Enhancing Teamwork Effectiveness in Coursework through Training

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Team-based Learning at UW

- Team-based courses are becoming more prevalent:
  - **Psychology** (e.g. Organizational Behavior, Training & Development)
  - **Accounting** (e.g. Cost Accounting, Internal Auditing)
  - **Optometry** (e.g. Case Analysis & Optometric Therapies)
  - **English** (e.g. Genres of Business Communication)

- Students complete assignments or learning activities in teams

- Some teams can "flounder"

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Current Practices in Team Intervention

- Group Roles

Leader	Secretary
Timekeeper/Monitor	Devil's Advocate

- Contracting of acceptable group behaviours and procedures

Team Interventions

- We haven't taught students *how* to work in teams!

  - **Knowledge** (e.g. problem-solving process)

  - **Skills** (e.g. communicating disagreements respectfully)

  - **Attitudes** (e.g. strive to create the best possible product)

- Imparting teamwork ability requires systematic training

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A Better Approach?

- Knowledge, skills, and attitudes (KSAs) related to teamwork

- Two categories of behaviour among team members:

Task-Oriented Behaviour	Relationship-Oriented Behaviour
• Transforming inputs to outputs systematically	• What is being said and done to others—with social consequences

- The best teams are good at both

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What are Task-Oriented Behaviours?

- E.g. PSY 340: Training & Development

  - Randomly assigned 4-person teams; stable membership

  - Complete an assignment each week during class

- Structure the work

  (Input → Output)

- Monitoring progress

What are Relationship-Oriented Behaviours?

- Actions with consequences for interpersonal relations, motivation, and morale

    - Communications

    - Engagement

Examples:

- In the ways people act toward me, are there cues of concern for my well-being?

- Am I socially comfortable in this group?

- Can I voice my opinions without worrying?

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Task Process:
Systematic Problem-Solving Scheme

Step 1 Envision Output	Step 2 Identify Inputs	Step 3 Diverge	Step 4 Converge	Step 5 Completion
Reach consensus on: • Instructions or task assignment • End product	Identify available/relevant resources: • Textbook • Other media • Expertise within the team • External expertise (TAs, instructors)	Generate a wide variety of ideas as may apply: • Offer new ideas or ones that build on others' contributions • Ensure every member has been heard from	Evaluate ideas based on agreed-upon criteria • Evaluate each idea – each member is an active evaluator • Document a short list of ideas • Check for consensus	Produce the final product: • Coordinate members' contribution to the team product in an agreed-upon way • Jointly integrate, review, and revise • Submit end product

Throughout each step: Monitor progress in relation to time and deadlines. Be mindful of group processes (other handout page).

Relationship Process:
Active Relationships Management

Energetic Engagement	Respectful Interaction
• Share constructive enthusiasm about the team assignment • **Challenge ideas**: *"Can you expand on that?"*	• **Praise**: *"Great idea!"* • **Disagree respectfully**: *"I'm concerned that…because…"* • **Acknowledge**: Nodding, *"Thanks"*

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Assessing the Impact of Our Teamwork Training

- Experimental Design
  - Teams were randomly assigned to receive either our training or an alternative treatment on group roles/contracting
  - Training delivered via podcasts on LEARN, aided by handouts given in class
- Alternative treatment condition
  - Parallel podcasts and handouts about group roles and establishing a team contract
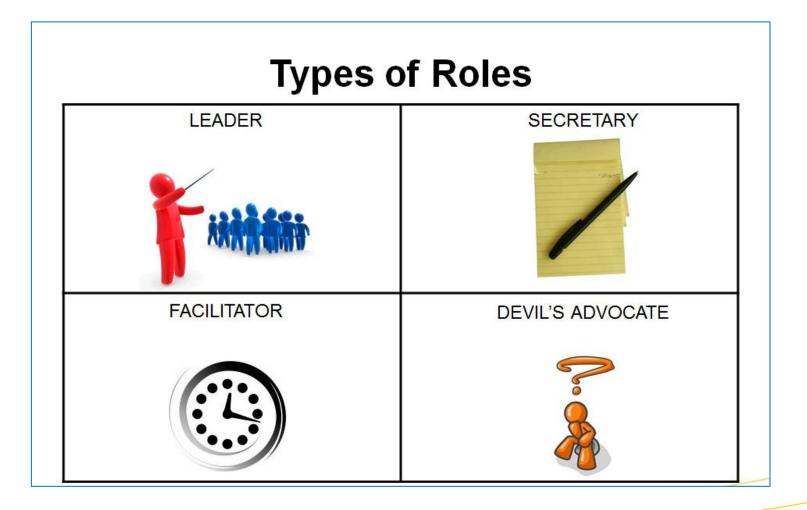 - Students wrote and signed a team contract during the first class

