

Delivering Safety and Health Training During the COVID-19 Pandemic

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RAPID TRANSITION TO DISTANCE LEARNING

March 2020 COVID-19 was
Declared a Pandemic

Immediate Need for Worker
Training on COVID-19

Designing and Delivering
Training in REAL TIME

Transition to Health and Safety
Training using Distance Learning

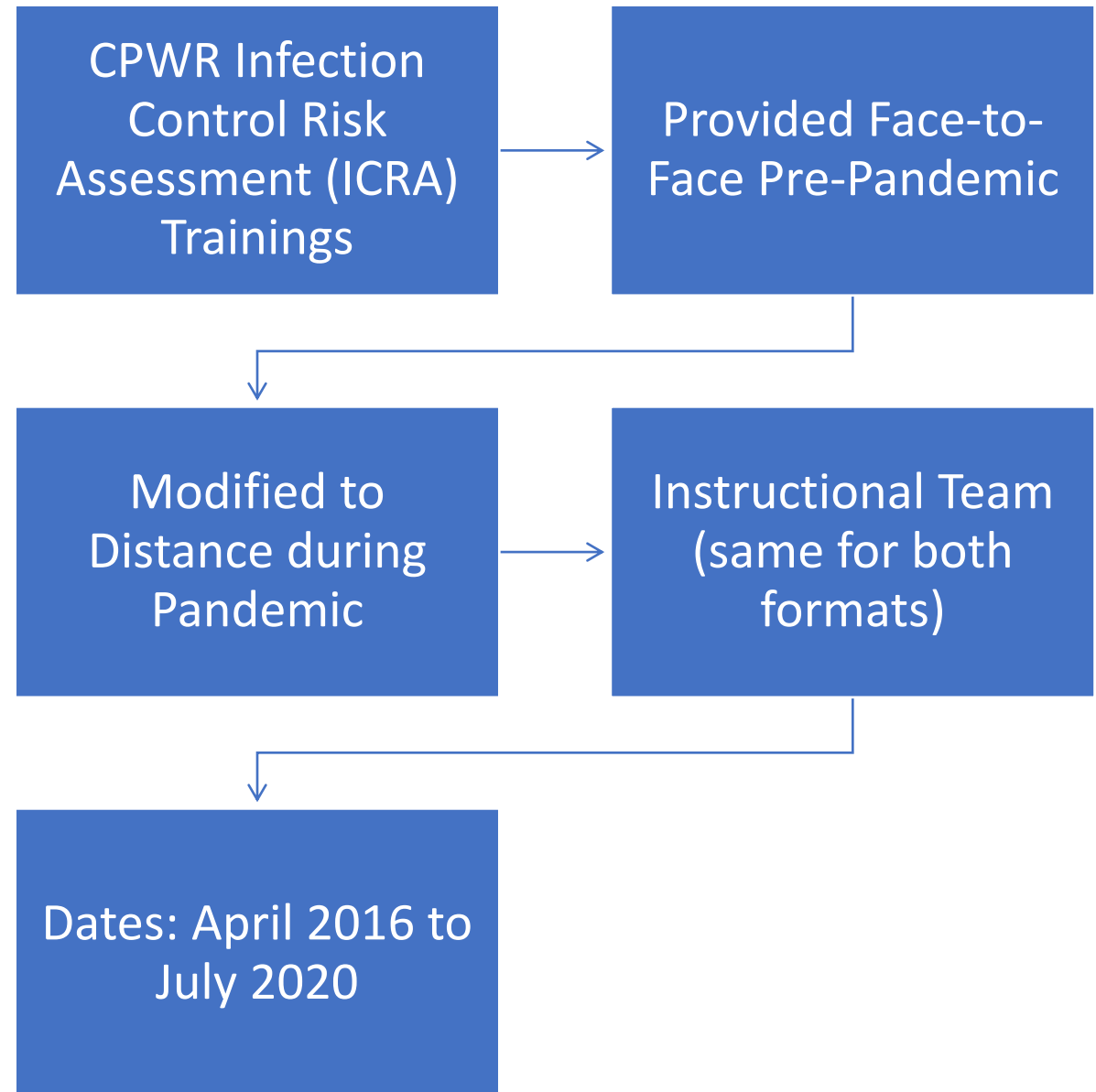


Evaluating Effectiveness of Worker Health and Safety Training

- Comparisons of Face-to-face versus Distance Learning Format on Training Outcomes
- Effectiveness of Health and Safety Training Designed During Pandemic to Meet Emerging Safety Needs
- Best Practices/Lessons Learned
- Tips and Tools for Trainers
- Next Steps for Distance Learning in Health and Safety Training



Courses Selected for Comparisons



Infection Control Risk Assessment (ICRA) Awareness Courses

- ICRA Awareness course prepares workers to perform construction, renovation, maintenance and demolition activities in healthcare facilities
- Involves active learner participation: case studies, lectures with discussion, demonstrations and hands-on activities to engage learners
- Pre-pandemic: 8-hour (Face-to-face)
- During pandemic: Revised to 6-hour that includes 1-hour COVID-19 and the Construction Industry Awareness Training (On-line)

Study 1

Face-to-Face

vs

Distance Learning
for Health and Safety
Training

Evaluation of ICRA Awareness Courses

CPWR Training Course Evaluation (26 items)

Immediately following training

Effectiveness

- Instructor(s)
- Teaching Methods/Materials
- Overall

Learning

- Training-related Knowledge/Skills

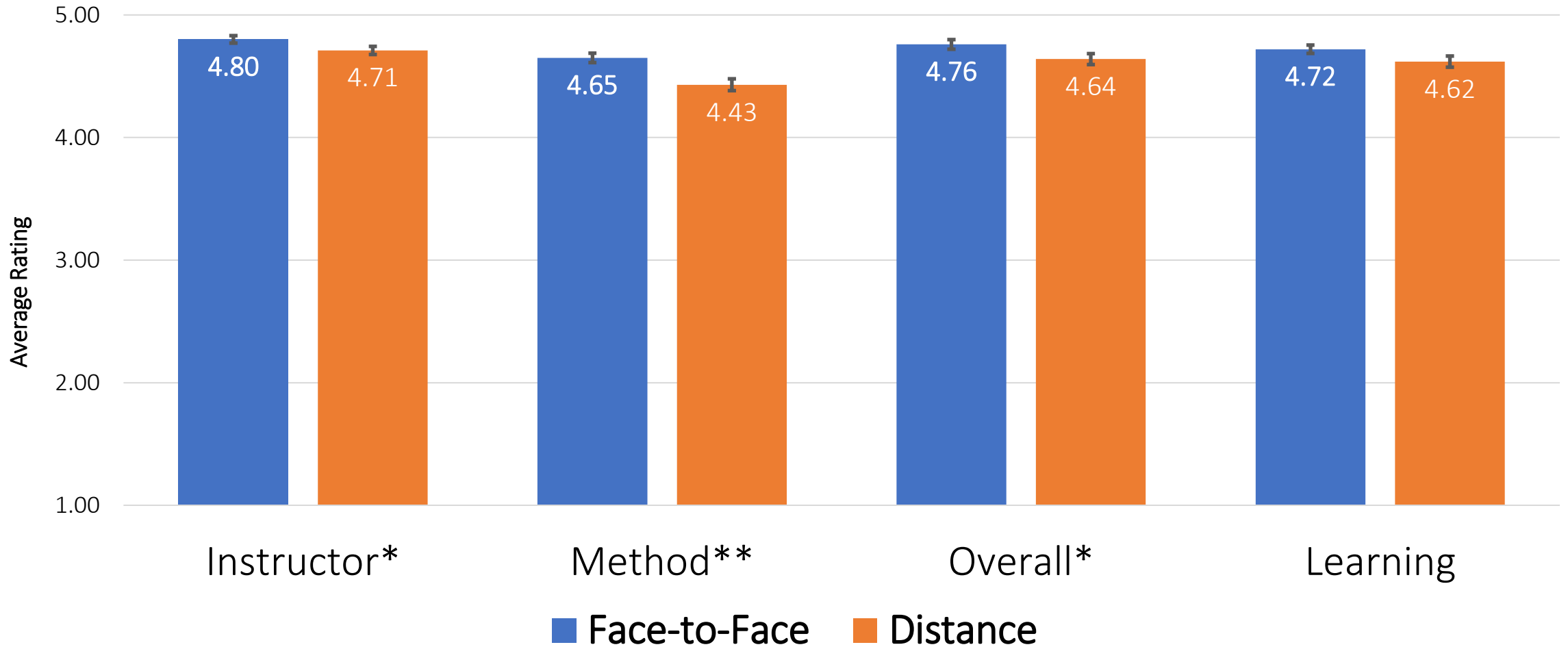
Comparisons of

- ICRA Awareness 8-hr (Face-to-Face)
- ICRA/COVID-19 Awareness 6-hour (Distance)



Were There Differences in
Effectiveness and
Learning?

