## Session #4: Building and Sustaining Your Interdisciplinary Research Team

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Learning Objectives

AT THE END OF THIS SEMINAR, PARTICIPANTS WILL BE ABLE TO:

1. Define and distinguish interdisciplinary research from other types of team research.

2. Identify team processes that drives team effectiveness.

3. Describe ways to foster collaboration in research teams.

4. Discuss strategies for building an interdisciplinary research team.

5. Explore ways that graduate students and early career faculty can broaden their experience with interdisciplinary research.

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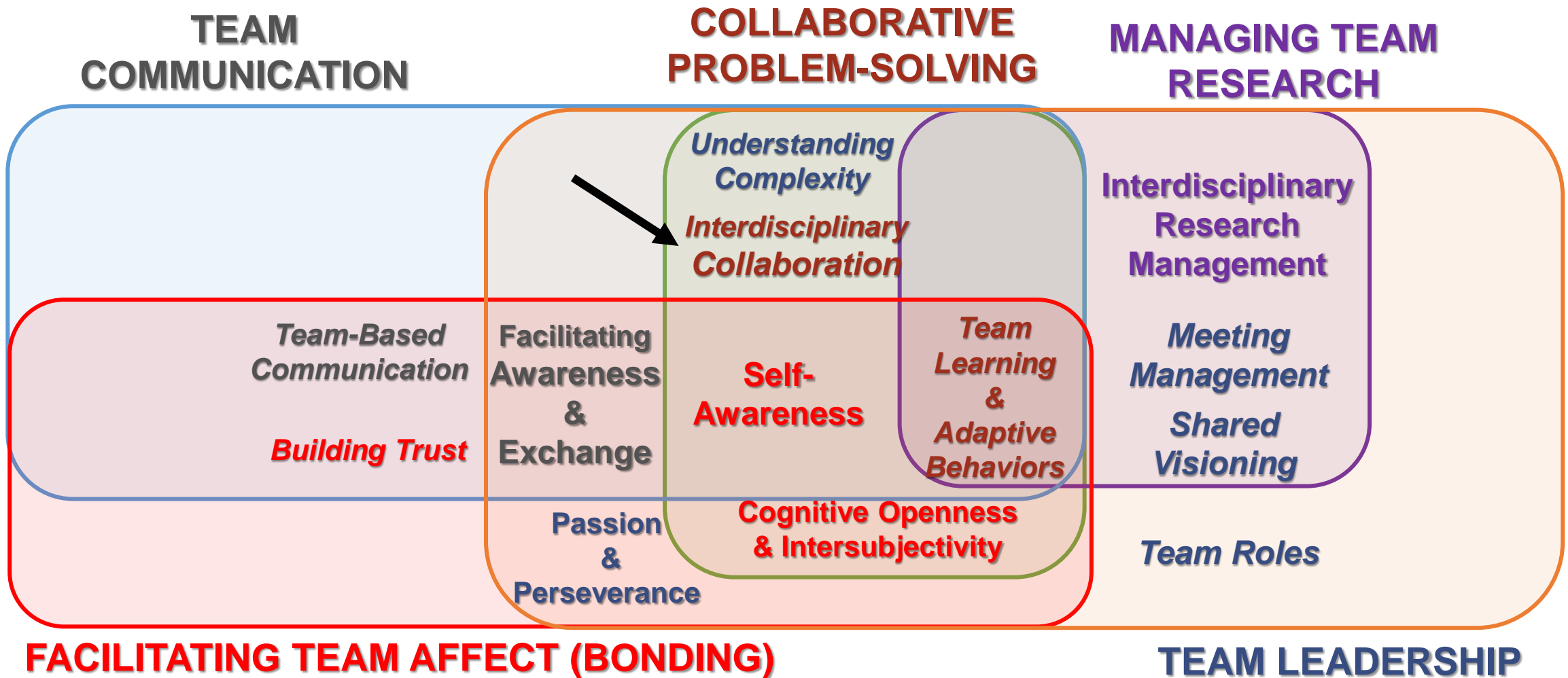ACCELERATING RESEARCH. IMPROVING HEALTH.
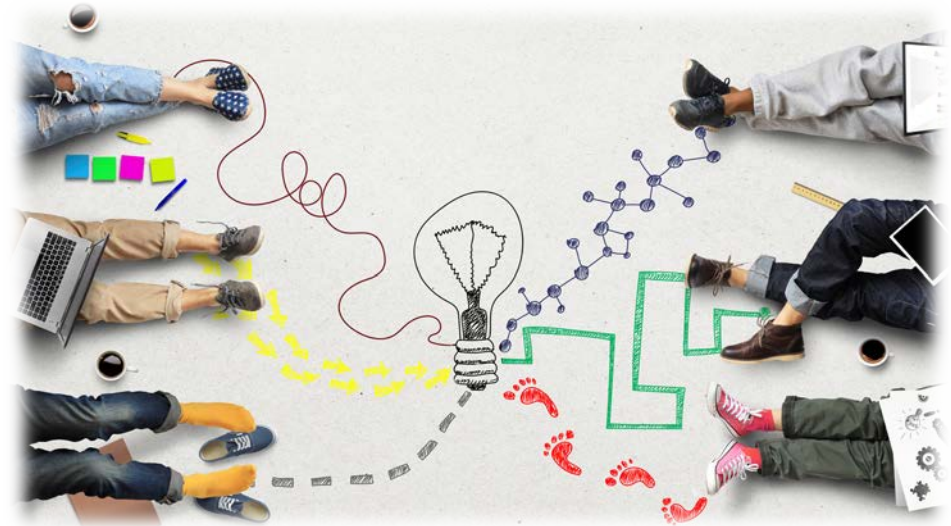
Plan for the Day

