

Assessment of Peer Mentoring of Teams in a First-Year Design-Build-Test-Communicate Class

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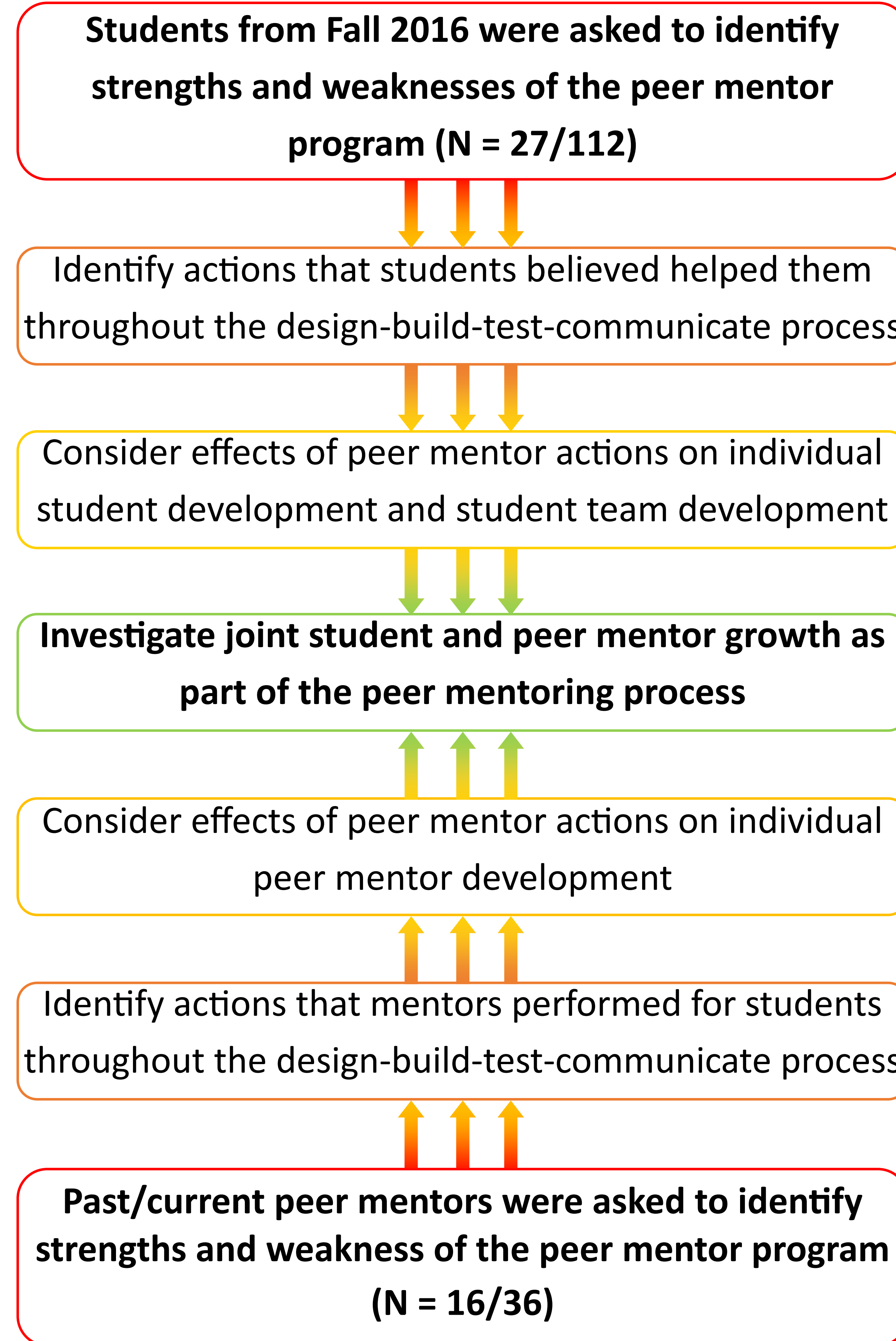
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Introduction

