# ICDR TOOLKIT

# **Employment**

A Toolkit for Interagency Collaboration





## **TABLE OF CONTENTS**

Introduction
About the Interagency Committee on Disability Research (ICDR)
Resources in this Toolkit
Relevant Legislation on Employment for People with Disabilities
The Rehabilitation Act of 1973
The Americans with Disabilities Act
The Workforce Innovation and Opportunity Act
Federal Employment Initiatives
Research and Technical Assistance
Research by ICDR Member Agencies
Interagency Research by ICDR Member Agencies
U.S. Department of Health and Human Services15
U.S. Department of Education
U.S. Department of Labor
U.S. Department of Veterans Affairs
National Science Foundation
Technical Assistance and Best Practices
U.S. Department of Health and Human Services
U.S. Department of Education
U.S. Department of Labor
Future Directions
Assistive Technology/Universal Design Working Group Recommendations 47
Building Capacity
Economics of Assistive Technology and Universal Design
Transition to Adulthood
Development of Evidence-Based Practices and Scale-Up
Career Pathways and the Participation of Individuals with Disabilities
Resources
Accessible Technology
Employees
Employers
Interagency Groups
Technical Assistance Centers
Workforce System
References 66

# Introduction

The underemployment of people with disabilities is a long-standing issue. The 2019 Annual Report on People with Disabilities in America describes the employment-to-population ratio as the percentage of the population that is employed. Using data from the American Community Survey, the employment-to-population ratio for people with disabilities aged 18-64 living in community settings ranged from 33.0 to 39.1 percent from 2008–2018. Statistics for people without disabilities during the same period ranged from 73.1-77.8 percent. This approximately 40-percentage-point difference is depressingly stable.

More recent statistics derived from the Community Population Survey by the Bureau of Labor Statistics show similar challenges. In September 2020, persons with a disability, aged 16-64, had a labor participation rate of 32.7 percent, compared to 75.7 percent for persons without a disability. They also possessed an unemployment rate of 13.4 percent, compared to 7.5 percent for persons without a disability. The Bureau of Labor Statistics defines the labor participation rate as the percentage of the population working or actively seeking work. The unemployment rate is defined as the number of unemployed people as a percentage of the labor force (U.S. Bureau of Labor Statistics, 2015). In other words, the percentage of persons with disabilities, either working or looking for work, is approximately 40 percentage points lower than the non-disabled population. Statistics from September 2019 show similar disparities, with persons with disabilities having a labor participation rate of 33.6 percent compared to 68.7 percent for persons without a disability, as well as a 7.5 percent unemployment rate compared to 3.5 percent for persons without a disability. The COVID-19 pandemic presumably impacts these numbers, though the approximately 40-percentage-point difference in the labor participation rate and almost twice the unemployment rate for persons with disabilities appears to be stable.

# About the Interagency Committee on Disability Research (ICDR)

The Interagency Committee on Disability Research (ICDR) was authorized by the amended 1973 Rehabilitation Act to promote coordination and collaboration among federal departments and agencies conducting disability, independent living, and rehabilitation research programs. Areas of focus include programs relating to assistive technology (AT) research and research that incorporates principles of universal design (UD). ICDR member agencies include:

- Secretary of the Department of Health and Human Services (HHS)
  - Director of the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)—Designated Chair of the ICDR
  - Administrator of the Administration for Community Living (ACL)
  - Director of the National Institutes of Health (NIH)
  - Director of the National Institute of Mental Health (NIMH)
  - Director of the Indian Health Service (IHS)
- Assistant Secretary of the Office of Disability Employment Policy (ODEP),
   within the Department of Labor (DOL)
- Secretary of the Department of Defense (DOD)
- Secretary of the Department of Education (ED)
  - Commissioner of the Rehabilitation Services Administration (RSA)

- Assistant Secretary of the Office of Special Education and Rehabilitative Services (OSERS)
- Secretary of Veterans Affairs (VA)
- Administrator of the National Aeronautics and Space Administration (NASA)
- Secretary of the Department of Transportation (DOT)
- Assistant Secretary of Indian Affairs (BIA), within the Department of Interior (DOI)
- Director of the National Science Foundation (NSF)
- Administrator of the Small Business Administration (SBA)

The vision the ICDR adopted is to facilitate and coordinate federal interagency efforts and promote collaborative relationships that maximize the best use of federal resources for disability, independent living, and rehabilitation research. The ICDR has a long history of fostering collaboration and coordination across the government to meet the disability community's needs and leverage limited resources. The ICDR 2017-2021 Strategic Plan describes the following three goals:

> **Goal #1:** Improve interagency coordination and collaboration in four thematic research areas: transition, economics of disability, accessibility, and disparities.

**Goal #2:** Develop a government-wide inventory of disability, independent living, and rehabilitation research.

Goal #3: Promote ongoing stakeholder input on gaps and priorities for disability, independent living, and rehabilitation research.

To address Goal #1 (improve interagency coordination and collaboration), the ICDR initiated a focus on inclusion of people with disabilities in employment research, with an emphasis on transition, economics of disability, accessibility, and disparities. These areas are further defined using several subtopics within Goal #1, including:

- Transitions in employment: school to work for youth; military to civilian for veterans; career pathways.
- Transitions for military personnel and veterans with disabilities.
- Transitions in AT/UD: technology transfer of innovations in AT/UD to mainstream technology.
- Economic outcomes of employment interventions: social costs of remaining employed vs. receiving benefits from either the Supplemental Security Income (SSI) or Social Security Disability Insurance (SSDI) programs; personal and societal costs and benefits associated with participation in state-based vocational rehabilitation (VR) programs and supported employment programs.
- Economic outcomes associated with AT/UD: expressions of consumer demand
  for accessible and affordable technologies as a function of need and other
  factors; impact of providing AT on employment rates, possibly within specific
  industries; market behavior of individuals and organizations; personal
  and social costs and benefits associated with providing AT or workplace
  accommodations that enhance productivity; the net effects on an employer's
  efficiency or profitability; social costs and benefits exhibited by communitylevel UD strategies, retrofitting, or construction.
- Accessibility in education and employment: AT and accommodations, online training, personalization of information technology (IT) interfaces and content.
- Accessibility in AT/UD: inclusive research methods, user-centered design, human factors research, and information security.

- Disparities in employment and education: research should be in tune with inclusive social policy that aims at mainstream educational and employment settings.
- Disparities in AT/UD: limited access and reimbursement for AT, including expensive technologies that do not scale to affordable general use.

# Resources in this Toolkit

The resources in this toolkit are intended to facilitate further research by federal agencies and departments and interagency collaboration in the field of employment for people with disabilities. This toolkit provides current employment resources, examples of federal employment promotion initiatives, recent federal-level research being conducted, and web resources on a variety of employment-related subtopics for people with disabilities. This toolkit will also present unexplored areas related to employment research that could benefit from interagency collaboration.

# Relevant Legislation on **Employment for People** with Disabilities

## The Rehabilitation Act of 1973

The Rehabilitation Act of 1973 (Pub. L. 93-112), as amended, prohibits discrimination based on disability with an emphasis on federal programs, programs receiving federal financial assistance, federal employers, and federal contractors. It also applies to schools that may receive federal financial support, including colleges and other postsecondary education or training institutions. Section 503 prohibits discrimination in hiring, retaining, and promoting individuals with disabilities by all federal contractors and requires affirmative action provisions for federal contractors with more than 50 employees and contracts worth \$50,000 or more. Regulation 41 CFR 60-741.45 established a 7 percent representation of people with disabilities aspirational goal across labor categories for federal contractors. Section 504 prohibits discrimination and promotes equal access to education and training for individuals with disabilities. Section 508 promotes equal access to IT for the public and federal employees.

#### The Americans with Disabilities Act

The Americans with Disabilities Act (ADA), amended to the ADA Amendments Act of 2008 (Pub. L. 110-325), is the primary federal law prohibiting discrimination based on disability in employment. The ADA applies to anyone who has "a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is

perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered" (ADA Amendments Act of 2008, 2008). Title I of the ADA requires employers with 15 or more employees to provide an equal opportunity to benefit from the full range of employment-related opportunities available to others. It restricts questions about an applicant's disability before a job offer is made and requires employers to provide reasonable accommodations to known physical or mental limitations to enable work task performance.

# The Workforce Innovation and Opportunity Act

The Workforce Innovation and Opportunity Act (WIOA) was enacted in 2014 and is designed to help individuals pursue employment, education, and training and support services necessary for success in the labor market. It also helps match employers with individuals with the skills necessary to compete in a global economy. WIOA replaced the Workforce Investment Act of 1998 and amended the Adult Education and Family Literacy Act, the Wagner-Peyser Act, and the Rehabilitation Act of 1973.

WIOA consists of five titles, with the fifth focusing on the Act's general provisions. Title I focuses on workforce development activities administered through the One-Stop System; i.e., American Job Centers (AJC), a national network of locally administered offices providing WIOA employment and training activities. Individuals with "barriers to employment," including adults and youth with disabilities, are eligible for a range of services provided by AJCs, including job-seeker assistance; hard and soft skill guidance, career planning, and job placement services; labor market demand and occupational information; job-driven training options; and work-based training opportunities under Title I, with many AJCs considering them a priority service population. It also supports three state formula grant programs, multiple national programs, and Job Corps. Title I is administered at the national level by DOL's Employment and Training Administration (ETA). Title II, administered by ED, focuses on adult education and literacy services and

also provides state formula grants and sponsors a series of national leadership activities. Title III, which ETA administers, focuses on the Wagner-Peyser Act and provides for employment services, which are often provided through the One-Stop network. Title IV provides for VR services for individuals with disabilities through state formula grants offered by RSA. WIOA requires that states reserve 15 percent of their formula grants to provide pre-employment transition services to students with disabilities, even when those students are not VR clients. Though each of these titles supports enhancing the employability of an individual, only Title IV focuses strictly on the employability and employment of individuals with disabilities.

# **Federal Employment Initiatives**

The federal government uses several initiatives and programs to promote the employment of people with disabilities, in addition to the 7 percent goal for disability representation among federal contractors. Hiring people with disabilities for federal positions is prioritized by the Office of Personnel Management during competitive, non-competitive, and special hiring authorities. For example, veterans with a 30 percent or more service-connected disability and persons eligible for a Schedule A appointment due to an intellectual disability, severe physical disability, or psychiatric disability may be flagged by the federal government for non-competitive hiring for positions.