- Welcome & Introductions

- Overview of how to build and sustain an interdisciplinary research team.

- Debrief/Wrap-Up

- Team Science Seminar Series Update

- Q&A/Team Science Office Hours (final 15 mins of each seminar)

CTSA Translational Team Science Competencies for *Individuals* & Teams

TEAM COMMUNICATION

COLLABORATIVE PROBLEM-SOLVING

MANAGING TEAM RESEARCH

Understanding Complexity

Interdisciplinary Collaboration

Interdisciplinary Research Management

Team-Based Communication

Building Trust

Facilitating Awareness & Exchange

Self-Awareness

Team Learning & Adaptive Behaviors

Meeting Management

Shared Visioning

Passion & Perseverance

Cognitive Openness & Intersubjectivity

Team Roles

FACILITATING TEAM AFFECT (BONDING)

TEAM LEADERSHIP

TRANSLATIONAL TEAM COMPETENCY DOMAINS
Individual Competencies   *Team Competencies*

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Definition of Interdisciplinary Research

"a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice."

Facilitating Interdisciplinary Research. National Academies. Washington: National Academy Press, p. 2

Interdisciplinary Research – What It is Not?

- <u>Multidisciplinary</u>: draws on knowledge from different disciplines but stays within the boundaries of those fields. A process for providing a juxtaposition of disciplines that is additive not integrative (disciplinary perspectives are not changed, only contrasted).

- <u>Transdisciplinary</u>: Involves scientists from relevant disciplines, as well as stakeholders, nonscientists, and non-academic participants.

Cooke et al., 2015; Enhancing the Effectiveness of Team Science.

Impetus to Form Collaborations

1. The interpersonal context (relations among scientists)*

2. The funding context

3. The sectoral context (academic, corporate, governmental)

4. The context of participating organizations (university departments, research labs, etc.)

Shrum, W.; Genuth, J., et al. Structures of Scientific Collaboration. Boston: The MIT Press; 2007.

Core Thematic Areas & Competencies:

❖ Translational Teamwork

❖ Leadership

❖ Context – collaborative problem solving – much of the complex work in the modern world is performed by teams
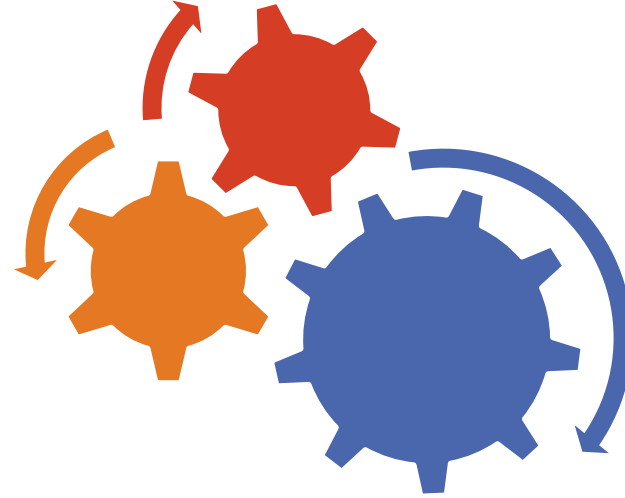
Interdisciplinary Research – Formation of Science Teams

- ❖ Physical proximity
- ❖ Social ties
- ❖ Brokers (boundary spanners, mentors)
- ❖ Prior experience with collaboration

What Drives Team Effectiveness?

