Building Campus Ecosystems to Support Research Mentoring

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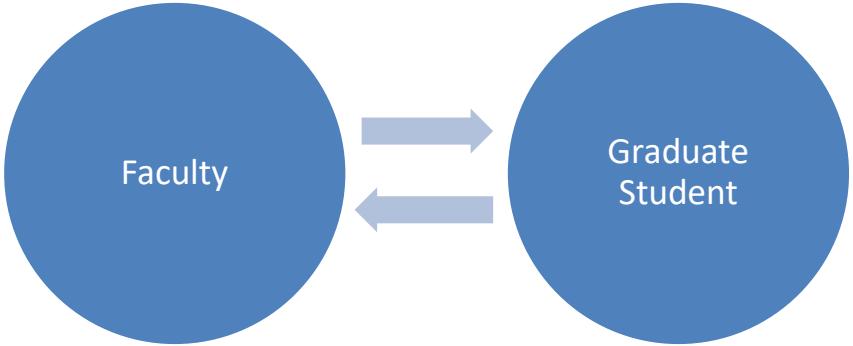
2020 CGS Summer Workshop

Agenda

- The mentoring relationship: effectiveness and limitations of training
- Effects of COVID conditions on the mentoring relationship
- The mentoring ecosystem
- MSU: assessing and addressing the ecosystem
- Tools: research-based interventions, assessments, institutional alignment

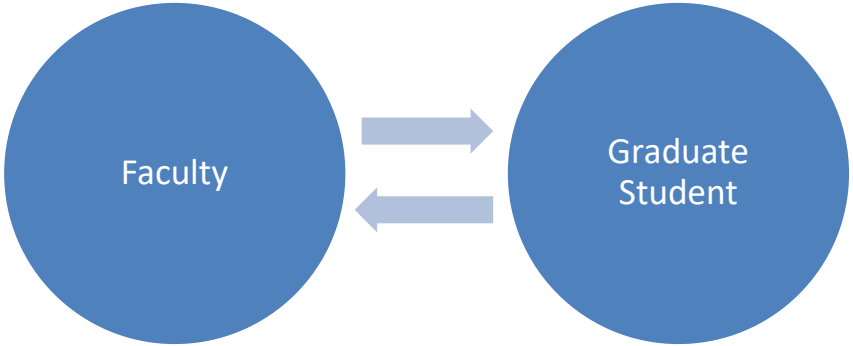
The mentoring relationship



Training in

- Effective communication
- Setting expectations
- Conflict resolution
- Culturally responsive mentoring

The mentoring relationship

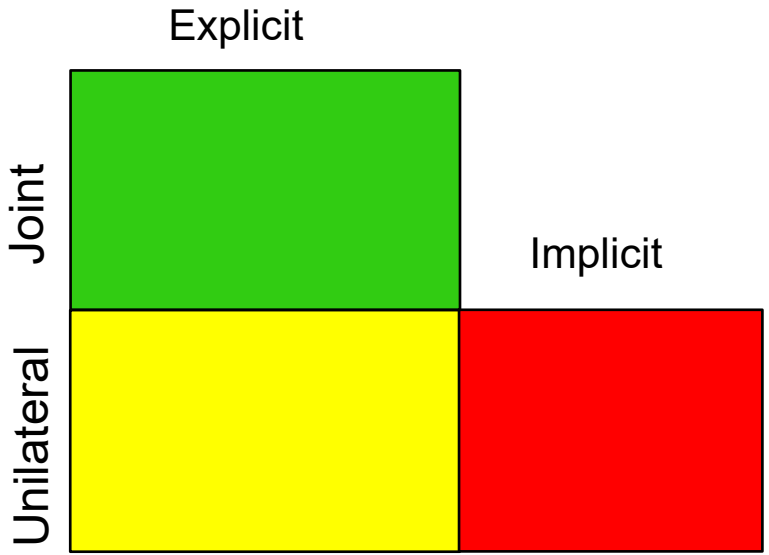


Good news: research shows this training works. Curricula such as *Entering Mentoring* and *Entering Research* can shift knowledge, skills and practices of mentors and mentees.

Focusing on mentor/mentee training as a mechanism for building institutional capacity in inclusive excellence in mentoring can:

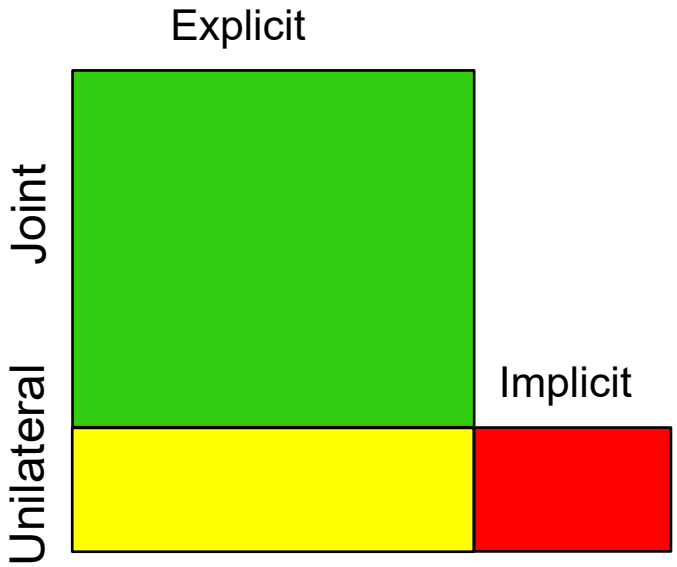
- Give individuals tools to improve their skillsets
- Help mentors and mentees recognize how identities influence professional and personal development
- Encourage mentoring that is adapted to career goals
- Strengthen mentoring relationships
- Improve career outcomes and satisfaction

