



ABC Workforce Development Survey



for the Built Environment

March 2020

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Methodology

- ABC distributed the survey to the membership list beginning on Jan. 8, 2020, and the survey was closed on Feb. 18, 2020.
- After removing duplicate and incomplete responses, the sample response rate was 8% of all ABC contractor members. The large sample size and the distribution of responses across categories was sufficient for FMI to be confident in modeling the total investment of ABC contractor members.
- FMI's model of total workforce development and education investment was built from 21 distinct categories based on contractor type and annual revenue.
 - Using survey data on total workforce development and education budgets, FMI cleaned and corrected data related to per person spending within each training type. FMI assigned each contractor category a typical number of employees educated and per-person investment for each training type (leadership, safety, trade/craft).
 - FMI multiplied the number of employees trained by the amount spent per employee to calculate the investment per firm in each of the categories. The amount per firm was multiplied by the number of ABC member contractors in each of those categories, based on ABC and survey data.
 - The final sum (\$1.5 billion) is intended as a conservative estimate of total workforce development investment made by ABC member contractors as the largest ABC member contractors were assumed to have revenues no greater than \$2 billion.



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Management Summary

Investments in workforce development by ABC contractors remains strong despite challenges fielding the appropriate workforce.

- The number of personnel educated by ABC member contractors increased by nearly 11% to over 1 million people in 2019. On average, ABC member contractors invested 7.9% of their payroll on education and workforce development in 2019. This is a slight decline from the 8.3% invested in 2018 but remains well above FMI's industry benchmark of 5.8%.
- General contractor/construction manager and heavy/civil/utility contractors have increased their total and per-contractor education investments compared to last year. On average, GC/CM contractors invested \$126,492 on education in 2019 while heavy/civil/utility contractors invested \$172,231.
- In contrast, specialty/trade contractor investments declined in 2019 to \$101,611 per contractor as members deal with a persistent craft labor shortage and adopt more efficient educational techniques.

Note: FMI construction industry benchmark for workforce development investment is based on a 2013 survey of over 3,600 US construction firms.

ABC member contractors invest an estimated total of \$1.5 billion per year in workforce development.

- ABC member contractors invest an average of \$109,960 annually on workforce development and education.
- The \$408 million investment in workforce development made by firms with revenue below \$10 million represents more than a quarter (27%) of the total workforce investment by ABC members.
- Compared to 2018, GC/CM and heavy/civil/utility contractors have increased their investment in workforce development and education.
- Trade and specialty contractors account for 71% (\$1.1 billion) of all workforce development investment made by ABC member contractors.
- ABC contractors invest an average of 7.9% of payroll on workforce development, which is well above the FMI construction industry benchmark of 5.8%.

Note: FMI construction industry benchmark for workforce development investment is based on a 2013 survey of over 3,600 US construction firms.

Slowing growth in construction spending is providing contractors an opportunity to catch up on deferred workforce development.

- The percentage of contractors reporting a severe labor shortage declined 5% between 2018 and 2019, while those reporting a moderate labor shortage increased 4%.
- While the proportion of ABC chapters characterizing the labor shortage as “very severe” fell from 34% in 2018 to 13% in 2019, more are reporting issues related to the exodus of baby boomers (3% increase) and drug use (12% increase).
- Since 2018, contractors have shifted the focus of their workforce development program slightly (6%) from managers and leaders to trade/craft personnel.
- The number of trade/craft personnel trained on average by ABC member contractors increased slightly from 45 in 2018 to 46 in 2019.
- The use of externally provided face-to-face training for craft/trade personnel increased from 61% in 2018 to 66% in 2019. Online instruction (instructor-led and self-paced) for trade/craft personnel increased slightly (2%-3%) in 2019.

Specialty/trade contractors are struggling to attract and develop the workforce needed.

- In 2019, ABC member contractors provided safety education to nearly 650,000 course attendees, and they skilled or upskilled nearly 450,000 course attendees.
- Safety education accounts for the greatest share (47%) of total workforce investment, despite having the lowest per-person investment (\$1,104).
- Across all contractor types, trade/craft personnel accounted for more than two-thirds (67%) of those receiving education.
- Compared to GC/CM and heavy/civil/utility member contractors, specialty/trade contractors are 11% more likely to characterize the labor shortage as “severe” or “very severe.”
- Specialty/trade contractors report higher rates of disinterest in training opportunities (2%), higher compensation in other industries (4%) and the perception that the industry is technologically unsophisticated (6%).

Contractors are meeting the challenge posed by shifting demographics by engaging with previously underrepresented groups of people.

- Women make up an average of 16% of ABC members' management/supervisory employees and 13% of ABC members' craft/trade employees.
- Since 2013, the percentage of trade/craft employees that are white (not of Hispanic origin) declined from 75% to 68%. The percentage of management/supervisory employees that are white (not of Hispanic origin) declined from 89% to 86%.
- Nearly one-quarter (24%) of U.S. personnel receiving education in the past year lacked a high school diploma or were current students.
- The use of independent apprenticeship programs increased from 11% in 2018 to 13% in 2019. Contractors with independent apprenticeship programs have an average of 35 apprentices in their program.
- Approximately two-thirds (61%-72%) of contractors participating in internship programs partner with college/universities and high school/career technical education institutions.
- A 2% increase in the share of employees under 40 years of age suggests the industry is accelerating efforts to deal with the demographic transition necessitated by the retirement of baby boomers.

ABC member contractors invest an average of \$109,960 annually on workforce development and education.

Model summary

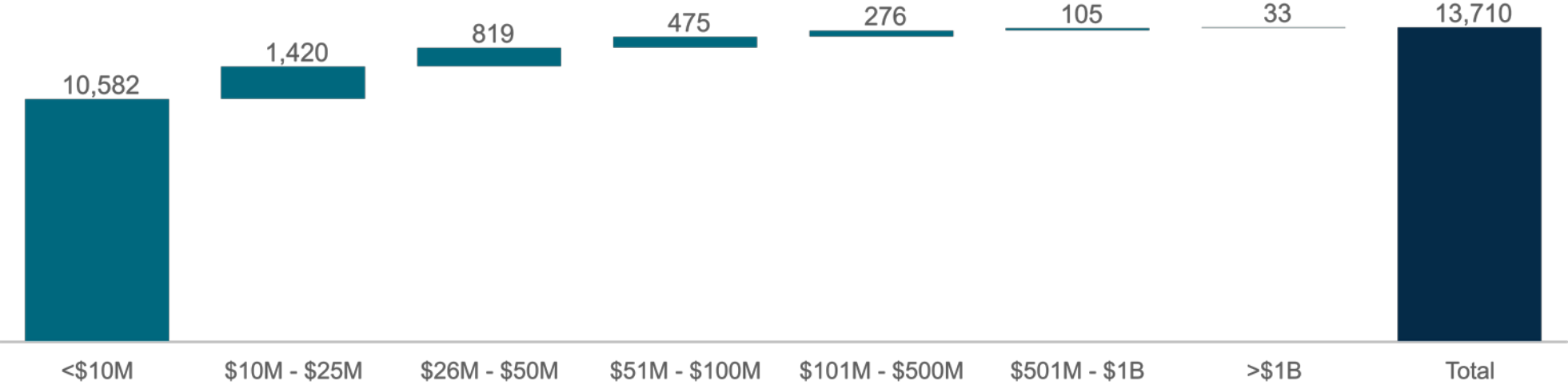
Source: FMI model

	GC/CM	Heavy/Civil/Utility	Trade or Specialty	Overall
Estimated ABC membership (number of firms)	2,534	728	10,448	13,710
Total training investment (\$)	\$320,529,891	\$125,384,271	\$1,061,632,836	\$1,507,546,998
Number of personnel trained in each training type	Leadership: 40,546 Safety: 177,755 Craft/trade: 81,054	Leadership: 8,874 Safety: 51,795 Craft/trade: 32,084	Leadership: 56,604 Safety: 415,924 Craft/trade: 224,485	Leadership: 106,024 Safety: 645,474 Craft/trade:337,623
Per-person investment (\$)	Leadership: \$2,000 Safety: \$850 Craft/trade: \$1,546	Leadership: \$671 Safety: \$1,042 Craft/trade: \$1,133	Leadership: \$1,167 Safety: \$1,205 Craft/trade: \$2,202	Leadership: \$1,494 Safety: \$1,306 Craft/trade: \$2,287
Trainee distribution by role	Senior leader: 7% Project manager: 15% Field manager: 25% Craft/trade: 52%	Senior leader: 7% Project manager: 9% Field manager: 17% Craft/trade: 67%	Senior leader: 4% Project manager: 9% Field manager: 16% Craft/trade: 71%	Senior leader: 5% Project manager: 10% Field manager: 18% Craft/trade: 67%

The \$408 million investment in workforce development made by firms with revenue below \$10 million represents more than a quarter (27%) of the total workforce investment by ABC members.

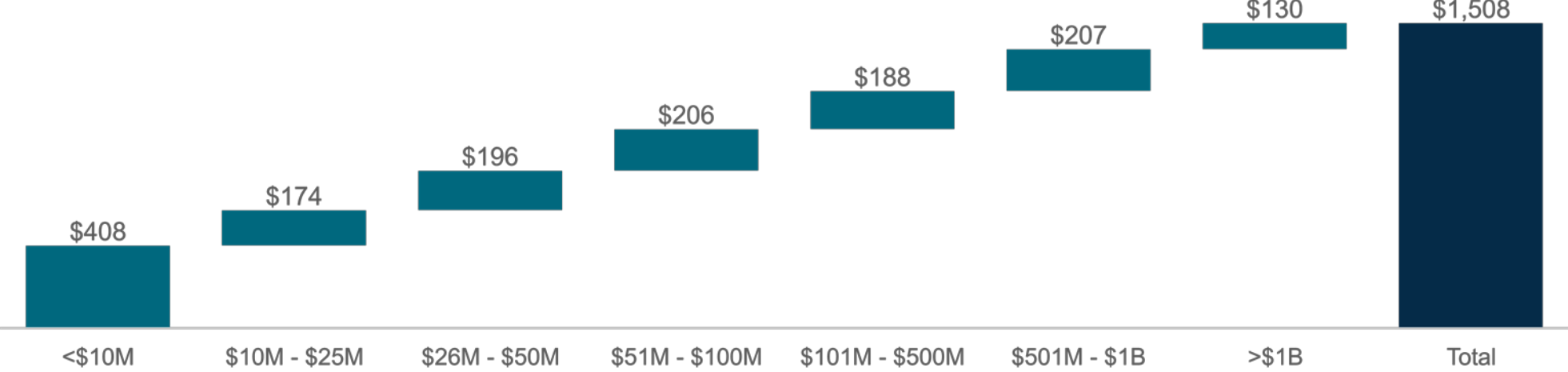
Estimated ABC membership by annual revenue

Source: FMI model



Training investment (\$M) by annual revenue

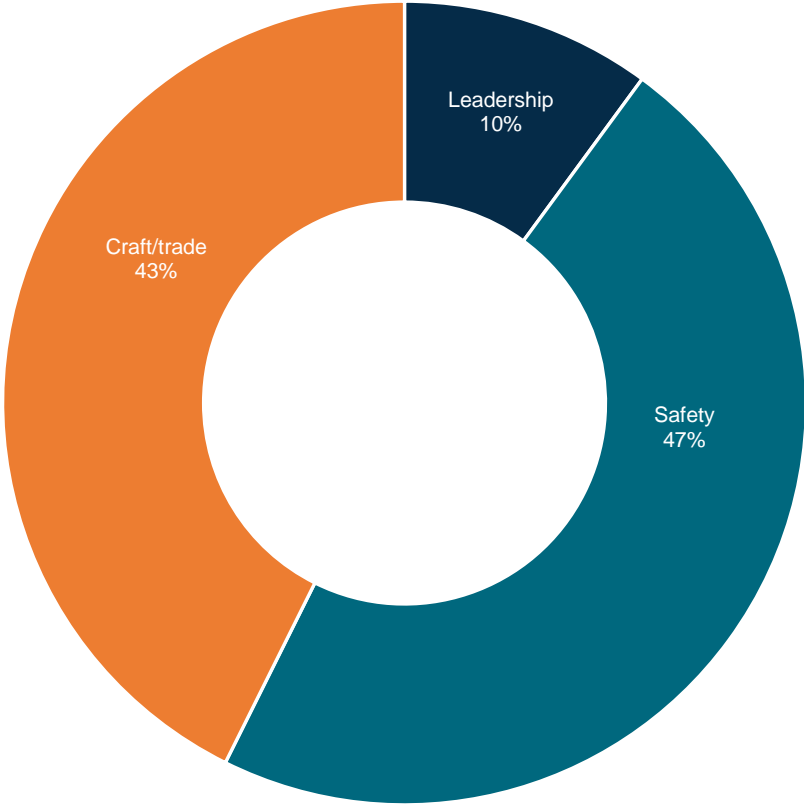
Source: FMI model



Safety education accounts for the greatest share (47%) of total workforce investment, despite having the lowest per-person investment (\$1,104).

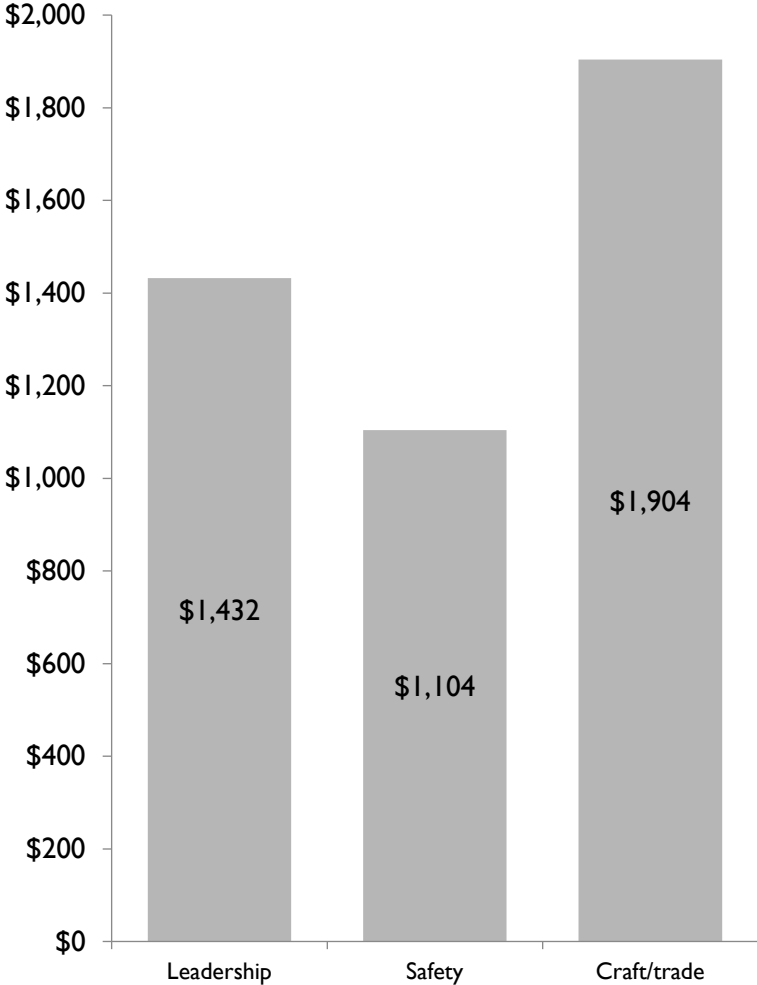
Training investment by training type

Source: FMI model



Training investment per person by training type

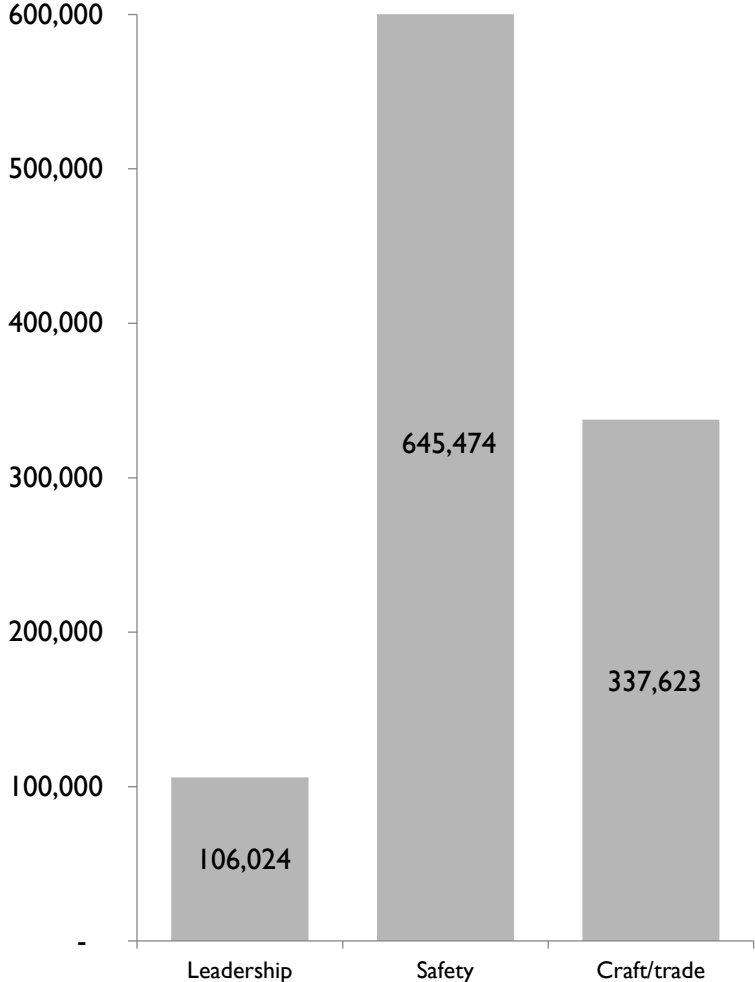
Source: FMI model



In 2019, ABC member contractors provided safety education to nearly 650,000 course attendees and skilled or upskilled nearly 450,000 course attendees.

