

# Combining mastery learning techniques with psychological safety practices improved students' teamwork skills and comfort levels

## A Multimodal Approach to Enhancing Cognitive and Affective Teamwork Domains: Integrating Psychological Safety and Mastery Learning in Business Writing Instruction

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### Background:

Psychological safety in teams influenced by:

- Positive leadership, work design, team climate (Frazier et al., 2017)
- Mutual respect, care, shared input (McKinsey & Company, 2021)

### Rationale:

Students with thorough understanding of course concepts may (1) Feel more confident in team settings and (2) Contribute more effectively to team projects (Table 1)

### Research Question:

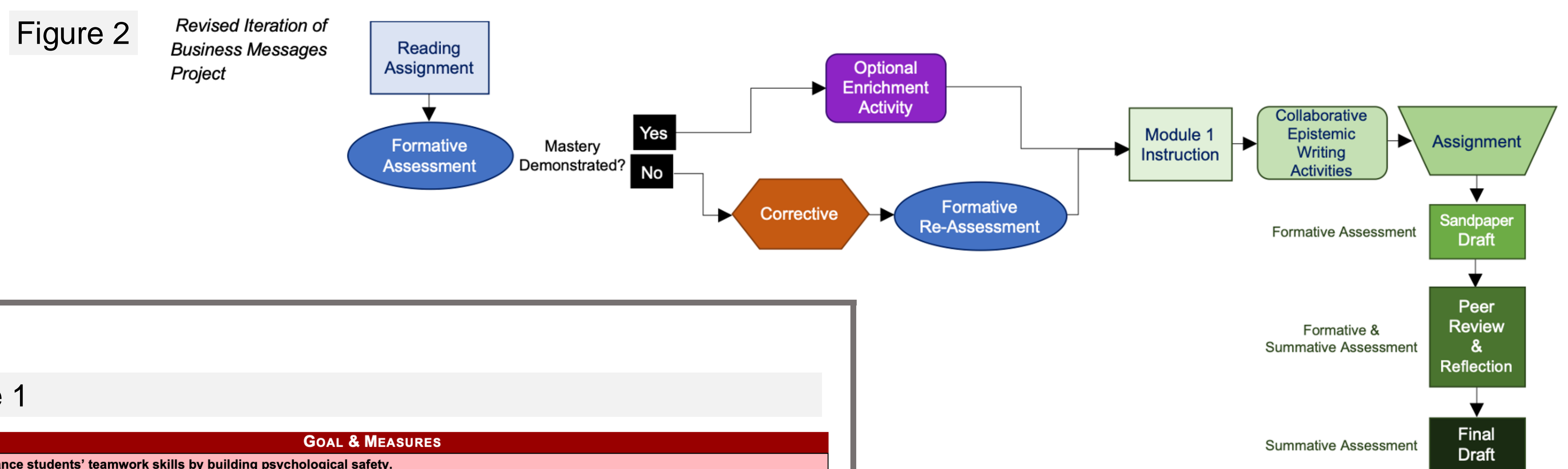
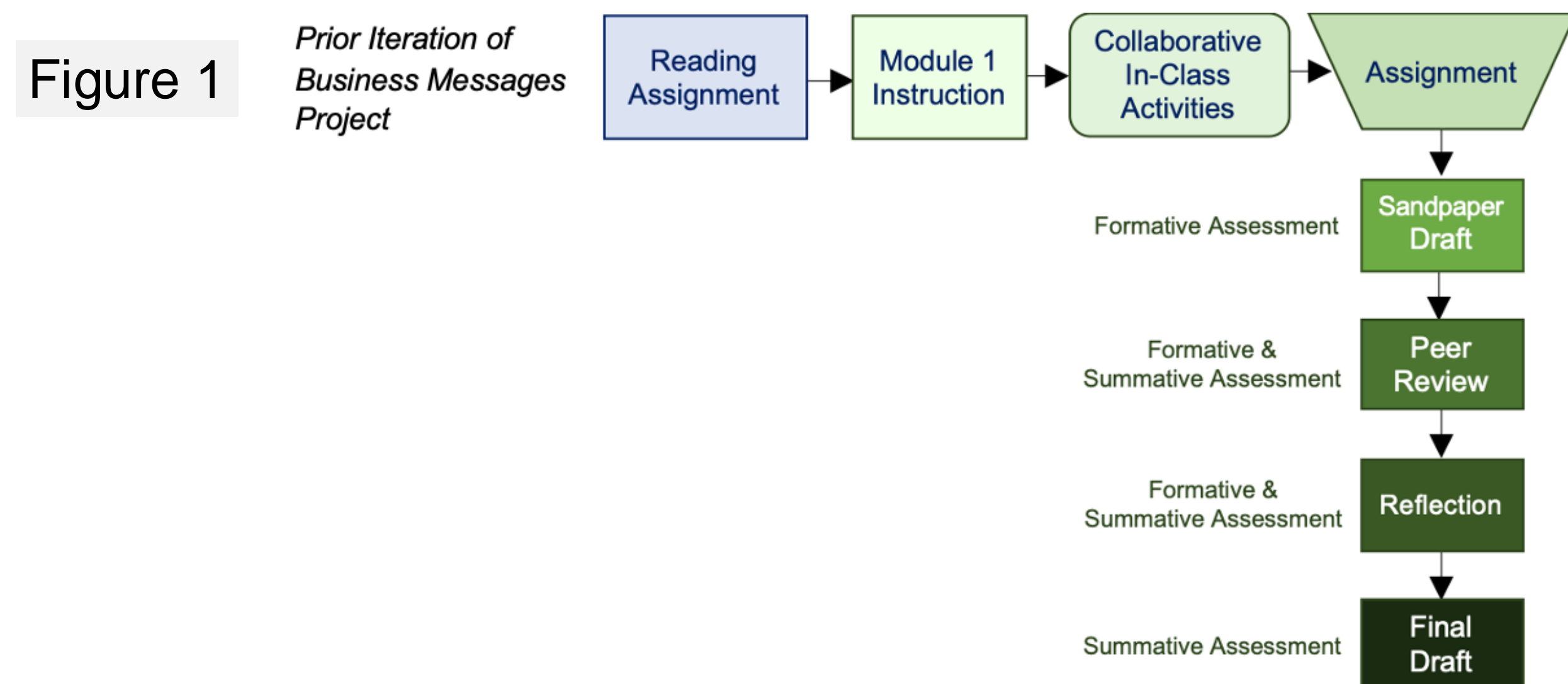
- Can mastery learning enhance psychological safety in team settings?

