

TECHNOLOGY USE BY WORKERS WITH DISABILITIES IN THE GIG ECONOMY

Maureen Linden, MS; Fran Harris, PhD

Center for Inclusive Design and Innovation (CIDI)

Nathan Moon, PhD; Salimah LaForce, MA

Center for Advanced Communications Policy (CACP)



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A Nation of Contingent Workers

- Transformation in work arrangements in United States: Increasingly a nation of contractors and freelancers
- What is “contingent employment?” Definitions vary:
 - Lack of attachment between employer and worker
 - Reliance upon conditional factor for employment: fixed, limited period of time or specific job to be done
 - United States Bureau of Labor Statistics (BLS): contingent workers as those without “an explicit or implicit contract for long-term employment”

Implications for Individuals with Disabilities

Positives –

- Entry into workforce; opportunities to counter unemployment and underemployment; flexibility that standard employment may not offer

Negatives –

Potential for lower pay and few benefits; no provisions for workplace accommodations; undermine goals of full employment

A Major Research Gap Remains

- Actual participation and experiences of individuals with disabilities in contingent work remains understudied
 - Prevalence or incidence of contingent work among this group
 - Individual and environmental factors associated with efficacious outcomes
- Purpose of project
 1. Qualitative research to identify variables associated with practices and experiences
 2. Produce and test survey that operationalizes key concepts
 3. Establish a preliminary, generalizable evidence base

Qualitative Research Overview

- Semi-structured interviews that were exploratory in nature. These examine the complexity of the person's experiences and choices regarding non-traditional employment and the ways they use technology for that activity.
- Transcripts generated categories and themes that can be operationalized to build quantitative research instruments
- Generalized findings around technology use are presented here
- Findings presented here as “**personas**,” a composite character representing the behaviors, needs, goals, and attitudes described in participants' interviews

Participant Demographics (N=22)

Gender	Male – 8	Female – 14
Race/Ethnicity	Asian – 2 White, Latino – 2	Black / African American – 4 White, Not Hispanic – 14
Highest Level of Education	Master’s or Doctorate - 8 Bachelor’s degree - 9 Associate’s Degree - 3 Some College - 2	
Total Household Income (including benefits)	\$100,000 or higher - 2 \$75,000 - \$99,999 - 3 \$50,000 - \$74,999 - 5 \$35,000 - \$49,999 - 3 \$25,000 - \$34,999 - 2 \$15,000 - \$24,999 - 3 Less than \$15,000 – 1	
Age	Range: 25-75 years old Mean: 44.6 years old (SD ±13.8 years) Median: 43.8 years old	

Functional Limitations

Nature:

- Sensory – 12
- Physical – 10
- Psychological – 4
- Chronic – 2

Onset

- Congenital: 10
- Acquired: 12

Relationship with Assistive Technology

People with Congenital Disabilities

- Mainstream Technologies provide access
- Identify Technology through personal networks
- Evolution of Technologies
- Technology Brings Independence

People with Acquired / Late Onset Disabilities

- Special Function Assistive Technologies
- Acquired through Agency Resources and Evaluations
- Technology not incorporated into sense of self

AT use for those with Congenital Disabilities

Mainstream Technology

“Dictation software has gotten way better, and so that I can type on my own, but sometimes speaking is easier and now it’s usually integrated into the operating system of whatever you’re using if you know where to find it.”

“Now the phones have like – you triple tap and you can zoom in on stuff, so it’s like – yeah, my phone is really helpful.”

AT use by those with Congenital Disabilities

Personal Network

“So I’m like, there has to be something I can do, and someone just told me to search magnifier on my cell phone because they make apps for everything now.”

“I’ve seen it on my Facebook. I have a couple of groups that I’m in with other people who have disabilities ... other people talked about how they had got it and what they’ve been through. So I was like, ‘Oh! I should look into that.’ So I did and – yeah. I’m currently fighting with my insurance company about it.”

AT Use by those with Congenital Disabilities

Evolution of Technology to Mainstream

“Back when I was in college, the low vision aids...were okay, but the majority of them were big and bulky. Portability was not the main focus. [Now] I have an iPhone 10. It has a magnifier on it too, that works just as good. So a lot of times I use that for magnification. It actually has a binoculars app, too. I mean, it’s awesome.”