Face-to-Face ICRA (8hr) with Distance ICRA-COVID-19 (6hr)



Face-to-Face ICRA
Awareness (8-hr)
with
Distance
ICRA/COVID-19
Awareness (6-hr)

Face-to-Face reported significantly
higher ratings of **EFFECTIVENESS**:

- Instructors
- Teaching Methods and Materials
- Overall
- **BUT no significant differences in
LEARNING** (Knowledge/Skills)

Study 2

Effectiveness of
Distance Learning for
Occupational Health
and Safety Training

Effectiveness of Occupational Health and Safety Training Delivered During the Pandemic

- Designing and Delivered in Real Time to meet Worker Needs
- Trainings:
 - COVID-19 and the Construction Industry Awareness Training (1-hour)
 - ICRA/COVID-19 and the Construction Industry Awareness Training (6-hour)
- Delivery: Distance (Synchronous, On-line Format)
- Participants:
 - Trainees (Members, Trainers, Union Representatives)
 - CPWR Instructors
- Evaluation: On-line, September 2020

CPWR Distance Learning Evaluation

Effectiveness (CPWR Instructors, Trainees)

- Instructor
- Content
- Format

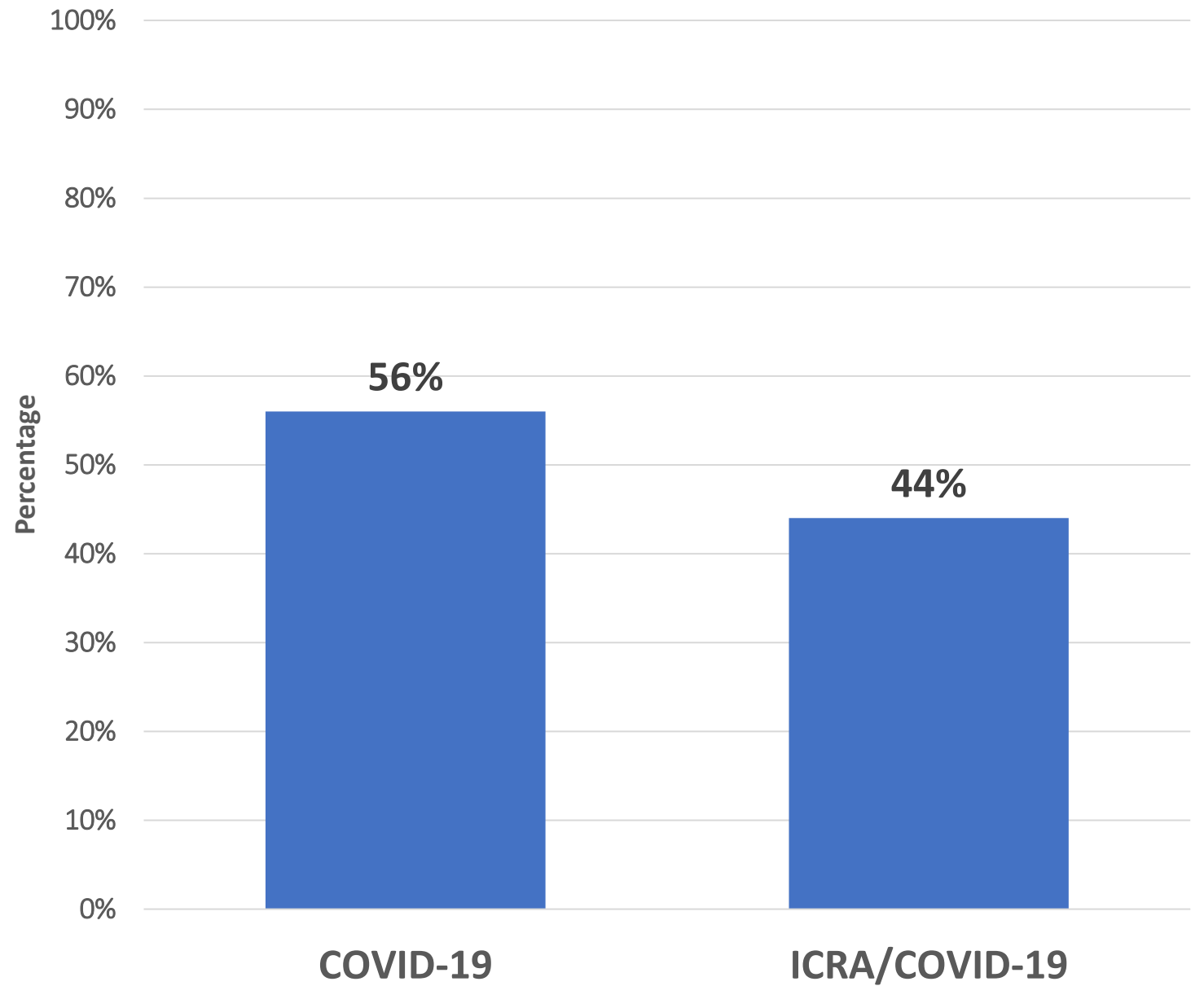
Learning/Performance (Trainees)

- Learning (CPWR Training-related Knowledge/Skills)
- Performance on-the-job
- Support on-the-job

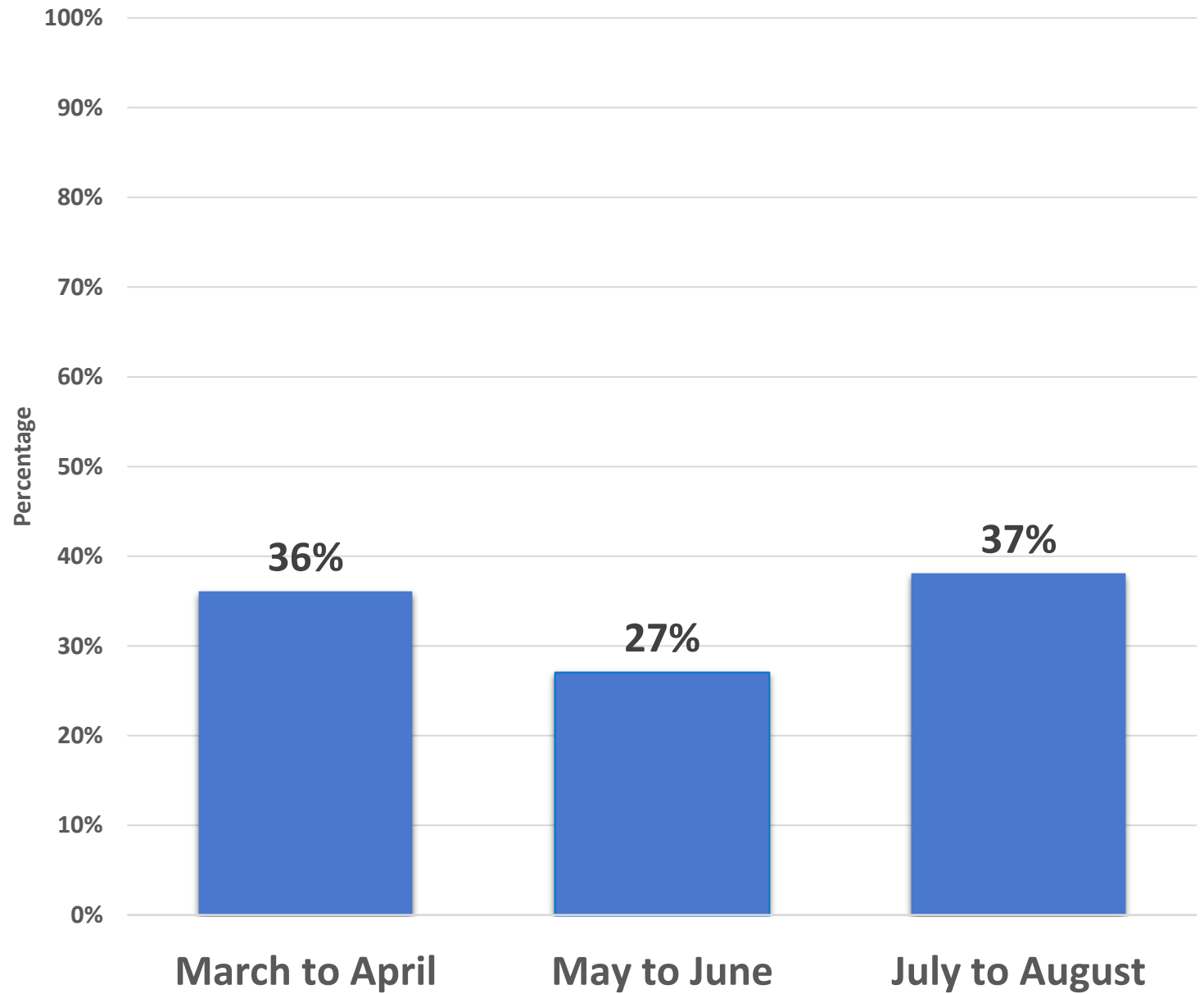
Training Background Information

The slide features a dark blue background. The title 'Training Background Information' is centered in the upper half in a white, sans-serif font. Below the title, there are two horizontal blue bars. The first bar is a solid blue rectangle. The second bar is a 3D-style blue bar that starts to the right of the first bar and extends to the right edge of the slide, creating a layered effect.

