

Promoting quality career pathways for individuals with disabilities through the public vocational rehabilitation program

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Abstract.

BACKGROUND: Career Pathways initiatives in Vocational Rehabilitation (VR) have emerged as a crucial strategy for enhancing quality employment outcomes among individuals with disabilities. This paper conducts a comprehensive examination of the integration of Career Pathways within VR, emphasizing its significance in aligning vocational goals with evolving labor market demands.

OBJECTIVE: Drawing from the innovative Career Pathways initiatives introduced by the Rehabilitation Services Administration (RSA), this paper addresses the RSA Career Pathways Demonstration Initiatives from 2015 to 2019 alongside the ongoing Disability Innovation Fund-Career Advancement Initiative Model Demonstration Project. The paper also discusses the strengthening of Career Pathways through the development of high-quality Individualized Plans for Employment and program evaluation.

METHODS: This study utilized a modified exploratory case study approach to examine past and present career pathways initiatives in state VR agencies. Data were gathered from publicly available documentation and archival records, focusing on 12 cases from two national initiatives: the RSA Career Pathways Demonstration Initiatives (2015–2019) and the Disability Innovation Fund-Career Advancement Initiative Model Demonstration Project (2021–2026).

RESULTS: The study reveals a substantial, positive impact on employment outcomes for individuals with disabilities through Career Pathways in VR programs, facilitated by the integration of adaptable pathways, individualized planning, and program evaluation.

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CONCLUSION: The paper concludes with a comprehensive discussion that reflects on the legacy of Career Pathways initiatives and outlines a sustainable model for the future. It highlights the critical role of VR programs in nurturing adaptable pathways for individuals with disabilities, thereby creating a more inclusive and empowering environment for their vocational aspirations.

Keywords: Career pathways, individuals with disabilities, employment, vocational rehabilitation

1. Introduction

A Career Pathways system is a series of training, education, and support services that help individuals enter or advance within a specific occupation or occupational cluster (U.S. Department of Labor, 2018). This is accomplished by aligning secondary and post-secondary education with local, regional, or state-level workforce development systems and human services. A recent meta-analysis conducted by the Department of Labor's Chief Evaluation Office in collaboration with Department of Labor's Employment and Training Administration, highlights the impacts of 46 career pathway programs, drawing on evaluation findings published between 2008 and 2021 (Strawn et al., 2021). This data underscores the effects of the various career pathway programs, particularly those focused on increasing educational attainment and employment in targeted industries. Small increases in overall employment rates and short-term earnings during the period of up to 35 months after individuals participated in these programs, and non-effect on medium/long-term earnings (from 36 months or more) were found. In regard to career pathways programs' characteristics associated with those impacts, the data indicated: a) larger educational impacts when employers provide input on curricular or program design, and partnering with a staffing agency; b) small educational impacts when community colleges serve as the lead agency or partner; c) larger labor market impacts when the program serves a larger share of Black participants; and d) smaller labor market impacts when the program offers flexible sequencing of courses, tuition, or other financial assistance. These findings validate the effectiveness of career pathways programs, including related sectional training and integrated education and training, across various funding streams and lead organizations. These programs significantly enhance credential attainment and employment outcomes within targeted industry sectors (Strawn et al., 2021).

1.1. Importance of integrating career pathways in vocational rehabilitation

The landscape of vocational rehabilitation has undergone a significant transformation with the implementation of the Workforce Innovation and Opportunity Act (WIOA) in 2014. This paradigm shift has introduced a dynamic approach to vocational rehabilitation, focusing on career pathways that aim to nurture lifelong career development and enhance the successful integration of individuals with disabilities into the modern workforce.

WIOA, signed into law on July 22, 2014, brought pivotal changes to the Vocational Rehabilitation (VR) program, including the integration of education and training and the promotion of career pathways programming. These changes reflect a comprehensive approach to assessing individuals' success within career pathways. Core performance indicators, which primarily measure employment and postsecondary outcomes, play a central role in evaluating the effectiveness of VR programs. They focus on outcomes such as obtaining competitive integrated employment after program exit, median earnings, and postsecondary diploma attainment. Importantly, sustained employment, which goes beyond mere job placement, signifies that individuals are not only entering the workforce but also maintaining their employment over an extended period. Moreover, the measurable skill gains (MSG) indicator measures the progress participants make toward their education or training. This progress can encompass both secondary and postsecondary education, highlighting the importance of the MSG indicator as individuals progress through their career pathways. As individuals advance in their education and training, the MSGs become instrumental markers of their development along the career pathways (WIOA §116).

