



**NATIONAL  
SKILLS  
COALITION**

Every worker. Every industry.  
A strong economy.

# Closing the Digital *Skill* Divide: What Higher Education Leaders Need to Know

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Initiatives webinar

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# Today's conversation

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- **What we learned** about the demand for digital skills
- **What our findings mean** for HBCUs, Tribal Colleges and Universities, Hispanic-Serving Institutions, and other education, workforce, and digital equity stakeholders
- **Your questions!**



# About National Skills Coalition:

## Our vision

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- ▶ Jobs that require skills training are the backbone of our economy.
- ▶ National Skills Coalition fights for a national commitment to inclusive, high-quality skills training so that more people have access to a better life, and more local businesses see sustained growth.



The **digital divide** isn't just about broadband or hardware – it's also about **skills**.





As educators know well, people often enroll in digital skills classes to get a job or **get a better job.**



**So we decided  
to research  
employers'  
demand for  
digital skills.**





# We analyzed 43 million job ads from 2021

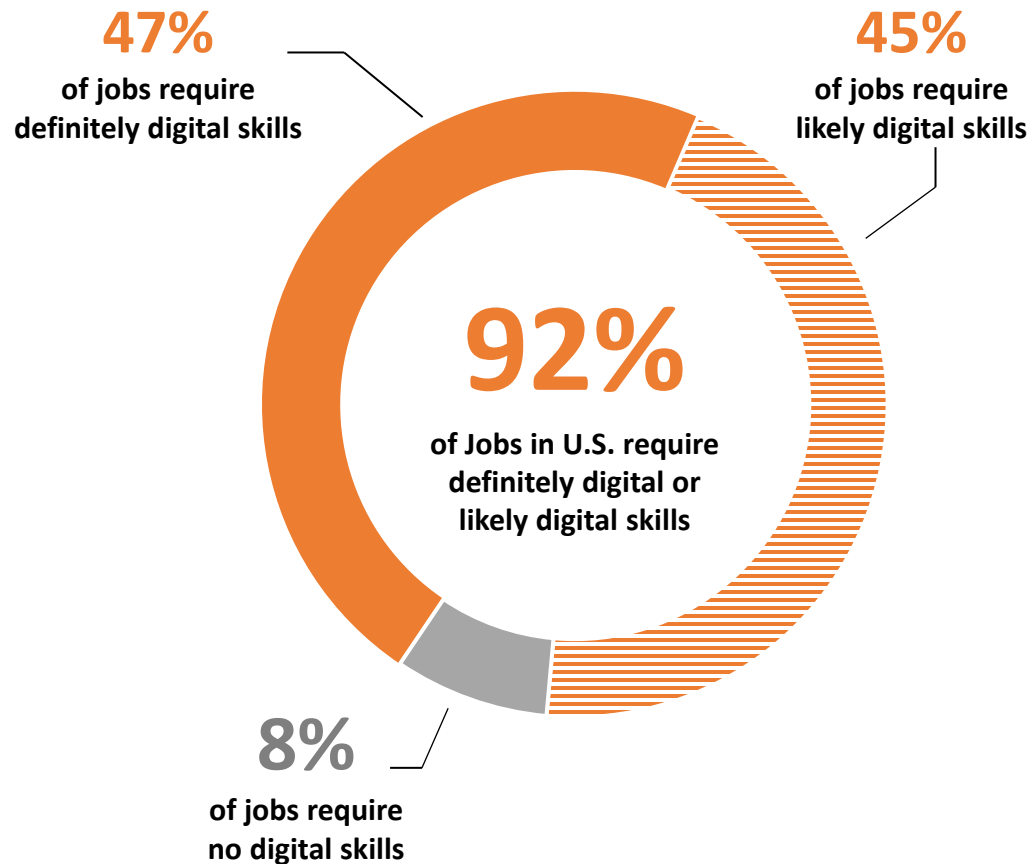
- The average ad sought **8 skills**
- Data was initially collected and standardized by Lightcast
- Further analysis was carried out by NSC in collaboration with the Federal Reserve Bank of Atlanta



