Assistive Technology Use in the Workplace by People with Blindness and Low Vision: Perceived Skill Level, Satisfaction, and Challenges

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Abstract

In the current labor market, assistive technology (AT) is vital to employment for people with blindness or low vision (B/LV), yet we know little about their AT use in the workplace. The purpose of this descriptive study was to increase our knowledge in this area. Participants were 314 employed people with B/LV who completed an online or phone survey about AT used on the job and perceived skill level, satisfaction, and challenges experienced with their workplace AT. Two researchers utilized content analysis to code open-ended responses and descriptive statistics were used to analyze quantitative data. Self-perceived skill levels were moderately high to high for each AT. Satisfaction with AT was generally high, but 15% or more of participants expressed dissatisfaction with their AT for five tasks. Dissatisfaction with AT for some work tasks differed noticeably by type of AT being used to accomplish the task. Accessing certain software, websites, or digital documents was the most common challenge experienced, mentioned by 59.1% of participants, representing an ongoing problem in the technological workplace environment for people with B/LV. In addition to websites, specific areas that present access or utilization challenges are slide presentation software, PDFs, spreadsheets, virtual meeting software, and printed material.

Keywords: blind, low vision, assistive technology, accessible technology, employment

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Digital skills are increasingly important in the workplace, a trend that is expected to continue in the future (World Economic Forum, 2018). Two of the five skills identified as necessary to succeed in the future economy, often referred to as the Fourth Industrial Revolution, are technology/computer skills and digital skills (The Manufacturing Institute, 2018). For people who are blind or have low vision (B/LV) to be competitive in the labor market, it is imperative that they have digital skills, for which assistive technology skills are a prerequisite. We define assistive technology (AT) broadly to include (a) technology created specifically for people with B/LV, such as JAWS, a third-party screen reader software, and (b) mainstream technology with built-in customization features that can be used by people with B/LV, such as Magnifier in Windows.

The increasing need for employees with technology skills is potentially positive for people who are B/LV, as technology can often be made accessible, although some challenges exist (Billah et al., 2017; Wahidin et al., 2018). Appropriate AT in the workplace can be a great equalizer for people who are B/LV. The development of AT specifically for this population has increased at a rapid pace, with new technologies and devices produced continually (Bhowmick & Hazarika, 2017). Including accessibility features in mainstream technology is a growing trend. This trend started with the 2009 introduction of VoiceOver in Apple's iPhone, and other companies followed suit. In 2020, more than 100 mobile apps designed for people with B/LV existed for use on smartphones and tablets (AppleVis, 2020). A large majority of people with B/LV utilize apps on mobile devices (Crossland et al., 2014; Griffin-Shirley et al., 2017) and are increasingly replacing traditional assistive devices with apps to accomplish specific tasks

(Martiniello et al., 2019). A recent survey documented that mobile devices are commonly used in the workplace, with 81.7% of B/LV respondents using them on the job (Crudden & Steverson, 2021).

Although there have been a number of studies about AT use by people with B/LV in everyday life (Crossland et al., 2014; Griffin-Shirley et al., 2017; Martiniello et al., 2019; Phillips & Proulx, 2019; Reyes-Cruz et al., 2020), we know little about how these individuals use AT in the workplace. We identified only two studies that addressed AT use at work for people with B/LV, and both were qualitative studies that involved five participants each (Branham & Kane, 2015; Wahidin et al., 2018). Branham and Kane (2015) explored the use, and non-use, of AT and accommodations by B/LV employees in the U.S. They identified several work-related AT challenges experienced by participants, including employer software that is inaccessible with screen readers, inaccessible hardware and office equipment, and AT-related problems when collaborating with sighted coworkers. Wahidin and colleagues investigated challenges to adopting AT in the workplace for B/LV employees in Australia (Wahidin et al., 2018). Primary challenges identified were keeping AT up-to-date, the inaccessibility of workplace documents and websites, and the need to educate coworkers on limitations of AT and how to make documents accessible. Participants emphasized the importance of a supportive work environment to successful use of AT in the workplace. Although the findings of these studies are relevant, they have limited generalizability because of their small sample sizes.

In addition to limited information about AT use in the workplace by people with B/LV, we know little about their AT skill level or their satisfaction level with the AT they currently use. Only one study was identified that assessed self-reported proficiency with AT devices, not related to the workplace (Martiniello et al., 2019). In a systematic literature review, 53 studies

were identified that investigated satisfaction with AT devices for people with disabilities, particularly in the context of the service delivery process, but none of the studies focused on people with B/LV (Larsson Ranada & Lidström, 2017).