Window of "Negotiable" Expectations



From *Setting Expectations and Resolving Conflicts in Graduate Education*

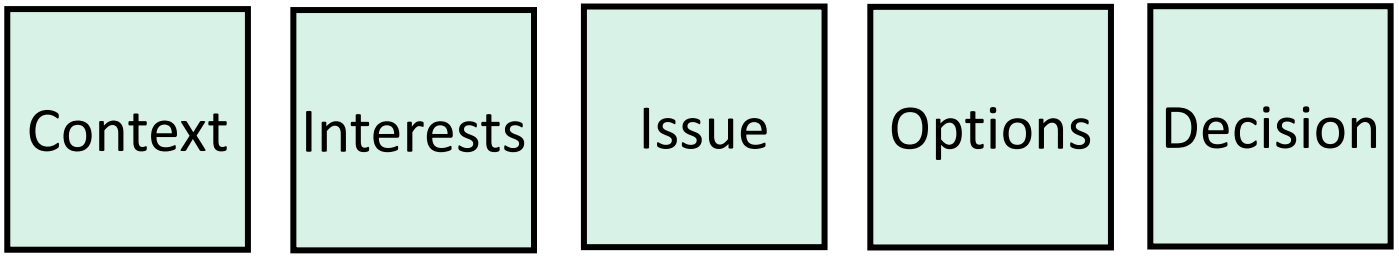
Window of "Negotiable" Expectations



From *Setting Expectations and Resolving Conflicts in Graduate Education*

Explicit Expectations

are set by jointly examining future goals and decision points in this order:



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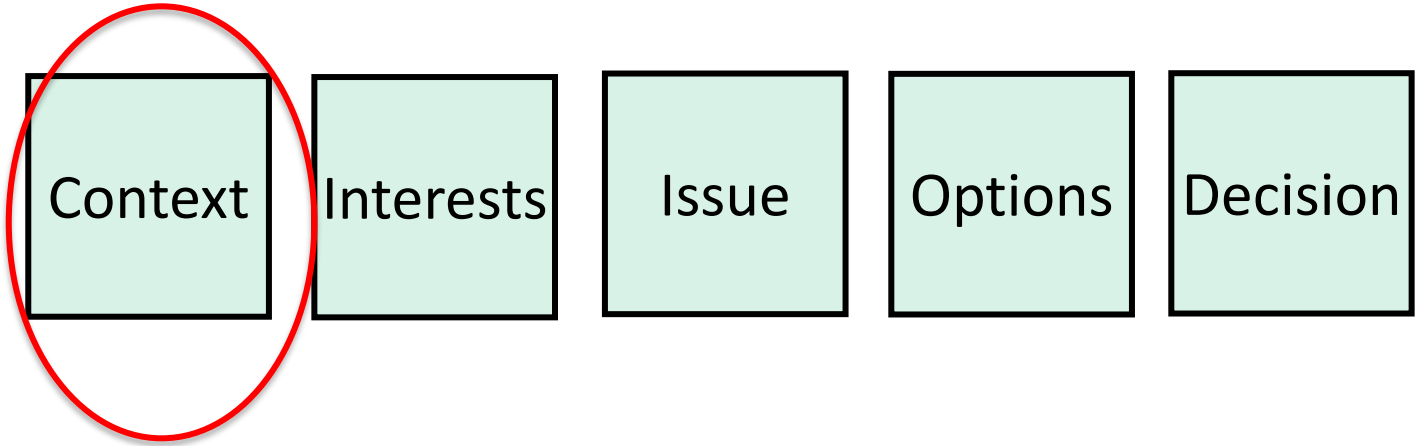

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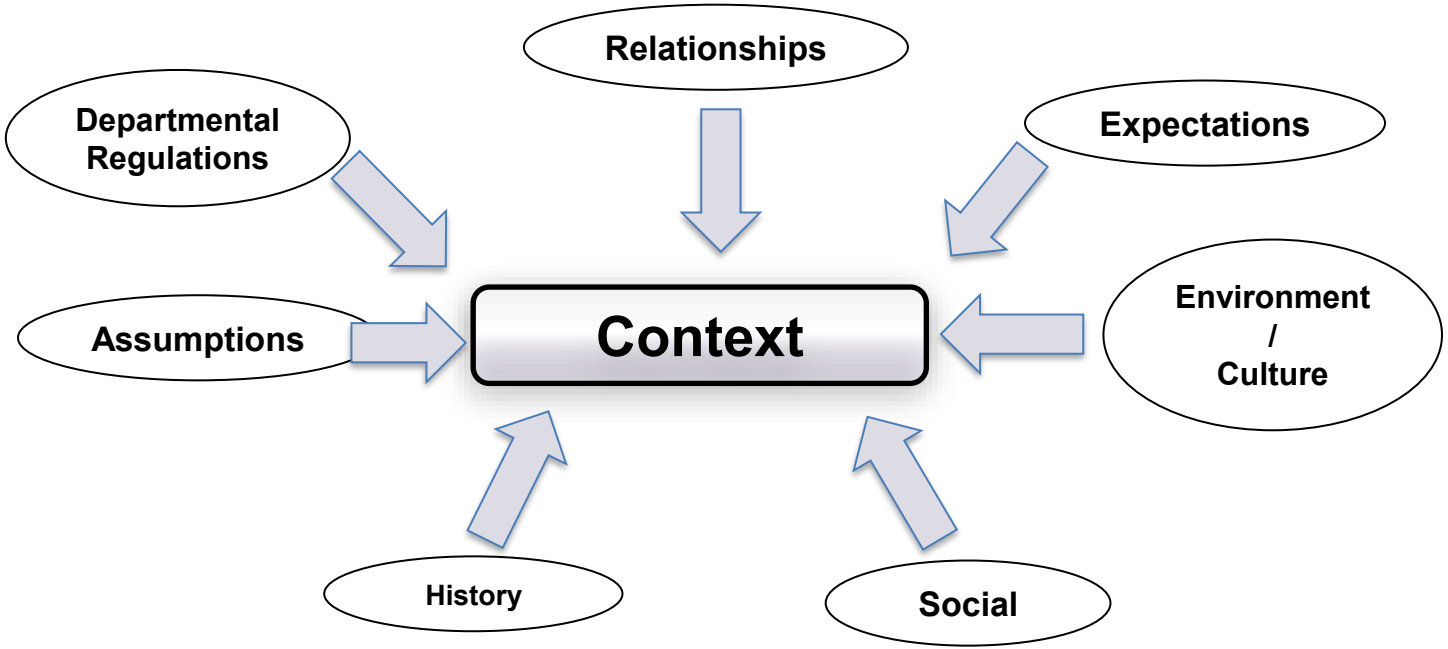
The importance of context