Prior to the enactment of WIOA, public vocational rehabilitation services fell short of delivering comprehensive career development support. A holistic career development process involves three essential

elements: self-exploration of an individual's career-related skills, interests, and values; exploration of potential occupations and career goals aligned with these attributes; and strategic career planning and management to achieve one's chosen employment and personal goals (Strauser et al., 2020).

The previous practices within VR services were characterized by inflexible and insensitive status codes related to consumer progress and case status, with an overemphasis on closure status 26 (successful closure) and closure status 28 (unsuccessful closure). Two significant policy barriers hindered counselors from providing effective career development services: the lack of qualitative criteria for selecting employment outcomes and the restrictive 90-day placement-to-Status-26-closure regulation. Consequently, individuals receiving VR-supported counseling and placement services often experienced a revolving door of entry-level positions with inadequate post-employment assistance.

The shift towards prioritizing "career" over "closure" in the VR process signifies a necessary change. Embracing best practices in rehabilitation services ensures alignment with this paradigm shift. Theoretical insights into career development, combined with disappointing post-VR employment outcomes, prompted disability policymakers to reassess closure criteria and service priorities. Establishing qualitative criteria for planning and evaluation and enhancing post-employment services has broadened the focus of VR services to encompass career development comprehensively.

1.2. Purpose

The purpose of this manuscript is to comprehensively explore the integration of Career Pathways into vocational rehabilitation, emphasizing the pivotal changes introduced by the WIOA and the role of Rehabilitation Services Administration (RSA) in advancing innovative Career Pathways initiatives. Additionally, we aim to provide an in-depth understanding of Career Pathways, its key elements, and the Integrated Career Pathways Model. This manuscript also offers insights into the RSA Career Pathways Demonstration Initiatives of 2015–2019 and the ongoing Disability Innovation Fund-Career Advancement Initiative Model Demonstration Project. Furthermore, we discuss the significance of supporting Career Pathways through the development of Quality Individualized Plans for Employment (IPE). Through this exploration,

we seek to highlight the transformative potential of Career Pathways in enhancing career development and employment outcomes for individuals with disabilities.

1.3. Rehabilitation service administration's innovative career pathways initiatives

Given the growing emphasis on Career Pathways, RSA has proactively sponsored multiple rounds of innovation funding to advance this approach to career planning and development within the public VR system. Initially, the Career Pathways for Individuals with Disabilities (CPID) grants (2015–2019) aimed to promote state VR agency partnerships in the development and use of career pathways to support career growth and quality of employment outcomes for individuals with disabilities in high-demand, high-quality occupations. Quality outcomes are typically defined as higher earnings, over time, with opportunities for advancement, and employer-sponsored benefits. Participating state agencies included the Nebraska Department of Education, Division of Rehabilitation Services; the Virginia Department for Aging and Rehabilitation Services; the Kentucky Office of Vocational Rehabilitation for the Blind, Department of Workforce Development; and the Georgia Vocational Rehabilitation Agency.

Building upon the initial CPID grants, RSA is currently funding six sites through the Disability Innovation Fund-Career Advancement Initiative Model Demonstration Project (CFDA 84.421C) until October 2026. Nebraska VR participated in the original CPID and was again selected to participate in the Career Advancement DIF. Five additional VR programs in Oregon, Vermont, Michigan, Wisconsin, and Massachusetts were also selected through a competitive grant process. These sites are tasked with identifying and demonstrating evidence-based practices to improve outcomes for VR-eligible individuals with disabilities regarding advancement in high-demand, high-quality careers, such as science, technology, engineering, and math (STEM), including computer science careers. The aim is to shift the narrative away from merely "jobs" and instead promote entrée into career pathways in industry-driven sectors through pre-apprenticeships, registered apprenticeships, and Industry Recognized Apprenticeship Program (IRAP). Doing so will improve and maximize competitive integrated employment outcomes, economic self-sufficiency, independence, and inclusion in society, and assist

in reducing reliance on public benefits (e.g., Supplemental Security Income (SSI)/Social Security Disability Insurance (SSDI), and/or Temporary Assistance for Needy Families (TANF), and State or local benefits). The sites are recruiting both VR-eligible individuals as well as those previously served by VR who are seeking to advance their career options.

