American Workers' Digital Skills:

What the data tells us

Webinar

June 3, 2020

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.

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What you told us you want to learn today

- **What the data tells us about US workers' digital skills (31%)**

- **What skills are in demand (35%)**

- **What curricula or program models to teach (16%)**

- *How to connect this data to advocacy for policy change!*

Our agenda today

- **Context:** Examples of digital skill demands in the workplace

- **Deep dive:** Data on US workers' foundational digital skills

- **Implications:** What the data means

- **Action:** How you can connect the dots for policymakers

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What we're <u>not</u> going to cover today

- **Specific program models or curricula**

- **Lists of job titles or occupations or credentials that are in demand**

- **Digital access issues**

Check out the Resources slides at the end of today's webinar for recommendations

Context

The pandemic has brought home a new reality:

Businesses need workers who are digitally literate.

Even frontline workers need digital skills

- **From healthcare to grocery stores, manufacturing to construction, demands are changing fast**

Let's look at some examples...

The new face of food-safety training

Photo credit: Honeygrow/Kyle Huff

Restaurant workers are being trained with VR goggles

- **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

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.

Mobile tools are growing in the retail sector
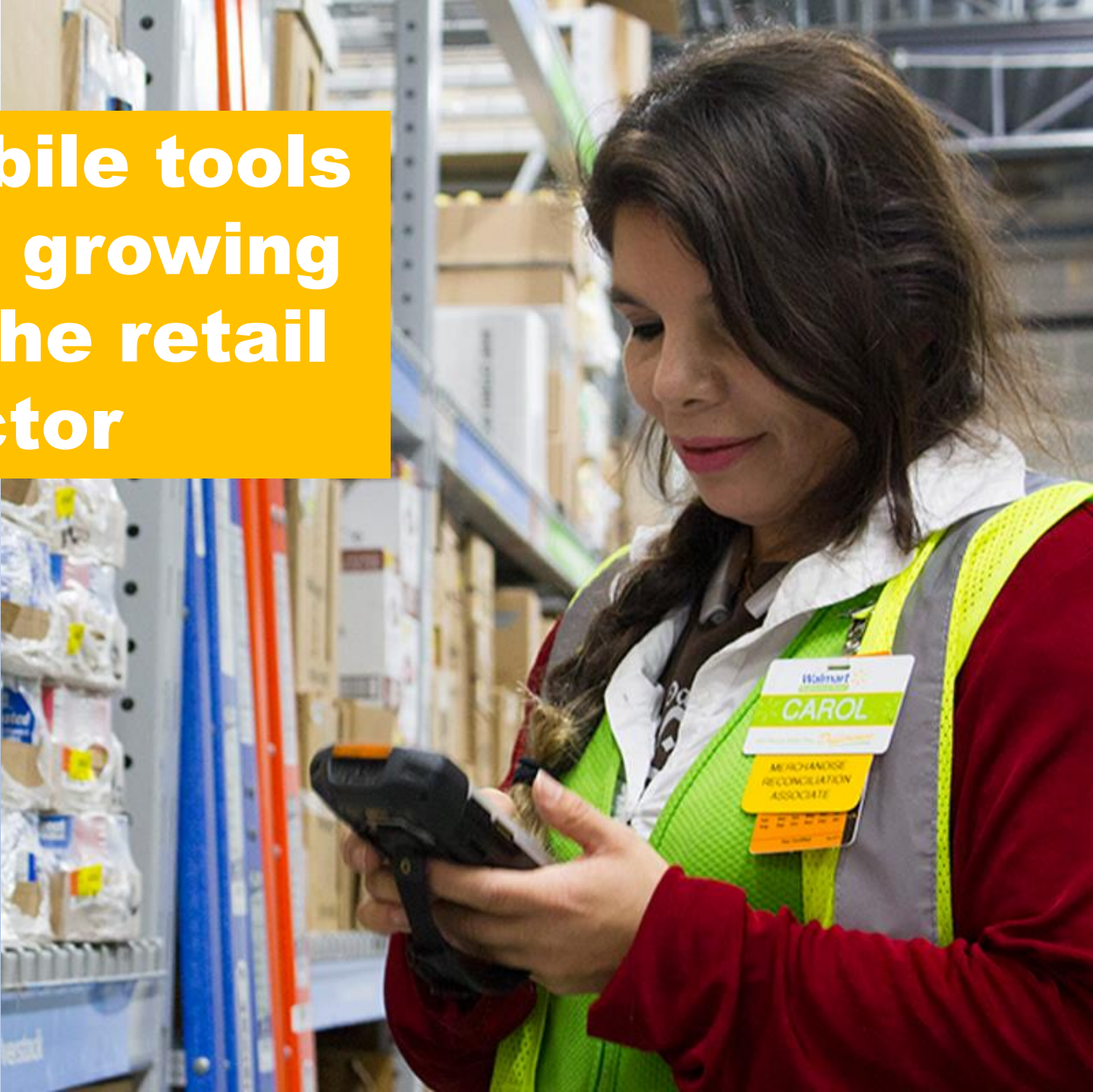
Retail workers are using custom apps

- 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

Grocery workers are completing online training.

National Grocers Assoc. courses are available to member stores.

New Courses in 2020

- 2020 – Supplemental Nutrition Assistance Program (SNAP) Training
- Bakery Clerk 3 – Science
- Bakery Clerk 4 – Product Knowledge
- Bakery Clerk 5 – Merchandising
- Cashier 3 – Process Payment: Cash & Check
- Cashier 4 – Process Payment:

- Cashier – Supplemental Nutrition Assistance Program (SNAP) Training
- Ransomware 1 – What is Ransomware?
- Ransomware 2 – Examples of Ransomware
- Ransomware 3 – What Can Retailers Do?
- Seafood Sustainability
- Sexual Harassment – Connecticut
- Stocking – Proper Lifting

Safety training often requires digital skills

UNIVERSITY OF SOUTH FLORIDA

USFOSHA.com
Online OSHA Training

OSHA-Authorized Outreach Training Online!