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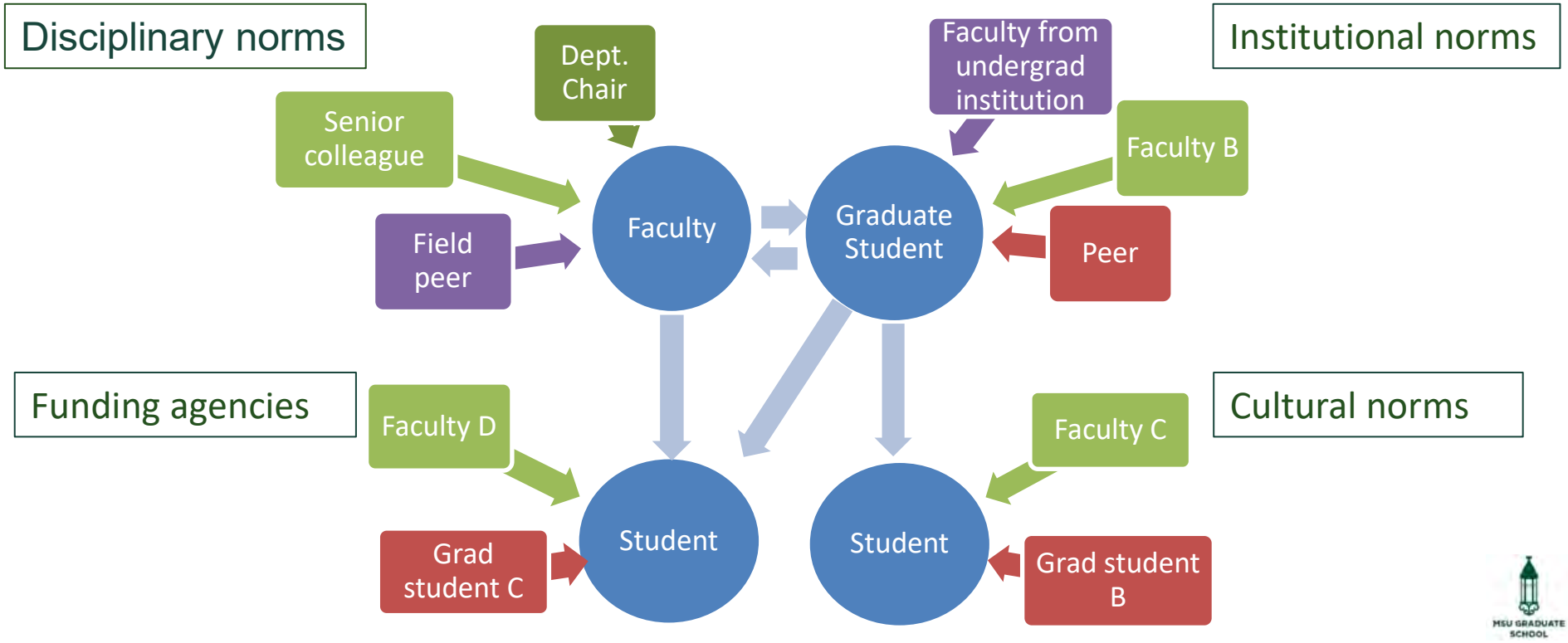
The mentoring relationship



Focusing on mentor/mentee training as the primary mechanism for building institutional capacity in inclusive excellence in mentoring can:

- Simplify the roles of mentor/mentee
- Send the message that effective mentoring is an individual responsibility (and an individual failing when it goes wrong)
- Reinforce institutional homeostasis
- Leave systemic issues intact, many of which cannot be overcome by effective mentoring

