How Do Accommodations Impact Employment Outcomes? Introducing the ACCESS-PD RRTC

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- The content of this presentation does not necessarily represent the policy of NIDILRR, ACL, or HHS, and you should not assume endorsement by the federal government.

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Learning Objectives

1. Describe three ways AT can impact the employment outcomes of individuals with physical disabilities
2. Identify two benefits and one barrier associated with contingent employment
3. Identify two technical assistance or training resources developed by the RRTC and describe how they can support successful employment outcomes

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Agenda

- Overview / Background
- Research Activities
  - Impact of AT and Accommodations on Employment: Interview Findings
  - Evaluation of the Use of Accommodation Decision Tools (Work ACCESS & CATM) by VR Counselors
- Training Activities
  - Navigating Employment as a Person with a Physical Disability

Rehabilitation Research & Training Center on Accommodations, Employment Supports & Success for People with Physical Disabilities (ACCESS-PD RRTC)

Overall Goals:

1. Increase knowledge about workplace accommodations and employment options
2. Improve both accommodation and employment outcomes
3. Reduce unmet needs for necessary workplace accommodations

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What do we mean by “Physical Disability”?

- Physical disability is defined as a limitation on a person’s physical functioning, mobility, dexterity or stamina.
- A person may also have a sensory or cognitive limitation or neurodiversity, but those are secondary.
- Examples: arthritis, spinal cord injury, cerebral palsy, multiple sclerosis, limb amputation, carpal tunnel syndrome, low back pain ….

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Workplace Accommodations

Strategies, environmental modifications or assistive technology (AT) that help a person perform a job task that they otherwise might not be able to perform or perform as effectively.

Workplace Accommodations are Essential

- 75% of employees with disabilities could not perform all their job duties without accommodations (CIDI Research)
- For individuals with spinal cord injuries, AT services had one of the highest correlations with positive employment outcomes among VR services studied (Marini et. al.)
- Approximately 30% of individuals with mobility/upper extremity limitations lack needed accommodations

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Research: Impact of AT & Accommodations on Employment Phase 1: Interviews

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Project R1: Impact of AT & Accommodations on Employment

Purpose:

- Describe impact of AT/accommodation use on employment outcomes.
- Qualitatively describe the relationships between individual and environmental factors and participation, performance, satisfaction, and other employment outcomes.
- Identify patterns that can inform intervention, training, and policy decisions.

- **Phase One:** Conduct narrative, semi-structured interviews with a mix of contingently and traditionally employed people with physical disabilities to inform…
- **Phase Two:** Development of Work, Accommodations & Technology Survey (WATS)

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What is Contingent Employment?

- Definitions vary:
  - Lack of attachment between employer and worker
  - Employment may be for a fixed, limited period of time or for a specific job to be done
  - Bureau of Labor Statistics (BLS): contingent workers as those without “an explicit or implicit contract for long-term employment”
- Examples: indep. contractor, freelancer, consultant, gig economy worker
- Transformation in work arrangements in United States: Increasingly a nation of contractors and freelancers

Contingent Employment & Workers with Disabilities

- Pros – Entry into workforce; opportunities to counter unemployment and underemployment; flexibility that standard employment may not offer
- Cons – Potential for lower pay and few benefits; no provisions for workplace accommodations; undermine goals of full employment

Why does work arrangement matter?

Traditional employment and contingent work create distinct differences when in comes to accommodations. It influences:

- Who initiates supports
- Who pays
- Disclosure decisions
- The stability of accommodations over time

Our research is being designed to capture these contextual differences

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Methodology

Narrative Interviews are qualitative, in-depth, research conversations that encourage participants to tell detailed stories about specific life experiences or events rather than just answering direct questions. Iterative until saturation reached.

Interview Questions were centered around employment and accommodation needs/experiences, workplace environments, technologies used, work relationships, financial status/concerns, transportation options, vocational rehabilitation experience. Participant directs the conversation.

The Sample

Category	Summary
Total Participants	14 participants
Employment Type	9 Full-time; 5 Contingent
Employment Focus	Approximately half work in disability-focused roles
Occupational Diversity	Media & Writing; Education; Disability & Advocacy; Public Sector/Technical; Research & Business
Disability Types Represented	Mobility/Neuromuscular; Chronic/Medical; Neurological/Cognitive; Mental Health; Sensory; Upper Extremity/Nerve-related
Mobility & Assistive Aids Used	Power, Manual or Stand-up wheelchair; Walker; Walking

Workplace Accommodations Types

Red text and "" indicates only traditional respondents.

