Bridging School and Work: Evidence-Based Transition Practices for Autistic Students

Josh Taylor, PhD
Holly Whittenburg, PhD

WHO WE ARE

Dr. Holly Whittenburg
Associate Professor,
Washington State University

Dr. Josh Taylor
Associate Professor,
Washington State University

Introduction

3-2-1

- 3 things about yourself …
- 2 things you know about autism or transition …
- 1 thing you want to learn this afternoon or 1 question you have …

Objectives for Today

- Identify **evidence-based predictors** of postschool success for students with autism
- Apply **strengths-based, inclusive transition strategies** for supporting transition age youth, including those from rural and underserved communities
- Select and use **research-based tools and approaches** to enhance transition planning, career and job development, and sustainable long-term employment supports

What we know

- Persistence of poor outcomes (Winsor et al., 2021)
- Limited inclusive education (Kurth et al., 2014)
- Predictors of postschool success (Mazzotti et al., 2021)
  - Inclusive education
  - Work experience
  - CTE coursework
  - Receiving VR job placement services
  - High parental expectations for employment
  - Postsecondary educational experiences

ASD and the Workplace

- Difficulties with social communication
  - Interacting and communicating with co-workers and customers
  - Accepting correction and supervision
  - Understanding workplace norms and expectations
  - Developing work relationships

ASD and the Workplace

- Independence
  - Reliance on prompting
  - Checking accuracy of work
  - Transitioning between tasks
  - Problem-solving and prioritizing

Project SEARCH

- Immersion in local business
- Three 10- to 12-week internship experiences
- Employability skills instruction
- Supported employment services
- Collaboration between schools, VR agencies, and businesses

(Daston et al., 2012)

Project | SEARCH

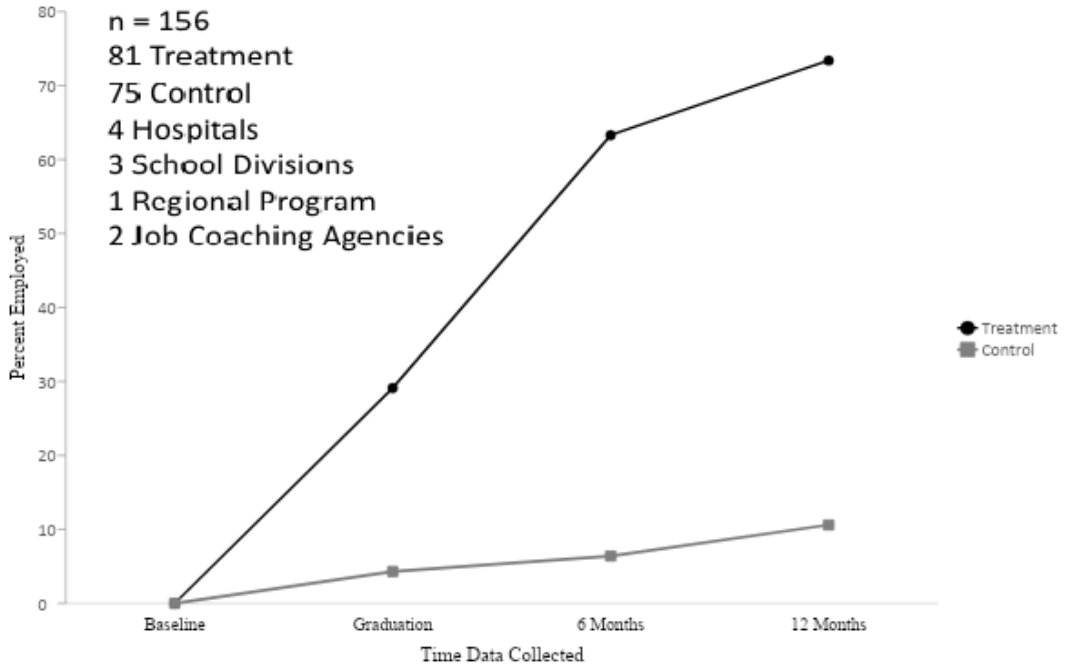
Project SEARCH + ASD Supports

Also incorporates:

- Applied behavior analysis techniques
- Evidence-based instructional strategies
- Customized employment

