Short Training, Long Horizons: The Opportunity of Noncredit Education

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This convening takes on the difficult questions

- Defining and measuring noncredit programs and student outcomes
- Building noncredit-to-credit pathways
- Developing principles of credit mobility
- Incorporating noncredit education into state funding models

I come today to complicate your work.

Reframing: Noncredit mobility is student mobility

- Mobility takes distinct forms that must be measured separately, but they are not mutually exclusive
  - Economic: a job, a better job, higher wages, or keeping a job that depends on the training
  - Educational: validated learning that connects directly and clearly to credit-bearing credentials
- No one outcome fits all noncredit learning
- Where, when, and for whom is noncredit enabling mobility, and what kind?

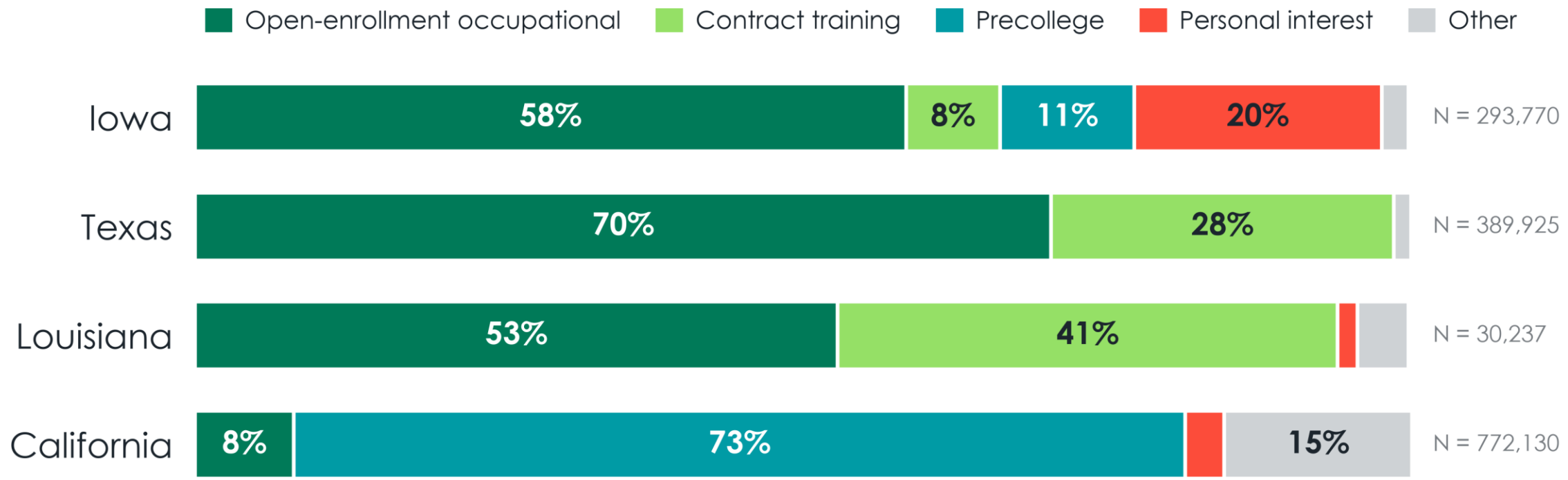
Our first question must be: What kind of mobility is this program intended to offer?

Purposes and students

What is noncredit for, and whom is it serving?

Noncredit purposes vary widely across states

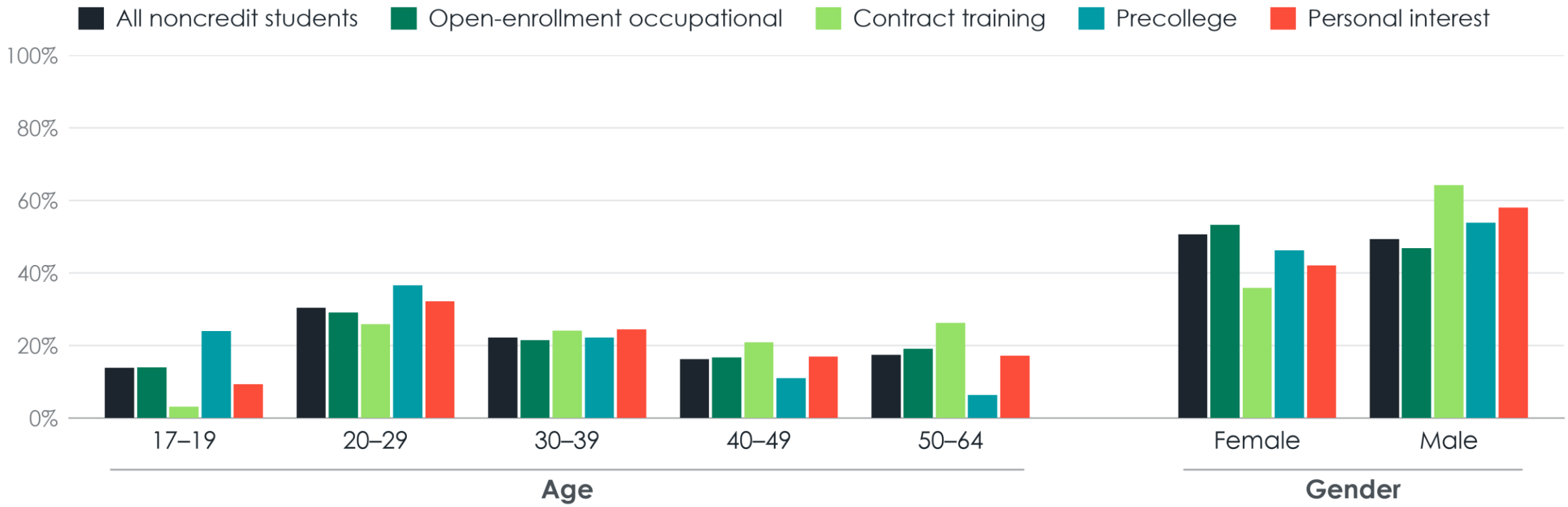
Share of noncredit students, by primary type of noncredit coursework



Notes: Values of 1% or less are not shown. Students with mixed course-taking (1% or less where reported) are omitted. California data could not identify contract training. Iowa, California, and Texas: AY 2013–14 to 2017–18 entry cohorts; Louisiana: AY 2017–18 cohort. Categories reflect students' primary coursework (Texas: first quarter only), not stated purposes.
Source: Bahr et al. (2022), Investigating the Hidden College: A Study of Community College Noncredit Education in Five States, Table 3.