Category	Representative Examples
Work Arrangement & Scheduling	Remote work; *Flexible start times; *Frequent breaks; *Extra travel time
Physical & Task Supports	Reachers; Lapboards
Digital & Computer Accessibility	*On-screen keyboard; *OS accessibility settings (PC & smartphone); *Alternative keyboard techniques
Input & Control Access	Switch access; Slide advancers
Speech, Writing & Cognitive Supports	Speech-to-text (Dragon); AI tools (LLMs, Otter); Smart pens; Task & calendar tools
Mobility & Transportation	Stand-up wheelchair; Modified vehicle; Accessible transportation
Vision & Sensory Supports	Captioning; *Screen readers (NVDA, AIRA); *Lighted magnifiers
Workspace & Built Environment	*Adjustable furniture; *Accessible entrances, restrooms, parking; *Accessible classroom/office layouts

Workplace Accommodations Themes

CONTINGENT

Assistive Technology

- Funding AT
- Mainstream Tech Used as AT
- AT Abandonment
- AT Training
- Adequacy of AT

Self Accommodation

Self-Advocacy

Unmet Needs

Accommodation Process

TRADITIONAL

Assistive Technology

- Funding AT
- Mainstream Tech Used as AT
- AT Training
- AT Abandonment
- Non-work AT

Unmet Need

Disability Disclosure

Accommodation Process

Adequacy of Accommodations

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Workplace Accommodations Themes - Contingent

Assistive Technology

- Funding AT
- Mainstream Tech Used as AT
- AT Abandonment
- AT Training
- Adequacy of AT

Self Accommodation

Self-Advocacy

Unmet Needs

Accommodation Process

Since I am self-employed, I am responsible for determining my accommodation needs and acquiring the necessary AT

My experiences with employment and accommodations have taught me the importance of resilience, adaptability, and self-advocacy.

With my smart pens, I had three different replacements issued within four years, and they've said if the one that I currently have breaks they're not going to replace it again, and it's broken and I haven't told them, yeah.

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Workplace Accommodations Themes – Traditional

Assistive Technology

- Funding AT
- Mainstream Tech Used as AT
- AT Training
- AT Abandonment
- Non-work AT

Unmet Needs

Disability Disclosure

Accommodation Process

Adequacy of Accommodations

I got a grant from OVR, the Office of Vocational Rehab, and they provided me with a computer that I could write on the screen. From then on I didn't need the blackboard.

So, things like Dragon Naturally Speaking never really worked for me, no matter how much I trained it to my voice. It was just something that I really threw in the corner after a while because it would take more time for me to fool with the voice-to-text and the text than to actually do it myself.

Well, right now, because I'm in rehab, they would say we'll have rehab pay for it, and then rehab would say, no, no, have your work pay for it. And I'd be like "right", and I'd be like, "look, I'm not the rope, this is not tug of war, I'm going over here and playing with the cat. You all figure yourselves out. I'm done.

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Workplace Accommodations Themes – Traditional (cont.)

Assistive Technology
- Funding AT
- Mainstream Tech Used as AT
- AT Training
- AT Abandonment
- Non-work AT

Unmet Needs

Disability Disclosure

Accommodation Process

Adequacy of Accommodations

Maybe an off-road track chair to go see construction sites or anywhere where it's soft dirt.

The conference room, I remember, was this big circle type table with all these chairs, so I would always have to be forced to sit in the back whenever we had conferences or different trainings.

They've never asked, and I never told them. I just put my accomplishments and achievements on a resume so they can figure it out.

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Key themes informing WATS content

- Accommodation outcomes depend on the full context, not on a single product or policy
- Low-tech and mainstream tools can be highly effective when matched appropriately.
- Solutions often require customization and adjustment throughout the workday
- Disclosure and workplace climate can shape what is requested, provided, and sustained.
- Some cases require expertise beyond the worker and the employer—systems should recognize and support that

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Conclusions and Next Steps

- Workers often encounter a lack of coordination across employers, vocational rehabilitation, and individual funding.
- Workers in contingent and nontraditional employment were more likely to rely on self-funding, self-training, and self-advocacy.
- AT and workplace accommodations played a central role in enabling productivity, stability, and retention.
- Whether that translates into equitable pay, increased earnings, advancement, and opportunities will be determined quantitatively via the WATS.

Work, Accommodations, and Technology Survey (WATS)

- Starting in September (this week!) we are launching the WATS to quantitatively explore these issues, at scale.
- Sign up using the QR code.
- Participants will receive a $10 e-gift card.
- We're using snowball sampling – share with others who might be interested in participating (but please don't mention $$ on social media)

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Research:
Evaluation of the Use of Accommodation Decision Tools by VR Counselors