The Workforce Recruitment Program for College Students with Disabilities is a recruitment and referral program for college students and recent graduates sponsored by DOL's ODEP and DOD's Defense Human Resources Activity's Diversity Management Operations Center. The program pre-screens candidates and provides targeted location and qualification capabilities to organizations to facilitate hiring for temporary and permanent positions.

The AbilityOne program provides employment opportunities for individuals who are blind or have other disabilities in the areas of administrative services, custodial services, facility management, food services, grounds maintenance, etc. The program uses a network of nonprofit agencies to train and supervise the employees, freeing the federal government of these responsibilities. According to the U.S. AbilityOne Commission, more than 90 percent of program participants earned at least the federal or local minimum wage (U.S. AbilityOne Commission, 2020). The Commission has begun advocating for all agency participants to adopt this policy.

The Randolph-Sheppard Vending Facility Program authorizes state licensing agencies to recruit, train, license, and place individuals who are blind as operators of vending facilities on federal and non-federal sites. Vending facilities include cafeterias, snack bars, and automatic vending machines. State rehabilitation agencies conduct the preparation of the operators.

RSA provides formula grants to state VR agencies through a formula grant program. These state agencies then provide services to individuals with disabilities, including vocational assessment and evaluation, education, or training; on-the-job training; employment search and placement; and consulting with potential or existing employers for job accommodations or modification. Funding is provided through the Vocational Rehabilitation State Grants and American Indian Vocational Rehabilitation Services (AIVRS) programs. Access to VR services is determined using state-specific eligibility criteria. Some states further restrict access through Orders of Selection, determining which individuals, based on the disability's impact, receive access to service funds first. Additional funding for supported employment is available through the Supported Employment State Grant program.

The Ticket to Work Program facilitates the entrance of Social Security Administration (SSA) disability beneficiaries age 18-64 into the workplace. Participants work with a federally recognized Employment Network and receive career counseling, VR, and job placement support. Participants have a transition period of at least 9 months where they receive their full SSDI benefits in addition to any wages they earn. Participants receive an expedited reinstatement of benefits if their benefits are halted due to their earning level but can no longer work due to the medical condition or a related condition. Participants engaged with an Employment Network and showing progress toward independence using SSA-defined time frames do not need to participate in medical Continuing Disability Reviews.

The federal government, as well as some state governments, provides tax credits to encourage hiring individuals with barriers to employment, including disabilities. The Work Opportunity Tax Credit is an opportunity for employers who hire VR recipients, in addition to individuals from several other target groups. The Disabled Access Credit can be used by small businesses earning less than \$1 million and possessing 30 or fewer employees. The credit can be used toward up to \$5,000 in expenses necessary for disability accessibility.

# Research and Technical Assistance

The federal government supports a significant portfolio of research and technical assistance (TA) activities in the disability employment domain. It must be noted that there is often overlap between these two domains as research and TA can occur concurrently, with one informing the other. The following sections will focus on significant disability research activities that have received funding in the past 5 to 10 years, or are currently receiving funding. Prominent TA projects and emerging best practices in employment programs for people with disabilities will also be listed.

# **Research by ICDR Member Agencies**

Each of the ICDR member agencies support disability-related research and TA. Example areas of emphasis include community inclusion, medical rehabilitation, rehabilitation engineering, employment, education, and program evaluation. Among the member agencies, HHS, ED, DOL, and NSF conduct the most employment-focused disability research. This does not diminish the contributions of other agencies, which typically require program evaluation elements in their funded TA, capacity building, dissemination activities, etc. Significant research projects focusing on employment from these organizations will also be described.

### **INTERAGENCY RESEARCH BY ICDR MEMBER AGENCIES**

Several significant disability employment research projects have occurred, and are occurring, through interagency collaboration. This model allows for the blending and braiding of funding streams to pursue activities of mutual interest. Some ICDR member agencies, such as ODEP, partner extensively with organizations within their parent Department. For example, ODEP often supports the demonstration

component of an initiative, while DOL's Chief Evaluation Office (CEO) focuses on the evaluation and ETA provides training support and access to workforce system data. In examples such as these, the projects will be described within the context of their ICDR membership. The examples presented below describe interagency collaborative research that crosses parent organizations, such as ED and HHS.

The Promoting Readiness of Minors in Supplemental Security Income (PROMISE) initiative was a collaborative project sponsored by ED, HHS, DOL, and SSA. PROMISE focused on fostering improving health, education, and postsecondary outcomes for children ages 14–16 who receive SSI, as well as their families. The program provided a series of competitive grants to states. These grants were designed to aid in system coordination and to increase the use of resources available through the Individuals with Disabilities Education Act, the Vocational Rehabilitation State Grants program, Medicaid health and home and community-based services, Job Corps, Temporary Assistance for Needy Families, and Workforce Investment Act programs. PROMISE's goal was to improve life outcomes for youth using SSI and decrease their dependence on the system.

ACL has established the Multi-agency Task Force on Increasing Employment Opportunities for Americans with Disabilities to address the chronic unemployment of Americans with disabilities. The goal of the 11member group is to achieve a significant increase in the number of disabled Americans in the workforce and improve their integration.

Federal Partners in Transition is an active interagency workgroup consisting of representatives from ED, HHS, DOL, and SSA. The group developed a strategic plan focusing on interagency cooperation, *The 2020 Federal Youth Transition Plan:*A Federal Interagency Strategy, which describes a shared vision, compatible outcome goals, and policy priorities for improving the transition outcomes of youth with disabilities.

ED's OSERS has developed a Transition Steering Committee to focus on services, needs, and outcomes for youth with disabilities who may benefit from services and initiatives of the Department. Committee members include representatives from the Office of the Assistant Secretary, the Office of Policy and Planning, the Office of Special Education Programs, and RSA.

#### U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

HHS houses several sub-agencies that conduct research on disability employment. Chief among them is ACL, and, within it, NIDILRR. ACL focuses on older adults and people with disabilities and on facilitating their ability to live where they choose, with the people they choose, and with the ability to participate fully in their communities. Though its portfolio is primarily TA and the provision of funding to state and community agencies for the delivery of services, a significant percentage of its activities are evaluated, and research to understand and improve community service provision does occur.

## National Institute on Disability, Independent Living, and Rehabilitation Research

NIDILRR was transferred to ACL from ED with the passage of WIOA. With its transfer, ACL acquired an organization whose mission is "to generate new knowledge and to promote its effective use to improve the abilities of individuals with disabilities to perform activities of their choice in the community, and to expand society's capacity to provide full opportunities and accommodations for its citizens with disabilities" (Administration for Community Living, 2020). NIDILRR's research occurs across domains, including employment, and focuses on a wide range of disabilities and impairments across populations of all ages. NIDILRR is the primary federal sponsor of disability research and uses several funding vehicles to support employment research, including Disability and Rehabilitation Research Projects (DRRP), Rehabilitation Engineering Research Center (RERC) program,

Field-Initiated Projects (FIP) program, Rehabilitation Research and Training Center (RRTC) program, and the Small Business Innovation Research (SBIR) program. Additional programs, such as the Switzer Research Fellowship Program and Advanced Rehabilitation Research and Training (ARRT) program, prepare and train researchers, while the Model Systems program focuses on research on recovery and long-term outcomes for spinal cord injury, traumatic brain injury (TBI), and burn injury. The ADA National Network provides information, training, and TA to individuals, businesses, and agencies with rights and responsibilities under the ADA.

The following is a presentation of recently completed NIDILRR-supported employment research. Sponsored training activities are excluded from this presentation, and currently funded initiatives will be presented later. Many NIDILRR grants are for 5 years and, due to the ongoing needs of the disability community, are recompeted at the end of their funding cycles.

NIDILRR's *Center on Knowledge Translation for Employment Research (KTER)* identified employment outcomes for individuals with disabilities found by NIDILRR-funded researchers and developed research-based informational products from them for dissemination to various audiences, including individuals with disabilities and their families, VR practitioners, the business community, and policymakers. To meet this goal, KTER investigated the information needs of these populations, conducted research studies to test knowledge translation strategies to reach these audiences, disseminated findings, and provided TA to researchers to assist in their knowledge translation and dissemination efforts. KTER was recently refunded to continue their work.

Translating Evidence to Support Transitions: Improving Outcomes of Youth in Transition with Psychiatric Disabilities by Use and Adoption of Best Practice Transition Planning focused on increasing the use and adoption of postsecondary employment and/or school enrollment best practices for students with emotional

behavioral disturbance receiving special education services. Similar to the KTER, this project focused on developing research-based materials to inform practice. These materials were pilot tested, refined, and disseminated to facilitate capacity building within high school special education transition planning teams.

The Successful Employment and Quality Work Life After Severe Disability Due to Spinal Cord Injury project was developed to study employment after spinal cord injury to identify factors associated with successful employment throughout the lifespan. The project included a qualitative component focusing on factors related to successful employment from the perspective of stakeholders with spinal cord injuries, and a larger quantitative study informed by these perspectives, as well as those from an advisory board. This study informed econometric models of participation in employment and quality employment outcomes across the life cycle. New knowledge generated was disseminated through training, TA, and publications.

The VR-ROI Project: Estimating Return on Investment in State Vocational Rehabilitation Programs examined the return on investment (ROI) in eight state VR programs. The project developed and tested a web-based "ROI Estimator" for state use. The project activities developed VR-ROI estimates for specific populations, including youth in transition, individuals with several low-incidence disabilities, and individuals with disabilities from minority backgrounds. It then developed and disseminated training materials for state VR agencies interested in conducting ROI analyses. Training in the use of the project's methodological framework and agency-specific ROI Estimator results was also provided.

The FIP on Contingent Employment of Individuals with Disabilities examined the participation, practices, and characteristics of people with disabilities engaged in contingent work, as well as their rationales, attitudes, perceptions, and experiences in contingent work arrangements. To accomplish this, project staff interviewed individuals with disabilities engaged in various forms of contingent employment,

including the so-called "gig economy." Findings were used to develop, test, and administer a Survey on Contingent Employment Practices by People with Disabilities.

The *Progressive Employment for Individuals with the Most Significant Disabilities* project examined the progressive employment (PE) model for individuals with the most significant disabilities and significant disabilities served by state VR agencies and community rehabilitation providers. The project explored the impact of PE on improving people with disabilities' competitive employment outcomes. Key activities included systematic data collection and secondary analysis of PE implementation data and VR case file data from four states. Findings from these actions were used to create a PE fidelity of implementation scale and measure PE model implementation integrity. The researchers then compared employment outcomes for groups both receiving and not receiving PE services in a 3-to-4-year period. Findings from these activities were then disseminated to inform future randomized controlled trials of PE.