In Iowa, precollege students are younger; contract trainees, mostly men

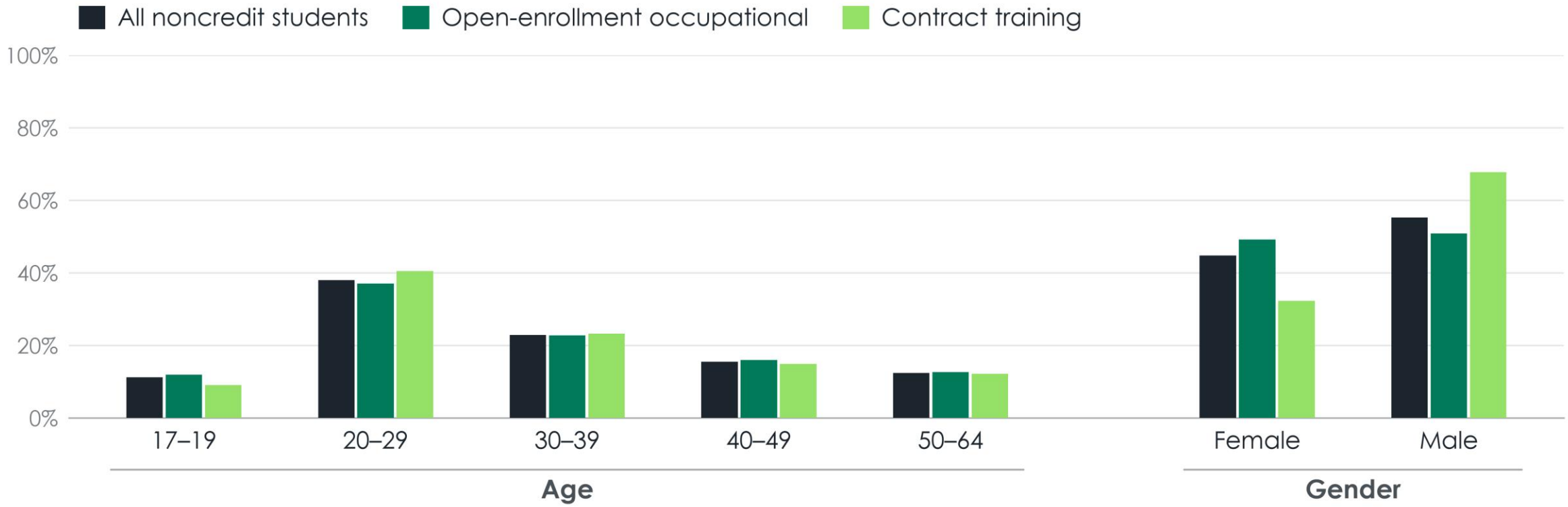
Percent of all noncredit students and of each course category, by age and gender



Notes: Excludes students with missing data (share missing, across the groups shown: age 1% to 13%; gender 2% to 9%). Ages 20–29 combine the reported 20–24 and 25–29 groups. AY 2013–14 to 2017–18 entry cohorts.
Source: Bahr et al. (2022), Investigating the Hidden College: A Study of Community College Noncredit Education in Five States, Tables 7-1 and 7-2.

In Texas, two in three contract trainees are men

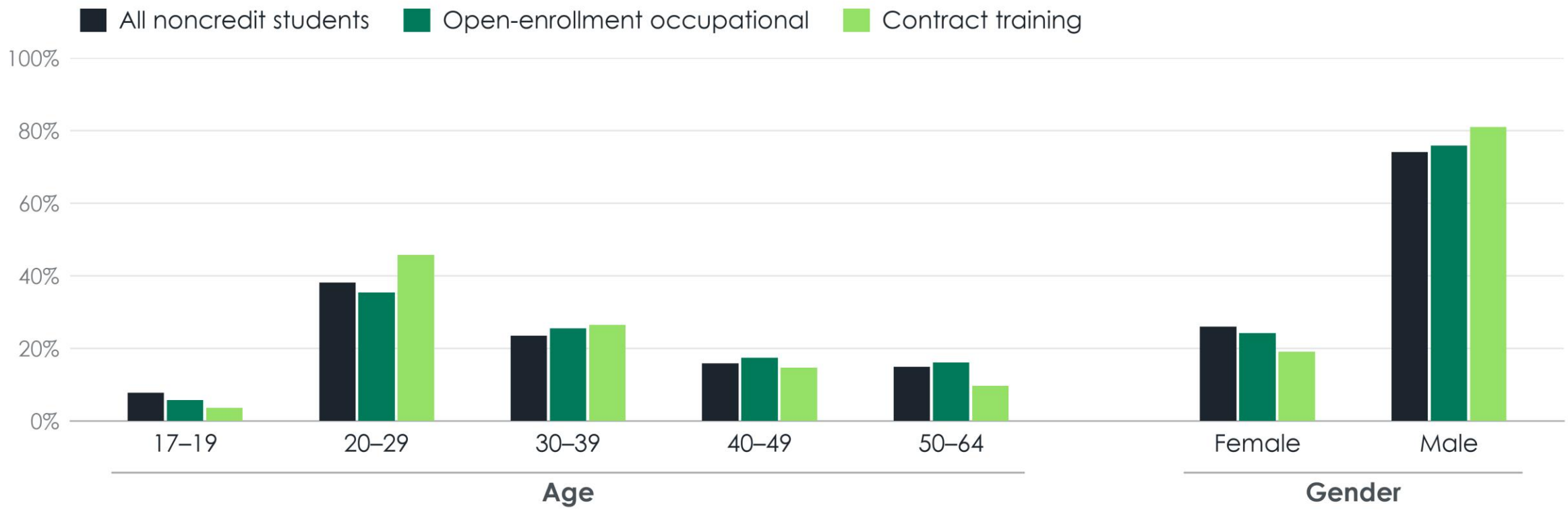
Percent of all noncredit students and of each course category, by age and gender



Notes: Excludes students with missing data (share missing, across the groups shown: age 1% or less; gender 1% or less). Ages 20–29 combine the reported 20–24 and 25–29 groups. Precollege and personal-interest students (each 1% or less of Texas noncredit students) are not shown. AY 2013–14 to 2017–18 entry cohorts.
Source: Bahr et al. (2022), Investigating the Hidden College: A Study of Community College Noncredit Education in Five States, Tables 7-1 and 7-2.

In Louisiana, more than three in four trainees are men

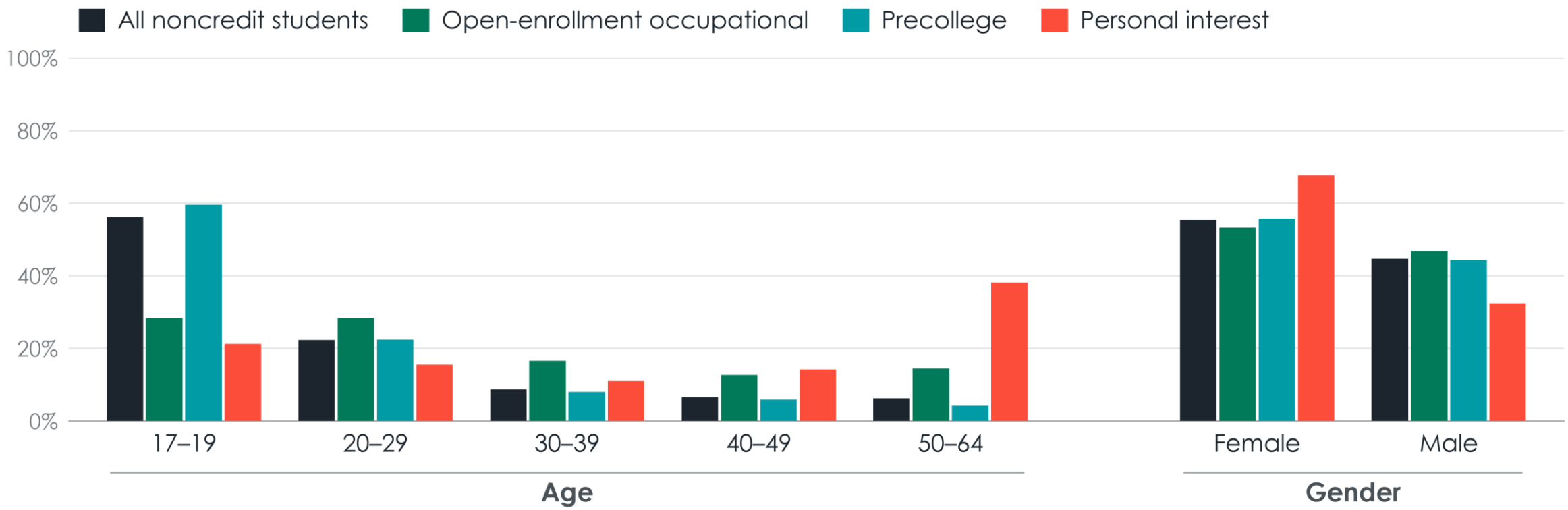
Percent of all noncredit students and of each course category, by age and gender



Notes: Excludes students with missing data (share missing, across the groups shown: age 31% to 80%; gender 10% to 12%). Ages 20–29 combine the reported 20–24 and 25–29 groups. Precollege and personal-interest students (each 2% or less of Louisiana noncredit students) are not shown. AY 2017–18 cohort.
Source: Bahr et al. (2022), Investigating the Hidden College: A Study of Community College Noncredit Education in Five States, Tables 7-1 and 7-2.