Training Attended



Date Attended Training

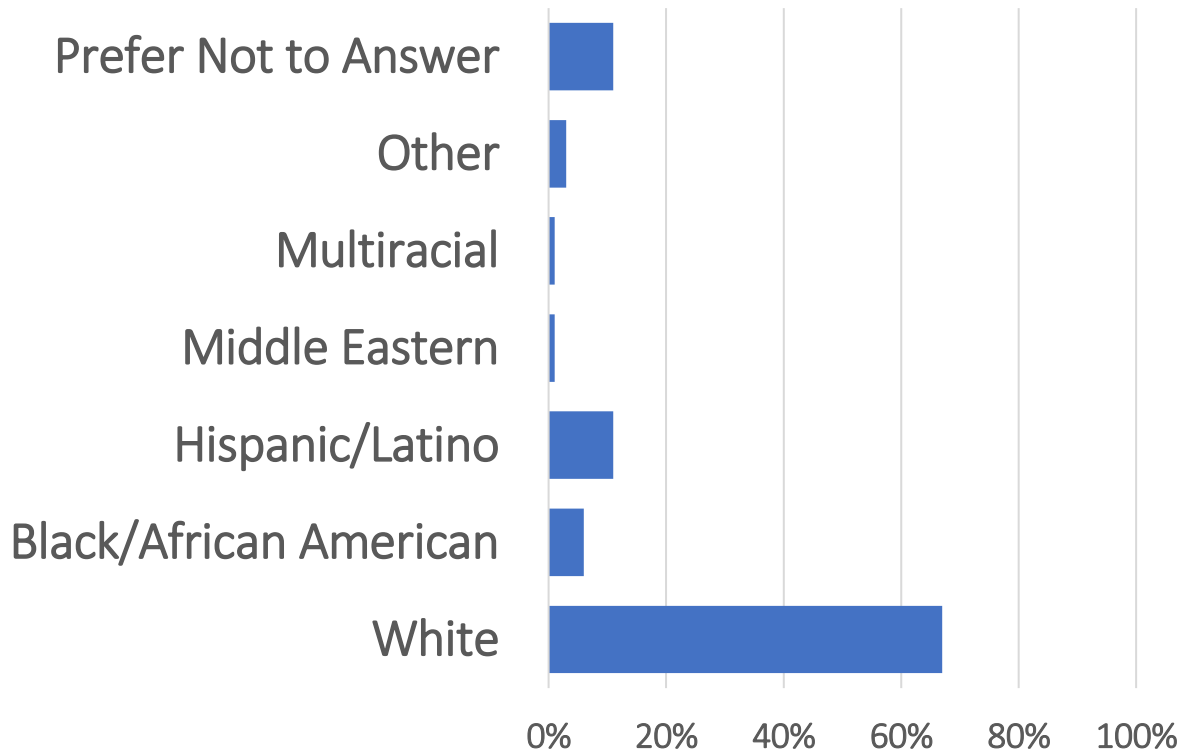


Trainee Background Information

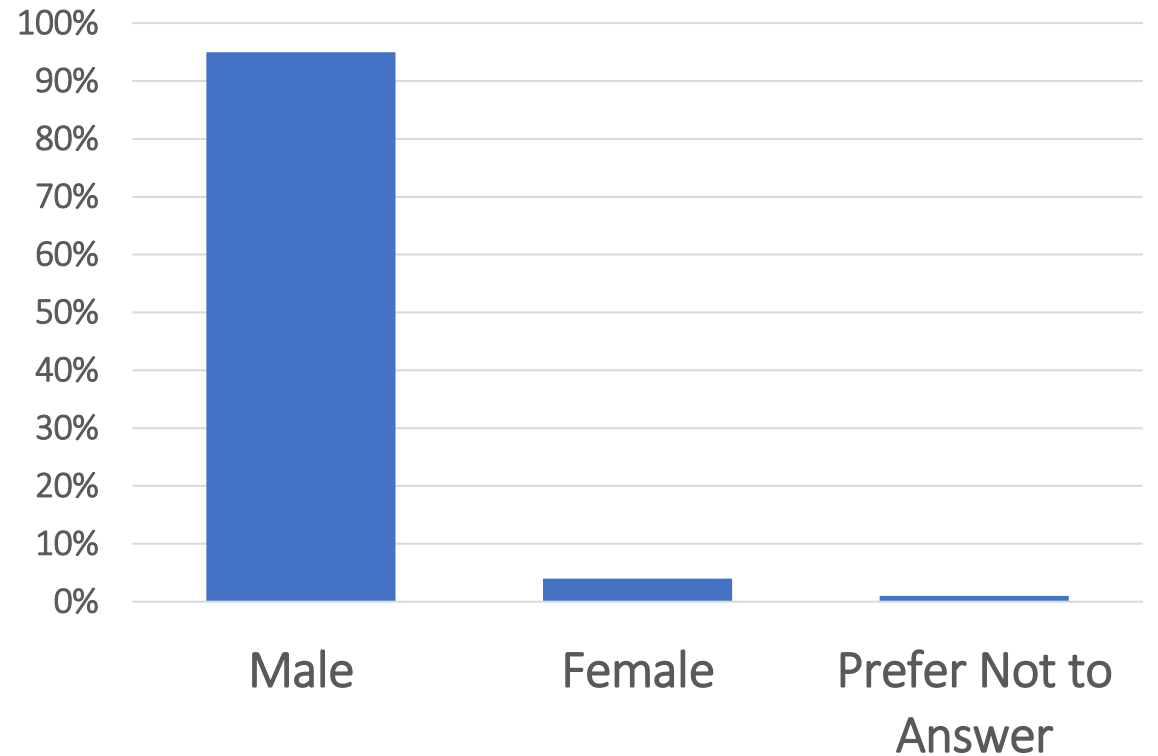
The slide features a dark blue background. The title 'Trainee Background Information' is centered in the upper half in a white, sans-serif font. Below the title, there are two horizontal blue bars. The first bar is a solid blue rectangle spanning most of the width. The second bar is a 3D-style blue rectangle that overlaps the right side of the first bar, extending to the right edge of the slide.