Given the importance of technology in all our lives, its increasing use in the workplace, and the limited research regarding AT use in the workplace by people with B/LV, we began a longitudinal study, funded by the National Institute on Disability, Independent Living, and Rehabilitation Research grant RTEM0007, in 2020 to increase knowledge about AT use. This paper is the first publication associated with this longitudinal study. It includes results from this study's first survey with a sample of employed people with B/LV. The following research questions, all specific to people with B/LV, were addressed:

1. Which ATs are most commonly used in the workplace?
2. What are employed people's perceived skill levels with the AT they utilize on the job?
3. How satisfied are people with the AT they use for specific work tasks?
4. What are the greatest challenges people experience when using AT in the workplace?

Method

This study was reviewed by the authors' university's institutional review board and determined to be exempt. Criteria for participation included having a visual impairment, being aged 21 or older, living in the United States or Canada, using AT on the job, and being employed or recently employed and currently job searching. Beginning in January 2021, we utilized several outlets to recruit participants including blindness organizations and websites, technology companies, social media, a research participant registry for people with B/LV, former research study participants, and the researchers' advisory board. People interested in participating completed a pre-screening survey to determine eligibility.

Participants

More than 440 people completed the pre-screening survey, and 419 who met the criteria were invited to participate. Of the 419 invitees, 329 people started the survey. Four people were disqualified: three were not employed and not searching for a job and one did not use AT on the job. Data for five people who completed less than 30% of the survey, five people with questionable responses, and one person who declined further participation were excluded. The final sample consisted of 314 people who hailed from 45 states in the U.S. and 4 Canadian provinces. Most participants were female (63.1%), white (82.5%), and totally blind (55.7%). Participants were between 22 and 89 years old (M = 45.93, SD = 12.24). Additional participant information is presented in Table 1.

Data Collection

Survey Instrument

Researchers created survey items that focused on topics covered by the set of research questions associated with the overall study. The four research questions addressed in this paper are a subset of the larger study's questions. The survey utilized complex logic allowing answers from previous questions to carry forward to later questions. Based on logic, all participants did not receive all questions. Participants were provided a list of 28 stand-alone AT devices/software and apps used on a mobile device, as well as the option to write in 3 additional AT, and asked to select the AT they use on the job. Participants then rated their perceived skill level for each of their work AT on a scale of 1 (beginner) to 10 (advanced).

Participants identified tasks they perform on their job from a list of 14 specific tasks. Participants were asked follow-up questions about seven of their selected tasks. If more than seven tasks were identified, the follow-up tasks were randomly selected to reduce the burden of

the long survey for people who completed a large number of tasks. Participants identified the primary AT used to complete each task from their personal list of AT identified and rated their satisfaction with that AT to complete the task. Satisfaction was assessed with two separate questions: (a) how easy it is to perform the task with the AT and (b) how effective the AT is to perform the task, based on two items from the QUEST 2.0 scale (Demers et al., 2002). Satisfaction was rated on a slightly modified QUEST 5-point Likert-type scale (*not satisfied at all*, *not very satisfied*, *more or less satisfied*, *satisfied*, *very satisfied*). Dissatisfaction with AT was defined as a response of "not satisfied at all" or "not very satisfied" on one or both of the satisfaction items. Participants also answered a short series of open-ended items, including "Please list the 3 ATs you most frequently use on the job." and "What work tasks are most challenging with the AT that you currently use?"

After the initial version of the survey instrument was developed, we requested and obtained feedback from people with B/LV, representatives of blindness organizations, and technology company representatives, and made changes to the survey based on this feedback. Six people with B/LV then pilot tested the survey before implementation and additional adjustments were made based on their feedback.

Procedure

Data collection began in May 2021 and continued through September 2021. Participants had the option of completing the survey online via Qualtrics or by telephone. Personalized survey links were generated and emailed to study participants who wanted to complete the survey online. One of the researchers completed each telephone survey with participants who chose this method for survey completion. Participants who completed the entire survey were eligible to receive a small gift card.

Data Analysis

Descriptive statistics were utilized for quantitative variables. Frequencies were calculated for participant characteristics, AT utilized at work, and satisfaction levels with AT. The total number of AT used by each person was a sum of their identified AT. Means, standard deviations, and ranges were calculated for participants' age and perceived skill level for each AT utilized. Means were calculated for perceived skill level across all ATs used by each person. Because the question sample sizes varied substantially based on factors such as number of people who (a) utilized an AT, (b) reported conducting a task at work, and (c) utilized the specific AT to conduct the task, the total number of people who responded to the question (*N*) is reported if this number is less than the overall sample size of 314.