(Wehman et al., 2014; Wehman et al., 2019)

School 2 Work



Project SEARCH + ASD Supports

- Project SEARCH Video
- Results(Wehman et al., 2017):
  - 87% employment rate for the group who participated in the internship program at twelve months after graduation
  - 12% employment rate for the school-based group
  - Support needs for the control group did not change over time, but decreased significantly for the treatment group

What we Learned

The importance of:

- effective instruction
- access to competitive, integrated work experiences
- intensive experiences over time
- individualized vocational assessment and training
- collaboration between schools, VR, and local businesses
- training and support

How are we preparing students with autism for college and career opportunities?

(Taylor, 2021; Taylor et al., 2023)

Workforce Innovation and Opportunity Act (2014)

- Significant shift in employment and transition policy
- Emphasis on competitive, integrated employment (CIE)
- Dedicated 15% of VR funds to provide Pre-Employment Transition Services (Pre-ETS) for students prior to HS graduation
- Encouraged increased collaboration between schools and VR agencies

(Taylor et al., 2021)

Pre-Employment Transition Services (Pre-ETS)

(Taylor et al., 2021)

Key Theme Findings

Instructional Priorities

- Employment Skills
- PSE Skills
- Self-Advocacy
- Independent Living

Instructional Contexts

- Community-based work experiences
- PSE experiences
- Short-term events and programs

Networks of Stakeholders

- Employer partnerships
- Coordination with LEAs
- State and local support
- Universities and colleges
- Family involvement

(Taylor et al., 2021)

Quick Discussion

How do these themes align with what you are seeing and/or doing in New York?

Digging deeper…

- Not clear the extent to which state VR agencies are incorporating research-based transition recommendations (RBTRs) including:
  - Predictors of successful outcomes (Mazzotti et al., 2021)
  - Transition-focused best practices (Rowe et al., 2021) into WIOA

- Developed codebook of 16 RBTRs in areas of: (a) career awareness, (b) work preparation experiences, (c) collaboration, (d) workplace readiness and skill development, and (e) transition planning

(Whittenburg et al., 2023)

Overall Findings

- States are innovating practices, but inconsistently
- Focus on interagency collaboration and career awareness
- Students with IDD benefit most from work experiences (preferably paid) prior to graduation
- Work-based learning experiences (WBLE) lead to higher rates of employment and better long-term career trajectories
- However, few students with disabilities receive WBLE prior to graduation
- Not clear ***how*** transition services are offered in conjunction with inclusive education
- Future research needed to examine equity of service delivery and outcomes

(Taylor et al., 2022; Whittenburg et al., 2023; Whittenburg, Taylor et al., 2025)

Quick Discussion

- What are some of the supports for helping students with autism have work experiences prior to graduating?
- What are some of the barriers?

Why are WBLEs important for students?

- Students with disabilities who participate in WBLEs, especially PAID experiences, are more likely to be employed after graduation than their peers who do not participate in WBLEs

- Students who participate in WBLEs:
  - Are better able to generalize skills
  - Learn general and job specific skills
  - Opportunities to interact with peers without disabilities
  - Increase their self-worth
  - Increase their independence

- PAID work experiences lead to greatest student benefits (Carter et al., 2012)

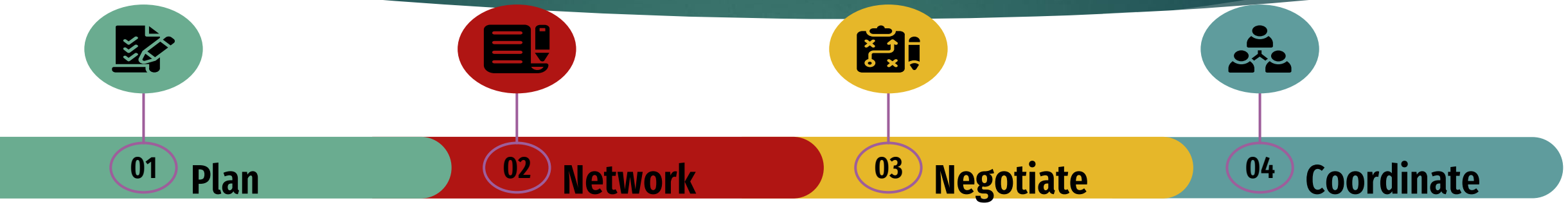
Career Exploration

- Job shadowing
- Career Exploration
- Informational Interviews

Career Preparation

- On-Campus Jobs
- School-based enterprises
- Job clubs
- Service Learning
- Apprenticeships
- Internships
- **Paid Employment**

How do we set up WBLEs?