2. The essentials of career pathways

2.1. Background of career pathways

WIOA (2014) places increasing emphasis on interagency cooperation and coordination across all relevant state agencies and systems, emphasizes access to postsecondary education and training, highlights external and internal focus on disability awareness, and encourages self-advocacy to improve opportunities and successful employment of people with disabilities (Castruita Rios et al., 2023). WIOA introduces common performance measures used for negotiations and evaluations within and across programs. Consequently, VR agencies now report on business engagement measures, leading many to adopt a ‘dual customer’ approach, aiming to work closely with businesses to address both supply and demand needs.

As part of ongoing efforts to meet the demand for a skilled workforce, the U.S. Departments of Labor, Education, and Health and Human Services formed a federal partnership in 2012. They issued a joint commitment letter to support the use of career pathways, promoting individuals’ attainment of high-value, industry-recognized credentials. This approach helps individuals make more informed choices and achieve long-term career success. In the following year, the U.S. Department of Transportation also joined the federal partnership, focusing on promoting career pathways for high-demand jobs in the transportation industry and its subsectors.

2.2. Definition of career pathways

WIOA provides a definition of and framework for the implementation of career pathways at the federal, state, local, and tribal levels. A career pathway is a combination of rigorous and high-quality education, training, and other services that

- aligns with the skill needs of industries in the economy of the state or regional economy involved;
- prepares an individual to be successful in any of a full range of secondary or postsecondary education options, including apprenticeships registered under the Act of August 16, 1937;
- includes counseling to support an individual in achieving the individual’s education and career goals;
- includes, as appropriate, education offered concurrently with and in the same context as workforce preparation activities and training for a specific occupation or occupational cluster;
- organizes education, training, and other services to meet the needs of an individual in a manner that accelerates educational and career advancement to the extent practicable;
- enables an individual to attain a secondary school diploma or its recognized equivalent, and at least one recognized postsecondary credential;
- helps an individual enter or advance within a specific occupation or occupational cluster [Section 3(7) of WIOA, 2014].

2.3. Key elements of career pathways

Six key elements of career pathways have been identified to help guide state and local agencies through the essential components necessary for developing a comprehensive career pathways system (U.S. Department of Education, 2015). The key elements are as follows: *Building Cross-Agency Partnerships and Clarifying Roles*, *Identifying Industry Sectors and Engaging Employers*, *Designing Education and Training Programs*, *Identifying Funding Needs and Sources*, *Aligning Policies and Programs*, and *Measuring System Change and Performance*. The components encompassed within each element are not sequential and thus may occur in any order.

Comprehensive career pathways involve multiple partnerships with differing roles. The state leadership team represents a diverse group of state and local public agencies, private and non-profit organizations, and employers denoting different sectors in the economy to guide the development of the career pathways system. The team models interagency collaboration, integrates sector strategy principles, crafts and implements common goals, and establishes a shared vision for how career pathways can benefit the local community and stakeholders.

The intent of career pathways is to train individuals to meet the skill needs of industries and employers, therefore engaging these entities as partners is essential. For instance, understanding the state and local labor market trends helps both counselors and clients identify the demand for jobs and informs the client's choice to support their plan. In addition, active employer involvement helps ensure that the identified career and technical education and training meets the skill and competency needs of local employers.

As aforementioned, career pathways are a way of blending education and training programs and work experiences to meet employers' skill needs aligned with in-demand industries. Examples include contextualized curricula, integrated basic education and occupational training, career counseling, support services, assessments, and credit transfer agreements that ease entry and exit and promote credential attainment (U.S. Department of Education, 2016).

Identifying sources of available funding from partner agencies and other public and private resources is another key element of career pathways. States and local entities need to examine whether administrative or legislative policy changes are necessary to help individuals participate in programs, enable funding, or support the professional development of staff to support career pathways. Lastly, appropriate measures and evaluation methods should be in place to support continuous improvement of the career pathways system and ensure it is in line with the new WIOA Common Performance Measures.

