

A person is seen from behind, holding a tablet computer. The background is a bright, out-of-focus room with windows. The text is overlaid on the image.

the new landscape of digital literacy

What Policymakers and Workforce Advocates Need to Know



NATIONAL SKILLS COALITION
Every worker. Every industry. A strong economy.

Molly Bashay & Amanda
Bergson-Shilcock
May 5, 2020



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Webinar Scope

The Covid-19 pandemic has spotlighted the importance of digital literacy for America's workers and the education, training and workforce programs that serve them. Millions of workers are hurrying to adjust to new remote-work tools, while education and training participants are quickly upskilling to adapt to online learning. Meanwhile, workforce and adult education program staff are working to transform in-person services to virtual formats, all while ensuring that their own digital skills are up-to-speed.



Current Snapshot

Major Changes in the Education and Workforce Landscape

- The novel coronavirus pandemic and resulting economic fallout has devastated families, communities and businesses, leaving many individuals struggling to adapt
- As workers and business attempt to keep pace, **digital learning and remote working tools** have become all but essential.



Current Snapshot

Strained Access and Rapid Transformation

- Public libraries and other traditional access points are closed, meaning millions are disconnected from Wi-Fi and skill-building opportunities
- Education programs at all levels are racing to convert to engaging, fully-online learning experiences while instructors upskill themselves



Current Snapshot

Compounding Inequities and Disproportionate Impact

- Not everyone has the capacity to weather this disruption successfully by adopting digital stopgaps and patches
- Variations in access to reliable broadband, digital devices, and the skills or skills training necessary to use these tools mean the transition to an online society is falling hardest on the already vulnerable



Overview of Today's Webinar

In this webinar, you will:

1. Get a sneak peek at a new data analysis illustrating **digital skill gaps among workers in major industries** such as healthcare and manufacturing
2. Learn key questions to ask in **applying a racial equity lens to digital literacy** efforts
3. And hear about National Skills Coalition's new recommendations for policymakers and advocates seeking to **incorporate digital skill-building in their COVID-19 response plans.**



what the data say

Illustrating Digital Skill Gaps Among Workers in Major Industries



Current
Snapshot

Your Responses from the Pre-webinar Survey

How is Covid-19-related disruption affecting the people you serve? Who has been impacted the most?



How can data help us at this moment?



Data can help us:

- **Understand the digital literacy landscape in a **pre-COVID19** world**
- **See how the pandemic is **accelerating** pre-existing trends**
- ****Anticipate** emerging workforce skill demands**
- ****Make the case** for new & adjusted policies to support digital skill-building**



What did digital skill gaps look like pre-COVID?

- Data you're about to see comes from **rigorous assessment** called PIAAC (*background handout available*)
- Organized by OECD and conducted in US by NCES of the US Department of Education
- US workers **ages 16-64**
- Employed (at the time of survey)



A word of thanks...

- **Our research partners at the [American Institutes for Research](#)**
 - **Learn more about their work at [AIR.org](#), and access more about the **OECD Survey of Adult Skills (PIAAC) dataset at [PIAACgateway.com](#)****
- **Walmart for financial support**

We thank Walmart for their support but acknowledge that the findings, conclusions, and recommendations presented here are those of National Skills Coalition, and do not necessarily reflect the opinions of Walmart.



Nearly 1 in 3 US workers have digital skill gaps.



Among all US workers:

- **13%** have **no** digital skills
- **18%** have very **limited** skills
- **35%** have achieved a baseline level of **proficient** skills
- **33%** have **advanced** skills



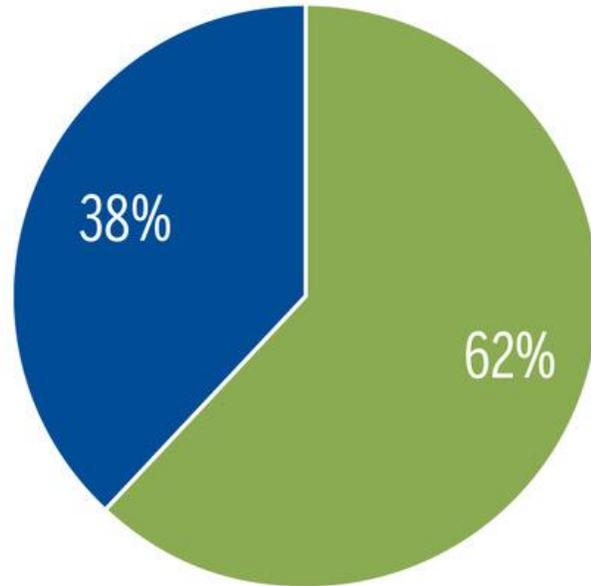
Selected industries	Percentage of workers with no digital skills	Percentage of workers with limited digital skills	Combined percentage of workers with limited or no skills*
Construction, transportation and storage	22%	28%	50%
Retail, wholesale, and auto repair	14%	23%	37%
Hospitality and other services	18%	18%	36%
Manufacturing	16%	19%	35%
Administrative and support services; arts, entertainment and recreation	13%	22%	35%
Health and social work	12%	21%	33%
Finance, insurance, and real estate (FIRE)	6%	14%	19%*
Education	5%	11%	15%*
			NOTE: Numbers may not sum due to rounding.