The Effects of Customized Employment on the Employment Outcomes of Transition-Age Youth with Disabilities: A Randomized Clinical Trial is a project designed to achieve integrated employment outcomes for individuals with intellectual disabilities and/or autism spectrum disorder. The project's goals are to operationalize customized employment as an evidence-based project and evaluate and compare outcomes of individuals who participate in customized employment compared to those who receive typical services. The project anticipates improving the employment outcomes of customized employment participants in the careers of their choice, maximizing inclusion and integration in community employment, and improving VR professionals and other stakeholders' capacity to provide customized employment to individuals with intellectual disabilities/autism spectrum disorder service users.

The Integrated Scaling Approach: A Model for Large-Scale Implementation of Effective Interventions for Employment project is designed to expand the delivery of effective employment interventions by developing an approach that increases the demand and supply of said interventions. Activities include creating a scaling method for practices designed for people with psychiatric disabilities, testing and evaluating the approach, and disseminating the process to others to scale future effective employment interventions.

The Workplace Accommodation Expert Support System project is developing an online tool and mobile application for employers to help assess the workplace accommodation needs of their employees with disabilities and provide recommendations for accommodations that are evidence-based. Activities include identifying and incorporating crowd-sourced and published accommodation best practices into a system of decision trees focusing on the personal, task, and environmental factors to determine potential solutions. The researchers will then develop resource links to facilitate accommodation, optimizing the website/app's content and usability and evaluating how employers and employees utilize the system in the field.

The Promoting Entrepreneurship Among Low-Income Youth with Disabilities project develops and evaluates a school-based model promoting employment and/or entrepreneurship among transition-aged youth with disabilities from low-income communities. Project activities include identifying practices and supports for improving employment and/or entrepreneurship through interviewing minority youth with disabilities and teachers and VR administrators/counselors collecting data on supports and barriers to employment for the youth. Formative and summative evaluations are being conducted to inform a planned randomized controlled trial of youth interested in conventional employment after graduation and those interested in self-employment.

The *Center on Knowledge Translation on Employment Research* examines research conducted by NIDILRR-funded researchers, tests the effectiveness of dissemination strategies, develops and evaluates capacity-building strategies to improved knowledge translation expertise, and develops and disseminates informational products. It also supports a community of practice for NIDILRR employment researchers and has created a method for developing expertise in knowledge translation strategies; a resulting toolkit and coaching guide; a knowledge translation training academy; and a web library of courses on knowledge translation.

The goal of the *Helping Youth on the Path to Employment: Creating Economic Self-Sufficiency* project is to create a career development program to improve the poor education and employment outcomes of young adults with mental health conditions by minimizing disruptions in postsecondary education, promoting degree completion, and improving economic self-sufficiency. Activities include a randomized controlled trial to test program efficacy, establishing implementation sites for the intervention, recruiting and retaining college students, and collecting and analyzing data on program and control recipients over 2 years to measure academic and employment impacts.

The Rural Youth Apprenticeship Development Project is designed to develop and advance apprenticeship programs for youth with disabilities in underserved rural communities. Activities include creating a rural youth apprenticeship development toolkit, supporting the development of apprenticeship programs in several VR agencies, establishing a learning collaborative, and using the VR Program Evaluation Coach tool to assess program design and system change.

The *Collaborate for Change* project combines theories of collaboration, secondary transition, and diffusion of innovations to develop and field-test competencies for secondary transition collaboration among special educators and VR counselors. Activities include developing and validating theory-based, operationalized

competencies in the context of secondary transition and pilot testing the competencies and creating a structural and measurement model.

The Virtual Office Space: Improving Employment Opportunities for Individuals with Low Vision project is developing a high-resolution virtual desktop system for use at home or in the office by individuals with low vision. The project will create the Virtual Office Space and then evaluate it during four iterative cycles using individuals with low-vision and using an expert panel for effective and acceptable use. The product and research findings will then be disseminated.

The Developing Implementation and Fidelity Monitoring Tools for the Bridge for Resilient Youth in Transition (BRYT) program is designed to support high school students returning to school following an extended absence due to a mental health crisis. This project will produce a BRYT intervention logic model and implementation package. Both will be informed by focus groups and interviews with BRYT stakeholders, and both will be piloted, evaluated, and refined through interactions with BRYT.

The Developing a Career Services Toolkit for Individuals with Serious Mental Illness Pursuing Postsecondary Career and Technical Education (CTE) project is producing a toolkit to assist individuals with serious mental illnesses in succeeding in postsecondary CTE programs and in gaining employment in their intended fields. Activities will include using a Delphi study to identify unique knowledge, skills, and resources required to succeed in CTE; developing a toolkit for individuals with serious mental illnesses, their families, and service providers; pilot testing the toolkit; and then revising and refining it based on collected data.

The Reclaiming Employment: Self-Employment Resources for Mental Health Service Users project will develop and evaluate a public-facing online platform, Reclaiming Employment™, that provides support for individuals with psychiatric disabilities to pursue self-employment and entrepreneurship. Activities include the development of a Reclaiming Employment prototype, testing to assess user experiences and outcomes, and refinement of the platform in preparation for dissemination.

The Connecting Practices to Outcomes: Lessons from the Federal Sector Workplace project is using secondary data and focus groups to examine the impact of employer practice adoption on the retention, advancement, separation, and workplace experiences of individuals with disabilities in the federal workforce. The project goals include developing a knowledge base of how federal diversity efforts impact representation, hiring, and advancement; examining the role of diversity efforts in employee experiences and attitudes; and improving understanding of findings through focus groups of employer representatives and employees.

The Efficacy of a Community College Transition Program for Young Adults with Autism Spectrum Disorder (T-STEP) project will assess the feasibility, social validity, and efficacy of the T-STEP intervention for 16-to-21-year-old community college students with autism spectrum disorder. The 3-year study includes a pilot study, including stakeholder feedback, to refine the appropriateness and feasibility of using the T-STEP in a community college setting. An examination of efficacy in online and in-person formats using intervention and control groups, a description of the characteristics of individuals who most benefit from the intervention, and employment and enrollment follow-up 3 months after program completion will follow the pilot study.

The *Using Virtual Reality to Improve Job Reentry in Adults with TBI* project is developing a Virtual Reality Job Interview Training program to improve social competency skills needed for a successful job interview. This program has been successful with individuals with autism spectrum disorder and schizophrenia; this study will examine its efficacy with individuals with TBI. Participants will be randomly assigned to intervention and control groups and evaluated for interview performance,

confidence, and anxiety, as well as rates of job offers at long-term follow-up. The researchers will collect qualitative data to identify revisions or enhancements to the virtual reality training for use with this population.

The Career and Occupational Readiness Experience (CORE): Enhancing Supported Employment for Transition-Age Youth with Psychiatric Disabilities project is implementing, testing, and refining the CORE, a provider-developed add-on to Individual Placement and Support (IPS) supported employment. Project activities include examining CORE feasibility, refining practices and protocols through key stakeholder partnerships, and pilot testing CORE with transition-age youth with psychiatric disabilities. The findings from these activities will be disseminated.

Employment project evaluates IPS effectiveness for young adults with psychiatric disabilities. The project is using a mixed-methods approach to examine the population of young adults served. Quantitative measures are being used to examine organizational adaptations of IPS programming, employment and education outcomes over a 12-month follow-up period, service fidelity, the correlation between IPS fidelity and client outcomes, and client factors' influence on positive results. Qualitative measures will examine barriers to employment and education, interagency collaboration, and organizational, financial, and system barriers.

The Promoting Career Design and Development via Telehealth for Rural Adults with Intellectual and Developmental Disabilities project evaluates the effectiveness of a career design telehealth intervention for adults with intellectual and developmental disabilities waiting for formal home and community-based services in Kansas. Facilitators will provide the Self-Determined Career Design Model via telehealth, with participants randomly assigned to waitlist control or intervention groups. Intervention participants will receive the model via telehealth for 2 years, while the waitlist control group will begin receiving it in Year 2. Anticipated benefits include

improved employment and self-determination for adults with intellectual and developmental disabilities, enhanced cost-effectiveness of delivering the intervention via telehealth, and documented best practices for using telehealth with adults with intellectual and developmental disabilities.

The Culturally Appropriate Research in American Indian Employment Programs project is examining the characteristics of practices and policies used by staff of AIVRS programs and their correlation to effectiveness in assisting American Indians/Alaskan Natives with disabilities in gaining and maintaining quality integrated employment. The project uses community-based participatory research in partnership with AIVRS program directors, counselors, the consumers they serve, and an American Indian/Alaskan Native-led advisory council to collect multiple rounds of data, analyze and disseminate findings, and prepare for additional research phases.

### **U.S. DEPARTMENT OF EDUCATION**

ED's Institute of Education Sciences, and its sub-agency, the National Center for Special Education Research (NCSER), "supports rigorous research on infants, tod-dlers, children, and youth with and at risk for disabilities through advancing the understanding of and practices for teaching, learning, and organizing education systems" (National Center for Special Education Research, n.d.). Additional offices, particularly OSERS and its sub-agencies, RSA and the Office of Special Education Programs, have evaluation research embedded in their TA and dissemination activities. However, their focused research activities were transferred to NCSER with the passage of WIOA.

## National Center for Special Education Research

NCSER supported the Exploring Predictors of Transition Planning Participation and Future Goal Aspirations of Secondary Students with Disabilities project.

The study examines associations between student/family/school-level factors, students' involvement in their transition planning, and future goal aspirations for postsecondary education, employment, economic independence, and independent living. Researchers are conducting secondary data analyses using the National Longitudinal Transition Study-2012 to examine these relationships and explore how they might differ by disability category and race/ethnicity.

NCSER supported A Secondary Analysis of the National Longitudinal Transition Study-2 (NLTS2): Examining the Relationships between Expectations, Access, and Postsecondary Life Engagement. The project's purpose was to develop a multidimensional model of post-school success using the NLTS2 dataset. This model was then used to explore program and student-level variables related to postsecondary outcomes for students with high-incidence disabilities.