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

Safety Manual

AUTHORIZED **OSHA** COURSES

Select Course ⌃
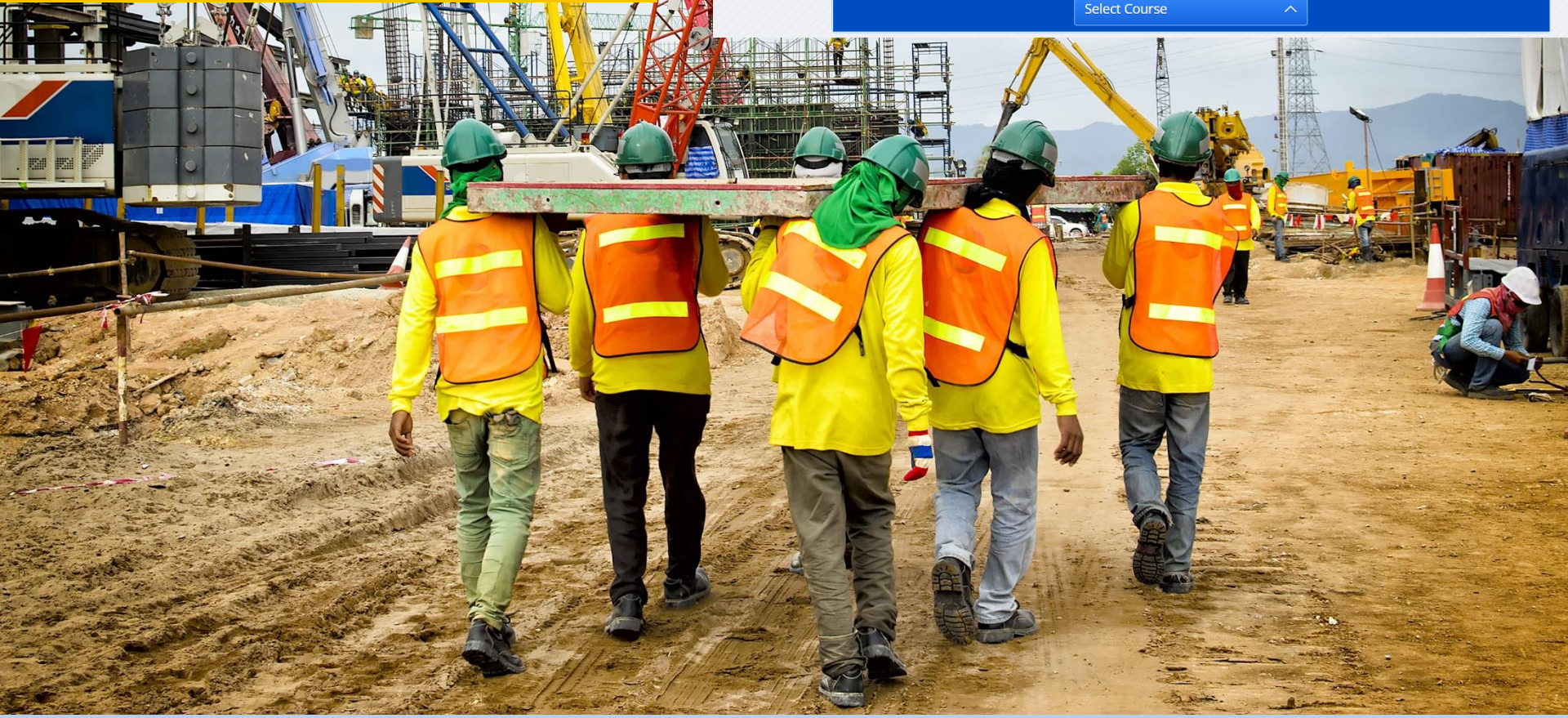
Construction workers are completing required training online

- **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

Salespeople are using web-based learning games

- Bridgestone Tires is boosting sales workers' product knowledge with an online tool

- The web-based tool is usable via smartphone, tablet, or desktop

The next frontier for manufacturing workers

Assembly line workers are using augmented reality (AR)

- Boeing tested an AR program for training aircraft assembly workers

- Workers made fewer mistakes compared to those trained using a traditional manual or even a tablet computer

But US workers have crucial digital skill gaps.

Deep dive
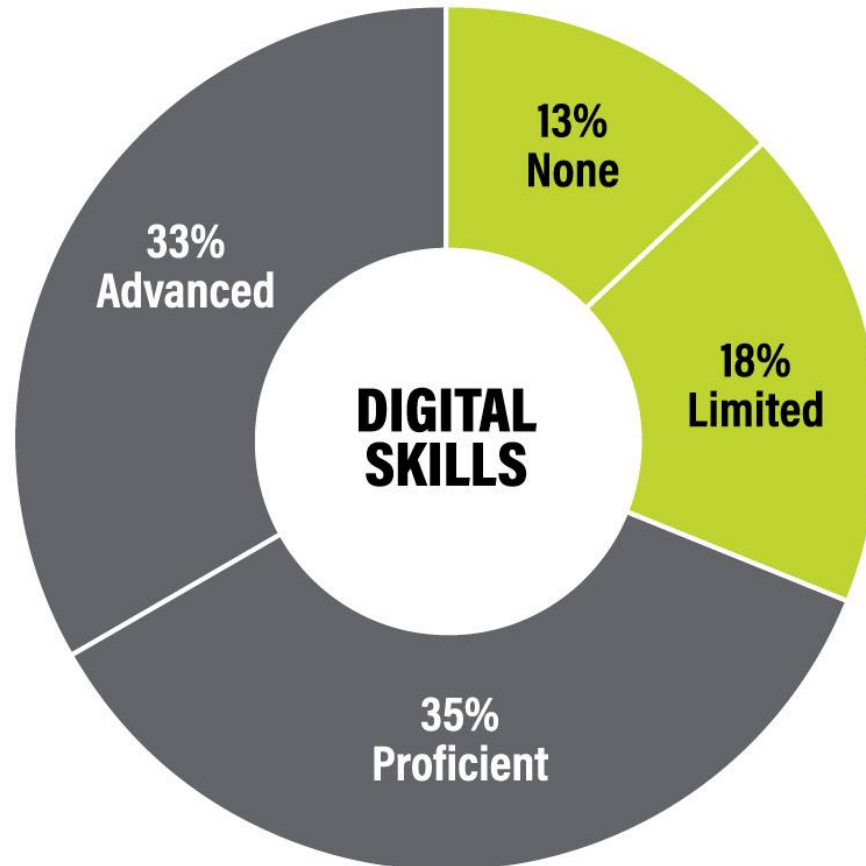
What do digital skill gaps look like?

- Data you're about to see comes from rigorous assessment called PIAAC

- Organized by OECD and conducted in US by IES of the US Department of Education

- US workers ages 16-64

- Employed at the time of survey

Nearly one-third of America's workers lack digital skills

13% None

18% Limited

33% Advanced

35% Proficient

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

How we are defining "Limited" digital skills:

- Workers who can complete simple digital tasks with a generic interface and just a few simple steps

- For example, sorting e-mails that respond to an event invitation into different folders

Digital skill gaps vary by industry.

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.