### Methods:

- Course Structure: • 200-level required business writing course • Business Messages Project (31% of grade)
- Focus on individual skills, then teamwork (Figure 1)
- Mastery Learning Approach: Implemented to enhance psychological safety • Emphasis on thorough understanding of course concepts
- Complete low-stakes pre-class quizzes
- Participate in collaborative in-class activities • Reflect on past team experiences (Figure 2)
- Pre- and post-test to measure psychological safety (Week 1 and 15, n=70)
- Teamwork assessment (n=70)

### Findings:

- Teamwork Cognitive Assessment:
  - Excellent: 42.9%
  - Satisfactory: 40.0%
  - Unsatisfactory: 17.1%
- Formative assessments increased classroom psychological safety (Figure 3)
- Emphasizing "failing forward" improved student collaboration
- High quiz scores (90.5% average) led to low usage of Correctives and Optional Enrichment Activities



**Table 1**

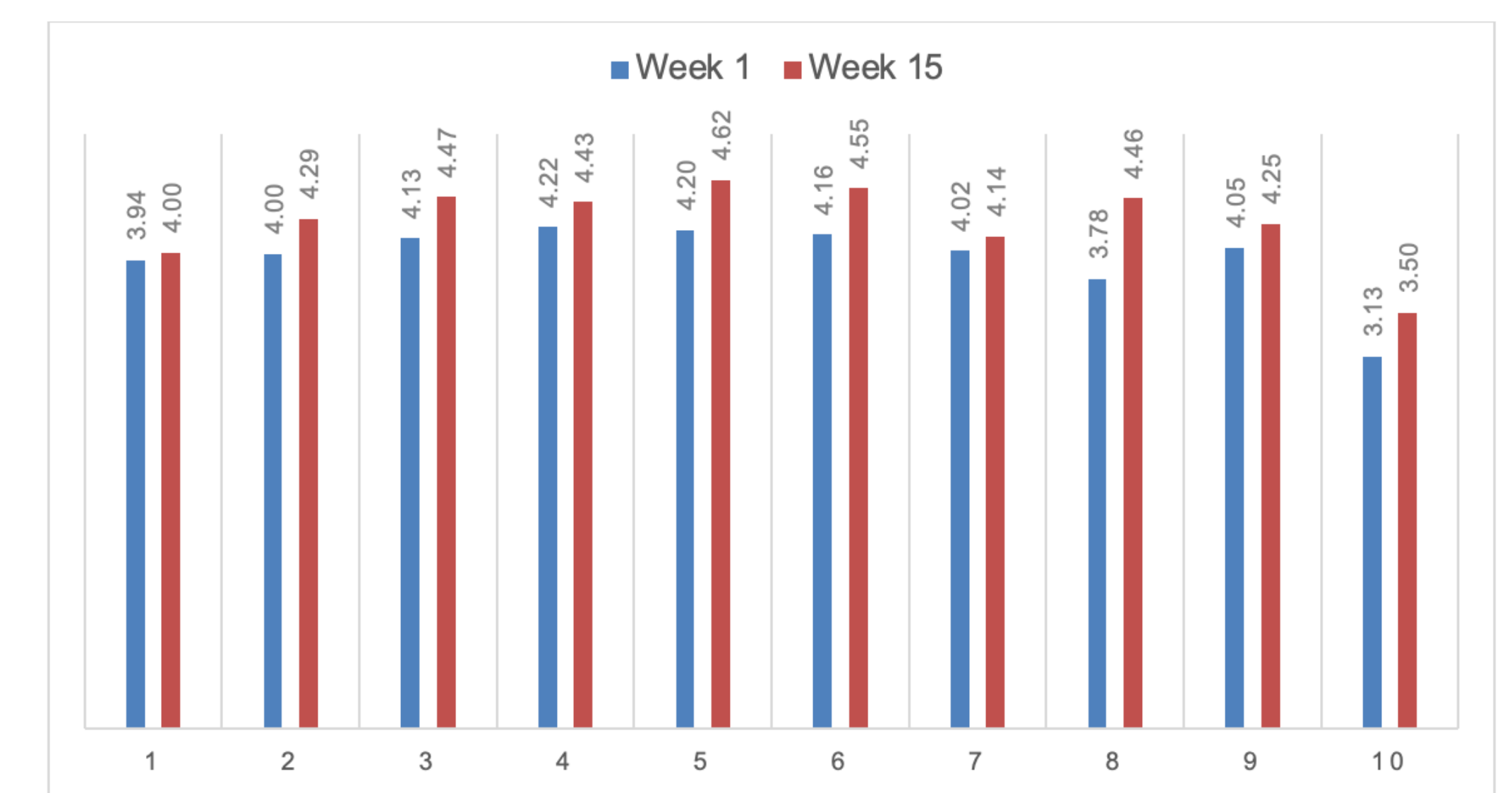
GOAL & MEASURES					
<b>GOAL: Enhance students' teamwork skills by building psychological safety.</b>					
Outcome 1.1	Students completing formative assessments will report improved psychological safety scores thereby enabling them to collaborate within team environments to deliver effective messages (BUS-C204 Course Goal)				
<b>Psychological Safety Survey</b> Summative, Direct Measure					
Edmondson and Wolley's <sup>13</sup> psychological safety survey was adapted for this anonymous measure. For the Pre-Test, students were asked to reflect on their most recent team experience and answer the questions using a five-point Likert scale. The Post-Test asked students to use the same five-point Likert scale and respond to the questions based on their experiences within our class. Students completed the Pre-Test the first day of class and the Post-Test in Week 15 via Canvas.					
Assessment Method	<table border="0"> <tr> <th>Pre-Test:</th> <th>Post-Test:</th> </tr> <tr> <td> <ol style="list-style-type: none"> <li>On this team, it was easy to discuss difficult issues and problems.</li> <li>I was not or would not have been criticized or retaliated against if I admitted to making a mistake.</li> <li>It was easy to ask a team member for help.</li> <li>I felt safe offering new ideas, even if they were not fully formed.</li> <li>Members of this team never rejected others for being different or left anyone out.</li> <li>My teammates welcomed my ideas and gave them time and attention.</li> <li>Members of this team could easily describe the value of others' contributions.</li> <li>On this team, people talked about mistakes and ways to improve and learn from them.</li> <li>Team members felt safe to raise concerns they had about team processes, plans, or decisions.</li> <li>Our team valued the process of completing the task more than the final outcome/grade.</li> </ol> </td> <td> <ol style="list-style-type: none"> <li>In this class, it is easy to discuss difficult issues and problems.</li> <li>In this class, I am not criticized or retaliated against if I admit to making a mistake.</li> <li>In this class, it is easy to ask a group member or instructor for help.</li> <li>In this class, I feel safe offering new ideas, even if they weren't fully formed.</li> <li>In this class, students and the instructor do not reject others for being different or leave anyone out.</li> <li>In this class, students and the instructor welcome my ideas and give them time and attention.</li> <li>Members of our class could easily describe the value of students' contributions.