2.4. *Integrated career pathways model*

Achieving successful integration of career and technical education programs of study with Career Pathways Systems necessitates a collaborative commitment from multiple partners to enhance transparency, alignment, and systemic transformation. The Integrated Career Pathways Model (U.S. Department of Education, 2015) demonstrates how a comprehensive Career Pathways System can cater to both transition-aged youth and working-age adults, fostering collaboration, alignment, and the development of structured pathways leading into and through postsecondary credential programs. Each step within these pathways should be meticulously designed to prepare individuals for the subsequent levels of employment and education while providing them with credentials that hold value in the labor market.

To reiterate, Career Pathways serve as a means to blend vocational training, work experience, and

higher education, facilitating career growth. Successful integration of career and technical education programs of study with Career Pathways Systems necessitates the active involvement of multiple partners working together to achieve greater alignment and systemic transformation. Consequently, this approach yields system outcomes that encompass financially sustainable, aligned career pathways systems for both youth and adults with disabilities, an increased number of skilled workers holding credentials valued by the labor market, and enhanced cost efficiencies through the reduction of service duplication.

3. Methods

Our research involved a modified exploratory case study of past and present career pathways initiatives (Yin, 2018). The modified approach offered a flexible framework for reviewing and presenting individual cases defined as state VR agencies selected to participate in two national initiatives. The aim was to provide a general descriptive overview of each along with outcomes, as available, noted across the respective sites. Publicly available documentation and archival records served as the primary data sources for the review. The RSA Career Pathways Demonstration Initiatives took place between 2015 and 2019 and the Disability Innovation Fund-Career Advancement Initiative Model Demonstration Project sites (CFDA# 84.421C) are funded 2021 to 2026. A total of 12 cases were reviewed: four representing prior Career Pathways Demonstration sites and eight sites from the current Career Advancement Initiative.

4. Results

A descriptive summary of each site provides an overview of the variety of approaches used to design and implement career pathways programs within state VR agencies.

4.1. *Overview of RSA career pathways demonstration initiatives 2015–2019*

Nebraska, Virginia, Kentucky, and Georgia each embarked on distinct career pathways initiatives aimed at empowering individuals with disabilities and connecting them with meaningful employment

opportunities. In the following sections, we examine the specifics of each state's initiative, highlighting their goals, strategies, and impacts on the lives of individuals with disabilities.

4.1.1. *Nebraska: Career pathways advancement project (CPAP)*

Nebraska's CPAP is a multifaceted program designed to empower individuals with disabilities to enter, advance, and succeed in their chosen career paths (Nebraska VR, 2021). The initiative employed a two-pronged approach: focusing on the supply side by supporting individuals and the demand side by connecting with businesses and employers.

On the supply side, CPAP utilized an upskill/backfill model. Upskilling involves providing individuals with opportunities to further their education, gain additional credentials, and become more competitive job seekers in their desired fields. Backfilling, on the other hand, aids individuals who are already employed by enhancing their skills and knowledge to progress within their organizations. Essentially, upskilling helps individuals "get a job," while backfilling reinforces the skills of those already employed to facilitate career advancement.

In practice, CPAP offered flexible entry and exit points into career pathways, accommodating individualized services and goals. Eligible participants included those with prior successful case closures from Nebraska VR agencies in specific career pathways such as architecture/construction, healthcare, information technology, manufacturing, and transportation. The project's recruitment efforts involved personalized outreach to potential participants, providing information about training programs, credentials, and program requirements while considering their personal and professional commitments. Additionally, CPAP collaborated with over 400 businesses in these career pathways, both to fill vacant positions and to refer existing employees with disabilities to receive advanced training, contributing to cost savings in onboarding and early training phases.

4.1.2. *Virginia: Career pathways for individuals with disabilities (CPID)*

Virginia's CPID initiative was a comprehensive effort to integrate career pathways into the academic and career planning of students and youth, particularly those with disabilities. Individuals were recruited through the Department of Aging and Rehabilitation Services (DARS) and the Department for

the Blind and Vision Impaired (DBVI) to participate in CPID. The majority of the population served at CPID by 2020 was between the ages of 14 and 23, with 85% significantly disabled (Bryan et al., 2020). The program collaborated with various sector partners, including businesses, vocational evaluation experts, and workforce and community organizations. Initially focused on the modern manufacturing and information technology sectors, CPID engaged in in-depth discussions with sector partners to align with Virginia's labor market needs. Partnerships with organizations such as the Virginia Manufacturing Association and the Northern Virginia Tech Council helped identify employer needs and training requirements in these sectors.