NCSER funded *Modeling Short-Term and Longitudinal Work and Educational Transition Outcomes for Adolescents with High-Incidence Disabilities*. The project used three secondary datasets, the National Education Longitudinal Study of 1988, the Educational Longitudinal Study of 2002, and NLTS2, to explore the career and postsecondary goals of students with high-incidence disabilities. The team compared findings with students without disabilities and examined the relationships between inclusion and CTE and postsecondary outcomes for high-incidence disabilities students.

NCSER sponsored A Study of the Effects of a Three-Tier Model of Interagency

Collaboration on Transition Outcomes for Students with Disabilities. In the

study, the researchers examined the efficacy of the Communicating Interagency

Relationships and Collaborative Linkages for Exceptional Students model on transition outcomes for students with disabilities. The researchers compared findings to "business-as-usual" services for this population in the areas of in-school academic and functional and post-school outcomes (i.e., employment, education, independent living).

NCSER funded Factors Associated with High School and Post-High School Outcomes for Deaf and Hard-of-Hearing Students (Secondary Analysis of NLTS2 Data). In this study, the researchers used NLTS2 to identify school-based interventions associated with academic, social/behavioral, vocational, and functional outcomes experienced by deaf or hard-of-hearing students during and after high school.

NCSER sponsored *Paths 2 the Future: Testing the Efficacy of a Career Development Intervention for High School Girls with Disabilities*. In this study, the researchers examined the efficacy of a gender-specific curriculum, Paths 2 the Future, for positively impacting the education and career outcomes of high school girls with high-incidence disabilities using a cluster randomized controlled trial. Key areas of emphasis included career knowledge and skills (e.g., self-determination, disability knowledge, gender awareness, career and college readiness) and engagement in career-related activities (e.g., enrollment in CTE, work experience, and paid employment).

NCSER funded *Predictors of Intermediate and Postsecondary Outcomes for Students with Disabilities*. The problem examined post-high school extant data from Washington State public schools and other public data, focusing on youth receiving special education services. Three factors were examined: (1) enrollment in vocational education or workforce skills courses; (2) percent of the school day spent in general education classrooms; and (3) credentials and estimated performance of the students' high school teachers. These areas were examined to

determine their influence on the predictors of academic, behavioral, transition, and postsecondary success of students with disabilities.

NCSER sponsored *Ready for Wages: Research on Employment of Adjudicated Youth through Working at Gaining Employment Social Skills Curriculum.* This study assessed the efficacy of Ready for Wages, a research-based social skills curriculum that promotes positive employment-related skills and outcomes for incarcerated juvenile offenders with disabilities in long-term facilities. The researchers used a cluster randomized controlled trial to assess the pre/post-performance of youth in a correctional facility compared to similar youth performance when not receiving the curriculum.

NCSER supports the *College and Career Readiness for Transition: Development and Validation of a Student Measure* project. The project focuses on developing a college and career readiness self-perception measure for high school students with disabilities. When fully developed, educators can use this measure to develop transition goals for student Individualized Education Programs. Research and development activities include item development, systemic review, and refinement of items so they align with an assessment framework. Items are then field-tested to determine item inclusion. A large-sample administration will then assess psychometric properties and aid in developing scoring procedures and validation studies.

NCSER supports the *Moving Transition Forward: Exploration of College-Based and Conventional Transition Practices for Students with Intellectual Disability and Autism* project. The study compares aspects of a college-based transition experience with a conventional high school or community-based experience and their impact on the employment outcomes of students with intellectual disability and/or autism. Researchers will conduct secondary data analyses of the National Longitudinal Transition Study-2012 and the Transition and Postsecondary Education Programs for Students with Intellectual Disability and compare the

transition experiences of youth in college-based programs with those receiving high school or community-based programs.

NCSER supports the *Paths to the Future for Young Men (P2F-Young Men)* project to address the career development needs of adolescent boys with high-incidence disabilities. P2F-Young Men is a modification of Paths 2 the Future, a female-specific career development curriculum previously shown to have efficacy with high school girls with disabilities. Phase 1 of the project consists of information gathering (e.g., literature review, focus groups, expert teacher reviews) and feasibility and usability testing of the revised curriculum. Phase 2 will be a pilot test of the P2F-Young Men using a randomized controlled trial.

## Office of Special Education and Rehabilitative Services

RSA funded the *Substantial Gainful Activity* project in 2010 to develop and assess an employment model to increase VR clients' likelihood of receiving SSDI benefits earning above substantial gainful activity at case closure. The project focused on non-blind SSDI beneficiaries who received benefits due to their previous work history. Activities included case studies of eight state VR agencies, administrative data analysis, and Delphi panels to inform an employment innovation model. This was followed by implementing and assessing the model in two states.

#### **U.S. DEPARTMENT OF LABOR**

## Office of Disability Employment Policy

DOL's ODEP promotes policies and practices to increase workforce success among people with disabilities. ODEP primarily drives system change through TA to government agencies, service providers, and non-governmental entities, as well as public and private employers. Research is mainly through evaluating initiatives,

typically in partnership with other agencies, as in the described in the section on the Disability Employment Initiative below.

Though ODEP did not report findings from its *Self-Employment TA*, *Resources*, and *Training* program until 2013, project activity began in 2006. Three state or local projects, plus one national initiative, were awarded funds to develop, test, and evaluate self-employment service delivery models with a goal of national replication. The evaluators examined the outcomes of state VR participants who received self-employment counseling from a grantee, focusing on income change and satisfaction. They also studied capacity building and system change during the evaluation.

ODEP funded a 5-year research study to determine whether Individual Learning Plans should be considered a promising college and career readiness practice and whether and how youth with disabilities participate in these efforts. An Individual Learning Plan is a document that aligns high school course-taking with postsecondary plans and goals and documents the college and career readiness skills developed by a student. It is similar to the Individuals with Disabilities Education Act's required transition planning in that it emphasizes career development opportunities, including self-exploration, career exploration, career planning, and management skill-building activities. Focus groups and surveys with educators, families, and students indicated that Individual Learning Plans should be considered a promising practice for youth with and without disabilities.

ODEP supported the *Employment First State Leadership Mentoring Program*, an application of the Employment First framework for systems change. Employment First centers on the premise that all citizens, including individuals with significant disabilities, can fully participate in integrated employment and community life. The Program focused on aligning policies, coordinating resources, and updating service delivery models to increase integrated employment options for people with the

most significant disabilities. An evaluation was conducted to examine the impacts of the investments in state Employment First systems change efforts. Areas of focus included identifying common challenges faced by state governments and validating strategies and practices contributing to the implementation of Employment First objectives.

The *Apprenticeship Inclusion Models* project was an ODEP-funded pilot program designed to research, develop, test, and evaluate innovative strategies in existing apprenticeship programs that provide skills training to people with disabilities. Project goals focused on expanding access to inclusive apprenticeships for people with disabilities. Evaluation activities focused on data collected from select sites to identify lessons learned and inform practices in apprenticeships, workforce development, and employment. Guidance for employers and other organizations about developing inclusive apprenticeships, including actionable techniques and models, was developed and disseminated.

ODEP, in collaboration with ETA and SSA, sponsors eight *Retaining Employment and Talent after Injury/Illness Network* demonstration projects. The projects' primary goal is to increase employment retention and labor force participation of individuals who acquire and/or are at risk of developing disabilities that inhibit their ability to work. The secondary goal is to reduce the long-term work absences among project participants, including the need for SSDI and SSI. A Phase I and II evaluation of the project is ongoing.

ODEP recently sponsored the *Survey of Employer Policies on the Employment of People with Disabilities*, an update to a previously fielded survey on the same topic. The project collected data from employers on their organizational policies, practices, successes, challenges, and attitudes and beliefs in the recruitment, retention, and advancement of people with disabilities. The survey's goal was to inform

ODEP's strategies and policies for increasing employment opportunities for people with disabilities.

ODEP, in collaboration with the National Academy of Social Insurance, sponsored the *Improving Access to Data for Disability-Related Research* project. The project's goal was to improve access to data from Worker's Compensation, Temporary Disability Insurance, Paid Family Leave, and SSDI related to stay-at-work/return-to-work research. The project report provided aggregate data and information on the feasibility of obtaining individual data from state agencies to support this research. The report also presented and evaluated three options for developing data-sharing agreements with the states and opportunities for housing the data in a secure webbased resource.

ODEP sponsored a six-round evaluation of the *Disability Employment Initiative (DEI)*, an initiative jointly funded with ETA. The DEI goal is to increase access to training and employment opportunities and improve outcomes for youth and young adults with disabilities who are unemployed, underemployed, and/or receiving SSA disability benefits. The researchers used an experimental design to examine the implementation, outcomes, and impact of the DEI among the Rounds 1–4 grantees. Two quasi-experimental designs were used during the evaluation of Rounds 5–6, with the first examining the impact of DEI interventions on participants' employment and education outcomes. The second evaluated the impact of a career pathways component on participant outcomes. DEI funding to states continues, though the evaluation is now complete.

ODEP sponsored an evaluation of its *State Exchange on Employment and Disability* project. The initiative was designed to engage member-based state policymaker organization to serve as "intermediaries" between ODEP and state and local policymakers (e.g., National Conference of State Legislatures, Council of State Governments, Women in Government, and National Governors Association). The initiative's goal

was to promote employment opportunities for people with disabilities by addressing shortcomings in state policies that limit the ability of individuals with disabilities to secure or maintain employment. The evaluation used a formative design to examine the project's progress on short-, medium-, and long-term outcomes.

The ODEP-supported *SSI Youth Recipient and Employment Transition Formative Research Project* identified promising programs and policies for youth SSI recipients and testable strategies or strategy models for assisting young SSI recipients with the transition to sustained, gainful employment. Findings focused on promising approaches to promote employment for youth SSI recipients, identifying target populations for said strategies, and guidance for examining the efficacy of the strategies when scaled. The researchers also developed a description of the community of practice, its activities, and descriptions of collaborations between VR agencies and workforce development boards.

ODEP and CEO supported the *Evaluating the Accessibility of AJCs for People with Disabilities* study, which partnered with IMPAQ International LLC and its partners, the Burton Blatt Institute and Universal Designers and Consultants. The study examined the physical, communication, and programmatic accessibility of AJCs nationwide. A web-based survey was administered to all the estimated 2,453 AJCs, and site visits were conducted to 100 of them. Nine focus groups with people with disabilities were conducted during the in-person site visits. Data were collected to determine an accessibility rating using a four-level categorization with two categories distinguishing levels of full accessibility and two differentiating levels of non-full accessibility. A second related study *The Role of the Public Workforce System in the Ticket to Work Program for Persons with Disabilities* examined services for Ticket to Work participants. The goal of these two studies was to make recommendations where appropriate to improve these programs.