For the open-ended responses, we applied content analysis (Bengtsson, 2016). Two researchers independently reviewed and coded responses. For the AT most frequently used item, they classified responses into established AT categories, with the category "smartphone/tablet" added based on participant responses. For the challenges question, two researchers independently reviewed all responses and identified broad themes within them. They compared codes, agreed upon a set of codes, and independently recoded the data according to the codes. The researchers compared their codes and discussed any discrepancies in coding to reach an agreement on each response and form final coding structures. This qualitative approach enhanced the accuracy and reproducibility of codes (Yin, 2016). Frequencies are reported for each code mentioned by five or more people.

Results

Virtually all participants (98.1%) used a computer at work and 88.2% used a smartphone or tablet. The AT most commonly used on the job is presented in Table 2, in order from most to

least often reported. The number of AT used at work ranged from 1 to 22, with an average of 7.23 (*SD*=4.09). The three ATs most *frequently* used at work (*N*=313), based on open-ended responses, were screen reader software (81.2%), smartphone/tablet (48.9%), and any type of optical character recognition (OCR) (24.0%), including OCR software/hardware or an OCR app on a mobile device. The three AT most frequently used at work by people with some functional vision (legally blind with some functional vision or low vision; *N*=69) were screen magnification (58.0%), built-in accessibility tools on a computer (36.2%), and electronic video magnifier (33.3%). The three AT most frequently used at work by people with no or minimal functional vision (totally blind or legally blind with minimal functional vision; *N*=244) were screen readers (95.5%), smartphone/tablet (54.1%), and any type of OCR (29.5%).

Average self-perceived skill levels for ATs utilized on the job were high (see Table 2), although skill level for most AT varied widely across participants, as evidenced by their ranges. When evaluating AT perceived skill level by person (i.e., averaging AT skill across all ATs they utilized), we found that most participants considered themselves to be highly skilled with their on-the-job AT. The average self-rating at the 25th percentile was 7.1, the median was 8, and the 75th percentile was 9. Only nine participants had an average AT skill level (across all their work ATs) below 5.0.

The level of satisfaction with the performance of the primary AT used for specific work-related tasks, in terms of ease of use and effectiveness, is presented in Figures 1 and 2. Satisfaction was generally high for AT used for these work tasks. Satisfaction did vary by task, with 15% or more of the participants expressing dissatisfaction (response of “not very satisfied” or “not at all satisfied” to one or both of the satisfaction items) about their AT for some tasks. Tasks with higher levels of dissatisfaction were using a computer to create presentations (33.3%,

N=114), using a photocopier (26.1%, *N*=46), accessing an employer's database or software system (19.8%, *N*=187), making formal presentations (18.3%, *N*=137), and accessing printed material (15.3%, *N*=144). Details about dissatisfaction with the specific AT used for computer-based tasks are presented in Table 3; results illustrate the differences in satisfaction with computer-based tasks depending on the primary AT used. Additionally, dissatisfaction differed for the task *accessing print* based on type of AT used. More people who used OCR on a mobile device to access print were dissatisfied (25.0%, *N*=40) than people who used specialized OCR software/hardware (8.3%, *N*=24) or an electronic video magnifier (18.8%, *N*=16).

Challenges experienced with AT in the workplace are presented in Table 4, in order from most to least reported. Ten people (3.3%) indicated that they do not experience challenges with AT on the job. Of the 17 themes identified, the most pervasive was accessing or utilizing certain software, websites, databases, or digital documents, mentioned by more than half of participants. Software commonly cited included slide presentation software, PDFs, spreadsheets, and virtual meeting software. One participant shared, "Since almost none of the apps I use on a daily basis were built with accessibility in mind, I have to constantly juggle with questions like, 'Is my screen reader saying it isn't there because it actually isn't there, or is it not reading it to me?'" Other commonly mentioned challenges were reading printed material, accessing images and graphs, and reading handwriting.

Discussion

This article presents results from the first survey in an ongoing longitudinal study aimed to increase our knowledge about AT use in the workplace by people with B/LV. The purpose of the present study was to assess the status of AT use in the workplace by people with B/LV in

2021, with a focus on AT most commonly used, perceived skill with on-the-job AT, satisfaction with AT for specific work tasks, and challenges experienced with workplace AT.

