

# Understanding Short-term Credentials

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# Introduction

# Background

## What is a short-term credential?

- Short-term credentials are academic programs lasting **less than one year** of full-time academic study and requiring **fewer than 30 credits**.
- Short-term credentials are sometimes referred to as **“alternative credentials.”** They represent an alternative pathway to securing an academic credential, when compared to traditional college degree programs.

# Background

What is driving the growing interest in short-term credentials?

- Rapid advances in technology
- Intense policy push for all adults to have a credential
- Need alternatives to degree programs
- Attention to adult learners' needs
- Low time commitment
- Lower cost
- Potential for “stackability” to higher credentials

# Research Questions

- 1) What **types** of short-term credentials are available and how are they defined?
- 2) What is the **demographic profile** of students who pursue short-term credentials?
- 3) What does existing research say about the **outcomes** for students who pursue these credentials?
- 4) What **factors** may affect these outcomes (including state and institutional policy, programmatic factors)?
- 5) What system-wide changes or state-level **policies** might influence short-term credential offerings and attainment?



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# Methodology



# Methodology



## Literature Review

- ERIC Database
- Google search (including Google Scholar)
- Materials from Ascendium Education Group

## Supplemental Analyses

- Integrated Postsecondary Education Data System (IPEDS) 2002-03 to 2019-20
- Beginning Postsecondary Students Study (BPS) 2012-17



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# Terminology

# Classifying Short-term Credentials

Brown and Kurzweil (2017)		NCRN (2019)
Labor market training and credentialing	Certificate programs	Certificate
	Work-based training	Apprenticeship
	Skills-based short courses	Bootcamp
	MOOCs	
	Competency-based programs	Certification
		License

- **Certificate**

Credit or non-credit, nondegree academic program of study with varying durations

- **Work-Based Training**

Often provided through employers or workforce training programs (e.g., apprenticeship)

**Skills-based Short Course**

Intensive, quick training programs in in-demand fields (e.g., coding bootcamp)

**MOOC**

Available online for limited or no fees and without admission requirements or enrollment limits

**Competency-based Training**

Emphasize demonstrated competencies and prior learning outside the classroom (e.g., certification, license)

# Current Study

- - Credit-bearing certificate programs
  - Less than one year of full-time academic study
  - Fewer than 30 credits
  - Undergraduate
  - Targeted toward students without a postsecondary degree

# Stackable Credentials

“A sequence of credentials that can be accumulated over time to build up an individual’s qualifications and help them to move along a career pathway or up a career ladder to different and potentially higher-paying jobs” – U.S. Department of Labor (2010, p. 6)



# Types of Stackable Credentials

Bailey & Belfield (2017a)

## Progression Stacks

Certificate → Associate degree

Student initially completes a low-credit award before advancing to subsequently higher credentials

## Supplemental Stacks

Bachelor's degree → Certificate

Degree-holding student completes an additional credential to retrain for a new job

## Independent Stacks

Certificate → Certificate

Student completes multiple complementary credentials



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# Policies & Programs



# Categories of Policies & Programs

- 1) State short-term credential and stackable credential legislation
- 2) Micro-credential task force initiatives
- 3) Campus-level short-term and stackable credential initiatives
- 4) Scholarship funding for workforce development
- 5) State strategic goals concerning short-term credentials
- 6) Exploratory research studies on stackable credentials
- 7) Miscellaneous workforce development policy initiatives

# Virginia FastForward

## Overview

- All 23 community colleges in Virginia
- Noncredit 6-to-12-week workforce training programs
- Career coaches who provide comprehensive support (e.g., academic advising, career advising, financial aid)
- Pay-for-performance funding model

For more information, see <https://www.fastforwardva.org/>

# Virginia FastForward Pay-for-Performance Model

■ Student

■ Campus

■ State

Student enrolls, but does not complete



Student enrolls & completes training



Student enrolls, completes training, & earns workforce credential



# Virginia FastForward Key Numbers

**\$1,100**

Average cost to students

**4 out of 10**

~40% of participants are  
students of color

**93%**

Success rate

**25% to 50%**

Average wage increase

# SUNY Micro-Credentialing Task Force

*“Digital badges and other types of micro credentials are precisely the kind of value-added tools we can offer students to ensure not only that they complete college, but that they are the top candidate when they start looking for a job in their field”*

– former SUNY Chancellor Nancy L. Zimpher ([SUNY, 2015, para. 3](#))

- Included senior administrators, faculty, and students throughout the 64-campus SUNY System.
- Issued recommendations for quality standards and implementation policies throughout its 64-campus system.