ODEP and CEO supported the Community College Interventions for Youth and Young Adults with Disabilities Evaluation to examine the implementation and outcomes of two sponsored demonstration projects presenting innovative education and career development service models to youth and young adults with disabilities. The study documented the extent of institutional change at the two colleges, assessed the fidelity of the implemented programs to the intended program models, assessed the potential for replicability and scalability, and determined the extent to which the grantees incorporated Universal Design for Learning principles and Guideposts for Success in the development and operation of their programs. Data collection included site visits; interviews with staff, instructors/faculty, and partner organizations; a longitudinal participant survey; telephone interviews with select student participants; college records; pathways program data; and grantee quarterly performance reports.

ODEP and CEO supported the Evaluation of Customer Satisfaction with ODEP TA Centers. Phase 1 of the study focused on the feasibility of conducting a customer satisfaction survey of the ODEP TA Centers, followed by semi-structured interviews of the TA Center staff, site visits, and a rigorous review of monthly and quarterly reports, grant applications, work plans, meeting notes, and logic models. Phase II focuses on customer satisfaction with two of the TA Centers: the Job Accommodation Network (JAN) and the Employer Assistance and Resource Network (EARN) on Disability Inclusion.

#### **U.S. DEPARTMENT OF VETERANS AFFAIRS**

#### Health Services Research and Development

VA's Health Services Research and Development division supports research and innovation designed to provide accessible, high-quality, cost-effective care for veterans, with additional benefits to the nation. Most of the division's sponsored research and development focuses on health and community inclusion, particularly for veterans with acquired disabilities. Examples of projects focusing on increasing the employability and employment success of veterans with disabilities are described below.

VA's Health Services Research and Development division supports the *Improving Access to Supported Employment for Veterans with Polytrauma/TBI* project.

The goal of the project is to increase veteran access to supported employment.

Specific activities include identifying actionable barriers to serving veterans using supported employment in polytrauma/TBI clinics and developing and refining a supported employment-TBI intervention toolkit. Following this, the researchers will conduct a qualitative and quantitative assessment of its effectiveness at a VA Medical Center using a pre/post design.

VA's Health Services Research and Development division supports the *Is Protection of Disability Benefits Associated with Employment in Veterans with TBI and PTSD?* project. This project is in preparation for a proposed Phase II research study. Specific activities include developing an interagency agreement between VA and SSA to forgo reductions in disability benefits for 5 years, ensure that wages earned by veterans do not count against received disability benefits for 5 years, and to ensure that veterans can apply for benefits regardless of their return-to-work status. The researchers are also pursuing an agreement with the Internal Revenue Service. Additional research preparations include reviewing de-identified, aggregated VA

data to identify sample regions that can provide treatment to address unmet psychological, psychosocial, and vocational rehabilitation needs.

#### NATIONAL SCIENCE FOUNDATION

The NSF mission is "to promote the progress of science; to advance the national health, prosperity and welfare; [and] to secure the national defense" (National Science Foundation, n.d.). Within this charge are several lines of support for the research community, including divisions of Biological Sciences, Computer and Information Science and Engineering, Education and Human Resources, Engineering, Environmental Research and Education, Geosciences, Integrative Activities, International Science and Engineering, Mathematical and Physical Sciences, and Social, Behavioral, and Economic Sciences. Much of NSF's sponsored work in disability occurs in its Education and Human Resources, Engineering (particularly its Disability and Rehabilitation Engineering portfolio), and Social, Behavioral, and Economic Sciences offices. NSF supports many initiatives to enhance opportunities for underrepresented communities, including individuals with disabilities, through educational and professional training support. Other areas of research include the characterization, restoration, rehabilitation, and/or substitution of human functional ability or cognition or interaction between persons with disabilities and their environment. Funding awards emphasize innovative, "high-risk high-reward" research.

A significant area of support from NSF focuses on STEM education to prepare the workforce for high-tech careers. It sponsored the development of a *Science Policy* Research Report: A Research Agenda for Science of Broadening Participation 2.0: STEM Employment of People with Disabilities. The report examined key issues and detailed barriers and opportunities for increasing participation in STEM fields among under-served populations, focusing on people with disabilities and high-technology industry and non-government employers. The report also explored best practices for inclusion in STEM disciplines, analyzed relevant research and policy approaches, examined a range of social, economic, methodological, institutional, and policy contexts, and provided recommendations to inform related government agenda setting and decision-making.

NSF also sponsored two SBIR development phases of *A Serious Game for Job Skills*, an educational video game. The game is designed to enhance student learning, reduce school costs, and increase the efficacy of transition plans, particularly readiness and knowledge of employment options, and improve students' attitudes toward full-time employment. The game includes a series of mini-games to allow participants to experience a "day in the life" of a person in a STEM career and social skills that allow individuals to interpret different cultures in a STEM environment. At the same time, a virtual mentor provides financial advice. Evaluation of the game was conducted in two phases, with observations and interviews with pilot testers occurring with the alpha build and a mixed-methods evaluation occurring with the beta version.

NSF sponsors the *Building Mutual Expertise for Physical Accessibility in Workplaces* to study how people with disabilities and employers currently exchange knowledge to create accessibility in workplaces. This project's overall goal is to identify and evaluate principles for socio-technical systems that facilitate knowledge exchange to solve accessibility problems in the workplace. Researchers will identify existing practices and attitudes of people with disabilities and employers around problem-solving for accessibility through individual interviews with employees and job-seekers with disabilities, co-workers, and employers without disabilities. They will then model the intellectual gaps in accessibility problem-solving among individuals with varying knowledge levels about accessibility and identify strategies for overcoming those gaps. This will be done by facilitating a series of small collective access groups where workplace stakeholders with and without disabilities collaborate to brainstorm solutions to accessibility problems.

These activities will then lead to the generation and validation of principles for mutual knowledge exchange in socio-technical systems.

NSF is sponsoring STEM Identity and Computer Education: Overcoming the Intersectionality of Culture, Poverty, and Disability to improve the accessibility of IT and coding for people with various types of physical disabilities as a path to higher-wage employment. This project is identifying specific barriers that prevent underrepresented students with disabilities from fully engaging in STEM education (specifically computer science) and effective methods and tools for teaching coding to persons with various disabilities.

NSF supports the *Professional Identity Development in Civil Engineering Students* with Disabilities project, a study examining the supports and barriers experienced by engineering students with disabilities. The researchers are conducting a longitudinal study of students with disabilities in civil engineering based on constructivist grounded theory. They are following an initial cohort of students from the fall of their first year through the spring of their junior year, with interviews twice a year (early fall and late spring). The second cohort, running concurrently, follows students from the spring of their junior year through their first year in the workplace, again with interviews twice a year. This approach spans the full undergraduate experience and the transition to work, and it provides a rich dataset from which to develop a theory of identity formation for this population.

NSF sponsors Building Research Capacity by Technological Interventions in Support of Mixed-Ability Workplaces to explore challenges that emerge during training sessions and the everyday work of people with cognitive and physical disabilities. The researchers are investigating theories that connect cognition with physical action to design novel technologies that augment the accessibility of mixed-ability workplaces and all workers' success. The project's goal is to build research capacity to generate fundamental, convergent research in support of mixed-ability workplaces and ultimately boost the diversity of the U.S. workforce.

The NSF-funded Collaborative Research: Improving the Future of Retail and Warehouse Workers with Upper-Limb Disabilities via Perceptive and Adaptive Soft Wearable Robots project will investigate modeling, perception, and control of soft wearable robots to provide physical assistance and skill training for older workers and workers with physical disabilities in jobs involving picking, placing, and assembly tasks. In addition to engineering research, the researchers are investigating the economic impacts of the technology, providing the first econometric data-driven understanding of the productivity and labor market effects of artificial intelligence- and robotics-driven augmentation, with a specific focus on the underrepresented population of individuals with disabilities. The researchers plan to develop a model of interaction between lightweight and complainant soft wearable robots with human workers. In addition, the researchers will develop a framework for transferring demonstrated skills through cost-function learning and model predictive control with perceptual feedback integration for online movement and impedance adaptation of exoskeletons. They will also develop an interactive visual perception framework that enables multimodal intention detection and action monitoring in a semantic 3D map of the dynamic workspace and provides in-context visual feedback for collaborative robot manipulation. The team will develop training programs for occupational therapists and people with upper-limb disabilities to enhance awareness and knowledge regarding assistive robot use and improve perception toward their use in collaborative workspaces. Federal data on occupational ability requirements will also be used to increase understanding of the economics of assistive technologies. Finally, the team will use quantitative and qualitative data from field experiments, interviews, and focus groups with employers and employees to determine attitudes, barriers, and best practices for the adoption and acceptance of assistive wearable technologies in the workplace.

NSF sponsors research on *Personalized Virtual Job Assistants to Prepare Individuals with Neurodevelopmental Disabilities for Entry-Level IT Jobs* to gain scientific understanding and develop technology to support more substantial participation of neurodiverse individuals in a future workforce. Key research questions include: (1) What tasks are appropriate for what segment of the neurodiverse worker population? (2) What are the basic task analysis principles that enable job decomposition and chaining? (3) What user interface design principles can minimize the cognitive burden of workers? (4) What aspects of worker behavior and performance can be observed unobtrusively and ethically, and when and how can support be provided? (5) How can communication between workers, employers, job coaches, and researchers be more effective?

NSF sponsors research on *Identifying Barriers and Supports for Physics Students* and Early Career Physicists with Disabilities to investigate the barriers and supports encountered by undergraduate and graduate physics students and early career physicists with disabilities in their learning and research experiences. Research questions include: (1) How is the existing culture in the physics research and instructional communities toward persons with disabilities shaped by the ability profile and other personal characteristics of the instructor/mentor and the student/mentee? (2) How does the existing culture in the physics research community vary across subfields and research types? (3) What are effective strategies for making physics more accessible and inclusive for persons with disabilities? (4) What are effective ways to train university faculty to better support undergraduate and graduate students and early career researchers with disabilities? In addition to collecting student data, the researchers will conduct surveys in collaboration with the American Physical Society to capture a broad population of practicing physicists. Interviews will be conducted with physicists with disabilities and their mentors.