We found that the number of AT used on the job varied widely, from 1 to 22, with an average of 7 ATs reported. If only one AT was used, which was reported by seven people, most used a screen reader or screen magnifier. With the prevalent use of computers in the workplace, screen readers and screen magnifiers were commonly used and were the ATs used most frequently on the job, depending on vision level. Apps on smartphones or tablets were used by a large majority of participants and were also used frequently on the job, although use of specific types of apps for different functions varied widely. Widespread use of apps at work coincides with Martiniello et al.'s (2019) finding that apps have replaced the use of other AT devices for many people. The top three most frequently used AT, by vision level, identified in this study may be considered core technology tools for which people with B/LV who are preparing for employment should receive training.

Self-perceived skill levels were generally high across ATs, and across most individuals. This corresponds with Martiniello's et al.'s (2019) finding that a majority of people rated themselves as having advanced proficiency across all AT devices asked about, and very few rated themselves at beginner proficiency. When one considers that participants reported their skill levels only for AT currently being used on the job, it is perhaps not surprising that average skill levels were high. Ideally, employees' skills for work-related AT would be moderate to high. Having inadequate AT skills for work-related AT could result in inefficiency and poor work performance. This may indicate that few people with low AT skills are working, and perhaps primarily people with moderate to high AT skills attempt to pursue employment. However, it is important to consider that skills measured in this study were self-perceived rather than actual,

and self-perceived skills may overestimate actual skills (Bunz et al., 2007; Porat et al., 2018). Research is needed to develop accurate methods for evaluating actual AT skill level rather than relying on self-reported skill. Having an objective measure of AT skill, particularly skill for specific job tasks, would benefit individuals with B/LV, professionals who work with them, and employers by ensuring that job seekers are ready for employment.

Most people were satisfied with the AT they use to accomplish specific work tasks. Satisfaction with how easy it is to perform a task with the AT and how effective the AT is to perform a task were similar, although not identical. For example, respondents were more satisfied with how effective than easy their AT was to use a photocopier but more satisfied with how easy than effective their AT was to access print. Despite generally high satisfaction, more than 20% of participants were dissatisfied with their AT for (a) using a computer to create presentations and (b) using a photocopier, and between 15 and 20% were dissatisfied with their AT for (a) accessing their organization's database/software system via computer, (b) making formal presentations, and (c) accessing print. Of particular interest is that level of satisfaction for some work tasks differed based on type of AT being used.

Screen readers or screen magnifiers are arguably the most important AT used on the job, and satisfaction with these two ATs differed considerably across tasks. People who used screen reader software reported less satisfaction with certain computer-related tasks than people who used screen magnification software, and vise versa. Percentage who expressed dissatisfaction with screen reader software ranged from a low of 2.7% for accessing the internet, using email or creating text documents to a high of 38.7% for creating presentations. Percentage who expressed dissatisfaction with screen magnification software ranged from a low of 4.8% for accessing their organization's database/software system to a high of 50% for making formal presentations.

Built-in screen reader/magnifier users expressed more dissatisfaction than those who use third-party screen reader or screen magnification software for several tasks: creating spreadsheets; accessing the Internet, using email, or creating text documents; and gaining remote access into a network or computer system. In terms of making formal presentations, people who used a refreshable braille display were much less likely to express dissatisfaction than the other AT users.

Overwhelmingly, the most common challenge experienced with AT in the workplace was accessing specific databases, websites, digital documents, or software. This finding coincides with the two previous studies of AT use in the workplace: Branham and Kane (2015) reported that 42.6% of the accessibility challenges identified by their five subjects related to inaccessible software or websites, and Wahidin and colleagues (2018) also identified this as a challenge for their sample. Inaccessible websites are a long-standing, well-known challenge to people using screen reader software (Lazar et al., 2004, 2007). WebAIM's (2021) recent annual accessibility evaluation of the top one million websites indicates the extent of the ongoing problem: 97.4% of website home pages had Web Content Accessibility Guidelines (WCAG) 2 failures and an average of 51.4 errors per page. Given that most people in our study utilize screen readers and 92% of people with B/LV reported utilizing the internet as a part of their jobs (Silverman et al., 2022), it is imperative that legislation be passed to enforce the American with Disabilities Act requirement for website accessibility.

Limitations

Limitations of this study should be acknowledged. Being a survey study, the findings rely on participant self-report, which involves a number of potential disadvantages such as social desirability bias, response bias, and differing interpretation of ratings scales or questions. For

example, we did not provide definitions of “beginner” and “advanced” user for the anchor points on our self-perceived skill 10-point scale. People may have interpreted those terms differently, and this is a limitation of that scale. Although we collected basic demographic and disability-related information, we did not collect all potential variables of interest that may be related to AT use on the job and skill level, such as length of work experience. Information such as this can be collected in future surveys. The survey relied on logic, such that participants’ earlier responses determined items received later in the survey; if participants inaccurately answered an earlier question, they may not have received all the later items they should have. Researchers carefully checked for inconsistent responses during the data cleaning process, but obviously could not generate responses for items which were not presented in the survey. Finally, responses are from a volunteer sample; therefore, the ability to generalize these findings across the population of employed people with B/LV is uncertain.