# Dutchess Community College (SUNY)

## Micro-credentials

Eligible for  
National  
Council on  
Strength and  
Fitness (NCSF)  
Certification

**Personal  
trainer  
certificate**  
(9-credit)

**Basic bookkeeping  
micro-credential**  
(5-credit)

**Surveying  
technician micro-  
credential**  
(7-credit)

**Exercise science &  
wellness (A.A.S)**

**Business administration  
(A.S.) or Business  
Management (A.A.S)**

**Construction technology  
management (A.A.S)**

For more information, visit  
<https://www.sunydutchess.edu/academics/microcredentials2/index.html>



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# Enrollment

# Undergraduate Enrollment in Certificates

- Beginning Postsecondary Students Study (BPS) 2012/17

**10%**

Percent of entering undergraduates who enroll in certificate programs (of any length)

## Undergraduates with Above Average Enrollment in Certificate Programs

American Indian / Alaska Native	22%
Hispanic or Latinx	16%
Low-income students	14%
Students who primarily speak Spanish	17%
Veterans	18%
First-generation to attend college	16%



# Certificate Field of Initial Enrollment

## BPS 2012-17

Health care 44%

Women: 57%  
Hispanic or Latinx: 55%  
American Indian or Alaska  
Native: 77%

Personal and consumer services 21% Women: 28%

Manufacturing, construction, repair,  
transportation 17% Men: 49%  
White: 22%

Business 4% Black or African American: 7%  
More than one race: 7%

Engineering and engineering  
technology 4% Asian: 29%

# Enrollment in Certificates by Sector

BPS 2004-09 (McKinney et al., 2017)

**16%**

Community College

**23%**

Public Career & Technical Center

**62%**

For Profit

For-profit institutions enroll a high share of women and students of color.



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# Academic Outcomes

# Persistence Rates in Certificates

BPS 2012/17

## Certificate Persistence Rate:

Proportion of undergraduates who initially enrolled in a certificate program who completed a certificate and/or degree within two years

**41%**

Overall undergraduate certificate persistence rate

## Undergraduates with Below Average Persistence in Certificate Programs

Black or African American	30%
Asian	17%
Low-income students	36%
High middle-income group	37%
Students who speak English and Spanish equally	27%
First-generation to attend college	36%

# Persistence (6-Year) by Sector

BPS 2004-09 (McKinney et al., 2017)

## For Profit

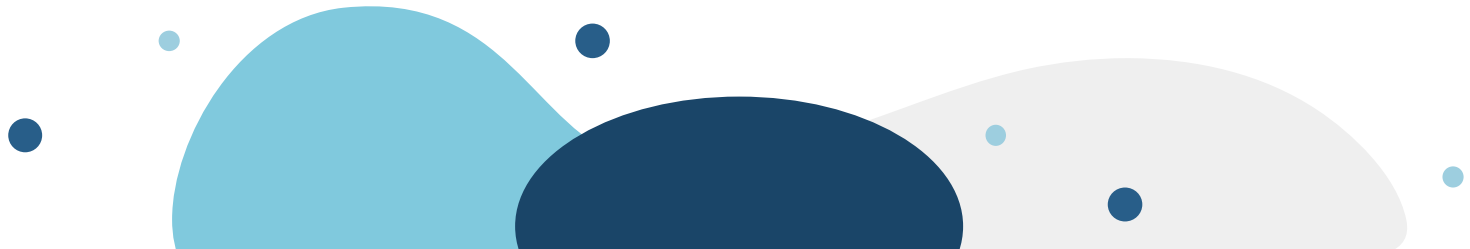
**55%** attained certificate within 6 years