AT Use by those with Congenital Disabilities

Independence

“You can go to an employer and say, ‘Listen, I have an extra tool so I don’t need to keep asking someone for help if JAWS freezes. I have these glasses and I can connect to a live agent. How about we make it an accommodation so if there’s something visual that I could use the agent to help with – something that’s more faster in real-time.’”

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AT Use by those with Acquired Disabilities

Agency Support

“ .. Mass[achusetts] Rehab is a state-funded employment kind of agency. And so basically, what they did was they said ‘We want to give you all the accessible things that you will need.’ And they paid for a 32-inch monitor and they paid for something called ZoomText.”

AT Use by those with Acquired Disabilities

Technology is “Other”

“Being at the same height as other people made you feel more part of the action, if you will, less a secondary citizen ... and when I stood up on front of the class it felt like ‘Oh! Now I’m a real teacher.’”

“I think sometimes you really just want to be quote-unquote normal. It’s work to work these items. It’s hard. Sometimes I can’t get places to do things because [the technology] is not available to me. And then just sometimes it won’t work.”

AT Use by those with Acquired Disabilities

Frustration

“I have more ambition than my software -- my accommodations -- can keep up with, to tell you the truth.”

“I had my power chair adjusted ... to give me a little bit more physical supports in the way that I need. That helped, but it didn't completely ameliorate some of the physical issues I have sustained typing. I still have problems which limits how much I can do.”

The Impact of type of Work on Technology Use

Contract Workers

- Protected under ADA
 - Disputes over who provides
 - Don't want to "bother" the employer with
- Environmental Access Modifications
- Assistive Technologies

Freelancers

- Tech Interfaces help them avoid disclosure
- Self-Accommodating
- Mainstream Use
- Information Access Technologies

Persona #1 – Jackie

- 45-year-old, African American female, Deaf since birth
- Predominantly an ASL speaker with some basic English proficiency.
- Jackie has multiple freelance venues:
 - She contracts with a pharmaceutical company to audit doctors' offices and ensure that drug samples are being dispensed properly.
 - She has been a "secret shopper" for many years measuring quality of service or gathering specific information about products / services.
- She communicates with pharmaceutical reps in person through text message.
- Jackie finds jobs using apps, so she avoids disclosing her disability.
- She enjoys the freelance work she's done most of her working life. Her income has varied but is currently about \$75,000 / year.

Persona #2 – Teresa

- 55-year-old, female, with a genetic condition that onset about 12 years ago causing weakness and fatigue.
- Teresa ran a medical transcription company that she left to take care of her children with disabilities. She found out about a web-based transcription service from her social network. She freelances allowing her to rest and care for her children as needed.
- Teresa uses a power tilt-in-space wheelchair. She needs to change her seating angle regularly and supports her arms with pillows in various positions. This isn't optimal and limits the number of hours she can transcribe. She would prefer an adjustable desk with a larger monitor.
- Teresa is frustrated with her earning level. She feels that she could work more if she had the right technology. She is paid a flat rate per audio minute. As a result, her pay ranges from \$2 - \$10 / hour.

Persona #3 – Michael

- 60-year-old, Caucasian male, with a spinal cord injury.
- Michael previously worked as a financial advisor at the regional level to many banks. He currently prepares income taxes seasonally.
- Michael uses a manual wheelchair with little other technology. He would prefer that items in the office were lowered for easier reach and that the flooring was a bit firmer, but he doesn't ask because he's only a seasonal employee.
- He largely considers himself to be retired but is glad to interact with clients and coworkers. He is now primary caregiver to his teenage children.

Next Steps

- *Contingent Employment Practices Survey (CEPS)*
 - Has been developed; testing later this year and deployment next year
 - Will have included items that categorize and describe assistive technology and mainstream technology use.
 - Survey will be administered in both a web-based and telephone format
- Objectives
 - Evidence on contingent employment practices, including relationship to community participation and social inclusion.
 - Inform future efforts to document the prevalence of contingent employment arrangements by people with disabilities.
 - Support policymaking and efforts to improve employment of individuals with disabilities

Thank you

Additional information

Maureen Linden

Maureen.linden@design.gatech.edu

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