

E-IDEA Teamwork Initiative



Summary Report | Winter 2021 Workshops

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E-IDEA Objectives

E-IDEA teaches EDI (equity, diversity and inclusion) and Teamwork skills that can be directly applied in Engineering project teams.

In the Winter 2021 semester, E-IDEA partnered with five professors over four departments in the Faculty of Engineering to provide interactive, experiential workshops on the following topics: Conflict and Feedback, Meeting Skills, Personality and Preference, Power and Privilege, Group Development and Project Management, and Collaboration.

E-IDEA is constantly evolving to ensure that students are provided with the highest quality learning experiences. To this end, we solicit feedback directly from students following every workshop. As we support students' learning, we also introduce diverse experiential learning methods to professors, with the intention of including more dynamic ways of teaching and learning in Engineering education.

The following report is a summary of student satisfaction surveys collected throughout the Winter 2021 semester.

Methodology & Approach

Data Collection:

- Students completed non-mandatory forms
 - Average response rate: 85%
 - Student responses are representative of entire class
 - We collected 1 response per student after each workshop

Presentation of Data:

- Student responses are summarized and categorized

Table of Contents

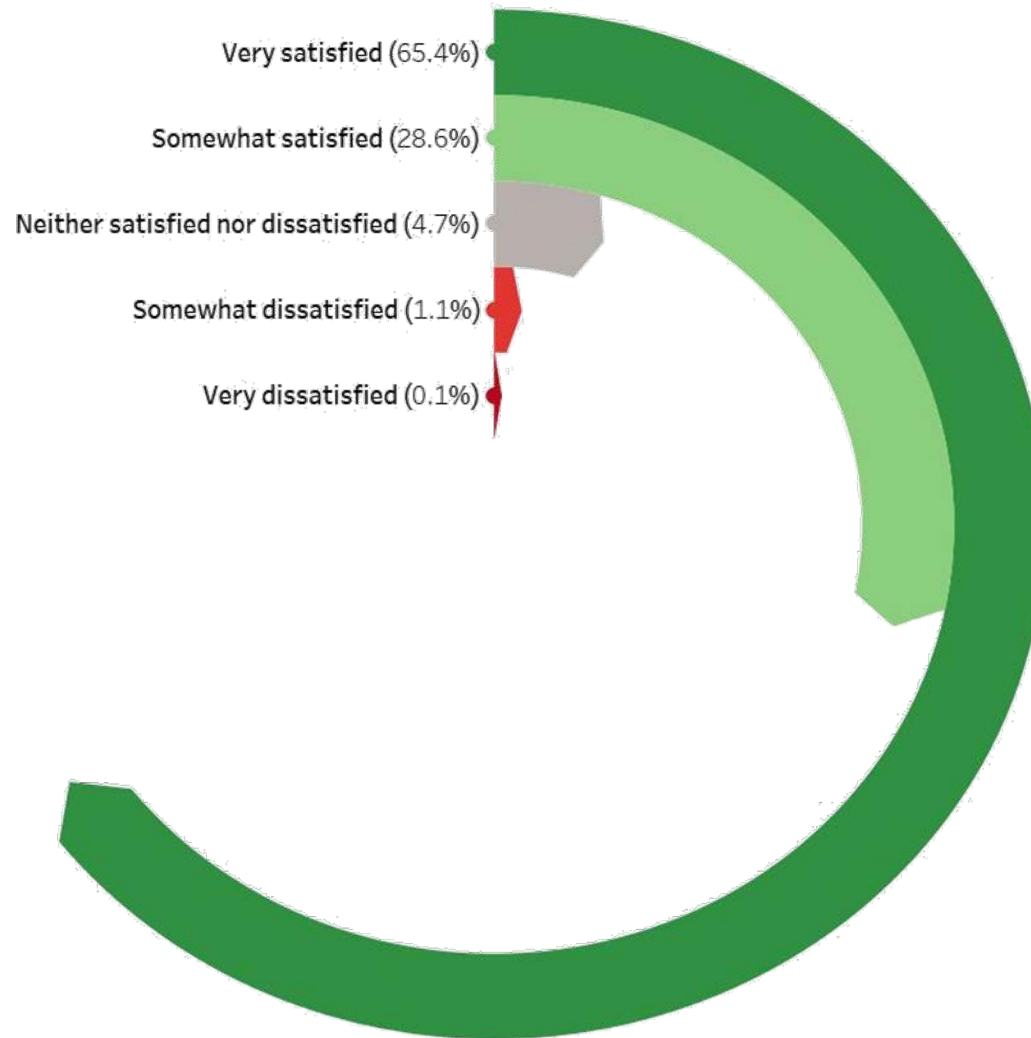
1. [Student Satisfaction Overall5](#)
2. [Student Satisfaction by Workshop Topic.....9](#)
3. [Student Satisfaction by Course.....16](#)
4. [Key Takeaways and Next Steps.....27](#)

Student satisfaction with E-IDEA workshops overall

Workshop satisfaction: Global Snapshot

Overall, 94% of students are satisfied with the workshops

Based on 832 responses



"It was a nice introductory to prepare myself to the upcoming courses that are mainly project-based and to future environments in the field of engineering."