In California, three in five precollege students are 17 to 19

Percent of all noncredit students and of each course category, by age and gender



Notes: Excludes students with missing data (share missing, across the groups shown: age 2% or less; gender 1% to 3%). Ages 20–29 combine the reported 20–24 and 25–29 groups. California data could not identify contract training. AY 2013–14 to 2017–18 entry cohorts.
Source: Bahr et al. (2022), Investigating the Hidden College: A Study of Community College Noncredit Education in Five States, Tables 7-1 and 7-2.

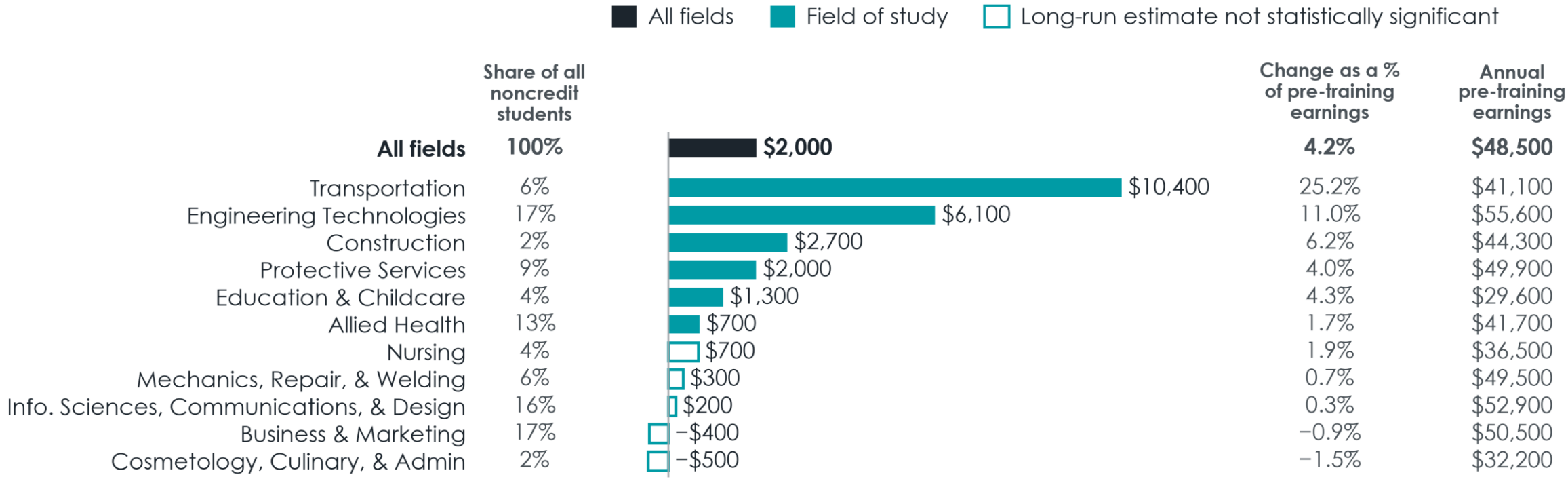
Economic mobility

What happens to students' work and earnings after noncredit training?

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Earnings gains linked to noncredit training vary widely by field

Predicted change in annual earnings two years after training, by field of study (Texas, 2019 dollars)



	Share of all noncredit students	Change as a % of pre-training earnings	Annual pre-training earnings
All fields	**100%**	**4.2%**	**$48,500**
Transportation	6%	25.2%	$41,100
Engineering Technologies	17%	11.0%	$55,600
Construction	2%	6.2%	$44,300
Protective Services	9%	4.0%	$49,900
Education & Childcare	4%	4.3%	$29,600
Allied Health	13%	1.7%	$41,700
Nursing	4%	1.9%	$36,500
Mechanics, Repair, & Welding	6%	0.7%	$49,500
Info. Sciences, Communications, & Design	16%	0.3%	$52,900
Business & Marketing	17%	−0.9%	$50,500
Cosmetology, Culinary, & Admin	2%	−1.5%	$32,200

Notes: Change at the eighth quarter after training (long-run plus reciprocal-time coefficients, multiplied by four), conditional on employment. Estimates are associations, not causal effects. Pre-training earnings are mean quarterly earnings before entry, multiplied by four. Hollow bars: long-run coefficient not statistically significant ($p \geq .05$). Rounded to the nearest $100. Share: percentage of all 128,138 noncredit students; the "Other" field (5%) is not shown.
Source: Calculations from Bahr and Columbus (2026), Educational Evaluation and Policy Analysis, Table 3.

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Common noncredit programs in each field of study

Field of study	Common noncredit programs
Transportation	Commercial vehicle operation
Engineering Technologies	Occupational safety and health technology; petroleum technology; manufacturing engineering technology
Construction	Electrical and power transmission installation; plumbing technology
Protective Services	Criminal justice/police science; corrections; fire science
Education & Childcare	Human development and family studies; reading teacher education
Allied Health	Emergency medical technician; dental assisting
Nursing	Nursing assistant/aide
Mechanics, Repair, & Welding	Welding technology; machine tool technology
Information Sciences, Communications, & Design	Organizational communication; data processing and data processing technology
Business & Marketing	Business/commerce; administrative assistant and secretarial science
Cosmetology, Culinary, & Administrative Services	Baking and pastry arts; institutional food workers

Source: Bahr and Columbus (2026), Educational Evaluation and Policy Analysis, text and notes 8–9. Fields are listed in the order of the preceding earnings figure.

Larger gains for longer duration training and contract training

Predicted change in annual earnings two years after training (Texas, 2019 dollars)



		Share of all noncredit students		Change as a % of pre-training earnings	Annual pre-training earnings
All students		100%	$2,000	4.2%	$48,500
Training type	Contract training	28%	$2,500	4.8%	$51,900
	Open-enrollment occupational	72%	$1,900	4.0%	$47,100
Contact hours	30 or fewer	41%	$1,300	2.5%	$53,600
	31–90	29%	$1,800	3.6%	$50,300
	91–150	11%	$2,900	7.3%	$39,800
	151–300	13%	$4,800	13.1%	$36,800
	301 or more	6%	$3,600	9.8%	$37,000

Notes: Change at the eighth quarter after training (long-run plus reciprocal-time coefficients, multiplied by four), conditional on employment. Estimates are associations, not causal effects. Hour groups compare students who attempted different amounts of training; they are not returns to additional hours. Adjusting for field of study shrinks the gap above vs. below 150 hours from 734*to*126 per quarter (Columbus and Bahr, 2026, working paper). All long-run coefficients shown are statistically significant ($p < .001$). Rounded to the nearest $100. Share: percentage of all 128,138 noncredit students.
Source: Calculations from Bahr and Columbus (2026), Educational Evaluation and Policy Analysis, Table 4 (Columns 4–5) and Table 5.

Economic mobility can take forms that an earnings average overlook

A raise in the same industry

Texas: $1,200 of the $2,000 annual gain at two years came from higher pay within an industry

Work in a higher-paying industry

Texas: $800 of the $2,000 came from working in industries with higher average pay (2019 dollars)

A better chance of having a job

Texas: employment 5.6 percentage points more likely right after training; 3.5 points in the long run

Keeping a job

Recertification and license renewal protect earnings rather than raise them, so no gain may appear

Earning the credential the training prepares for

Virginia: completers who earned an industry credential made about $3,300 more a year (2022 dollars) than those who did not

A step into credit

Outside California, about 1 in 20 noncredit students moved into credit within two years

Sources: Bahr and Columbus (2026); Columbus and Bahr (2026), working paper (preliminary); Xu, Bird, Cooper, and Castleman (2026); Bahr et al. (2022).