Demographic Information

Race/Ethnicity

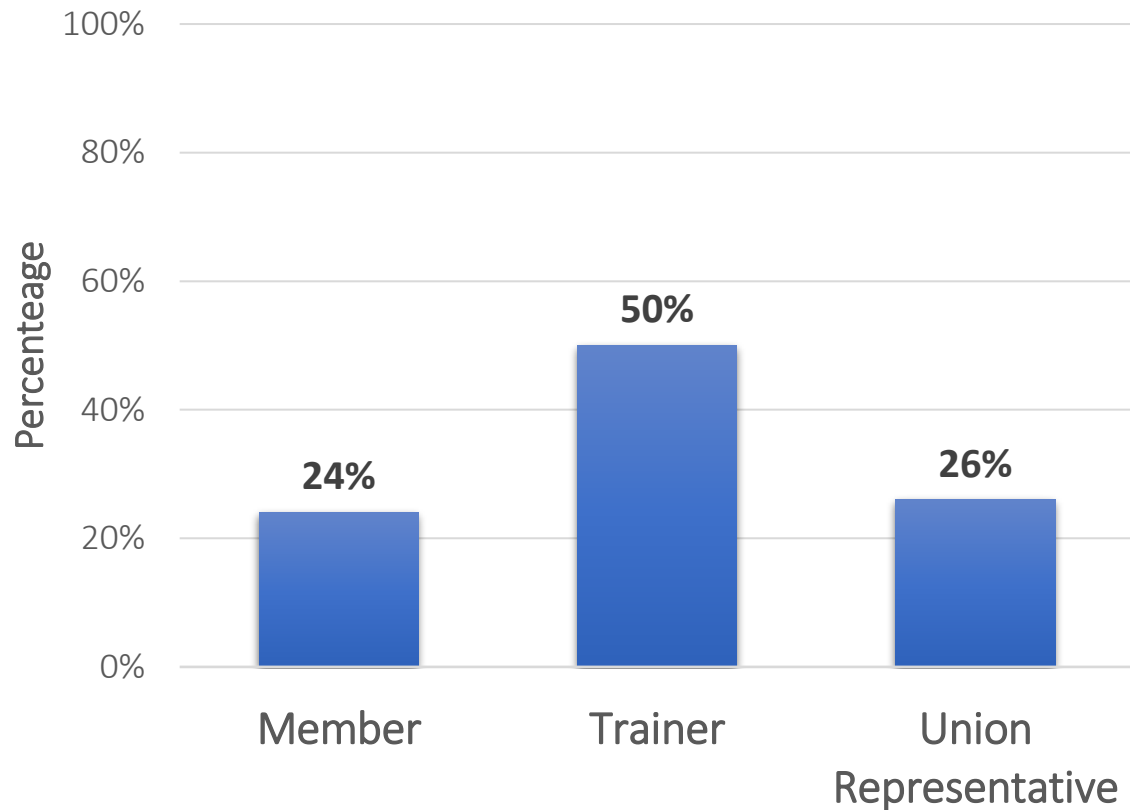


Gender

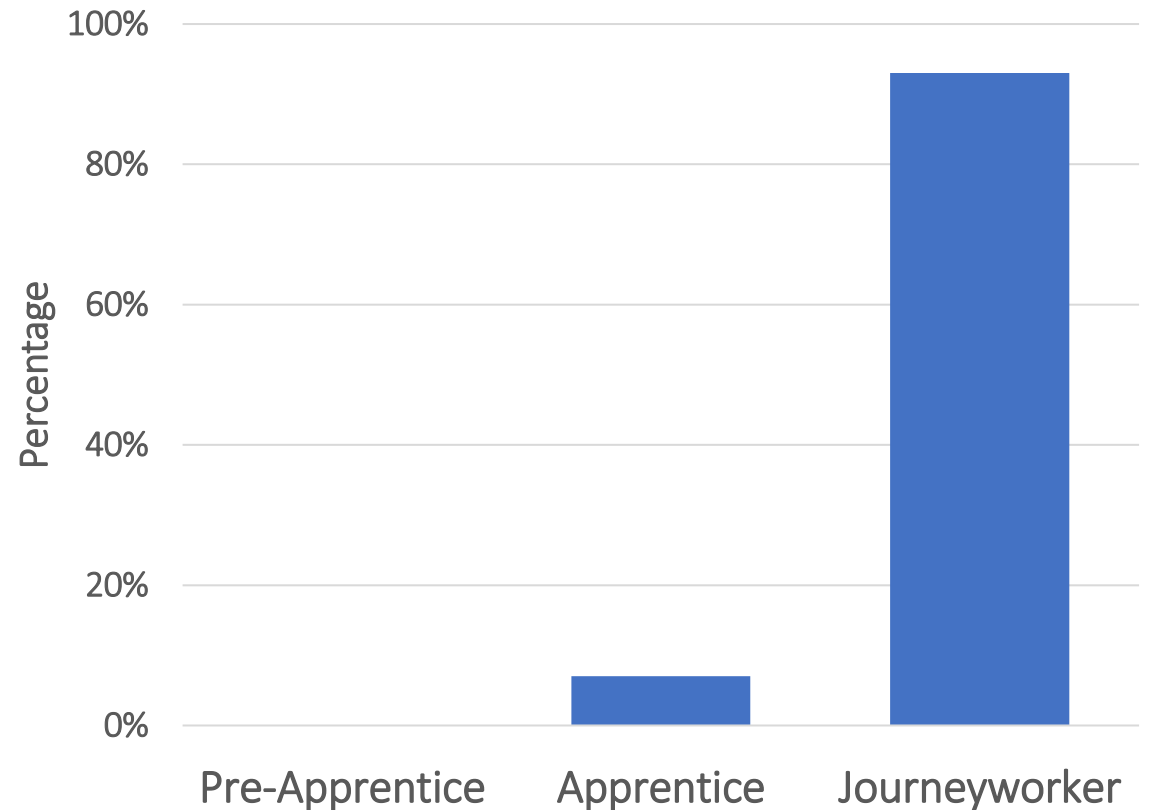


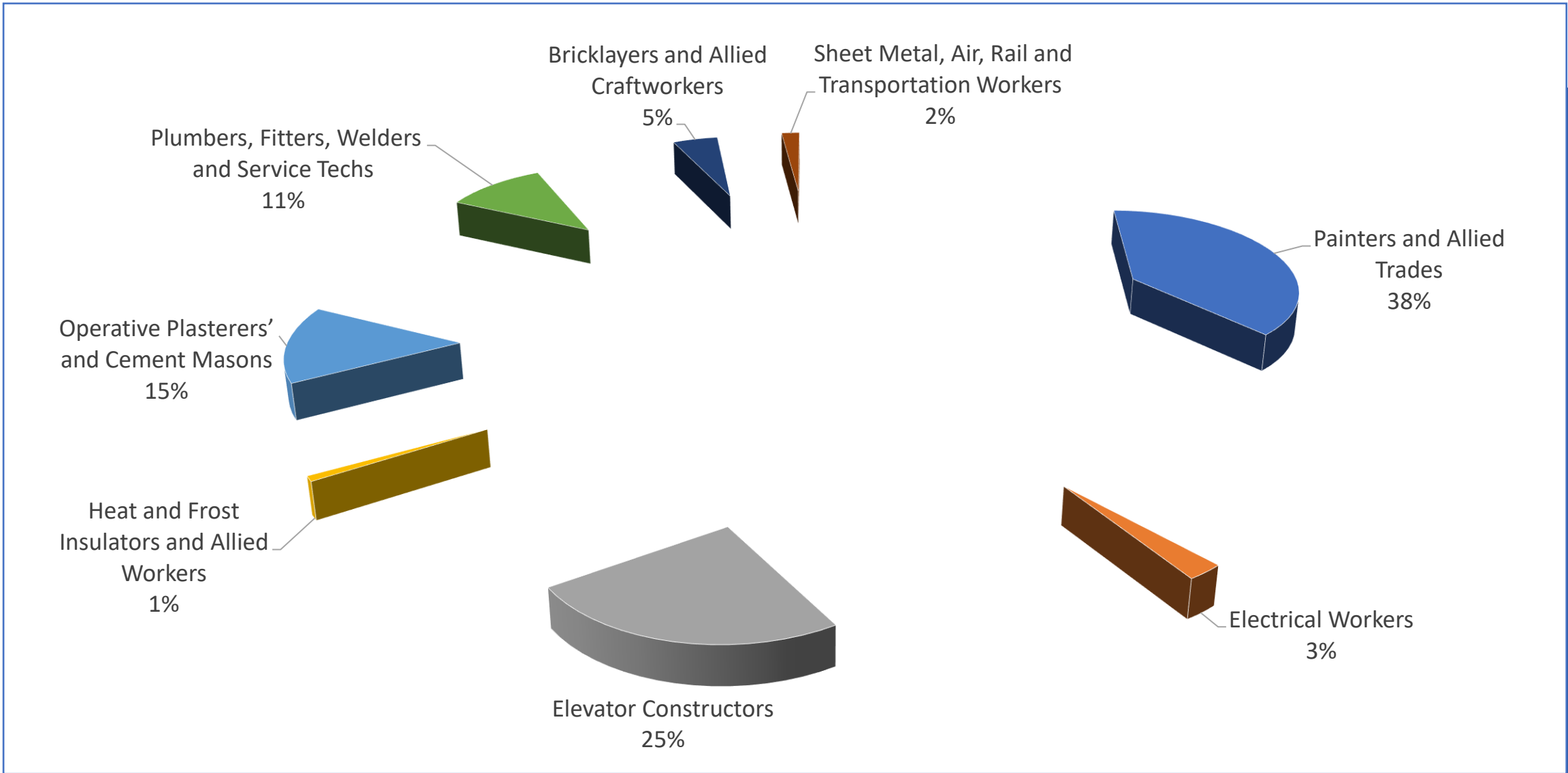
Work-Related Characteristics

Union Membership

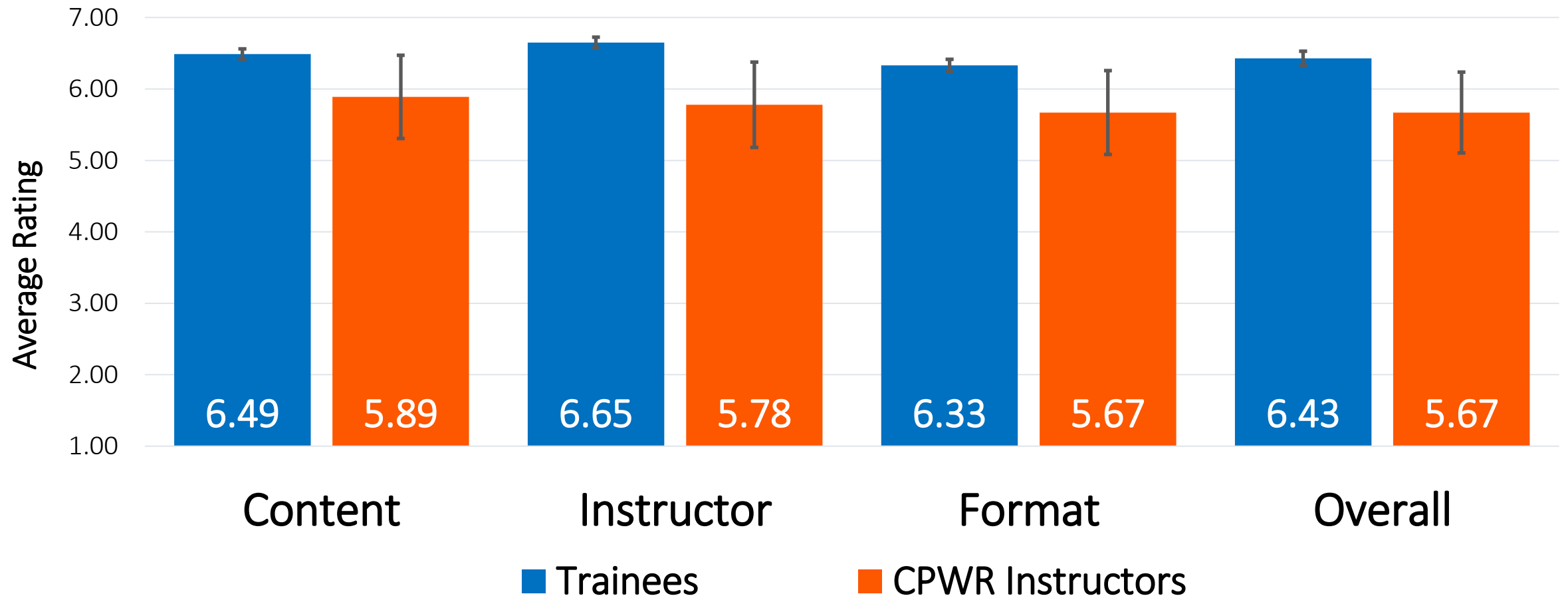