## Community College

**57%** attained certificate within 6 years

## Public Career & Technical Center

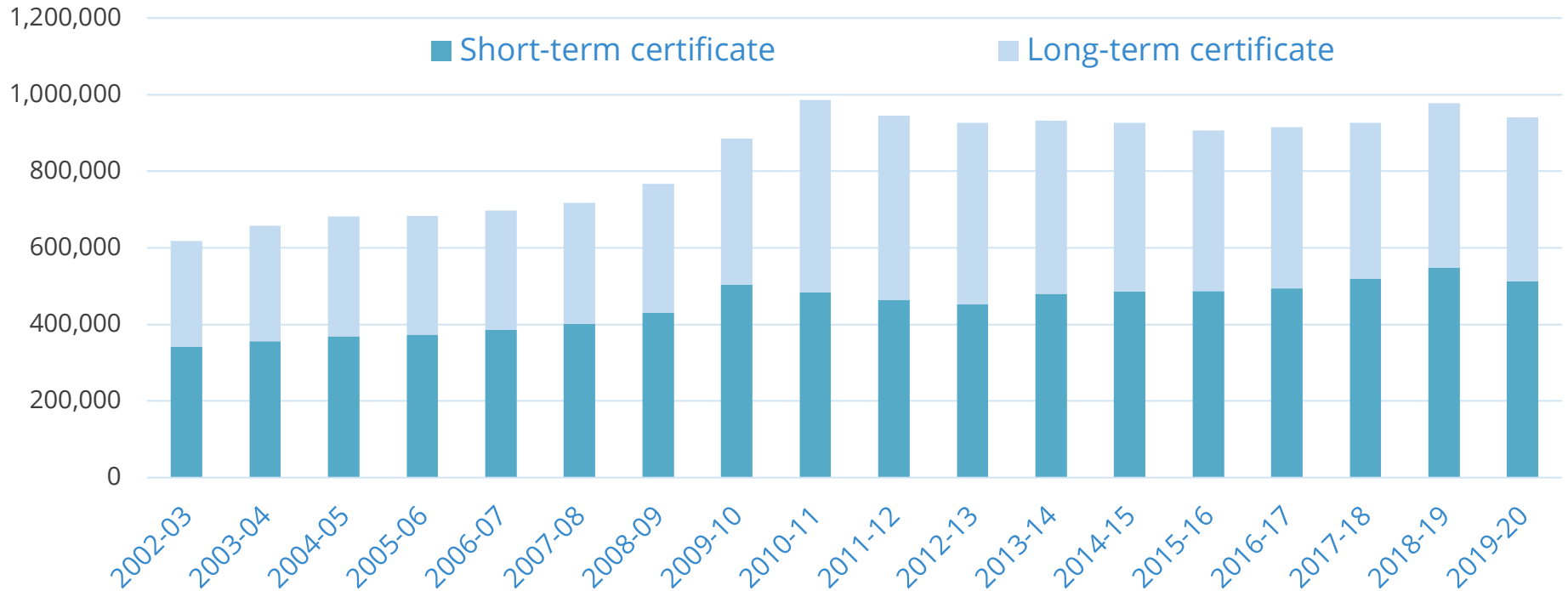
**68%** attained certificate within 6 years