Conclusions

AT is vital to the successful employment of most people with B/LV, and this descriptive study is valuable as it represents the first large-scale study to investigate AT use in the workplace for this population. Our findings document that almost all participants experienced challenges with their workplace AT, and some areas of dissatisfaction exist with current AT. The findings provide helpful information for AT specialists, technology companies, and organizations that hire people with B/LV and provide a baseline against which to evaluate change over time in AT use and experiences that will be explored in future surveys of this longitudinal study.

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Table 1
Participant Information

Variable	*n*	%
Gender		
Female	198	63.1
Male	116	36.9
Race		
American Indian or Alaska Native	5	1.6
Asian	22	7.0
Black or African American	20	6.4
Native Hawaiian or Other Pacific Islander	3	1.0
White	259	82.5
Other race	17	5.4
Highest Education Level		
High school diploma or equivalent	37	11.8
Associate, vocational, or technical degree or certificate	19	6.1
Bachelor's degree	121	38.5
Master's degree	109	34.7
Professional or doctoral degree	28	8.9
Level of Vision		
Totally blind	175	55.7
Legally blind with minimal functional vision	70	22.3
Legally blind with some functional vision	57	18.2
Low vision, not legally blind	12	3.8
Additional Disability		
Yes	112	35.7
No	202	64.3
Employment Type		
Employer job	257	81.9
Self-employed	37	11.8
Both	20	6.4
Company Size		
1-14	53	16.9
15-49	32	10.2
50-99	27	8.6
100-499	66	21.0
500-999	24	7.6
1,000-2,499	29	9.2
2,500 or more	83	26.4

Note. $N = 314$.

Table 2

AT Most Commonly Used in the Workplace and Perceived Skill Level

AT Type	Use		Perceived Skill Level		
	n	%	*M*	*SD*	Range
Screen reader software	256	81.5	8.08	1.58	2-10
Other apps on smartphone/tablet[a]	207	65.9	8.24	1.49	2-10
OCR app	176	56.1	7.54	2.18	1-10
Built-in accessibility tools[b]	164	52.2	7.71	2.08	1-10
OCR software/hardware	136	43.3	7.34	2.11	2-10
Remote sighted assistance app	126	40.1	8.16	2.16	1-10
Digital reading app	105	33.4	8.25	1.78	1-10
Refreshable braille display	105	33.4	7.44	2.23	1-10
Braillewriter	85	27.1	9.20	1.56	2-10
Navigation/wayfinding app	84	26.8	7.64	1.73	3-10
Braille notetaking device	80	25.5	7.93	1.99	2-10
Digital reading software/device	78	24.8	8.13	1.79	1-10
Braille labeler	76	24.2	8.89	1.83	2-10
Audio recorder app	71	22.6	8.04	2.11	2-10
Other identification app	68	21.7	7.79	2.21	1-10
Screen magnification software	64	20.4	7.16	2.21	1-10
Money identification app	63	20.1	9.22	1.28	5-10
Audio recorder	47	15.0	8.04	2.33	1-10
Electronic video magnifier	46	14.7	8.16	2.31	3-10
Handheld lens magnifier	43	13.7	9.00	1.69	3-10
Handheld electronic video magnifier	33	10.5	8.52	2.11	2-10
Digital labeling technology	29	9.2	7.72	2.66	1-10
Dictation/speech software	27	8.6	7.67	2.08	3-10
Other built-in accessibility features	22	7.0	6.82	1.76	3-10
Wearable device	17	5.4	6.82	2.35	3-10
Orientation, wayfinding, or navigation device	15	4.8	7.07	2.28	2-10
Digital labeling app	12	3.8	8.67	1.23	6-10
Other AT (write-in option)	38	12.1	7.48	2.19	2-10

Note. Total $N = 314$. OCR = Optical Character Recognition.

[a] Other apps refer to apps that were not in the list of 28 AT; examples provided were email, virtual meeting, and calendar.

[b] Built-in accessibility tools were primarily screen readers/magnifiers, but could include dictation software.