Professional Tenure





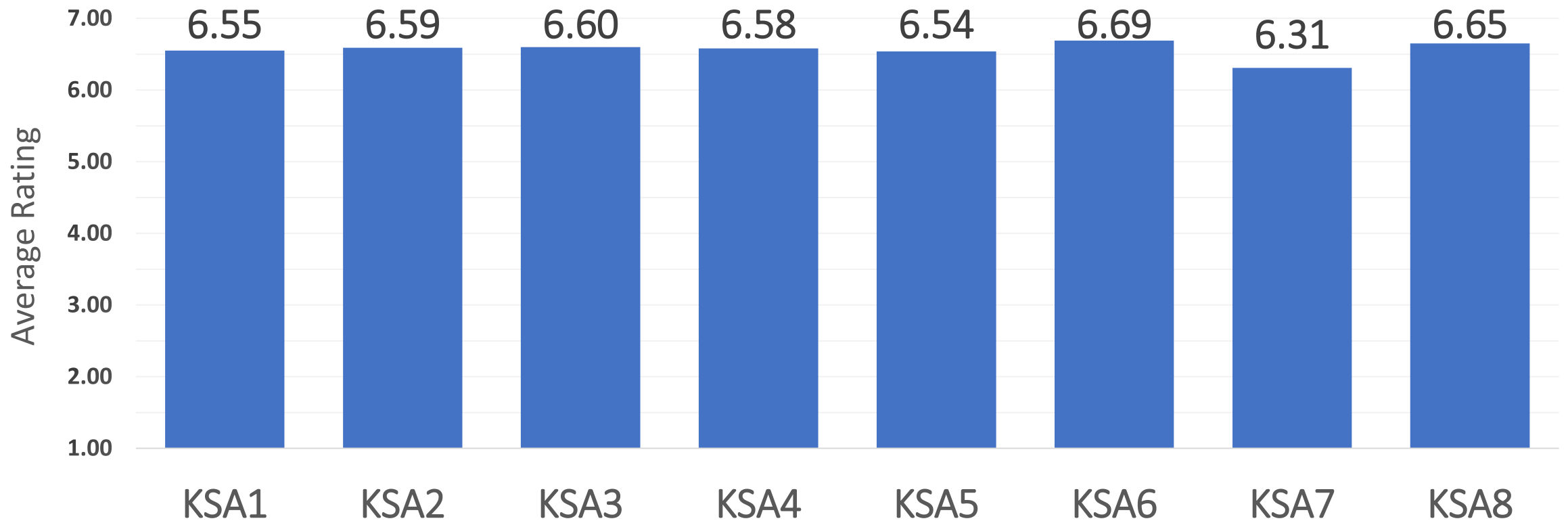
Training Effectiveness



Ratings of Training Effectiveness

Learning Outcomes

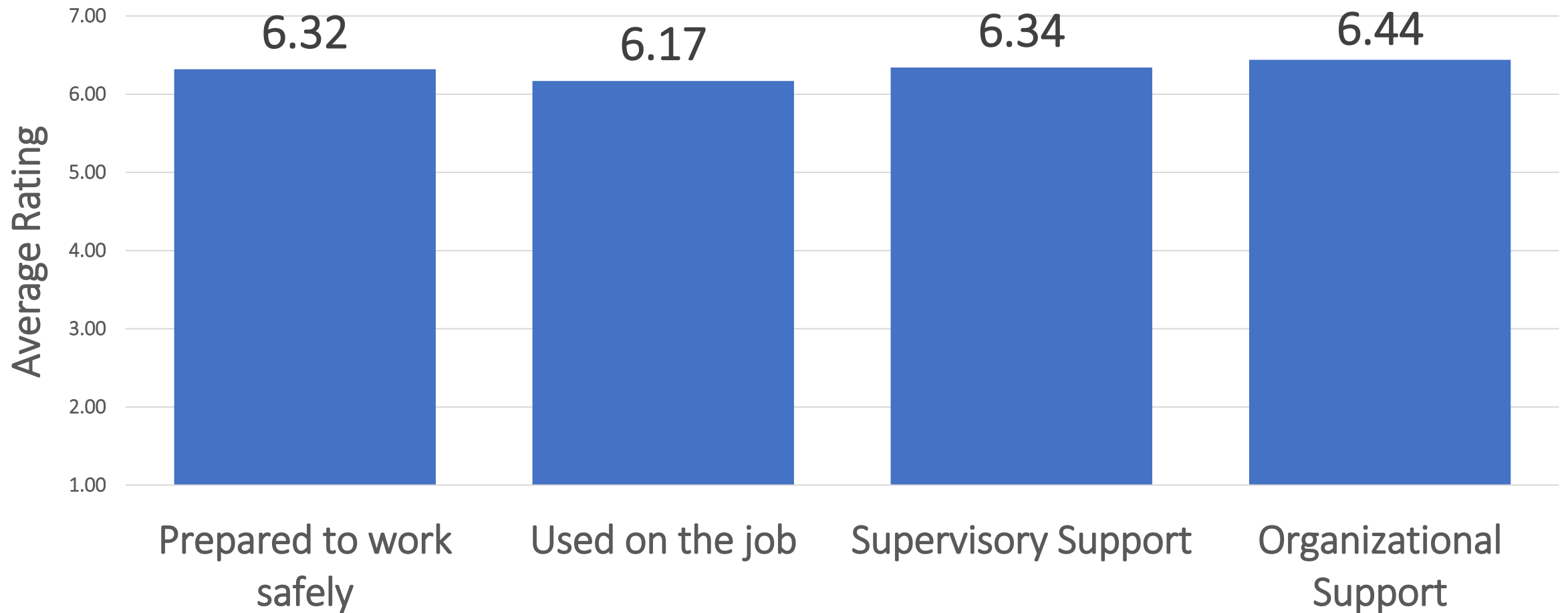




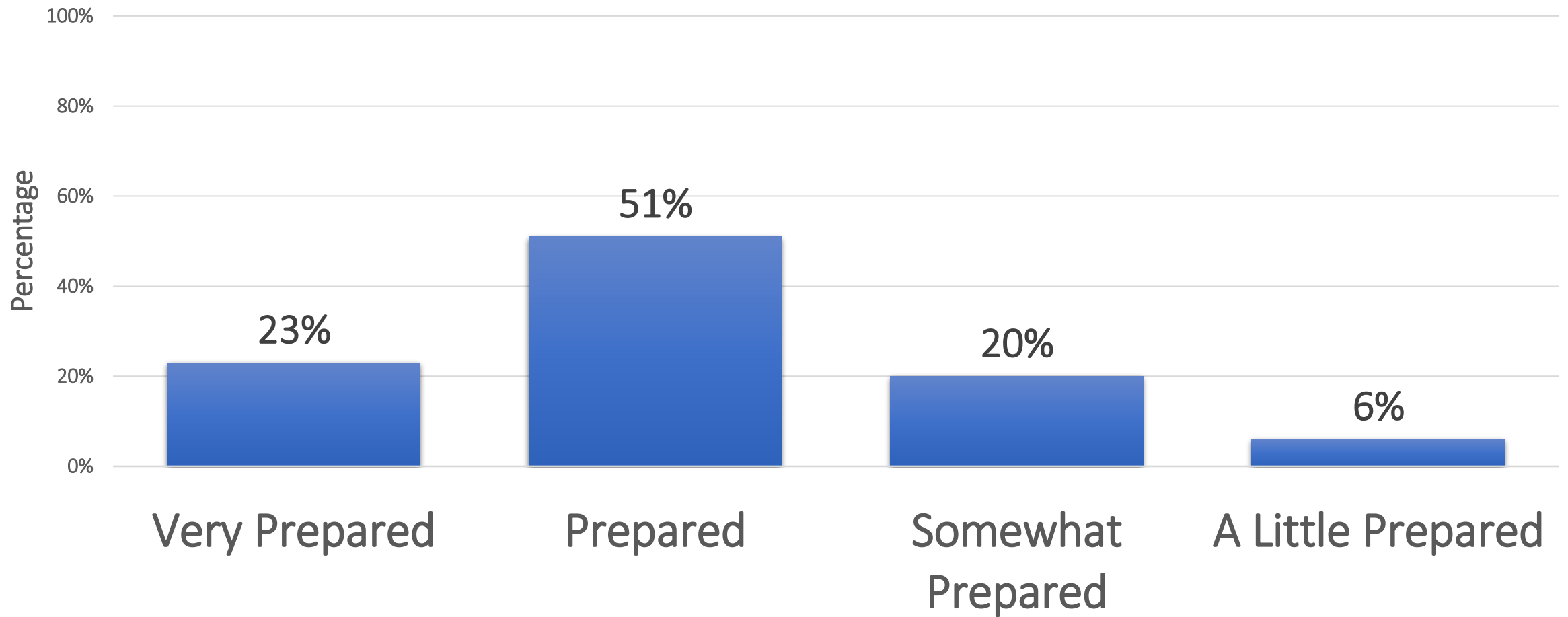
Training-related Knowledge, Skills, and Abilities