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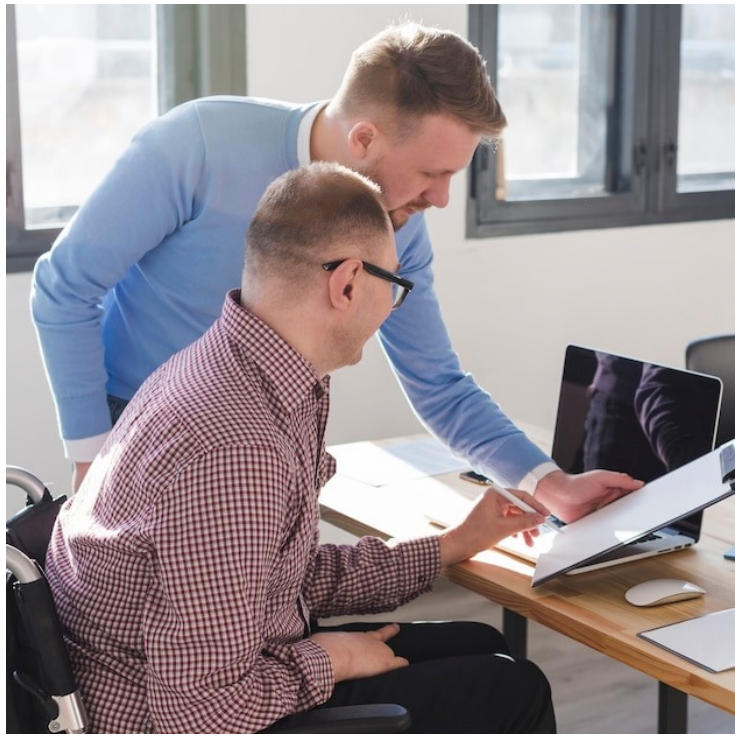
Project R4 - Evaluation of the Use of Accommodation Decision Tools by VR Counselors

We are conducting efficacy studies on two interventions intended to help VR counselors make informed accommodation decisions.

- Work ACCESS, an online accommodation assessment tool
- Continuum of Assistive Technology Mastery (CATM), a tool for evaluating an individual's mastery of their AT



Designed by Freepik

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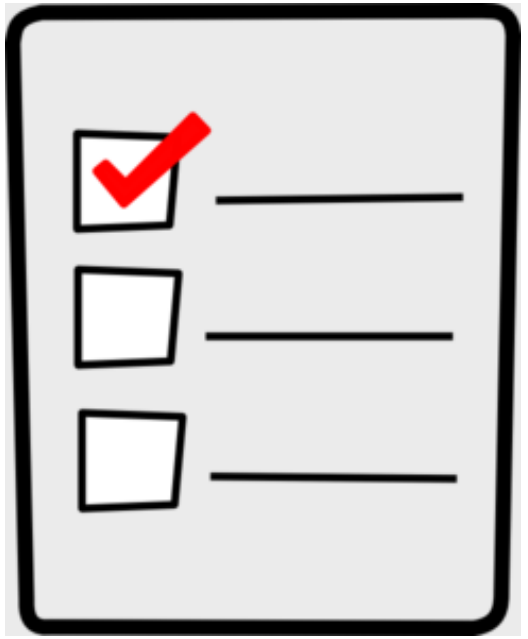
Workplace Accommodation Expert Support System (Work ACCESS)

An online (website /mobile app) workplace accommodation **assessment tool** for employers and employees to use together. It asks questions about the problem and recommends accommodations based on the answers.



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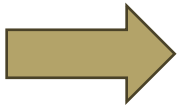
Work ACCESS Operation

Assessment Questions

- Activity
- Functional limitations
- Other personal factors
- Environmental factors
- Identify specific problem

Expert-Generated Rule Sets



Accommodation Solutions

- May include policy changes, assistive technology, facility modifications, strategies, and universal features
- Lists all possible matches
- Lists product types / features, not specific products
- External links for more info.