Virginia CPID also worked closely with workforce development, adult education, and VR agencies to align with other core programs authorized by WIOA and federal-funded career pathway initiatives. In specific regions of Virginia, CPID partners with a Disability Employment Initiative Grant to share resources and opportunities for participants (Bryan et al., 2020). The initiative places significant emphasis on strengthening connections between employers and individuals with disabilities through paid internships, pre-apprenticeship programs, and hands-on career exploration activities, such as virtual job shadowing. These efforts have resulted in positive outcomes, including over 321 post-secondary credentials obtained by participants and higher employment rates for CPID participants compared to non-participants.

4.1.3. *Kentucky: Project case*

Kentucky's Project Case targeted four key industry sectors: information technology, manufacturing, industrial technology, and healthcare/nursing (Kentucky Career Center, 2020). The project operated in both rural Eastern Kentucky and Metro Louisville, enabling Kentucky to serve a diverse range of individuals in urban and rural areas. The cornerstone of Project Case is collaboration among various stakeholders, including state VR, workforce centers, social service agencies, educational institutions, employers, and more. Notably, the project introduced career pathway coordinators, strategically embedded within local workforce development boards. These coordinators play a vital role in liaising with workforce partners, maintaining direct employer contact, and providing sector-specific advice to VR consumers and counselors.

Kentucky's workforce boards, with strong connections to local businesses, offered valuable insights into alternative training routes and employer-recognized credentials, complementing the traditional role of VR counselors. This shift in perspective reframes VR as a source of highly skilled individuals, capable of contributing significantly to the workforce. Project Case also fostered partnerships with secondary and post-secondary education providers, facilitating accessible STEM events, welding programs, and career exploration activities. These initiatives empowered consumers to explore and prepare for their chosen career paths actively. On an individual level, Project Case offered personalized sessions covering self-advocacy, resume building, interview skills, and other targeted topics to address specific barriers faced by consumers.

The introduction of a reverse career fair, where job seekers promote their skills and abilities to employers, further enhanced connectivity and reframes the employment process. Overall, the project has strengthened relationships between the state VR office and its workforce partners, offering valuable insights into local training opportunities and fostering a culture of collaboration.

4.1.4. Georgia: Explore, engage, employ (E3)

Georgia's E3 project, organized by the state VR agency, aimed to facilitate the transition of youth and students with disabilities from school to post-secondary education and employment (AbleGeorgia, 2016). The initiative was particularly focused on preparing participants for careers in manufacturing and robotics, offering an array of tools and resources. E3 set clear goals, targeting youth and students aged 14–24, whether they are currently in school or out of school, and aimed to serve 3,000 participants over five years. It pursued three primary objectives: increasing customized career pathways, achieving competitive integrated employment, and enhancing average weekly wages and employer benefits.

The project's operational framework consisted of three phases: "explore," "engage," and "employ." "Explore" introduces participants to the world of work and potential career goals, "engage" allows active participation in work and career-related activities, and "employ" encompasses two phases. Phase one focuses on activities like job fairs, professional development, job placement, and supported employment, while Phase two offers ongoing support, including accommodations, career advancement, and

follow-up services. E3 placed significant emphasis on career pathways exploration tools, including virtual job shadowing, career exploration, informational videos, life skills instruction, and pre-employment transition services. These resources empowered participants to make informed decisions about their career paths.

In summary, each state's career pathways initiative was tailored to its unique population and industry sectors, with a focus on empowering individuals with disabilities to access meaningful employment opportunities. These initiatives emphasized collaboration, engagement, and personalized support to help participants achieve their career goals.

4.2. Disability innovation fund-career advancement initiative model demonstration project-current

In recent years, seven U.S. states have embarked on innovative Career Pathways Initiatives, supported by significant funding allocations (total funding invested by RSA; \$80,091,786 across 60 months), to address the needs of individuals with disabilities and advance their economic self-sufficiency (RSA, n.d.). Each state's initiative is unique, tailored to its specific needs and priorities.