The mentoring relationship

Disciplinary norms

Institutional norms

Dept. Chair

Faculty from undergrad institution

Senior colleague

Faculty B

Field peer

Faculty

Graduate Student

Peer

COVID edition

Funding agencies

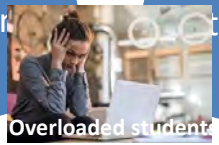
Cultural norms

Faculty D

Faculty C

Grad student C

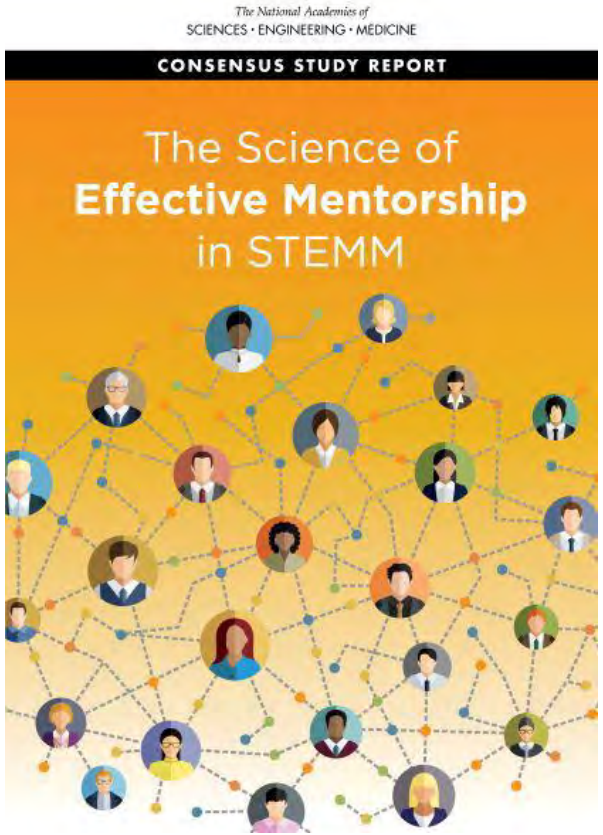
Grad student B



The stress on individuals during the pandemic has revealed some of the underlying weak points in our campus ecosystems:

- Individual skillsets are not always a match to circumstances
- Context matters, and how we define context matters
- Systemic inequalities have been magnified
- Mentoring responsibilities are distributed differentially across individuals, especially those from historically minoritized groups
- Individuals strain to compensate for an ecosystem that does not sustain mentoring

What are the resources and strategies for creating a healthier ecosystem?



Mentorship ecosystem

"A set of interconnected participants including university leadership (e.g., presidents, provosts, deans), department chairs, program leaders (e.g., research, training, and graduate program directors), mentors (faculty members, staff, and others who have extensive contact with graduate and undergraduate students), and mentees (undergraduate and graduate students participating in mentoring programs and other mentoring relationships), and agencies that fund mentorship programs."

Where our own campus was pre-pandemic

- Diagnosing issues
- Shifting to a different approach to the ecosystem
- Thinking structurally—changing the metaphor
- Working on embedding, scaffolding and alignment
- Creating communities of practice and transformation

Diagnosing issues

2018 Graduate School Strategic Plan

Objective 1.1 Mentoring: We will increase MSU's capacity for inclusive excellence in mentoring for and by students.

- Work with academic units to develop a template for evaluating mentorship activities for use as part of faculty development programs, annual review, and RPT.
- In collaboration with our campus partners, establish a broad-based professional development program for faculty and academic staff focused on mentorship of graduate students.
- Facilitate further integration of annual RCR training within disciplinary contexts.
- Develop a tiered professional development program for graduate students aimed at developing their skills and abilities as mentors and mentees.

Externally validated assessments

ncpre
National Center for Professional & Research Ethics

ILLINOIS
Coordinated Science Laboratory
COLLEGE OF ENGINEERING

Survey of Organizational Research Climate 2009/2014

Wells et al. (2014) Survey of organizational research in three research intensive, doctoral granting universities. *Journal of Empirical Research on Human Research Ethics*

NIHBEST

Faculty Perceptions of Mentoring 2017

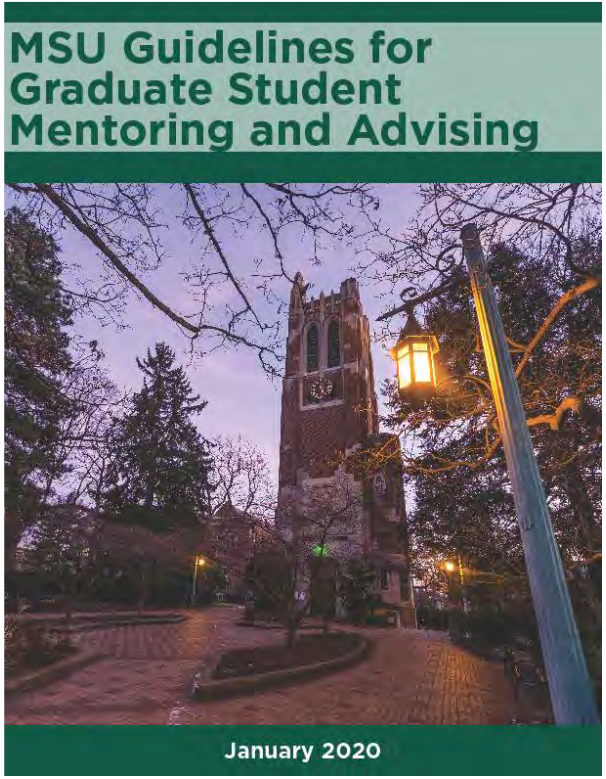
Watts et al. (2019) Faculty perceptions and knowledge of career development of trainees in biomedical science: What do we (think we)know? *PLoS ONE*

gradSERU 2017)

Dean's Task Force on Graduate Student Mentoring 2018-19

- Revisit *MSU Guidelines on Advising Relationships and Guidelines* for *Integrity in Research and Creative Activities* (2004)
- Review:
  - ✓ National reports on mentoring and professional community
  - ✓ Recommendations and statements by federal agencies and disciplinary societies
  - ✓ Guidelines at other universities
  - ✓ Research on effective mentoring
  - ✓ MSU data on mentoring
- Recommend other measures that would support the Graduate School strategic priority on expanding inclusive, high-quality mentoring practices on campus

Revised guidelines



Institutional alignment

- shared values
- shared rights
- shared responsibilities

Distributed responsibilities

Process for revision and assessment

Statement on values

Foundational Values

for Graduate Student and Faculty Mentoring Relationships at Michigan State University