Industry moves come first; within-industry gains last

Predicted change in annual earnings after training, by source (Texas, 2019 dollars, preliminary)

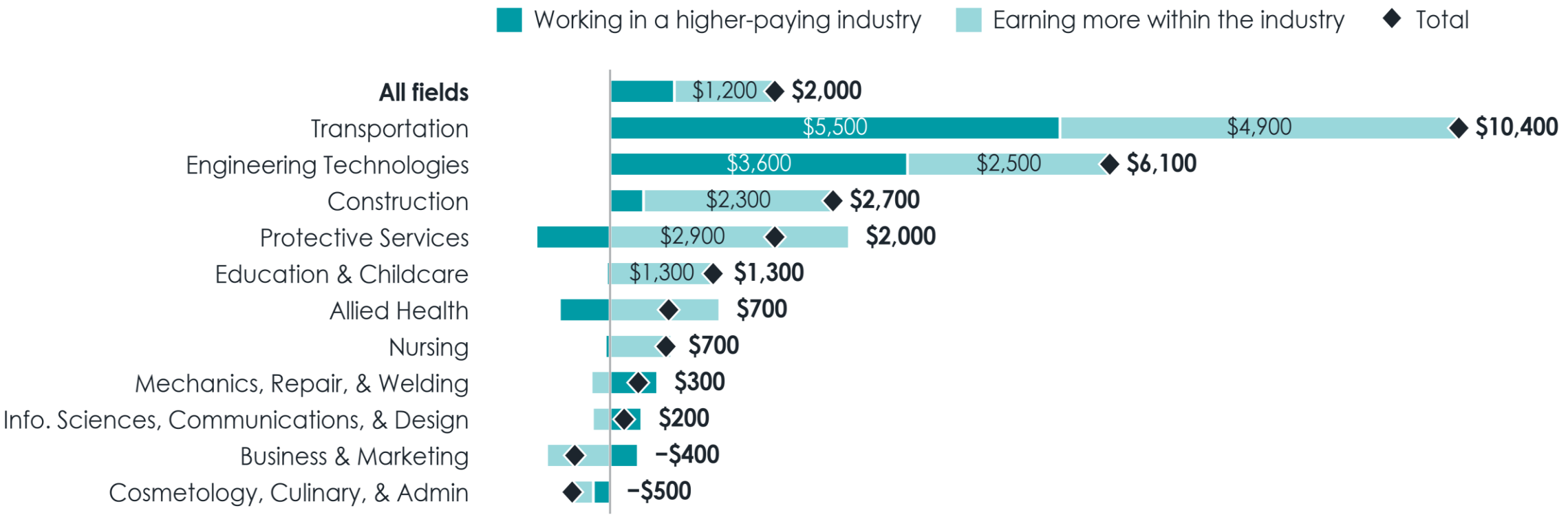


Notes: Preliminary, unpublished analysis of 128,138 Texas noncredit occupational students. Working in a higher-paying industry = change in the average pay of workers without a bachelor's degree in the student's 3-digit industry; earning more within the industry = the remainder. Annualized (quarterly effect multiplied by four), conditional on employment; associations, not causal effects. All components statistically significant ($p < .01$). Rounded to the nearest $100.
Source: Columbus and Bahr (2026), Occupational Training and Industry Mobility (working paper), using the Bahr and Columbus (2026) Texas cohort.

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Fields differ in where earnings gains come from

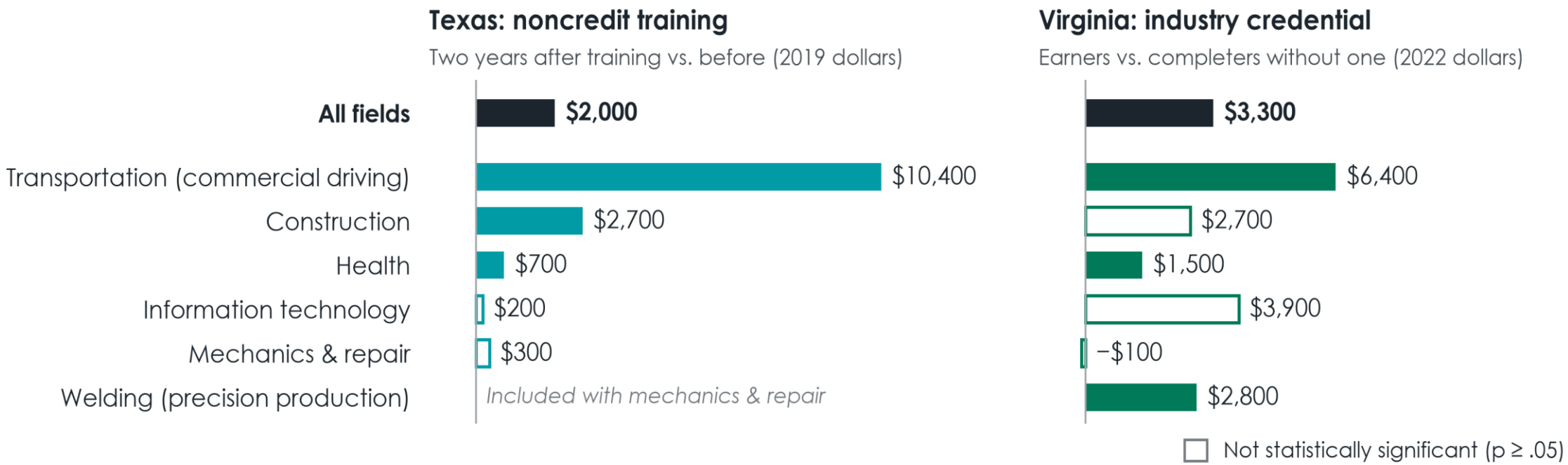
Predicted change in annual earnings two years after training, by source (Texas, 2019 dollars, preliminary)



Notes: Preliminary, unpublished analysis of the Texas cohort shown on the earnings slides. Working in a higher-paying industry = change in the average pay of workers without a bachelor's degree in the student's 3-digit industry; earning more within the industry = the remainder. Eighth quarter after training, multiplied by four; conditional on employment; associations, not causal effects. Rounded to the nearest $100. The "Other" field is not shown.
Source: Columbus and Bahr (2026), Occupational Training and Industry Mobility (working paper), using the Bahr and Columbus (2026) Texas cohort.

Earning an industry credential after training was linked to higher pay

Predicted change in annual earnings, by field: Texas training and Virginia industry credentials



Notes: Texas: change relative to each student's own pre-training trend, two years after training (Bahr and Columbus, 2026, Table 3). Virginia: difference between FastForward completers who earned an industry credential and completers of the same training who did not, quarterly estimate multiplied by four (Xu et al., 2026, Tables 2–3). Both are associations from individual fixed-effects models, conditional on employment; field definitions differ. Rounded to the nearest $100.
Sources: Bahr and Columbus (2026), Educational Evaluation and Policy Analysis; Xu, Bird, Cooper, and Castleman (2026), Journal of Public Economics.