In this section, we provide a brief synopsis of select Career Pathways Initiatives in states such as Nebraska, Oregon, Vermont, Michigan, Wisconsin, Massachusetts, California, and Virginia. These initiatives represent a collective effort to empower individuals with disabilities, promote diversity and equity, and bridge the gap between disability services and the labor market. It is noteworthy to mention that Nebraska and Virginia have had the previous grants and are participating in both rounds of this initiative. The following sections offer insights into the goals, strategies, and expected impacts of these initiatives, shedding light on their potential to contribute to a more inclusive workforce.

4.2.1. Nebraska department of education: Vocational rehabilitation

Nebraska VR is dedicated to enhancing economic self-sufficiency for individuals with disabilities by promoting career advancement in various high-demand industries. Building upon an existing grant, this project expands outreach, develops an electronic data system, and forges partnerships to connect 350 eligible individuals to businesses and educational

institutions, allowing them to enter career pathways with growth potential.

4.2.2. Oregon vocational rehabilitation

The Inclusive Career Advancement Program (ICAP) by Oregon VR aims to increase educational and economic equity for people with disabilities. Collaborating with 17 community colleges and workforce partners, ICAP offers personalized support and navigation to engage 500 VR clients in career pathways, promoting access to opportunities and sustainable employment.

4.2.3. Vermont agency of human services: Vocational rehabilitation

The Vermont Career Advancement Project (VCAP) introduces Career Pathways Navigators to support VR consumers in pursuing earn-while-you-learn programs. VCAP partners with education institutions, vocational centers, and workforce organizations to offer comprehensive support, such as benefits counseling and assistive technology, in five high-wage career sectors.

4.2.4. Michigan department of labor and economic opportunity: Michigan rehabilitation services

The STEMM-UP project addresses employment disparities among individuals with disabilities from marginalized groups. Collaborating with Michigan State University, it focuses on enhancing career readiness and job placement in STEM fields by developing interventions, conducting needs assessments, and evaluating outcomes for around 850 participants.

4.2.5. Wisconsin department of workforce development: Division of vocational rehabilitation

The Wisconsin Career Advancement Initiative seeks to enhance career pathways outcomes for VR consumers by improving partner collaboration, training staff, using evidence-based decision-making, and providing support for over 1,000 individuals. By fostering partnerships and connecting consumers to training, this initiative aims to increase competitive integrated employment.

4.2.6. Massachusetts rehabilitation commission: Vocational rehabilitation division

The RISE Career Advancement Model in Massachusetts serves young adults with disabilities, focusing on psychological factors like self-efficacy

and self-advocacy. This alternative to standard VR offers three phases—Career Readiness, Career Pathways, and Career Extended Support—to improve career sustainability and reduce reliance on public assistance for 1,000 participants.

4.2.7. California department of rehabilitation

The Pathways to Success Project (PSP) in California aims to increase the participation of individuals with disabilities in high-wage careers, including STEM fields. PSP's unique service design aligns caseloads with individual goals, utilizing sector-specific teams and state-of-the-art technology to engage businesses and provide work-based learning experiences, internships, and career-level employment for CDOR consumers. This project targets underrepresented groups, promoting diversity, equity, and inclusion.

4.2.8. Virginia department of aging and rehabilitative services: Rehabilitation services

The Pathways to Careers project in Virginia focuses on assisting VR-eligible individuals with disabilities in obtaining or advancing in sustainable, high-wage careers. Collaborating with various state agencies and stakeholders, this project aims to develop policy changes, expand employment opportunities, and provide training and support for at least 750 individuals to reduce reliance on public assistance and promote equity.

In the following section, we explore how the development of high-quality IPE aligns with the overarching goals of adaptability and progress required to navigate career pathways successfully. This exploration ultimately underscores the importance of IPEs in fostering the economic self-sufficiency of individuals with disabilities. Additionally, we address some of the basic target program outcomes of Career Pathways initiative.

5. Strengthening career pathways through the development of quality IPE and program evaluation

5.1. The development of IPE

The development of quality IPE holds paramount importance in supporting career pathways for individuals with disabilities. These plans serve as roadmaps that not only outline an individual's vocational goals

but also chart the course for their journey toward meaningful and sustainable employment. Here, we explore the crucial role of IPEs in facilitating career pathways and empowering individuals with disabilities to thrive in the workforce.