Among US workers ages 16-64. Source: OECD Survey of Adult Skills, 2012-14.

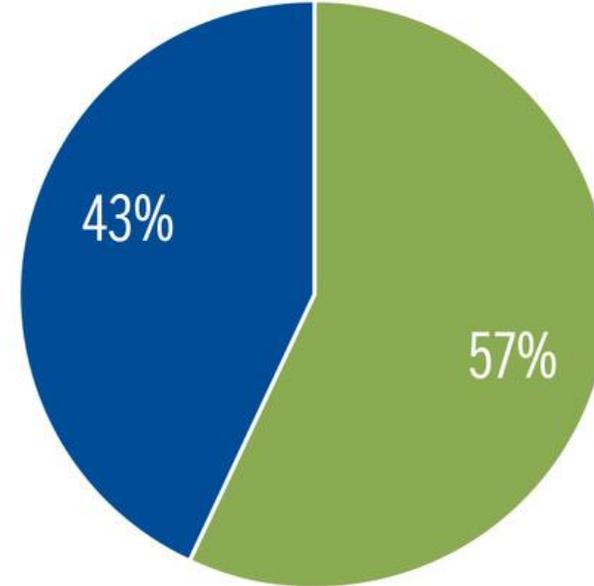
Industries not shown due to low sample size include agriculture; mining; utilities and waste management; professional, scientific and technical activities; information and communications; public administration.

MANY WORKERS WHO LACK DIGITAL LITERACY HAVE JOBS THAT REQUIRE SUBSTANTIVE COMPUTER SKILLS

Among Workers with
No Digital Skills



Among Workers with
Limited Digital Skills



- Moderate or complex computer skills needed for current job
- Straightforward computer skills needed for current job



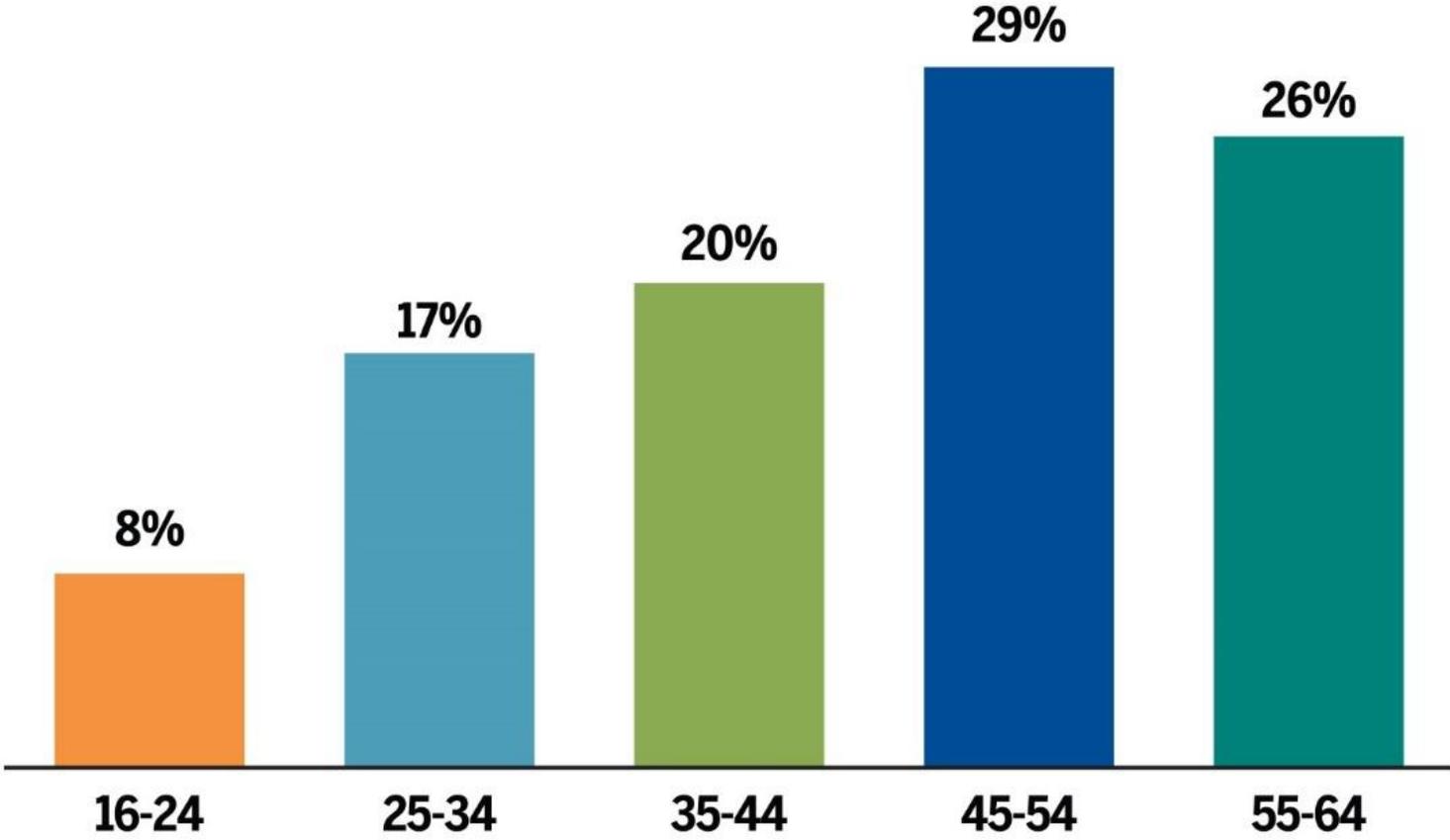
**Delving in:
Workers with no
digital skills**