Effective mentoring relationships are formed and sustained through principles of reciprocity and mutual responsibility. Mentors and mentees should respect one another both as researchers/scholars/creative practitioners and as individuals. That respect is formed through a shared commitment to scientific, creative and professional excellence, and a recognition of these common values:

- **Commitment to respect and care**
  - Establishing a relationship based on trust and open communication
  - Engaging in ways that are respectful and culturally responsive
  - Actively promoting an environment of civility
  - Using inclusive and non-discriminatory language
- **Commitment to professionalism, ethics, and integrity**
  - Communicating regularly about expectations in the graduate degree program in the disciplinary field
  - Promoting the highest standards of integrity in research, scholarship, and creative activities
  - Engaging in continuing professional development in mentoring skills
- **Commitment to the professional and personal growth and independence of the student**
  - Talking with students about their interests in a range of career paths
  - Encouraging and supporting career exploration and professional development
  - Supporting mental and physical health

2

Operating with a shared and acknowledged set of values will help the campus sustain a climate that supports strong mentoring relationships.

Distributed responsibilities

Effective advising and mentoring of graduate students is the joint responsibility of the University, the Graduate School, graduate degree-granting and program units (hereafter referred to as academic units), the faculty advisors, and the students.

Responsibilities of MSU include:

- Creating a climate of mutual accountability
- Communicating the value of graduate education to MSU's mission
- Setting expectations that graduate student mentoring is an important faculty and unit responsibility
- Supporting MSU's offices that contribute to graduate student education and well-being

Responsibilities of the Graduate School include:

- Providing resources and training to help faculty and graduate students continuously improve their mentoring skills and abilities
- Providing information to units to help them fulfil their mentoring responsibilities
- Advocating for excellence in mentoring including inclusive mentoring practices
- Regularly assessing various aspects of mentoring on campus (e.g., through surveys, focus groups, or other applicable means).
- Partnering with other units to provide additional mentoring and professional development opportunities
- Recognizing and rewarding faculty and students who exemplify excellence in mentoring (e.g., through annual mentoring awards)
- Serving as a contact point for faculty and students who experience difficulties in mentoring relationships

5

"Effective advising and mentoring of graduate students is the joint responsibility of the University, the Graduate School, graduate degree-granting and program units (hereafter referred to as academic units), the faculty advisors, and the students"