- FACC-100 student;
Effective Meeting Skills

Workshop satisfaction: Delivery

Students enjoy opportunities to engage meaningfully with peers and concepts

Based on 832 responses

Various aspects of workshop delivery:



Essential factors for success:

- An engaging facilitator
- Structured team-discussion time to interact with peers (such as breakout rooms)
 - Time for teammates to get to know one another (e.g. icebreakers, check-in questions)
- Relevant supporting resources (e.g. videos, examples, exercises)
- Additional & varied opportunities to participate interactively
 - Q&A, polls, role-playing exercises

E-IDEA
Teamwork
Initiative:
Appreciating
EDI content

"I was happy that these topics were covered in the engineering faculty. It means a lot to me that people are at least aware of these issues and it shows the relevance and the impact of these issues."

"As an individual that is part of a minority group, it was very nice to see that other people are actively to help and willing to make an effort to improve equity for everyone. I was also able to gain many insights on what I could do to help other minority groups, such as acknowledging my implicit bias. "

- FACC-100 Students;
Power, Privilege, Implicit Bias

Student satisfaction with E-IDEA workshops by topic

Each course that E-IDEA partnered with received three of the following six workshops over the Winter 2021 semester. Student feedback will be used to improve current workshops and to inform new topics for future workshops.

Conflict & Feedback: Overview

Based on 163 responses

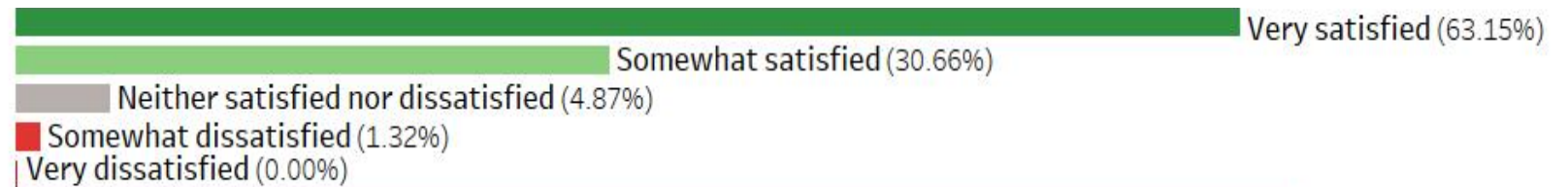
ECSE-223 (02/16/21)

MIME-452 (01/22/21)

CHEE-491 (02/01/21)

MECH-500 (02/25/21)

94% of students surveyed were very or somewhat satisfied with the Conflict & Feedback workshop.



"It allowed us to reflect on how we were working together thus far and resolve some issues we encountered in how we met to work together."

- ECSE-223 Student

"It would have been better to do this feedback about conflict after the first deliverable since we actually get to do some work in teams."

- ECSE-223 Student

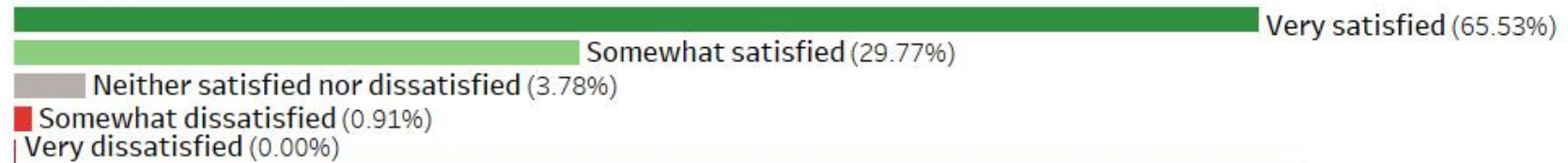
Effective Meeting Skills: Overview

Based on 248 responses

FACC-100 (01/14/21)

MIME-452 (01/15/21)

95% of students surveyed were very or somewhat satisfied with the Effective Meeting Skills workshop.



"I liked it because it makes you pause for a second and step back to really assess the true meaning of communication."

- FACC-100 student

"[I would have liked] more tips on how to deal with team members that do not do work."

- FACC-100 student

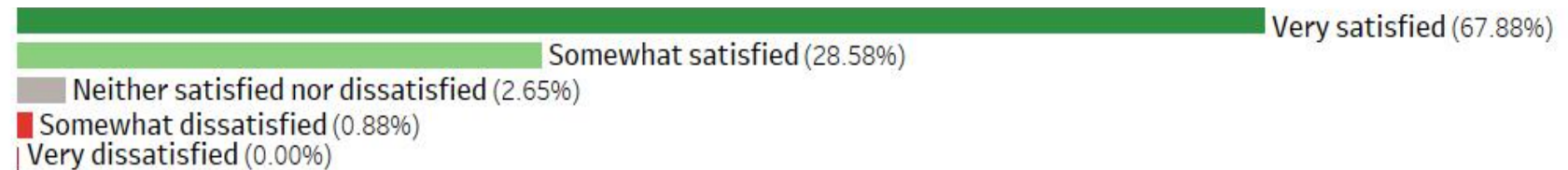
Personality & Preference: Overview

Based on 130 responses

ECSE-223 (03/18/21)

MECH-500 (01/21/21)

97% of students surveyed were very or somewhat satisfied with the Personality and Preference workshop.



"More time for discussion would be nice. Also, mandatory attendance to the session would make the breakout room discussions more satisfying, since having part of the team is less fun."