How we are defining “No” digital skills:

- **Workers who failed to meet one or more of 3 baseline criteria to even take the full digital skills assessment:**
 1. **Prior computer use**
 2. **Willingness to take the computer-based assessment**
 3. **Ability to complete 4 out of 6 very basic computer tasks, such as using a mouse or highlighting text on screen**

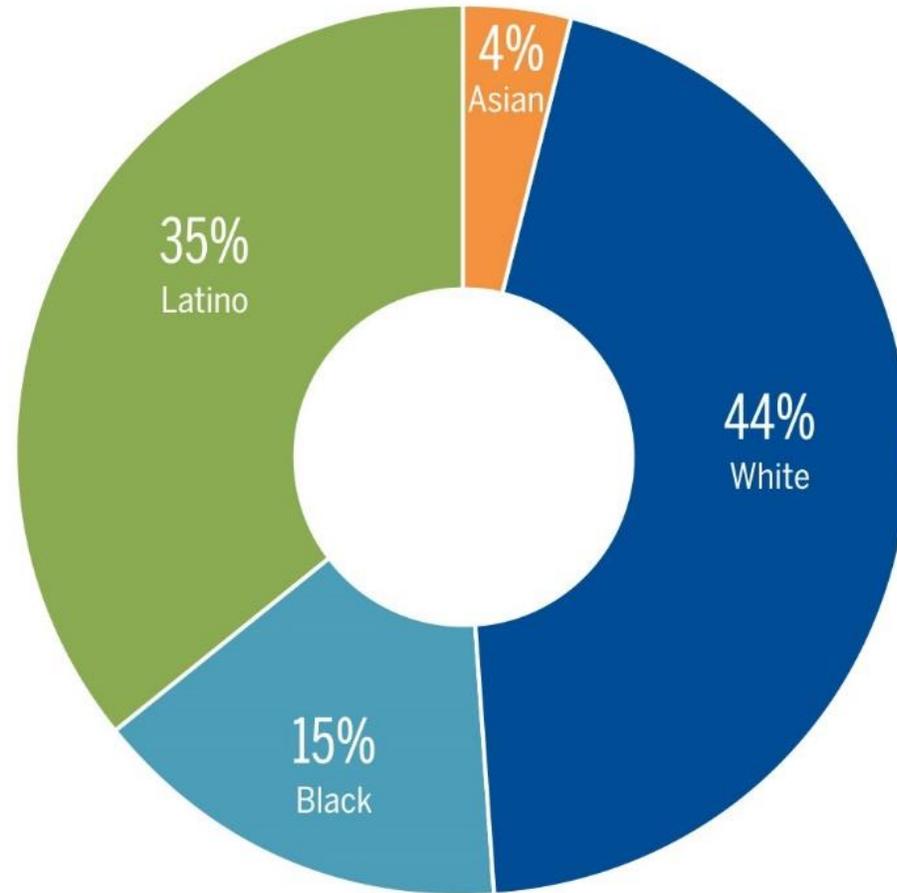


WORKERS WITH NO DIGITAL SKILLS EXIST IN ALL AGE GROUPS, BUT ARE MORE PREVALENT AMONG AGES 45+



Currently employed US workers ages 16-64. Source: OECD Survey of Adult Skills, 2012-14

WORKERS WHO HAVE NO DIGITAL LITERACY SKILLS ARE DEMOGRAPHICALLY DIVERSE



Currently employed US workers ages 16-64. Source: OECD Survey of Adult Skills, 2012-14
"Other" category not shown due to low sample size.