Team Processes!

Including:

1. Shared understanding of **team goals**
2. Shared understanding of **member roles**
3. How team handles **communication**, **conflict**, and **hierarchy**
4. How teams make **shared decisions**

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Ref: Cooke et. al, 2015; Kozlowski and Ilgen, 2006

How do you Influence Team Processes?

Team Composition

- Identify knowledge, skills & attitude required for effective performance

Team Professional Development

- Integrate member knowledge & develop a shared understandings

- Perform team training

- Annual TS Workshop for Interdisciplinary Teams:
  https://www.iths.org/teamscience2023/

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Ref: Cooke et. al, 2015

Leadership for Team Science

- Research has identified leadership styles & behaviors that foster positive interpersonal processes

- Organizational & team leadership styles & behaviors can be developed
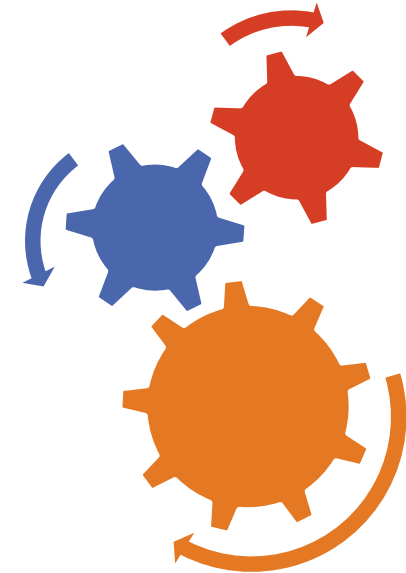
Support In-person & Virtual Collaboration

- Determine ways to communicate

- Intentionally foster exchanges that build trust, shared knowledge, & psychological safety

Ref: Cooke et. al, 2015

Collaboration & Team Science

Collaboration and Team Science: From Theory to Practice

L. Michelle Bennett, PhD[1] and **Howard Gadlin, PhD**[2]

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Fostering Collaboration: Key Elements

- ❖ Trust & psychological safety

- ❖ Shared vision

- ❖ Strategically identify team members

- ❖ Build an interdisciplinary team

- ❖ Promote disagreement while containing conflict

- ❖ Set clear expectations for sharing authorship & credit

- ❖ Leadership – self-awareness & strong communication skills

"Helen, you're the Team Leader, why don't you jump first?"

What Drives Team Effectiveness

Team Processes & Emergent States: Cognitive, Motivational & Affective, Behavioral

Process	Tools
Shared understanding of team goals (cognitive)	• Project Charter • Welcome Letter
Clearly identified member roles	• Project Charter • Meeting Roles ✓ • Welcome Letter
How team communicates, builds trust & handles conflict, hierarchy, etc. (motivational and affective)	• Team Agreements ✓ • Social Styles ✓ • Conflict Mode Preferences ✓ • Listening Skills ✓ • Team Agendas/Minutes ✓
How team makes shared decisions (behavioral)	• Team Agreements ✓ • Welcome Letter • Meeting Roles ✓

Leadership through Versatility

❖ Self-awareness

❖ Ability to adjust behavior

❖ Willing to focus on the needs of others more than your own

❖ Helps to overcome interpersonal & productivity barriers

❖ Peter Anderton – "*Great leadership comes down to only two rules*"

   ❖ Rule 1: It's Not About You

   ❖ Rule 2: It's All About You

   ❖ View TED talk at https://www.youtube.com/watch?v=oDsMlmfLjd4

Discussion Questions (Breakout Rooms): 5 minutes

How would you apply these concepts in your own work?

► Styles/flexibility

► Self-awareness

► Tools for improving team effectiveness

   ► Agreements

   ► Meeting agendas

Sharing Recognition & Credit

Journal of Interprofessional Care

Interprofessional education and practice guide: interprofessional team writing to promote dissemination of interprofessional education scholarship and products

Mia T. Vogel, Erin Abu-Rish Blakeney, Mayumi A Willgerodt, Peggy Soule Odegard, Eric L. Johnson, Sarah Shrader, Debra Liner, Carla A. Dyer, Leslie W. Hall & Brenda Zierler