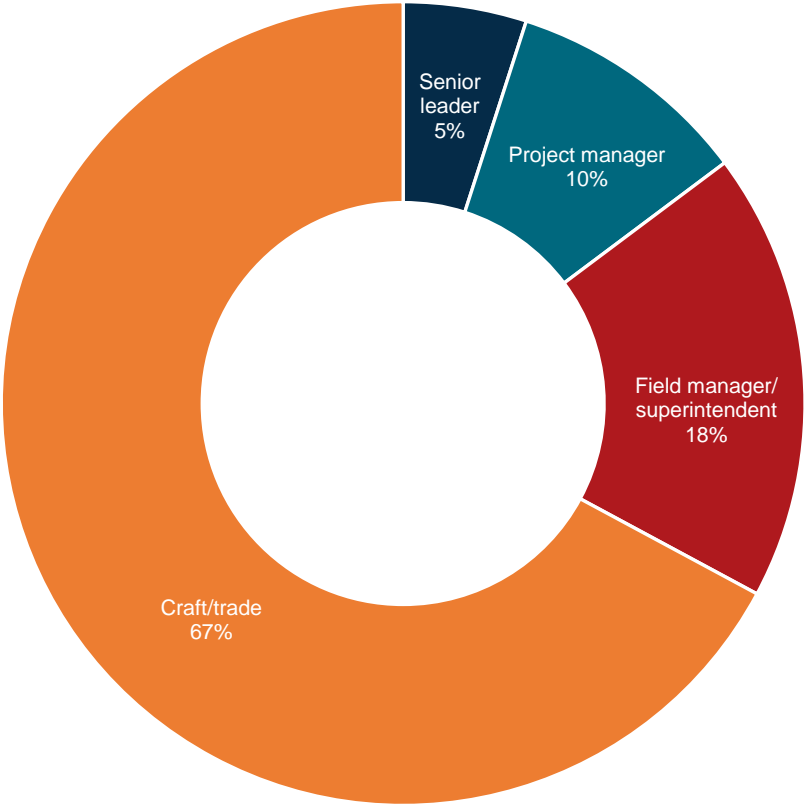
Personnel trained by training type

Source: FMI model



Personnel trained by role

Source: FMI model





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Key Findings



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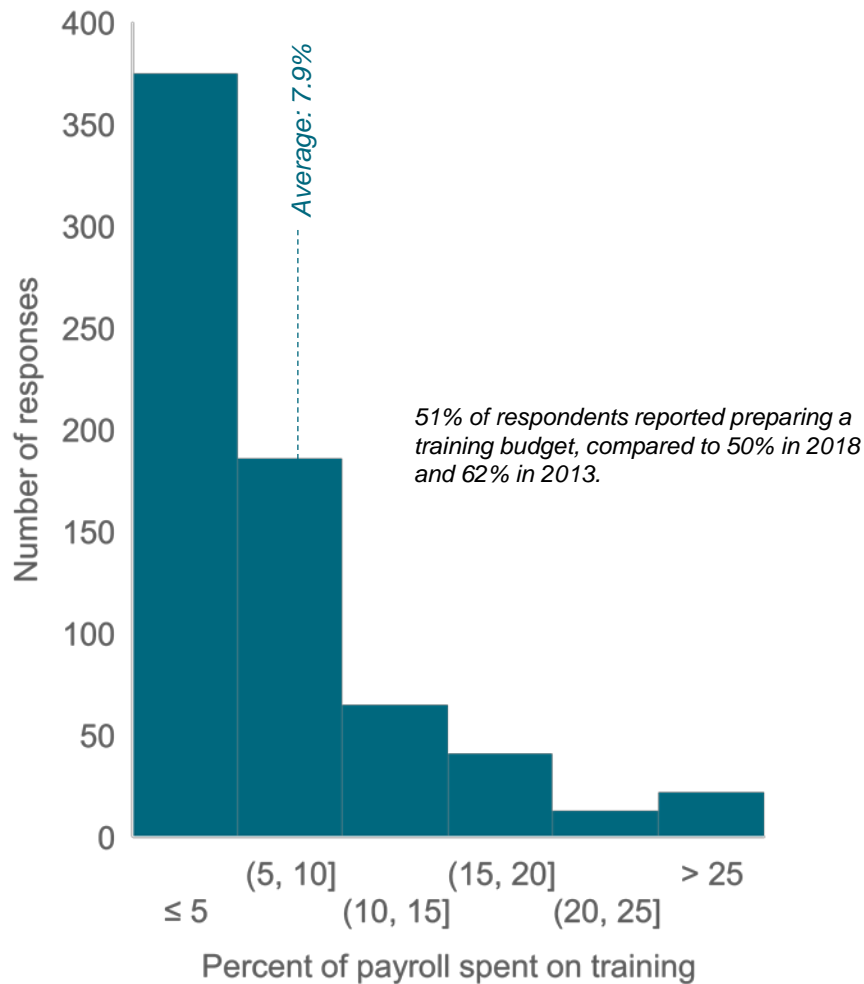


Workforce Development

In 2019, ABC member contractors invested an average of 7.9% of payroll on workforce development, which is well above the FMI construction industry benchmark of 5.8%.

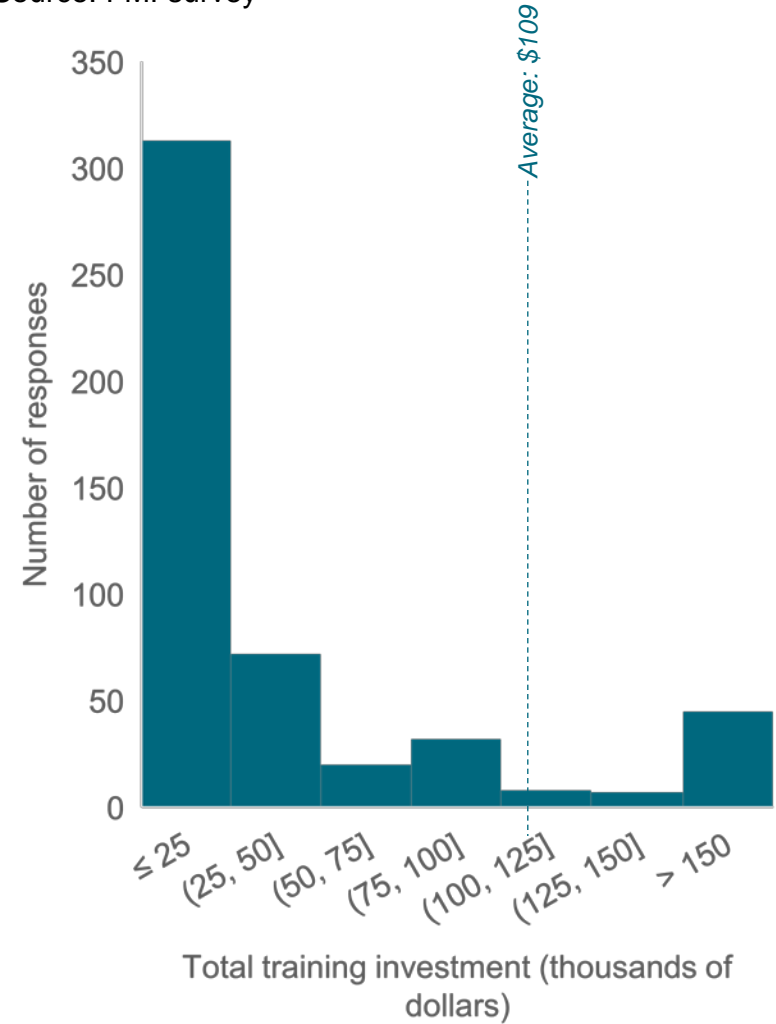
What percentage of your company's payroll is spent on training? (n=702)

Source: FMI survey



What is your total investment (in thousands of dollars) for training U.S. personnel? (n=497)

Source: FMI survey



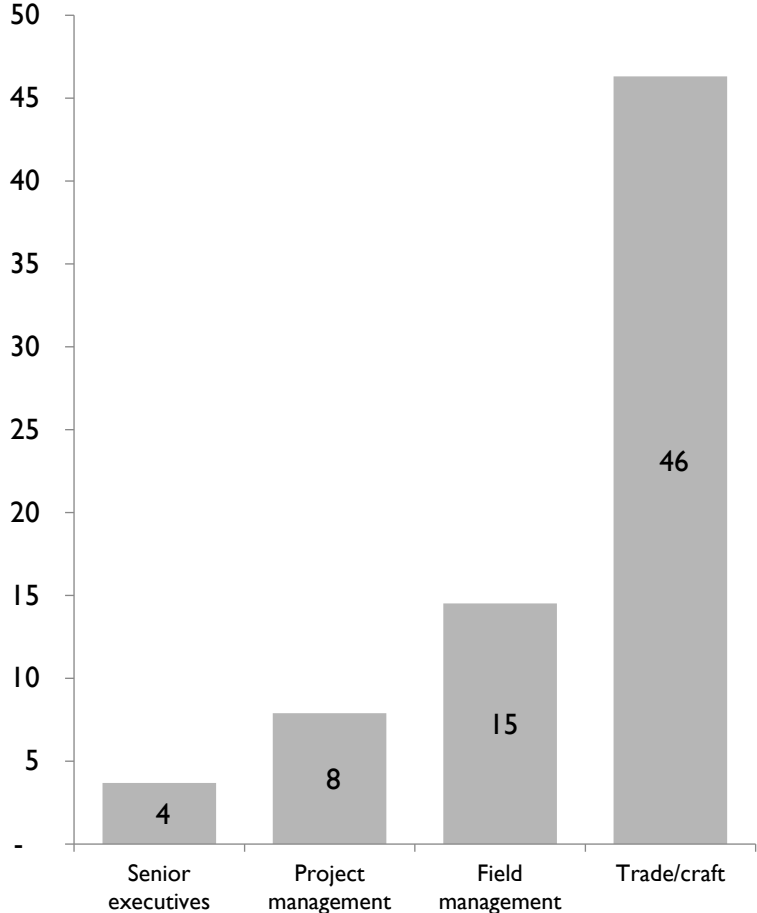
Note: FMI construction industry benchmark for workforce development investment is based on a 2013 survey of over 3,600 US construction firms.

The number of trade/craft personnel trained on average by ABC member contractors increased slightly from 45 in 2018 to 46 in 2019.

In the United States, how many personnel in each of the following employee groups receive training in a year?

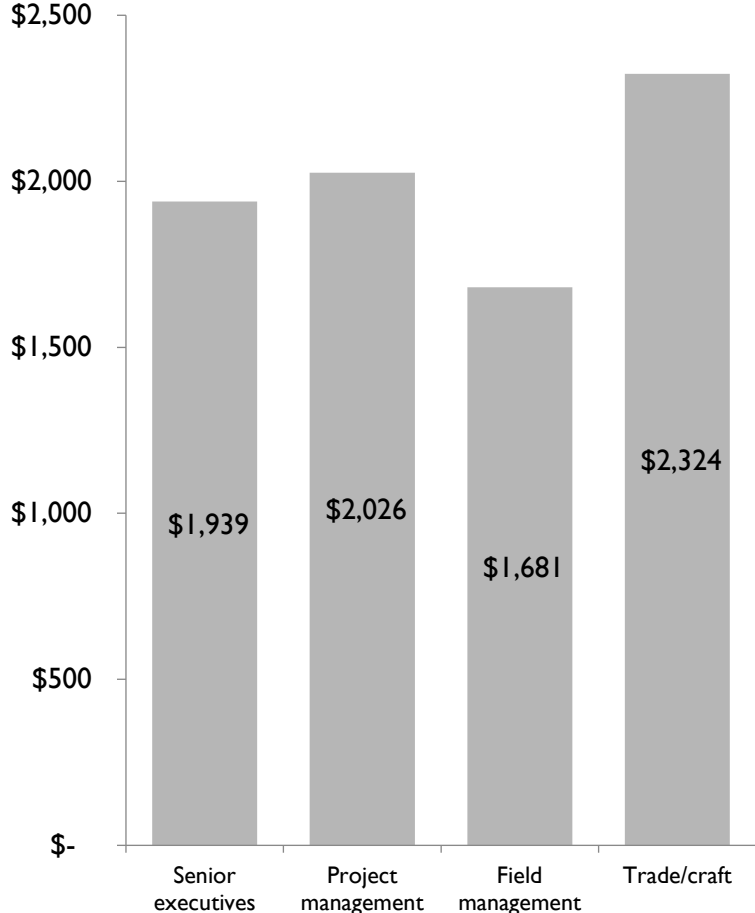
(n=489-669)

Source: FMI survey



In the United States, how much does your company or organization invest annually per person on training for each of the following employee groups? (n=270-366)

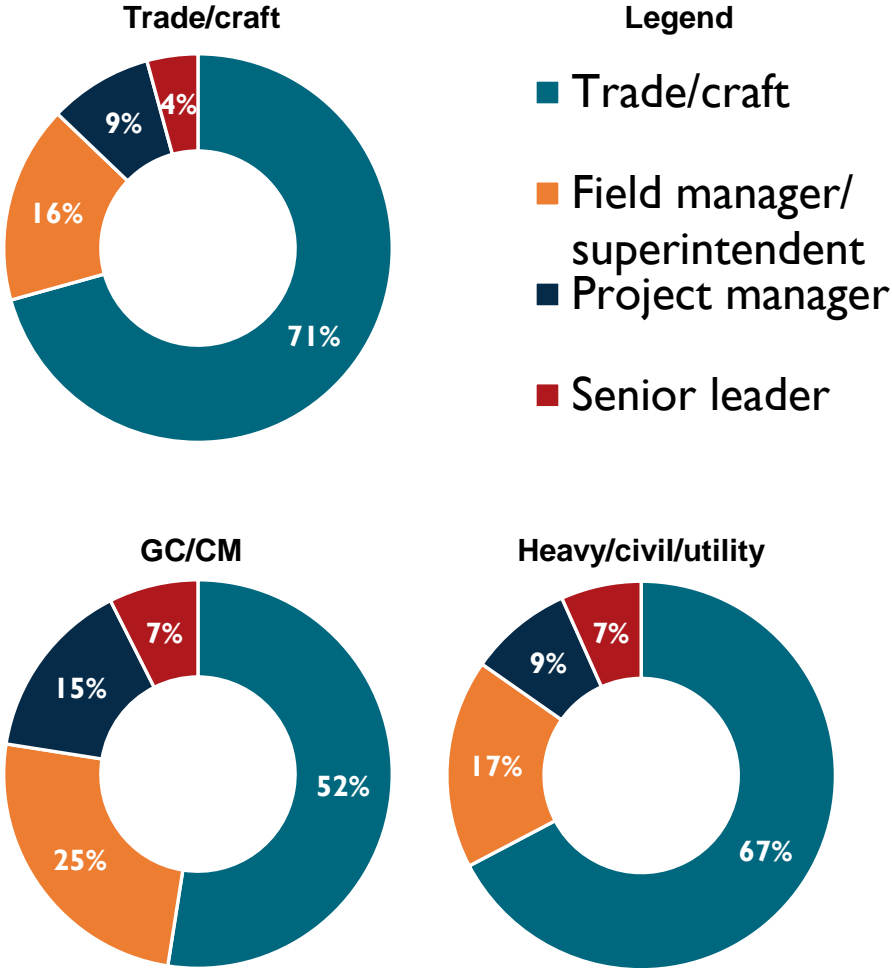
Source: FMI survey



Since 2018, contractors have shifted the focus of their workforce development program slightly (6%) from managers and leaders to trade/craft personnel.