- Use Person-Centered Planning strategies to gain a better understanding of the student
- Match Students to meaningful jobs

- Use community-resource mapping to build your network
- Utilize your social network

- Negotiate paid employment

- Coordinate who is providing services and when

Person-Centered Planning

What are the students' post-school goals?

Students' Preferences, Interests, Needs, and Strengths

What supports and services does the student need to reach their goal?

Match Student to Meaningful Job

Interests

Preferences

Goals

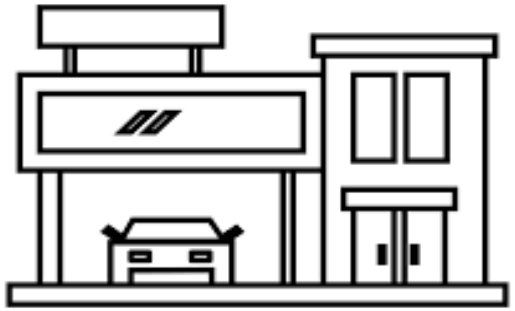
Needs

Strengths

JOB MATCH

Work environment

Type of tasks



Location

Supervision

Considerations for Students with Extensive Support Needs

Duration

How much time do students need at work sites to learn skills?

Natural Supports

What supports are already available to students?

Supplemental Supports

What additional supports may students need? How will these support be faded over time?

School Support

What instruction or support do students need at school to help them be successful in the community?

Build Routines

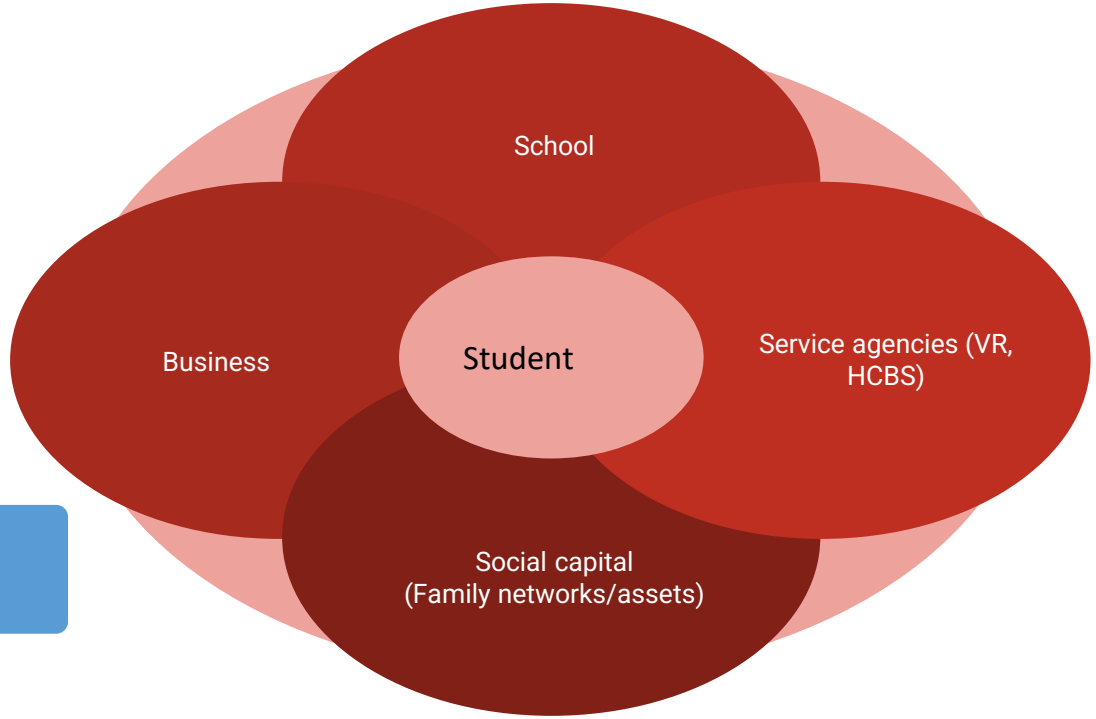
What routines can we establish to help students understand expectations?