Participants' Learning

Safety at the Workplace

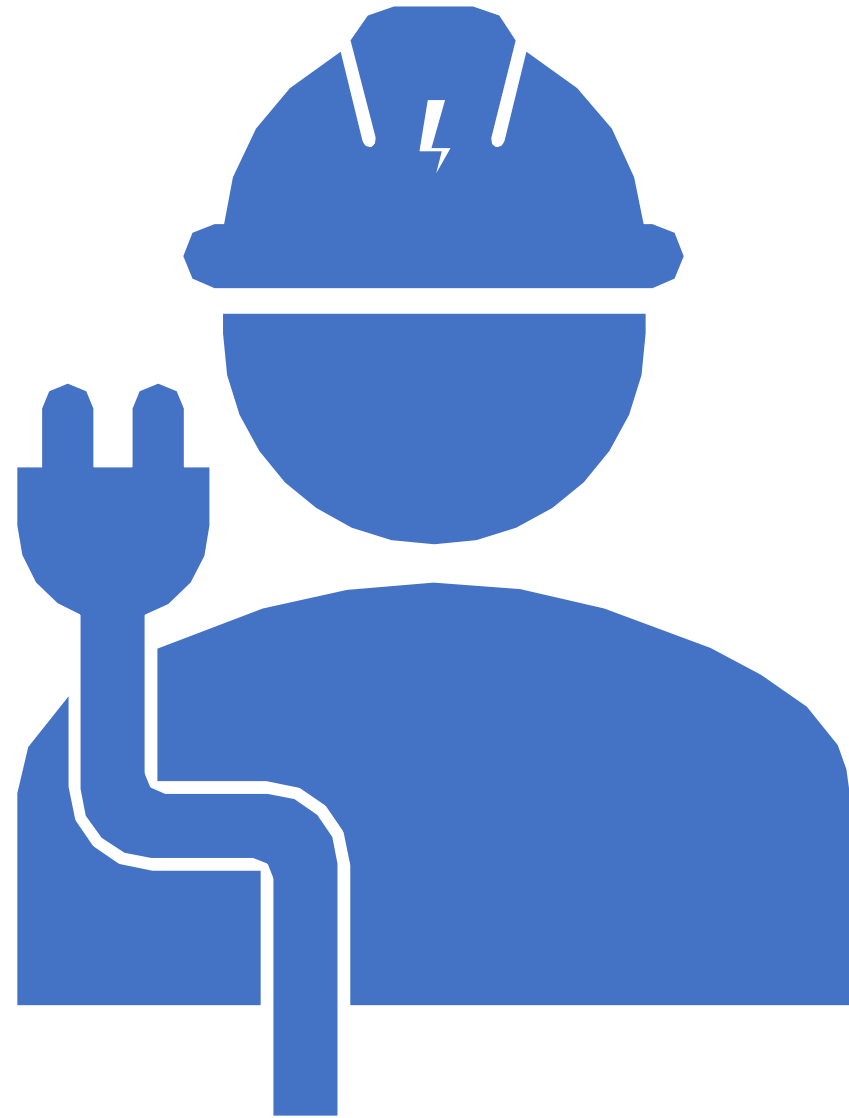


Impact on Working Safety



Trainers Prepared to Train Using
Distance Learning

Did the
Participants'
Work Expertise
Affect the
Training
Outcomes?



Did Participants' Work Expertise Affect Outcomes?

Union Membership

- Member, Trainer, Union Representative
- **NO significant differences** on Effectiveness Ratings and Learning/Performance

Trade Affiliation

- Eight Trades Represented
- **NO significant differences** on Effectiveness Ratings and Learning/Performance



Did Training Length
or Date Affect the
Outcomes?



Did Training Characteristics Affect Outcomes?

Type/Length of Training

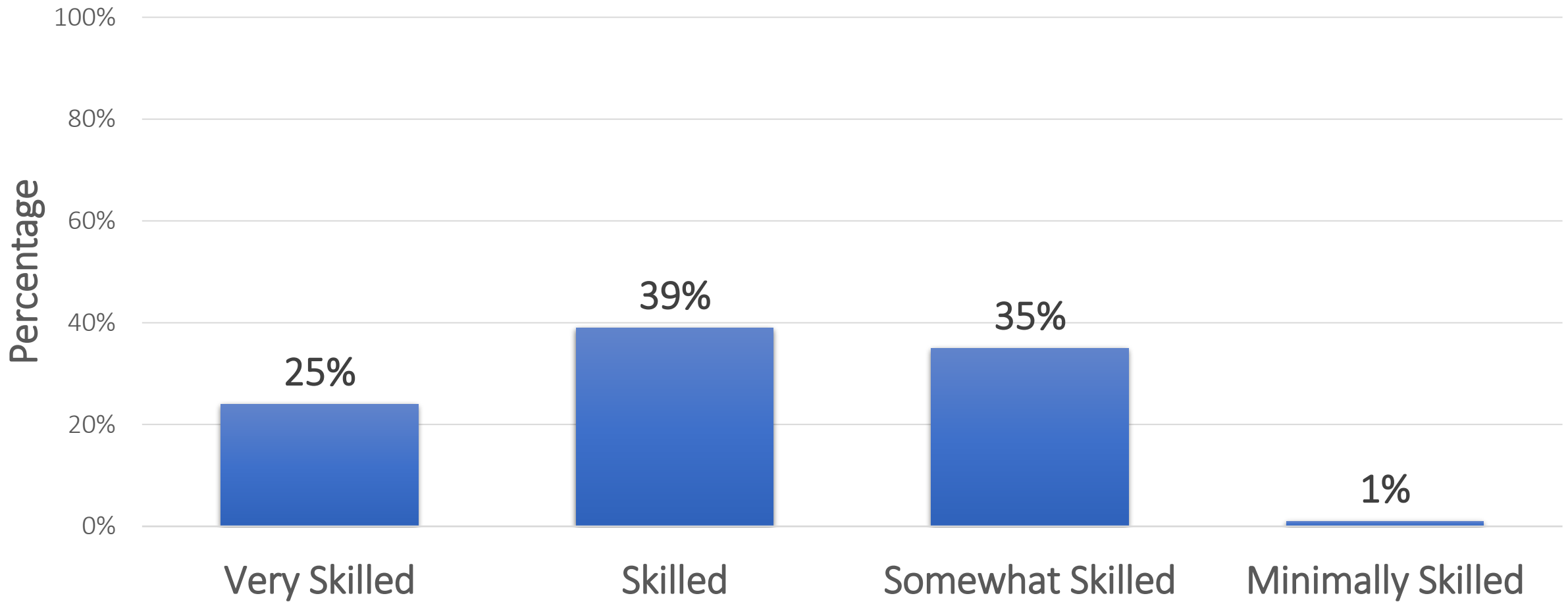
- Compared COVID-19 (1-hr) with ICRA/COVID-19 (6-hr)
- **NO significant differences** on Effectiveness Ratings and Learning/Performance

Month Training Presented

- Compared Months Presented (March/April, May/June, July/August)
- **NO significant differences** on Effectiveness Ratings and Learning/Performance



Did Participant's
Technological
Competence Affect the
Outcomes?