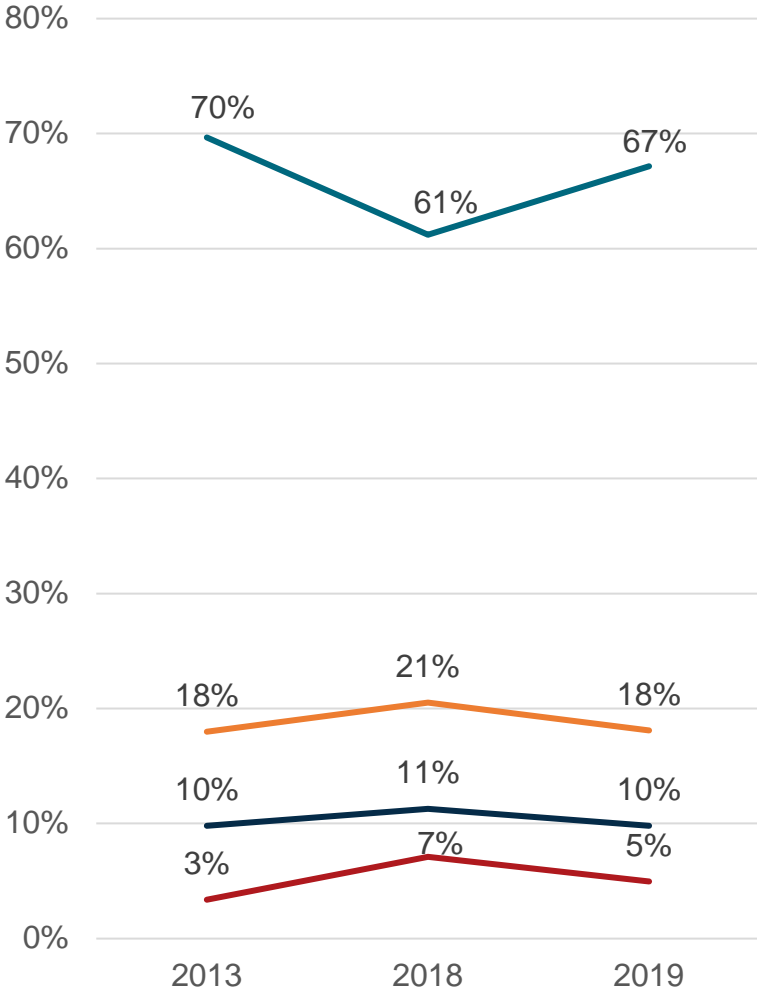
Personnel roles trained by contractor type

Source: FMI survey



Personnel roles trained by year

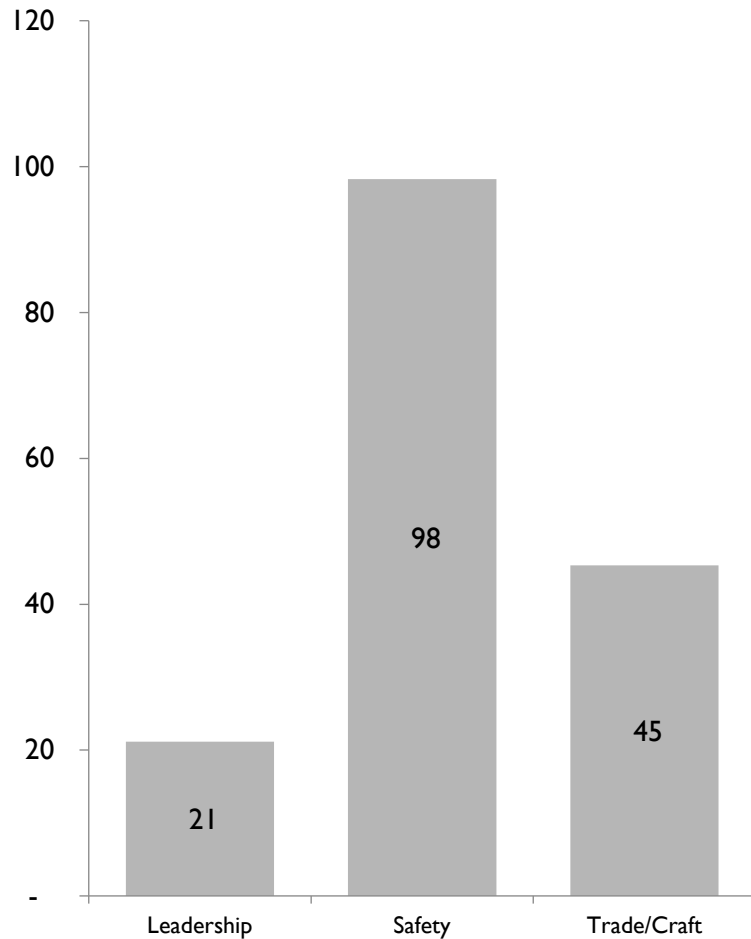
Source: FMI survey



On average, construction firms invest in safety education for 98 employees per year at an average per-person cost of \$1,147.

In the United States, how many personnel receive each of the following training types in a year? (n=406-519)

Source: FMI survey



In the United States, how much does your company or organization invest annually per person on training for each of the following types of training? (n=206-305)

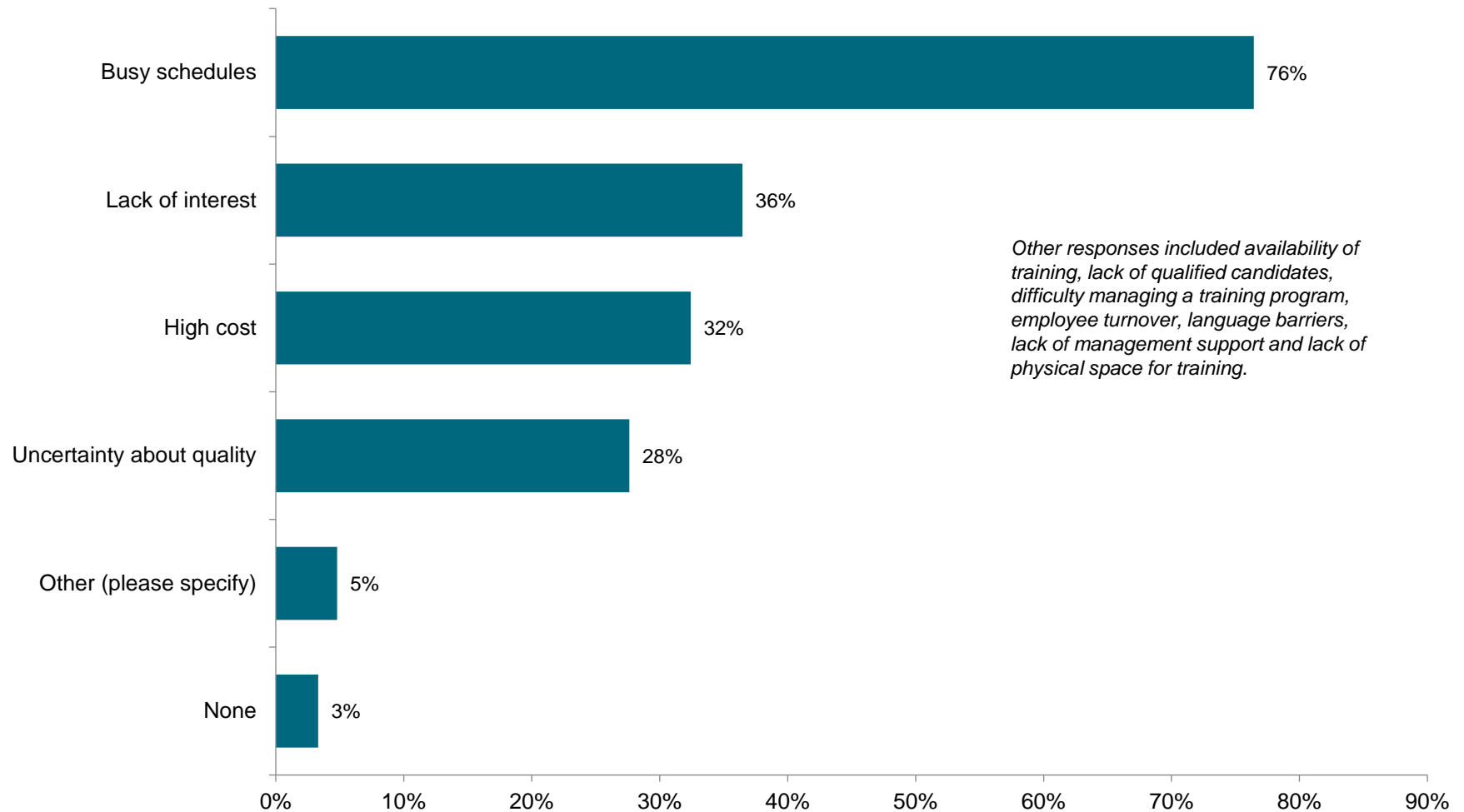
Source: FMI survey



More than three quarters (76%) cited busy schedules as the main obstacle to workforce development. As a result, contractors may continue to seek programs that are self-paced and available remotely.

Which of the following obstacles are limiting your ability to conduct staff training and development? (n=543)

Source: FMI survey





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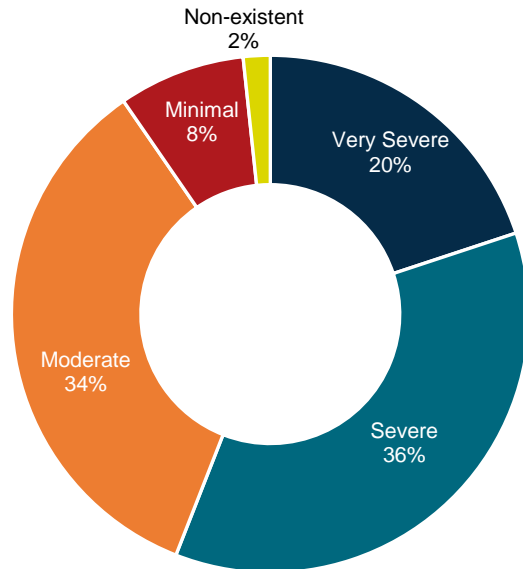


Development Practices

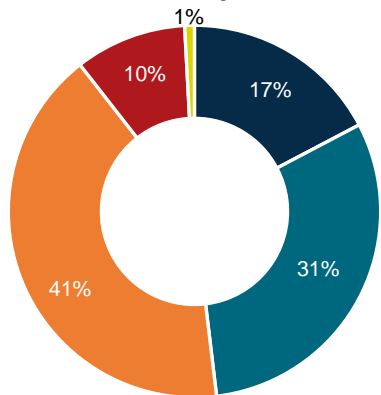
The percentage of contractors reporting a severe labor shortage declined 5% between 2018 and 2019, while those reporting a moderate labor shortage increased 4%.

How severe is the skilled labor shortage facing your company or organization? (n=833, % of responses)

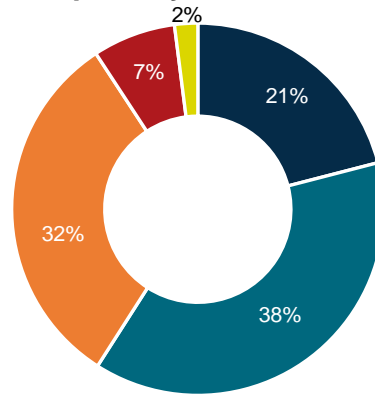
Source: FMI survey



GC/CM and Heavy/Civil/Utility

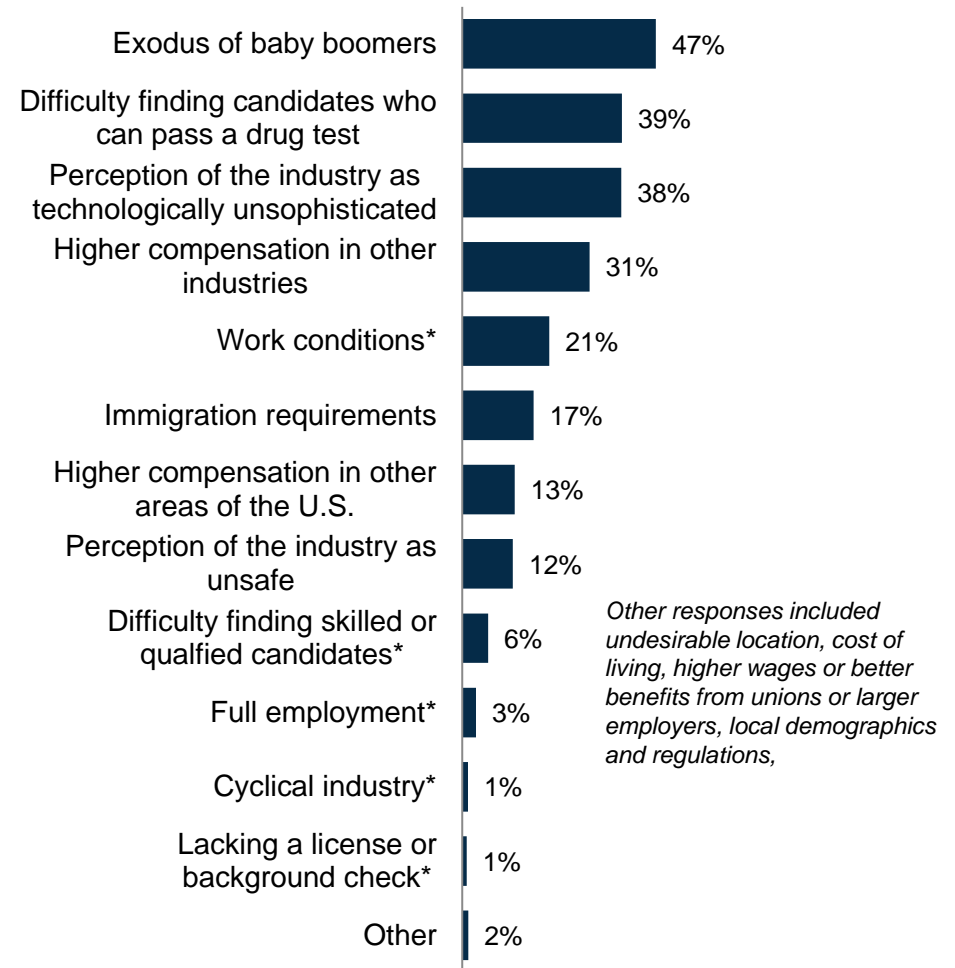


Specialty/Trade



Which of the following factors have increased the severity of the skilled labor shortage facing your company or organization? (n=717 % of respondents)

Source: FMI survey



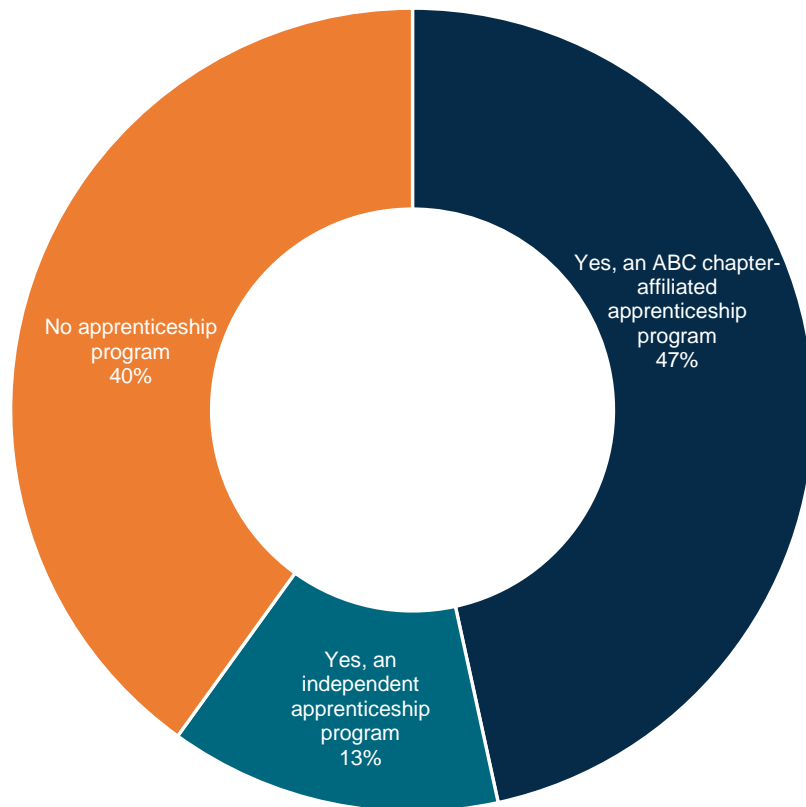
Note: Asterisk (*) indicates write-in response categories.