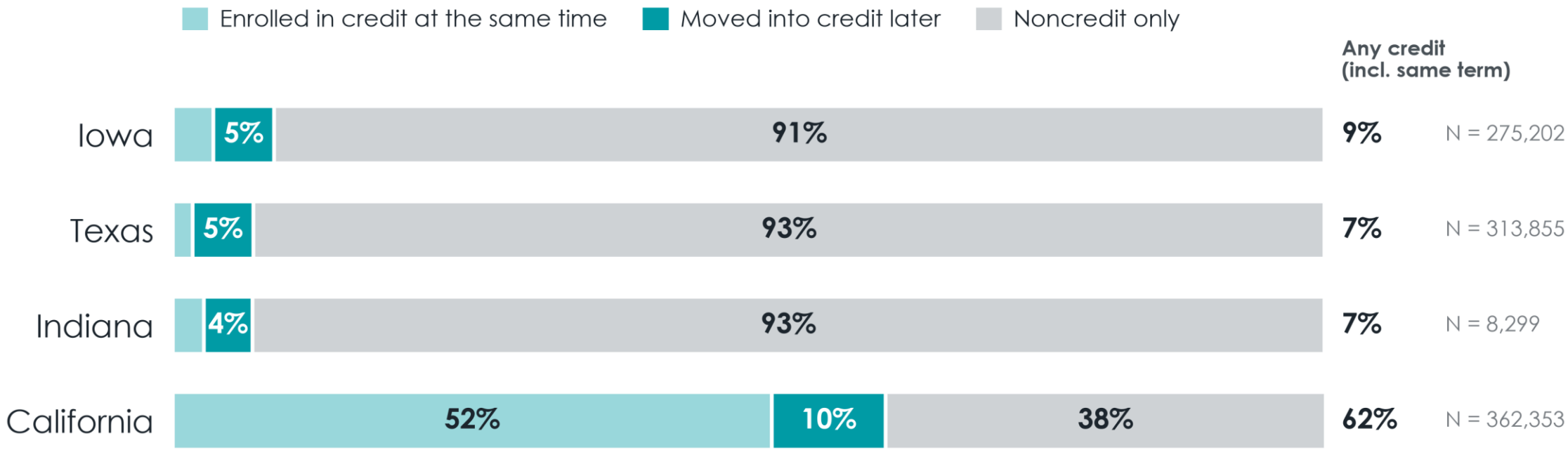
Educational mobility

Do noncredit students move into credit?

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Outside California, about 1 in 20 noncredit students moved into credit

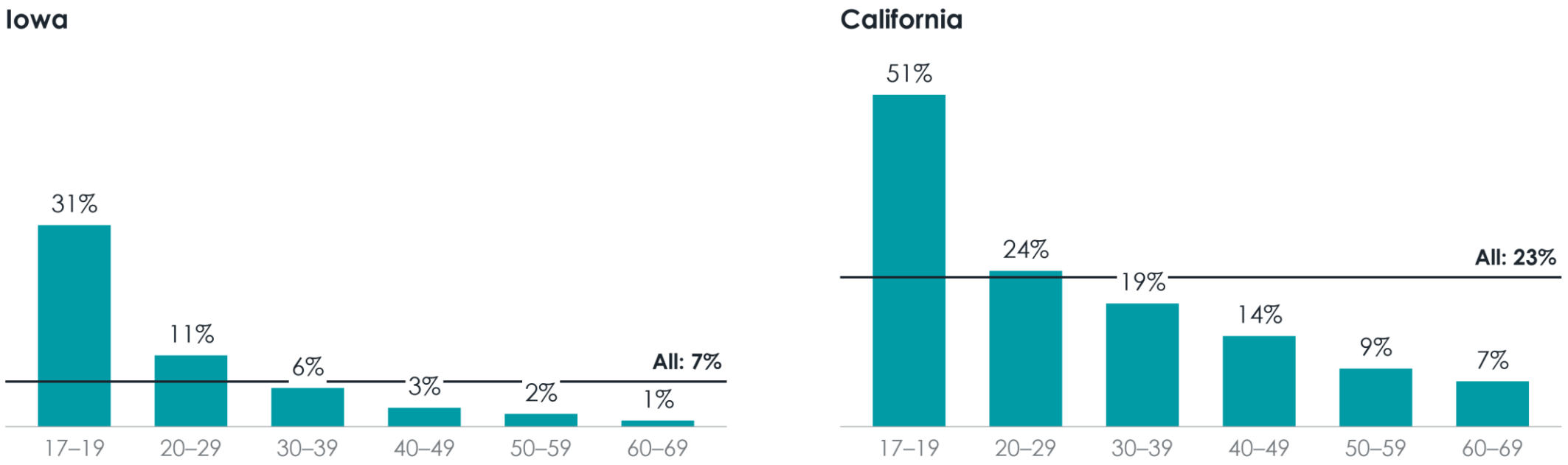
Credit enrollment within two years of first noncredit enrollment, by state (percent of noncredit students)



Notes: Entry cohorts AY 2013–14 to 2017–18 (Indiana: 2017–18); Louisiana not available. Students who took credit before their first noncredit course are excluded. Moved into credit later = first credit course after the first noncredit term and within two years (the transition rate); same-term credit enrollment is shown separately and is not counted as a transition. Neither shows credit awarded for noncredit learning. In California, half of noncredit students took supplemental instruction or tutoring tied to credit courses.
Source: Bahr et al. (2022), Investigating the Hidden College: A Study of Community College Noncredit Education in Five States, Table 5.

Younger noncredit students moved into credit most often

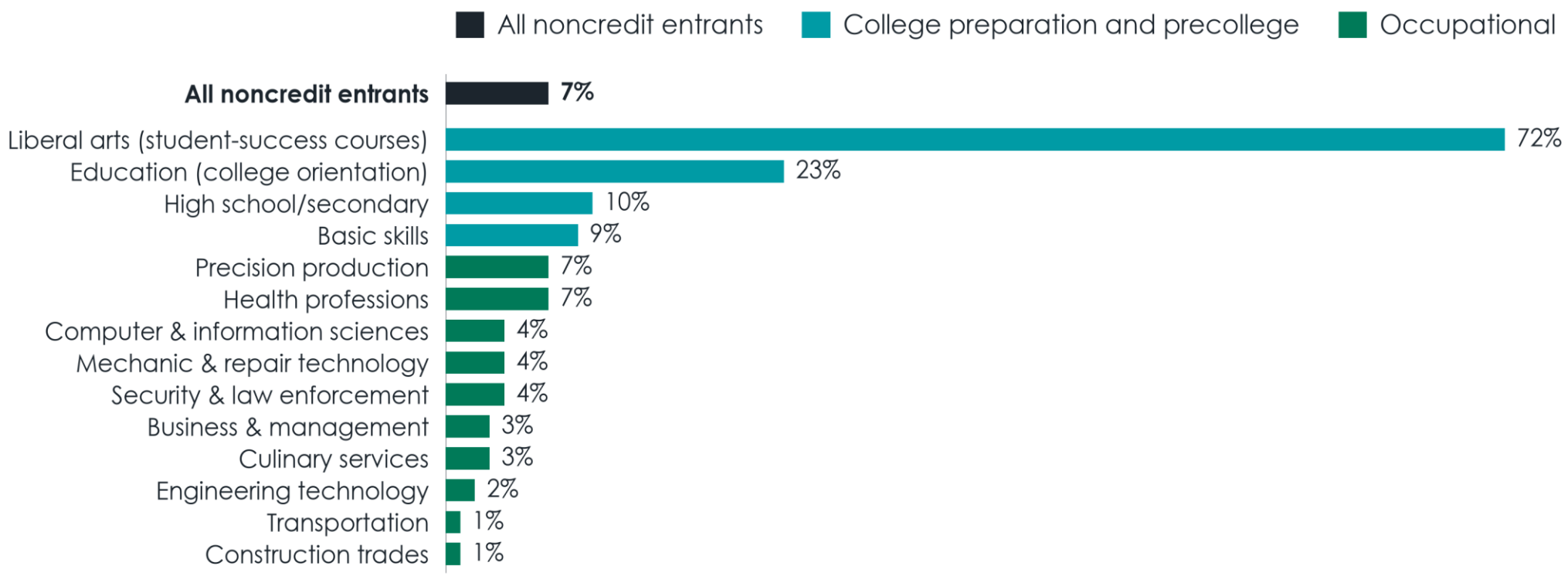
Percent of noncredit entrants who enrolled in credit within three years, by age at entry



Notes: Students who began exclusively in open-enrollment occupational or precollege noncredit courses, Fall 2014 to Fall 2016; three-year (nine-term) window. Ages 20–29 combine the published 20–24 and 25–29 rates, weighted by group size; because the published rates are rounded, the combined values are approximate. Moving into credit means enrolling in at least one credit course.
Source: Bahr et al. (2024), Noncredit Research in Brief 3 (Iowa and California), Figures 2A and 2B.