Table 3
Percentage Dissatisfied with Specific AT Used for Computer-Related Work Tasks

Task	N	Dissatisfied (Overall)	N	Screen Reader	N	Screen Magnifier	N	Built-in Accessibility Tools
Use a computer to:								
Create presentations	114	33.3	75	38.7	18	11.1	14	21.4
Access organization's database/software system	187	19.8	137	19.7	21	4.8	16	25.0
Remote access into a network or computer system	124	12.1	93	11.8	13	7.7	13	23.1
Participate in a meeting	236	10.2	155	8.4	25	24.0	26	7.7
Create spreadsheets	187	8.6	132	6.1	29	10.3	17	17.7
Access the Internet, use email, or create text documents	263	4.6	186	2.7	34	5.9	24	16.7
Make formal presentations[a]	137	18.3	73	21.9	8	50.0	10	20.0

Note. Numbers with decimals are dissatisfied percentages and N is the total number of people who used the device for that task. Dissatisfied includes percentage who responded “not satisfied at all” and “not very satisfied” to one or both of the two satisfaction items.

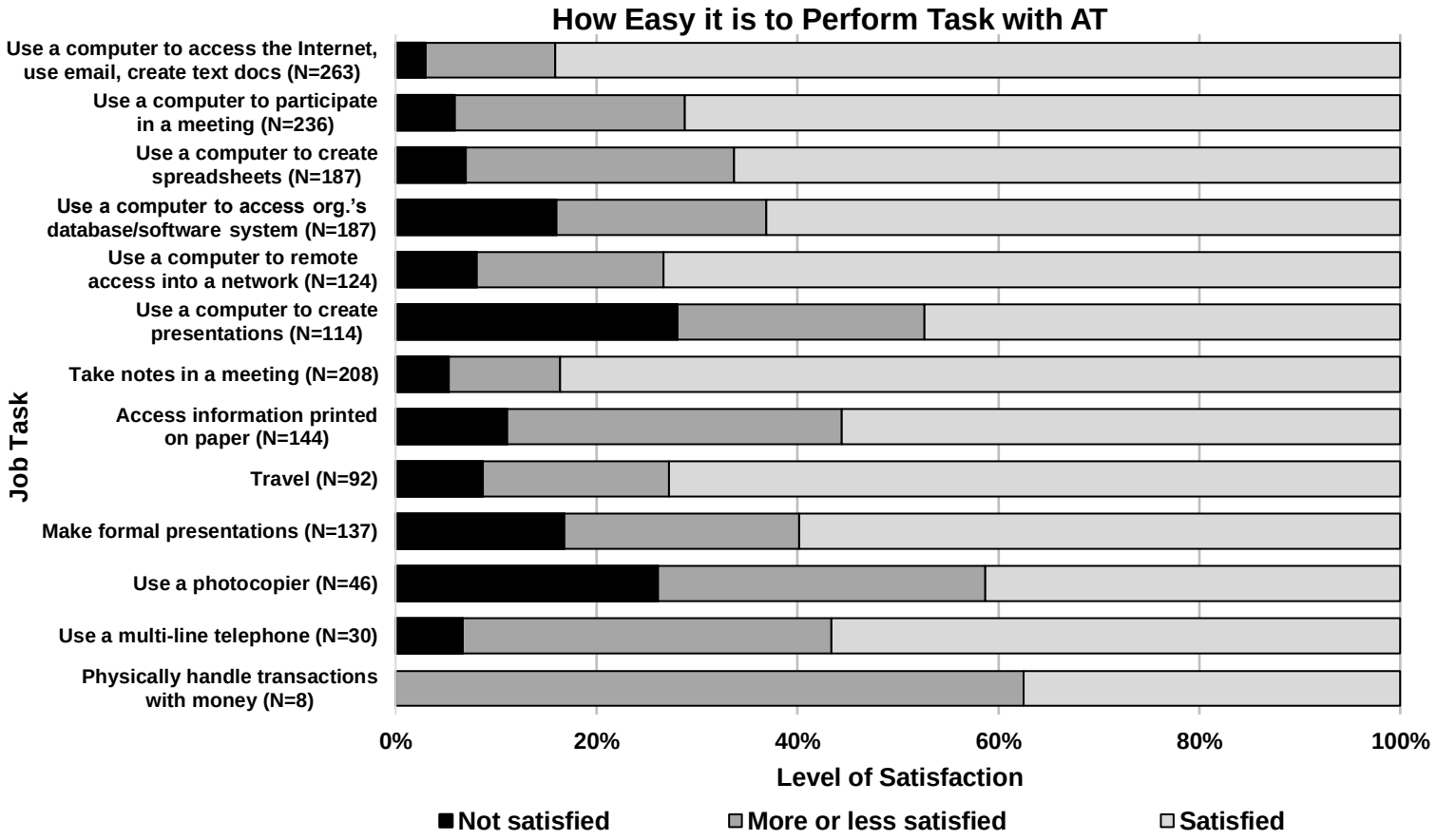
[a]Of the 29 people who used braille devices (refreshable braille display or braille notetaking device) for this task, 1 (3.4%) was dissatisfied.