The use of independent apprenticeship programs increased from 11% in 2018 to 13% in 2019. Contractors with independent apprenticeship programs have an average 35 apprentices in their program.

Does your company have an apprenticeship program that is registered with the state or federal Department of Labor?

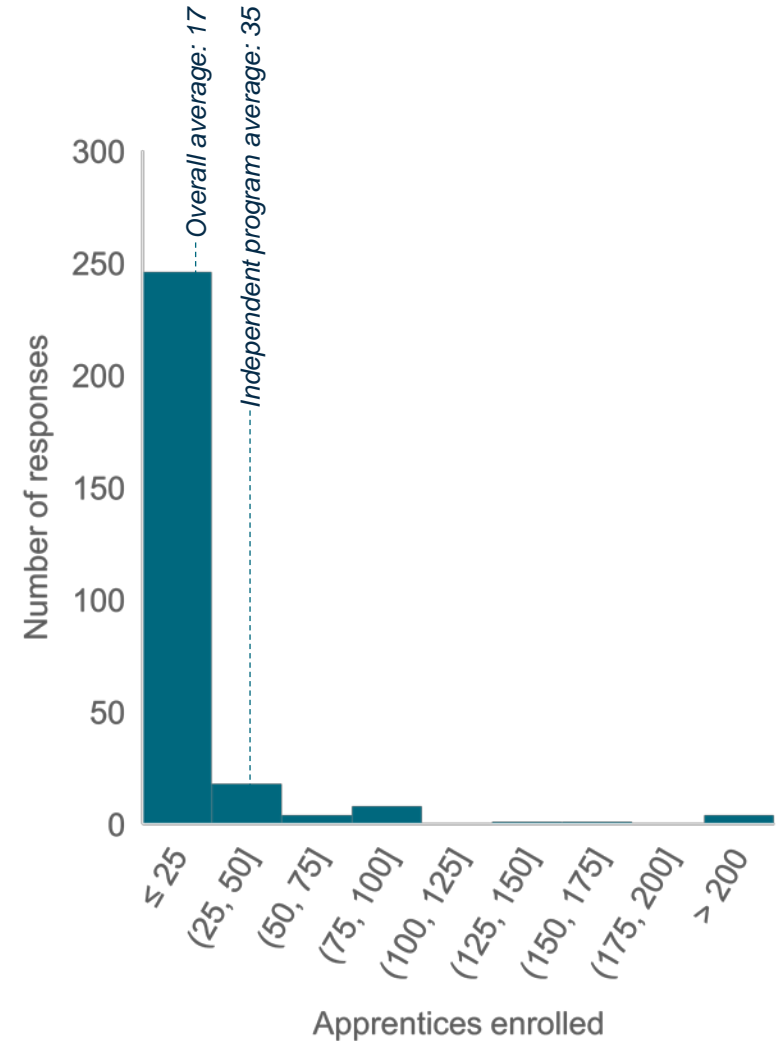
(n=614)

Source: FMI survey



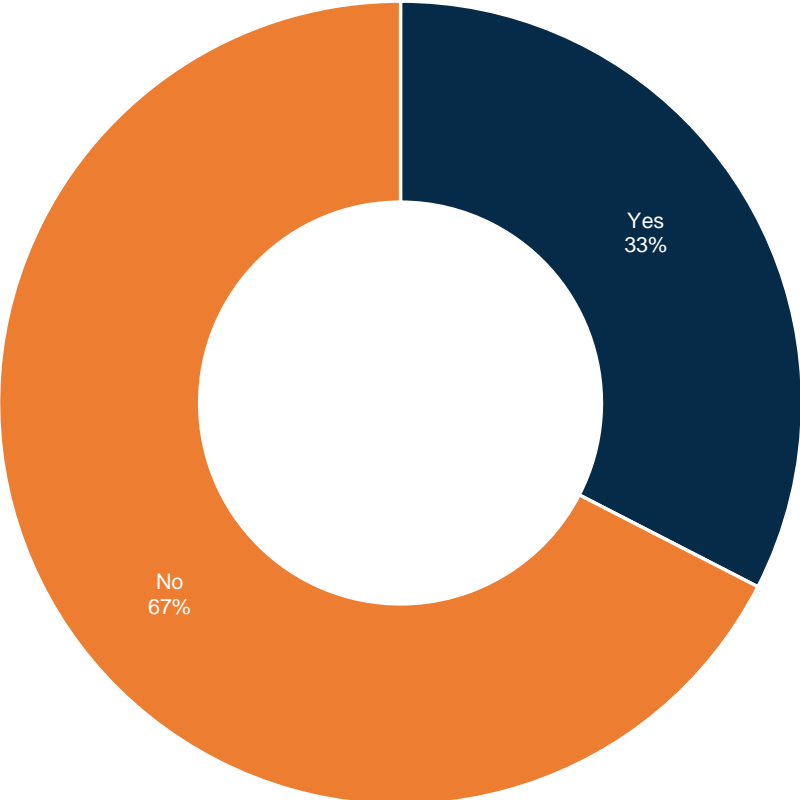
In the United States, how many apprentices or trainees are currently involved in your program? (n=416)

Source: FMI survey

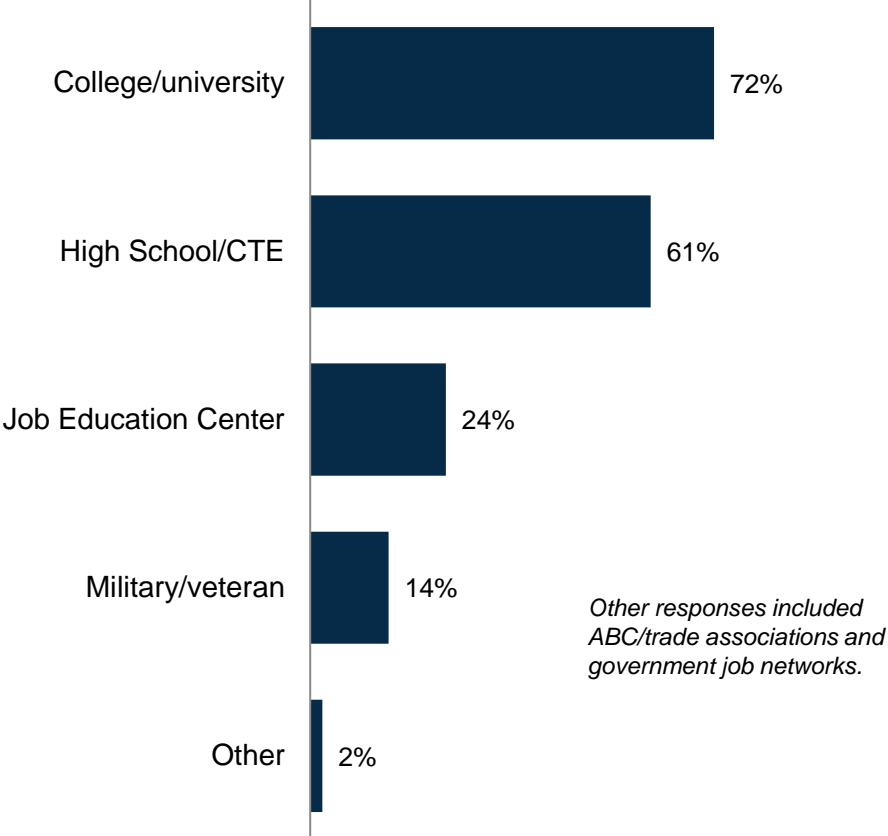


Approximately two-thirds (61%-72%) of contractors participating in internship programs partner with college/universities and high school/CTE institutions.

In the United States, does your company participate in internships programs? (n=602)
Source: FMI survey



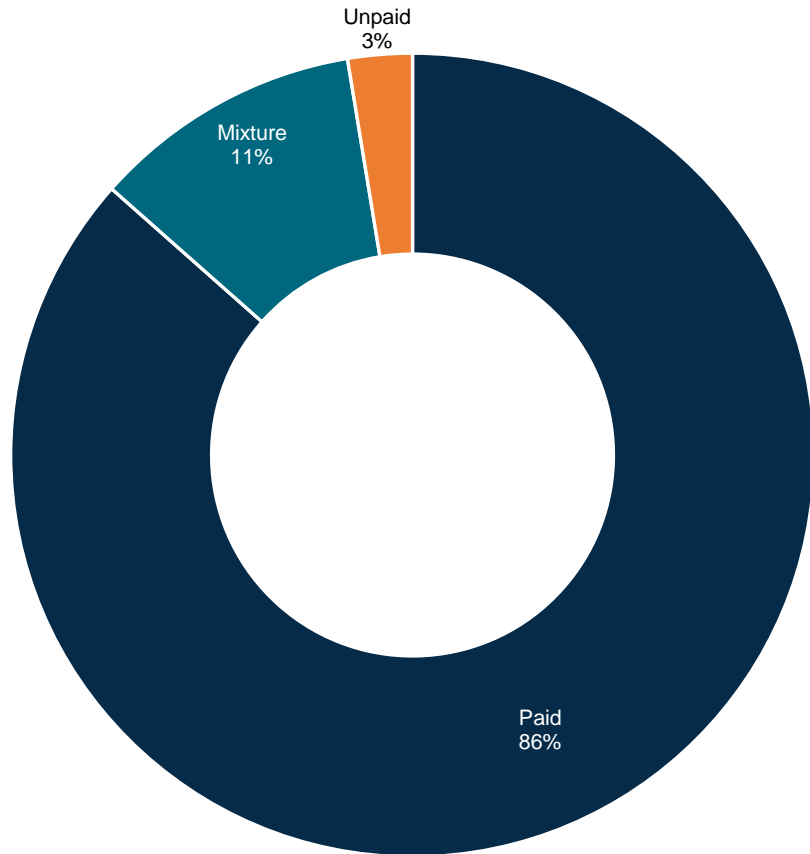
What types of entities do you partner with for your internship program? (n=185)
Source: FMI survey



More than two-thirds (69%) of contractors participating in internship programs provide internships for craft/trade job classifications.

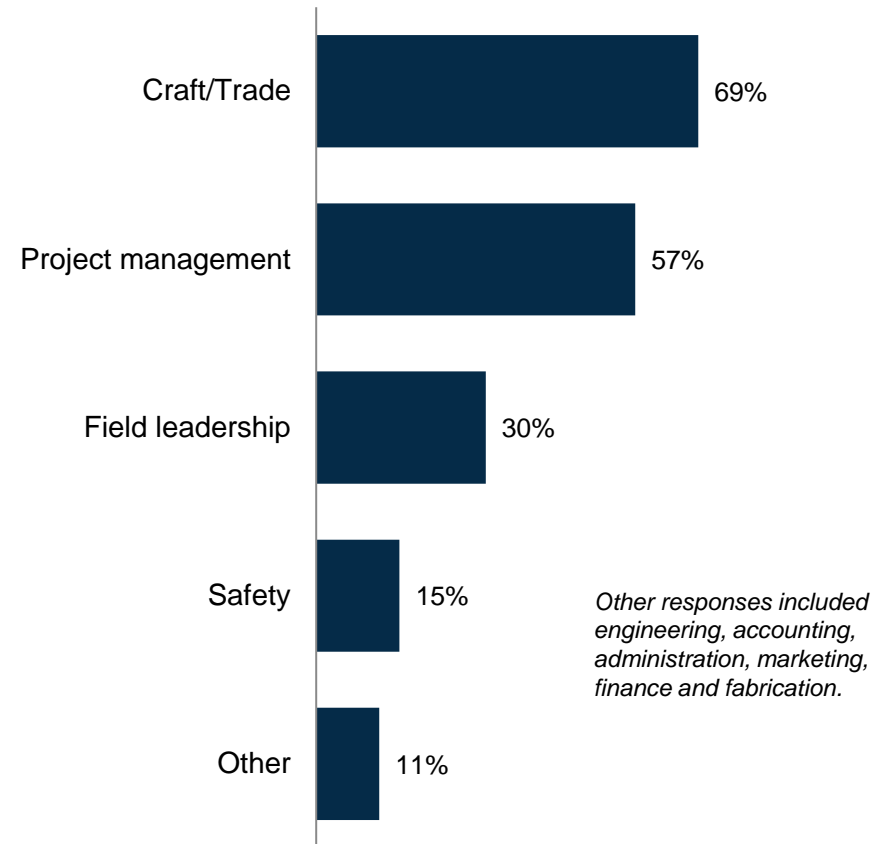
Are your interns paid or unpaid? (n=193)

Source: FMI survey



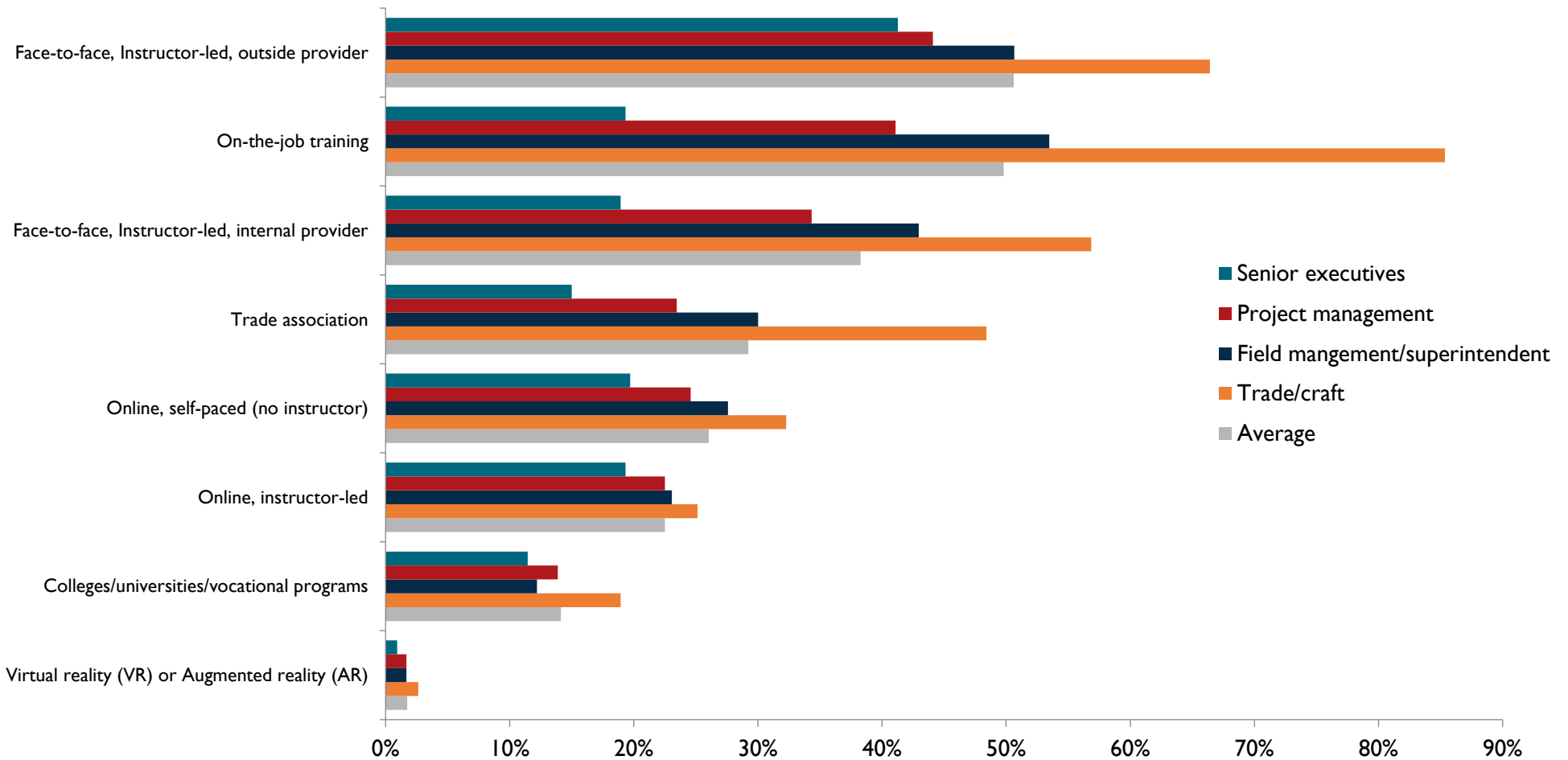
For which job classifications do you provide internships? (n=185)

Source: FMI survey



The use of externally provided face-to-face training for craft/trade personnel increased from 61% in 2018 to 66% in 2019.