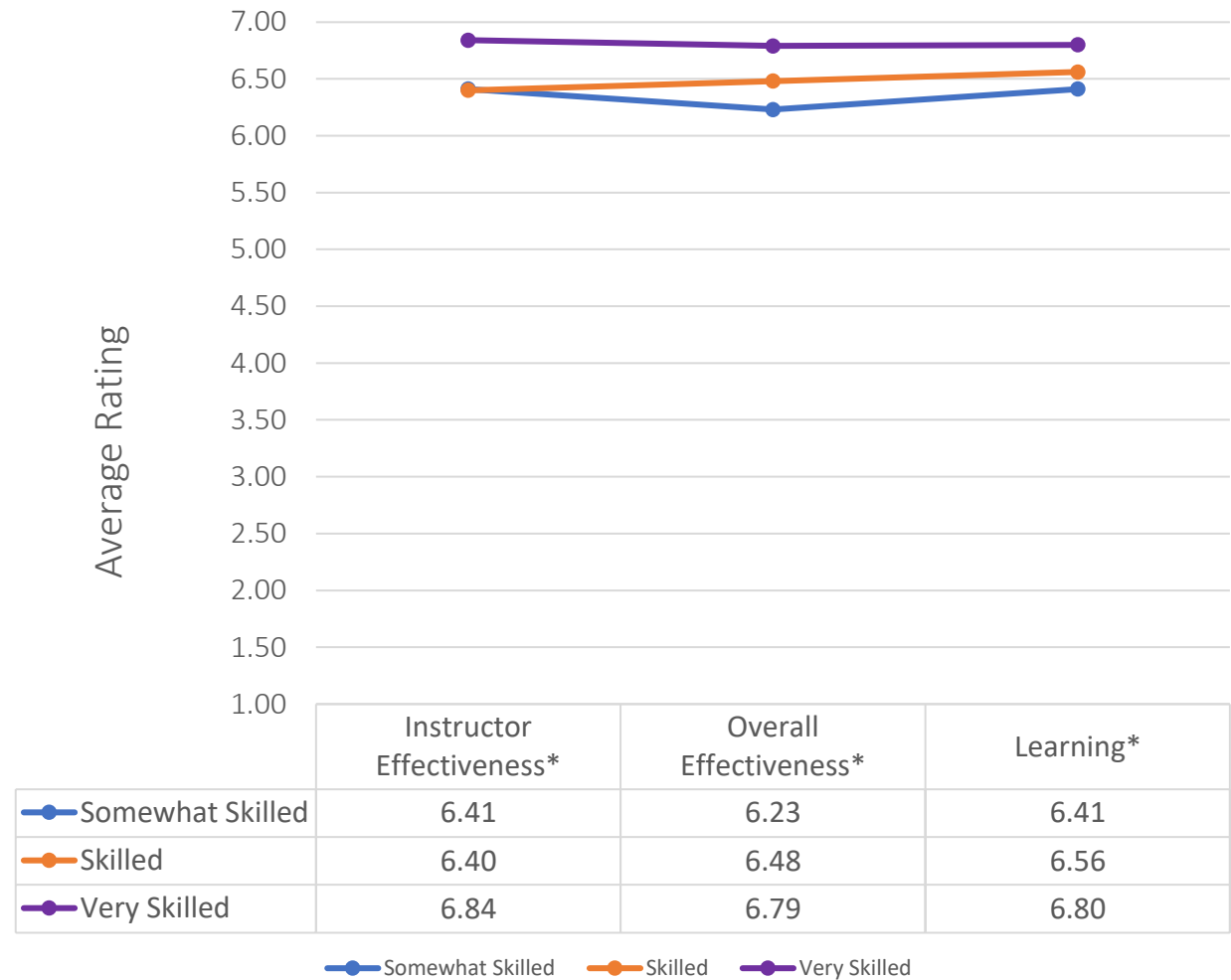


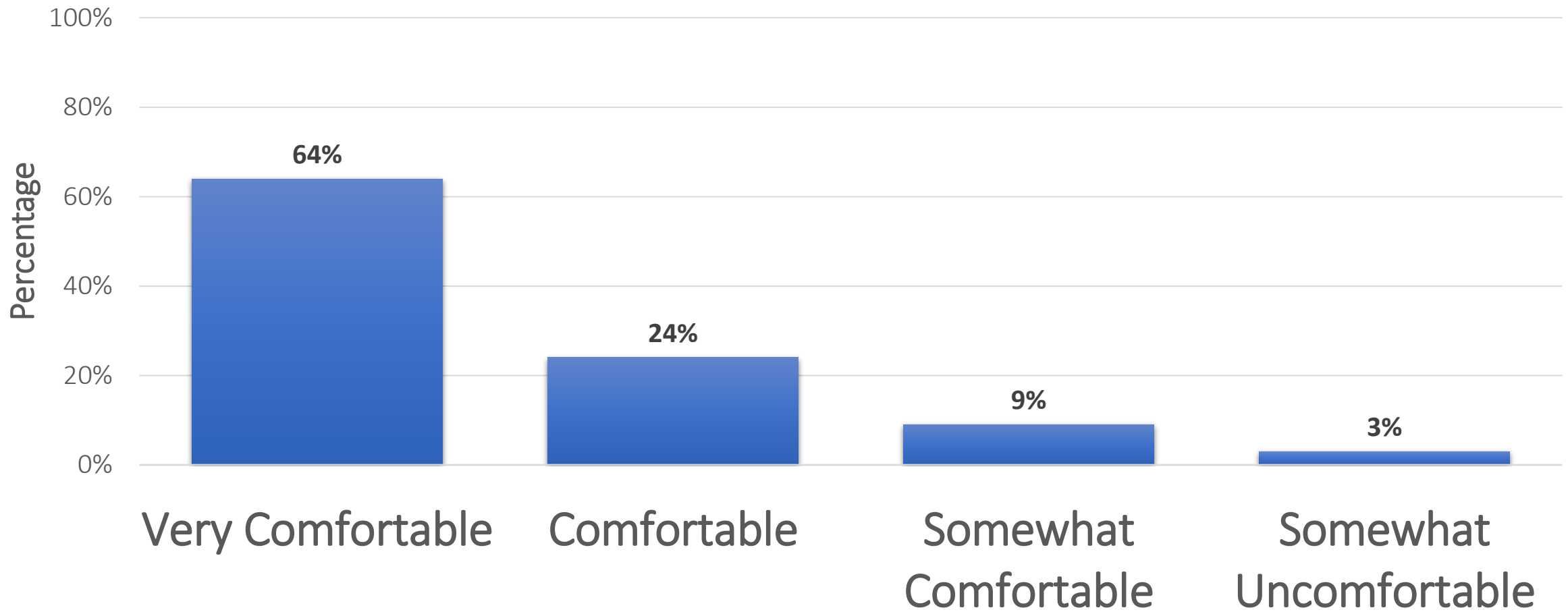
Skill in Using Distance Learning
Format

Effect of Trainee Skill in Using the Technology on Training Outcomes

Instructor Effectiveness: Very Skilled and Skilled HIGHER ratings than Somewhat Skilled

Learning and Overall Effectiveness: Very Skilled HIGHER ratings than Somewhat Skilled