**Next up:
Workers with
limited digital
skills.**

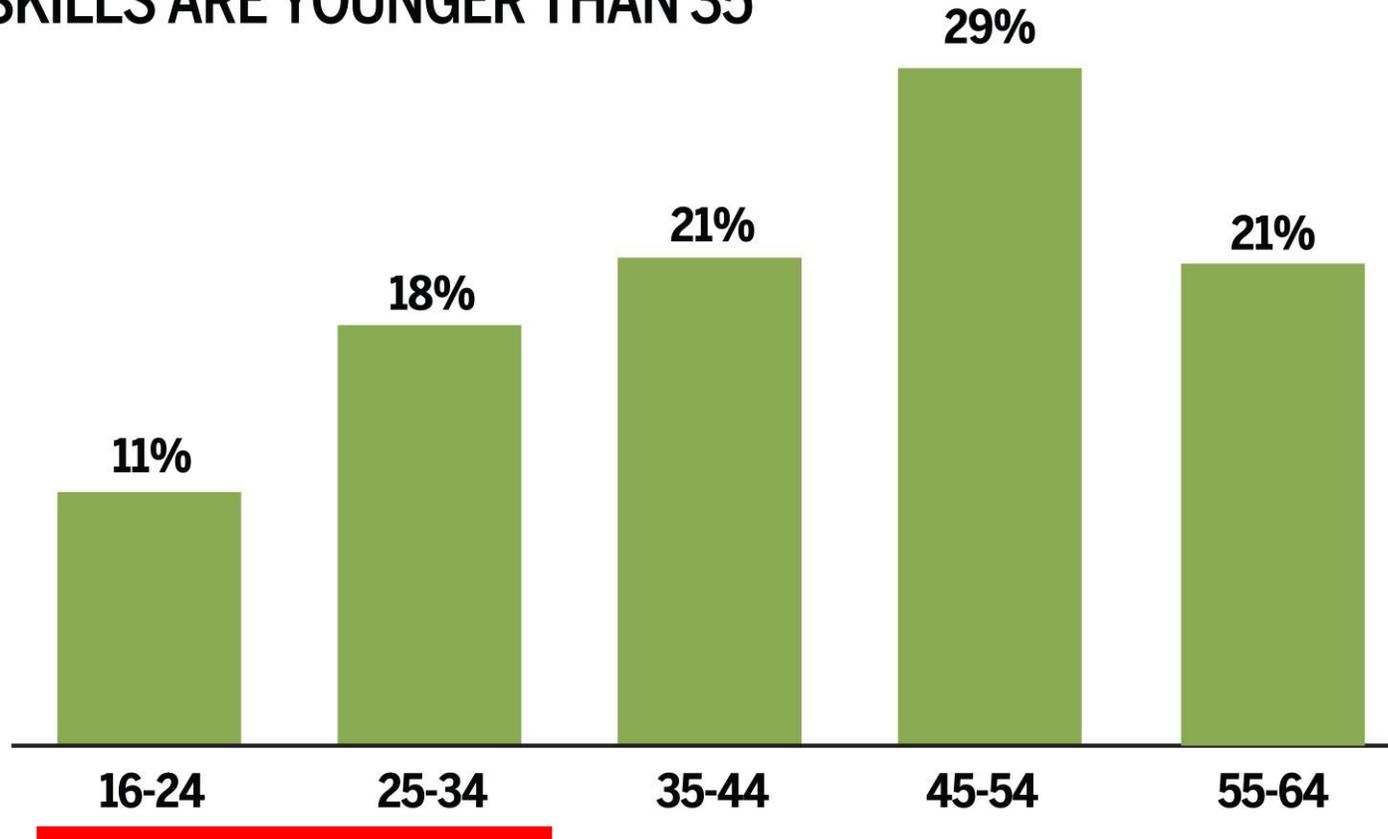


How we are defining “**Limited**” digital skills:

- **Workers who can complete only very **simple digital tasks** with a generic interface and just a few simple steps**
- **For example, these workers might struggle to sort e-mails that respond to an event invitation into different folders**