Which of the following training methods do you use to train each type of employee? (n=533)
Source: FMI survey

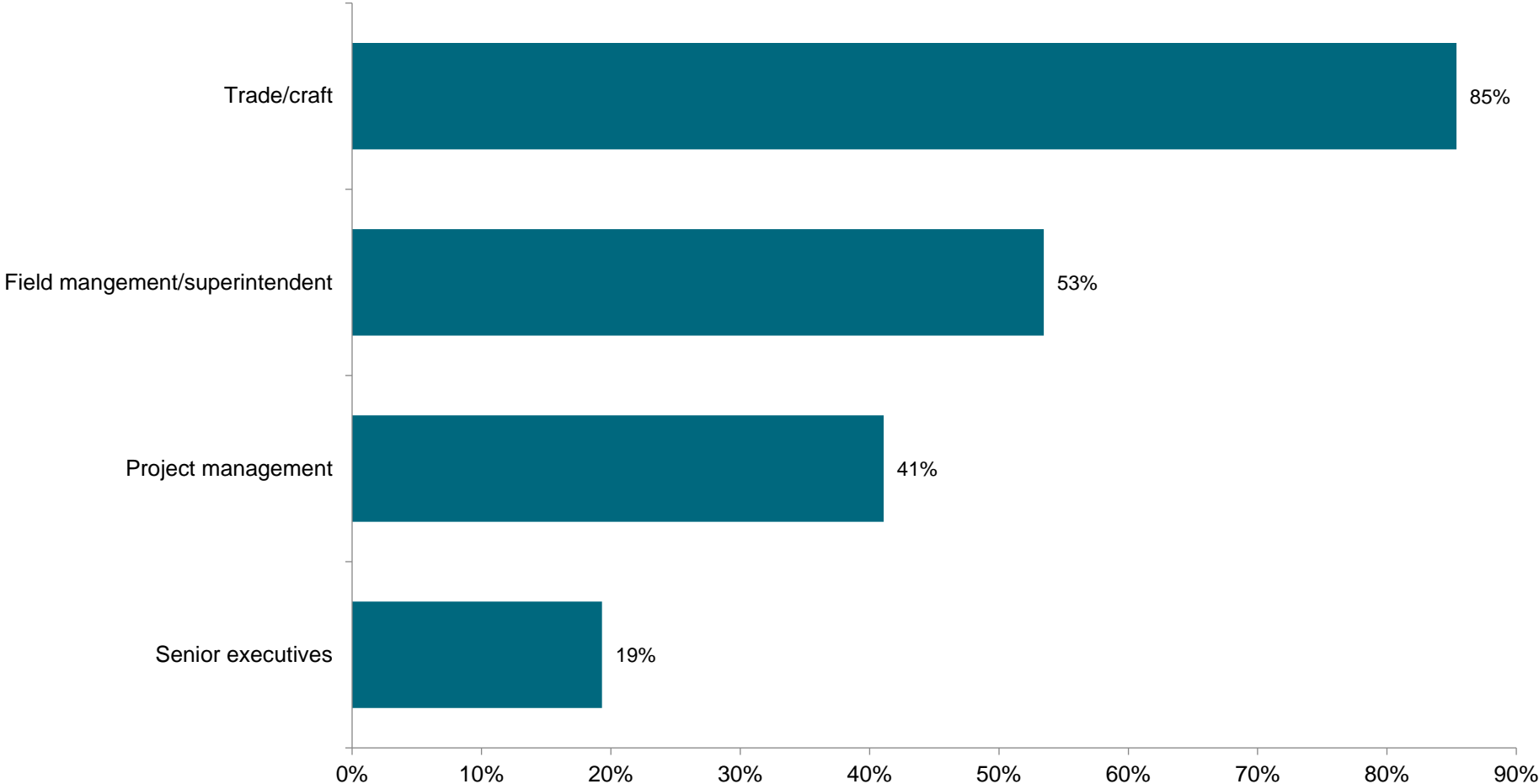


Note: Analysis limited to those respondents who selected at least one type of training. Methods sorted by average of all personnel types.

The vast majority (85%) of ABC member contractors use on-the-job training as part of their workforce development program for trade/craft employees.

Which of the following employee types (if any) receive on-the-job training? (n=533)

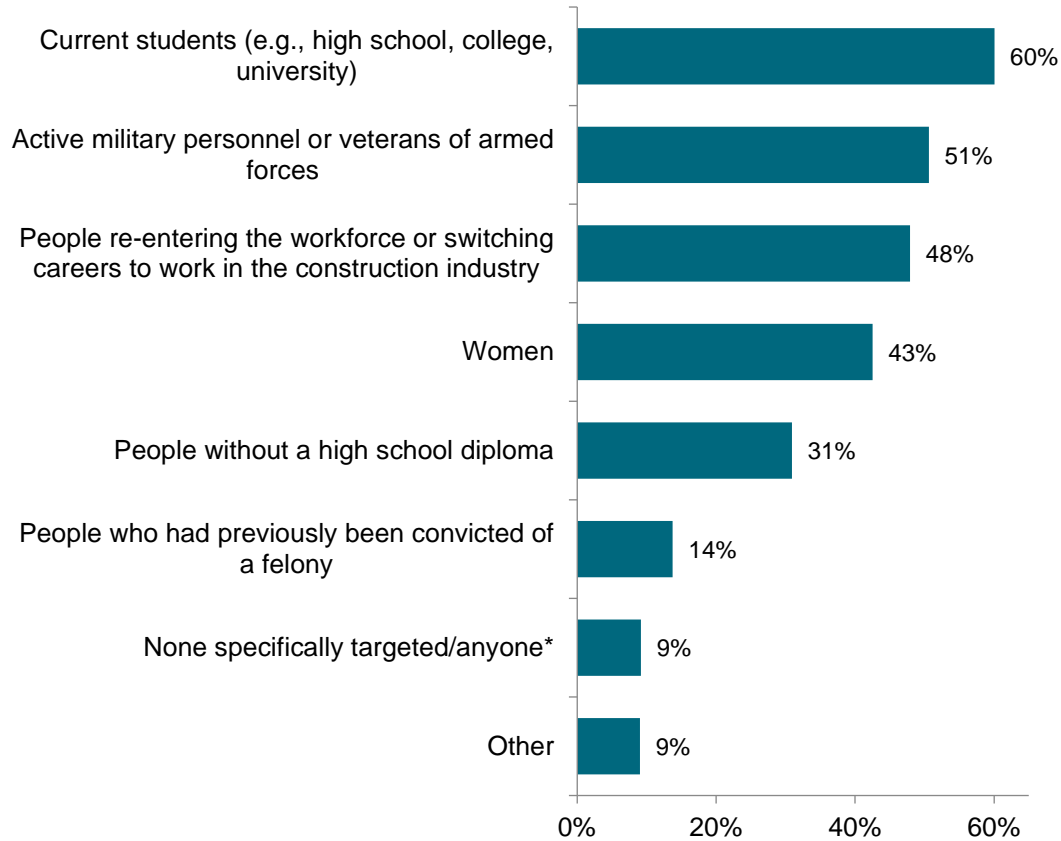
Source: FMI survey



Women make up an average of 16% of ABC members' management/supervisory employees and 13% of ABC members' craft/trade employees.

Which of the following groups of people has your firm targeted for recruitment and/or training? (n=741)

Source: FMI survey



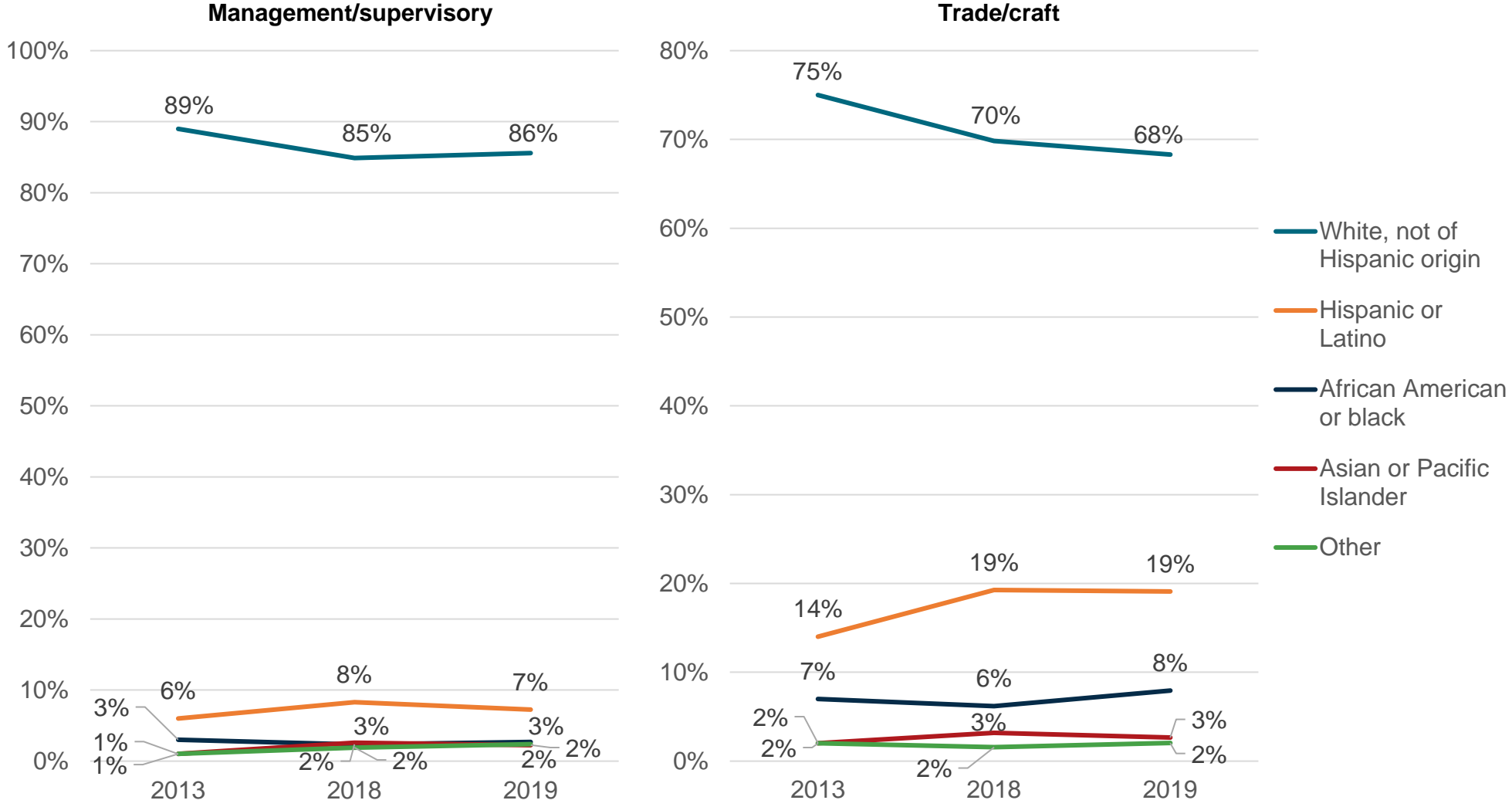
"Other" responses emphasized current employees, those with skills or college educations, young people, union members, apprentices, racial minorities and the disabled.

	Women	Military
Percentage targeting group for recruitment	43%	51%
Percentage of management/supervisory employees (average)	16%	7%
Percentage of trade/craft employees (average)	13%	9%
Percentage of leadership training participants (median)	10%	10%
Percentage of safety training participants (median)	11%	17%
Percentage of trade/craft training participants (median)	8%	15%

Note: Asterisk (*) indicates write-in response categories.

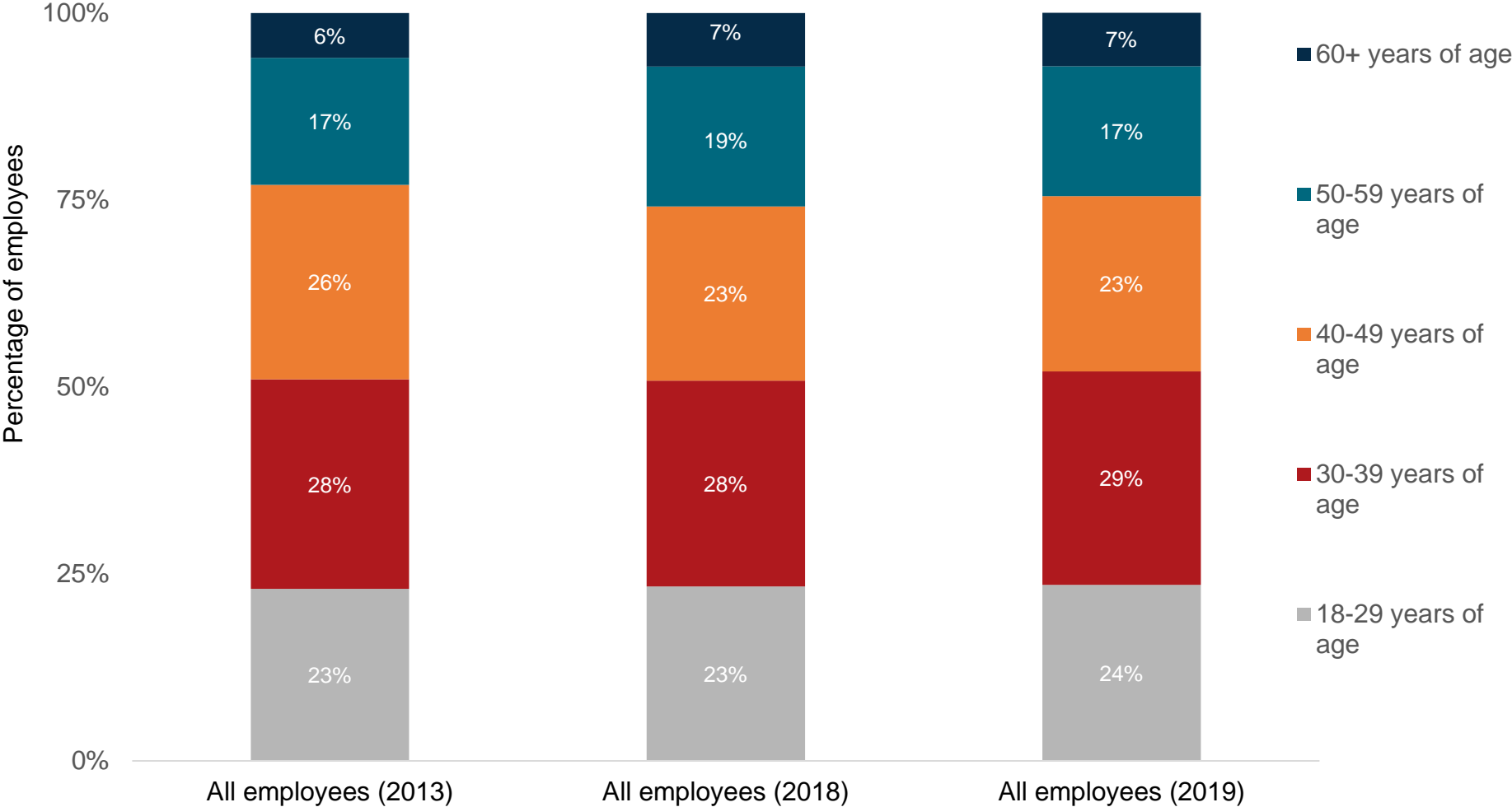
Since 2013, the percentage of trade/craft employees that are white (not of Hispanic origin) declined from 75% to 68%.

