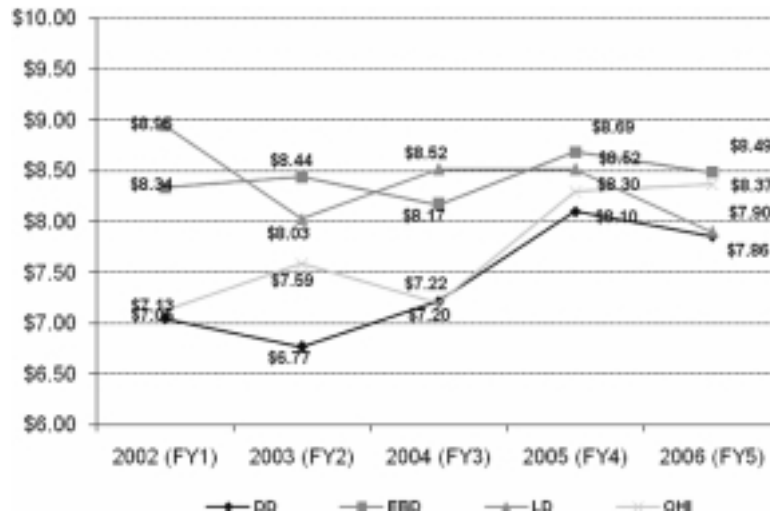


Fig. 4. Hourly wages by disability for 2002 through 2006.

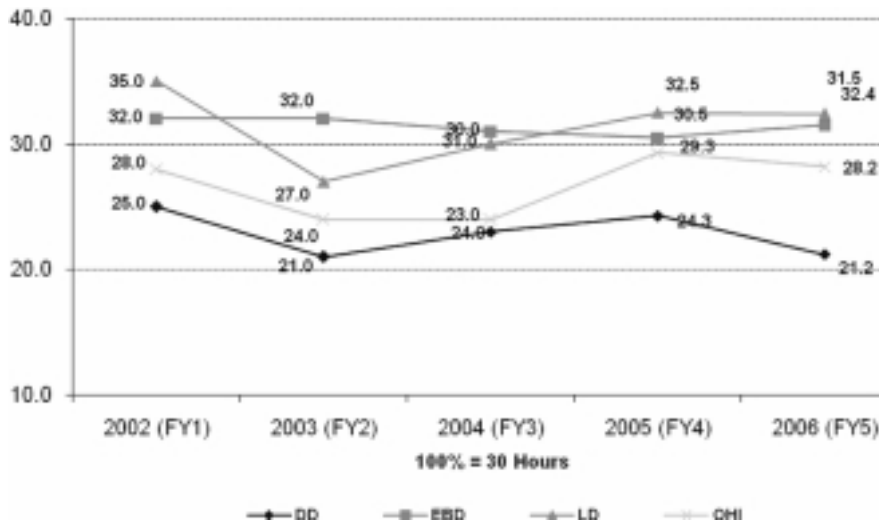


Fig. 5. Hours worked per week by disability for 2002 through 2006.

ployment at a higher rate than the general population of TCE participants, we closely examined data pertaining to the immediate conditions of employment, wages and hours, and longevity to discern out-of-school participants' relative success in the TCE program in comparison to all TCE participants and in comparison to in-school participants. It is important to note these data for non-competitively employed youth separately: this subgroup received an average of \$7.06 per hour and worked an average of 22.5 hours per week. Additionally, non-competitively employed participants who retained employment for at least three months comprised approximately 67% of that group.

Considerable variability is notable in the hourly wages and hours worked per week of those included in the competitive employment category. The variability in earnings and hours worked per week are reflected by the obtained standard deviations of \$1.75 per hour and 10.4 hours per week respectively. Wages ranged from a minimum of \$5.15 per hour to a maximum of \$14.11 per hour, with an average of \$8.26 per hour and a median of \$8.00 per hour. Likewise, the range of hours worked per week is as broad as that of hourly wage with a minimum workweek of 5 hours per week and a maximum of 50 hours per week, with an average of approximately 28 hours per week and a median of 28 hours per week.