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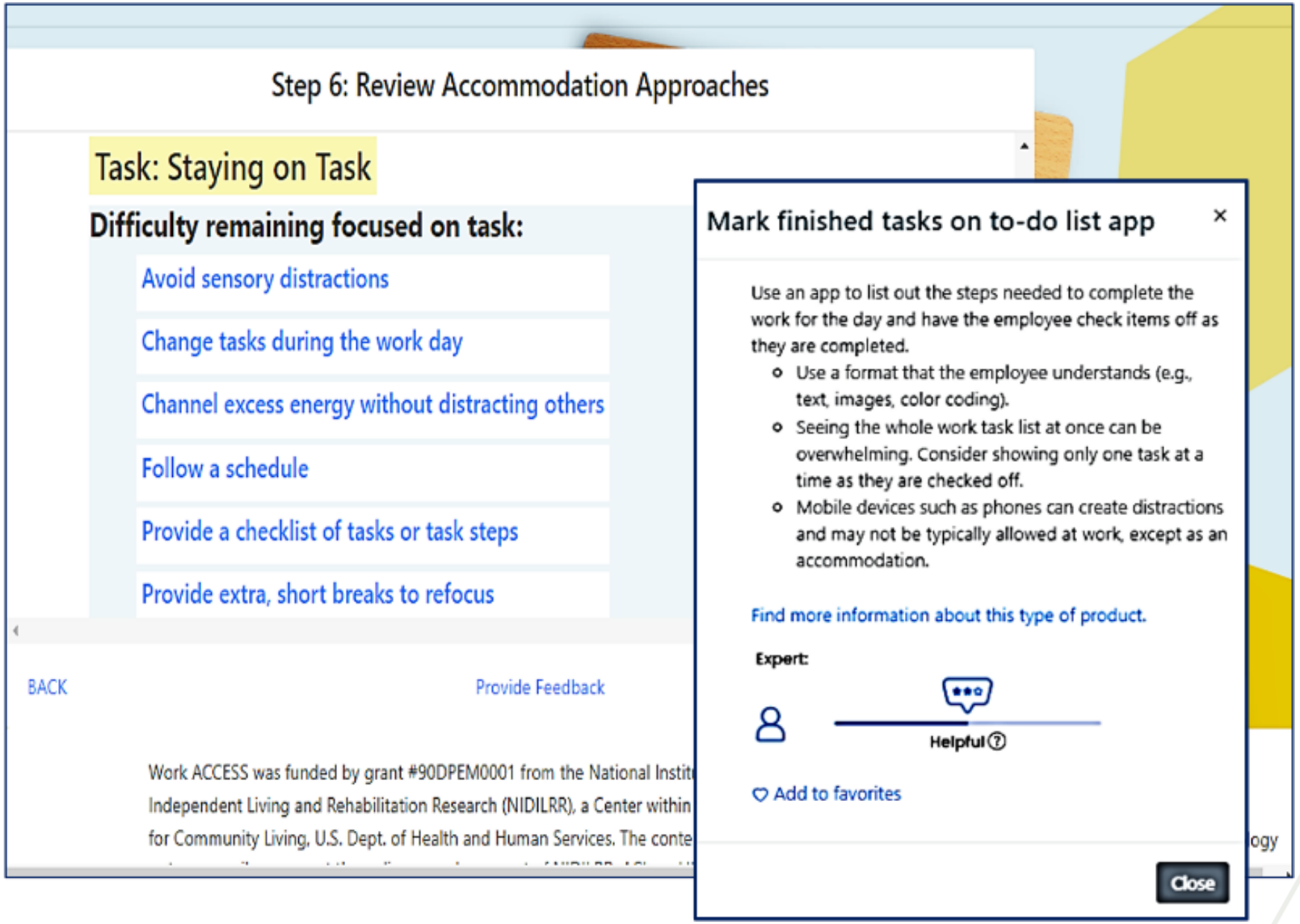
Work ACCESS Screens



How is Work ACCESS Different from Other Tools?

- It documents the problem but also prescribes solutions
- It examines the intersection of activity and functional limitations
- Considers additional person and activity/environment factors
- Warns users when a situation is more complicated and experts need to be involved
- It provides prompts and information appropriate for users with varying degrees of accommodation expertise

Work ACCESS links to the AT Network…

Community of Practice bringing together all AT stakeholders

Includes:

- Resources to support AT use
- Technical assistance information
- Product database
- Community / discussion board