In your company, what percentage of employees are of the following race/ethnic groups? (n=773-775)
 Source: FMI



A 2% increase in the share of employees under 40 years of age suggests the industry is accelerating efforts to deal with the demographic transition necessitated by the retirement of baby boomers.

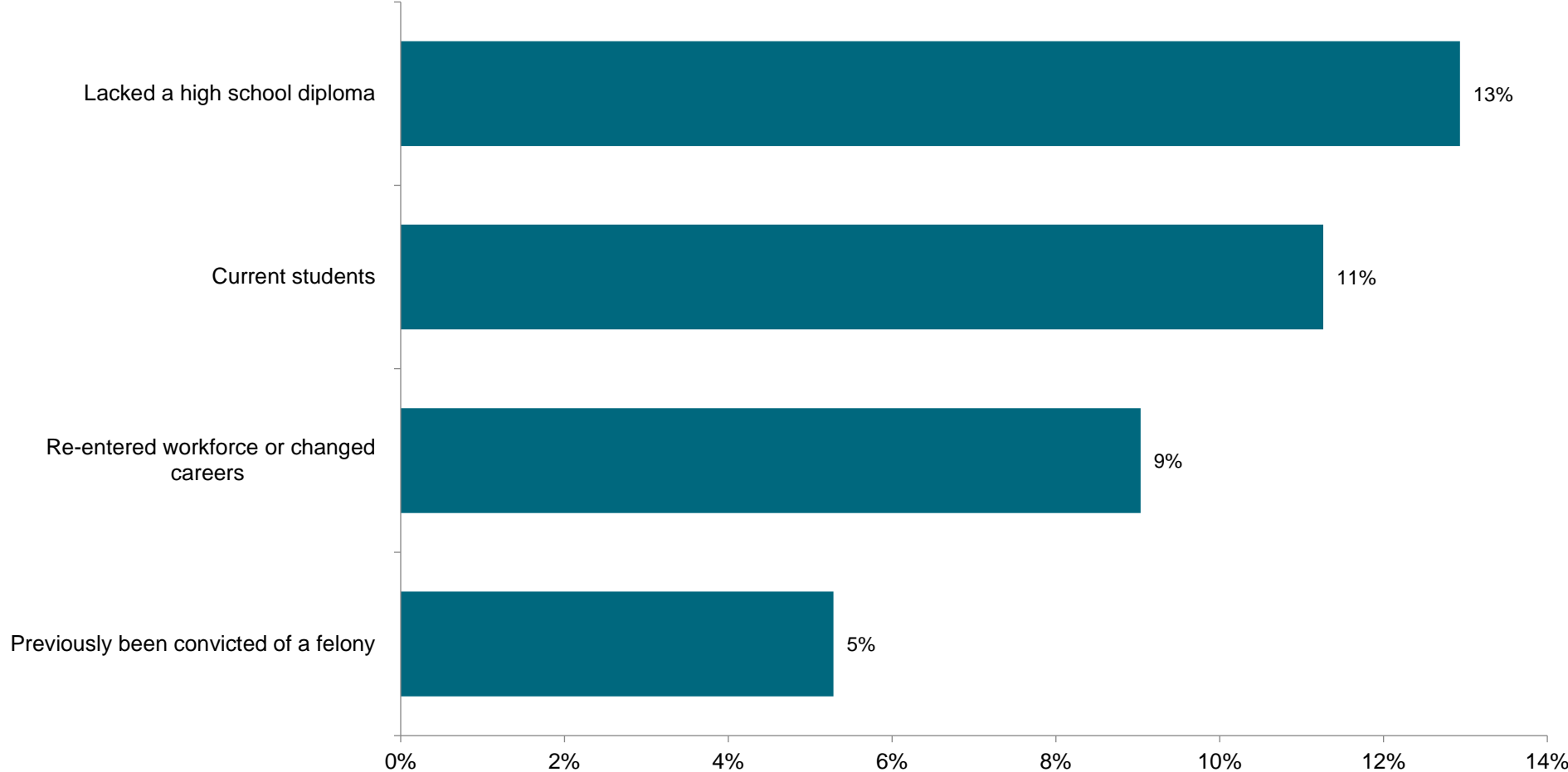
In your company, what percentage of your company's workforce falls into the following age groups? (n=811)
Source: FMI



Nearly one-quarter (24%) of U.S. personnel receiving education in the past year lacked a high school diploma or were current students.

What percentage of U.S. personnel trained in the past year meet the following criteria? (n=454-504)

Source: FMI





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Appendix



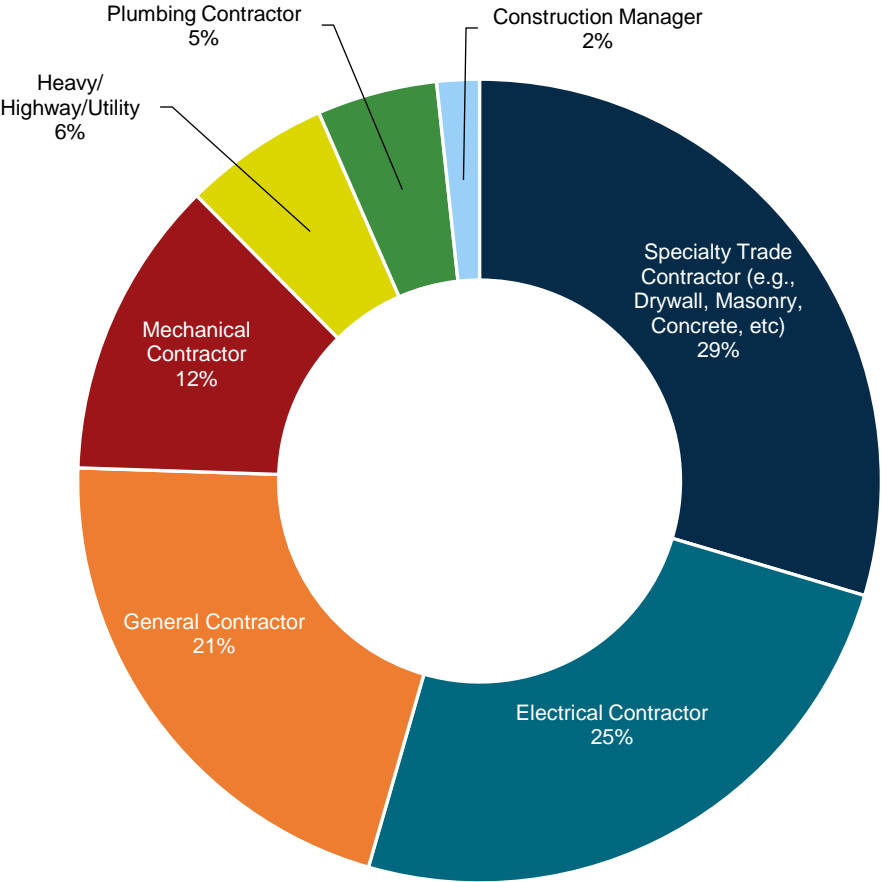
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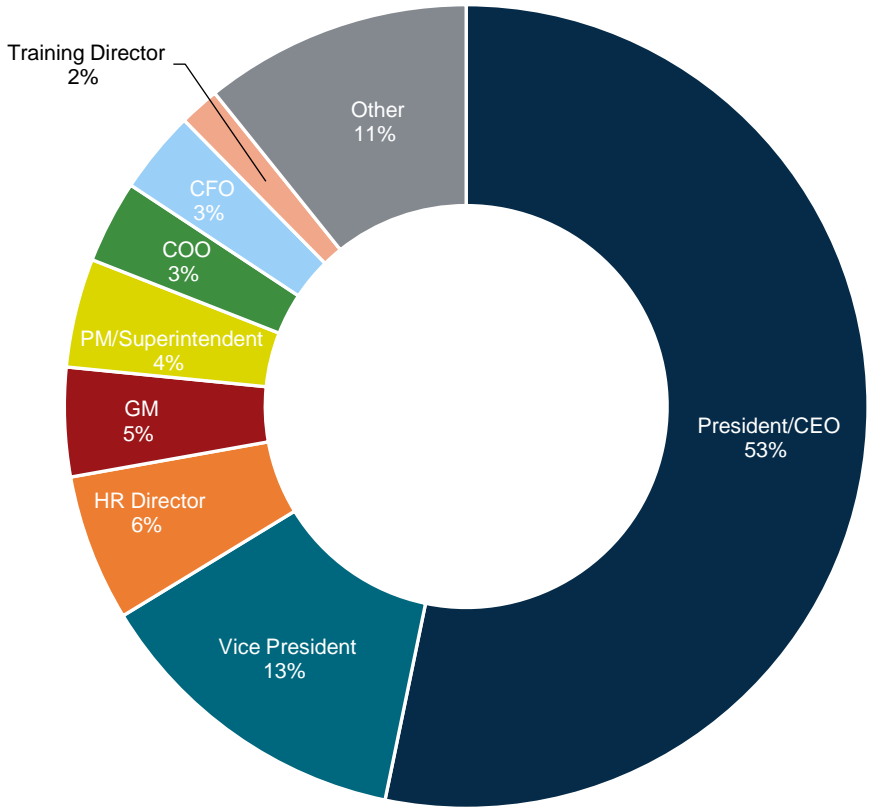
Contractor Survey Demographics

Trade contractors (e.g., electrical, mechanical, plumbing or other specialty) accounted for 71% of survey respondents.

Which of the following best describes your company or organization? (n=1,054)
Source: FMI survey



Which of the following best describes your role? (n=1,054)
Source: FMI survey

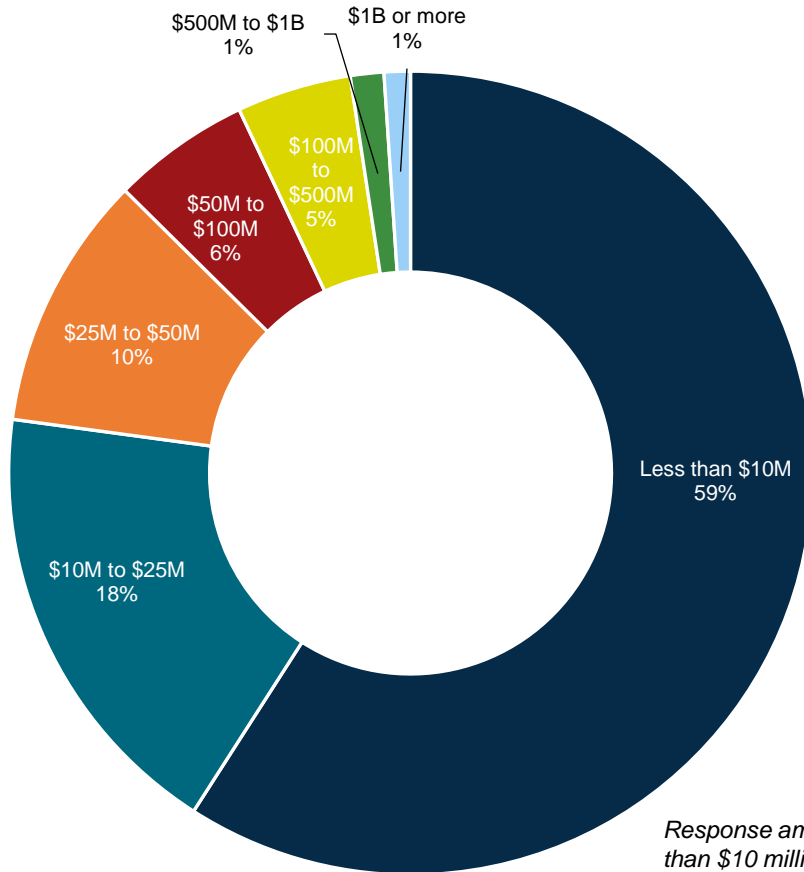


Other includes Admin/Office Manager, BD/Sales, Finance/Accounting/Compliance, Marketing/PR, Preconstruction/Estimating/Scheduling, Safety/Training/Recruitment

Approximately two-thirds (59%-63%) of the survey sample is from firms with less than \$10 million or employing fewer than 50 people.

Which of the following best describes your company's annual construction revenue? (n=1,041)

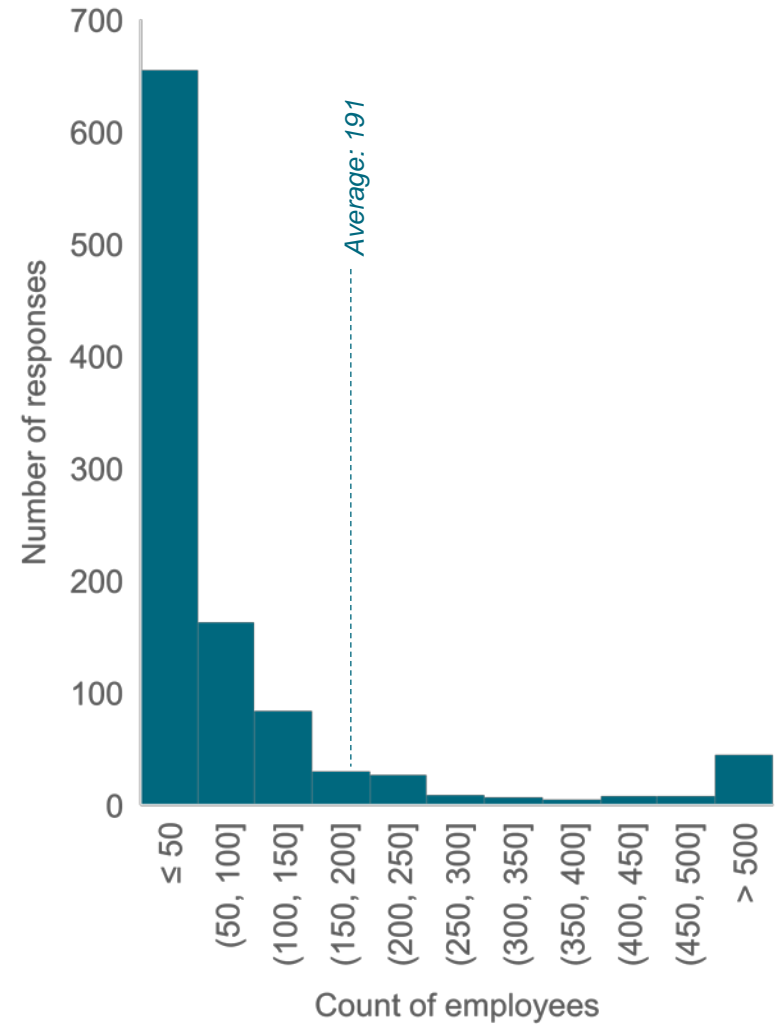
Source: FMI survey



Response among contractors with less than \$10 million in revenue was up compared to 2013, when they accounted for 42% of the sample.