Table 3
Competitive employment outcomes for out-of-school youth

Disability area	Number in competitive employment	Average wages (per hour)	Average work hours (per week)	Access to health insurance	Job retention at least 90 days
Developmental Disability	41	\$7.61	21.9	6	36
Emotional/Behavioral Disorder	48	\$8.52	31.0	8	44
Specific Learning Disability	29	\$8.67	31.3	5	22
Other Health Impaired	24	\$8.30	30.3	6	23
Total ¹	143	\$8.26	28.2	25	125

¹Includes individuals who participated in more than one program year.

²Total of non-duplicated participants across the five years of the program.

A further examination of the job retention rates for the out-of-school participants yields further evidence of these youth's demonstration of success. Of the 146 youth in competitive employment, approximately 88% maintained continuous employment for at least 3 months. Further, more than half (51%) of competitively employed youth maintained their employment in a position for at least 6 months. Finally, 39% were retained in their jobs for at least 1 year. While maintenance of job placement for at least 3 months is a relatively high rate (88%), the steep decrease from 88% to 39% across an entire year is quite different from the same retention rate for all TCE participants, which was a decrease of 81% to 66%. However, some of this job turnover is both natural and planned as youth leave their first adult job for other employment and career endeavors.

Disability group comparisons among out-of-school youth: Table 3 shows the distribution of Project participants employed in competitive employment based on disability and their outcomes. As a percentage of the total, the largest disability group who accessed competitive employment was the EBD cluster – with 34% of the youth. The other relatively large disability group was the DD group, with about 29%; the LD and OHI groups both comprised nearly equal halves of the remaining 37% of the youth.

The EBD group demonstrated better than average wages (\$8.52 per hour), work hours (31 hours per week), and rates of job retention (44 of 48 youth retaining jobs for at least 3 months), in relation to the average rates on these indicators for the whole group of youth. Similarly successful was the LD group of 29 youth. They earned the highest wage: \$8.67 per hour of the four groups, worked an average of about 31 hours per week, and most of them (76%) retained their jobs for at least 3 months. The OHI group also earned a higher than average wage, \$8.30 per hour, and worked a higher than average amount: approximately 30 hours per week; this group also had the highest retention rate

of the four groups, with 23 of its 24 members remaining in their job positions for at least three months.

The DD group had the lowest rates on almost all of the outcome indicators, earning \$7.61 per hour, working an average of 22 hours per week, and 88% retained their jobs for at least 3 months, a higher rate only to the LD group's 78%. Regarding the youth in the disability groups in terms of their access to health insurance, approximately 25% (the LD group) to 14% (the DD group) gained the benefit of health insurance through their jobs, averaging about 17% on the whole.

Out-of-school youth wages in perspective: To put these data on average wages and weekly working hours for out-of-school youth into perspective, a standard was applied to wage and hour rates, set to the goal of at least \$8.00 per hour and 30 hours per week. That is, when youth reached the threshold of these levels, they were deemed successful in reaching their employment goals.

When considering the employment outcomes of competitively employed youth, this standard provides a better sense of the relative success of participants by their disability cluster or group. In relation to these goals, three of the four disability groups' averages indicate success in wages and work hours, earning on average over \$8.00 per hour and working on average over 30 hours per week. The exception was the DD group, whose youth, again, earned an average of \$7.61 per hour and worked only about 22 hours per week.

In terms of the goal wages and hours, the DD group attained 95% of the wage goal and 72% of the working hour goal. Furthermore, the median wage for this group was \$7.10 per hour, and the median work hours were 20 hours per week, which may be further explained to indicate that more members of this group tended to earn and work less than the average stated for the group as a whole. Figure 6 details the data regarding the attainment of wages and work hours for each of the disability groups in relation to the program goals stated above.