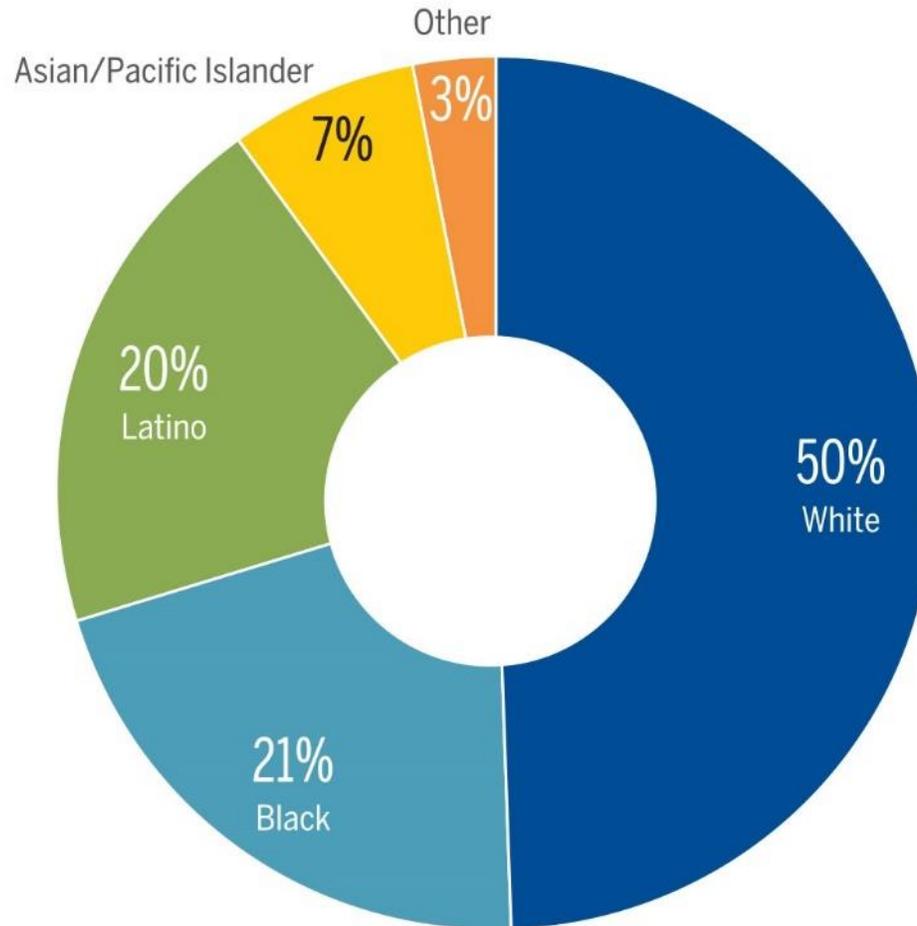


NEARLY ONE-THIRD OF WORKERS WITH LIMITED DIGITAL SKILLS ARE YOUNGER THAN 35



Currently employed US workers ages 16-64. Source: OECD Survey of Adult Skills, 2012-14

HALF OF WORKERS WITH LIMITED DIGITAL SKILLS ARE WHITE



Currently employed US workers ages 16-64. Source: OECD Survey of Adult Skills, 2012-14



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The pandemic is amplifying existing trends

- **Workers with low digital literacy also tend to have **low earnings** and **limited education****
- **These same populations are more likely to face **layoffs** due to the pandemic**



Racial equity gaps are being magnified

- **Workers of color** are more likely to lack home broadband access and home computers
- **Lack of access makes it harder to build digital skills**

Applying a racial equity lens to digital literacy
How workers of color are affected by digital skill gaps

DIGITAL SKILLS SERIES

American jobs are undergoing massive technological transformation, with even entry-level workers now expected to use all manner of digital devices and equipment. Examples include restaurant workers being trained in food safety using virtual reality goggles, home health aides using tablet computers to report patient information, retail clerks using smartphone apps to process returned items, and manufacturing workers using augmented reality to assemble parts.

To succeed in this rapidly transforming environment, workers need broad-based digital problem-solving skills that equip them to learn a wide variety of today's technologies and navigate continued changes in the future. This **digital literacy** includes both the capacity to use technology and the cognitive skills necessary to navigate it successfully.

But a startling one-third of American workers lack these vital digital skills. This lack of skills has wide-ranging consequences, hampering workers' own economic mobility and security, while also holding back the productivity and economic competitiveness of the U.S. companies that employ them.