High expectations

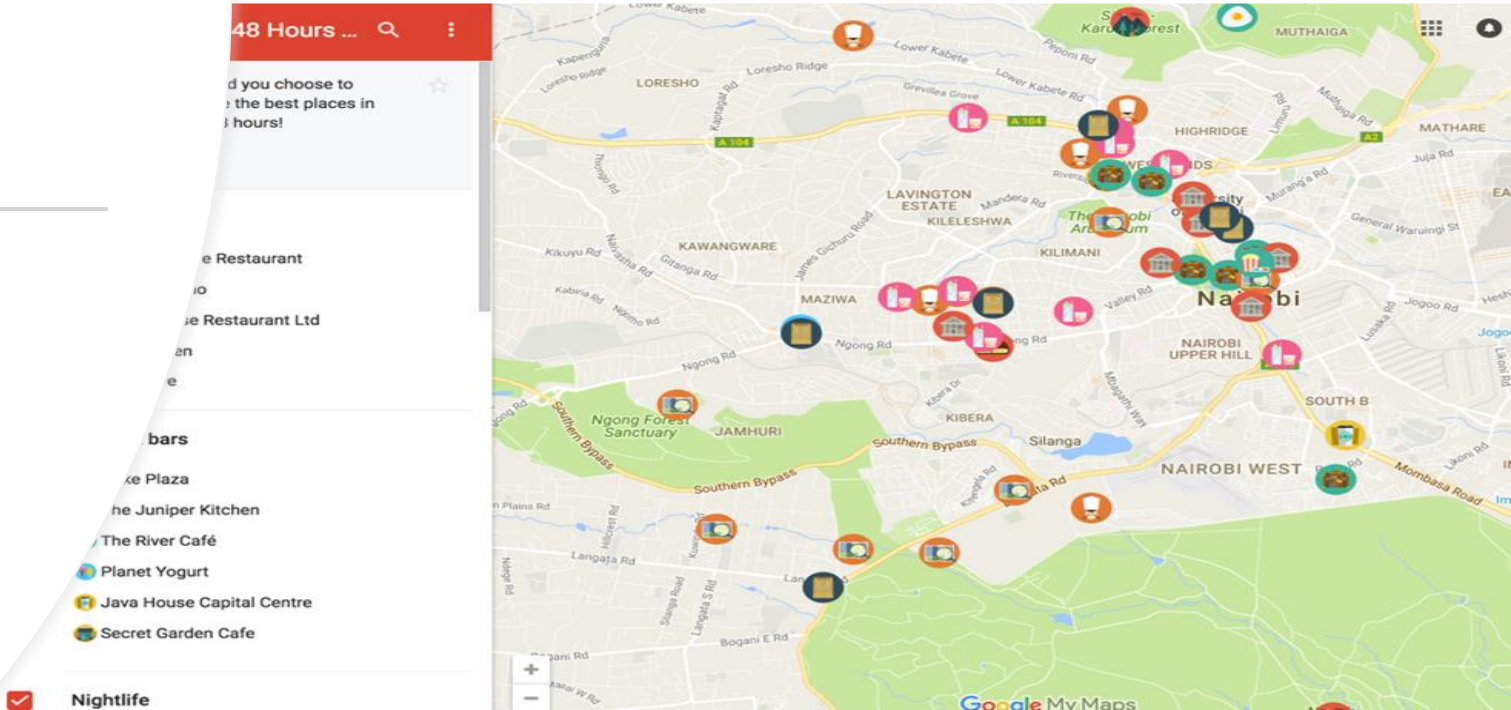
How can we ensure buy in from all stakeholders?