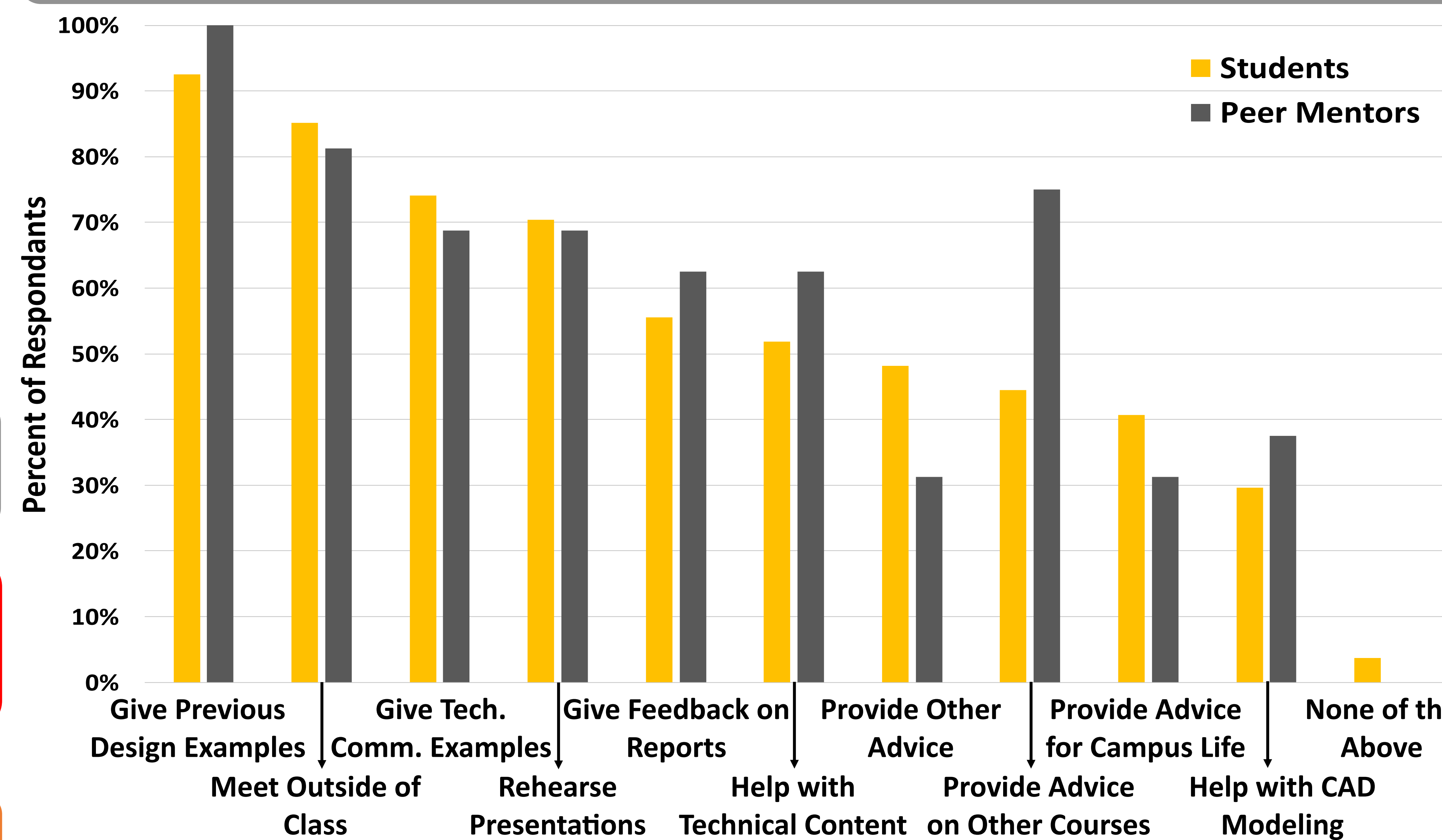
In *Introduction to Engineering: Underwater Vehicle Design*, students work in teams of four or five students to design, build, and test two underwater vessels, while peer mentors recruited from former students of the course help to guide design decisions and provide feedback on the design and communication process.