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Team Writing

CENTER FOR HEALTH SCIENCES
INTERPROFESSIONAL EDUCATION
RESEARCH AND PRACTICE
UNIVERSITY *of* WASHINGTON

Interprofessional Team Writing Toolkit
This toolkit is designed for IPE and Collaborative Practice researchers of all levels interested in improving scholarly writing with their interprofessional teams.

https://collaborate.uw.edu/resources-and-training/online-training-and-toolkits/

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Other Challenges

Appointment, Promotion, and Tenure (APT) within the context of interdisciplinary research (team science):

❖ Early career faculty perceive team science as risky

❖ Establishing themselves as independent investigators

❖ Review criteria for the evaluation of investigators participating in team science

❖ Ongoing work on developing an APT Toolkit for faculty, chairs, APT Committees, external reviewers

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Ways Graduate Students Can Broaden their Experience

Recommendations from Institute of Medicine (National Academies of Science, Engineering and Medicine)

❖ Dissertation committee (faculty from different disciplines)

❖ Share office/space with students from different fields

❖ Participate in conferences outside of field and in poster session that represent multiple professions

❖ Post-docs – during appointments through networking events and internships in industrial (non academic settings)

❖ Seek institutions and mentors favorable to team science

Institute of Medicine 2005. Facilitating Interdisciplinary Research. Washington, DC: The National Academies Press. http://doi.org/10.17226/11153

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Sustaining Interdisciplinary Teams

❖ Celebrate successes

❖ Recognition for individual contributions to teamwork

❖ Professional development (what does your team need to improve effectiveness?)

❖ Social engagement

❖ Acknowledge life events

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Debrief/Wrap-Up

► Please provide feedback on today's session!

　► Feedback in chat

　► Complete Today's Session Evaluation

► Next month's session:

　► Growth Mindset and Receiving and Giving Feedback

　► Thurs 2/2/23 12:00pm-1:00pm; Dr. Michael Johnson

　► Registration for February's webinar: https://www.iths.org/teamscience2023/

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2022-2023 TEAM SCIENCE SEMINAR SERIES SCHEDULE

Logistics: 10 one-hour sessions occurring Oct 2022-July 2023 from 12pm-1pm on the 1st Thurs of each month; certificate offered through ITHS if attend 8 or more sessions (80%) & complete session evaluations.

Date	Topic	Date	Topic
10/6/22	Introduction to the Team Science Seminar Series 2022-2023: Why is Team Science Important?	3/2/23	Handling Everyday Conflict with Curiosity, Courage, and Compassion
11/3/22	Building Self-Awareness and Leadership Traits for Team Effectiveness	4/6/23	Creating Engagement: Facilitation from Chaos to Construct
12/1/22	Setting the Foundation for Successful Meeting Management	5/6/23	Diversity, Equity, and Inclusion in Team-Based Research
1/5/23	Building an Interdisciplinary Research Team	6/1/23	Engaging Communities in Interdisciplinary Research
2/2/23	Growth Mindset & Giving and Receiving Feedback	TBD	Multiple-PI Collaborative Grant Applications

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❖ UW Center for Health Sciences Interprofessional Education, Research, and Practice (CHSIE)

❖ 6 Health Sciences and College of Engineering APT Leads

Q&A/Team Science Office Hours

12:45 pm–1:00 pm

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10. Institute of Medicine 2005. Facilitating Interdisciplinary Research. Washington, DC: The National Academies Press. http://doi.org/10.17226/11153

Local (UW) Resources

❖ https://collaborate.uw.edu/resources-and-training/online-training-and-toolkits/

❖ UW Collaboration Consortium - an informal collection of interdisciplinary centers on campus that has been meeting regularly to brainstorm and strategize ways to build support for interdisciplinary and community-engaged efforts on campus. Contact: Jennifer Davison @jnfrdvsn@uw.edu

❖ UW Population Health Initiative - https://www.washington.edu/populationhealth/

❖ Engineering in Health – 9 month program collaborative problem solving (engineering students and clinicians)

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External Resources

❖ https://www.teamsciencetoolkit.cancer.gov/Public/Home.aspx

❖ https://www.leadershipacademy.nhs.uk/resources/healthcare-leadership-model/nine-leadership-dimensions/

❖ https://global.wilsonlearning.com/resources/interpersonal-skills-take-off/ (quote on slide 16)

❖ Science of Team Science (SciTS) annual conference Virtual this year: https://www.inscits.org/2023-scits-conference (Early June)

❖ INGRoup Interdisciplinary network for group research https://www.ingroup.net/content.aspx?page_id=22&club_id=300815&module_id=538532