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Sample Podcast Content:
Systematic Problem-Solving Scheme

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Sample Podcast Content for Alternative Condition

Types of Roles

LEADER	SECRETARY
FACILITATOR	DEVIL'S ADVOCATE

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Alternative Condition: Team Contract

- Students developed expectations of behaviours for all group members

1. Time use and attendance

   - E.g. *"Arrive on time and stay for the entire class."*

2. Task preparation

   - E.g. *"Complete all readings before class."*

3. Decision-making

   - E.g. *"Let others finish their thoughts before speaking."*
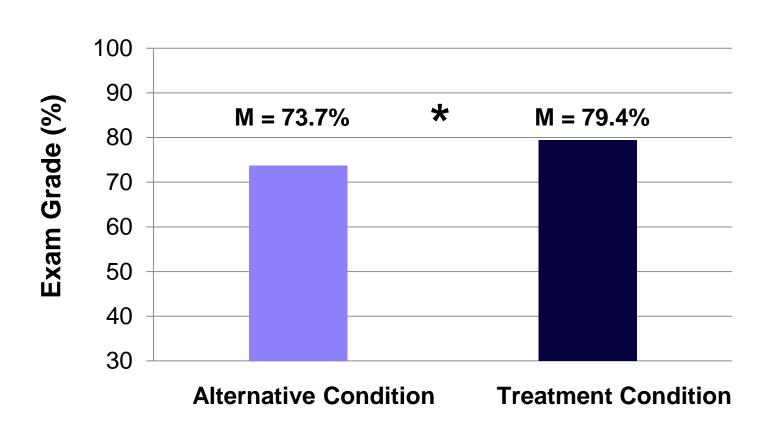
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Assessment of Learning & Performance

- Final exam grades

- Assignment grades

  - 1 assignment per team

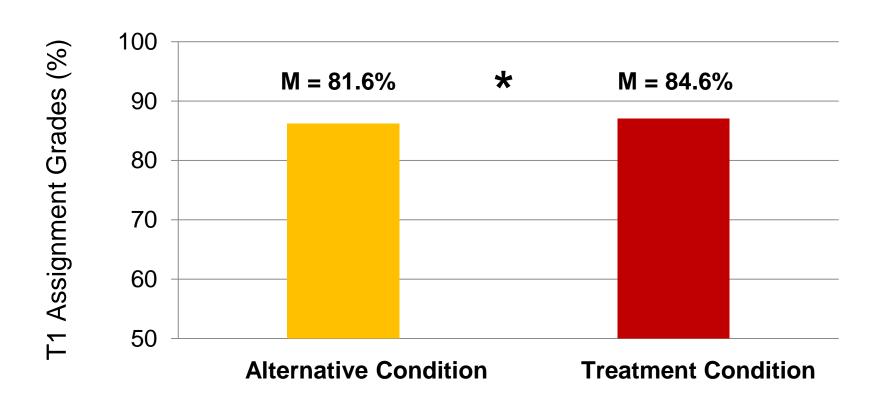 - Turned in weekly at the end of class (10 weeks total)

Results: Final Exam Grades

$t(50) = 2.16, p = .04$

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Results: Time 1 Assignment Grades

M = 81.6% ***** **M = 84.6%**

T1 Assignment Grades (%)

Alternative Condition | Treatment Condition

$t(11) = 4.47, p < .01$

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Results: Time 2 Assignment Grades

$t(14) = -1.0$, *ns*

What's Behind these Results?