Table 4
Competitive employment outcomes for out-of-school and in-school participants

Status	Number in competitive employment	Percent in competitive employment	Average wages (per hour)	Average work hours (per week)	Access to health insurance	Job retention at least 90 days
Out-of-School	146	72%	\$8.26	28.2	25	125
In-School	126	55%	\$7.98	27.4	12	97

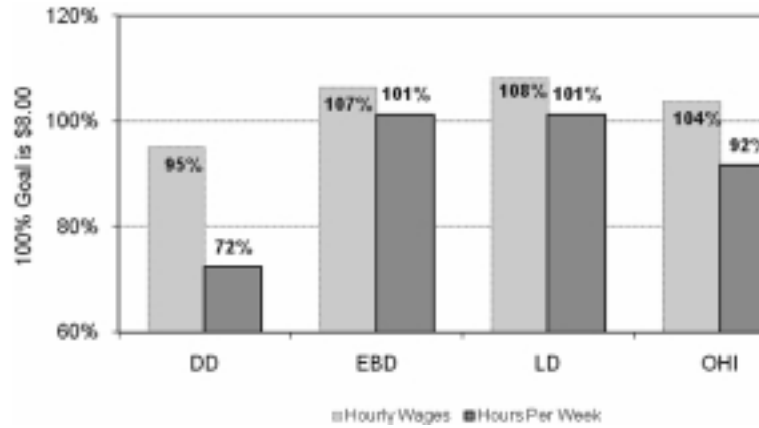


Fig. 6. Percent of goal obtained by disability group.

3.2. Youth participants in comparison with student participants

Table 4 demonstrates that out-of-school youth tended to realize better outcomes in competitive employment than the participants in school during the course of their involvement in the TCE program. In comparison to the out-of-school youth, the in-school students in competitive employment had very similar variability in the hourly wages and hours worked per week. The variability in earnings and hours worked per week are reflected by the obtained standard deviations of \$1.87 per hour and 10.4 hours per week respectively – in comparison to youth’s \$1.75 per hour and 10.4 hours per week. Wages ranged from a minimum of \$5.15 per hour to a maximum of \$14.28 per hour, with an average of \$7.98 per hour and a median of \$7.50 per hour. Likewise, the range of hours worked per week is as broad as that of hourly wage with a minimum work-week of 5 hours per week and a maximum of 45 hours per week, with an average of approximately 27 hours per week and a median of 27 hours per week. Considering similarities in variability and range regarding working conditions, it seems particularly clear that the youth succeeded at a higher rate in these outcome indicators. Additionally, the youth sustained their competitive job placement more successfully: 86% of youth retained employment for at least three months in comparison to

77% of students. And, in closing, more youth than students gained access to health insurance as a condition of their employment.

4. Discussion

The TCE Project has successfully assisted a number of students and young adults experience positive employment outcomes. The findings presented in this report provide strong evidence that the TCE Project achieved its overall interagency goals. In addition to serving as a source of information regarding overall success in achieving Project goals, the data also provides information about the process of adjusting and improving the TCE Project over its course. To illustrate, as a result of performance measurement and monitoring, TCE’s management decided to divert resources from the least critical areas to concentrate more resources to helping students and young adults with the most significant disabilities (namely individuals with developmental disabilities), to improve their employment outcomes.

A central philosophy of the TCE Project is toward the growth of self-determination of participants, engaging students and youth in self-discovery and establishing employment plans consistent with identified interests, strengths, and abilities – fitting with findings of

Table 5
Hourly wage rates of selected occupations nationwide and the twin cities

Occupations	Average national hourly wage rate (in dollars)		Average twin cities hourly wage rate (in dollars)	
	Mean	Median	Mean	Median
All Occupations	18.21	14.15	21.07	17.05
Food and Related Occupations	8.58	7.73	9.22	8.47
Food Preparation Workers (Entry)	8.68	8.19	9.98	9.76
Counter Attendants (Entry)	7.88	7.60	8.38	8.20
Dishwashers (Entry)	7.58	7.45	8.42	8.37
Personal Care and Service Occupations	10.67	8.89	11.71	10.24
Personal and Home Care Aides (Entry)	8.52	8.34	10.24	10.15
Personal and Home Care — All Other (Entry)	10.20	8.91	9.32	8.24
Retail Sales and Related Occupations	15.77	10.64	19.22	12.94
Cashiers (Entry)	3.32	7.82	8.94	8.56
Counter and Rental Clerks (Entry)	10.33	9.12	10.28	8.62
Retail Salespersons (Entry)	11.14	9.20	11.06	9.32

