Title: Using Wireless Technologies to Facilitate Competitive Integrated Employment

for Individuals with Disabilities: A Systematic Review of the Literature

Authors: Eliseo Jimenez, Ph.D, BCBA-D; Josephine Mhende, MPH; Dustin Ducharme, M.Ed;

Ramatu Muhammad, MD; Andrew Roach, Ph.D

Center for Leadership in Disability at Georgia State University, UCEDD/LEND;

Left Upper Corner Logo; A Blue and Black Logo of Wireless Inclusive RERC

Right Upper Corner Logo; A Blue and Grey Logo of Georgia State University, Center for Leadership in Disability.

The poster is organized in three Sections.

Section 1 , Heading; Introduction

* Employment is a major part of an adult’s identity and plays a significant role in creating a stable life environment (Chen, 2015)
* Americans with Disabilities Act (ADA) enacted a new set of standards for employers that requires reasonable accommodations to qualified individuals with disabilities in the workplace
* Workforce Innovation and Opportunities Act (WIOA) requires all state vocational rehabilitation programs must focus some of their efforts on transition services and pre-employment services, which includes training for assistive technology
* Even though employment is an attainable goal for individuals with disabilities, only 51.8% of young adults with ID were gainfully employed (NLTS-2).

Section 1, Sub- Heading 1; Assistive Technology (AT)

“Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.” (IDEA, 2004)

Section 1, Sub- Heading 2; Internet of Things (IOT)

Devices that are capable of automated communication. Wireless technology allows devices to communicate not only with their user, but with other wireless devices (device-to-device communication)

Section 2, Table Heading; Mobile Technology VS Wireless Technology

Table is in 2 columns and 3 rows, The left Column depicts Mobile Technology and is in increasing shades of Blue color and The Right Column depicts Wireless Technology is in increasing shades of orange.

Column 1, Row 1;

Can be taken anywhere. It requires an internal battery for power and must be connected to a mobile network

Column 1, Row 1; image of a blue man with an orange head walking

Column 2, Row 2;

Access to the internet through cell tower networks. Access not limited by physical location.

Column 2, Row 2; image of a Blue Cell Tower

Column 3, Row 3;

Utilizes cell towers to communicate with separate devices( synchronous or asynchronous)

Column 3, Row 3; Image of an orange phone with a white screen.

Column 2, Row 1;

Does not mean mobile. Includes non- mobile devices (e.g., Traditional desktop).

Column 2, Row 1; Image of a Blue Traditional Desktop

Column 2, Row 2;

Access to internet is determined by physical location and proximity to a fixed device (i.e., router).

Column 2, Row 2; Image of a Grey and Black Router, with 4 green lights

Column 2, Row 3;

Requires proximity to separate device for device-to-device communication

Column 2, Row 3; Image of a Bluetooth sign

Section 3, Heading; Methodology

Section 3, Sub-Heading 1; Research questions

1. What types of technology are being used in vocational skill acquisition interventions for individuals with IDD?
2. Of the technology used for vocational skill training, which technologies have wireless capabilities, and are those capabilities utilized during the intervention procedures?

Section 3, Sub-Heading 1; Image to the left of a blue human head with a white question mark in it

Section 3, Sub-Heading 2; Literature Review

An extensive review of the literature was conducted by faculty, students, and staff at Georgia State University. Inclusion Criteria: Studies had to 1) include participants with ID, 2) Target a physical vocational skill, 3) use wireless technology, 4) utilize single-case methodology

Section 3, Sub-Heading 2; Image of a blue magnifying glass

Section 3, Sub-Heading 3; Data / Analysis

-41 studies met inclusion criteria -138 participants (111M, 27F) -Intervention type (83% visual/ audio; 17% audio only)

-Intervention location (27% job sites, 52% schools; 10% clinics; 11% combination)

-Technology used (38% tablet; 17% smartphone; 10% wearable; 35% laptop/ desktop)

-Studies reported increases in job functioning, work rate, self-esteem, self-determination)

-Few studies (2) taught participants how to use the technology

Section 3, Sub-Heading 3; image of an ascending Blue Bar graph with an arrow pointing up.

Section 3, Sub-Heading 4; Conclusion

Very few studies utilized wireless functions within interventions. Although many researchers utilized schools as their intervention location, very few studies included opportunities to generalize their skill to the job site or acquire the skill at the job site. Surprisingly, a large number of studies utilized tablets versus smaller devices more commonly used on a daily basis (e.g. , smartphone)

Section 3, Sub-Heading 4; Image of a blue spin wheel with a white check sign in it.

Footnote

Footnote is in 3 columns

Column 1, Logo; A Blue and Grey Logo of 10 years Anniversary Center for Leadership in Disability. Inclusion, Innovation, Impact

Column 2, QR code image

1. Open the QR Code reader on your phone.
2. Hold your device over a QR Code so that it’s clearly visible within your smartphone’s screen.
3. Use a QR reader to scan the code for a text document. Use the text to speech feature to have the contents of this poster read to you.

Column 3, Heading; References

1. American With Disabilities Act (1990), Pub L. No. 101-336, 104 Stat.328
2. Chen, J., Leader G., Sung, Leahy, M. (2015). Trends in employment for individuals with autism spectrum disorder: A review of the research literature. Journal of Autism and Developmental Disorders, 2, 115-127.
3. Newman, L., Wagner, M., Knokey, A.-M., Marder, C., Nagle, K., Shaver, D., Wei, X., with Cameto, R., Contreras, E., Ferguson, K., Greene, S., and Schwarting, M. (2011). The Post-High School Outcomes of Young Adults With Disabilities up to 8 Years After High School. A Report From the National Longitudinal Transition Study-2 (NLTS2) (NCSER 2011-3005). Menlo Park, CA: SRI International.
4. Workforce Innovation and Opportunity Act of 1998 29 USC 3101 (2014)

NOTE: The contents of this poster were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90RE5025).  NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this poster do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.