

Teaching Digital Accessibility to Industry Professionals using the Community of Practice Framework

An SEET Track Experience Report

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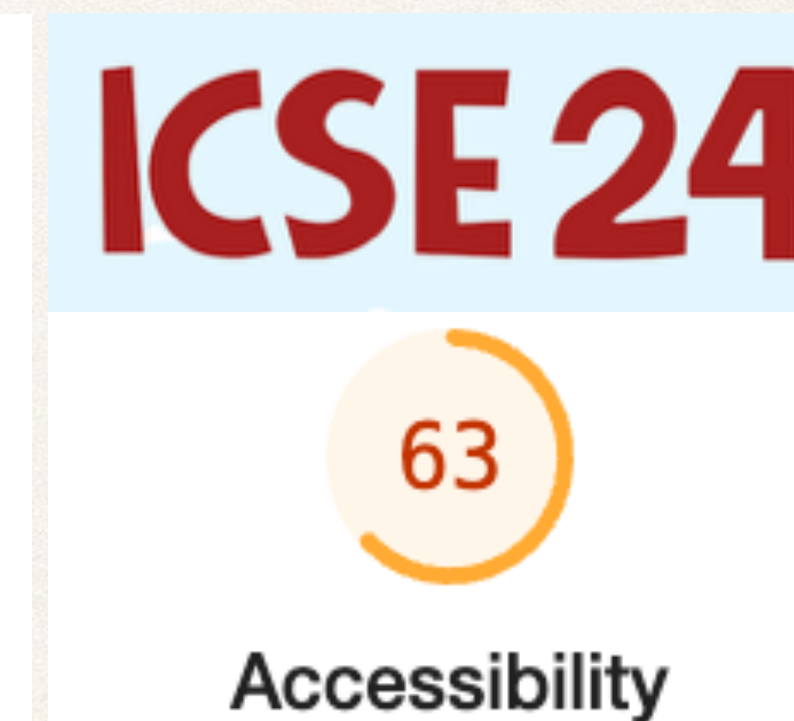
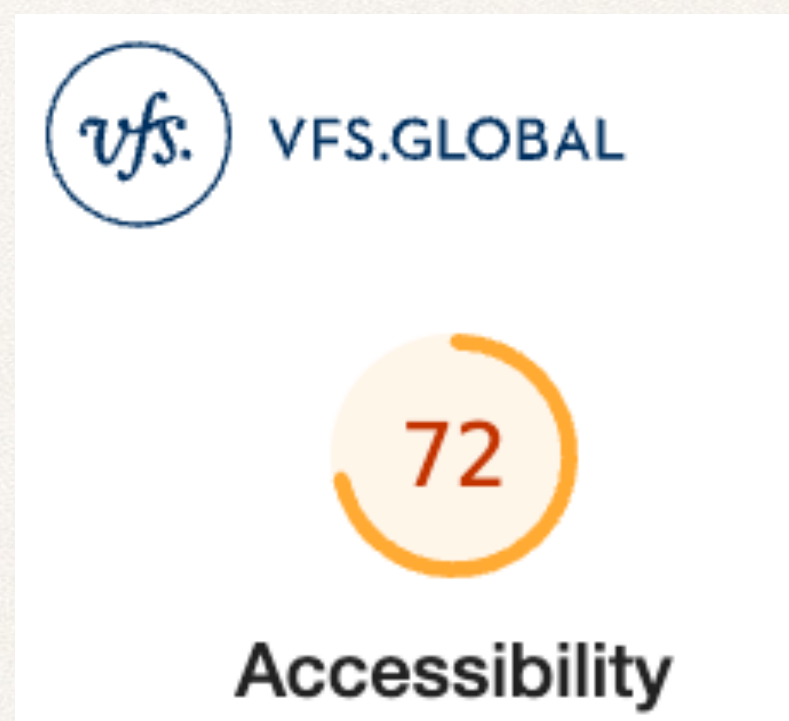
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“Easy to find candidates with relevant accessibility skills”

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“Easy to find candidates with relevant accessibility skills”

67%

“Have to invest in on-the-job training”

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Community of Practice (CoP) Framework [Wenger 1998]

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- ❖ Practice
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Has been used for training

- ❖ English-language teachers
- ❖ Engineering Education Researchers
- ❖ Journal reviewers
- ❖ Scrum masters
- ❖ ...

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Exploration (45 min): Accessibility 'experts' within the group presented a relevant topic

Experience sharing (45 min): relevant to the week's topic

Practice (20 min): Solve relevant exercises
Structured reflection (10 min)

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GAAD 2023 event for all

Expert talks, Crosswords and puzzles

“Bug bash” → squashing accessibility bugs in their real projects with their teams

Context

❖ Participant demographics

Category	SubCategory	Count
Job Title	Software Engineer	45
	UX Designer	13
	Management	6
	Engineering Intern	2
Experience	0-3 Years	27
	4-7 Years	17
	8-15 Years	8
	15+ Years	14
Accessibility Knowledge	Beginner	33
	Intermediate	28
	Expert	5
Job Location	India	61
	Australia	5
Gender	Men	29
	Women	37
Identify as a PWD	Yes	3
	No	52
	Prefer not to say	11