¹Table adapted from a Bureau of Labor Statistics report (2005) and reflects averages based on the Twin Cities Metropolitan Service Area (MSA) as defined by the U.S. Census Bureau.

researchers such as Izzo and Lamb [6] and Wehmeyer and Palmer [13]. Each of these research studies describes the importance of the ongoing supportive involvement of professionals in the lives of young people with disabilities, while encouraging them to develop and discern their desires and goals. The TCE Project, in focusing on employment outcomes in terms of wages, terms of employment, and job retention, offers additional metrics beyond job satisfaction noted in Wehmeyer and Palmer [13].

An important goal of the TCE Project was to engage students with various degrees and types of disabilities, and to customize interagency transition and employment assistance to improve post-secondary opportunities, career outlooks, and competitive employment outcomes. Wehmeyer and Bolding describe the limited outcomes of the whole age spectrum of employees with developmental disabilities, especially when not integrated into the community through self-determination and choice-making about living and working environments [12]. In the TCE Project, strong efforts were made to be inclusive of the various unique needs of participants with different disabilities, including those with developmental disabilities, by proactively engaging young adults in striving toward their full potential and extending employment opportunities in the community workforce for individuals in transition from the secondary education system. In this way, the TCE Project effectuates, through practice-based ideas and experience-based actions and service activities, the theoretical conceptualizations of transition as described by authors such as Eisenman, including person-environment fit theories, career development theories,

and a general integration of individual and social orientations on transition [4]. An important quality of the TCE Project has been its impact on the system that transitions young people with disabilities into life beyond high school. Benz and colleagues described the importance of sustainability of transition programs within the school system [1]; in contrast, the unique confluence of TCE's agencies and partners has activated a larger community-based approach to transition. TCE's core partners continue to work collaboratively to improve systems change objectives and develop new pathways to employment in the workforce. A key action toward this objective was enhancing opportunities in the One-Stop Service Delivery System and increasing access to services and opportunities to create better transition outcomes in Anoka County.

An effective One-Stop System for people with disabilities under the Workforce Investment Act (WIA) required several steps and substantive collaboration too numerous to detail here. The TCE Project met or exceeded all of these collaborative interagency objectives over its five-year project period. Broader systems level policies were discussed and managed by a consensus of TCE's centralized management committee overseeing the Project. And, teams of professionals who were working at the individual Local Education Agency (LEA) level managed local policy and implementation issues.

When examining employment participation rates for individuals with disabilities who are in the same age group as the TCE participants, the out-of-school youth in the TCE program also show themselves to be succeeding. In the National Longitudinal Study on Tran-

sition 2, a reporting of post-school participation in employment by Garza indicates that approximately 75% of individuals with disabilities who completed school are employed, whether or not they are also in postsecondary education. Further, the rate of employment for those who did not complete school is 58%. Garza also notes that engagement in any activity is related to degree of functional skills practiced by individuals [5]. In this manner, it must be remarked that despite a wide range of functional skill levels, TCE youth were highly engaged in post-high school activities directed toward community inclusion.

It is noteworthy that individuals with emotional and/or behavioral disabilities have demonstrated great difficulty in engagement in employment activities; according to Zigmond, approximately 44% of study participants, who were identified as fitting the federal classification for EBD, were employed at the point of 3 months after exiting high school, and the rate takes 21 additional months to reach approximately 61% employment rate [14]. In comparison, of the 67 TCE out-of-school youth with EBD, 41 individuals were competitively employed, or approximately 72%.