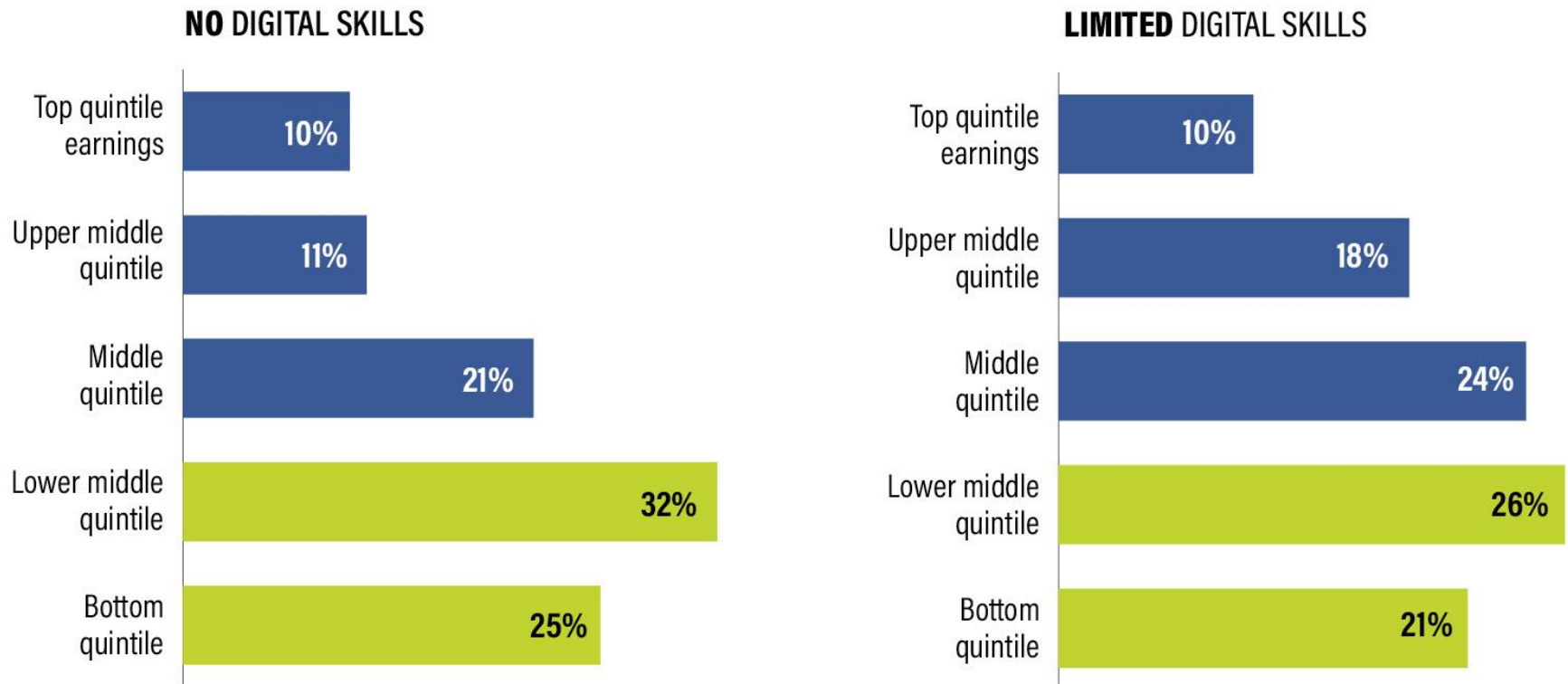| Selected occupations	Percentage of workers with *no* digital skills	Percentage of workers with *limited* digital skills	Combined percentage of workers with limited or no skills*
Plant and machine operators and assemblers	33%	29%	63%
Skilled agricultural and fishery workers; elementary occupations	32%	21%	53%
Craft and related trades workers	21%	27%	48%
Service workers and shop and market sales workers	16%	24%	40%
Clerks	6%	19%	24%
Technicians and associate professionals	8%	15%	24%
Professionals	4%	9%	13%

*NOTE: Numbers may not sum due to rounding.

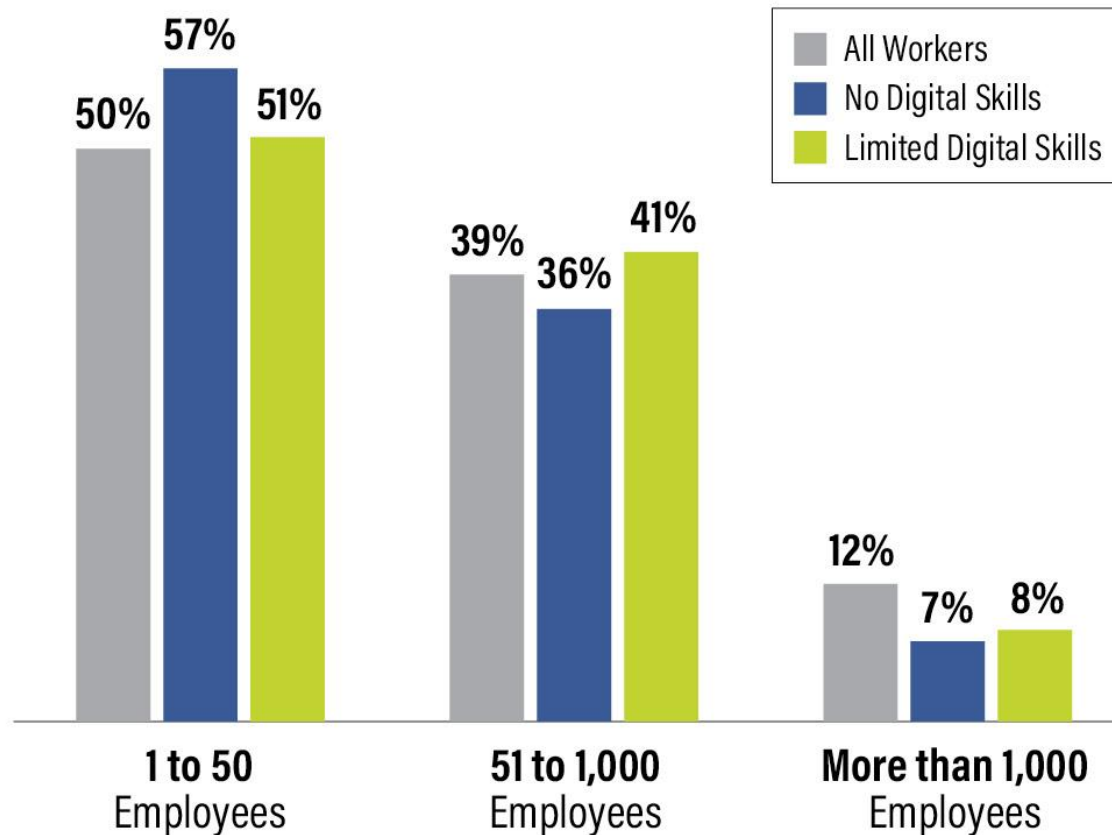These gaps have consequences for economic competitiveness

Roughly half of workers with limited or no digital skills have low earnings

NO DIGITAL SKILLS

Top quintile earnings	10%
Upper middle quintile	11%
Middle quintile	21%
Lower middle quintile	32%
Bottom quintile	25%

LIMITED DIGITAL SKILLS

Top quintile earnings	10%
Upper middle quintile	18%
Middle quintile	24%
Lower middle quintile	26%
Bottom quintile	21%

Numbers may not sum to 100 due to rounding. Currently employed US workers ages 16-64. Source: *OECD Survey of Adult Skills (PIAAC) 2012-14.*
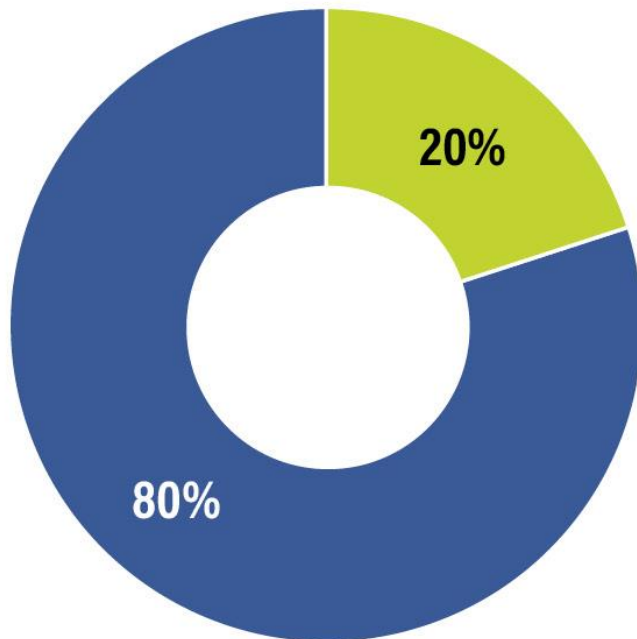
Workers with limited or no digital skills are slightly more likely to work for small businesses


Legend:
- All Workers
- No Digital Skills
- Limited Digital Skills

1 to 50 Employees: 50% / 57% / 51%

51 to 1,000 Employees: 39% / 36% / 41%

More than 1,000 Employees: 12% / 7% / 8%

Low digital skills aren't just a problem for workers themselves; many are also supervising others