- ECSE-223 Student

"I loved how values were connected to leadership styles and how values affected teamwork."

- ECSE-223 Student

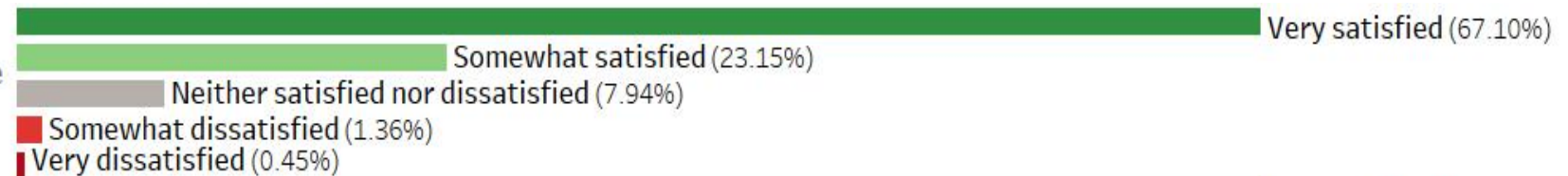
Power, Privilege & Implicit Bias: Overview

Based on 123 responses

FACC-100 (02/04/21)

CHEE-491 (02/22/21)

90% of students surveyed were very or somewhat satisfied with the Privilege, Power, and Implicit Bias workshop.



"It made me think about barriers that exist for some people that others might not see at all and the inequalities that lie in the work industry."

- FACC-100 student

"More on how to tackle implicit bias within the team and how to confront team members."

- CHEE-491 student

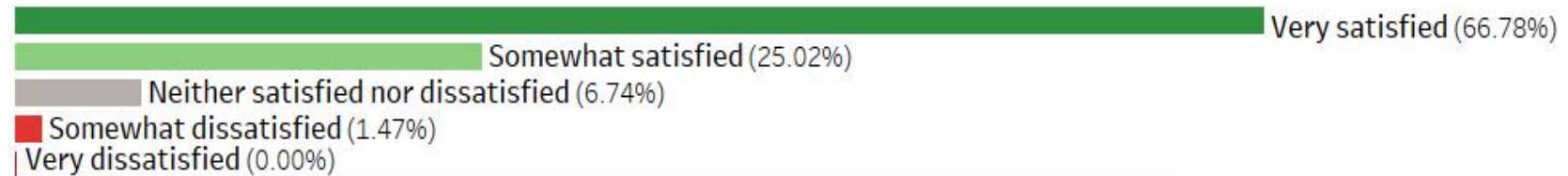
Stages of Team Development & Project Management: Overview

Based on 157 responses

FACC-100 (01/14/21)

ECSE-223 (04/01/21)

93% of students surveyed were very or somewhat satisfied with the Team Development and Project Management workshop.



"Now I know why teams 'argue' a bit after the 'honeymoon' phase."

- FACC-100 student

"If we could have gone more into depth about these team dynamics on a short-term scale, [since] that's what we will be experiencing at school."

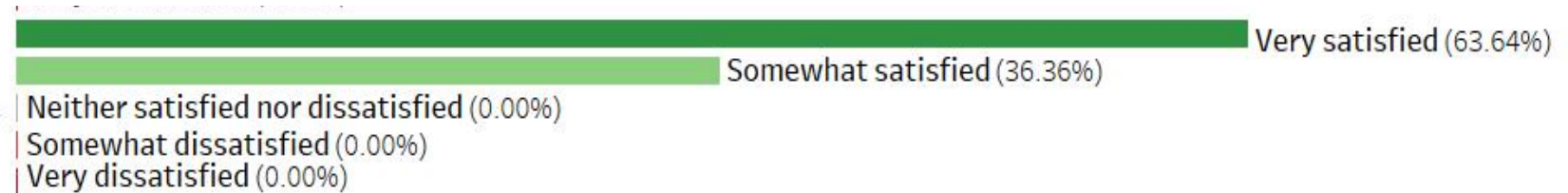
- FACC-100 student

Task vs. Process: Overview

Based on 11 responses

MECH-500 (02/09/21)

100% of students surveyed were very or somewhat satisfied with the Task vs Process workshop.



Having a safe space to discuss how we feel in our group and having the time to really look in the mirror and see our failures or successes as a group.

-ECSE-223 student

[It would be nice to] learn more about how to designate roles in a group to be more effective.
- ECSE-223 student

This is probably the only time in this semester that we will get to be creative.

-ECSE-223 student

Student satisfaction with E-IDEA workshops by course

Students were asked to identify their favourite aspects of the workshops, as well as suggested areas of improvement. This data will be used to improve current workshops and will be incorporated into the design of new workshops.

FACC-100

Introduction to the Engineering Profession

"Honestly, these workshops have gotten better and better through time."

- FACC-100 student;
Stages of Team Development

Based on 379 responses

What did students appreciate most about the workshops?

16% of students appreciated:

- Connecting workshop content to their team
- Applying theories and models to personal & team experiences

Applied Learning

Student-to-Student Interaction

Supporting Resources

33% of students appreciated:

- Time with their team (in Zoom breakout rooms)
- Structured discussions

38% of students appreciated:

- Videos such as TED Talks
- Media articles on popular psychology, workplace trends, and best practices

FACC-100

Introduction to the Engineering Profession

"I feel like we should have more real life examples/applications."