# Trends in Certificates Awarded

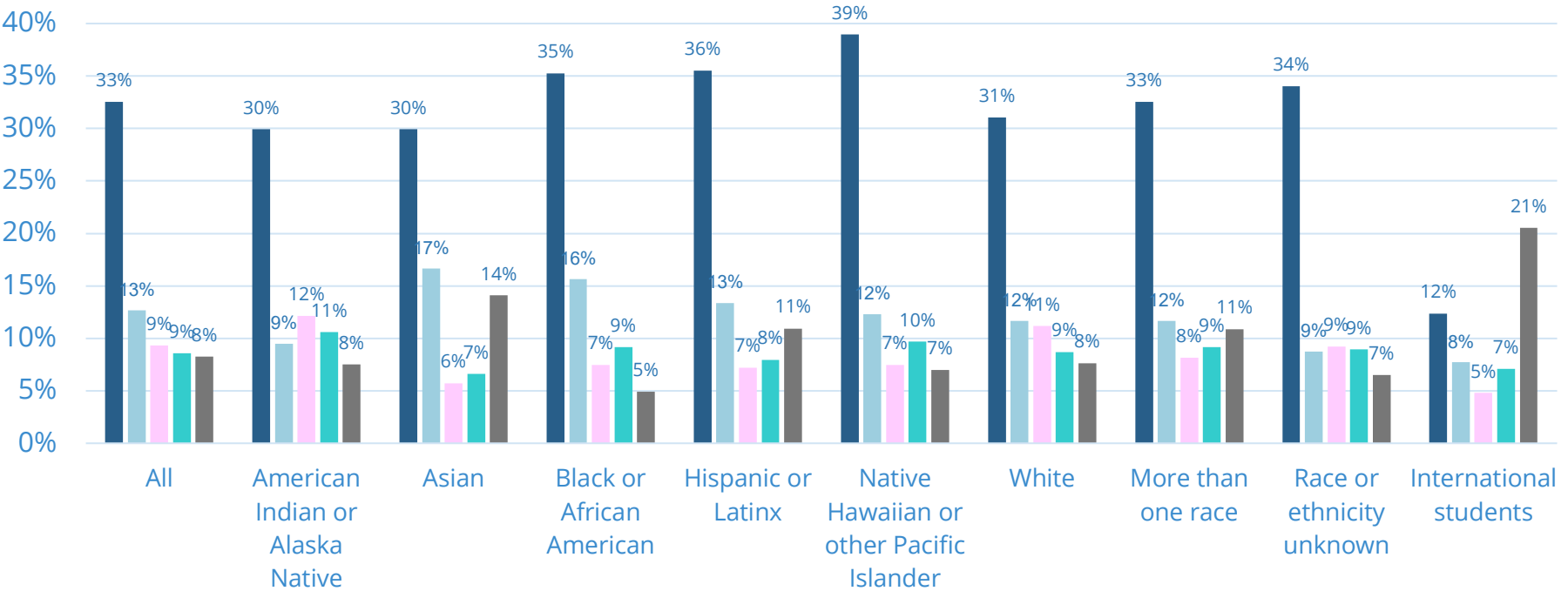
Integrated Postsecondary Education Data System (IPEDS)

**342,589** short-term certificates awarded in 2002-03 vs. **512,799** in 2019-20



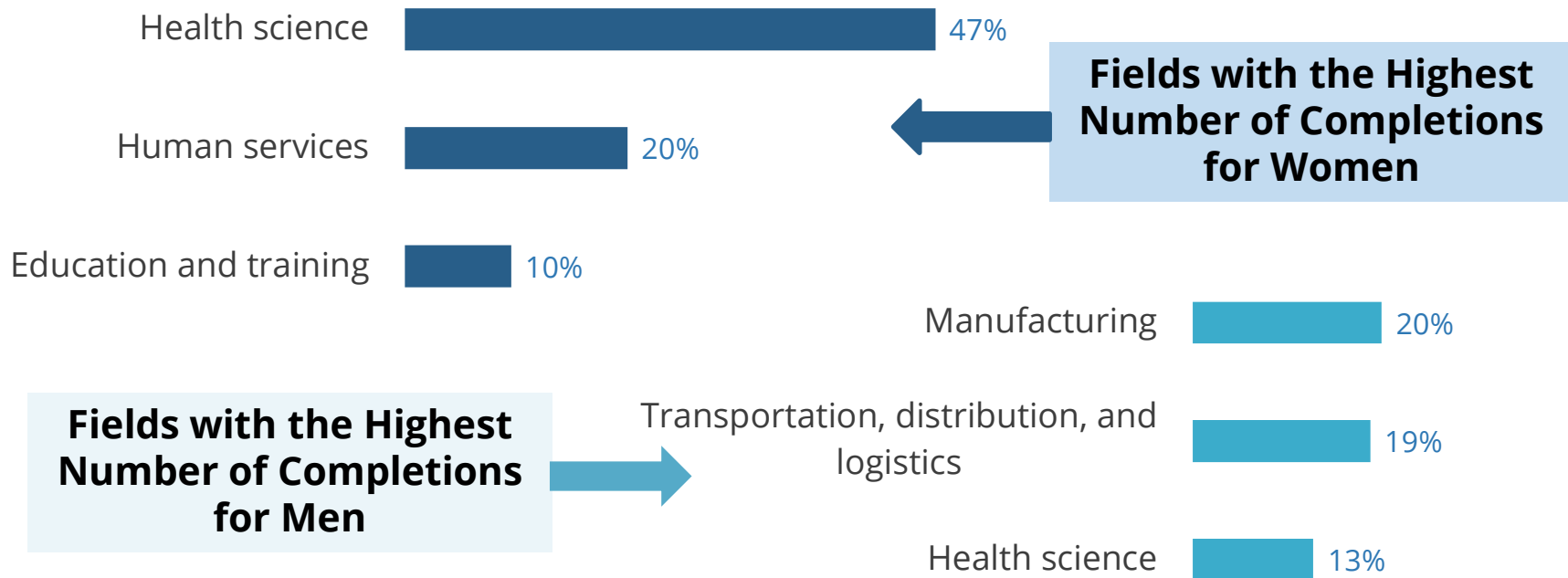
# 2015-2017 Certificate Completions by Race/Ethnicity