In Iowa, occupational noncredit students rarely moved into credit

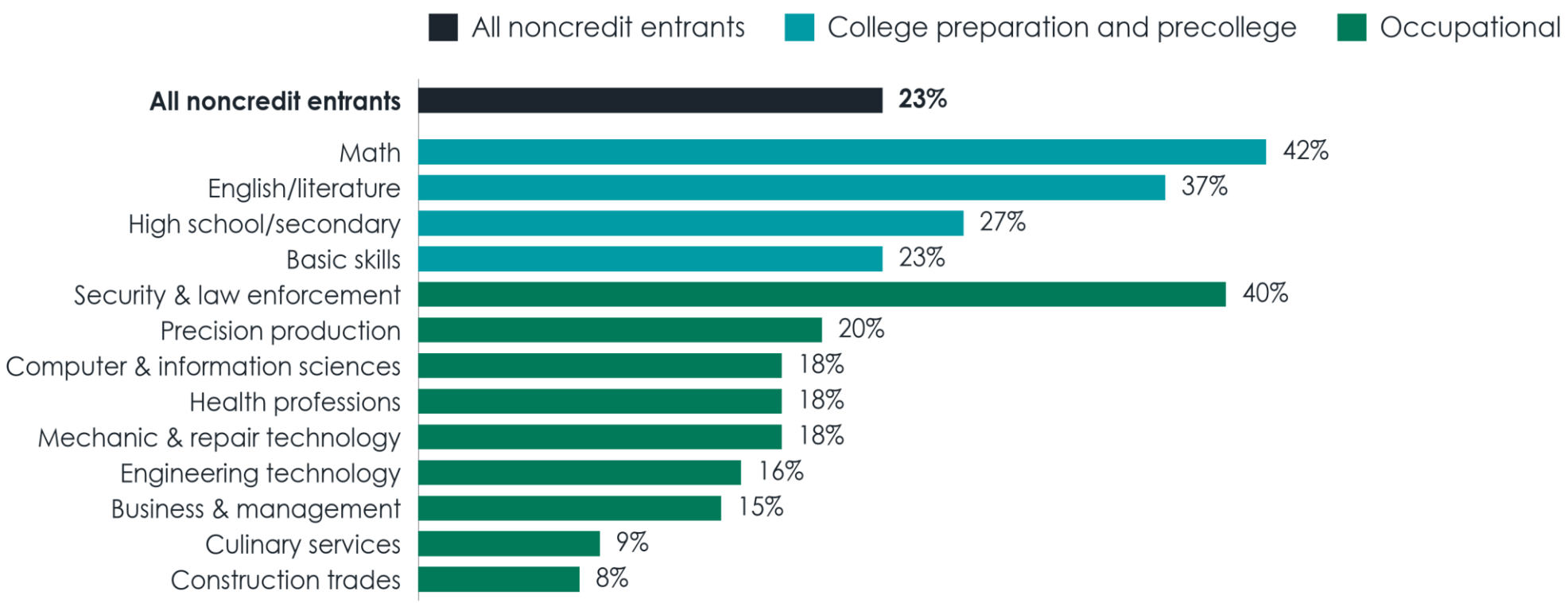
Percent of noncredit entrants who enrolled in credit within three years, by field of first noncredit course (Iowa)



Notes: Selected fields with at least 100 entrants. Students are assigned to every field in which they took a noncredit course in their first term. Fall 2014 to Fall 2016 entrants; three-year window. Liberal arts and education courses were mostly student-success and college-orientation courses.
Source: Bahr et al. (2024), Noncredit Research in Brief 3 (Iowa and California), Figure 6A.

In California, most occupational noncredit fields fell below the average

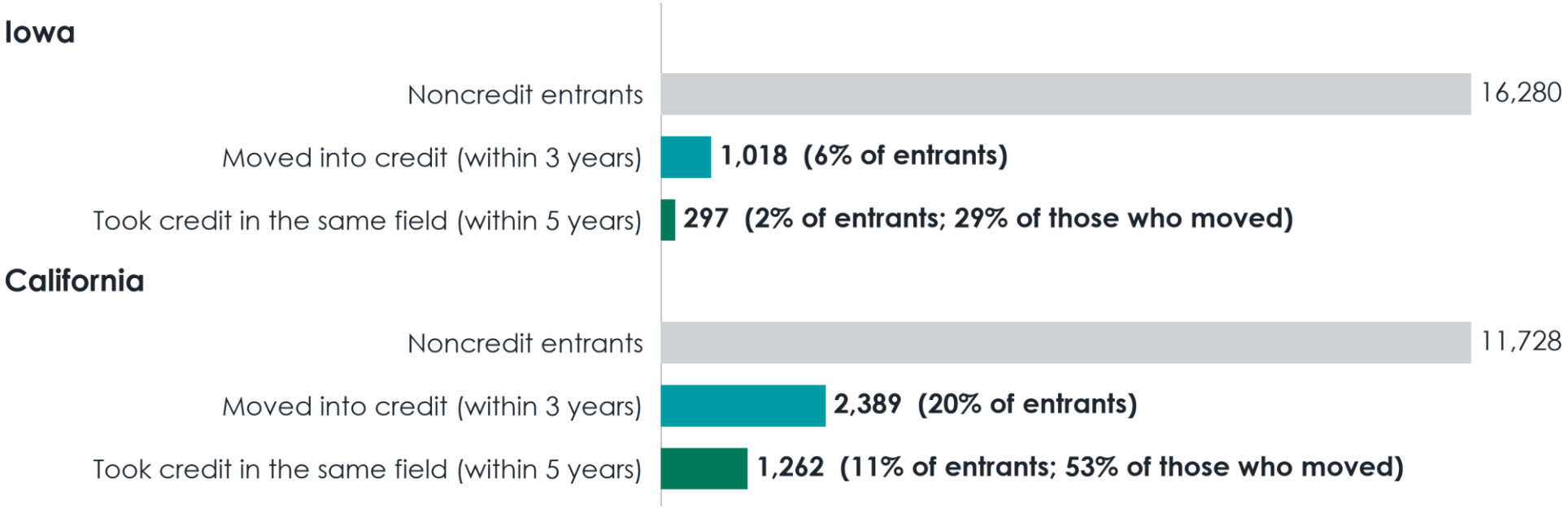
Percent of noncredit entrants who enrolled in credit within three years, by field of first noncredit course (California)



Notes: Selected fields with at least 100 entrants. Students are assigned to every field in which they took a noncredit course in their first term. Fall 2014 to Fall 2016 entrants; three-year window.
Source: Bahr et al. (2024), Noncredit Research in Brief 3 (Iowa and California), Figure 6B.