</li> <li>In this class, we talk about mistakes and ways to improve and learn from them.</li> <li>In this class, students feel safe to raise concerns they have about processes, plans, or decisions.</li> <li>This class values the process of completing tasks more than the final outcome/grade.</li> <li>Completing the quizzes helped me feel more confident about course concepts and thus more likely to participate in class.</li> <li>Now that you've completed your team project, how comfortable did you feel taking risks and making mistakes in our class? For example, did you feel comfortable offering an answer you weren't sure was correct? Did you feel comfortable submitting in-class activities that weren't proofread due to time constraints, etc. Feel free to also use this space to let me know: (1) What worried you the most in terms of our Team Case Analysis based on past teamwork experiences and/or our specific assignments and (2) if you have any discussion topics, activities, etc. you'd like me to incorporate to help you or others feel more comfortable taking risks and making mistakes in teams.</li> </ol> </td> </tr> </table>	Pre-Test:	Post-Test:	<ol style="list-style-type: none"> <li>On this team, it was easy to discuss difficult issues and problems.</li> <li>I was not or would not have been criticized or retaliated against if I admitted to making a mistake.</li> <li>It was easy to ask a team member for help.</li> <li>I felt safe offering new ideas, even if they were not fully formed.</li> <li>Members of this team never rejected others for being different or left anyone out.</li> <li>My teammates welcomed my ideas and gave them time and attention.</li> <li>Members of this team could easily describe the value of others' contributions.</li> <li>On this team, people talked about mistakes and ways to improve and learn from them.</li> <li>Team members felt safe to raise concerns they had about team processes, plans, or decisions.</li> <li>Our team valued the process of completing the task more than the final outcome/grade.</li> </ol>	<ol style="list-style-type: none"> <li>In this class, it is easy to discuss difficult issues and problems.</li> <li>In this class, I am not criticized or retaliated against if I admit to making a mistake.</li> <li>In this class, it is easy to ask a group member or instructor for help.</li> <li>In this class, I feel safe offering new ideas, even if they weren't fully formed.</li> <li>In this class, students and the instructor do not reject others for being different or leave anyone out.</li> <li>In this class, students and the instructor welcome my ideas and give them time and attention.</li> <li>Members of our class could easily describe the value of students' contributions.</li> <li>In this class, we talk about mistakes and ways to improve and learn from them.</li> <li>In this class, students feel safe to raise concerns they have about processes, plans, or decisions.</li> <li>This class values the process of completing tasks more than the final outcome/grade.</li> <li>Completing the quizzes helped me feel more confident about course concepts and thus more likely to participate in class.</li> <li>Now that you've completed your team project, how comfortable did you feel taking risks and making mistakes in our class? 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<sup>13</sup> Edmondson, A. C., & Woolley, A. W. (2013). Understanding outcomes of organizational learning interventions. In Easterby-Smith, M., & Lyles, M. (Eds.), *International handbook of organizational learning and knowledge management* (pp. 185-211). Blackwell.