■ Health Science 
 ■ Human Services 
 ■ Manufacturing 
 ■ Transportation, Distribution, & Logistics 
 ■ Education & Training



These data are from Taylor et al. (2020) who used 2015-2017 IPEDS data.

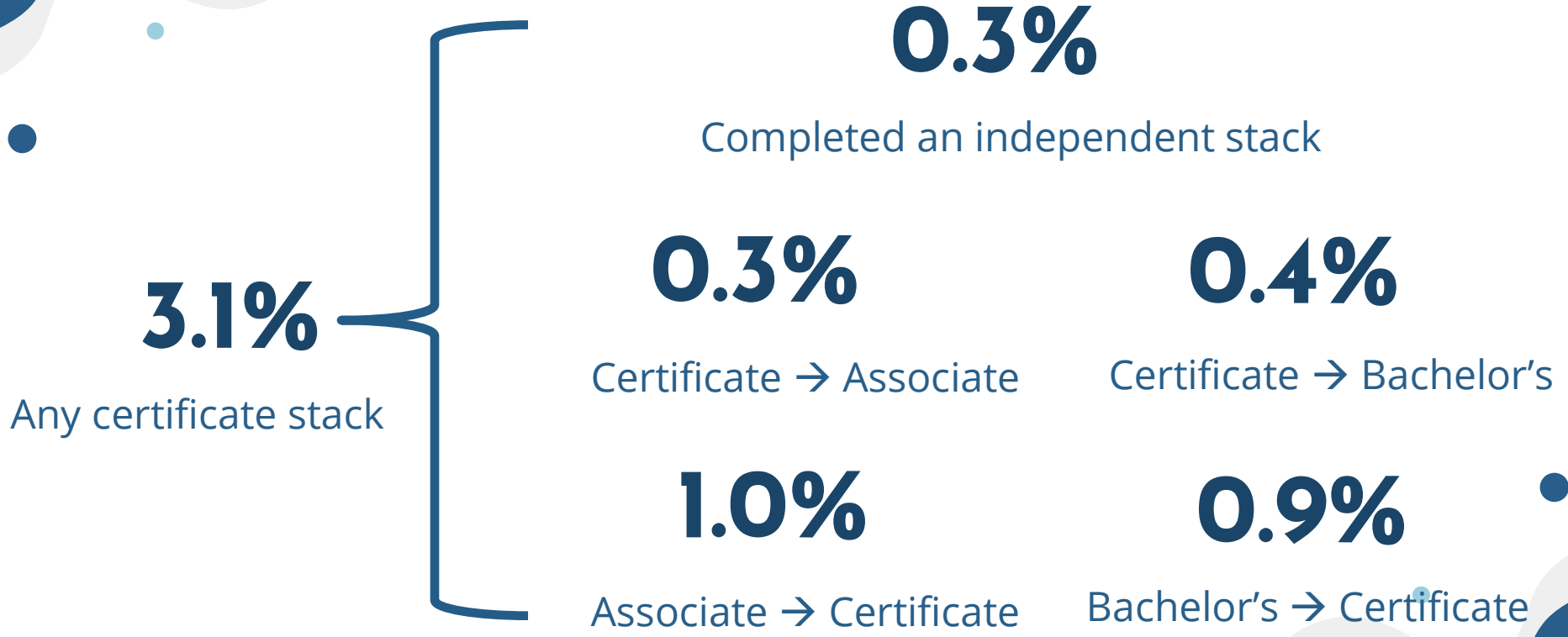
# 2015-2017 Certificate Completions by Gender