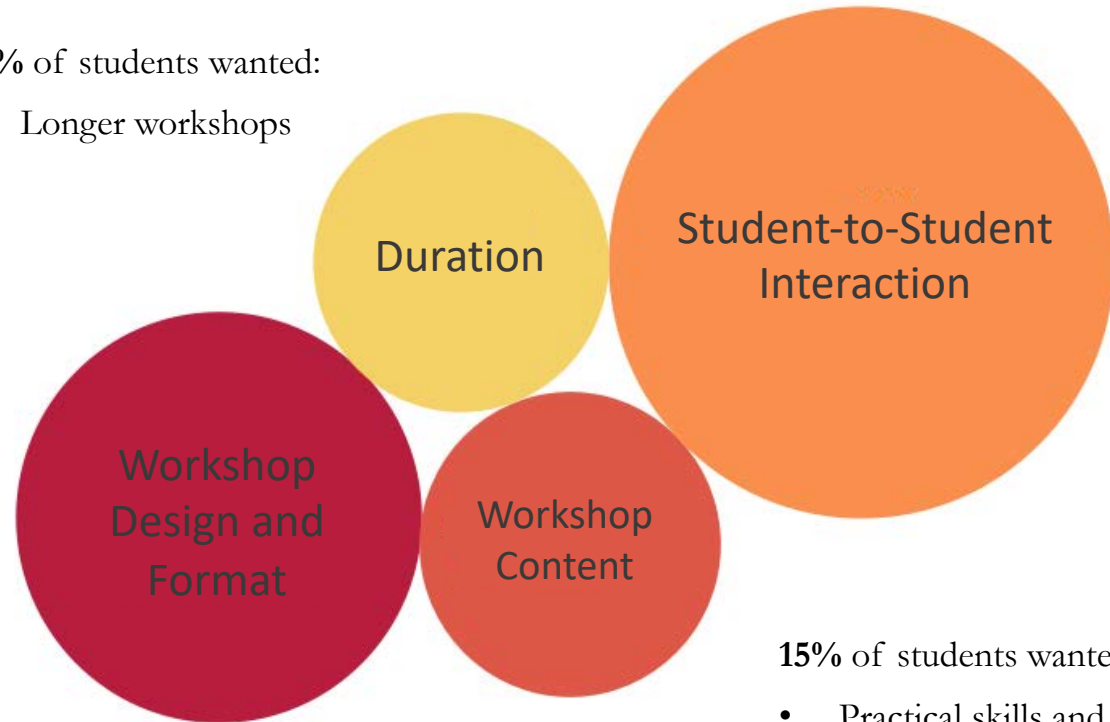
- FACC-100 student;
Effective Meeting Skills

Based on 379 responses

What improvements did students suggest?

14% of students wanted:

- Longer workshops



42% of students wanted more:

- Time in breakout rooms
- Large-group discussions

27% of students wanted more:

- Opportunities to interact with the facilitator
- Depth into theoretical concepts
- Options to attend in-person workshops

15% of students wanted more:

- Practical skills and tips
- Real world applications
- Concrete examples
- Case studies

MECH-500

Selected Topics in Mechanical Engineering

"[I appreciated] Faye's enthusiasm and engaging structure."

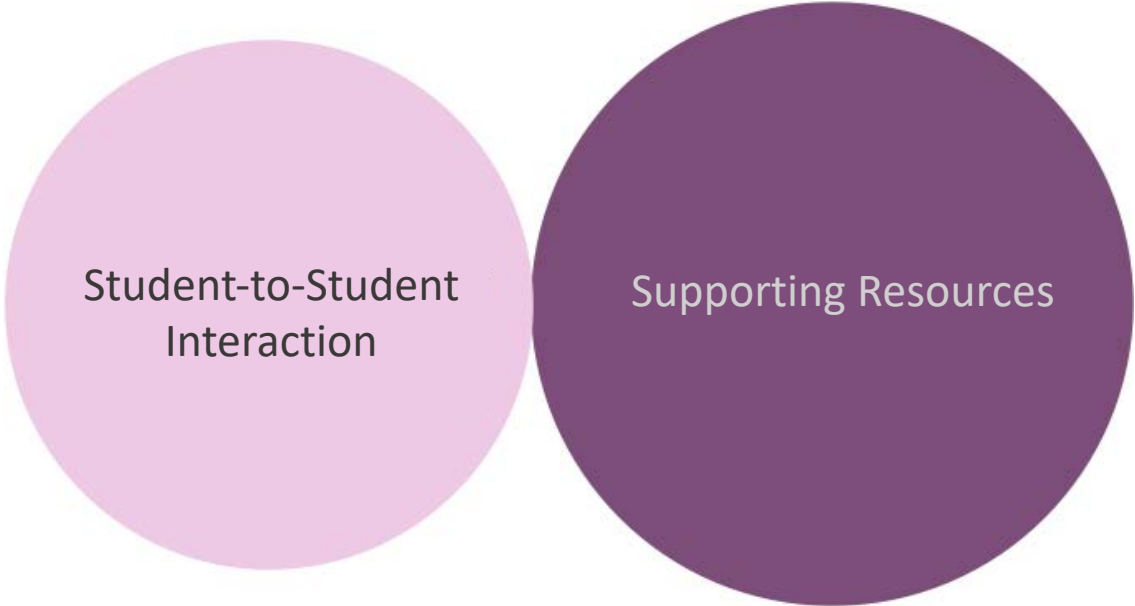
- MECH-500 student;
Personality & Preference

Based on 49 responses

What did students appreciate most about the workshops?