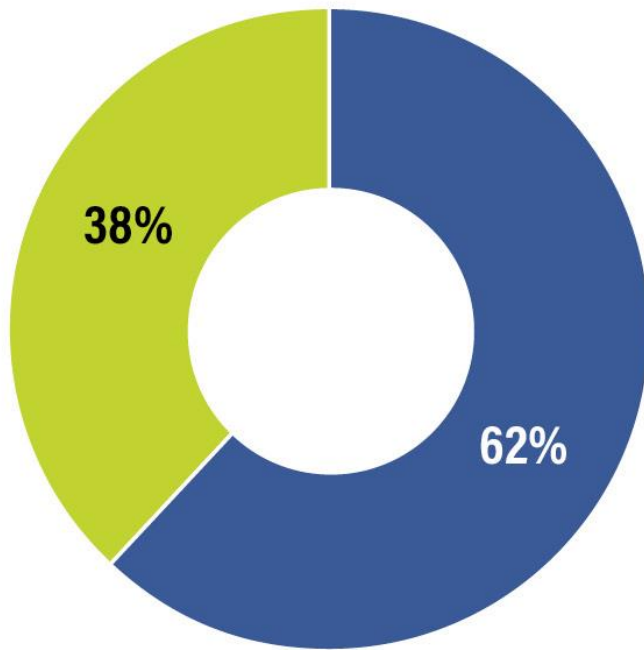### One-Fifth of Workers with **No** Digital Skills are Supervisors

20%

80%

One-Third of Workers with **Limited** Digital Skills are Supervisors

33%

67%
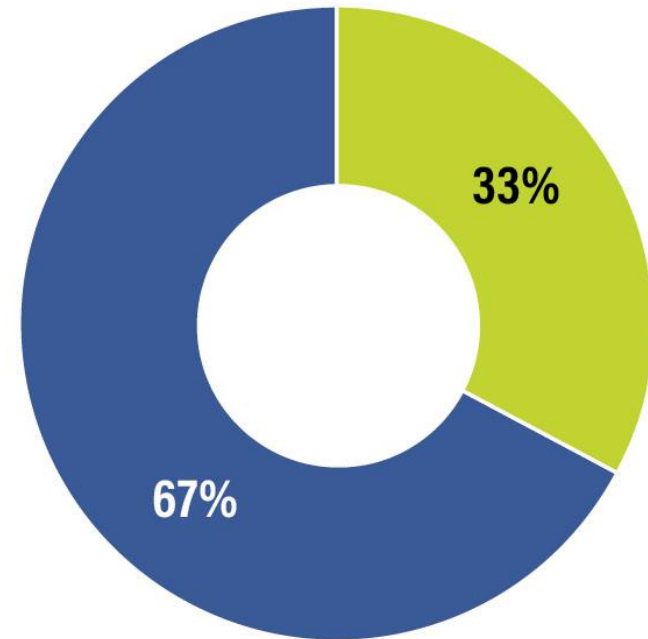
■ Supervising other employees   ■ Not supervising

Many workers who lack digital literacy have jobs that require substantive computer skills

Among Workers with **No** Digital Skills

38%

62%

Among Workers with **Limited** Digital Skills

43%

57%
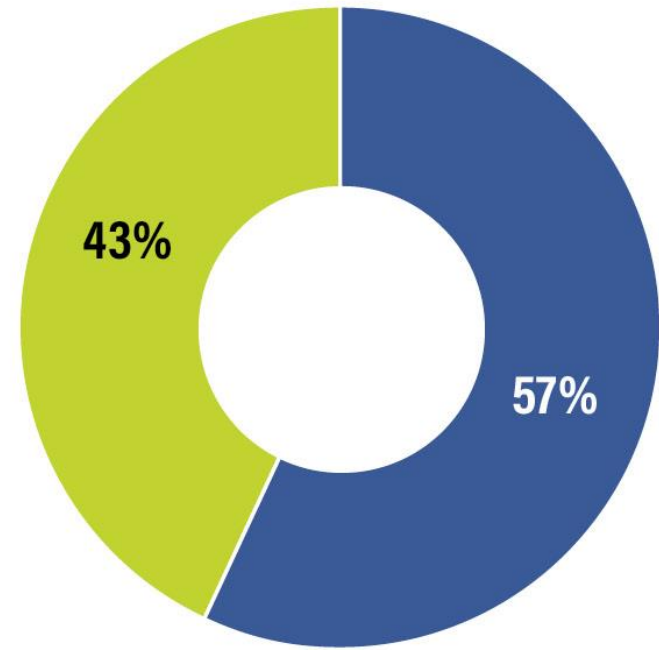
■ Moderate or complex computer skills needed for current job   ■ Straightforward computer skills needed for current job

Currently employed US workers ages 16-64. Source: *OECD Survey of Adult Skills (PIAAC) 2012-14.*

Workers with fewer digital skills are less likely to have had recent on-the-job training (in any job)
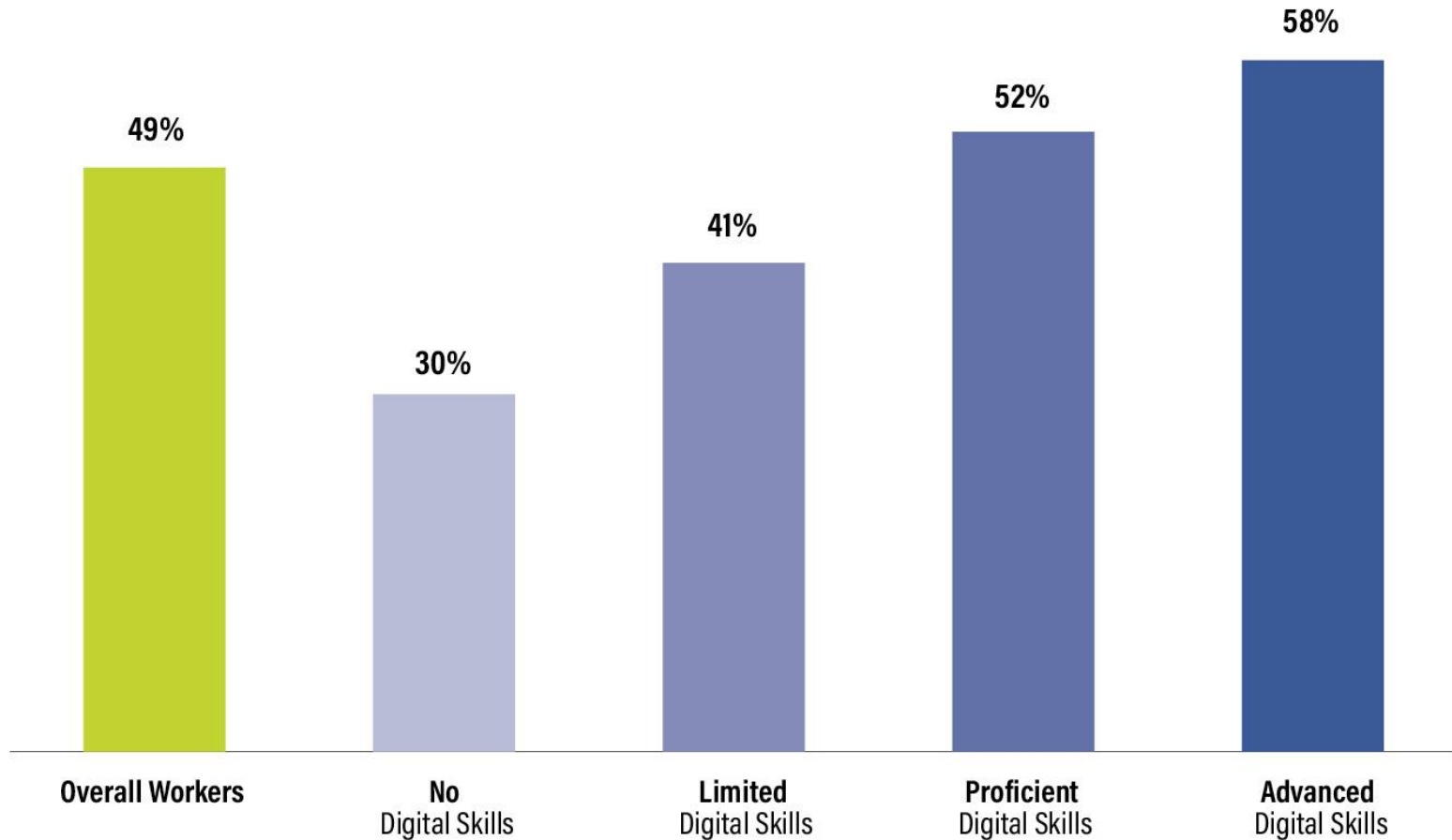
Overall Workers	No Digital Skills	Limited Digital Skills	Proficient Digital Skills	Advanced Digital Skills
49%	30%	41%	52%	58%