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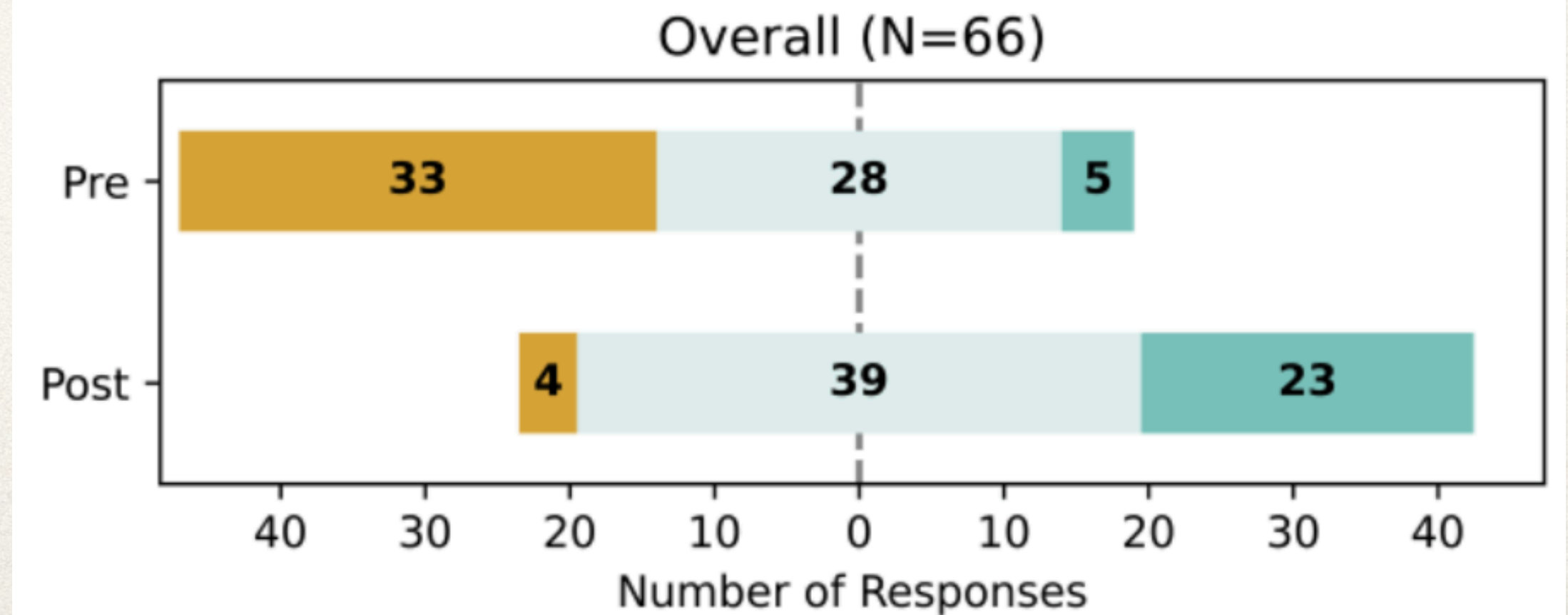
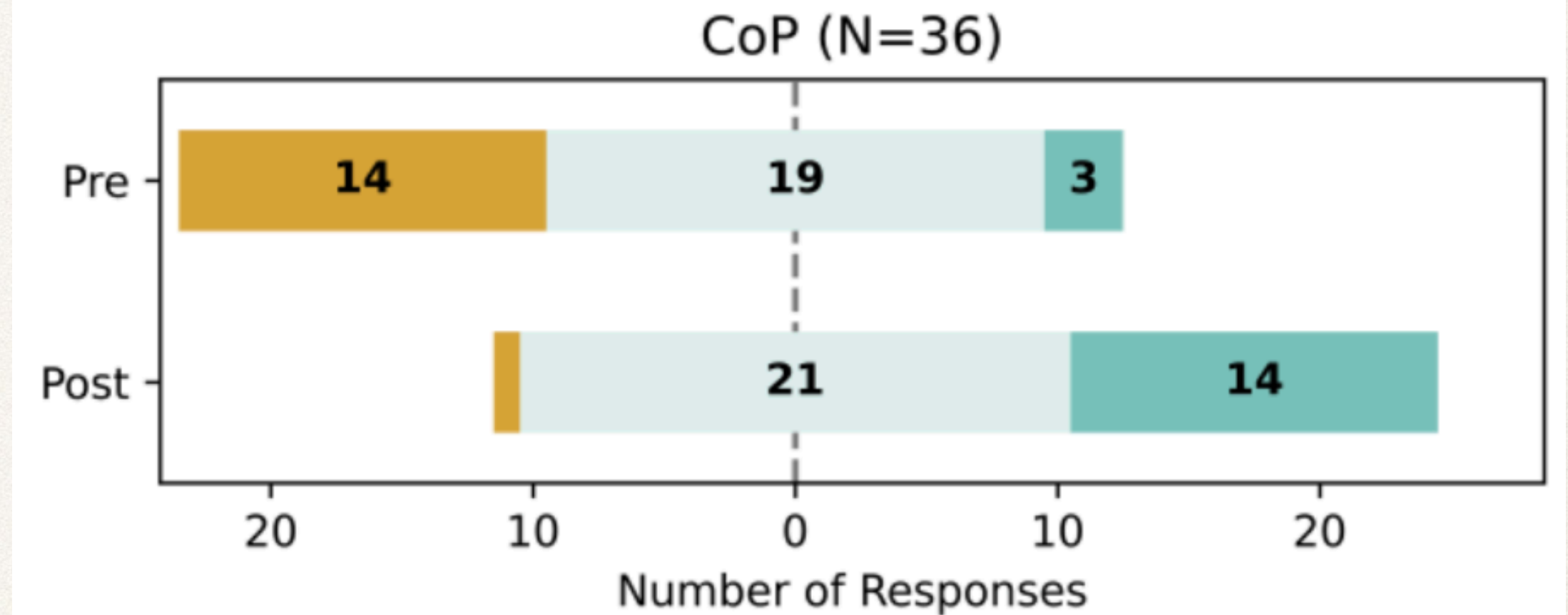
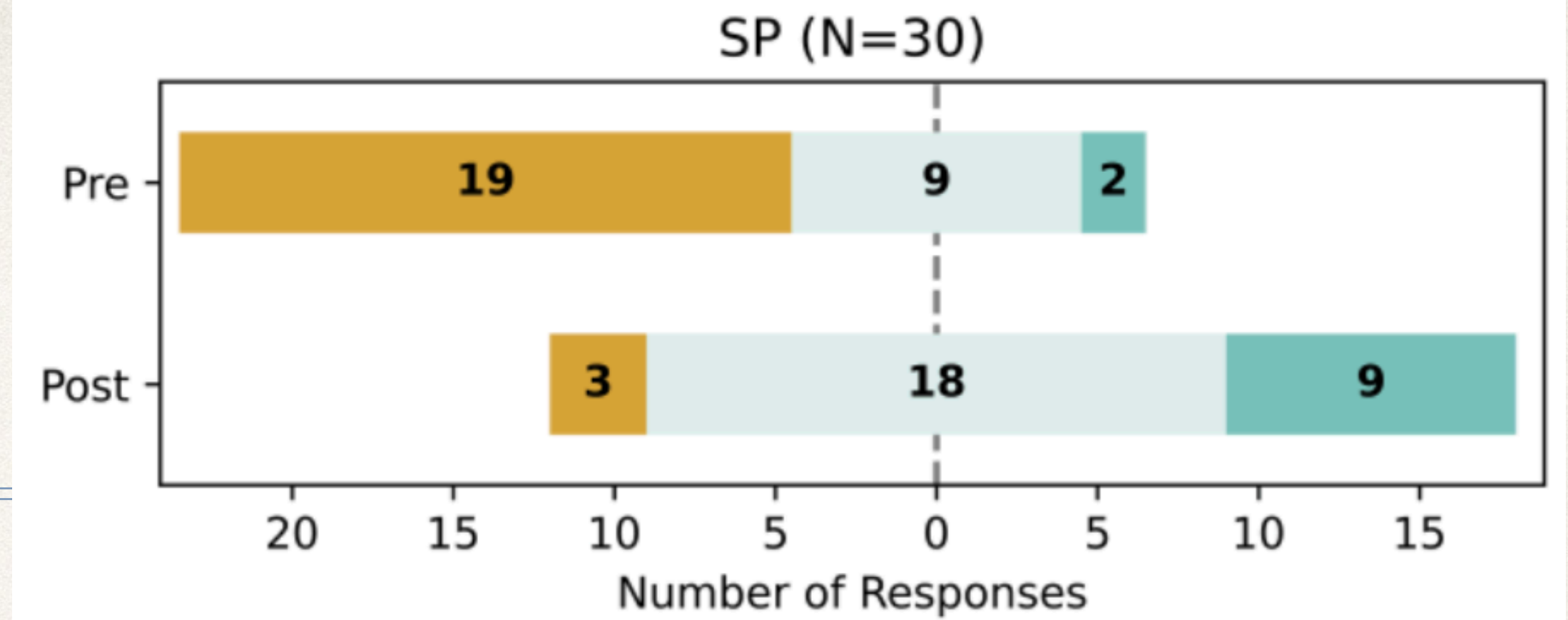
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 - ❖ e.g., apply accessibility tags in HTML; accessibility testing using tools
- ❖ Documentation and reporting
 - ❖ e.g., report the accessibility bug with its severity, etc.