www.assistive-tech.net

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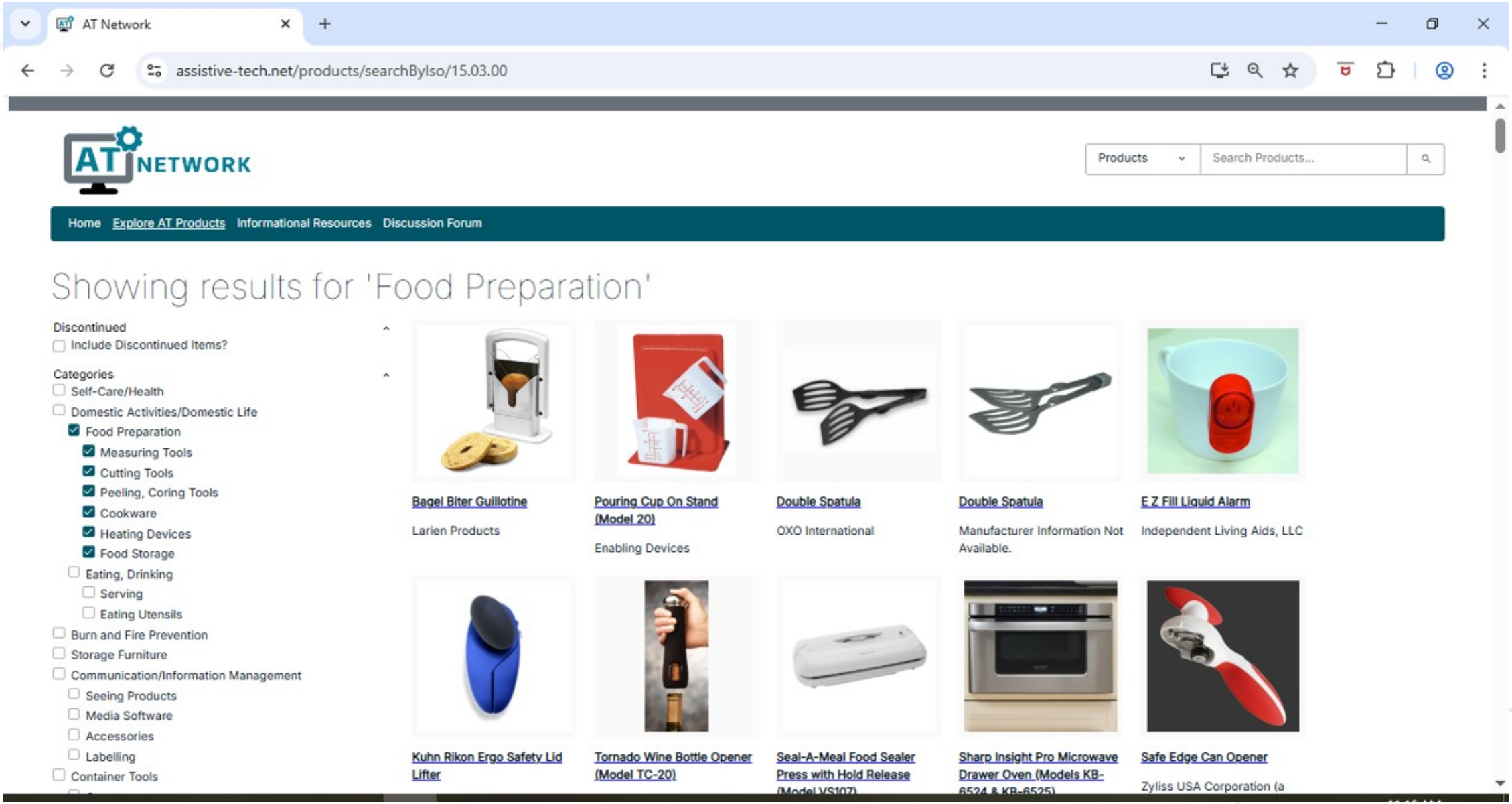
AT Network Product Database



Mastery of Assistive Technology

Continuum of Assistive Technology Mastery (CATM)

- Is a tool to measure progress toward individual mastery of AT
- Can be self-administered or used by others who know the individual
- Provides a framework for important discussions of AT
- Provides a progress report that identifies what areas might be worked on next

CATM
Continuum of Assistive Technology Mastery

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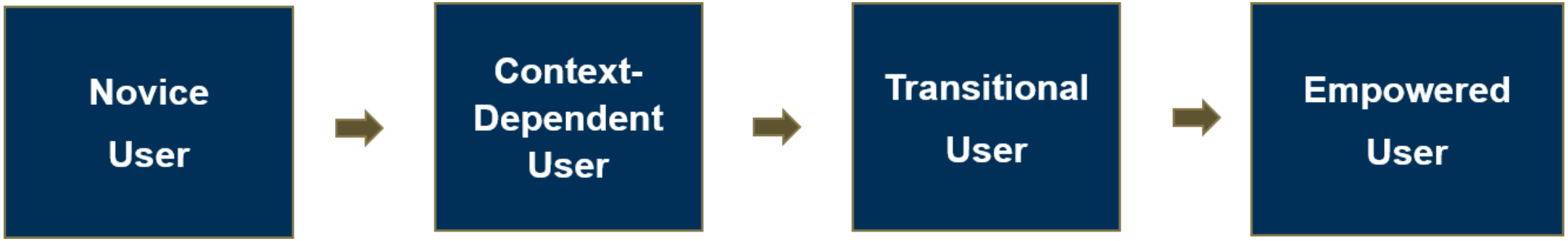
AT Mastery: 4 Stages

- Mastery of AT is tracked as an individual's personal journey through these stages:
  - Novice User
  - Context-dependent User
  - Transitional User
  - "Empowered" User



Satterfield, B., Milchus, K., Griffiths, P., LaForce, S., Walker, B., DeStefano, L., & Blake, M. (2024). Mastery of assistive technology: What is it? How do we measure it?. *Assistive Technology*, https://doi.org/10.1080/10400435.2024.2362136