49% of students appreciated:

- Learning to give constructive feedback
- The Barrett Values Assessment
- TED Talk videos
- Working collaboratively on Jamboards



Student-to-Student
Interaction

Supporting Resources

38% of students appreciated:

- Hearing diverse perspectives from peers
- Sharing assessment results
- Linking individual values to team behaviour

MECH-500

Selected Topics in Mechanical Engineering

"I would like the instructor to give some feedback during the breakout rooms."

- MECH-500 student;
Personality & Preference

Based on 49 responses

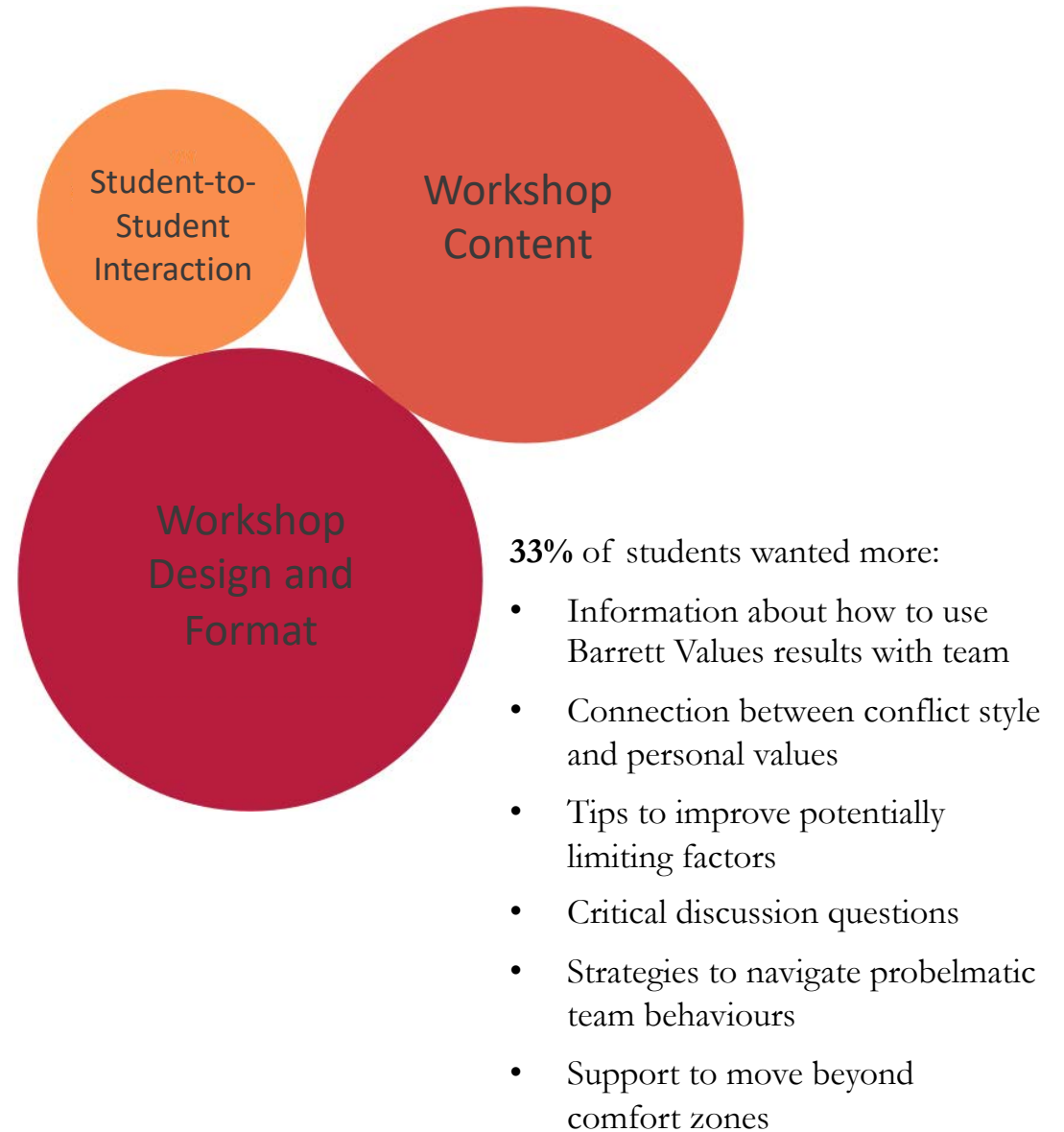
What improvements did students suggest?