*The opinions expressed in this report reflect those of the authors and do not necessarily reflect those of the Federal Reserve System or the Federal Reserve Bank of Atlanta.*



# Virtually all of today's jobs require digital skills



- **Definitely** digital: Microsoft Excel; Python language
- **Likely** digital: Bookkeeping; survey design
- **Not** digital: Ironing; changing diapers; problem-solving





# Jobs at every level of education require digital skills

Educational credential required	Percentage of job ads requiring <u>likely</u> digital skill	Percentage of job ads requiring <u>definitely</u> digital skill
High school diploma	94%	46%
Associate's degree	97%	47%
Bachelor's degree	99%	74%
Master's degree	97%	46%
Ph.D.	97%	39%

**Counter-intuitive but true:**

**Younger people need to develop digital skills too!**





**Higher education can help people build digital skills from fiber optics...**



...to agricultural workers (using in-cab tractor technology for efficient tractor operation)...



**Firefighters using record management software to analyze and optimize firefighter response times**



**Welders using collaborative robots  
("cobots") in advanced manufacturing**

*Photo credit: Smooth Robotics*



**Medical office staff supporting telehealth patients**



**Food processing plant workers using inventory control technologies**





**Construction workers using mobile apps to submit work-order changes**

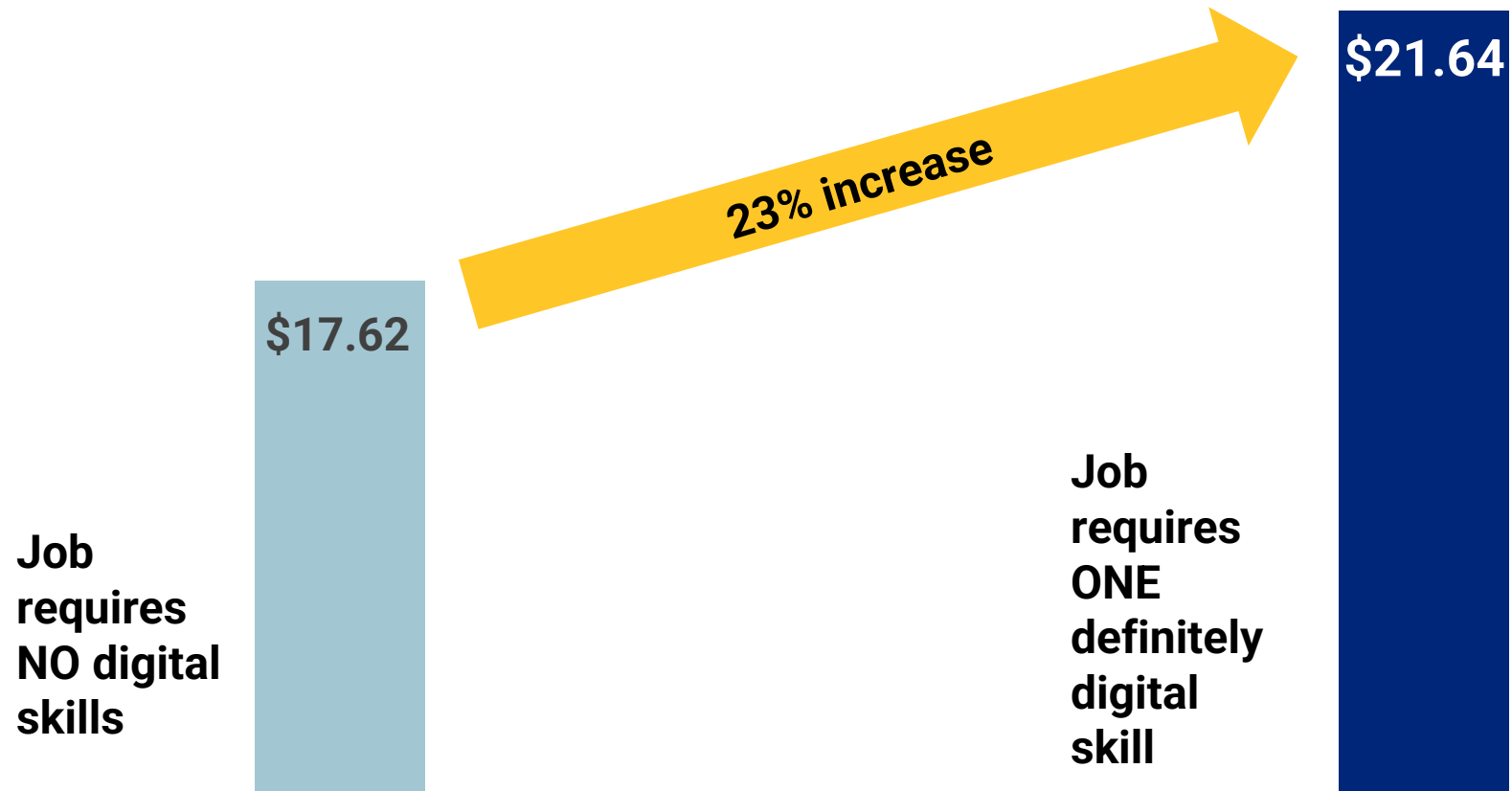


**Journalists using multimedia software to capture, edit, and produce stories.**





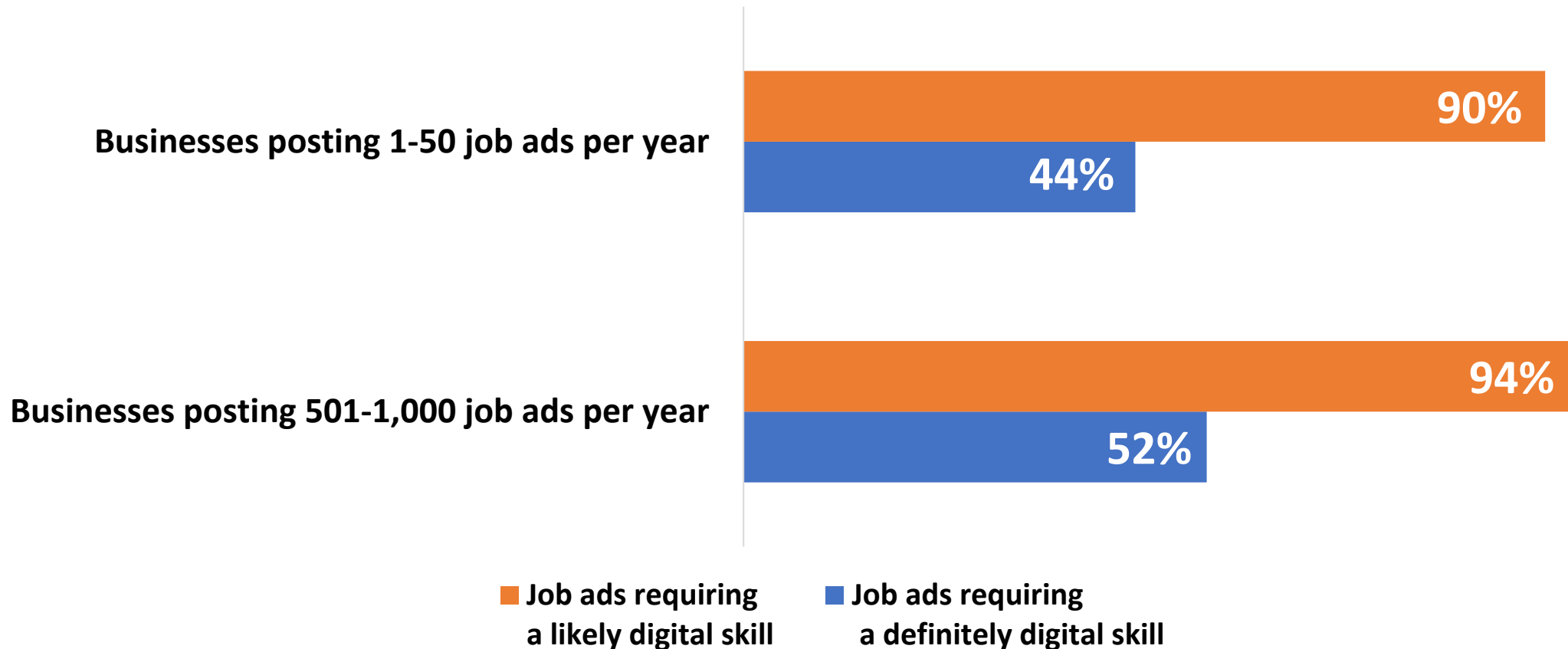
# Jobs that require digital skills pay more