Two Qualtrics surveys were designed to collect information from students and peer mentors

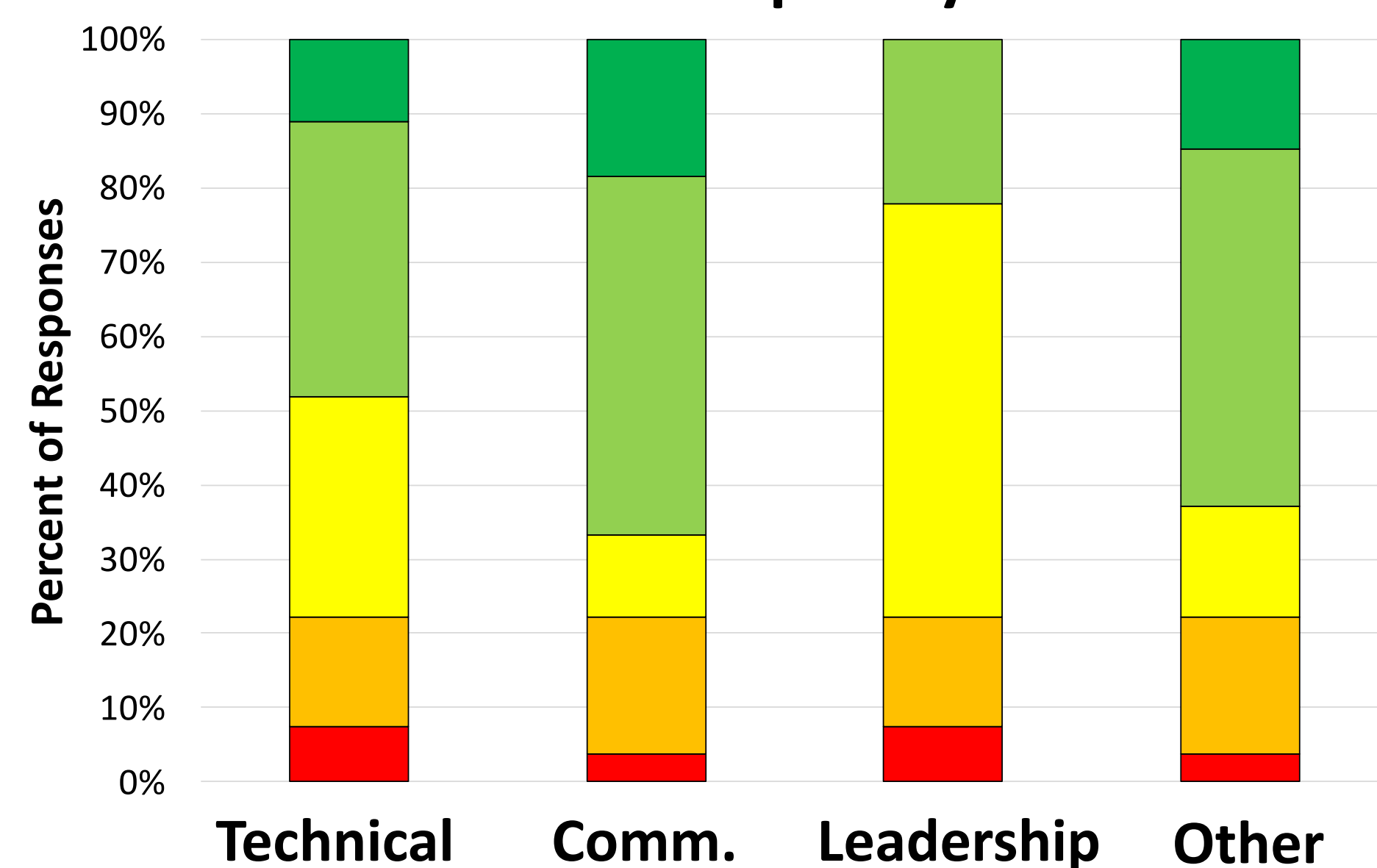
Students



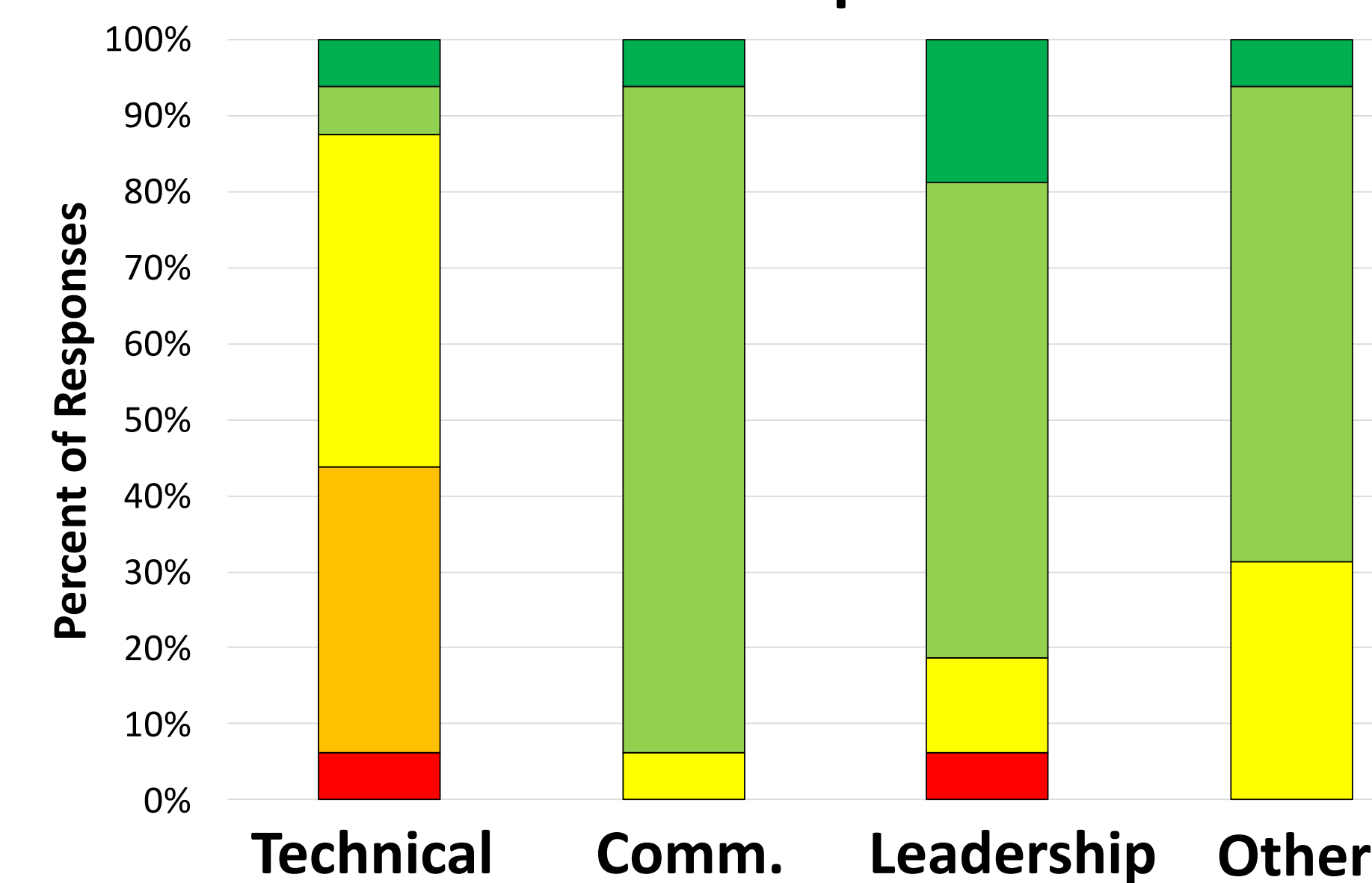
Resources Peer Mentors Provided for Students, and Skills Developed Throughout the Peer Mentor Process, As Reported By Peer Mentors and Students