How many people are employed (both craft and salary) by your company at its seasonal peak? (n=1,041)

Source: FMI survey





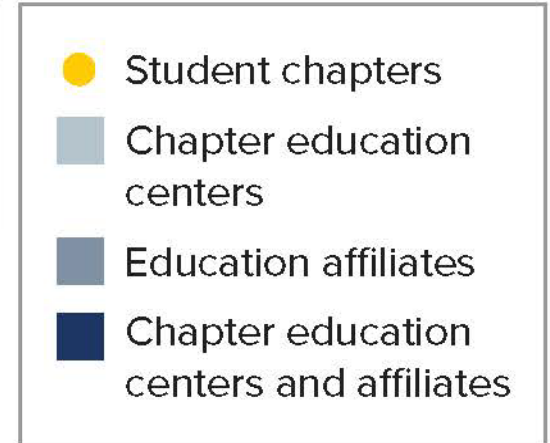
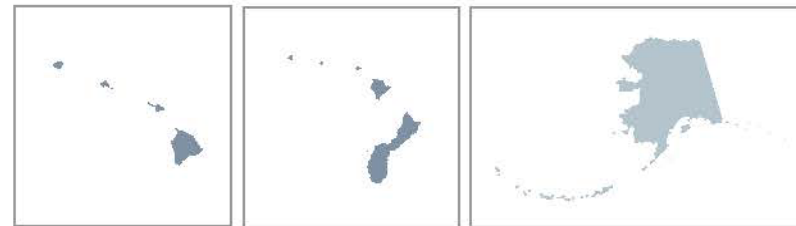
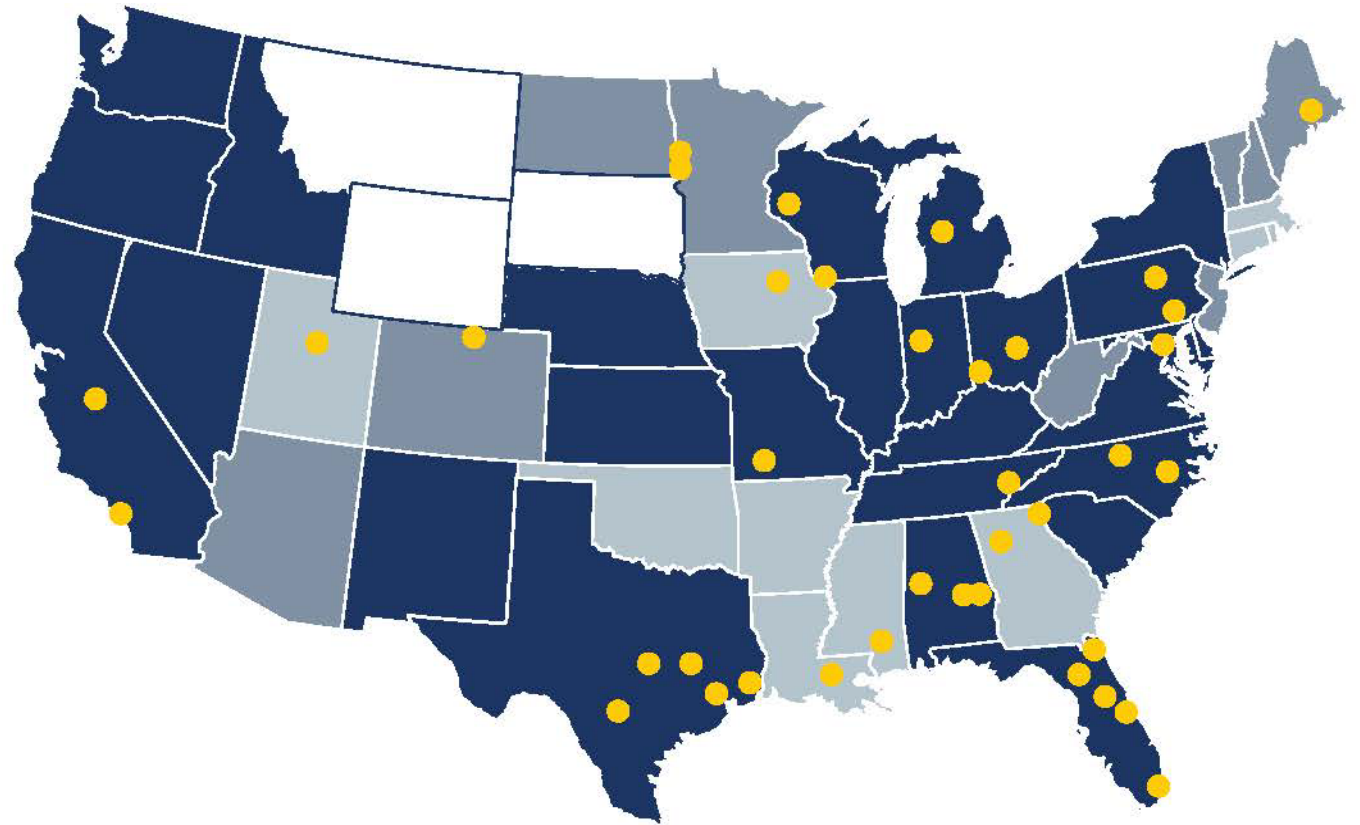
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ABC Chapters

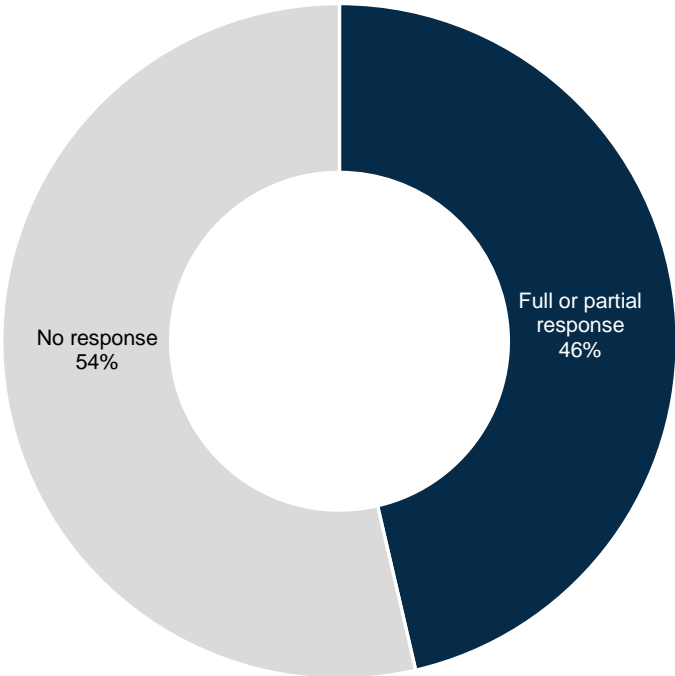
ABC has 69 chapters across the United States.

- ABC chapter responses are representative of their education programs and not their member companies.
- ABC's 69 chapters offer 800 apprenticeship, craft, safety and construction management education programs across the country.

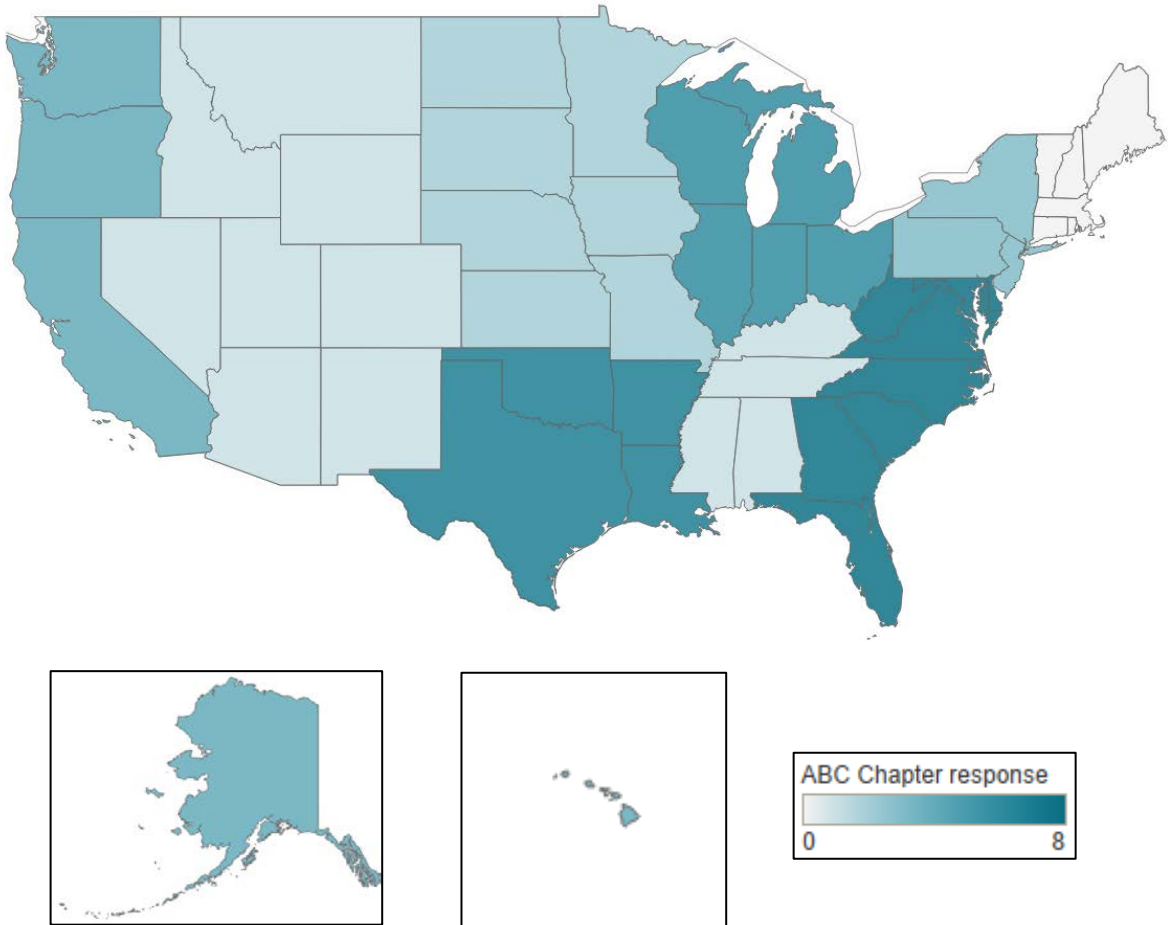


The South Atlantic and West South Central regions provided the greatest number of ABC chapter responses.

ABC Chapter response (n=69)
Source: FMI



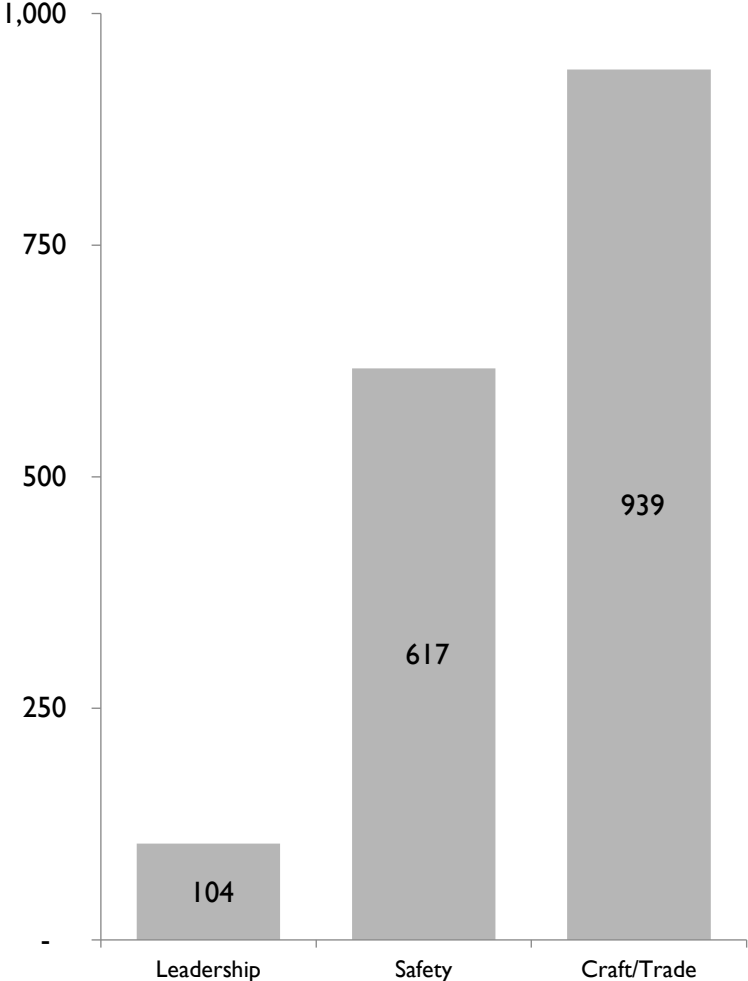
ABC Chapter response by census region (n=32)
Source: FMI



Three-quarters (75%) of personnel receiving workforce development and education from ABC chapters are craft/trade personnel.

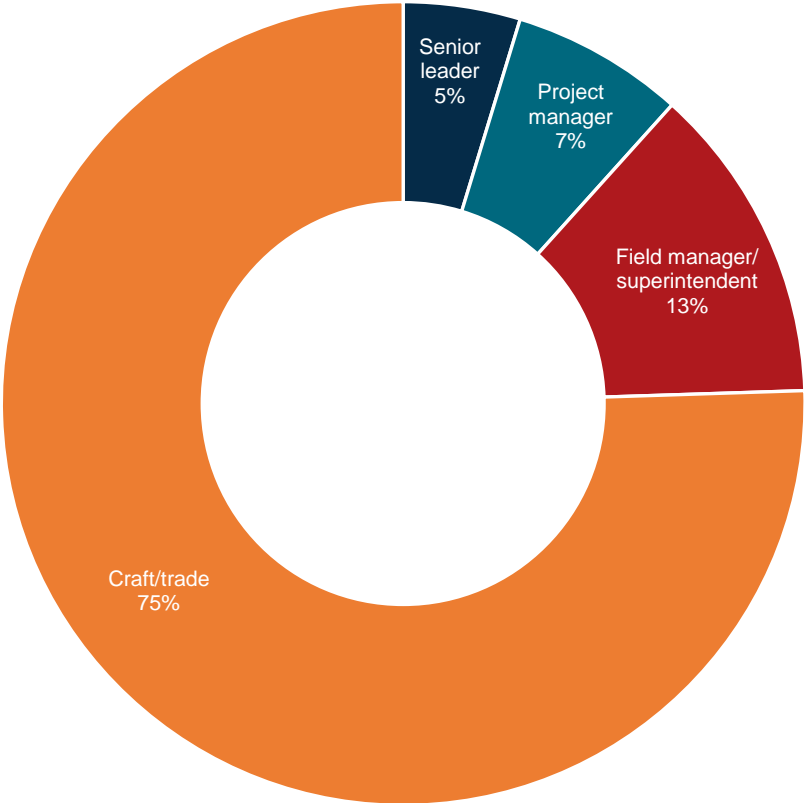
Personnel trained by training type (n=24)

Source: FMI



Personnel trained by role (n=26)

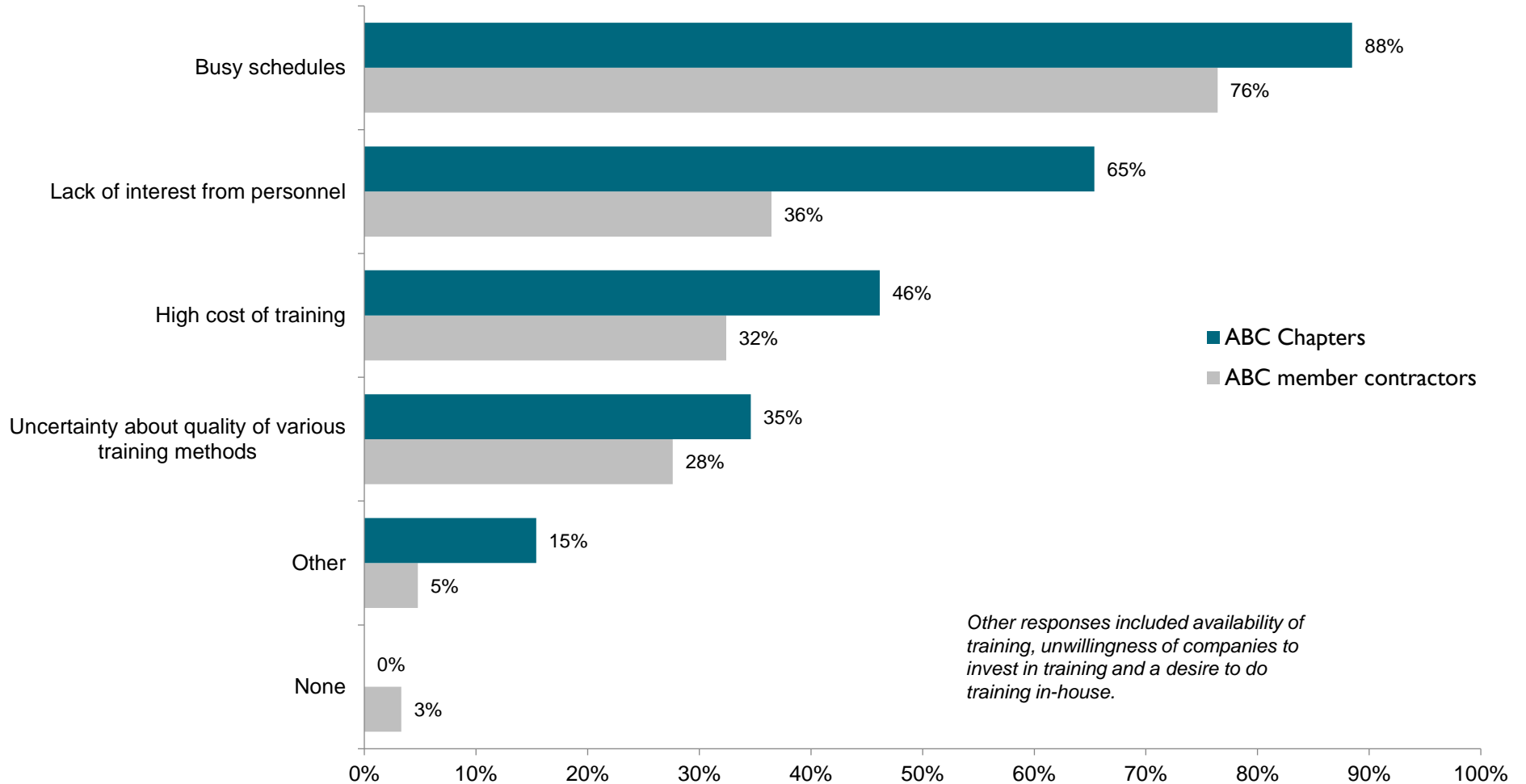
Source: FMI



Compared to contractors, ABC chapters perceive lack of interest to be a more significant obstacle to workforce development.