Workers of color are disproportionately affected by digital skill gaps compared to their white peers, in large part due to structural factors that are the product of longstanding inequalities in American society, such as income and wealth gaps and uneven access to high-quality K-12 education. Historically, public policy decisions played a key role in forming racial inequalities in educational attainment, employment, and wages among American workers. Policies also have helped create the systems that shape access and outcomes in postsecondary education and training for people of color. Therefore, public policies must rise as an integral part of the solution to addressing digital skill gaps for workers of color.

This fact sheet draws on U.S. data from a respected international assessment known as the Organization for Economic Cooperation and Development (OECD) Survey of Adult Skills, or PIAAC.¹ The data shows that 13 percent of currently employed American workers ages 16-64 have no digital skills, and an additional 26 percent have very limited skills. Another one-third (36 percent)

Have questions or want to learn about specific examples? Contact National Skills Coalition for details at info@nationalskillscoalition.org.

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<https://tinyurl.com/DLREquity>

A young woman with long brown hair is shown in profile, wearing a grey VR headset. She is smiling broadly, looking towards the left. The background is a light-colored brick wall. A yellow banner with white text is overlaid on the bottom half of the image.

The pandemic is speeding up adoption of digital tools in the workplace.

Photo credit: Honeygrow/Kyle Huff

Even before COVID-19, use of digital tools was growing

- **Virtual reality (VR)** is equipping Honeygrow workers to follow food safety protocols
- **Kentucky Fried Chicken** created a VR simulation “**escape room.**”
- **An animated Col. Sanders** won’t let workers leave until they demonstrate the correct 5-step chicken frying process



Safety training often requires digital skills



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- ✓ Provides Department of Labor OSHA Card
- ✓ 24/7 Student Care With Access to Trainer
- ✓ Get Instant Downloadable Certificate!
- ✓ Bulk Registrations Available For Discounted Rates!



Select Course

Construction workers are completing required training online

- **Mobile-first training** is now available for workers to complete on tablets or even smart phones
- **Widely required training such as OSHA-10 certifications** has been among the first to move online



New tools for retail workers



Retail workers are using customized apps

- **Frontline Walmart workers use:**
 - **Claims App** to manage returns and determine destination (e.g., resale, donation) for rejected items
 - **Price Change App** to efficiently manage shelf pricing updates



Voice assistants expanding in the elder care field



*Yvonne Meyer, Los Angeles retirement home resident.
Photo credit: CNBC.*

Home health workers are teaching their patients to use Alexa

- Libertana Home Health has deployed **Echo Dot** with Amazon Alexa at 5 independent living units in California
- Health and social workers teach clients how to use Alexa to summon a Libertana app to **connect with caregivers**, schedule medication reminders and appointments, and more.



American workers deserve our investment in their digital skills.



**Deep dive data webinar:
June 3, 2020
2:00 p.m. Eastern Time**

infusing equity into the conversation

Key Questions to Ask in Applying a Racial Equity Lens to Digital Literacy Efforts



Current
Snapshot

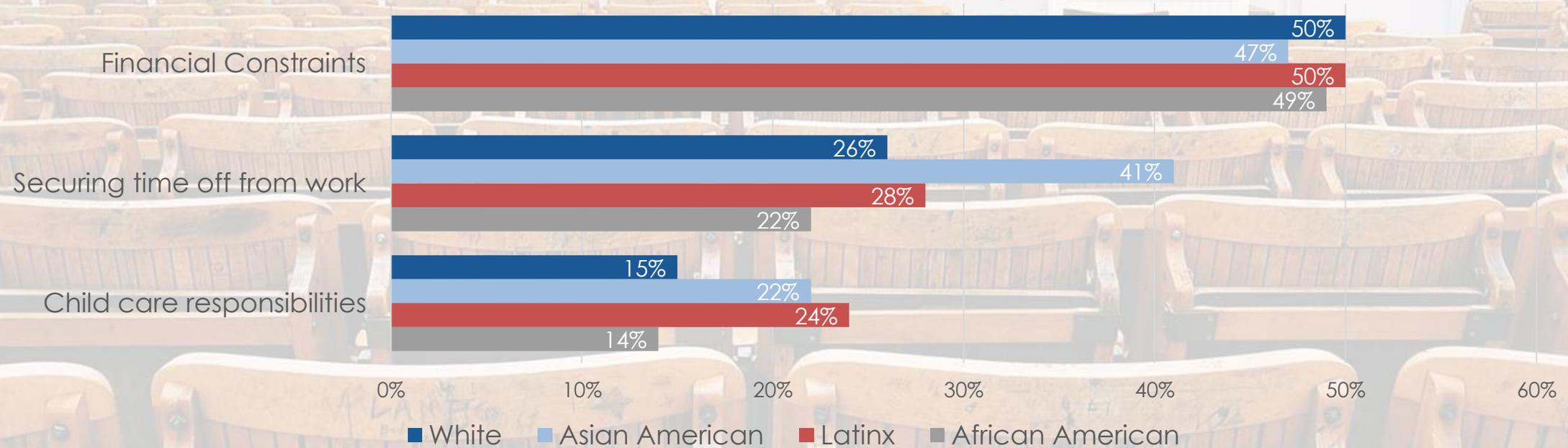
Your Responses from the Pre-webinar Survey