13% of students wanted more:

- Time to interact with team
- Guidance on speaking openly with peers

38% of students wanted:

- To complete the personal values assessment before the workshop
- Clearer instructions for breakout room discussions
- More direct interaction with facilitator



33% of students wanted more:

- Information about how to use Barrett Values results with team
- Connection between conflict style and personal values
- Tips to improve potentially limiting factors
- Critical discussion questions
- Strategies to navigate problematic team behaviours
- Support to move beyond comfort zones

MIME-452

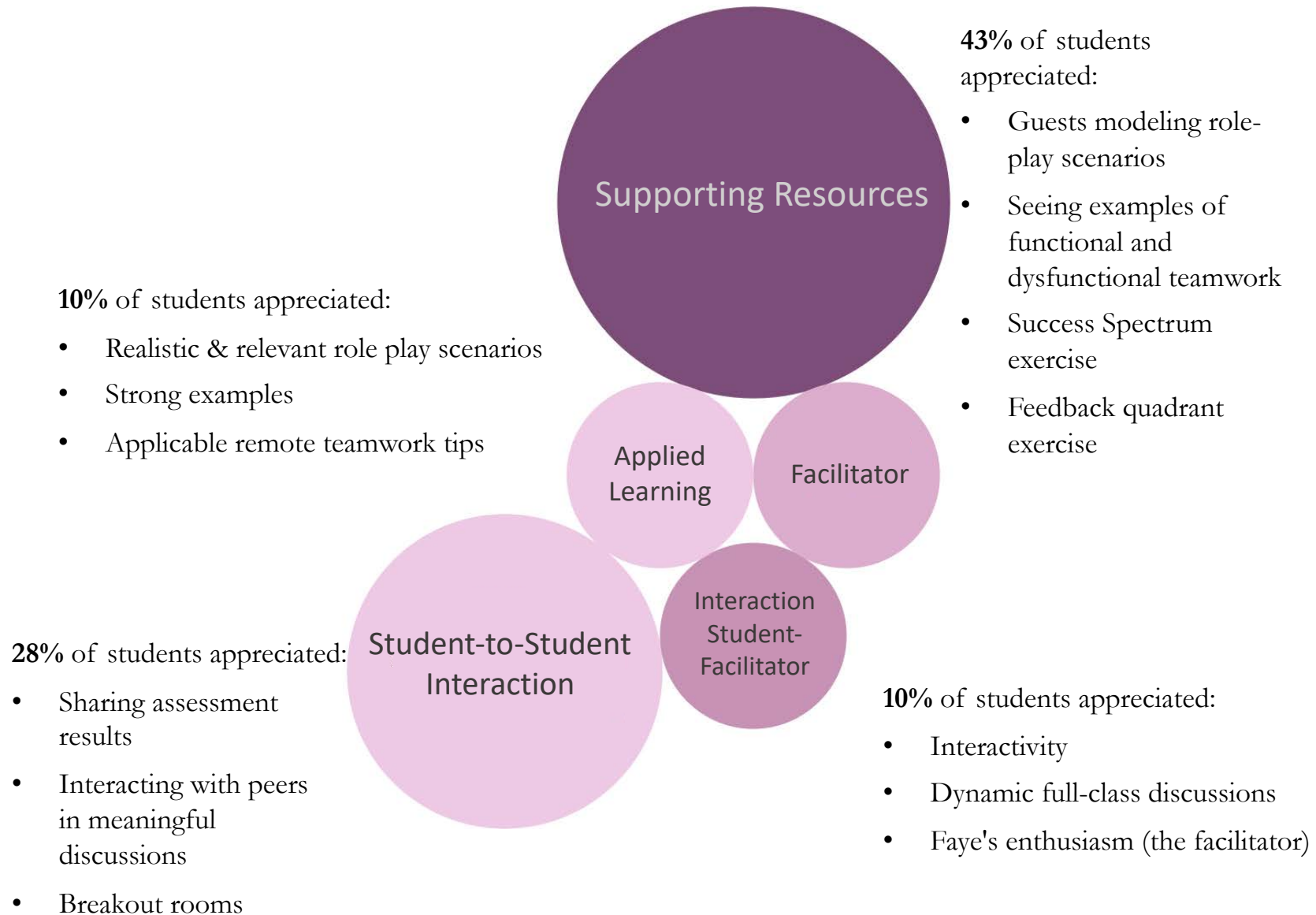
Process and Materials Design

"Talking about something like this is important in order to be aligned right from the beginning."

- MIME-452 Student; Conflict & Feedback Workshop

Based on 39 responses

What did students appreciate most about the workshops?



MIME-452

Process and Materials Design

"It would be cool to hear from Industry people or upper-year students (closer in age and who can relate to your life experiences!)."