Few noncredit entrants went on to credit in the same field

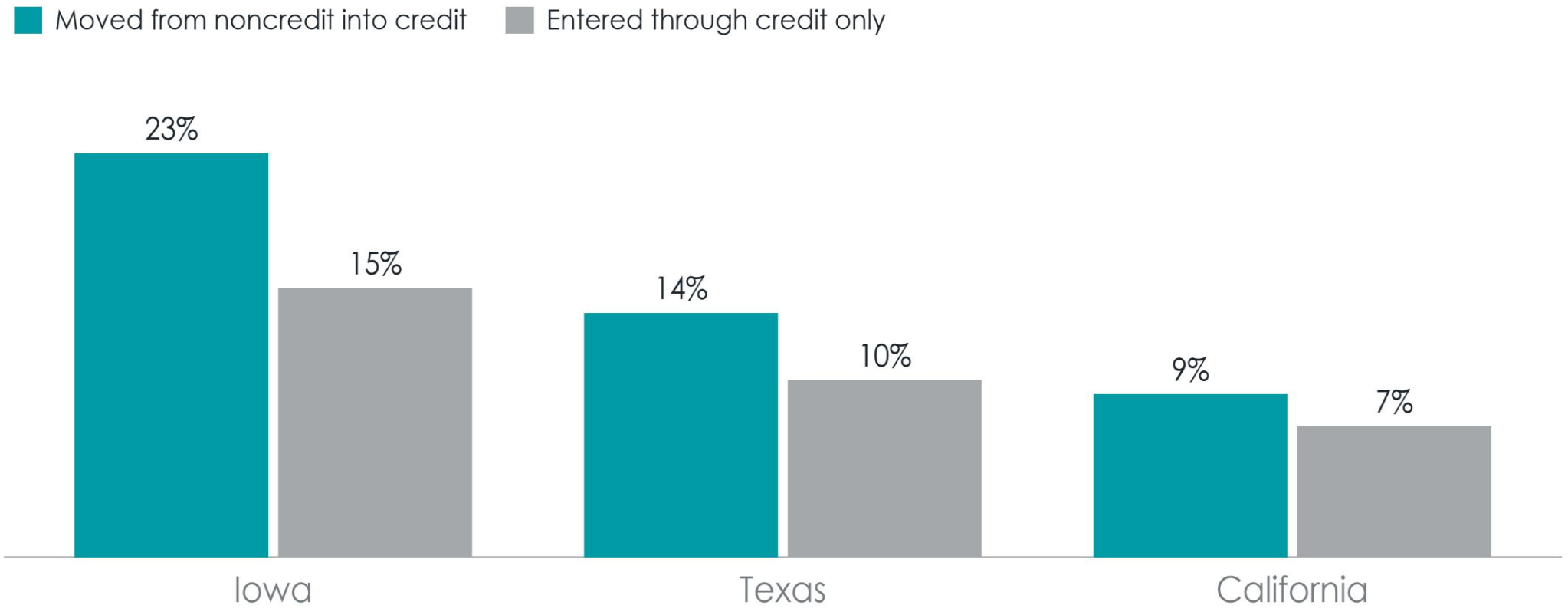
Fall 2014 noncredit entrants: who moved into credit, and who took credit in the same field



Notes: Students whose first term was exclusively noncredit (open-enrollment occupational or precollege). Same field = a credit course in the same 2-digit CIP field as a first-term noncredit course. Excluding basic skills, California's same-field share of those who moved falls from 53% to 36%. Same-field course taking does not show that noncredit learning was awarded credit. These Fall 2014 rates (Iowa 6%, California 20%) differ from the earlier three-year rates (7%, 23%), which cover Fall 2014 to Fall 2016 entrants.
Source: Bahr et al. (2025), Is Noncredit Education an On-Ramp to Credit Coursework? (Research in Brief 4), Table 1.

Credit movers earned credentials at least as often as other credit students

Percent earning any postsecondary credential within three years of first credit enrollment (AY 2013–14 entrants)



Notes: A descriptive comparison, not an effect estimate: students who moved into credit chose to do so and differ from other credit students (for example, they are younger). Moved into credit = first credit course within two years of first noncredit enrollment.
Source: Bahr et al. (2022), Investigating the Hidden College: A Study of Community College Noncredit Education in Five States, Table 6.

Building routes students can use

Ohio's statewide guarantees

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Ohio guarantees college credit for approved workforce learning

Route	Who it serves	What the learner receives	Where the learning happens
Career-Technical Assurance Guides (CTAGs)	Secondary and adult career-technical students	Credit for specific college courses, for career-technical courses approved by college faculty	Secondary and adult career-technical institutions
Industry-Recognized Credential Transfer Assurance Guides (ITAGs)	Adults holding approved industry-recognized credentials	Guaranteed credit for specific college courses at every public institution	Anywhere the credential was earned
Ohio Technical Center Degree Pathways (formerly the One-Year Option)	Adults who complete a 900+ clock-hour Ohio Technical Center program and earn an approved industry credential	30 semester hours, as a block, toward an Associate of Technical Study (proportional credit for 600 to 899 hours)	Ohio Technical Centers

Sources: Ohio Department of Higher Education (2025), The Ohio Articulation and Transfer Policy, pp. 35–36; Grant (2026), ODHE memorandum; Daugherty et al. (2023), RAND RR-A2485-1.

Guaranteed credit still depends on outreach and intake

A large potential pool

About 475,000 Ohio workers, and 11.1 million nationally, hold an industry credential but no college degree

Not everyone wants college

Fewer than 1 in 4 surveyed credential holders may be likely to enroll; credit appealed only to those who valued a college credential

Trusted messengers

Credential holders trusted websites and friends, family, and employers more than social media or marketing

What colleges often do

82% have a CPL web page and over 80% train admissions or advising staff; one-on-one advising is common

What colleges do less often

Engage employers in outreach, screen every incoming student for prior credit, and use data to improve

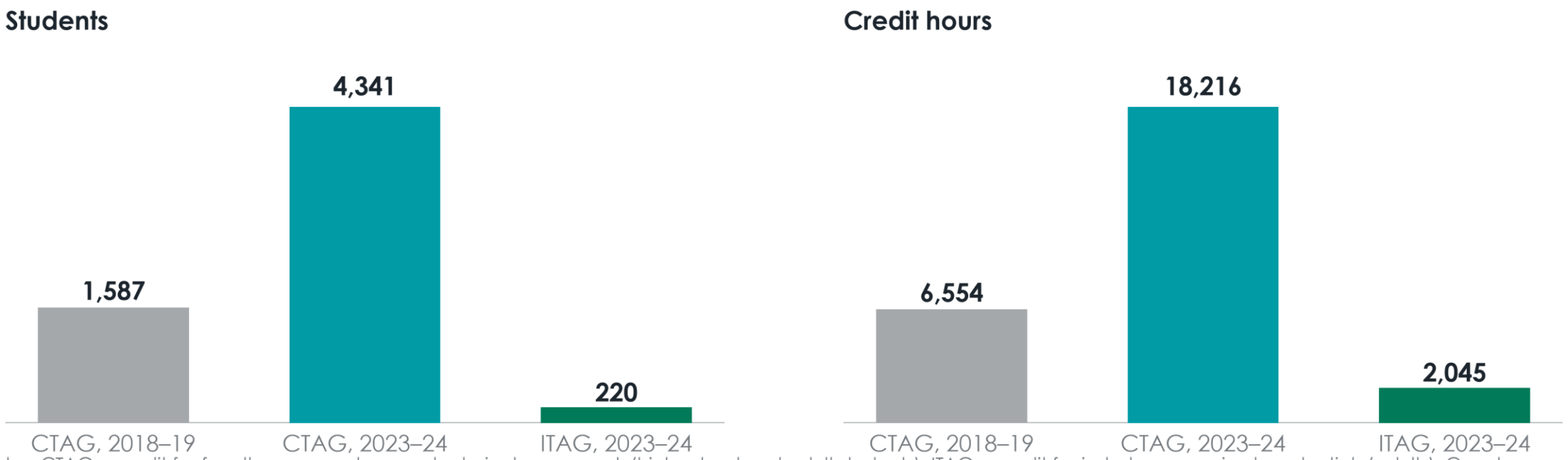
What the state does

Sets statewide guarantees, trains college staff, and maps how credentials lead to degrees and careers

Sources: Kushner, Daugherty, Leigh, Kramer, and Wearly (2026), RAND RR-A4918-1; Leigh and Daugherty (2025), RAND RR-A4071-1; Wearly and Kramer (2026), Non-Degree Credentials Research Network presentation.