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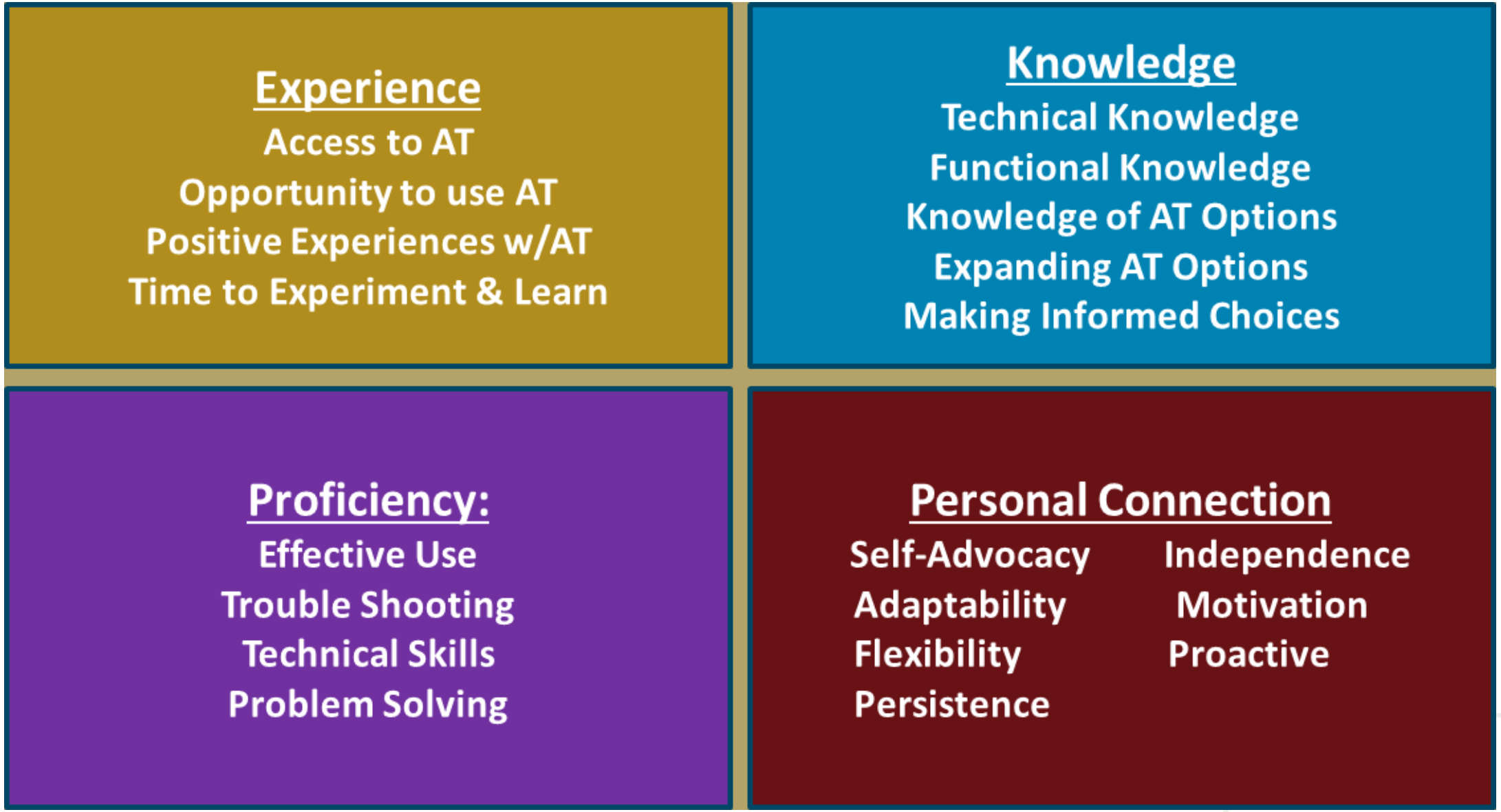