4.1. Wage comparisons with all youth

In relation to national and local wage rates, out-of-school youth in the TCE program fare well, with a mean wage rate \$8.26 per hour. When considering the nationwide wage rates for entry-level positions in the three categories most similar to those identified as the most typical TCE youth occupations, which ranged from \$7.45 (the median wage for dishwashers) to \$11.14 per hour (the mean wage for retail salespersons), the TCE youth wage rate compares reasonably well. When considering the local wage rates for entry-level positions in the same three categories, which ranged from \$8.20 per hour (the median wage for counter attendants) to \$11.06 (the mean wage for retail salespersons), the TCE youth wage rate appears very close to the minimum in the range.

4.2. Comparisons with youth with disabilities

When reviewing associations of TCE youth with the comparison group of youth with disabilities in the United States, many similarities are found. In a report based on the National Longitudinal Transition Study 2 data, out-of-school youth with disabilities tend to be employed mostly in the following job classifications: retail (20.6%), trades (20.0%), food service (13.9%),

maintenance (12.5%), personal care (3.1%), clerical (0.7%), and other (29.1%) [2]. The TCE demonstrated similar patterns, although many more were engaged in personal care jobs and many fewer were employed in trades and maintenance positions. In terms of national wage rates, the largest proportion of youth with disabilities earn 'more than \$7.00 per hour' (40.6%), while 27.4% earn between \$5.15 and \$6.00 per hour, 23.7% earn between \$6.01 and \$7.00, and 8.3% earn less than \$5.15 per hour; the average wage for these youth is \$7.30 per hour [2]. Keeping in mind that these are national data, and wage rates tend to be a little higher in the Twin Cities metropolitan area (as noted earlier), the TCE youth's average wage rate of \$8.26 per hour was favorably comparable to the NLTS2 data findings.

In terms of working hours per week, Cameto reported that the NLTS2 data indicate that youth with disabilities work an average of approximately 29 hours per week [3]. The TCE youth worked an average of 28 hours per week, which is in keeping with this trend. The NLTS2 data also indicated a pattern of job retention as follows, regarding the proportions of youth employed for differing durations: 2 months or less, 27.2%; 2.1 to 6 months, 35.2%; 6.1 to 12 months, 25.4%; 12 to 24 months, 7.6%; and more than 2 years, 4.6% [3]. The data on the TCE youth, by comparison, showed the following job retention rates: less than 3 months, 12.3%; 3 to 6 months, 36.3%; 6 to 12 months, 17.1%; and more than 12 months, 34.2%. While not exactly comparable due to differing measurement categories, the TCE youth show a pattern of job retention, which is longer than the NLTS2 data indicate for the general population of youth with disabilities.

5. Summary

TCE introduced customized employment strategies within the menu of opportunities available to youth and young adults in transition from school-to-careers in Anoka County. It was TCE's interagency vision and goal to improve and increase direct job placement outcomes into the workforce for students enrolled at seven independent school districts serving the local community. Reported outcome data revealed that 62% of all transition-aged students enrolled with TCE were placed into integrated competitive employment in the workforce at minimum or prevailing wages. For out-of-school youth including high school graduates, 72% obtained integrated jobs in the workforce at competitive wages.

Although traditional job placement methods account for some outcomes, TCE enhanced opportunities for many unserved and underrepresented youth with significant disabilities who are unable to benefit from traditional employment approaches. TCE's outcome performance provides clear evidence that customizing employment does indeed expand upon opportunities for youth and young adults with significant disabilities to work when jobs are developed or created around their unique interests and abilities. Furthermore, the introduction of customized employment and strengths-based practices eliminated the need for TCE's school and adult employment partners to use a "flow through" job readiness continuum (e.g., sheltered employment, work adjustment training, and habilitation to achieve competitive employment outcomes).

In summary, customized employment principles and service strategies encouraged a person-centered focus where transition-aged youth and young adults were supported one individual at a time. TCE's partners have learned that customizing employment can make a measurable difference in improving outcomes for youth and young adults with complex lives and disabilities. Simply said, customized employment is changing what it means to be "qualified" to work competitively in the workforce. This is exciting news for transition-aged youth and young adults with the most significant disabilities who are traditionally underrepresented in our nation's labor force.

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