Table 4
Challenges Experienced with AT in the Workplace

Theme	*n*	%
Accessing or utilizing certain software, websites, databases, or digital documents	179	59.1
Using slide presentation software	29	9.6
Accessing some PDFs	25	8.3
Using spreadsheets	25	8.3
Using virtual meeting software	19	6.3
Accessing scanned documents	11	3.6
Using collaborative software	8	2.6
Reading printed material	33	10.9
Accessing images, graphs, maps, photos	24	7.9
Reading handwriting	22	7.3
Using copier or other office equipment	18	5.9
Working efficiently	17	5.6
Formatting or managing the layout of documents	14	4.6
Technical issue with AT that requires troubleshooting	12	4.0
Giving presentations	11	3.6
Technical issue with computer, device, or software	11	3.6
Need for training	10	3.3
Travel, navigation, and wayfinding	9	3.0
Filling out forms	7	2.3
Identification, including recognizing faces or facial expressions, color, or object	7	2.3
Signing documents (print or electronic)	5	1.7
Access to remote or virtualized computers and networks	5	1.7
Editing documents	5	1.7

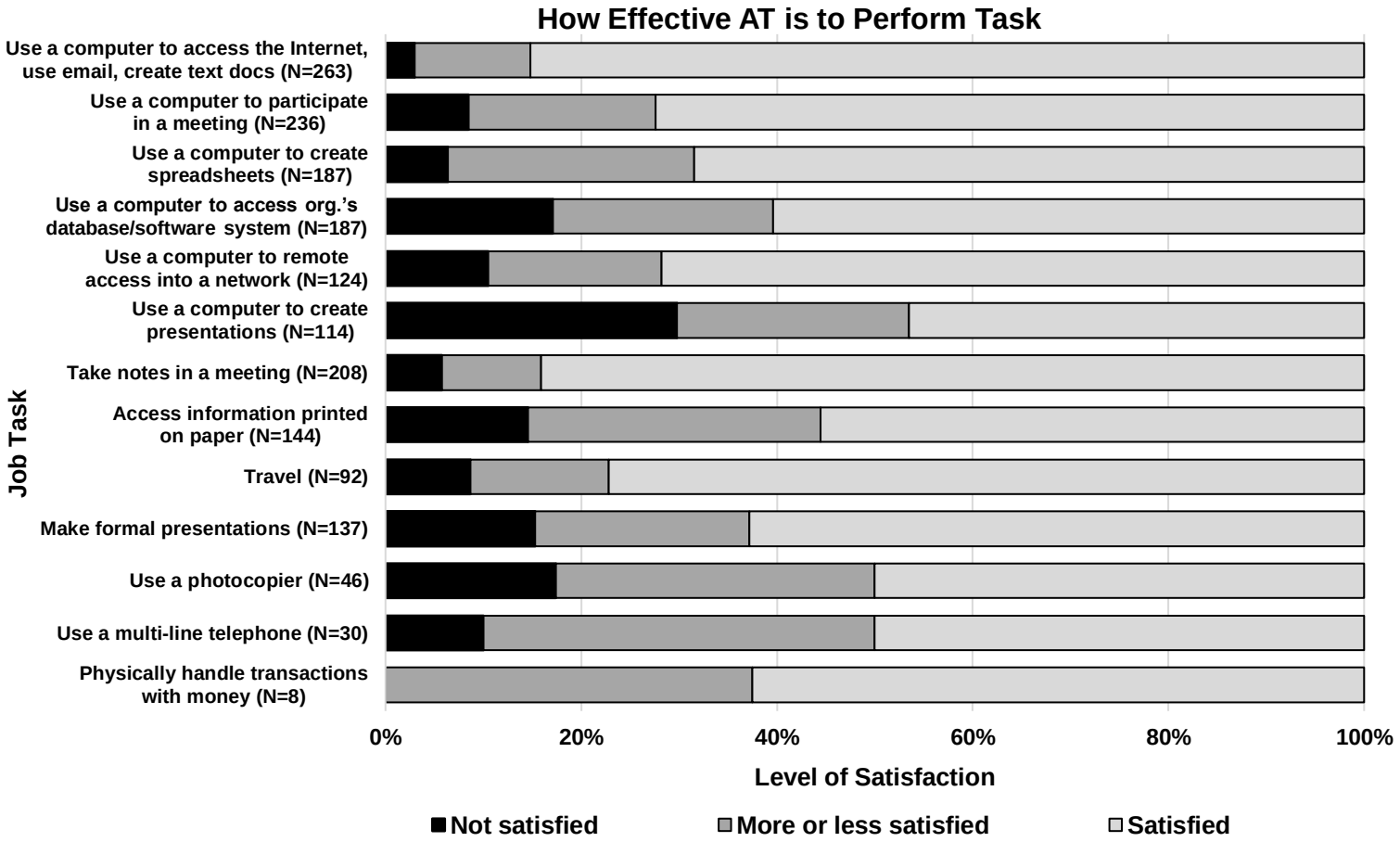
Note. $N = 303$.