Coordinating Service Delivery

- Importance of partnerships within and outside the school
- Start EARLY
- Meaningful roles (not just linkages)
- Create system to share data



Community Resource Mapping



Community Resource Mapping Activity

Google Maps

EMPLOYMENT AND PEOPLE WITH IDD IN RURAL COMMUNITIES

Employment outcomes for people with IDD in rural areas often lag those of their urban and suburban peers (Erickson et al., 2018; Test & Fowler, 2018)

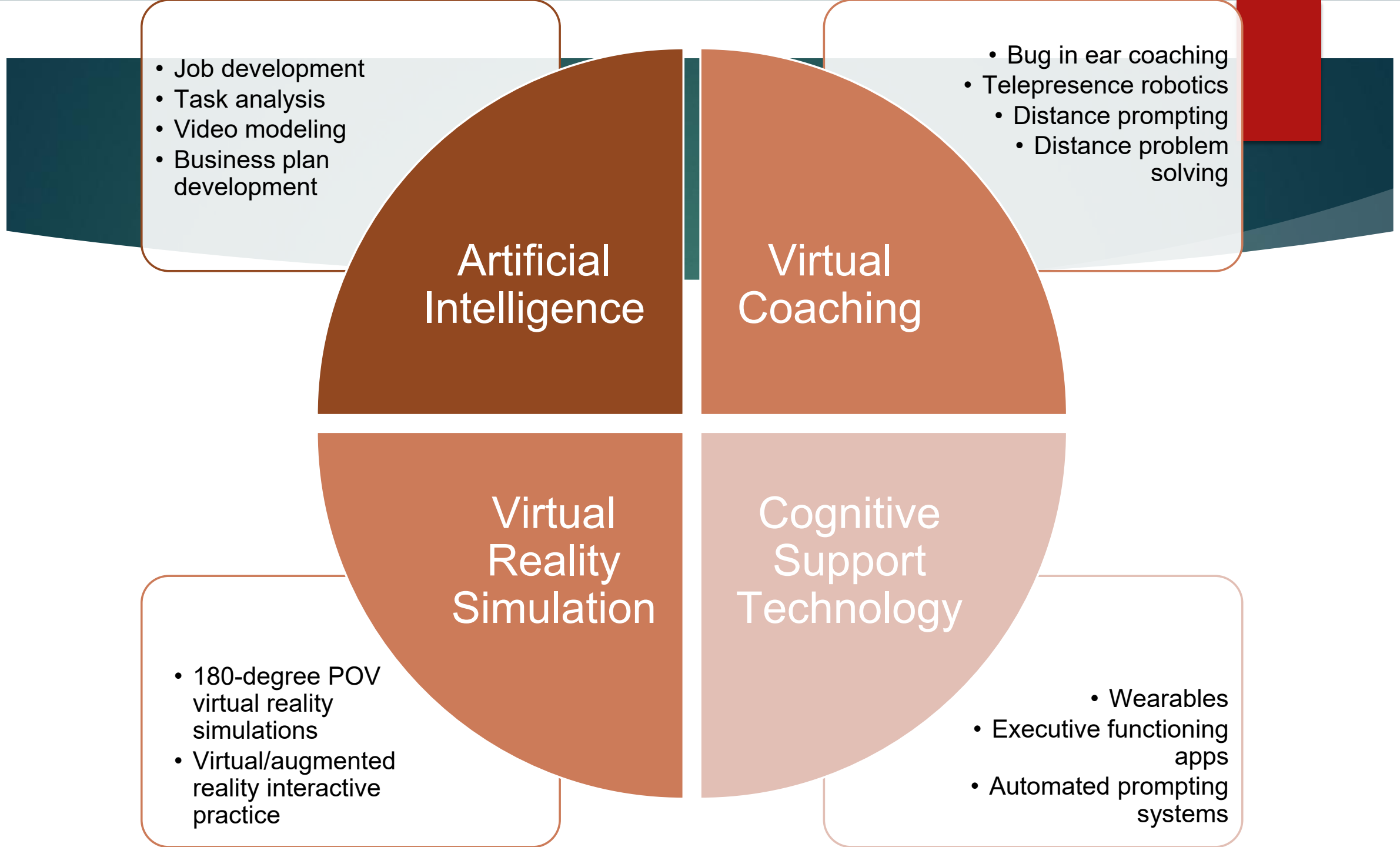
Rural residents with IDD may lack access to high-quality services, including quality SE providers (Scheef et al., 2023; Test & Fowler, 2018)