Currently employed US workers ages 16-64. Source: *OECD Survey of Adult Skills (PIAAC) 2012-14.*

Workers want to upskill...

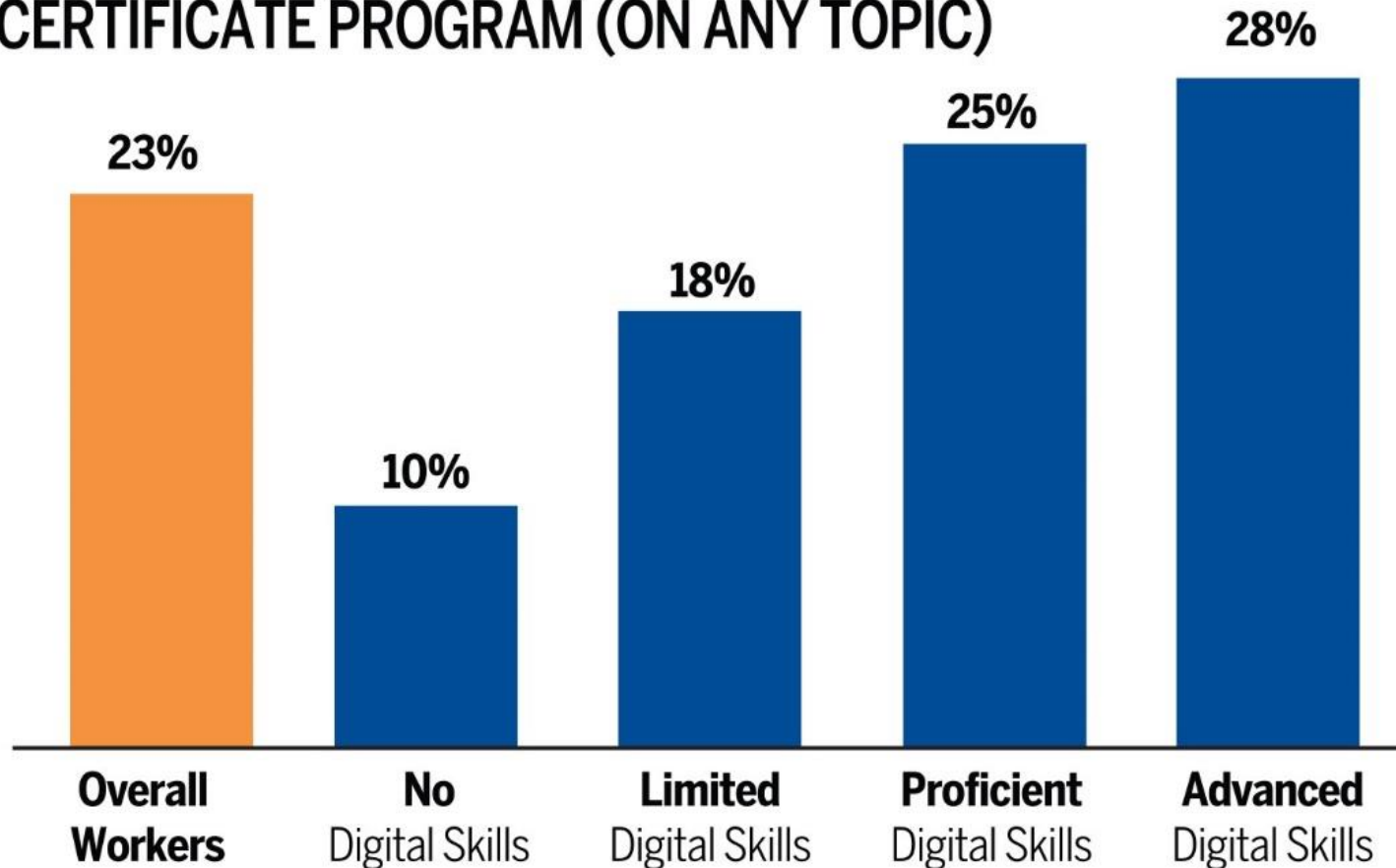**...but those who <u>already</u> have greater skills are more likely to do so.**

WORKERS WITH GREATER DIGITAL SKILLS ARE MORE LIKELY TO HAVE RECENTLY ENROLLED IN A DEGREE/ CERTIFICATE PROGRAM (ON ANY TOPIC)

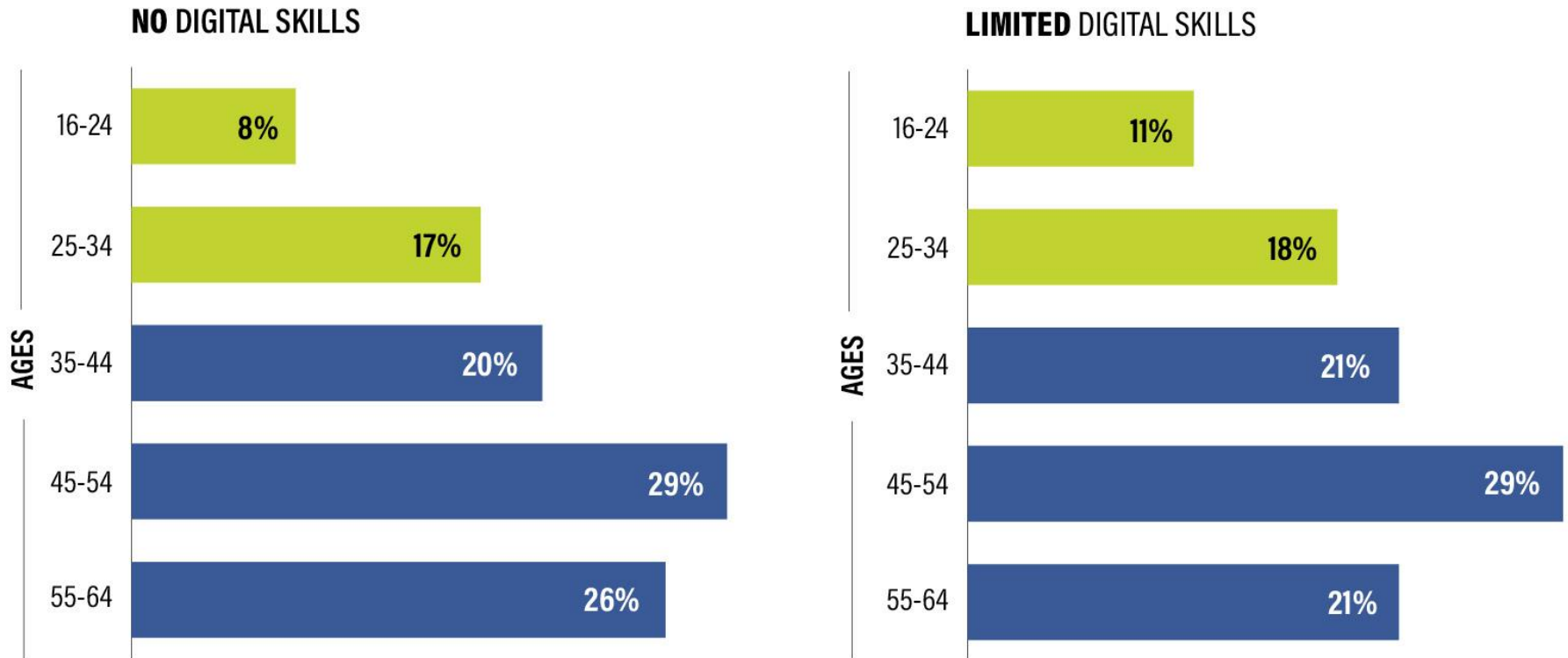|				
23%	10%	18%	25%	28%
Overall Workers	**No** Digital Skills	**Limited** Digital Skills	**Proficient** Digital Skills	**Advanced** Digital Skills