Findings — Proficiency

- ❖ Level of accessibility knowledge
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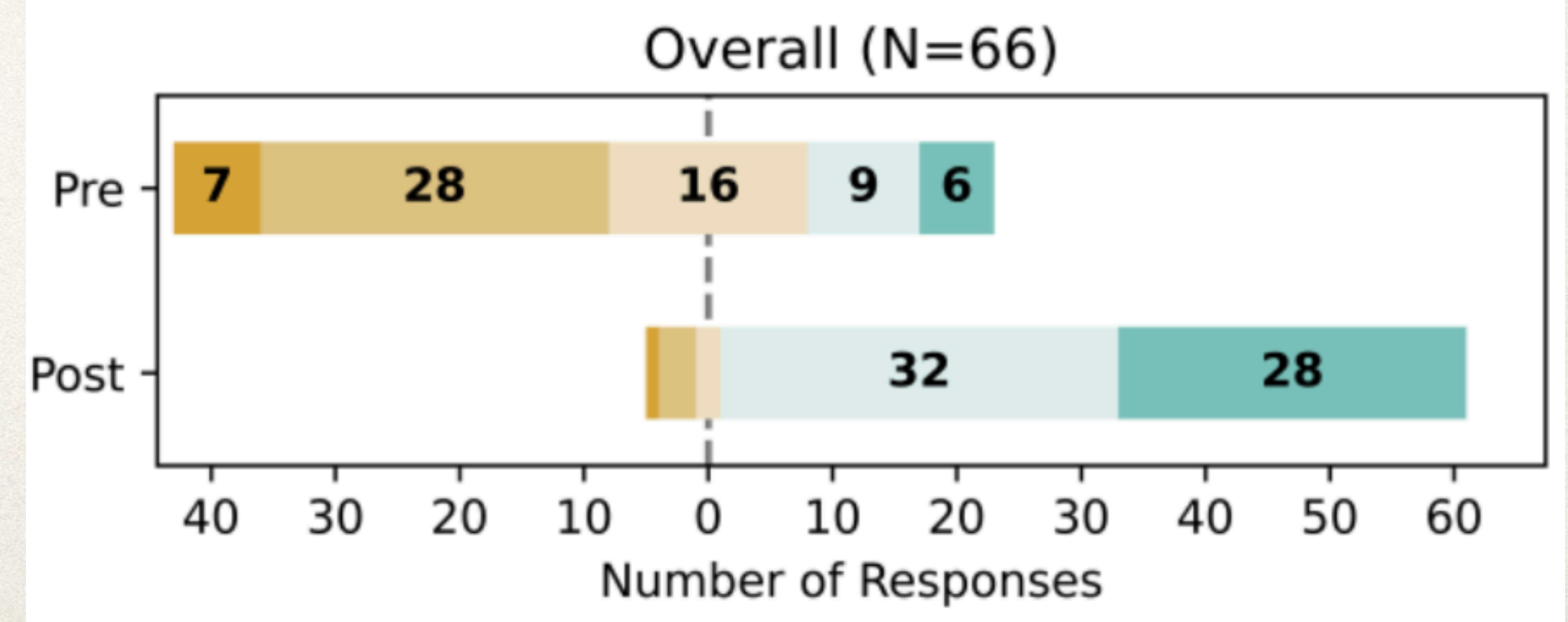