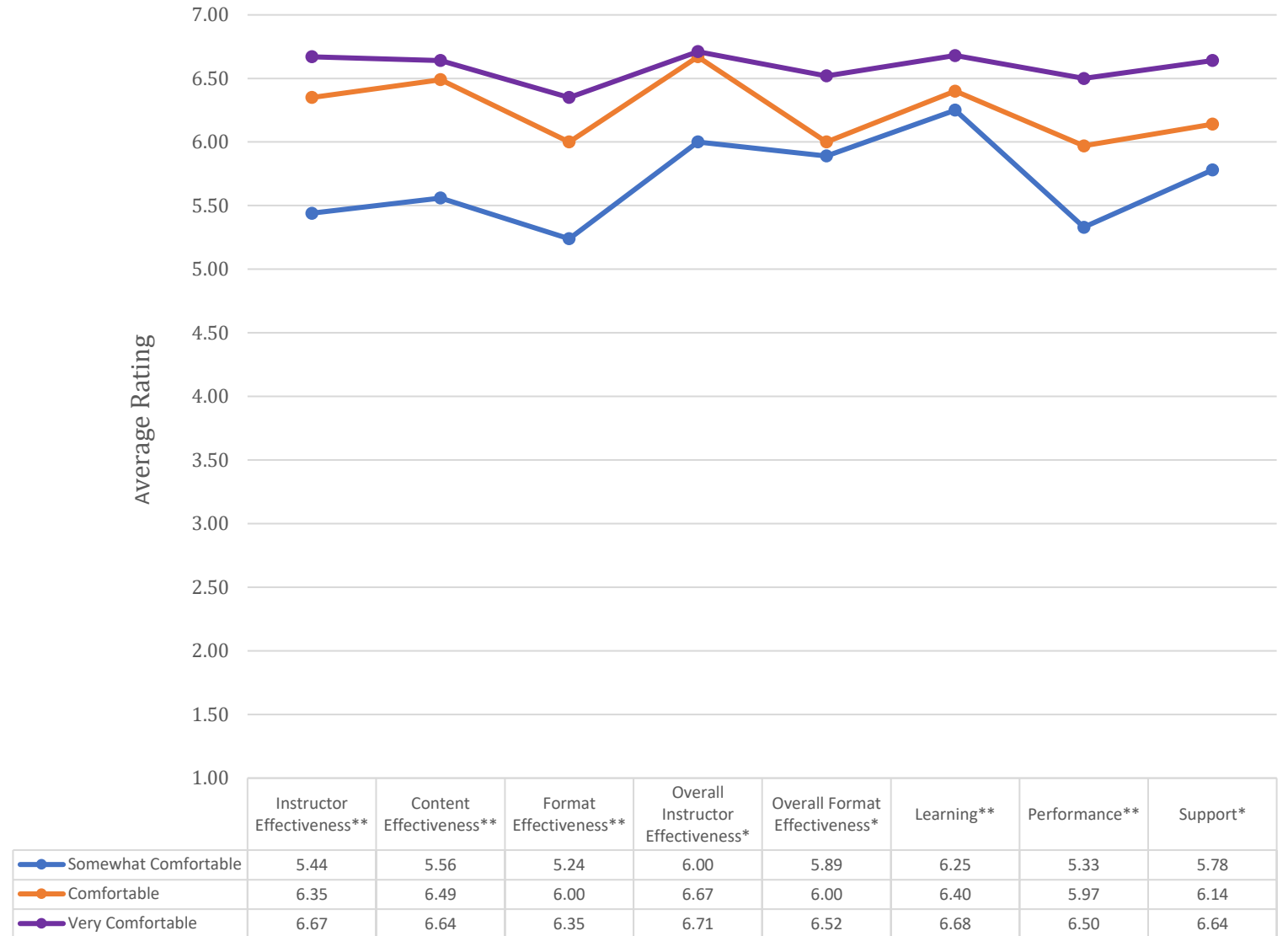


Comfortable Taking Distance Learning

Effect of Level of Trainee Comfort with the Technology on Training Outcomes

Instructor, Content, and Format Effectiveness: Very Comfortable and Comfortable HIGHER ratings than Somewhat Comfortable

Learning, Performance on the job: Very Comfortable HIGHER ratings than Somewhat Comfortable



Why did these
results occur?

Comments from
Trainees and CPWR Instructors



Instructor expertise

Use of synchronous on-line platform (Zoom)

Content/Application to the workplace

Interaction/discussions/breakouts/polls

Shift to distance learning (Safety/Flexibility)

MOST Valuable

Face-to-face more effective (Gold Standard)

Limited interaction

Challenges in using hands-on

Technical issues

Limited ability to read non-verbal cues

LEAST Valuable

Tools and Tips for Trainers

Before Training

Know the audience in advance of the session to gain information about learner (technological proficiency; accessibility) and workplace needs (occupational; trade)

Provide orientation training for participants and trainers that clarifies technology, course expectations, and resources prior to the training session

Provide access to all course-related information to participants in advance of the training session

Convene instructor planning and coordinating meetings with the other instructors to review roles and responsibilities

Rehearse presentations using the technology (including camera) preferably with performance feedback

During Training

Encourage trainee engagement using specific regular interaction/discussions and diverse methods

Use co-instructor(s) to assist with technology

Create an open and flexible learning environment

Following Training

Evaluate training to ensure continuous quality improvement

Provide up-to-date, relevant, on-line resources for participants and trainers

Before Training

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On-line Etiquette for Trainees



Download training information ahead of time, including all handouts and PPTs.



Complete all pre-training assignments and assessments.



Test your computer compatibility with the platform. Log-in to the session at least 5 -10 minutes ahead of time.



Present a professional on-line presence (attire, background).



Limit distractions and do not multitask during training (turn off other devices).



Mute your microphone when not speaking.



Leave video/camera on at all times during class (do not revert to blank screen).



Share comments and questions in text chat and raise hand to ask questions.

During Training

- Encourage trainee engagement using specific regular interaction/discussions and diverse methods
- Use co-instructor(s) to assist with technology
- Create an open and flexible learning environment

Best Practices for Using Breakout Rooms

Provide clear instructions and a general framework for the breakout activity

Include a mix of participants to leverage expertise and experiences

Prepare trainees for breakout room expectations before you send them into their sessions

Depending on the activity, assign a facilitator for each room

Indicate the expected duration of the breakouts

Provide a way for trainees to get assistance, if needed, during the breakouts

Following Training

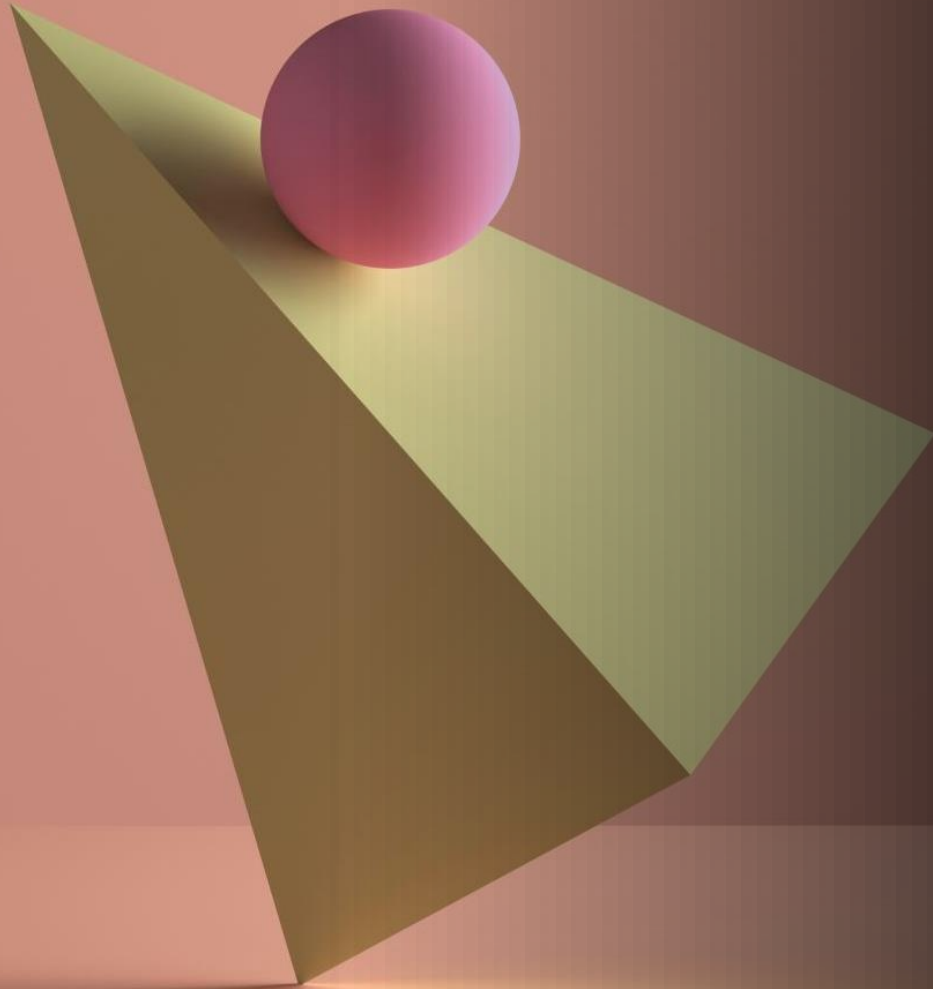
- Evaluate training to ensure continuous quality improvement
- Provide up-to-date, relevant, on-line resources for participants and trainers

“I believe 100% in face-to-face training but if we cannot it is a responsibility for us to train them on how to be safe.

We sometimes forget about the art of safety. We are forced in this time not to do face-to-face training, but we have members working today. We had to look at the art side and find the next best avenue.

Safety can never stop - no matter what obstacles are put in front of us. Great job for CPWR staff and instructors to adapt and overcome to reach the members.”

Quote from Participant in the ICRA/COVID-19 Training
(April 13, 2020)



Balancing the use of distance learning for health and safety training moving forward

How do you use what we have
learned into future health and safety
trainings?

Distance Learning for Health and Safety Training

- Preliminary evidence of using the **distance learning format** to successfully deliver **health and safety training** designed in **real time** in response to a **pandemic**
- Research is needed to identify **key trainee characteristics** and **training features** using various formats and content in **integrating into face-to-face offerings** (blended learning, flipped classrooms)
- Consider **expanding training outcomes** to include measures of relationships (trust, cohesion, peer support)
- **Strategic decision-making** regarding use of distance technology to **improve health and safety training systems**



Acknowledgements

- Dr. Alicia Stachowski, Dr. Nancy Goldstein
- Gary Gustafson and Steve Surtees
- Rick Reinhart
- CPWR Instructors: Mike Finn, Ron Mahs, Jerry Marsden, George Newman, Tom Sundly, Jim Young
- *Supported by NIEHS cooperative agreements ES006185 and ES009764*



QUESTIONS?

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