*How is your organization serving those
affected by Covid-19 disruptions?*



Traditional education and training programs underserve workers at highest risk

Barriers to Upskilling for Workers by Ethnicity and Race



Source: Joint Center for Political and Economic Studies



Workers of Color are Overrepresented Among those with Limited or No Digital Skills

- Black and Latino workers are overrepresented among those with digital skill gaps, while the picture for Asian American and Pacific Islander workers is more mixed
- Insufficient data limits our understanding of digital skill gaps among Native American and multiracial individuals
- Immigrant workers' digital skill gaps track with U.S.-born peers, though English learners fare worse



Key Questions to Consider

1. How are new digital demands in specific industries and roles affecting workers of color?
2. How are new investments in COVID-19 rapid response supporting incumbent worker upskilling?
3. How do skill-building policies/programs connect to digital inclusion and expanded access to broadband and devices?
4. Is outcome data being **disaggregated by race/ethnicity**?



“Three Legs of the Stool”

An equitable response to the developing digital needs of workers and businesses weathering this crisis requires:

- Broadening availability of digital skills and training opportunities
- Expanding individual access to essential tools like digital devices
- Expanding individual and household access to functional, reliable home broadband internet





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PALLONE, CLYBURN, AND 10 HOUSE DEMS ANNOUNCE PLAN TO CONNECT ALL AMERICANS TO AFFORDABLE BROADBAND INTERNET

Apr 30, 2020 | [Press Release](#)

Washington, D.C. – Congressman Frank Pallone, Jr., Chairman of the Energy & Commerce Committee, and Congressman James E. Clyburn, House Majority Whip and Chairman of the House Democratic Rural Broadband Task Force, along with 10 members of the Rural Broadband Task Force and Energy & Commerce Committee, today announced the House Democratic Plan to Connect All Americans to Affordable Broadband Internet. This plan—an updated and expanded version of the broadband provisions of House Democrats’ Moving America Forward Framework—is the product of significant collaboration between the Rural Broadband Task Force, the Energy & Commerce Committee, and many Members of the House Democratic Caucus.

The other members announcing this plan are: Communications and Technology Subcommittee Chairman Mike Doyle (D-PA), Congressman Jerry McNerney (D-CA), Congressman Dave Loebsack (D-IA), Congressman Marc Veasey (D-TX), Congresswoman Anna Eshoo (D-CA), Congressman Peter Welch (D-VT), Assistant Speaker Ben Ray Lujan (D-NM), Congressman Paul Tonko (D-NY), Congresswoman Grace Meng (D-NY), and Congressman Mark Pocan (D-WI).

Democrats welcome recent reports that Republicans support the inclusion of broadband investment in the next coronavirus response packages. This plan will accomplish the goal of delivering affordable access to high-quality internet to all Americans.

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Stark Inequities Revealed by Covid-19 are Driving Federal Change

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shifting to what works

Policy Solutions to Deliver Digital Skills Training Essential for an
Equitable Recovery



Current Snapshot

Your Responses from the Pre-webinar Survey

What, if any, policy concerns (e.g., budget) do you have as a result of Covid-19?



Policy Solutions for Emerging Challenges

Digital inequities exist in all layers of American society, creating a drag on U.S. productivity and worker economic security.

In response, National Skills Coalition, in collaboration with a broad-base of coalition partners representing adult educators, direct service organizations, small and mid-sized businesses and industry partners, crafted **policy solutions to meet the challenges arising from a digitalizing workforce and society.**



A woman with long, wavy red hair is standing behind a counter, holding a tablet. In front of her is a payment terminal. A hand is shown tapping a card on the terminal. The terminal screen displays "12.49" and "Tap or Swipe". The background is a blurred retail or service environment.

Challenge: Not all businesses and training providers have the guidance they need to effectively upskill workers with digital skills for a changing economy.



A new definition for an essential skillset



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Challenge: Not all businesses and training providers have the guidance they need to effectively upskill workers with the digital skills for a changing economy.





**Assess
current and
future
industry
demand for
digital skills**





Challenge: States need support to develop programs that embed digital literacy in occupational skills training and other proven accelerated learning strategies.