CRPs may not have the knowledge and skills to offer high quality services due to limited resources and high staff turnover (Washington State Division of Vocational Rehabilitation; 2022)

There may be a limited number of CRPs available or CRPS may have to travel long distances, resulting in more travel time, less direct service time, and more expenses (Ipsen et al., 2018; Landon et al., 2019)

RURAL CRP + TECHNOLOGY TOOLKIT

- Pilot study
- Partnered with two rural-serving CRPs in NW
- Training on best practices in SE and CE and emerging technologies
- 1:1 coaching with employment specialists
- Access to cutting-edge technologies
- Data collected on technology use, time spent (travel, service provision), mileage
- Developed toolkit for providers


Artificial Intelligence
• Job development
• Task analysis
• Video modeling
• Business plan development
Virtual Coaching
• Bug in ear coaching
• Telepresence robotics
• Distance prompting
• Distance problem solving
Virtual Reality Simulation
• 180-degree POV virtual reality simulations
• Virtual/augmented reality interactive practice
Cognitive Support Technology
• Wearables
• Executive functioning apps
• Automated prompting systems

SERVICE TIME & MILEAGE

Month	Direct Service Time M (SD)	Travel Time M (SD)	Mileage M (SD)
Month 1 (Pre-Intervention)	8.27 (7.37)	2.75 (1.95)	88.33 (82.05)
Month 2	11.13 (7.03)	1.50 (1.08)	40.75 (21.87)
Month 3	7.05 (6.13)	2.92 (0.88)	80.00 (55.33)
Month 4	12.25 (5.41)	3.00 (2.65)	79.33 (75.84)
Month 5	9.08 (6.09)	2.08 (1.88)	69.33 (60.52)
Month 6 (Post-Intervention)	9.00 (6.00)	1.31 (0.85)	61 (35.94)
Difference Pre-/Post	+0.74	-1.44	-27.33

OVERVIEW OF FINDINGS

- Increase from **no technology use** at baseline to **multiple technology tools being used** after 6 months
- Tech used to teach new skills, develop workplace supports, problem-solving, fading job coach presence, conducting check-in's, job development, job customization, developing off-the-job supports
- Across project period:
  - Direct service time **increased**
  - Travel time **decreased**
  - Travel mileage **decreased**
  - Time spent providing direct services increased from 75% (pre-intervention) to 87% post-intervention
- **Bottom line: more time with supported employees; less time in the car**

SETT FRAMEWORK

S

is for student's strengths, current performance and weaknesses in:

- Reading
- Math
- Writing
- Communication
- Learning and studying
- Vision, hearing and mobility
- Activities of daily living

E

is for learning environment:

- How is the classroom physically arranged?
- What materials and equipment are used?
- How is instruction given (small groups, whole class)?

T

is tasks for learning:

- What is the class expected to be able to do?
- Which tasks are essential for your child to be successful?

T

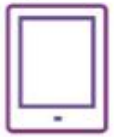
is for tools being used to help your child and other tools that may help.

The IEP team considers the assistive technology range:

Low/No Tech

Mid-Level Tech

High Tech

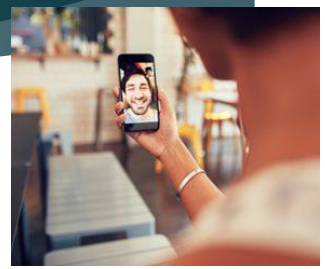


(McMahon & Tucker, 2024; Sweet et al., 2022; Zabala et al., 2004)

VIRTUAL JOB COACHING

- Telepresence robotics and leveraging existing tech
- Provide “check in’s” outside of in-person visits
- Problem solve issues in real time
- Check work quality/task completion
- Be able to fade job coach presence more quickly

Virtual Coaching Platforms & Devices	Cost
Using Zoom with existing smartphones and other mobile devices	Free ($15 for Pro license)
Google Voice	Free ($10-30 for subscription)
Bug in ear coaching	$25+ for Bluetooth headset (plus compatible mobile device)
Blink camera	$39.99 (plus optional monthly subscription for some features)
Kubi telepresence robotic base (tablet/phone not included)	$600 (model currently discontinued)
Ohmni telepresence robot	~$6000