Percent of currently employed workers ages 16-64
who studied for a formal degree/certificate in past year.
Source: OECD Survey of Adult Skills, 2012-14

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Digital skill gaps occur among all demographic groups.

Younger workers are not immune to digital skill gaps

NO DIGITAL SKILLS

AGES

Age	%
16-24	8%
25-34	17%
35-44	20%
45-54	29%
55-64	26%

LIMITED DIGITAL SKILLS

AGES

Age	%
16-24	11%
25-34	18%
35-44	21%
45-54	29%
55-64	21%

Currently employed US workers ages 16-64. Source: *OECD Survey of Adult Skills (PIAAC) 2012-14.*

A plurality of workers with digital skill gaps are white

NO DIGITAL SKILLS
- 44% White
- 15% Black
- 35% Latino
- Asian/Pacific Islander 4%
- Other 2%

LIMITED DIGITAL SKILLS
- 50% White
- 21% Black
- 20% Latino
- Asian/Pacific Islander 7%
- Other 3%
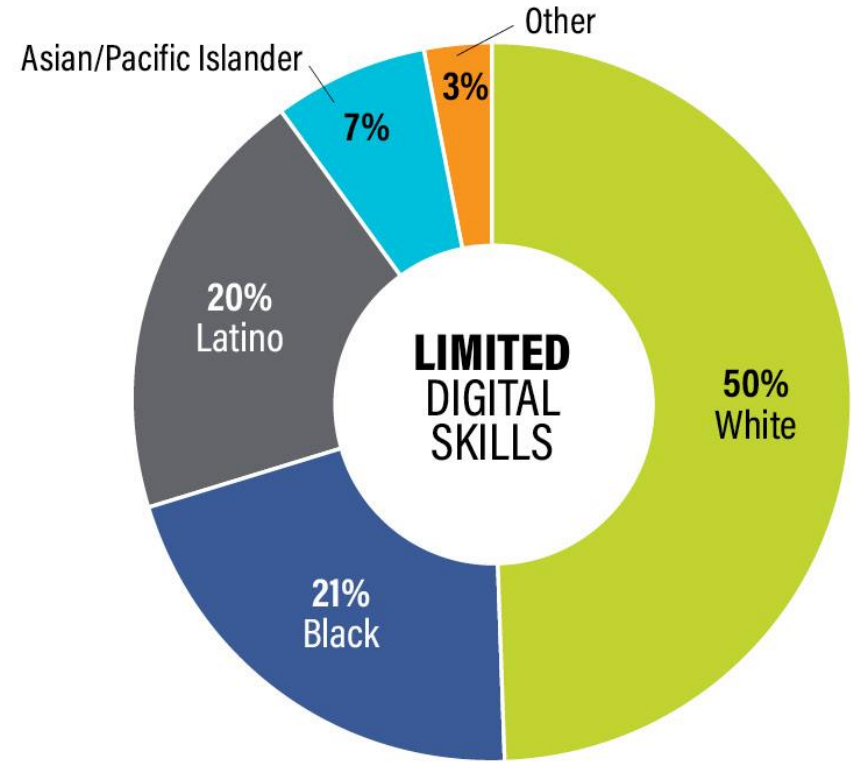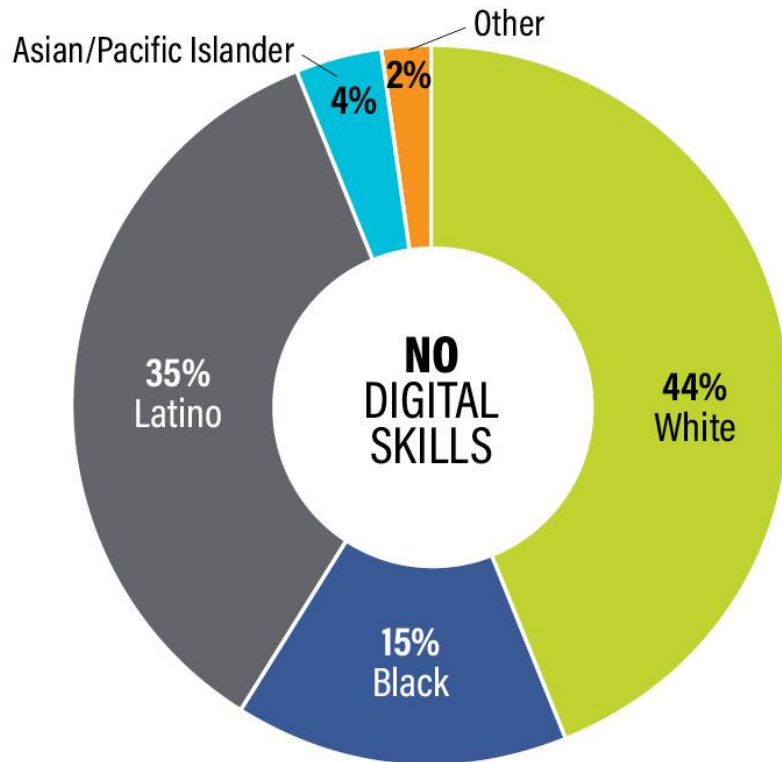
Most workers with digital skill gaps have a high school education or less

NO DIGITAL SKILLS

Below High School	33%
High-School Credential	47%
Certificate from a College or Trade School	6%
Associate's Degree	4%
Bachelor's Degree	7%
Graduate or Professional Degree	3%