**Create grant
programs to
encourage
high-quality
digital
instruction**



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Digital Equity Act (HR 4486/S 1167)

#DIGITALEQUITYNOW

[Fact Sheet](#) [Social Media Kit](#) [Statistics](#) [Endorsing Organizations](#) [Why](#) [🔍](#)

THE DIGITAL EQUITY ACT OF 2019

The Digital Equity Act strengthens federal investments in digital inclusion efforts around the nation to help ensure everyone in our communities is reaching their full potential.



#DIGITALEQUITYNOW

U.S. Senator Patty Murray (D-WA): Why We Need the Digital Equity Act



"There are too many people in my district and across the country who are being left behind because they can't afford broadband service or they lack the necessary digital skills. Not having broadband service means that it's much harder for a veteran to successfully apply for a job, for an entrepreneur with an innovative idea to put the idea into practice, for a student to complete his or her homework, and for an elderly person who is unable to leave his or her home to use telemedicine services. We are long overdue for closing gaps in broadband adoption and digital literacy."



"The Digital Equity Act of 2019 for the first time defines and codifies the terms 'Digital Equity' and 'Digital Inclusion.' AARP applauds this step. Full participation in society is increasingly dependent on new technologies and service delivery models for health care, financial services, shopping, community engagement, employment, and caregiving. In some sectors, and in rural areas, digital service delivery may supplant traditional service models. As the economy becomes increasingly digital, it is essential that all Americans have access to the necessary services."



"In the U.S., efforts to increase affordable access to the internet, devices and digital skills training are almost completely local. On the one hand this is fabulous because trusted community relationships are essential to effective digital inclusion work. On the other hand, financial support of local digital inclusion work is sorely lacking. The Digital Equity Act recognizes the value of local trusted institutions while allocating financial support. NDIA and our 350 affiliates in 41 states fully support the Digital Equity Act and look forward to its passage."



Challenge: Small businesses have limited in-house capacity to train workers while training providers' program availability may not respond to local business need.



Empower innovation through industry partnerships



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Challenge: Small and mid-sized employers need support to rapidly upskill their new and incumbent workforces to respond to the crisis.



Incentivize private investment in upskilling incumbent workers



Upcoming Research

The New Digital Demands

How American workers' uneven digital literacy skills affect economic mobility and business competitiveness, and what policymakers can do about it.



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DIGITAL LITERACY for SKILLS of the 21ST CENTURY:

Policy recommendations to address digital skill needs of workers most vulnerable to displacement

American jobs are undergoing massive technological transformation. To succeed in this rapidly changing environment, workers need broad-based digital problem-solving skills that equip them to learn a wide variety of today's technologies and navigate continued changes in the future. In-demand careers increasingly require digital literacy skills, and for many industries (especially those with more highly automatable roles or more easily digitized functions) digital skills are entry-level competencies for new hires and incumbent workers.

But tens of millions of workers lack these digital skills and even more lack access to high-quality training to empower them to increase their skills to meet future technological shifts. Our country's adult education and workforce systems are underfunded—and too often not adequately aligned—making it impossible for these systems to fully address the current challenge. Businesses attempt to fill the gap, but no single company can do it alone.

To meet the needs of today's and tomorrow's workers and businesses, policymakers must commit to invest in the opportunities and supports workers need to upskill and work alongside new technologies. This means first defining, measuring and assessing digital literacy among U.S. workers. Then, it will require making significant, targeted investments in digital literacy and supporting the industry or sector partnerships that bring industry together with education and training providers.

What is "Digital Literacy"?
Digital literacy is the ability to use information and communication technologies to find, evaluate, create and communicate information, requiring both cognitive and technical skills necessary for a specific occupation or occupational cluster for the purpose of career advancement.

Technological change will have an unprecedented impact on the U.S. workforce over the next decade.

- At least 60 percent of jobs will be significantly impacted, and
- 10 to 15 percent of jobs will be eliminated.

These changes would mean 100 million workers would need to be upskilled or re-skilled to succeed in the 21st century economy.

This publication is one in a three-part series of policy recommendations NSC staff is currently working on to address this challenge.

Applying a racial equity lens to digital literacy

How workers of color are affected by digital skill gaps

DIGITAL SKILLS SERIES

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HALF OF BLACK WORKERS NEED DIGITAL SKILLS

13% advanced digital skills	17% moderate digital skills
23% no digital skills	27% very limited digital skills

MORE THAN HALF OF LATINO WORKERS NEED DIGITAL SKILLS

17% advanced digital skills	22% moderate digital skills
20% no digital skills	25% very limited digital skills





Questions?



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Building a Digitally Resilient Workforce:

Creating On-Ramps to Opportunity

DIGITAL US COALITION



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the new landscape of digital literacy

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