*Note: Numbers shown are median hourly wages. People who qualify for jobs that require even one digital skill can earn an average of 23 percent more than those working in jobs requiring no digital skills – an increase of \$8,000 per year for an individual full-time worker. Data shown are national data. For details, see full report: **Closing the Digital Skill Divide** (National Skills Coalition, 2023.)*



# Small businesses rely on higher education to help develop a digitally skilled workforce

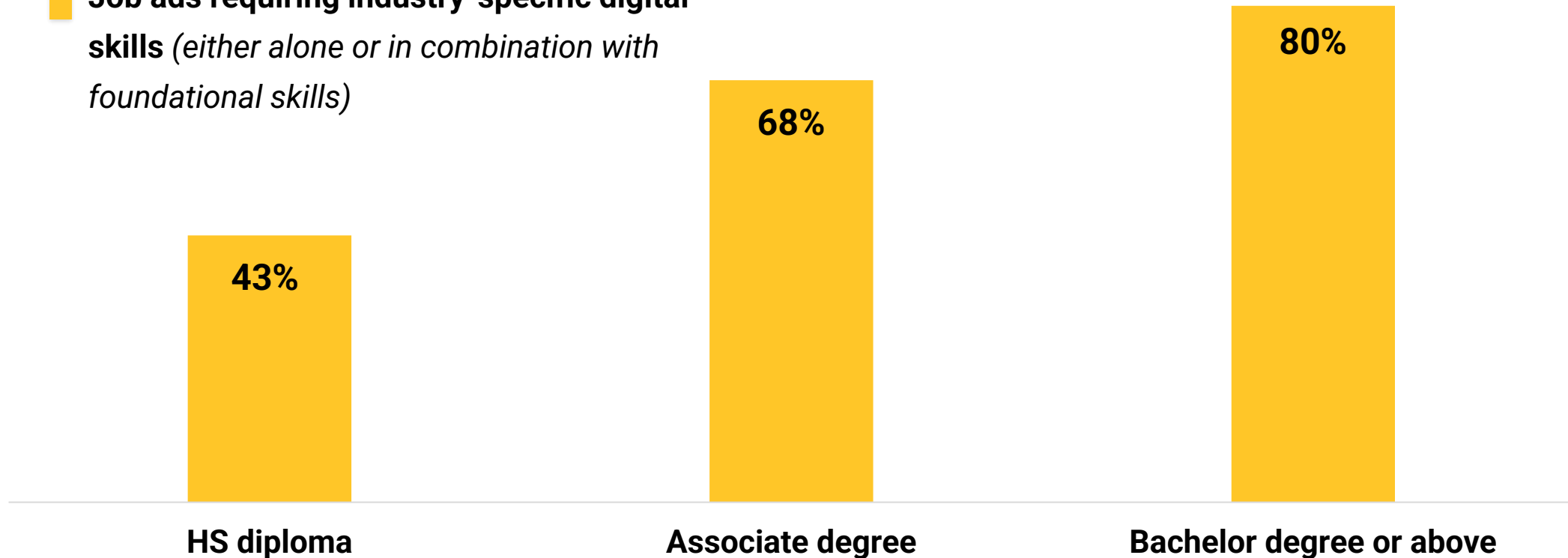


*Note: National data. For details, see full report: **Closing the Digital Skill Divide** (National Skills Coalition, 2023.) The dataset used for this analysis does not directly measure the size of a company, so we inferred firm size based on the volume of job ads posted by the company in a year.*