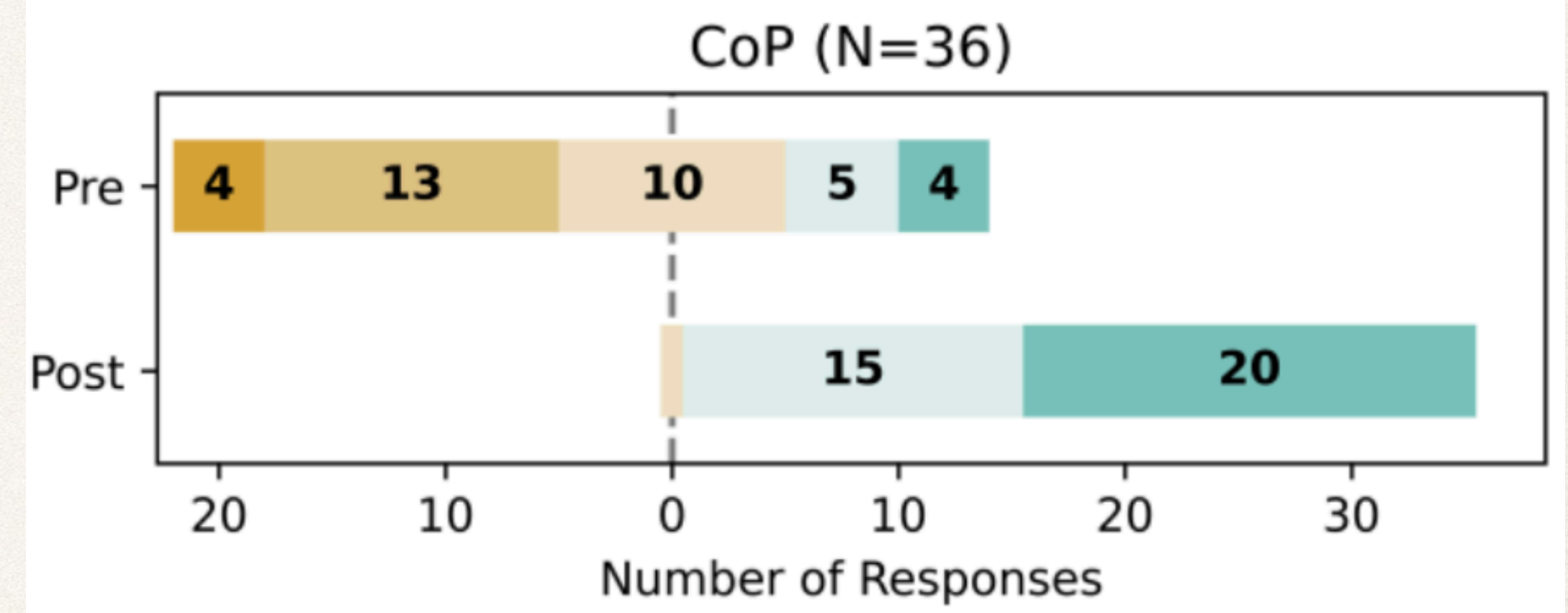
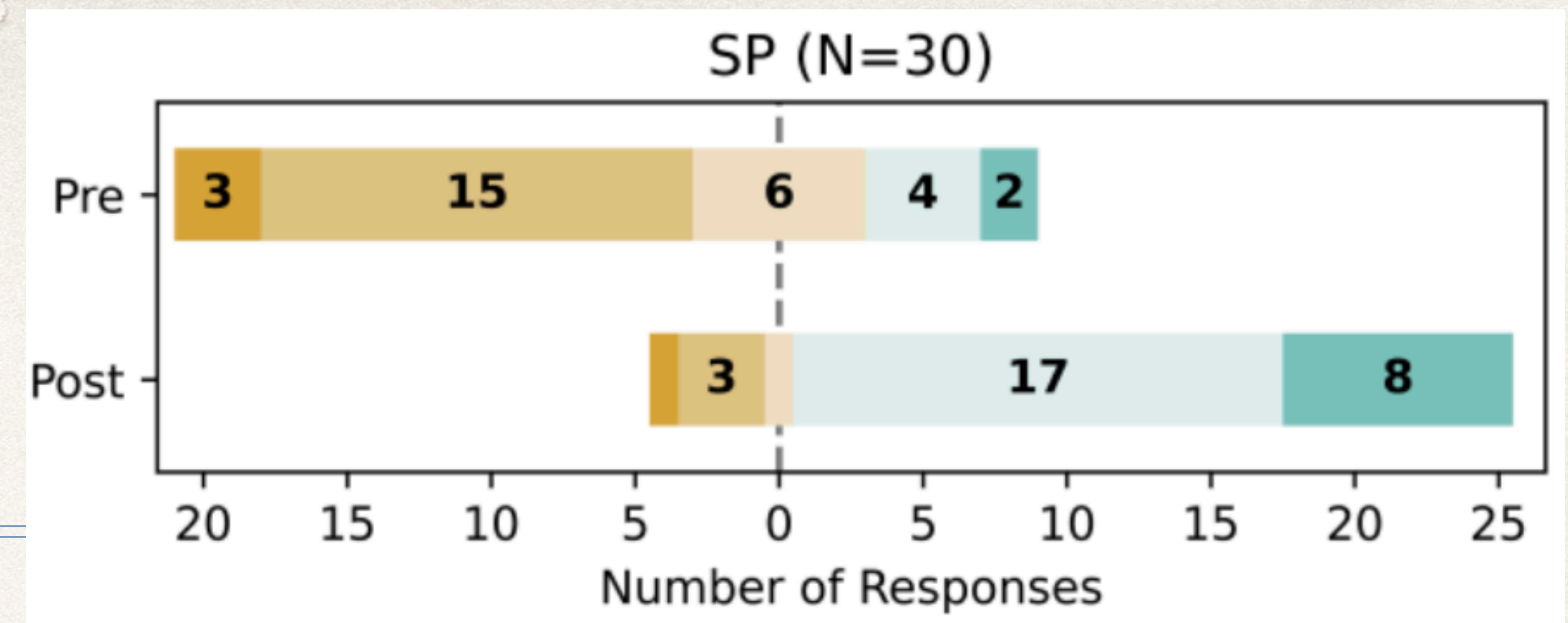
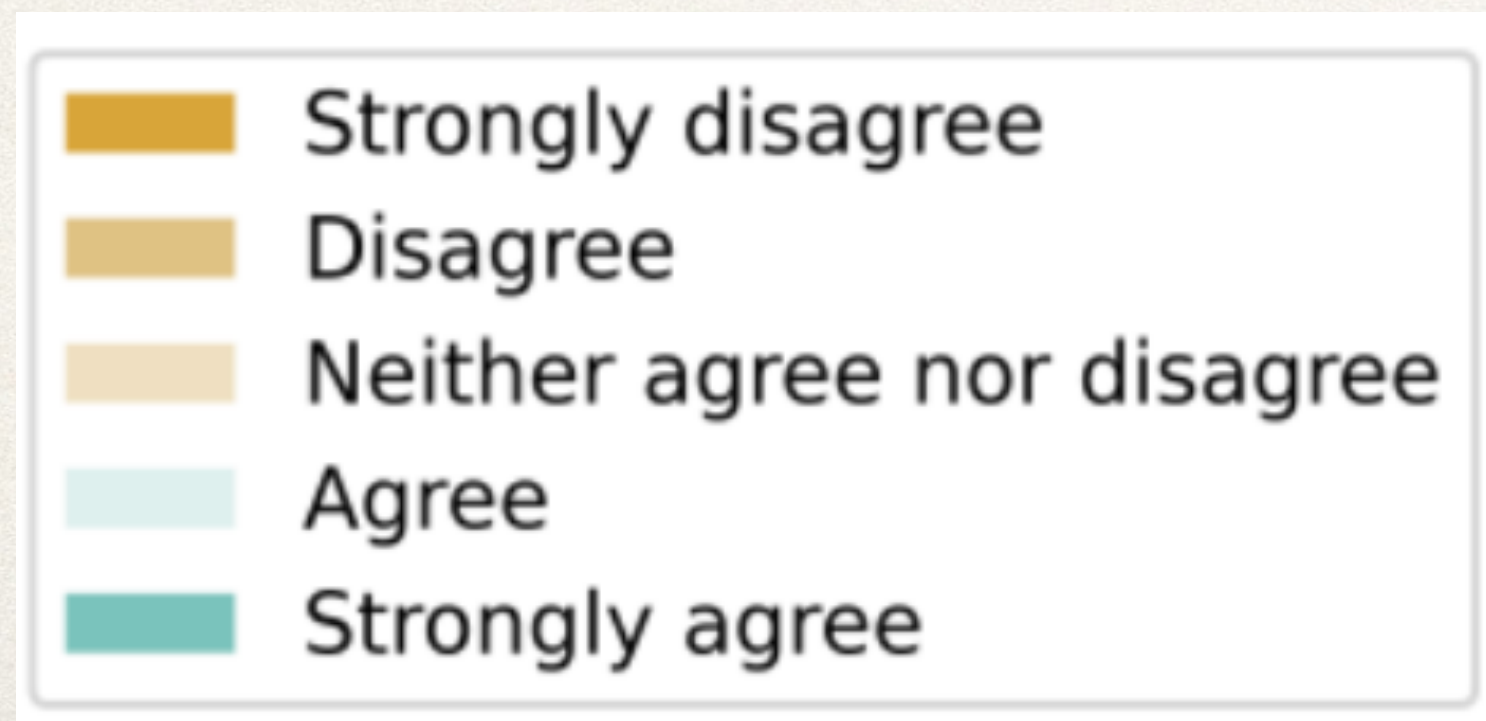