LIMITED DIGITAL SKILLS

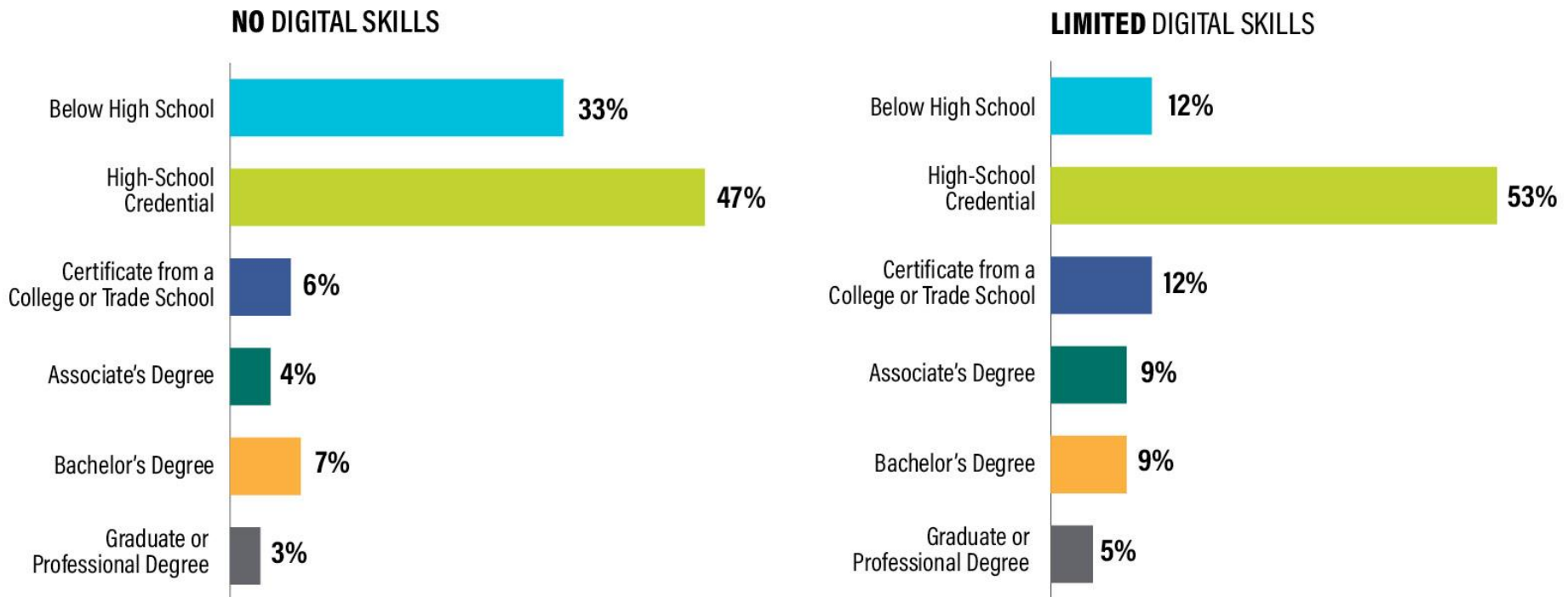|	
Below High School	12%
High-School Credential	53%
Certificate from a College or Trade School	12%
Associate's Degree	9%
Bachelor's Degree	9%
Graduate or Professional Degree	5%

Currently employed US workers ages 16-64. Source: *OECD Survey of Adult Skills (PIAAC) 2012-14.*

Workers of color face greater skill gaps.

HALF OF BLACK WORKERS NEED DIGITAL SKILLS

13% **ADVANCED** DIGITAL SKILLS

17% **NO** DIGITAL SKILLS

37% **PROFICIENT** DIGITAL SKILLS

33% **LIMITED** DIGITAL SKILLS
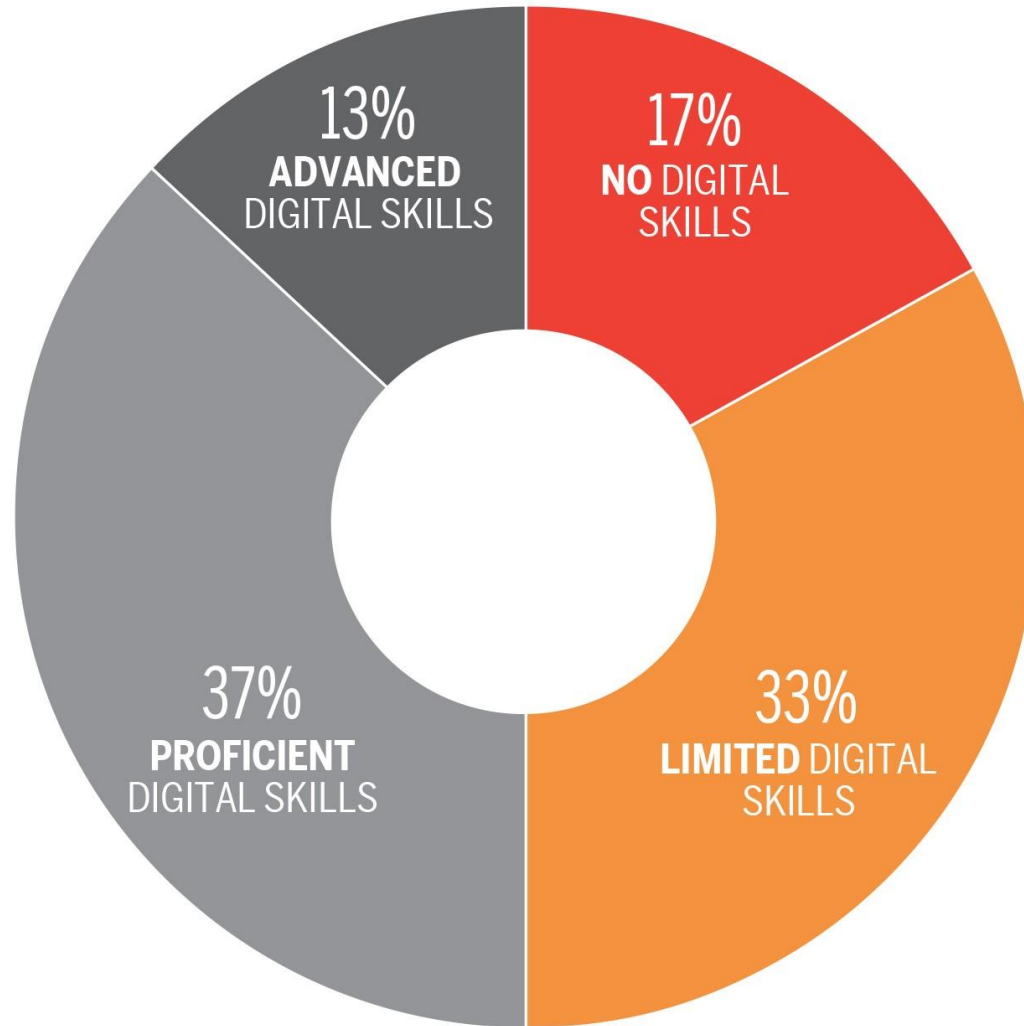
Currently employed US workers ages 16-64. Source: OECD Survey of Adult Skills (PIAAC), 2012-14.