Credit awarded through Ohio's CTAGs nearly tripled in five years

Students and credit hours awarded through CTAGs and ITAGs (academic years)

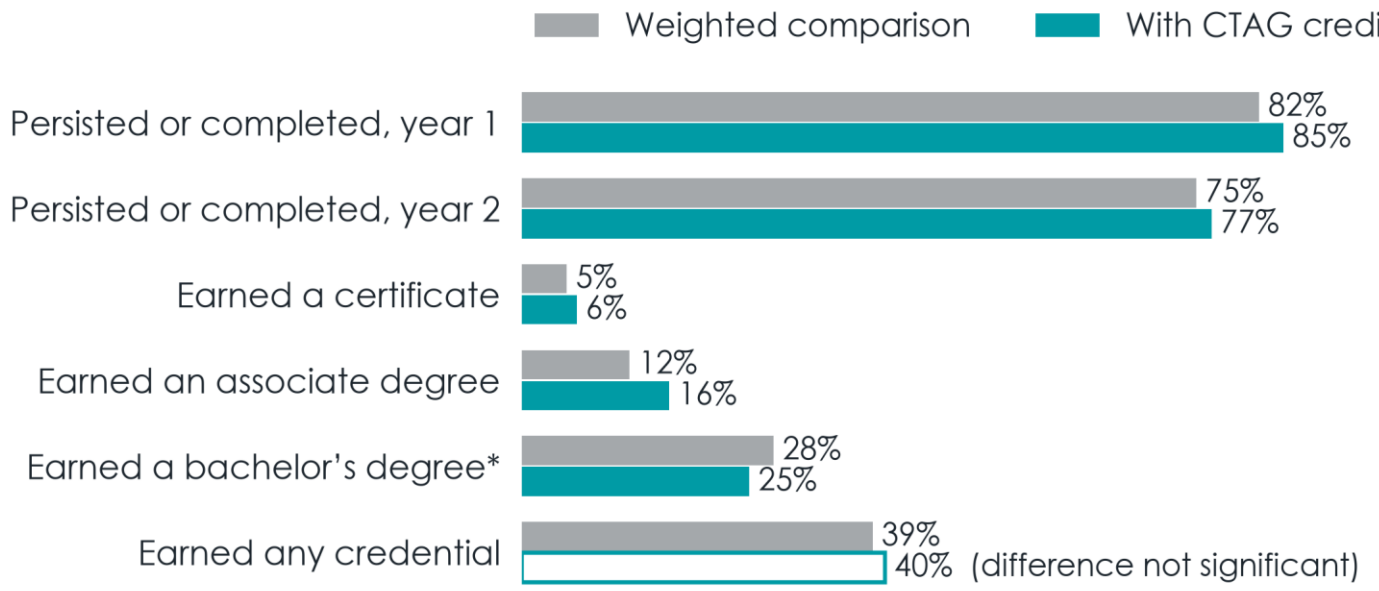


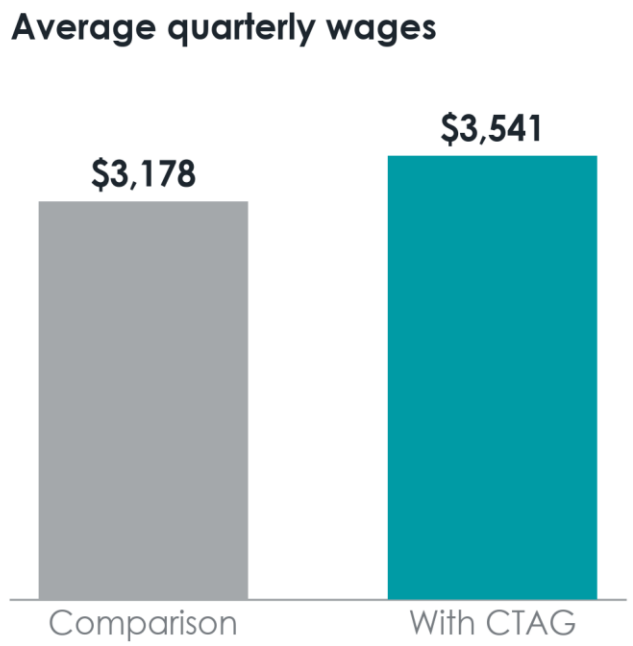
Notes: CTAG = credit for faculty-approved career-technical coursework (high school and adult students); ITAG = credit for industry-recognized credentials (adults). Counts are volumes of credit awarded, not take-up rates; no eligible population is reported; articulation records are most accurate from 2018–19, and some growth may reflect better reporting.

Source: Wearly and Kramer (2026, September 17), Moving from Noncredit to Credit: Lessons Learned from Scaling Statewide College Credit for Noncredit Training in Ohio [Presentation], Non-Degree Credentials Research Network.

Ohio students with CTAG credit earned associate degrees more often

Students with at least one CTAG credit vs. weighted comparison students; outcomes at least three years after high school





Notes: High school graduates of 2018–2021 who enrolled in Ohio public higher education; propensity-score weighting on background, first-term performance, and first program. Associations, not causal effects. *Bachelor's difference is not robust when students with other prior-learning credit are removed. CTAG holders also averaged 0.11 more quarters employed (2.4 for comparison students). CTAG holders: n = 4,401 to 6,926, by outcome. Wages measured three years after high school graduation.
Source: Wearly and Kramer (2026, September 17), Moving from Noncredit to Credit: Lessons Learned from Scaling Statewide College Credit for Noncredit Training in Ohio [Presentation], Non-Degree Credentials Research Network.

What it adds up to

What we know, what remains uncertain, and what states can do

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What the evidence shows, and what remains uncertain

What these studies show

- Noncredit serves different purposes, and different students, in different states
- Texas occupational training is associated with about $2,000 more a year at two years, concentrated in a few fields
- Gains reflect both higher-paying industries and higher pay within an industry
- In Virginia, earning an industry credential after training is associated with about $3,300 more a year
- Few noncredit students move into credit; younger students move most often

What remains uncertain

- Causal effects: every estimate here is an association
- Why some fields show no earnings gain: little benefit, keeping a job, or missing credentials
- The labor-market value of moving from noncredit into credit
- Mobility beyond five years, and in other states

Match each measure to the mobility a program intends

If a program is designed for…	Mobility to look for	What to measure
Entry into an occupation	A job, a better job, or a move to a higher-paying industry	Employment, earnings, and industry before and after training
Incumbent-worker or contract training	A raise or promotion in place	Earnings growth within the same employer or industry
Recertification or license renewal	Keeping a job	Credential renewal and continued employment
Preparation for an industry credential	Earning the credential, then better work	Credential receipt, then employment and earnings
Precollege or bridge coursework	A step into credit	Credit enrollment and progress in credit coursework
Learning that articulates to a credit program	Credit that counts toward a credential	Credit awarded, credit applied, and credential completion

As you tackle this convening's work

1. Name the mobility each program is designed to offer: a job, a raise, a new industry, keeping a job, a credential, or a step into credit
2. Measure each program against that purpose, and report by program and field, not only statewide
3. Collect what those purposes require: employment, earnings, industry, industry credentials, credit enrollment, and credit awarded
4. Where learning aligns with a credit program, make the pathway visible and, ideally, automatic
5. Build evaluation into new pathways and funding decisions, including Workforce Pell

What kind of mobility is this program intended to offer?

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