These data are from Taylor et al. (2020) who used 2015-2017 IPEDS data.



# Educational Attainment by Age 31



These data are from Bailey and Belfied (2017a) who used data from the National Longitudinal Survey of Youth 1997. The percentages of each type of stack do not add up to 3.1%, likely due to rounding by Bailey and Belfied.



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# Labor Market Outcomes

# Wage Increases by Credential

(Bohn et al., 2019, California)

8%

Short-term certificates  
(6-29 credits)

21%

Long-term certificates  
(30-59 credits)

32%

Associate degrees  
(60+ credits)

**The economic returns to short-term certificates *decline* over time** (Bahr, 2016).

# Odds of Employment for Short-term Certificate Completers

(Xu & Trimble, 2016)

**3%**

Increased chances of employment in **North Carolina**

**6%**

Increased chances of employment in **Virginia**

**When conditioned on employment, there was no economic earnings benefit of completing a short-term certificate in North Carolina.**

# Labor Market Outcomes by Gender & Race/Ethnicity

(Bahr, 2016; Belfield & Bailey, 2017a, 2017b; Bohn et al., 2019; Carnevale et al., 2012, 2020; Jepsen et al., 2014; Minaya & Scott-Clayton, 2017; Ositelu, 2021)

## Gender

The findings are mixed, with some studies finding that:

- women have higher returns than men
- women have lower returns than men
- no difference

## Race/ethnicity

Black and Latinx short-term certificate earners have lower median incomes than White adults.

It takes longer for Black short-term certificate earners to earn middle-income wages.

## Intersection

(of Gender & Race/ethnicity)

Within each racial/ethnic group, men have stronger economic returns than women.

Only White men, White women, and Latinx women experienced significant returns to awards less than 6 credits.

# Labor Market Outcomes by Field of Study

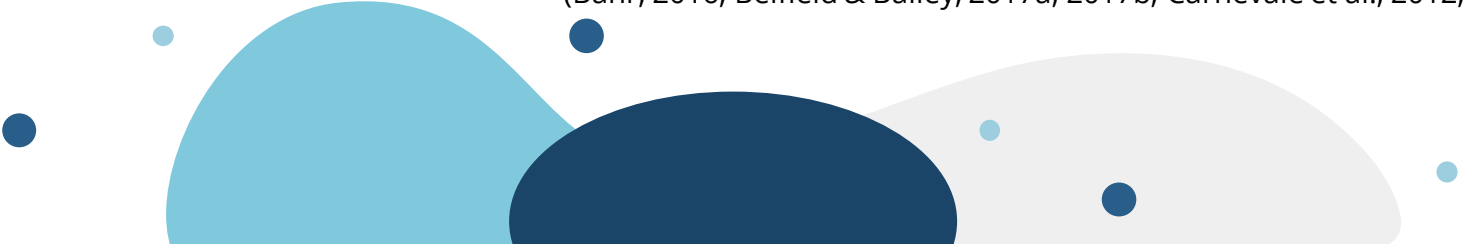
## Higher Economic Returns

- Biological sciences
- Engineering technologies
- Public and protective services

## Negative Economic Returns

- Education
- Fine and applied arts
- Interdisciplinary studies

(Bahr, 2016; Belfield & Bailey, 2017a, 2017b; Carnevale et al., 2012, 2020)



# Field of Study & Occupation (Carnevale et al., 2012)

**37%**

Certificate holders who work in the same field as their certificate earn 37% more than individuals who work outside the field.