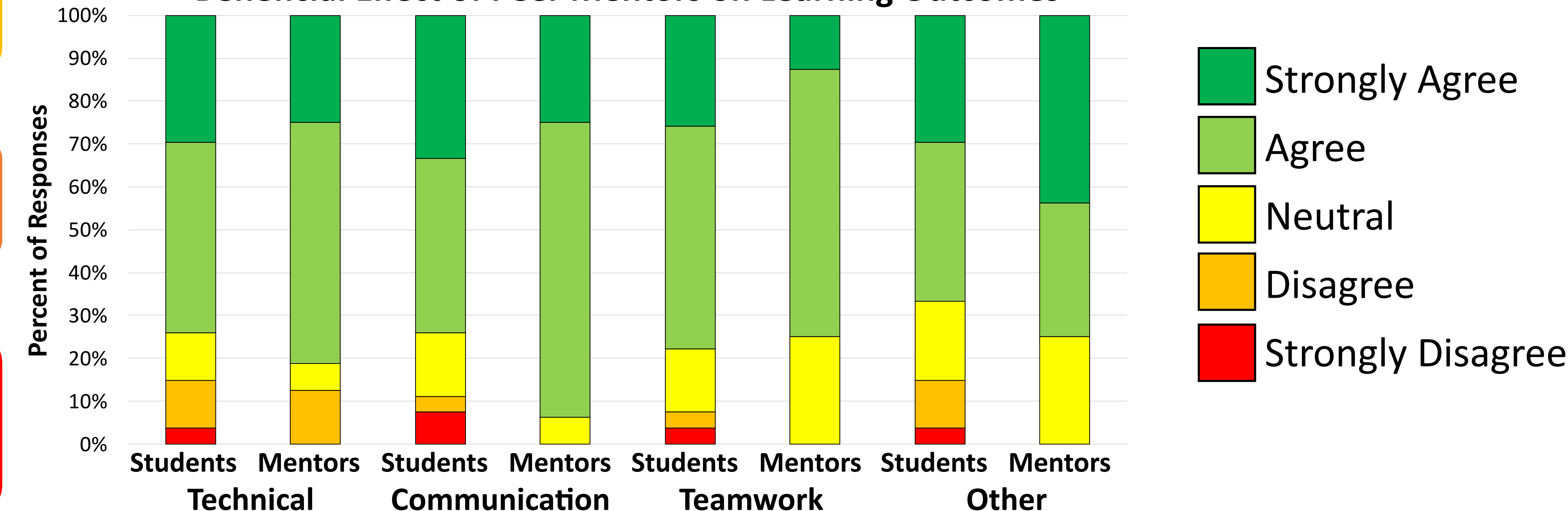
Student Skills Developed By Peer Mentors



Mentor Skills Developed From Mentoring



Beneficial Effect of Peer Mentors on Learning Outcomes



Student/Mentor Feedback

Peer mentors developed leadership and communication skills

- “My communication and creative skills were developed when assisting the new students through the design and build portions of the course.” - **Peer Mentor**
- A skill gained was “learning when to give input and when to let them figure it out on their own.” - **Peer Mentor**

Peer mentors had significant impacts on teamwork, such as:

- “Keeping the team directed towards our main goal, even when members of the team such as myself seemed inclined to pursue insignificant tangents to the main design.” - **Student**
- “Facilitation of communication for equality of work and ideas.” - **Student**

Overall, having a peer mentor can change student team performance and success

- “Peer mentors are well equipped to be able to really make a difference in the attitude and performance of their teams.” - **Student**
- “The most significant impact that my peer mentor had on my team was that he met with us many times outside of class.” - **Student**
- When a peer mentor was not present, students reported feeling “somewhat stranded and on our own.” - **Student**

Acknowledgements

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