# Higher education should help people develop both foundational *and* industry-specific digital skills

■ Job ads requiring industry-specific digital skills (either alone or in combination with foundational skills)



*Note: National data. Numbers reflect percentage of jobs requiring an industry-specific digital skill within the subset of jobs that require at least one definitely digital skill. Percentages would be even higher if including jobs with only likely digital skills. For details, see **Closing the Digital Skill Divide** report.*



# Examples of foundational digital skills:






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- Typing
- Data entry
- “Computer literacy”
- Spreadsheets
- Word processing
- Social media



# Examples of *industry-specific skills*:

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-  **Healthcare:** Electronic medical record software; radiologic technology
-  **Manufacturing:** Enterprise Resource Planning (ERP); Computer Numerical Control (CNC)
-  **Retail:** Robotics; SAS retail analytics and consumer goods software
-  **Real estate and rental & leasing:** Yardi software
-  **Finance and insurance:** Nationwide Mortgage Licensing System

**Educators and other advocates can use these findings to ensure that public policy investments pay off for workers and learners:**







**1. Combine these findings with Census data to target services and close equity gaps.**



**2. Explicitly embed digital skills throughout Career Technical Education and other credit-bearing programs.**

### 3. Collaborate with trusted community organizations to develop inclusive broadband workforce career pathways.





**4. Ensure that learners can access the supportive services they need to succeed.**



**5. Speak up for expanded financial aid for high-quality short-term upskilling programs.**



**6. Advocate for Digital Equity Act and BEAD funding to be used for digital skill-building.**



# Invest in digital skill-building strategies that work:

- **Industry sector partnerships** between employers and education/workforce training providers
- **Contextualized** and integrated curricula that draws from the real world
- Work-based learning models such as **apprenticeship** that allow participants to “earn and learn” without acquiring debt
- Programs that result in portable, **industry-recognized credentials**

More details in this report: [www.tinyurl.com/BoostingDL](http://www.tinyurl.com/BoostingDL)



**Time for your  
questions!**





# Contact information

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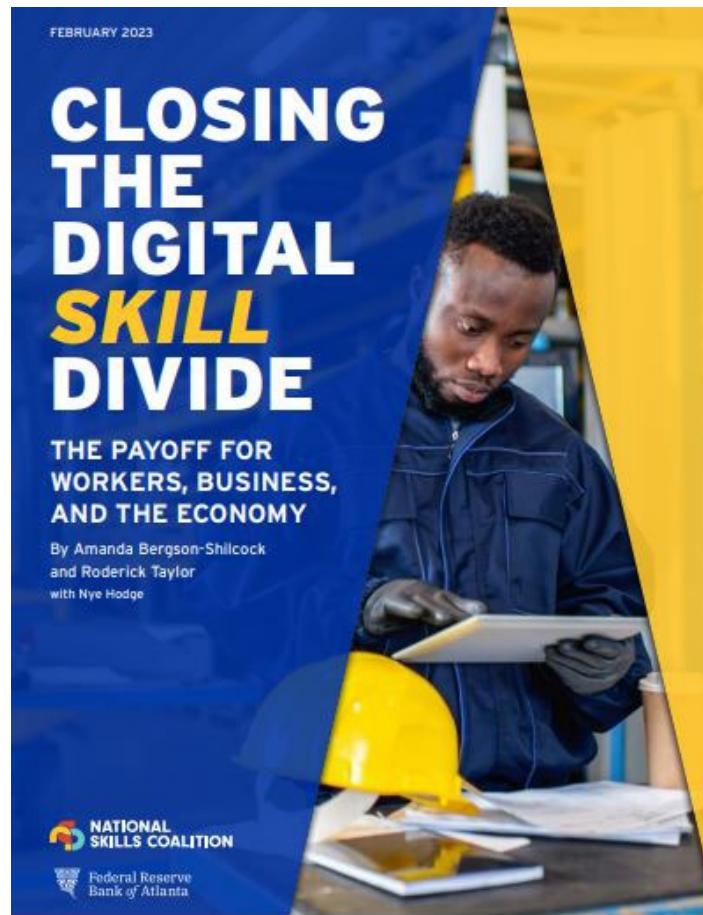
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# Full report: *Closing the Digital Skill Divide*