**1%**

Certificate holders who work outside their field of study earn 1% more on average than adults whose highest educational credential is a high school diploma.

**44%**

44% of certificate holders work in an occupational field closely related to their field of study.

# Further Intersections of Demographics, Field of Study, & Occupation

- 12 of 14 fields of study examined by Carnevale et al. (2012) were highly segregated by sex.
- Women tended to complete certificates that were associated with an earnings increase of 16% over a high school diploma, whereas men tended to complete certificates with an associated earnings increase of 27% (Carnevale et al., 2012).
- Racial/ethnic minorities are also overrepresented in short-term certificate fields associated with low earnings (Ositelu, 2021).



# Further Intersections of Demographics, Field of Study, & Occupation (cont.)

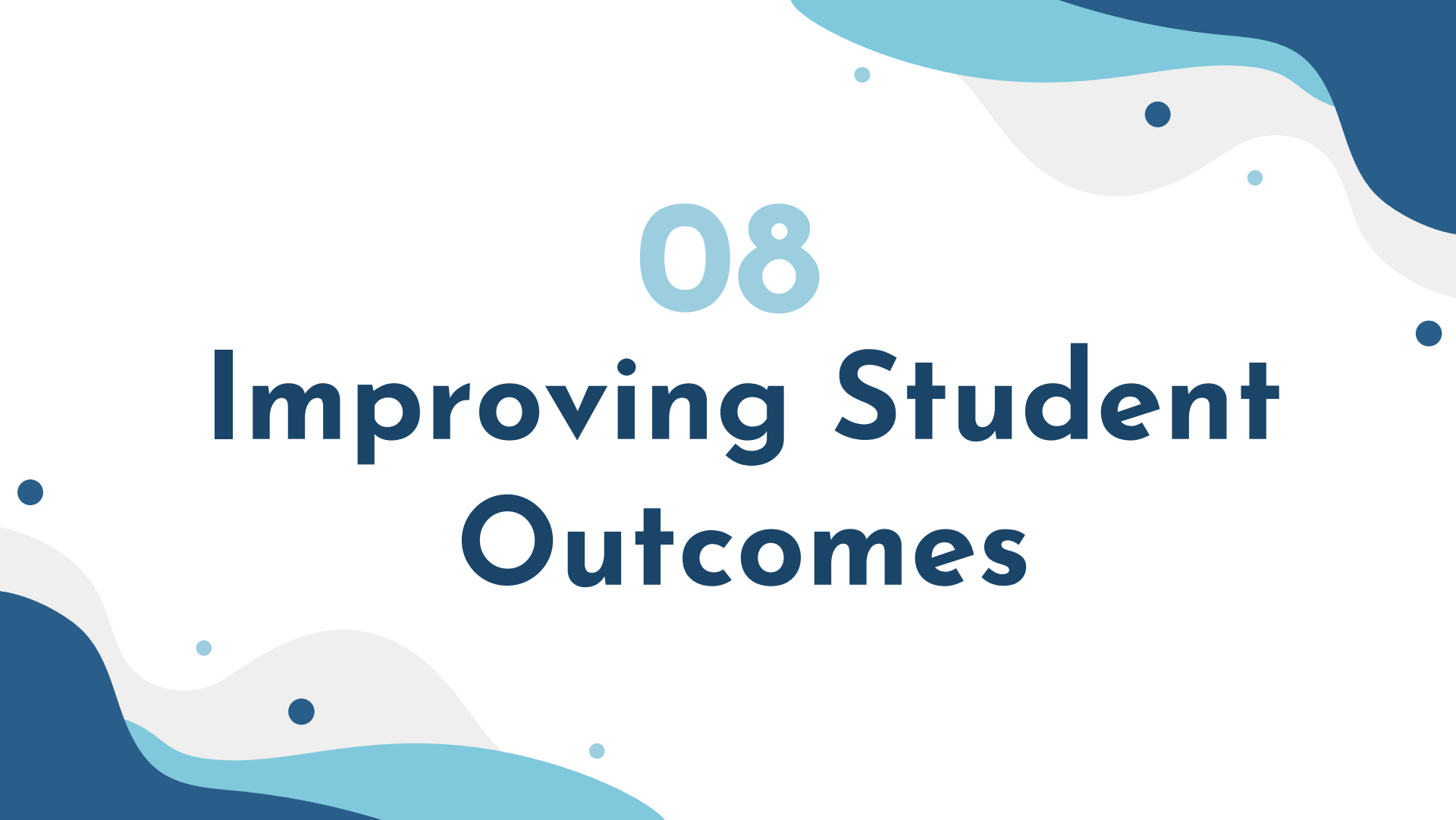
(Carnevale et al., 2012).