Communities of transformation

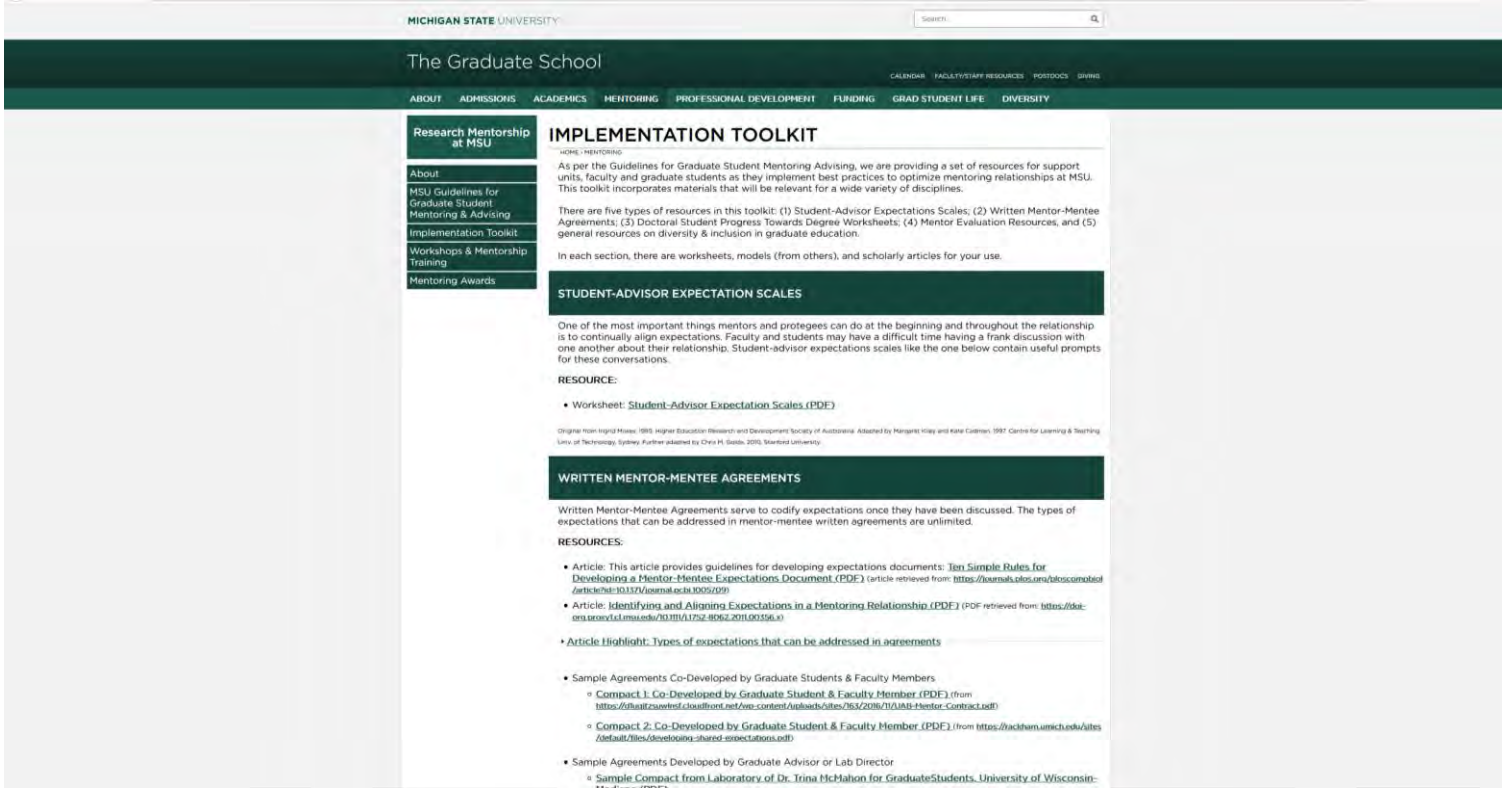
CoTs at MSU

- College Graduate Student Mentoring Advocates
- Faculty and staff learning community on mentoring
- Trained community of NRMN certified facilitators across disciplines and faculty levels
- AGEP peer communities

"communities that create and foster innovative spaces that envision and embody a new paradigm of practice….CoTs are aimed at embedding innovative/transformational practices within departments and institutions."*

Kezar, Gehrke, Bernstein-Sierra (2018) "Communities of Transformation: Creating Changes to Deeply Entrenched Issues," *The Journal of Higher Education*, 89:6, 833.

Online toolkit (under revision)



MICHIGAN STATE UNIVERSITY

The Graduate School

CALENDAR FACULTY/STAFF RESOURCES POSTDOCS GIVING

ABOUT ADMISSIONS ACADEMICS MENTORING PROFESSIONAL DEVELOPMENT FUNDING GRAD STUDENT LIFE DIVERSITY

Research Mentorship at MSU

- About
- MSU Guidelines for Graduate Student Mentoring & Advising
- Implementation Toolkit
- Workshops & Mentorship Training
- Mentoring Awards

IMPLEMENTATION TOOLKIT

HOME › MENTORING

As per the Guidelines for Graduate Student Mentoring Advising, we are providing a set of resources for support units, faculty and graduate students as they implement best practices to optimize mentoring relationships at MSU. This toolkit incorporates materials that will be relevant for a wide variety of disciplines.

There are five types of resources in this toolkit: (1) Student-Advisor Expectations Scales; (2) Written Mentor-Mentee Agreements; (3) Doctoral Student Progress Towards Degree Worksheets; (4) Mentor Evaluation Resources, and (5) general resources on diversity & inclusion in graduate education.

In each section, there are worksheets, models (from others), and scholarly articles for your use.

STUDENT-ADVISOR EXPECTATION SCALES

One of the most important things mentors and protegees can do at the beginning and throughout the relationship is to continually align expectations. Faculty and students may have a difficult time having a frank discussion with one another about their relationship. Student-advisor expectations scales like the one below contain useful prompts for these conversations.

RESOURCE:

- Worksheet: Student-Advisor Expectation Scales (PDF)

Original from Ingrid Moses, 1985. Higher Education Research and Development Society of Australasia. Adapted by Margaret Kiley and Kate Cadman, 1997. Centre for Learning & Teaching Univ. of Technology, Sydney. Further adapted by Chris H. Golde, 2010, Stanford University.

WRITTEN MENTOR-MENTEE AGREEMENTS

Written Mentor-Mentee Agreements serve to codify expectations once they have been discussed. The types of expectations that can be addressed in mentor-mentee written agreements are unlimited.

RESOURCES:

- Article: This article provides guidelines for developing expectations documents: Ten Simple Rules for Developing a Mentor-Mentee Expectations Document (PDF) (article retrieved from: https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005709)
- Article: Identifying and Aligning Expectations in a Mentoring Relationship (PDF) (PDF retrieved from: https://doi-org.proxy1.cl.msu.edu/10.1111/1752-8062.2011.00156.x)
- Article Highlight: Types of expectations that can be addressed in agreements
- Sample Agreements Co-Developed by Graduate Students & Faculty Members
  - Compact 1: Co-Developed by Graduate Student & Faculty Member (PDF) (from https://d1ualtzrsuwlnsf.cloudfront.net/wp-content/uploads/sites/163/2016/11/UAB-Mentor-Contract.pdf)
  - Compact 2: Co-Developed by Graduate Student & Faculty Member (PDF) (from https://rackham.umich.edu/sites/default/files/developing-shared-expectations.pdf)
- Sample Agreements Developed by Graduate Advisor or Lab Director
  - Sample Compact from Laboratory of Dr. Trina McMahon for GraduateStudents, University of Wisconsin-