MORE THAN HALF OF LATINO WORKERS NEED DIGITAL SKILLS

17% **ADVANCED** DIGITAL SKILLS

32% **NO** DIGITAL SKILLS

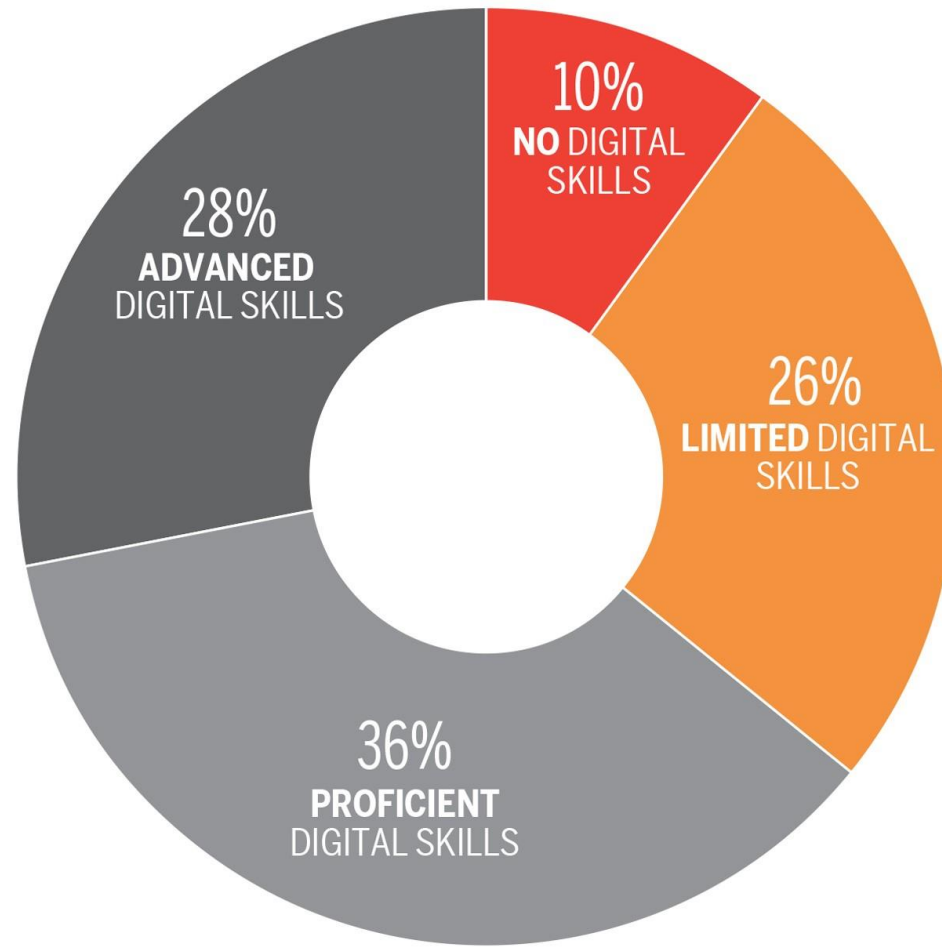26% **PROFICIENT** DIGITAL SKILLS

25% **LIMITED** DIGITAL SKILLS
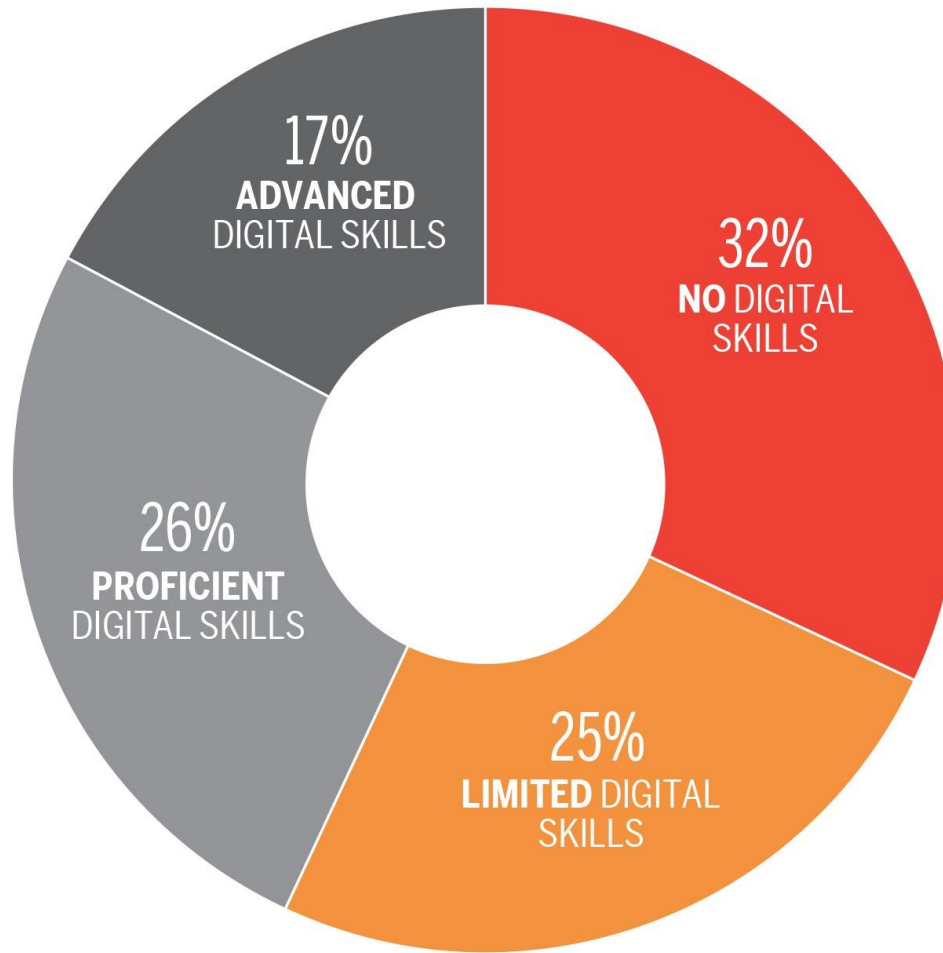
Currently employed US workers ages 16-64. Source: OECD Survey of Adult Skills (PIAAC), 2012-14.

ONE-THIRD OF ASIAN AMERICAN/PACIFIC ISLANDER WORKERS NEED DIGITAL SKILLS

10%
NO DIGITAL SKILLS

26%
LIMITED DIGITAL SKILLS

36%
PROFICIENT DIGITAL SKILLS

28%
ADVANCED DIGITAL SKILLS

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

Many immigrants and English learners are also people of color.

Implications

Structural racism helps drive digital skill gaps.

Factors can include:

- Unavailability of broadband access

- Lack of device access

- Limited K-12 education

- Low income

- Irregular or unstable employment

Don't underestimate people.

Fragmented knowledge

- *Definition*: Comfortable with certain tasks, unfamiliar with others

- Don't underestimate ingenuity and expertise.

- Avoid assumptions about who lacks digital skills and why

- Engage workers in identifying which interventions can help them make bridges between the skills they have and the skills they need

A quick note about in-demand skills & program models

- There isn't an easy, single answer to how to upskill workers

- However, providing a baseline of **foundational digital skills** & a **sense of self-efficacy** can help people to adapt to the digital demands of *any* job

Draw on existing best practices in workforce dev.

- Industry sector partnerships & employer advisory councils can provide crucial intelligence on local hiring needs

- Partnerships among workforce boards, Career and Technical Education, and adult education can improve jobseeker outcomes

Resources

- **Digital access issues:** **National Digital Inclusion Alliance** **www.digitalinclusion.org**

- **World Education's Ed Tech Center** **edtech.worlded.org/**

- **Digital US coalition** **digitalus.org/**

- **Curricula and tools for teaching digital literacy:** **Blended Learning Guide** **by David Rosen and Jen Vanek;** **GoogleDoc** **from Ed Tech Center**

Resources *(continued)*

- **Information on different types of credentials:** Credential Engine **database of 730,000 credentials**

- **Resources on competency-based education and hiring:** Skillful.com/, College for America, Urban Institute brief, Opportunity@Work.

Actions

What can you do now?

- Educate policymakers about existing digital skill gaps & potential remedies

- Advocate for expanded data collection on digital skills

- Support dedicated federal investment via Digital Upskilling Grants (*Learn more*; *NSC policy brief coming soon*)

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Every worker. Every industry. A strong economy.

American workers deserve our investment in their digital skills.

Time for your questions!

Contact us

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