Figure 1 Caption: Satisfaction with How Easy it is to Perform Work Tasks with Specific AT
Figure 1 Alt Text: A horizontal bar graph that presents the percentage of respondents who are “not satisfied”, “more or less satisfied”, and “satisfied” with how easy it is to perform specific work tasks with their AT. Most respondents are satisfied but percentages differ by task.
Figure 1 Long Description: Use a computer to access the Internet, use email, or create text documents (n=263) Not satisfied (NS)= 3, More or less satisfied (MLS)=12.9, Satisfied (S)=84.0; Use a computer to participate in a meeting (n=236), NS=5.9, MLS=22.9, S=71.2; Use a computer to create spreadsheets (n=187), NS=7, MLS=26.7, S=66.3; Use a computer to access the organization’s database/software system (n=187) NS=16, MLS=20.9, S=63.1; Use a computer to remote access into a network/computer system (n=124) NS=8.1, MLS=18.6, S=73.4; Use a computer to create presentations (n=114) NS=28.1, MLS=24.6, S=47.4; Take notes in a meeting (n=208) NS=5.3, MLS=11.1, S=83.7; Access information printed on paper (n=144) NS=11.1, MLS=33.3, S=55.6; Make formal presentations (n=137) NS=16.8, MLS=23.4 S=59.9; Travel (n=92) NS=8.7, MLS=18.5, S=72.8; Use a photocopier or multi-function document center (n=46) NS=26.1, MLS=32.6, S=41.3; Use a multi-line telephone (n=30) NS=6.7, MLS=36.7, S=56.7; Physically handle transactions with money (n=8) NS=0 MLS=62.5 S=37.5.



Note. N represents the number of people asked the questions about satisfaction with their AT for completing the task. *Not satisfied* includes responses "not satisfied at all" and "not very satisfied", and *Satisfied* includes responses "satisfied" and "very satisfied."

Figure 2 Caption: Satisfaction with How Effective Specific AT is to Perform Work Tasks
Figure 1 Alt Text: A horizontal bar graph that presents the percentage of respondents who are “not satisfied”, “more or less satisfied”, and “satisfied” with how effective their AT is to perform specific work tasks. Most respondents are satisfied but percentages differ by task.
Figure 1 Long Description: Use a computer to access the Internet, use email, or create text documents (n=263) Not satisfied (NS)=3, More or less satisfied (MLS)=11.8, Satisfied (S)=85.2; Use a computer to participate in a meeting (n=236) NS=8.5, MSL=19.1, S=72.5; Use a computer to create spreadsheets (n=187) NS=6.4, MLS=25.1, S=68.4; Use a computer to access the organization’s database/software system (n=187) NS=17.1, MLS=22.5, S=60.4; Use a computer to remote access into a network/computer system (n=124) NS=10.5, MLS=17.7, S=71.8; Use a computer to create presentations (n=114) NS=29.8, MLS=23.7, S=46.5; Take notes in a meeting (n=208) NS=5.8, MLS=10.1, S=84.1; Access information printed on paper (n=144) NS=14.6, MLS=29.9, S=55.6; Make formal presentations (n=137) NS=15.3, MLS=21.9, S=62.8; Travel (n=92) NS=8.7, MLS=14.1, S=77.2; Use a photocopier or multi-function document center (n=46) NS=17.4, MLS=32.6, S=50.0; Use a multi-line telephone (n=30) NS=10.0, MLS=40.0, S=50.0; Physically handle transactions with money (n=8) NS=0, MLS=37.5, S=62.5.



Note. N represents the number of people asked the questions about satisfaction with their AT for completing the task. *Not satisfied* includes responses "not satisfied at all" and "not very satisfied", and *Satisfied* includes responses "satisfied" and "very satisfied."