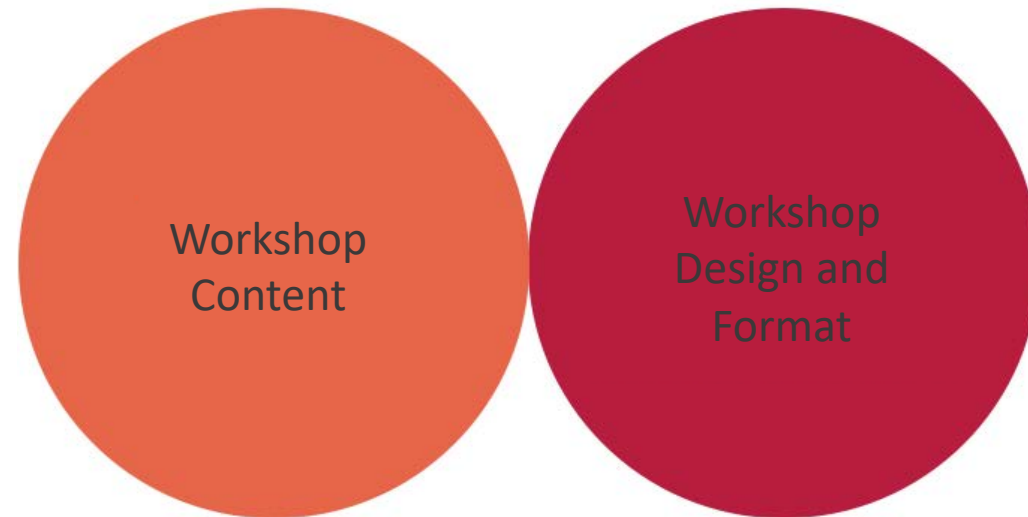
- MIME-452 Student;
Focus Group

Based on 39 responses

What improvements did students suggest?

43% of students wanted more:

- Interactivity
- Live role-play scenarios
- Guest speakers
- Examples of conflict styles in action
- Mandatory attendance to increase full-team participation



43% of students wanted to learn:

- How to receive critical feedback
- How to collaborate across timezones
- "Icebreaker" tips & strategies

ECSE-223

Model-Based Programming

"I liked the idea of discussing our strengths and values with our teammates."

-ECSE-223 Student;
Personality & Preference

Based on 329 responses

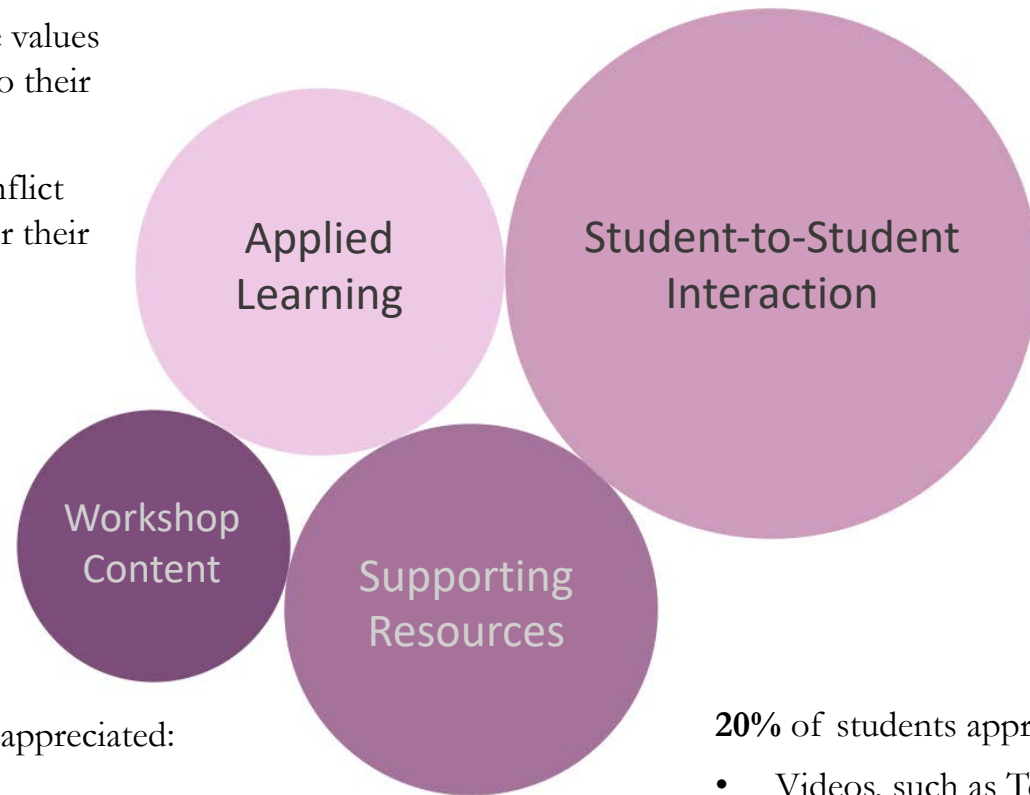
What did students like most about the workshops?

20% of students appreciated:

- Applying the values assessment to their teams
- Learning conflict resolution for their teams

41% of students appreciated:

- Breakout room discussions
- Team building



11% of students appreciated:

- Interactivity
- Learning how to give and receive feedback
- Understanding their leadership style

20% of students appreciated:

- Videos, such as Ted Talks
- Hands-on exercises
- Personal assessment tools

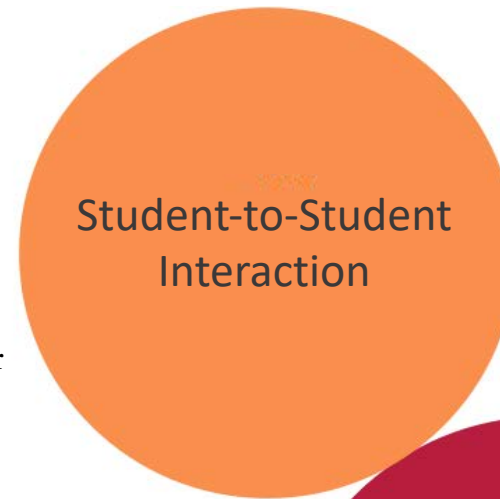
ECSE-223

Model-Based Programming

What improvements did students suggest?