NSF is funding research on the *Optimal Design of Disability Programs*. This initiative has three key components. The first component uses a randomized controlled trial to investigate how expectations about the availability of disability benefits in adulthood affect investment in human capital in childhood. The second is analyzing survey and administrative data to study how disability applicants, recipients, and non-applicants compare health shocks, broader shocks in permanent income, and other resources to tide consumers over in periods of economic crises. The third component will address the general equilibrium effects of disability insurance and examine variation across geographic areas in the ease of applying for disability benefits to estimate the effects of these programs on non-recipient family members, local labor markets, and community outcomes.

NSF is funding A Remote Multimodal Learning Environment to Increase Graphical Information Access for Blind and Visually Impaired Students. The project will investigate, develop, and evaluate an innovative remote learning system based on multiple sensory channels to strategically present information from auditory, linguistic, touch, and enhanced visual sensing. The first phase of the research investigates multimodal information processing to establish best practices for information delivery and non-visual graphical learning efficiency with experiments comparing graphical information presented in different modalities for three core STEM graphic themes: graphs, diagrams, and maps. The second phase of experiments investigates the remote learning system's efficacy and evaluates user performance on graphical STEM learning measures and key usability and satisfaction metrics.

#### **Technical Assistance and Best Practices**

ICDR member organizations provide significant disability employment TA and best practice dissemination to the research, policy, and practitioner communities. This assistance and information are based on research and practice-based knowledge generated by practitioners. Evaluation is a critical component of TA and best practice dissemination to gauge the value and efficacy of the services and information provided and develop the evidence base.

HHS, ED, and DOL support much of the federally sponsored disability employment TA and information dissemination. The projects listed below provide significant TA and information dissemination of best practices, primarily to the policy and practitioner communities.

#### U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

- The Disability Employment TA Center provides Administration on Disabilities grantees with tools and resources to assist individuals with disabilities in obtaining employment, with competitive wages, in integrated settings.
- The Partnerships in Integrated Employment System Change Grants seek to enhance collaboration across state systems to improve employment outcomes for individuals with developmental disabilities, focusing on youth and young adults. There are currently six states participating in the program, though the resources developed are available to all states.
- The Community of Practice for Supporting Competitive Integrated Employment for Individuals with Intellectual and Developmental Disabilities is a community of practice providing TA and facilitating capacity building to reform employment systems and increase competitive, inclusive employment for individuals with intellectual and developmental disabilities.

- Centers for Independent Living are federal grant-supported, nonprofit agencies
  that provide an array of independent living services, including services that can
  help with employment. They are consumer-controlled, community-based, and
  cross-disability in focus and provide local support in many community inclusion
  topic areas, including youth transition to postsecondary life.
- The Protection and Advocacy Systems are grant-funded, state organizations that advocate for competitive, integrated employment for people with disabilities and protect clients' rights to be free from employment discrimination based on disability. Though their focus is often legal, Protection and Advocacy Systems also provide information, service referrals, training, and TA to service providers, state legislators, and policymakers.
- The State Councils on Developmental Disabilities are federally funded organizations that promote competitive, integrated employment through systems change and capacity-building efforts at the state level. The Councils conduct outreach, provide training and TA, remove barriers, develop coalitions, encourage citizen participation, and keep policymakers informed about disability issues. Several Councils support Project Search, which provides internship opportunities for individuals with developmental disabilities.
- ACL's AT Programs provide grants to state AT programs to provide to individuals with disabilities and their families. The National Activities Program includes information on tools and services that can help a person with a disability perform activities that might otherwise be difficult, whether at home or in the workplace. It also provides grants, contracts, and cooperative agreements to individuals, service providers, states, and protection and advocacy organizations to support the implementation of the Assistive Technology Act of 2004.
- The University Centers for Excellence in Developmental Disabilities are grantees
   affiliated with universities that act as intermediaries between academic and
   local/state communities. Besides their work providing university student training,

- information dissemination, and research activities, many conduct activities that promote integrated employment for people with developmental disabilities.
- ACL's Profiles in Integrated Employment blog series describes best practices from agencies and states promoting integrated employment for people with disabilities. An example of this is their tips for employment service providers transitioning to an integrated employment model.

#### **U.S. DEPARTMENT OF EDUCATION**

- The National Deaf Center on Postsecondary Outcomes provides TA, training, and information dissemination to support the postsecondary success of deaf students. The online training is targeted toward certified rehabilitation counselors and provides continuing education units. The Center also possesses resources focusing on transition planning, work-based learning, workforce accommodations, and postsecondary access for serving deaf individuals.
- The National Technical Assistance Center on Transition disseminates transition
  practice guidance, toolkits, lesson plans, assessment tool recommendations,
  and policy and practice guidance on competitive, integrated employment for
  youth with disabilities. This TA Center also sponsors a series of webinars on
  transition-related topics.
- The Center for Parent Information and Resources possesses an online library of resources for families on various topics, including transition, employment, and AT for individuals with disabilities.
- The Center on Inclusive Software for Learning focuses on the accessibility of digital educational resources. In addition to guidance to promote accessibility, it is developing a customizable screen-reading program that will, for example, adjust the font, text size, spacing, and background color of digital learning materials.

- The Center on Technology Systems in Local Educational Agencies/Center on Inclusive Technology and Education System is developing and disseminating evidence-based practice frameworks to help local education agencies more effectively use instructional and assistive technology. They also provide TA to local education agencies, educators, and families on how to use these technology tools with students with disabilities.
- The National Center on Accessible Educational Materials (AEM) disseminates information focusing on AEM's creation and use. AEM materials and technologies are designed for learning use across a wide range of individual variability, regardless of format or features. The Center has developed dedicated resources for supporting the use of AEM in early learning, K-12, higher education, and the workforce.
- The AIVRS TA Center provides three TA tiers to the AIVRS programs. Intensive, sustained training and TA includes on-site, ongoing services with policy, programmatic, practice, or operational changes to support increased support capacity or improved systematic outcomes. Targeted, specialized training and TA focuses on support that can impact categories of recipients and is not extensively specialized. It can also include organizing events, such as strategic planning, conferences, and series of conference calls focusing on AIVRS recipients' needs. Finally, universal, general training and TA is primarily delivered through information dissemination or brief staff interactions such as phone calls or emails.
- The Job-Driven VR TA Center focuses on improving VR agencies and professionals' capacity to use market data and more effectively collaborate with the business community to increase competitive employment opportunities for people with disabilities. As a component of their work, the center supported employers' efforts to find and retain productive workers and created sustainable job-driven practice models for the VR professional community.

- The VR TA Center—Targeted Communities focuses on providing TA and information dissemination to VR agencies so they can improve employment outcomes for people with disabilities in frequently marginalized communities. Marginal communities include adjudicated adults and youth, culturally diverse populations, federal financial assistance recipients, high school dropouts and functionally illiterate consumers, persons with multiple disabilities, residents of rural and remote communities, and youth with disabilities in foster care.
- The VR TA Center for Youth with Disabilities provides TA and information dissemination designed to increase the number of youth with disabilities served by VR agencies. It also focuses on increasing the number of these youth who pursue and obtain postsecondary training or education and increasing the number of these youth who obtain competitive employment.
- The Workforce Innovation TA Center focuses on TA and information dissemination to promote the effective implementation of WIOA by state VR agencies. Key topic areas include pre-employment transition services, execution of Section 511 requirements, resources and strategies for competitive, integrated employment, integration of VR into the workforce development system, business and employer engagement, labor market information, apprenticeships, and customized employment.
- The Automated Personalization Computing Project is designed to increase community access for people with disabilities by increasing access to information and communication technologies using automated, personalized AT. The program is developing an IT infrastructure that allows users to save access preferences in the cloud or on another technology, allowing internet-capable technologies to access and run their accessibility preferences automatically.

#### **U.S. DEPARTMENT OF LABOR**

- The Partnership on Employment and Accessible Technology project provides TA and disseminates information focusing on using technology to make work accessible for people with disabilities. It developed tools and toolkits that focus on IT accessibility procurement planning, staff training, eRecruiting technology access, telework, and technology accessibility self-assessment. Their Future of Work series focuses on the accessibility opportunities associated with emerging technologies such as artificial intelligence, autonomous vehicles, and extended reality.
- The Job Accommodation Network (JAN) is a free service for employers and employees focusing on workforce accommodations and disability employment. The project offers one-on-one workplace accommodation guidance, information on key legislation, such as the ADA, and resources on self-employment and entrepreneurship. JAN also possesses an extensive information library and a searchable database of accommodations.
- The Employer Assistance and Resource Network (EARN) on Disability Inclusion supports employers by providing a centralized source of employer-focused tools, resources, and publications on disability inclusion best practices. EARN also offers online training, including accreditation from the HR Certification Institute and Society for Human Resource Management.
- The LEAD Center focuses on innovations in policy, employment, and economic advancement for people with disabilities through individual and systems-level change. Key activities include promoting equal opportunity in the workforce for youth and adults with disabilities, advancing the development of inclusive career pathways, supporting financial literacy, and providing data to the field on employment and related outcomes for people with disabilities. Critical TA and information dissemination topics include WIOA/workforce development, customized employment, financial literacy and capability, cross-system collaboration, and inclusive career pathways.

# **Future Directions**

The ICDR developed the *Working Group Research Gaps, Problem Statements, and Final Priorities* supplement to the 2018–2021 Government-Wide Strategic Plan.

The supplement describes the development of a series of proposed goals and objectives for federally funded disability research, including research focused on the employment of people with disabilities. During its development, the working group brainstormed research gaps and opportunities and then developed problem statements and goals that emerged from the issue areas.

Both the supplement and the Government-Wide Strategic Plan were developed several years ago. Many of the research projects, evaluations, TA centers, and information dissemination activities that have occurred over the last few years, and described above, have been influenced by these documents and the federal disability leaders who participated in their development. The problem statements, and associated goals developed by the working group, describe challenges for the disability community that have not been solved and objectives for equity and community inclusion that have not been met. Several that align with the topic of employment are described below.

# Assistive Technology/Universal Design Working Group Recommendations

The ICDR working group produced several problem statements and goals focusing on AT and UD, many with application to improving the employment opportunities and conditions for people with disabilities.

#### **BUILDING CAPACITY**

The ICDR working group described the importance of research on integrating accessibility and disability into the training curriculum of engineers, developers, designers, and the health workforce. It also discussed monitoring the development and implementation of certification programs, such as the International Association of Accessibility Professionals certification, and the possibility of certifying VR assessment and intake specialists. The working group also recommended further developing best practices for training individuals with disabilities for success in the workforce.