5.1.1. Personalized career guidance

IPEs are not one-size-fits-all documents; rather, they are tailored to each individual's unique strengths, abilities, and aspirations. By engaging individuals with disabilities in the IPE development process, vocational rehabilitation counselors can gain a deeper understanding of their interests and career goals. This personalized approach enables counselors to provide more accurate and relevant career guidance, ultimately leading to better employment outcomes.

5.1.2. Setting clear goals

Career pathways are often characterized by a series of progressive steps and milestones. IPEs play a pivotal role in setting clear and achievable goals along these pathways. By delineating the necessary vocational services, training, and support, IPEs provide individuals with disabilities a structured framework for advancing in their chosen careers. This clarity empowers them to stay focused on their professional development.

5.1.3. Access to necessary services

Career pathways may require individuals to acquire specific skills, credentials, or accommodations to succeed. IPEs serve as a compass for identifying and accessing the essential services and resources needed. Whether it's vocational training, assistive technology, or workplace accommodations, IPEs ensure that individuals with disabilities receive the support required to excel in their chosen fields.

5.1.4. Alignment with labor market demand

Developing IPEs in alignment with labor market demand is pivotal for individuals to secure employment that is not only meaningful but also sustainable. Vocational counselors can use labor market information to guide their clients toward career pathways that offer long-term prospects. This proactive approach helps individuals avoid dead-end jobs and navigate toward fields with growth potential.

5.1.5. Adaptability and lifelong learning

Career pathways are dynamic, and individuals may need to adapt to changing circumstances and opportunities. IPEs are not static documents; they can be

adjusted and refined as individuals progress in their careers. This adaptability encourages lifelong learning and ensures that individuals remain competitive in their chosen fields.

5.1.6. Accountability and advocacy

IPEs establish a clear foundation for accountability. Individuals, counselors, and service providers all have defined roles and responsibilities outlined in the plan. This structure promotes accountability, ensuring that everyone involved works collectively to achieve the identified vocational goals. Additionally, IPEs can serve as powerful advocacy tools, empowering individuals to assert their rights and needs in the workplace.

5.1.7. Measuring success

Measuring success along a career pathway is crucial for tracking progress and celebrating achievements. IPEs include performance indicators and benchmarks that enable individuals and counselors to assess whether goals are being met. This data-driven approach not only helps in identifying areas that may need adjustment but also boosts motivation by showcasing the journey's milestones.

In summary, supporting career pathways through the development of quality IPE is integral to unlocking the full potential of individuals with disabilities. These plans offer personalized guidance, set clear objectives, provide access to vital services, and ensure alignment with labor market demands. By fostering adaptability, accountability, and a commitment to lifelong learning, IPEs empower individuals to embark on successful career pathways, overcoming barriers and contributing their unique talents to the workforce.

5.2. Program and system assessment

Evaluation of Career Pathways initiatives must be multi-faceted, ongoing, and address individual outcomes, programmatic and system outcomes. Some of the basic target outcomes are:

- Increase use of career pathways when exploring vocational goals with clients.
- Increase the number of individuals who achieve competitive integrated employment.
- Increase earning potential and better opportunities for career advancement.
- Increase business support and training (i.e., providing natural supports).

- Build partnerships with community organizations or entities in place to help secure long-term economic benefits.
- Monitor participating clients' and employers' satisfaction with the services provided.
- Monitor labor market outcomes:
 - Improvement in labor market outcomes for this state/region.
 - Higher earnings for completers (explore earnings data relative to participant characteristics).

6. Discussion

The Career Pathways Initiatives implemented by various states in collaboration with the RSA have undeniably played a crucial role in reshaping the vocational landscape for individuals with disabilities. These initiatives, driven by a commitment to empower, educate, and elevate, have harnessed innovation, partnership, and personalized support to facilitate career development and meaningful employment opportunities for individuals who have historically faced barriers to inclusion in the workforce.

6.1. Legacy of career pathways initiatives

One question that naturally arises when considering the impact of these initiatives is whether their effects endure beyond their initial implementation. In examining the legacy of the Career Pathways Initiatives, one cannot overlook the profound impact on individuals' lives. For those who participated in these programs, the initiatives have been life-altering. Participants have gained not only the skills and credentials needed to access competitive integrated employment but also the confidence and self-efficacy that are essential for success in the workforce. Moreover, the Career Pathways Initiatives have instilled a cultural shift in how we perceive and approach disability in the workplace. By partnering with businesses and employers, these initiatives have helped break down stereotypes and misconceptions about individuals with disabilities. Employers who were part of these projects have experienced firsthand the value that individuals with disabilities bring to their organizations, leading to more inclusive hiring practices beyond the scope of the projects.