Expanding capacity through external expertise

The National Academies of SCIENCES ENGINEERING MEDICINE

B1G ACADEMIC ALLIANCE

Building Institutional Capacity for Mentoring Event

NRMN National Research Mentoring Network

Facilitator Training

B1G ACADEMIC ALLIANCE

Professorial Advancement Initiative

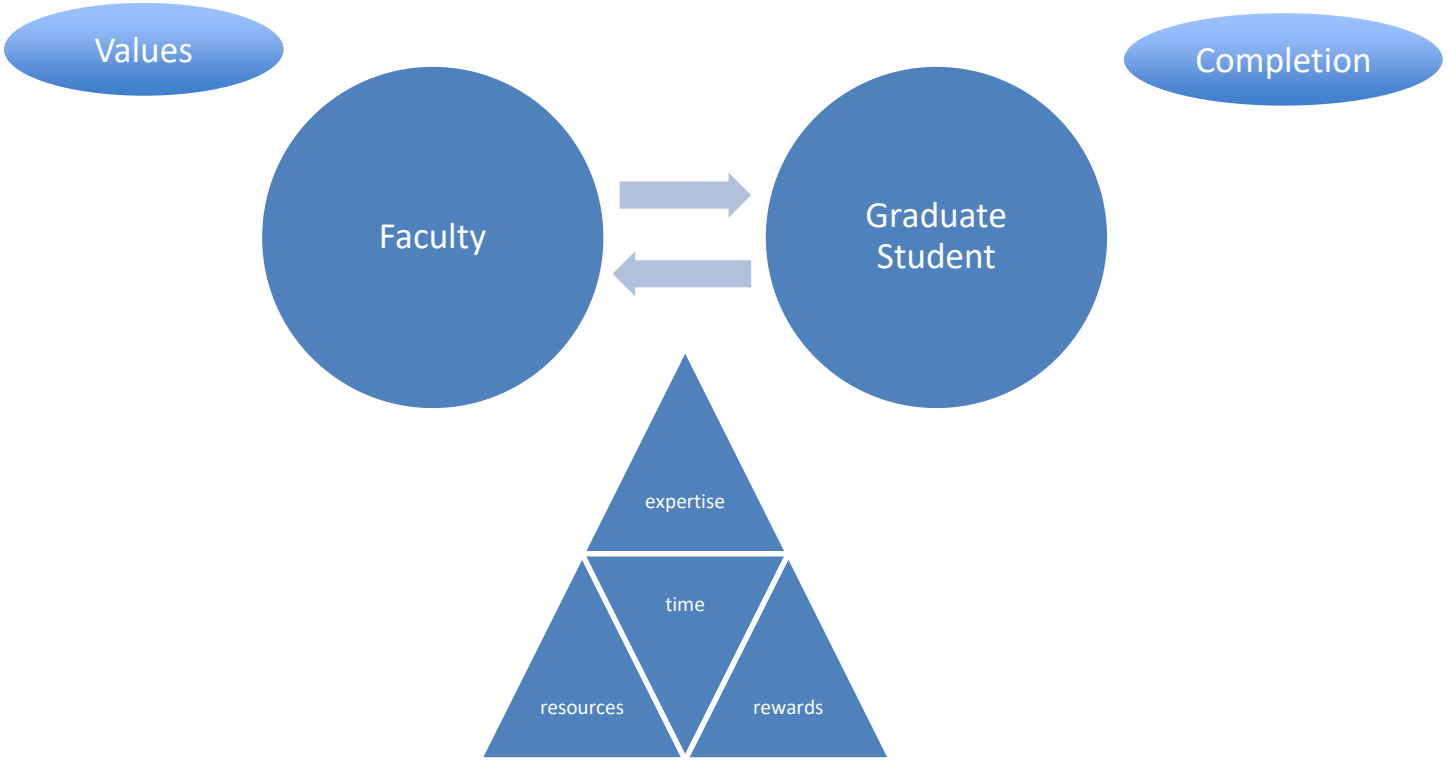
CIMER Center for the Improvement of Mentored Experiences in Research

Training and assessment programs

Where we are going—the program level

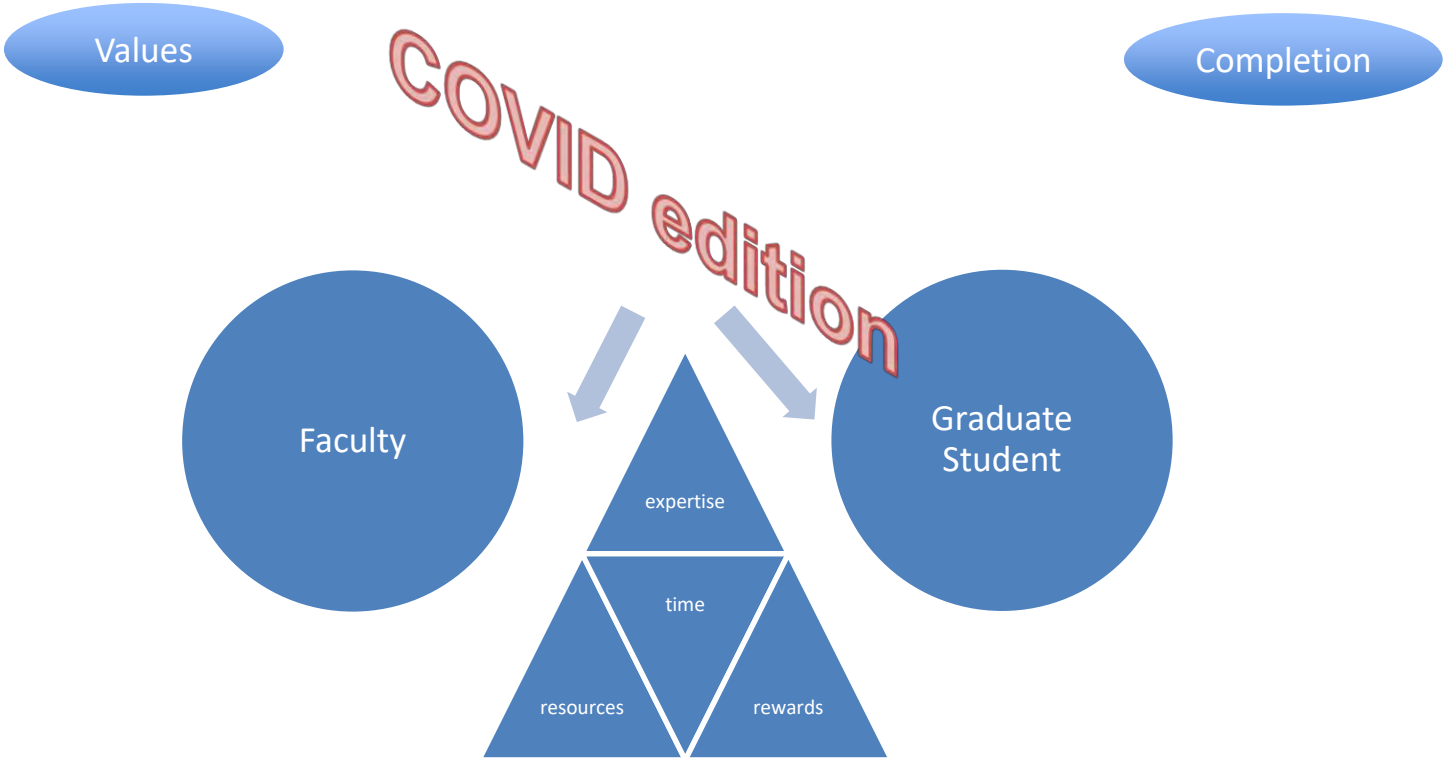
- Graduate Handbooks: program statements on mentoring and advising developed in response to prompts
- Building those prompts into our graduate program review process
- Regularly sharing and communicating assessment data
- Workshops for informal mentors (e.g., graduate secretaries)
- Continue grad program director orientations with focus on mentoring problem solving (scenarios, offices and people to know)