#### **ECONOMICS OF ASSISTIVE TECHNOLOGY AND UNIVERSAL DESIGN**

The working group described a need to examine the economic impact of AT and UD and highlight the real costs and benefits to counter current misperceptions. A component of this could be to show the benefit of designing products for accessibility at the onset rather than accruing later costs through revision or modification. A business case for accessibility should be made, and the total social cost of inaccessibility should be described. The working group developed several distinct goals within this topic, with several having a bearing on employment.

**Goal:** Assess the value of assistive and accessible technologies in employment and to manufacturers. Consider the rising population of older adults.

When describing this goal, the working group focused on highlighting the costs and benefits of AT and UD, the need for an accessibility business case, and the value of tax incentives. Within this goal, the group focused on the need to include older adults, who are aging into disability, in the research to prolong their ability to work productively, as well as individuals with disabilities who may need AT and UD to enter and maintain employment.

#### TRANSITION TO ADULTHOOD

Research has shown that youth and young adults continue to face obstacles as they transition from school to post-school life. Access to, and success within, postsecondary education and employment are two significant challenge areas for this population. Research shows that youth and young adults with disabilities have lower graduation rates, lower postsecondary enrollment rates, and higher unemployment rates than peers without disabilities. Many current transition best practices have not been rigorously tested. There is a need for evidence-based practices to guide policy and practice and enhance the likelihood of success in postsecondary education and employment. The working group identified several potential areas for transition research, including workplace learning, career planning, early VR involvement, mitigating risk factors, employer perspectives, and disclosure of disability.

#### **DEVELOPMENT OF EVIDENCE-BASED PRACTICES AND SCALE-UP**

Transition is a field informed by practice, and it needs to evolve to one informed by evidence obtained in real-world settings. Transition planning and services are highly individualized, and research on practices, particularly employment practices, that can be scaled-up are needed. The working group advocated encouraging researchers to: (1) develop evidence-based practices; (2) research how to bring promising evidence-based practices, interventions, and programs to scale; (3) incorporate principles of implementation science; and (4) plan for scale early in the research design process.

#### CAREER PATHWAYS AND THE PARTICIPATION OF INDIVIDUALS WITH DISABILITIES

Career pathways are a workforce development approach that focuses on earning stackable, industry-recognized credentials in in-demand fields to improve the

employability and earning potential of workers. The working group recommends advancing the study of career pathways to include people with disabilities.

Goal: Building and utilizing the evidence-base in youth transition.

The working group advocated creating a Transition Research Academy to analyze and advance research methodology within the field. The Academy would require partnering with universities; federal, state, and local agencies; individuals with disabilities; innovation hubs; and training institute leaders. This group would supplement the federal interagency transition committees and partnerships currently in place and support developing an improved transition-related evidence base and effective methods of assessing transition at the system level.

# Resources

The following section offers a variety of resources relating to employment for people with disabilities within the following categories: accessible technology, employees, employers, interagency groups, TA centers, and the workforce system.

# **Accessible Technology**

# Accessible Playbook for Emerging Technologies Initiative

https://www.peatworks.org/futureofwork/playbook/

This initiative offers a blueprint for how to launch successful initiatives to encourage the development of emerging technologies that are accessible for people with disabilities. It offers information on the challenges of accessible emerging technologies, how to launch an initiative stage by stage, example questions to assist leaders in this field, and examples from two initiatives to show how they executed each step of the process.

#### Automated Personalization Computing Project

https://www2.ed.gov/programs/rsa-apcp/index.html

This project's goal is to improve outcomes for people with disabilities through improving access to information and communication technologies and AT. It seeks to create an IT infrastructure that allows users to store their preferences in the cloud or other technology. These saved preferences would then allow for the user's device to automatically run their personalized AT solutions.

# Computer/Electronic Accommodations Program (CAP)

http://www.cap.mil/

CAP provides AT and accommodations to individuals with disabilities and wounded, ill, or injured service members in the DOD. The CAP program provides

technology to improve an individual's capabilities to maintain, increase, or improve their job performance. Their website provides AT resources that can be sorted by disability type in the following five categories: (1) blind/low vision; (2) cognitive; (3) communication; (4) deaf/hard of hearing; and (5) dexterity. Individuals needing these technology resources can submit a request for a product from their database or may request an AT product not on their list. CAP also curates an Interpreter Services Database. In addition, the CAP program has a variety of product demonstration videos illustrating how various AT devices can benefit people with disabilities.

# **Employees**

# Ability One

https://www.abilityone.gov/

Ability One is one of the largest sources of employment for people with disabilities in the United States. This program is run by the U.S. AbilityOne Commission, an independent federal agency. It provides employment opportunities for people who are blind or have a significant disability in manufacturing and delivering products to the federal government.

# Employment and Living with HIV/AIDS

https://www.dol.gov/agencies/odep/topics/hiv-aids

As one of the six federal agencies responsible for implementing the National HIV/AIDS Strategy for the United States, DOL held an HIV/AIDS Employment Roundtable in 2011. From the information gathered at this event, DOL put together resources for individuals, employers, and service providers on employment and living with HIV/AIDs.

#### Financial Education and Incentives

https://www.dol.gov/agencies/odep/program-areas/individuals/financialeducation-asset-development

Since financial education is critical to creating self-sufficiency for all workers, especially those with disabilities, DOL put together a list of resources on how to stretch wages further, invest wisely, avoid debt, and plan for retirement.

#### Personal Assistance Services

https://www.dol.gov/agencies/odep/program-areas/employment-supports/personal-assistance-services

DOL recognizes that personal assistance services at home and work can be vital for employment success. To raise and improve awareness on available options for personal assistance services, DOL released resources about them for people with disabilities.

# Randolph-Sheppard Vending Facility Program

https://rsa.ed.gov/about/programs/randolph-sheppard-vending-facility-program
The Vending Facility program was designed to increase employment and
training for people who are blind. It provides people who are blind and have the
proper licensing to have priority in operating vending facilities on federal and
other property.

#### Veterans

https://www.dol.gov/agencies/odep/program-areas/individuals/veterans ODEP offers a variety of resources on their website related to DOL initiatives to provide training and employment services to veterans and returning service members with disabilities.

#### Work Incentives

https://www.ssa.gov/disabilityresearch/wi/generalinfo.htm
SSA provides general information related to work incentives on their website.
Work incentives refer to special rules that allow people with disabilities receiving social security payments to work and still qualify for monthly payments and Medicare or Medicaid.

 Youth Transitions Collaborative/The Center for Health Care Transition Improvement https://www.dol.gov/agencies/odep/alliances/hscf2

ODEP, the Youth Transitions Collaborative, and The Center for Health Care Transition Improvement have partnered to collaborate on promoting the employment of youth and young veterans with disabilities, including those with chronic health conditions. This partnership provides members and stakeholders with information, TA, and access to resources to build regional and national capacity to empower youth and young veterans with disabilities.

# **Employers**

# **Apprenticeship**

https://www.dol.gov/agencies/odep/program-areas/apprenticeship ODEP offers a series of #ApprenticeshipWorks guides, models, and videos to showcase the benefits and opportunities of inclusive apprenticeships to youth, educators, service providers, and businesses. Additionally, ODEP hosts an Apprenticeship Toolkit as well as a variety of resources on pre-apprenticeship programs, research on apprenticeship, and information for employers interested in apprenticeship programs.

#### Autism

# https://www.dol.gov/agencies/odep/program-areas/autism

To address the challenges Americans on the autism spectrum face in securing competitive, integrated employment, ODEP has curated a list of resources related to employment and autism. They specifically offer a large section of resources for employers to expand and improve access to employment for candidates on the autism spectrum through modifications to recruitment practices, hiring practices, and onboarding policies.

#### **Customized Employment:**

https://www.dol.gov/agencies/odep/program-areas/customized-employment ODEP hosts information about customized employment, which refers to the relationship between the employee and employer being personalized to meet the needs of both. ODEP presents evidence-based research showing that customized employment leads to positive employment outcomes for people with disabilities. They host a variety of videos on this topic, as well as a compendium of customized employment implementation across the country.

# Flexible Work Arrangements

https://www.dol.gov/agencies/odep/program-areas/employment-supports/flexible-work-arrangements

ODEP supports the idea of creating flexible work arrangements, to include options for telework for employees. This allows employees to have more autonomy over their schedules and flexibility with balancing personal and professional commitments. Their site offers details for employers who want to start offering telework options.

#### Mental Health

https://www.dol.gov/agencies/odep/program-areas/mental-health ODEP provides a list of resources for employers to ensure that their disabilityrelated policies and practices consider the needs of people with mental health conditions.

# Preparing the Workplace for Everyone (Emergency Preparedness)

https://www.dol.gov/agencies/odep/pubs/ep/preparing2

ODEP offers resources for federal agencies working to strengthen their

Occupant Emergency Plans. They offer a framework built from effective practices from 20 agencies, reports and articles, and emergency plans. ODEP provides information on emergency preparedness plan development, implementation, practice, and maintenance.

#### Schedule A Appointment

https://www.usajobs.gov/Help/working-in-government/unique-hiring-paths/individuals-with-disabilities/

This section on USAJOBS contains information on the special hiring authority under Schedule A, including resources and tips for both applicants and employers. Schedule A jobs can be applied for by people with intellectual, severe physical, or psychiatric disabilities.

# **Tax Incentives for Employers**

https://www.dol.gov/agencies/odep/program-areas/employers/taxincentives-for-employers

ODEP provides information on various tax incentives that employers who make adaptions or accommodations for people with disabilities may be eligible for.

# **Universal Design**

https://www.dol.gov/agencies/odep/program-areas/employment-supports/ universal-design/resources

ODEP curates a list of resources related to UD that may be helpful for employers to consider for their employees.

# What Can You Do? The Campaign for Disability Employment

https://www.whatcanyoudocampaign.org/

Created through ODEP funding, the Campaign for Disability Employment is a "collaborative effort among several disability and business organizations that is working to change attitudes about disability and employment." More information about member organizations and recent activities is available on their website.

#### **Women with Disabilities**

https://www.dol.gov/agencies/odep/program-areas/individuals/Women ODEP offers information and resources on the unique challenges women with disabilities face. As the co-chair of the Federal Partners' Committee on Women and Trauma with the Substance Abuse and Mental Health Services Administration's Center for Mental Health Services, ODEP offers input in this workgroup within the Federal Partnership on Mental Health Transformation.