- T1 Systematic Problem-Solving Process (Mean Rating)

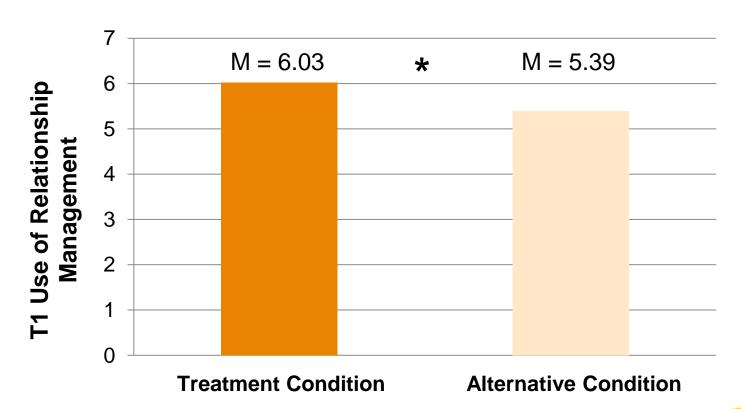*E.g. "Our group seeks a wide variety of ideas from team members throughout the work period."*

t(38) = 2.54, *p* = .02

What's Behind these Results?

- ## T1 Use of Relationship Management (Mean Rating)
  E.g. "Group members speak with one another in ways that signal high consideration for others' feelings and reactions."
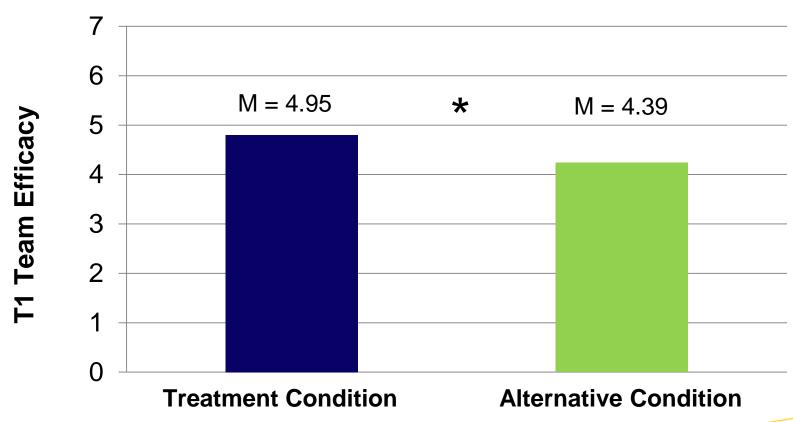
T1 Use of Relationship Management

	Treatment Condition	Alternative Condition
M = 6.03	6.03	
*		
M = 5.39		5.39

$t(29) = 2.37$, *p* = .02

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What's Behind these Results?

- T1 Team Efficacy (Mean Rating)

  E.g. "Achieving this team's goals is well within our reach."

M = 4.95   *   M = 4.39

(Bar chart: Y-axis labeled "T1 Team Efficacy" from 0 to 7. Treatment Condition bar ≈ 4.8 (dark navy), Alternative Condition bar ≈ 4.2 (green).)

Treatment Condition   **Alternative Condition**

$t(31) = 3.31$, $p < .01$

What's Behind these Results?
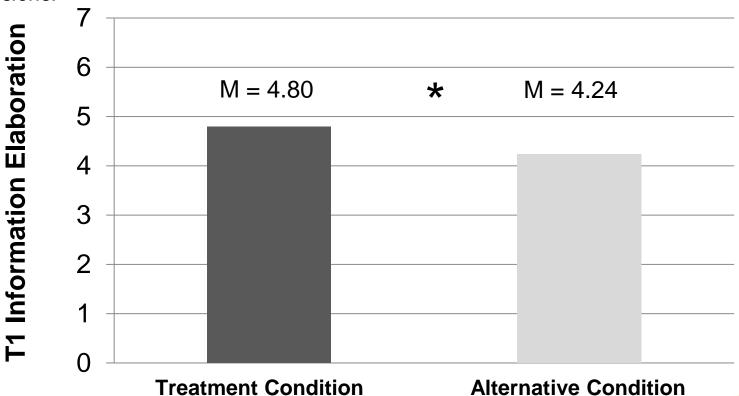
- T1 Information Elaboration

E.g. "Every group member contributed unique or creative information in the group work sessions."

M = 4.80   *   M = 4.24

$t(2) = 29.88$, *p* = .04

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Discussion

- Are we truly preparing students to work in teams?

- Why did effects of training diminish across the term?
    - "Student culture" issue?

- Can the approach used here be applied to other courses?

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Thank you!

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