In some states, initiatives like Nebraska's CPAP have continued to flourish. CPAP's upskilling and

backfilling approach has created a sustainable model that allows individuals to continually progress in their careers. The flexible entry and exit points into career pathways have ensured that individuals can return for further training or upskilling as needed, keeping them competitive and adaptable in a rapidly changing job market. Virginia's CPID initiative has made significant strides in integrating career pathways into academic and career planning for students and youth. The partnerships forged with businesses and sector experts have continued to provide valuable insights into labor market needs. The emphasis on paid internships, pre-apprenticeship programs, and career exploration activities has not only led to increased postsecondary credentials but also improved employment rates for CPID participants. These practices have been embraced by educational institutions, furthering the integration of career pathways into academic curricula.

Kentucky's Project Case has taken a collaborative approach that extends beyond the scope of the initial initiative. By embedding career pathway coordinators within local workforce development boards, Kentucky has created a sustainable model for connecting VR consumers with workforce partners and employers. This shift in perspective, which reframes VR as a source of highly skilled individuals, has continued to influence how VR counselors engage with consumers and employers alike.

Georgia's E3 project has been instrumental in facilitating the transition of youth and students with disabilities into postsecondary education and employment. By offering tools and resources for career exploration and providing clear pathways, E3 has equipped participants with the skills and knowledge needed to make informed decisions about their careers. This approach, which emphasizes the importance of career readiness and sustainability, has influenced similar initiatives in other states.

6.2. A sustainable model for the future

The success and legacy of these initiatives suggest a model that can be applied not only within the field of VR but across various sectors. At its core, this model hinges on collaboration, adaptability, and a commitment to lifelong learning. First and foremost, collaboration has been a driving force behind the success of these initiatives. By forging partnerships with businesses, educational institutions, workforce development boards, and community organizations, the initiatives have tapped into a diverse range of

expertise and resources. This collaborative approach has not only broadened the horizons for individuals with disabilities but has also nurtured a culture of inclusivity and diversity in the workforce.

Moreover, with the inclusion of pre-employment transition services following the passage of WIOA, there is an opportunity to look at how career pathways can be introduced and further explored by students at the early stages of career planning. The early introduction of career exploration and development strategies aligns with the goal of sustainability. By adopting these strategies at an early stage, students can build a strong foundation that seamlessly integrates career pathways throughout the VR process.

Second, adaptability has been a defining feature of the Career Pathways Initiatives. Recognizing the dynamic and ever-evolving nature of career pathways, these initiatives have embraced flexibility in their design. The capacity to adapt and refine services, training, and support as individuals progress in their careers ensures their continued competitiveness and relevance in their chosen fields. This adaptability has proven to be a pivotal factor in sustaining the impact of these initiatives.

Lastly, a commitment to lifelong learning has been a driving force behind the success of these initiatives. The emphasis on continuous skill development, upskilling, and career advancement has instilled in participants a mindset of lifelong learning. This commitment to personal and professional growth not only benefits individuals but also contributes to a more agile and competitive workforce.

7. Conclusion

The Career Pathways Initiatives undertaken by states in partnership with RSA have left a lasting legacy that extends far beyond their initial implementation. These initiatives have transformed the lives of individuals with disabilities, empowered them to pursue meaningful careers, and challenged societal perceptions of disability in the workforce. As we reflect on the achievements and impact of these initiatives, it is clear that they have set a precedent for how we approach VR and career development for individuals with disabilities. The collaborative, adaptable, and lifelong learning-focused model they represent provides a blueprint for future endeavors in this field and beyond.

Moving forward, we must build upon the successes and lessons learned from these initiatives. We should

continue to foster partnerships, adapt to evolving career landscapes, and prioritize the ongoing development of individuals with disabilities. By doing so, we can ensure that the legacy of the Career Pathways Initiatives endures, creating a more inclusive, diverse, and equitable workforce for all.

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Conflict of interest

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Ethics statement

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Informed consent

Not applicable.

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