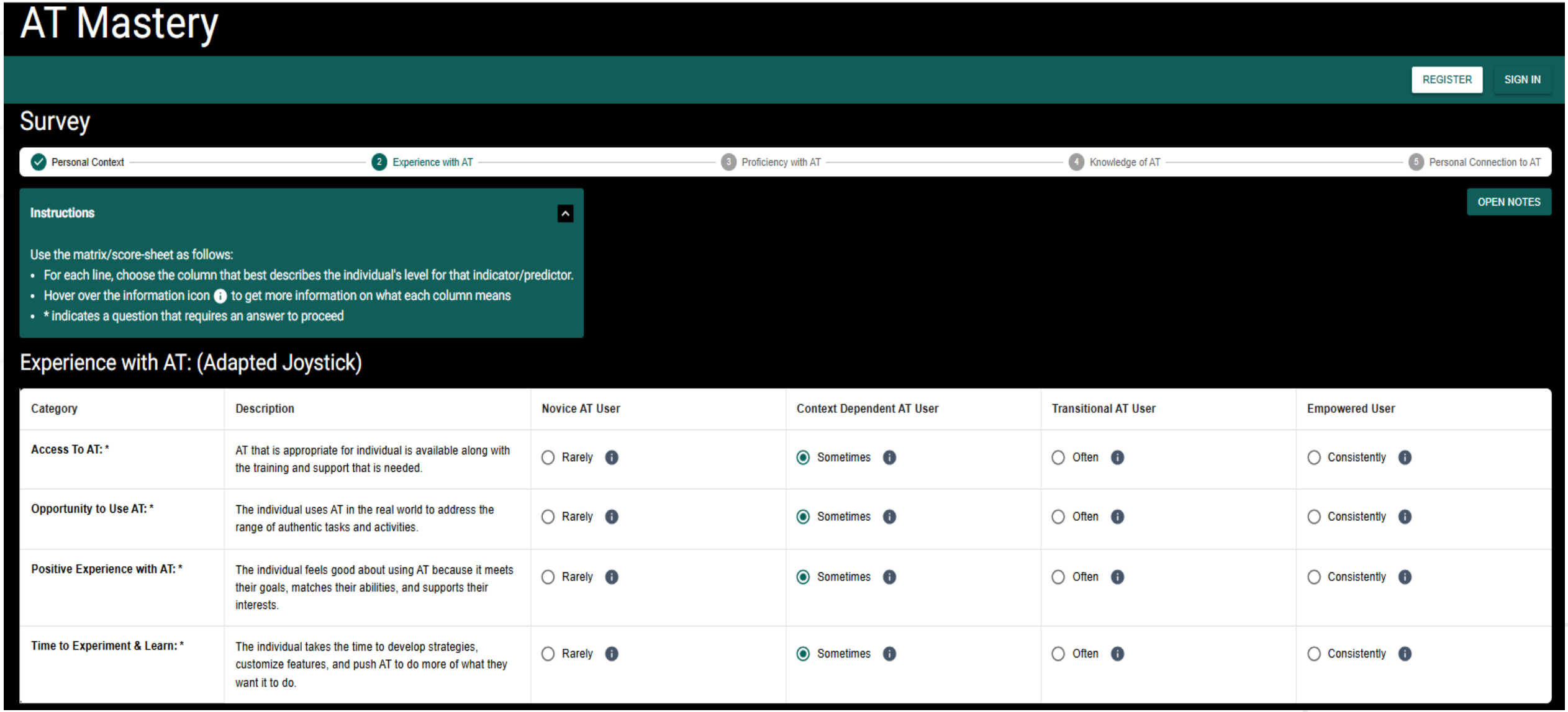
AT Mastery: 20 Indicators