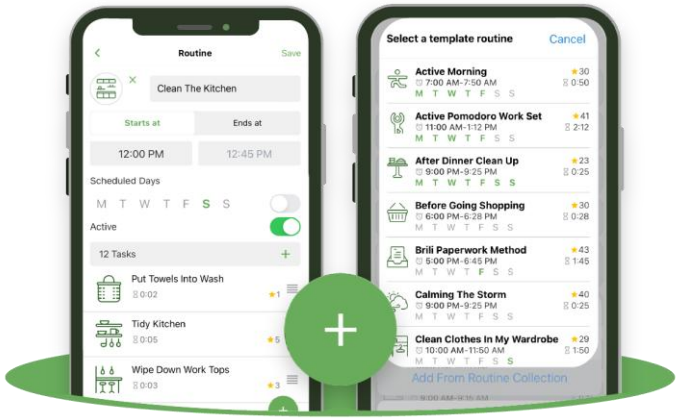


CONSIDERATIONS FOR VIRTUAL JOB COACHING

Check	Get Buy-In	Plan
Check wifi connectivity at the business	Make sure all parties are comfortable with the approach	Plan/gain consensus on how virtual check-in's will be used (regularly scheduled check-in's? Pop-up's for problem-solving?)

COGNITIVE SUPPORT TECHNOLOGY

- Wearables, portable devices, applications to support executive functioning, automated prompting systems
- Visual scheduling apps, to do lists, calendars, alarms, reminders, reinforcer/reward systems
- Can be used to teach routines and complex tasks, increase independence, prepare for the workday
- Important to match the specific application to the person, their setting, their work context



COGNITIVE SUPPORT TECHNOLOGY APP EXAMPLES

- Cognitive support technology covers a wide range of Assistive Technology
- Can promote independence by supporting executive functioning, organization, and planning

- **Featured app:** Focus To-Do (Pomodoro technique)

- Check out our *Technology-Based Strategies for Supported Employees with IDD* strategy guide
  - https://tacqe.com/wp-content/uploads/eri-files/handout_strategy-guide-tech-based-strategies-employees-IDD-ac.pdf
- As well as our *Resource Guide to Visual Scheduling Apps*
  - https://tacqe.com/wp-content/uploads/eri-files/handout_technology-guide-visual-scheduling-apps.pdf

GENERATIVE AI

Job Development

- Expanding career awareness, job matches with local employers, targeted resumes, interview question practice

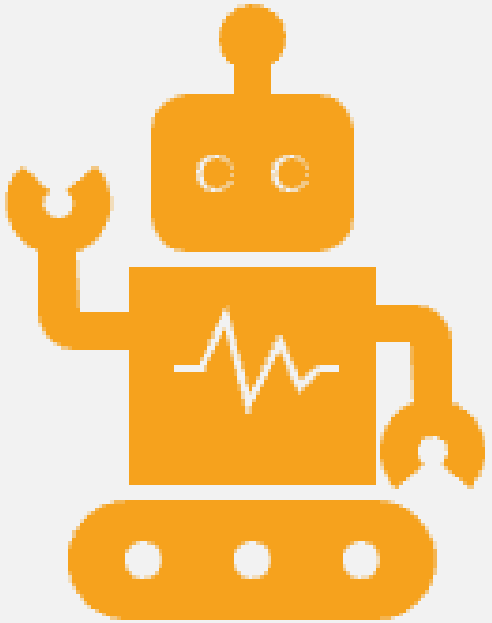
Job Skills Training

- Developing task analyses, creating video models, problem-solving situations at work, creating customization agreements, creating business plans for self-employment

EXAMPLES OF WHAT AI CAN DO

- Job Development – AI to start vocational profile development and job match to employers

- Job Skills Training –AI to develop a task analysis



DISCUSSION AND IMPLICATIONS

- Technology embedded within SE has been potential for meeting rural challenges to service delivery
- Importance of technology individualization and use to solve problems of practice
- All technology used in project was commercially available, much of it was inexpensive and/or free
- Need for future research to examine cost efficiency and effectiveness of intervention components

CONTACT US

- Holly.Whittenburg@wsu.edu
- Josh.Taylor@wsu.edu