Certificate holders in computer science can earn more than associate and bachelor's degree holders when they are employed in their field of study.

## HOWEVER

Men earn higher annual salaries in computer science on average than women (\$72,498 vs. \$56,664).

Men are more likely to obtain jobs in computer science (24% vs. 7%).



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# Improving Student Outcomes

# Increase Access to Financial Aid

- Pell Grants are only available for programs lasting at least one semester.
- Experimental evidence (Thomas et al., 2021) indicates that when offered a Pell Grant to enroll in a short program (as few as 8 weeks), students were:
  - **15%** more likely to enroll
  - **9%** more likely to complete the program

# Shift What “Counts” as Learning

- A more flexible approach to rewarding students’ learning and academic progress toward postsecondary credentials is needed (Klein & Travers, 2020).
- Emphasize competencies and learning defined more broadly than credit hours earned in a classroom (Lumina Foundation, 2013).

# Streamline Transfer and Credit Articulation Policies

- Transfer policies and credit articulation policies should be strengthened and simplified so students can stack credentials.
- Brock (2021) recommends that short-term credentials should be integrated into statewide transfer systems and articulation policies.
- Ohio provides an example of how a state higher education system can articulate such policies (Ohio Dept. of Higher Education, 2021).
- These policies will better ensure that students' prior earned credits will be valuable at other institutions.

# Provide Comprehensive Student Support Services

- Comprehensive student support services can provide support from the institution (e.g., tutoring) and community-based or public organizations (e.g., transportation to class) (Brock, 2021; Kazis & Leasor, 2021).
- Virginia's FastForward and Tennessee's Technology Centers are exemplars for how such wraparound services can lead to successful student outcomes.
- Foster culturally engaging campus environments.

# Improve Postsecondary Data Systems

- More data are needed on students' outcomes in short-term credential programs, including their immediate and long-term wages and educational trajectories (Kazis & Leasor, 2021; Lumina Foundation, 2020).
- Brock (2021) recommends that nondegree programs be included within each state's broader postsecondary data system.
- State and federal data collection efforts are (generally) not structured for the types of sophisticated analyses that researchers would like to conduct, such as examining the cumulative economic benefits of stackable credentials (e.g., Bailey & Belfield, 2017b).



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# Opportunities



# Opportunities for Further Research & Exploration

- More research is needed on **noncredit programs** of all types, including workforce training programs offered by community colleges, bootcamps, and employer-sponsored training programs.
- More research is needed on labor market outcomes for students with disabilities, English language learners, and other **groups with limited representation** in the literature.

# Opportunities for Further Research & Exploration (cont.)

- More research is needed on **stacking credentials**. Current data systems impede researchers' ability to identify students' progression along a pathway of stacked credentials.
- There is limited research on short-term credential students' **psychosocial experiences** at their institution.
- There is limited information on **what specific support services** improve students' outcomes.

# A Word of Caution

“Although certificates take less time to complete than associate degrees, it is unlikely that the recent growth in certificate completion can generate the same economic benefit as degree completion. An education policy that relies heavily on increased certificate completion is unlikely to be sufficient.”

– Belfield & Bailey (2017a, p. 4)

**The strategy moving forward seems to be one that one uses short-term credentials as a steppingstone toward a higher credential.**

***Short-term credentials provide the path.***



# Thank you!

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