# Workforce Recruitment Program

https://www.dol.gov/agencies/odep/program-areas/employers/workforce-recruitment-program

This program for college students with disabilities focuses on connecting federal and private-sector employers with highly motivated college students and recent graduates with disabilities. This program is run by ODEP and DOD's Defense Human Resources Activity's Diversity Management Operations Center.

#### Youth

https://www.dol.gov/agencies/odep/program-areas/individuals/youth
ODEP works to influence national policy related to youth transitioning from
school to adulthood and employment. Initiatives include the Apprenticeship
Inclusion Model, Guideposts for Success, Federal Partners in Transition, Policy
Development Center, and SSI-Youth. ODEP's site also provides monthly youth
labor force participants statistics.

# **Interagency Groups**

#### Federal Partners in Transition

https://www.dol.gov/agencies/odep/program-areas/individuals/youth/federal-partners

The Federal Partners in Transition is an interagency collaboration between ED, HHS, DOL, and SSA that focuses on "promoting inclusive service delivery for transitioning youth with disabilities from school into postsecondary education, the workforce, and independent living." This website offers resources on their interagency strategy, policy goals, fact sheets, and a variety of other in-depth information on this topic.

# Multi-agency Task Force on Increasing Employment Opportunities for Americans with Disabilities

https://acl.gov/programs/employment/multi-agency-task-force-increasing-employment-opportunities-americans

In 2018, the Multi-agency Task Force on Increasing Employment Opportunities for Americans with Disabilities was created. It is an interagency task force that aims to "address the chronic unemployment rate of Americans with disabilities." This website hosts their most recent statement on National Disability Employment Awareness Month.

# Transition Steering Committee

https://www2.ed.gov/about/offices/list/osers/transition/index.html

The Transition Steering Committee brings together four offices in ED and aims to focus on the services, needs, and outcomes of youth with disabilities who might benefit from these offices' services. Their website contains numerous recent publications and initiatives.

#### **Technical Assistance Centers**

#### Center for Parent Information and Resources (CPIR)

https://www.parentcenterhub.org/

This Hub hosts materials created for Parent Centers around the country that provide support and services to families of children with disabilities. They host online learning resources, parent discussion forums, news, an event calendar, information about Parent Centers, and a variety of other resources.

# Center on Inclusive Software for Learning

https://cisl.cast.org/

The Center for Inclusive Software for Learning is a project designed to explore and create tools that enable K–12 students with disabilities to have access to engaging and high-quality learning materials, specifically open education resources. Their website details the tools they are creating and findings of their research.

# Center on Technology Systems in Local Educational Agencies/Center on Inclusive Technology and Education System

https://cites.cast.org/

This Center aims to create and disseminate a framework of evidence-based practices to assist local schools to work together to improve the use of technology to support students' success. The Center also offers TA to local education agencies, teachers, and families to encourage programs to use technology accessible to students with disabilities. Their website hosts information about their framework and collaboration with local education agencies.

#### Disability Employment TA Center

https://acl.gov/programs/employment/disability-employment-technical-assistance-center

This cross-program, evidence-based training and TA Center aims to help Administration on Disabilities grantees develop and increase their impact to their communities. This Center works to develop fact sheets, trainings, and webinars as resources for grantees.

# **National Center on Accessible Educational Materials (AEM)**

https://aem.cast.org/

AEM offers TA, coaching, and resources across all 50 states to increase the use and availability of accessible educational materials and technologies for students of all ages. Their website provides information on supporting learners at each stage of the lifespan.

#### **National Deaf Center on Postsecondary Outcomes**

https://www.nationaldeafcenter.org/resource/deaf-people-and-educationalattainment-united-states

This Center funded by ED aims to "close the substantial gaps in education and employment that exist for deaf people in the United States and its territories." They offer TA and information dissemination. Their website offers research and data on employment outcomes, information on assistance and referrals, inspirational stories, online classes, and a variety of other resources.

#### **National TA Center on Transition**

https://transitionta.org/

This TA Center's purpose is to assist state and local education agencies, state VR agencies, and VR service providers in implementing evidence-based and promising practices to ensure students with disabilities, including those with significant disabilities, graduate prepared for success in postsecondary education and employment.

#### American Indian Vocational Rehabilitation Services TA Center

http://aivrttac.org/

This Center offers three main types of training and TA to the AIVRS programs: intensive sustained technical training and assistance; targeted, specialized

training and assistance; and universal, general TA and training. This Center offers webinars, training, newsletters, videos, toolkits, fact sheets, and a variety of other resources on their website.

#### ExploreVR

#### https://www.explorevr.org/

ExploreVR is a platform that provides VR agencies and their partners resources on research and evidence-based tools for planning, evaluation, and decision-making. ExploreVR seeks to increase knowledge about the public VR program and how it impacts employment and disability services around the country. Their website provides VR agencies, directors, researchers, and policymakers with information on VR to inform programmatic and policy decisions.

# Project E3 (Vocational TA Center for Targeted Communities)

# https://projecte3.com/

This Center's aim was to improve the employment outcomes for people with disabilities in traditionally marginalized communities. This Center resulted in increased participation in VR services for people with disabilities in these communities. The Center also found improved employment outcomes. Their website is available with information about their activities, as well as archived webcasts.

#### VR-Youth TA Center

# https://y-tac.org/

This Center is funded by ED and offers training and TA to state VR agencies. The Center offers assistance specifically with finding and engaging youth with disabilities who are not receiving special education services, as well as youth who are out of school and employed. Their website provides information on their Guideposts for Success framework, training modules, professional development, models and strategies, and a variety of other resources to

promote the transition of youth to adulthood leading to postsecondary education and competitive, integrated employment.

#### **Workforce Innovation TA Center**

http://www.wintac.org/

Funded by ED, this TA Center provides training and TA to state VR agencies, related agencies, rehabilitation professionals, and service providers to assist them with the implementation requirements of WIOA. Their website offers a wide variety of resources by topic areas, trainings, reports, and information on pilot projects.

#### **LEAD Center**

http://leadcenter.org/

This Center, funded by ODEP, aims to create equal opportunities in employment for youth and adults with disabilities. They advocate for inclusive career pathways and host an interactive Road to Inclusive Career Pathways on their website. They also provide the most updated information and data on employment outcomes for people with disabilities.

#### Job Accommodation Network (JAN)

https://askjan.org/

ODEP funds JAN, which provides free, expert, and confidential assistance with workplace accommodations and disability employment questions. JAN aims to find solutions that help both the employer and the employee. Their website hosts a variety of resources for both employees and employers, as well as an ADA library.

# Employer Assistance and Resource Network (EARN) on Disability Inclusion https://askearn.org/

EARN is funded through ODEP and is an online hub filled with employerfocused tools, research, and resources on disability inclusion. EARN's website has information by topic area, such as tax incentives for hiring people with

disabilities or how to recruit candidates. EARN hosts free trainings on disability inclusion topics and also curates examples of policies and employers who are engaging in disability inclusion in the workplace.

# **Workforce System**

# Employment First

https://www.dol.gov/agencies/odep/initiatives/employment-first

DOL provides information on Employment First, their framework for a system of change focused on the principle that all citizens, including people with disabilities, are capable of full participation in integrated employment and community life. Their website hosts information about how this approach urges other public policies, services, and reimbursement to align with this framework. Success stories and briefings on Employment First are also included on the website.

# Integrated Employment

https://www.dol.gov/agencies/odep/program-areas/integrated-employment DOL offers information on integrated employment, which refers to jobs held by people with the most significant disabilities in an employment setting where most employees are not persons with disabilities. Their site provides information about Medicaid Buy-In options as well as provider transformation efforts related to integrated employment.

#### Ticket to Work

https://www.ssa.gov/work/

Ticket to Work is an SSA program for Social Security disability beneficiaries age 18 through 64 who have a desire to work. This program supports career development and encourages financial independence. Their site hosts information for beneficiaries and assistance with finding meaningful employment through their Employment Networks.

# **Workforce System**

https://www.dol.gov/agencies/odep/program-areas/workforce-system ODEP works together with DOL's workforce development system, which is delivered through the nationwide AJCs that provide employment, education, and training services for job-seekers and employers. ODEP's website offers workforce system policy briefs, a list of workforce organizations and associations, WIOA resources, private and nonprofit workforce resources, and ODEP TA initiatives and resources.

# References

ADA Amendments Act of 2008, Americans With Disabilities Act of 1990, 42 U.S.C. § 12101 et seq. (2008). https://www.ada.gov/pubs/adastatuteo8mark.htm

Administration for Community Living. (2020). About the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). https://acl.gov/about-acl/about-national-institute-disability-independent-living-and-rehabilitation-research#:~:text=NIDILRR's%20mission%20 is%20to%20generate,for%20its%20citizens%20with%20disabilities.

Employment and Training Administration, U.S. Department of Labor. (n.d.). *About*. https://www.dol.gov/agencies/eta/wioa/about

Institute on Disability. (2020). 2019 annual report on people with disabilities in America. University of New Hampshire. https://disabilitycompendium.org/sites/default/files/user-uploads/2019%20 Annual%20Report%20---%20FINAL%20ALL.pdf

Interagency Committee on Disability Research. (n.d.). *Government-wide strategic plan fiscal years* 2018-2021. https://icdr.acl.gov/system/files/resources/ICDR%20Final%20Report%203.4.19\_0.pdf

Interagency Committee on Disability Research. (n.d.). Working group research gaps, problem statements, and final priorities: A supplement to the government-wide strategic plan. https://icdr.acl.gov/system/files/resources/Working%20Group%20Research%20Gaps%20Problem%20Statements%20and%20Final%20Priorities\_o\_o.pdf

Interagency Committee on Disability Research. (2020). *Government-wide strategic plan development process fiscal years 2017-2020*. https://icdr.acl.gov/system/files/resources/ICDR%20Government-Wide%20Strategic%20Plan%20Development%20Process.docx

National Center for Special Education Research. (n.d.). About us. https://ies.ed.gov/ncser/aboutus/

National Science Foundation. (n.d.). At a glance. https://www.nsf.gov/about/glance.jsp

Office of Disability Employment Policy, U.S. Department of Labor. (n.d.). *Disability employment statistics*. https://www.dol.gov/agencies/odep/publications/statistics

U.S. AbilityOne Commission. (2020). *Home*. https://www.abilityone.gov/

U.S. Bureau of Labor Statistics. (2015). What are the unemployment rate, labor force participation rate, and employment-population ratio? https://www.bls.gov/cps/cps\_htgm.htm#definitions