Continuum of AT Mastery: Sample Page

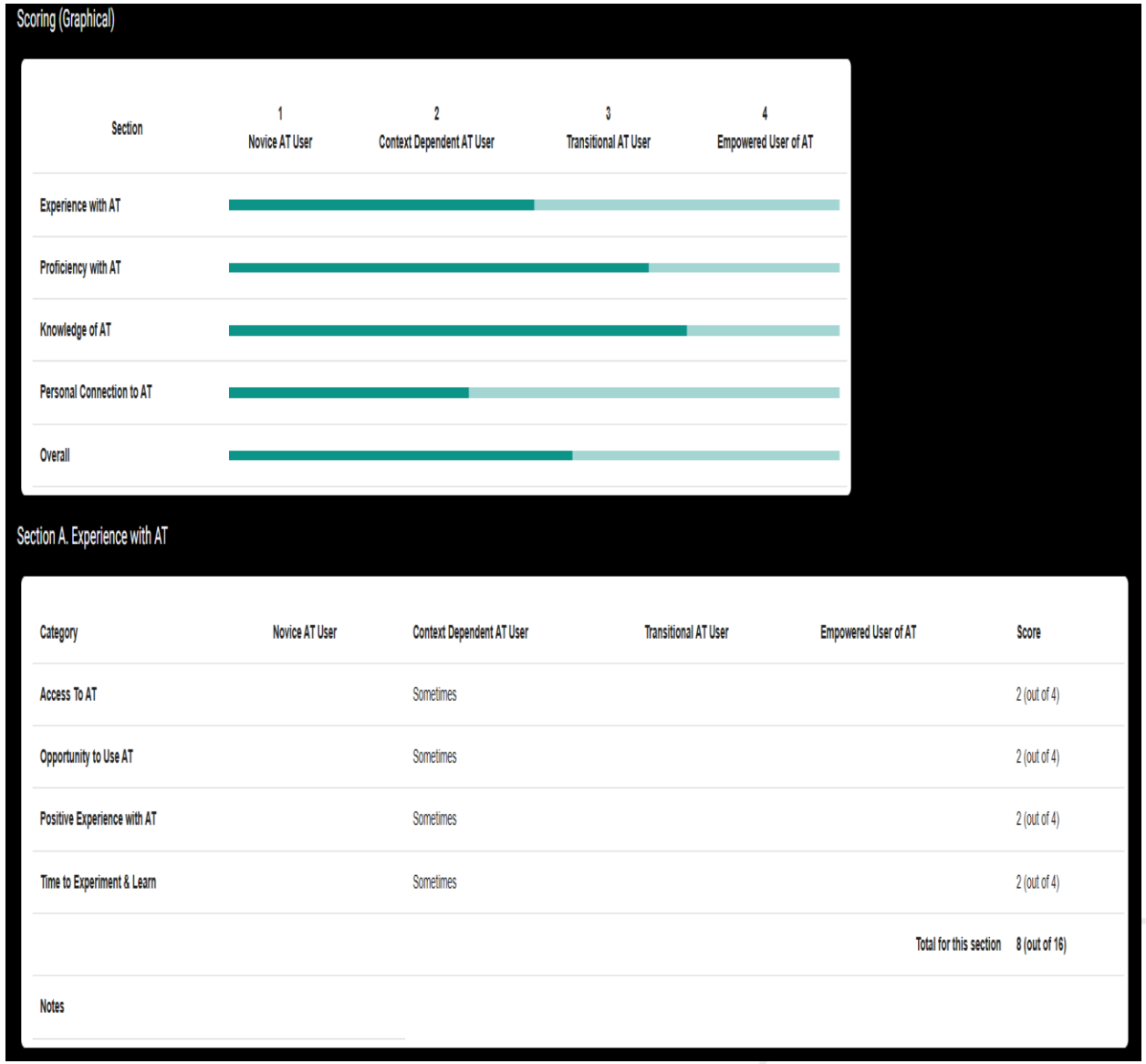


CATM Report: Identifying What to Work on Next

Final report:

- Identifies the AT and answers to the background questions
- Scores for CATM total
- Scores for each Construct (section)
- Graphic with progress bars

- Can be printed out as PDF
- Is saved for later review and access



Work ACCESS & CATM:
Research Questions & Hypotheses

Research Question:

How do VR counselors use Work ACCESS and the CATM?

Hypothesis:

VR counselors who

- use Work ACCESS to determine accommodations or
- use the CATM-PD to identify client strengths and weaknesses to guide their counseling and support

will have clients who have: fewer unmet accommodation needs, improved work performance, and improved employment outcomes

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Want to Test Drive Either Tool?

Work ACCESS

workaccess.ipat.gatech.edu

CATM-PD

atmastery.cidi.gatech.edu

National Resource Center's Training Activities

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National Resource Center

Training Highlights:

- Webinar Series
- **“Navigating Employment as a Person with a Physical Disability”**
- Video Resources for Classes
- Podcast: Consortium for Helping Improve Research Participation (CHIRP)

Technical Assistance:

- Online accommodation resources (e.g., Work ACCESS, AT Network)

Dissemination Highlights:

- Publications / Website / Newsletter
- State-of-science conference (late 2027)

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Navigating Employment as a Person with a Physical Disability

1. Keeping Government Benefits While Working
2. Making Systems Work for You
3. Effectively Communicating with Employers
4. Leveraging Assistive Technology
5. Understanding Civil Rights

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Module 1: Keeping Government Benefits While Working

- Understanding Your Benefits
- Work Incentives and Programs
  - Lots of explanation
  - Step-by-Step Scenarios
- Importance of Reporting Income and Changes

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Module 2: Making Systems Work for You

- Definitions related to employment and disability
- Personal and societal beliefs
- Dealing with insurance bureaucracies
- Working with vocational rehabilitation systems

Module 3: Effectively Communicating with Employers

- Marketing Yourself as the Candidate Employers Want
- Deciding What / When to Disclose Regarding Your Disability
  - Overall theme is it's highly personal
- Advocating for Accommodations
  - Tips
  - Role play
- Ongoing Communication Throughout the Hiring Process and Beyond

Module 4: Leveraging Assistive Technology

- What is Assistive Technology (AT)?
- Assistive Technology Act of 2004
- High- and Low-Tech AT (with examples)
- Assistive Technology and Employment
- Getting AT and Reasonable Accommodations

Module 5: Understanding Civil Rights

- Brief history of public policy related to people with disabilities
- Social Security Act of 1935
- Rehabilitation Act of 1973
- Americans with Disabilities Act of 1990
- Workforce Innovation and Opportunity Act
- Limitations of public policies

Do You Want to Take the Course?

- “Navigating Employment as a Person with a Physical Disability” is now **available for FREE**
- Go to our project webpage and look under Training
- Might be applicable to people with other types of disabilities

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Resource Recap

Resource	Link
Work ACCESS	https://workaccess.ipat.gatech.edu
Continuum of AT Mastery	https://atmastery.cidi.gatech.edu
AT Network	https://www.assistive-tech.net
Webinar Series	https://access-pd.design.gatech.edu/webinar-series
Online Course: Navigating Employment as a Person with a Physical Disability	https://access-pd.design.gatech.edu/navigating-employment

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Questions?

Contact: access-pd@design.gatech.edu

https://access-pd.design.gatech.edu

Use QR code to sign up for more info