Which of the following obstacles are limiting your ability to conduct staff training and development? (n=32)

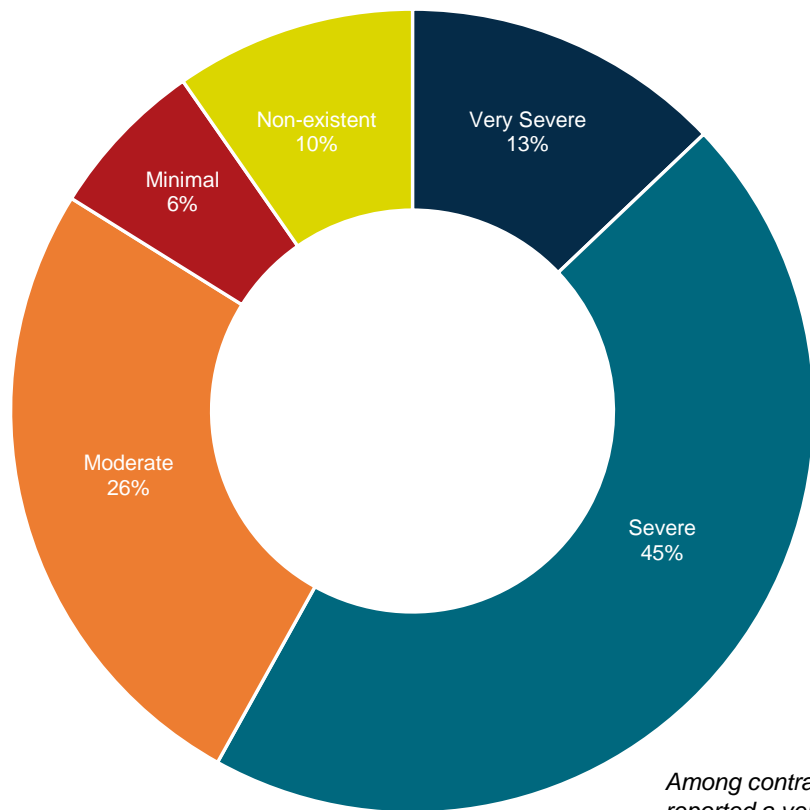
Source: FMI



While the proportion of ABC chapters characterizing the labor shortage as “very severe” fell 21% since 2018, more are reporting issues related to the exodus of baby boomers (3% increase) and drug use (12% increase).

How severe is the skilled labor shortage facing your company or organization? (n=31, % of responses)

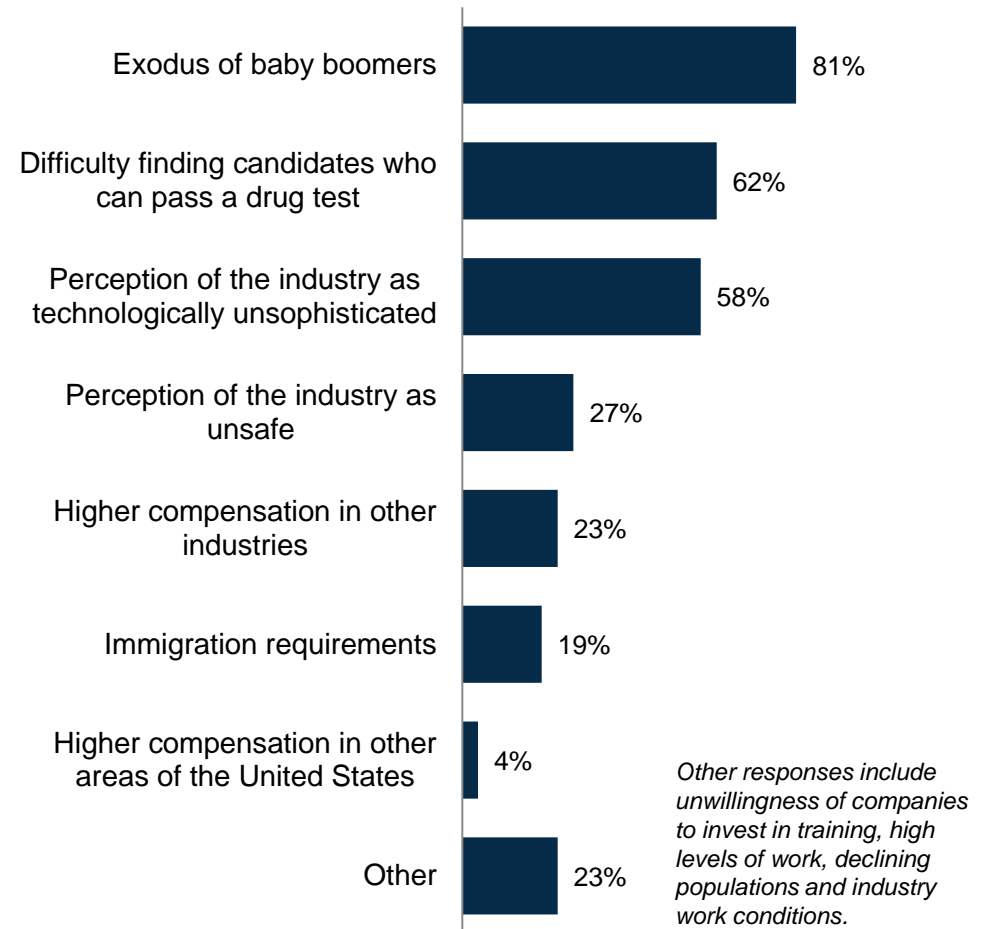
Source: FMI



Among contractors, 20% reported a very severe skilled labor shortage.

Which of the following factors have increased the severity of the skilled labor shortage facing your company or organization? (n=32 % of respondents)

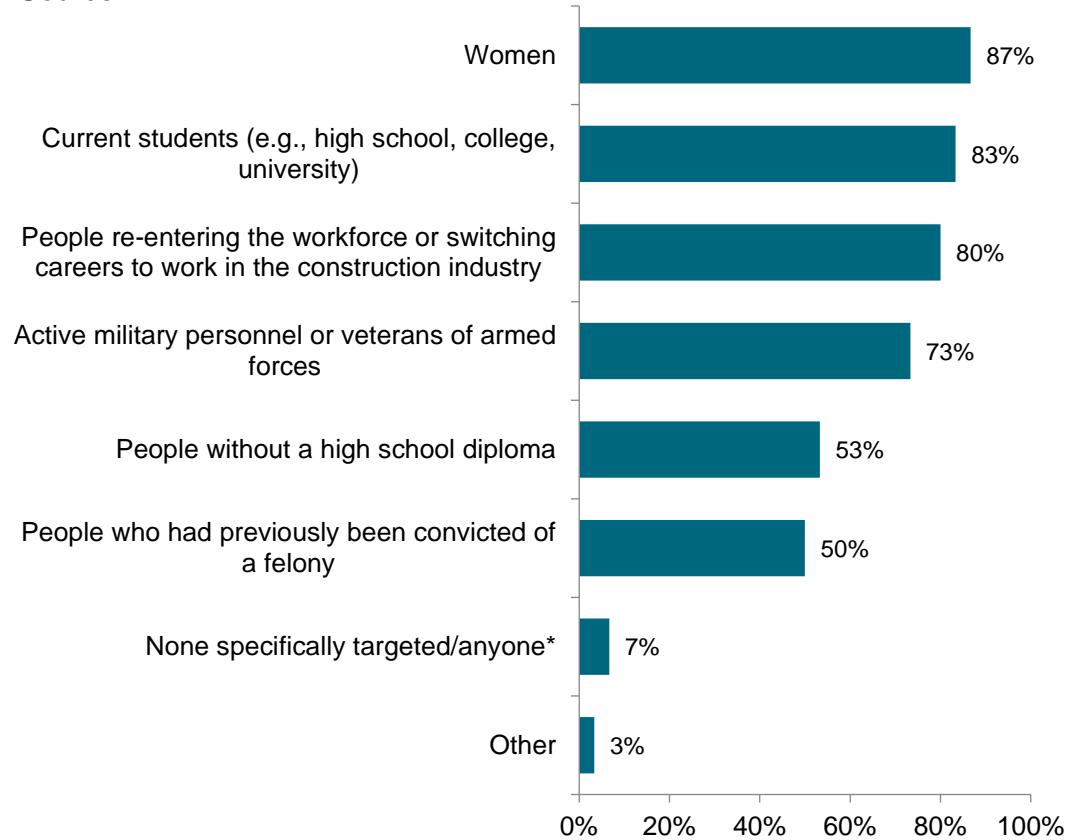
Source: FMI



The high priority placed on recruiting women by ABC chapters resulted in a rate of women in leadership training nearly triple that of contractors.

Which of the following groups of people has your firm targeted for recruitment and/or training? (n=30)

Source: FMI



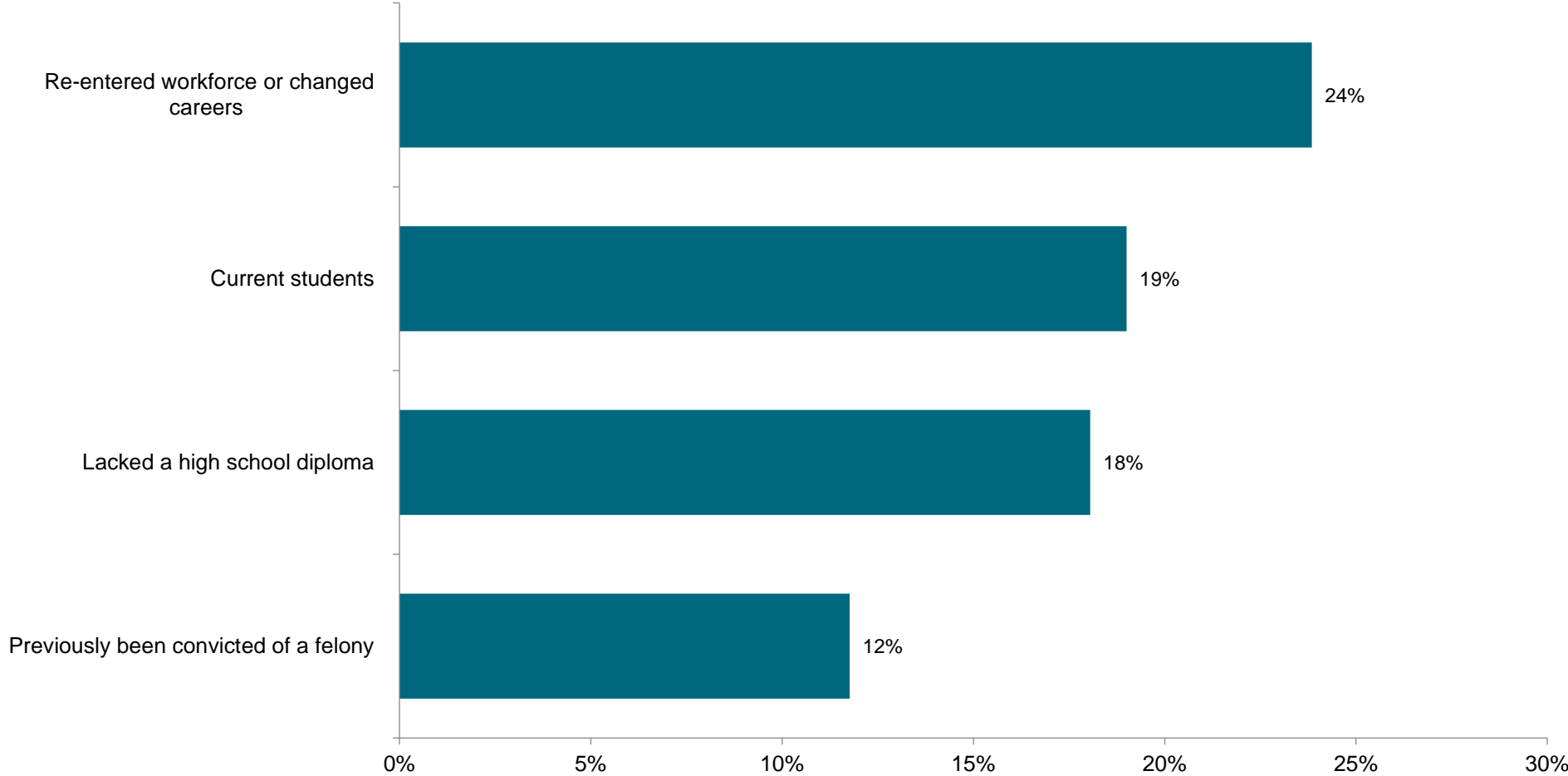
"Other" responses included skilled workers.

	Women	Military
Percentage targeting group for recruitment	87%	73%
Percentage of leadership training participants (average)	27%	NA
Percentage of safety training participants (average)	26%	NA
Percentage of trade/craft training participants (average)	14%	NA

Note: Asterisk (*) indicates write-in response categories. Information regarding veteran/military status for leadership, safety and trade/craft training not available.

With nearly a quarter (24%) of all course attendees re-entering the workforce or having changed careers, ABC chapters are critical to integrating people into the construction industry.

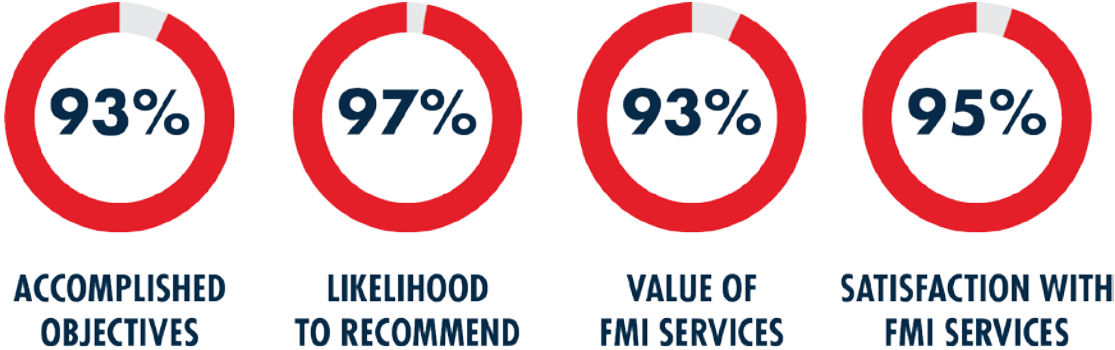
What percentage of U.S. personnel trained in the past year meet the following criteria? (n=17-19)
Source: FMI



QUALITY ASSURANCE

For over 65 years, FMI has been the leading management consulting and investment banking firm dedicated exclusively to engineering and construction, infrastructure and the built environment. It is the goal of everyone at FMI to improve the quality and depth of our client relationships and to create loyal, enduring relationships. We are committed to the success of our clients. We stake our reputation on it every day. That is why we constantly monitor what our clients think of our services and the professionals delivering our services. For over two decades, FMI has conducted client evaluations to assure that our services meet the needs of our clients, achieve the results proposed and deliver high value in a professional and effective manner. Upon completion of this engagement, we will ask you to provide us with a written evaluation of our work.

Summary of our client feedback:





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