31% of students wanted:

- More time in Breakout rooms
- Specific discussion points in their breakout rooms



20% of students wanted:

- Practical conflict resolution skills
- Concrete, real-world examples
- Clearer links between workshop content and course



37% of students wanted:

- Role playing exercises
- More interactivity
- Clarity on exercise instructions

"I wish that we could have learned how to deal with opposing values within our team."

- ECSE-223 Student;
Personality & Preference

CHEE-491

Instrumentation and Measurement

"[I liked] the discussions and the eye-opening topics ."

- CHEE-491 Student;
Power & Privilege

Based on 36 responses

What did students like most about the workshops?

10% of students appreciated:

- Applicability of workshop content to their groups

Applied Learning

Student-to-Student Interaction

Supporting Resources

39% of students appreciated:

- Breakout room discussions

37% of students appreciated:

- Videos, such as Ted Talks
- In-class exercises
- Theoretical models

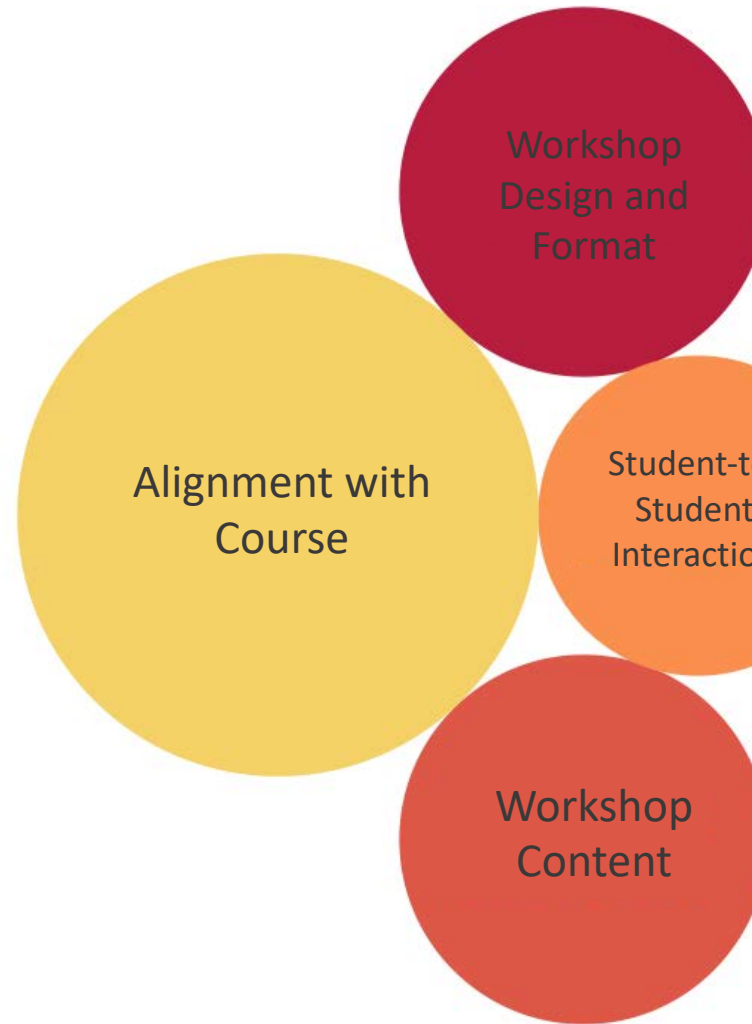
CHEE-491

Instrumentation and Measurement

What improvements did students suggest?

40% of students wanted:

- Workshops offered earlier in their degree
- Clearer links to engineering



20% of students wanted:

- More time for new concepts and exercises

15% of students wanted:

- More time in Breakout rooms

20% of students wanted:

- Tips on conflict resolution in groups
- Real-world examples

"[It would be nice if the workshop] added situations that engineers face in the workplace."

- CHEE-491 Students;
Power, Privilege, Implicit Bias

Based on 36 responses

Key Takeaways and Next Steps

Key Takeaways

- Students appreciate both the content and delivery (the *what* and the *how*) of E-IDEA's Teamwork & EDI workshops
- Level of satisfaction with E-IDEA workshops increased with level of study
 - U1 students want to learn about expectations in professional engineering environments
 - U3 students want to learn about applying teamwork and EDI skills in their courses, assignments, and to improve their general wellbeing
- Late-stream students identified a need for Teamwork & EDI workshops earlier in their degree
- Early-stream students identified a need for Teamwork & EDI workshops that coincide with their course-based group work

Next Steps

- Develop a long-term plan to align workshop delivery with student's learning needs throughout the entirety of their Engineering program.
- Evaluate workshop participation in alignment with the Canadian Engineering Accreditation Board's (CEAB) requirements.
- Infuse workshops with more real-world, engineering-related examples to supplement teamwork and EDI training.
- Include increased time for peer discussion and interactive exercises to practice the skills and concepts presented.
- Whenever possible, we will invite guest speakers to connect coursework with fieldwork.
- Depending on Covid-19 social distancing measures, workshops will be held in person as of the Fall 2021 semester.

To learn
more or to
get involved:

Contact us at
eidea.engineering@mcgill.ca