Performance Target	• Self-reported student psychological safety scores will increase by the end of the semester
Outcome 1.2	Students will identify and employ best team practices (Kelley Program Competency, 6.2)
Outcome 1.3	Students will assess and offer feedback on one's own effectiveness as well as one's team members' effectiveness with respect to productivity and relationship-building in both oral and written formats (Kelley Program Competency, 6.3)
Assessment Method	<p>Summative, Direct Measure</p> <p>Students will evaluate their team performance by answering the following questions:                      How did your team use best team practices to facilitate meetings and collaborate effectively? What was your role?                      Describe a time you offered effective face-to-face feedback to a teammate.                      Describe a time you offered effective written feedback to a teammate.                      Describe a time a teammate offered you effective face-to-face feedback.                      Describe a time a teammate offered you effective written feedback.</p> <p>All submitted assignments were assessed using a rubric I created in spring 2021 for BUS-C204/205: Business Writing faculty to assess SLO 6 (see Appendix A)</p>
Performance Target	• 80% of students will earn Satisfactory scores or higher

**Figure 3**

*Students' Self-Reported Psychological Safety*



Response Scale:

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

### Student Comments

I had a great team experience and found it to be very easy to talk and share ideas with my teammates. Before going into the team portion of this course, I always found team projects to be unhelpful and a waste of time but throughout the last few weeks, my mind has changed on team projects.

I feel very comfortable taking a risk in this class because I know if I am wrong I won't be ridiculed or shot down for the idea. I feel this class made me almost want to fail so I can see how to improve my writing. I learn the best from making mistakes and I felt comfortable doing that in this class.

SCAN ME



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