Findings — Identity

- ❖ 5-point Agree-Disagree Likert scale: “I can act as an accessibility ally for my team”
- ❖ 90+% ‘agree’ or ‘strongly agree’ in the post-survey

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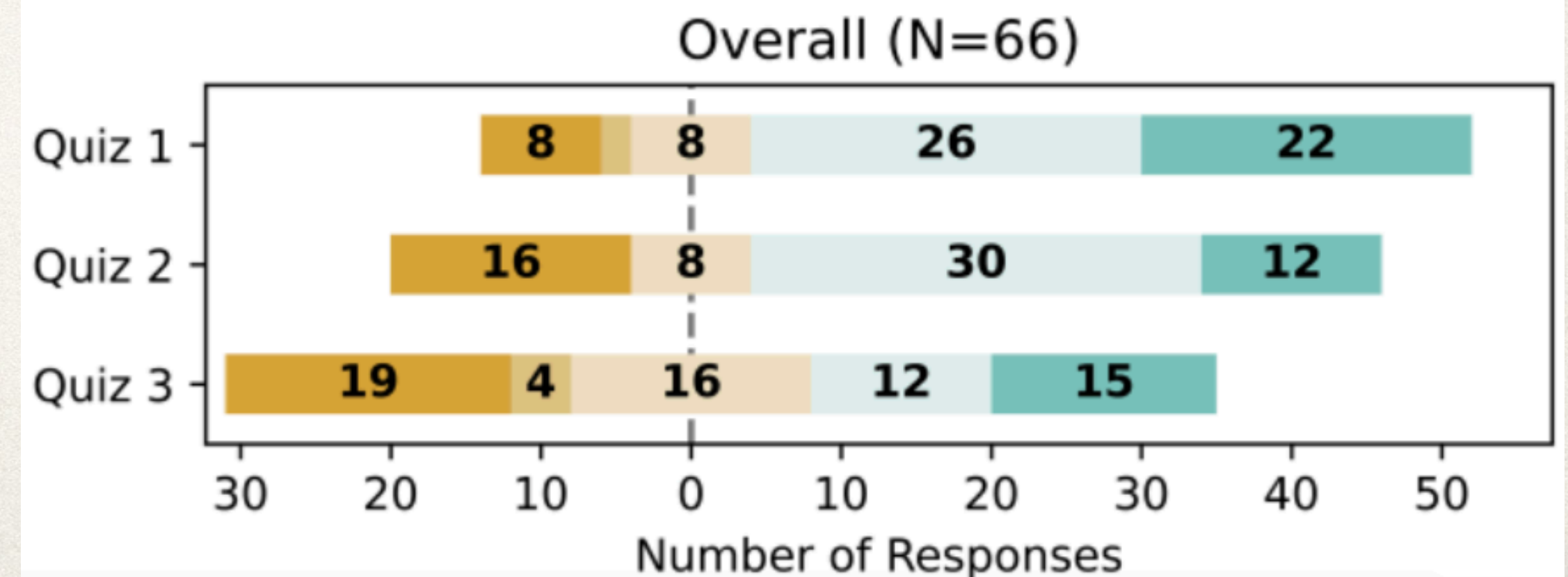
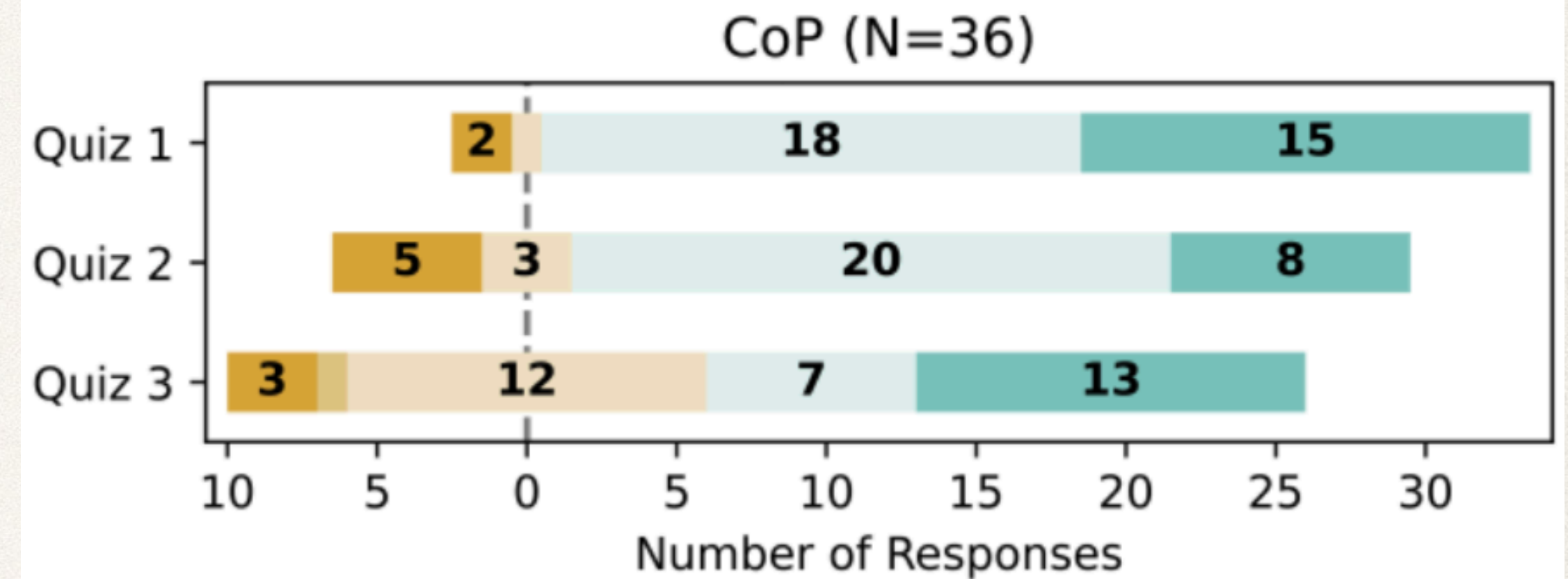
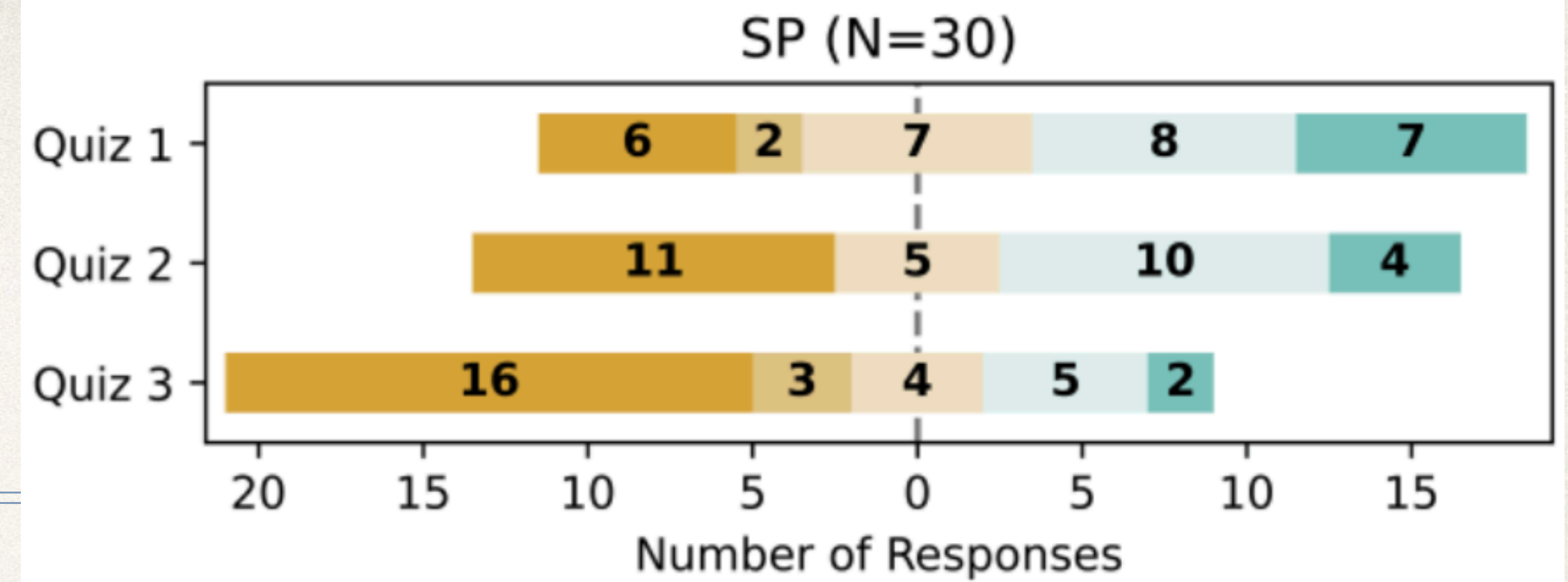
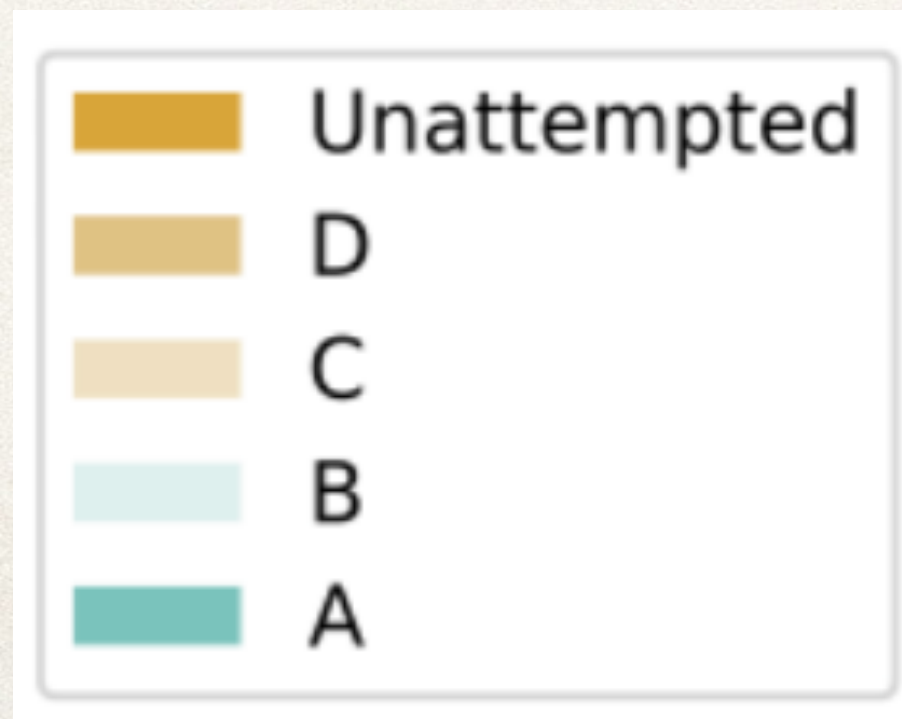