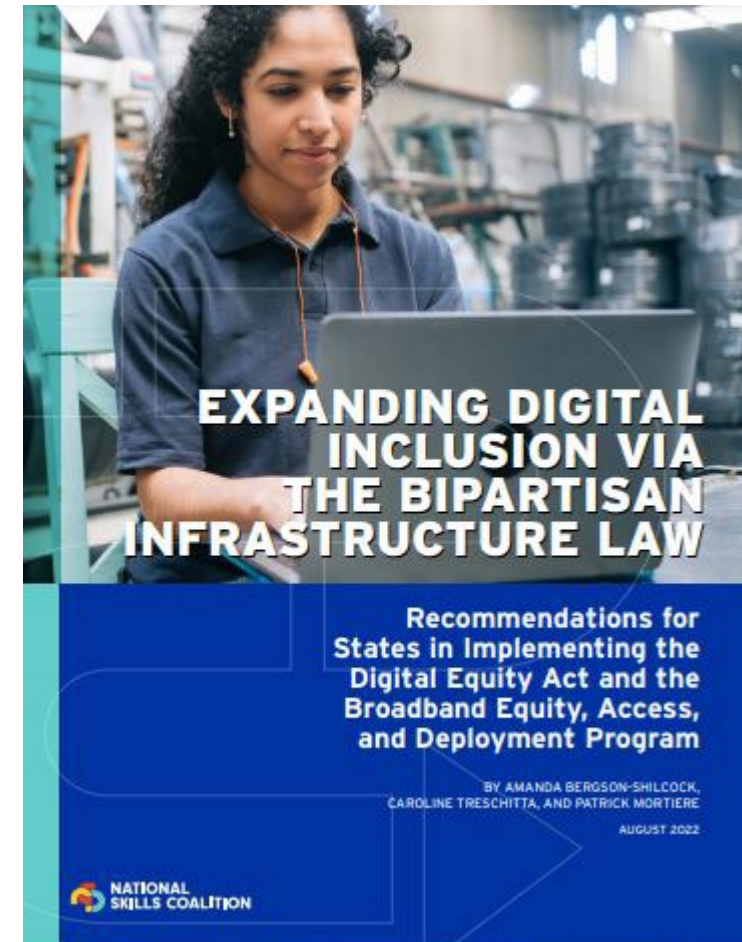


<https://tinyurl.com/DigitalSkillDivide>



# Knowledge to action: Additional resources

- NSC's experienced policy staff can help higher education leaders identify other specific administrative or legislative **policy possibilities**
- NSC's Digital Equity Act and BEAD **recommendations** (see *right*) may also be helpful



# Other NSC digital skills data resources



Full report:

[www.tinyurl.com/BoostingDL](http://www.tinyurl.com/BoostingDL)

- [Applying a Racial Equity Lens to Digital Literacy](#) (fact sheet)
- Digital skills fact sheets by industry:
  - [Manufacturing](#)
  - [Retail & hospitality](#)
  - [Health & social work](#)
  - [Construction, transportation & storage](#)



# The New Landscape of Digital Literacy

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



Full charts and graphs in this data report:  
[tinyurl.com/NewLandsDL](https://tinyurl.com/NewLandsDL)

# Additional digital skills data resources

The US Department of Education is currently funding the [Digital Resilience in the American Workforce \(DRAW\)](#) research project, which has produced several great resources:

- This blog post, with an [excellent synopsis of the various Digital Skills frameworks](#).
- Another blog post [for educators](#) and other direct-service practitioners. It provides links to the incredibly useful [Digital Skills Library](#) of 2,000 free resources for learning digital skills
- A lengthy [landscape scan](#) for the project, covering a huge range of important findings related to digital skills and resilience.