Findings — Quizzes

- ❖ Three 30-min quizzes (individual) after each module: Basics, Design, and Development
- ❖ Multiple choice questions
- ❖ Less 'drop outs' and better grades in CoP

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- ❖ Audit an internal, deprecated web app
- ❖ Experts had identified 30 issues
- ❖ Assignment (pre and post)
 - ❖ Identify accessibility issues
 - ❖ Corresponding WCAG guideline
 - ❖ Screenshot/video

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 - ❖ Corresponding WCAG guideline
 - ❖ Screenshot/video
- ❖ Assessment: max 150 pt, 5 for each issue
- ❖ Correctness, level of documentation, recommended fix
- ❖ Gain score analysis
 - ❖ Pre – no difference across SP / CoP
 - ❖ Post – Significantly more avg gain in CP (46.88) than SP (20.45); Mann Whitney U test $p < .05$

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Open-ended feedback

- ❖ “I got to learn from others, and they are a ping away to support me.”
- ❖ “I realised that what I knew before the course about accessibility was very little. I learned a lot of important pointers... I will put them to use in future development.”
- ❖ A female participant who identifies as a disabled person: “As a participant with cognitive differences, I’ve often felt left behind in training programs. This experience was different – it was truly inclusive, and I felt like an equal participant, and the informal setup made me feel at ease.”

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CoP framework is useful in teaching topics like accessibility

- ❖ Fostered identity!
- ❖ Many CoP participants continued their learning beyond the cohort through the *community* they developed.
- ❖ Fewer drop-outs, better learning

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Role-specific content can be more useful

- ❖ Designers were overwhelmed by the technical details
- ❖ Developers were not much interested in the design issues

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Org-specific examples than generic ones

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Emphasise the *Why* more than the *How*

- ❖ Showing who benefits from that and the difference it can make – can make a difference!
- ❖ Engage with potential end-user PWDs

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Involve PWDs in training instead of simulations

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Gamification can help

- ❖ Crosswords and puzzles at the GAAD event kept people engaged
- ❖ Future work: Serious games for teaching accessibility to students and software professionals (Partha's PhD)

Limitations

- ❖ Limited to one org
- ❖ Small N
- ❖ CoP participants were selected based on 'more time availability'
- ❖ CoP needs additional resources and expertise

Summary

- ❖ We used the CoP Framework to teach accessibility concepts and techniques to a self-selected group of professionals.
- ❖ Results are encouraging – mainly in terms of developing identity / belongingness.
- ❖ Lessons learned can be helpful in the SE community with or without the CoP framework.

Thank you!

Reach out for collaborations or just casual conversations!

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