The mentoring relationship



barriers to effective mentoring identified in *The Science of Effective Mentorship in STEMM* (2019)

The mentoring relationship



Institutional Alignment

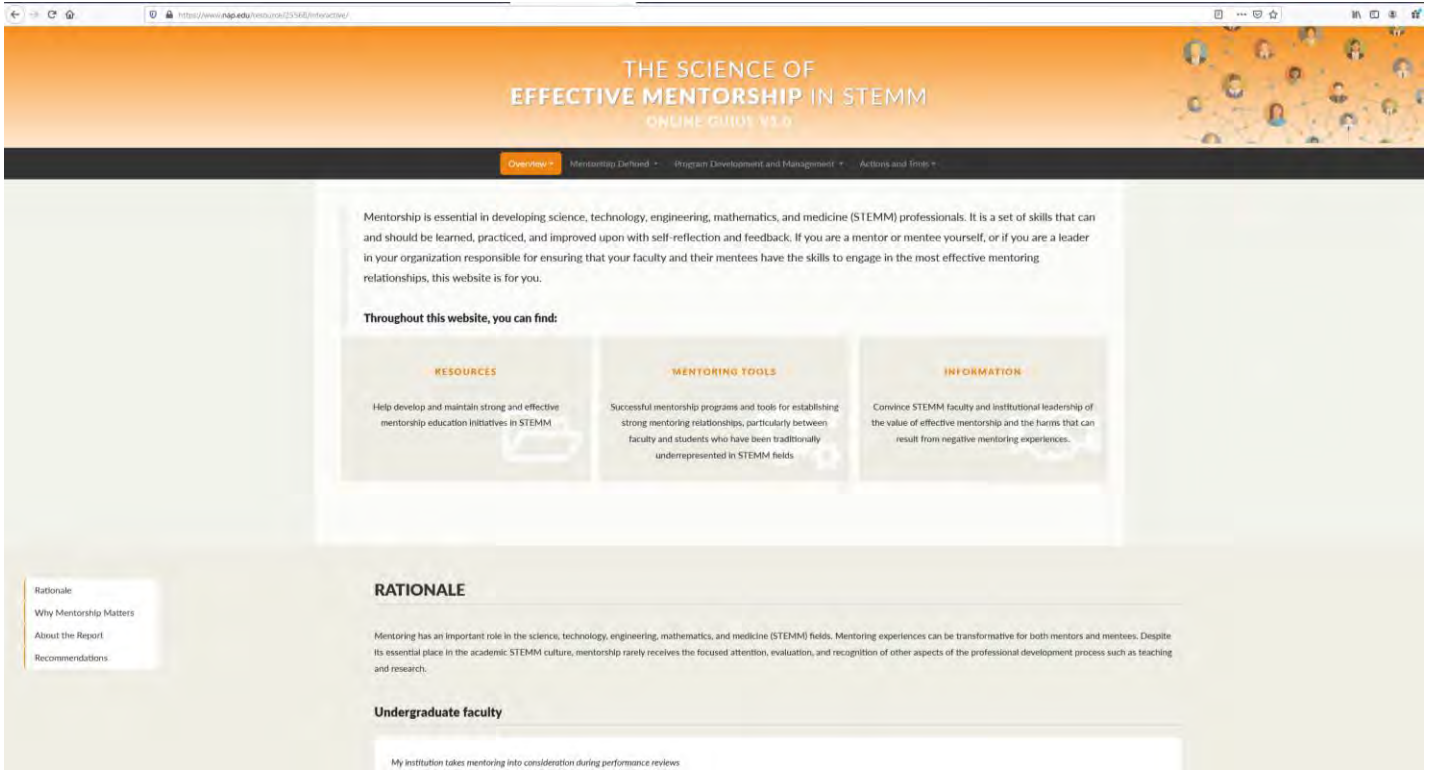
Lois J. Zachary, *Creating a Mentoring Culture: The Organization's Guide* (2005)

EXERCISE 2.2			
Identifying the Ecology of Your Organization Identify what is going on in the organization that could potentially affect your mentoring efforts			
	Direct Impact on Mentoring	**Indirect Impact on Mentoring**	**Implications for Action**
1. What keeps people awake at night?			
2. What are people energized and excited about?			

Research-based interventions

- *The Science of Effective Mentorship in STEMM* (2019)
- National Research Mentoring Network (NRMN)
- Center for the Improvement of Mentored Experiences in Research (CIMER)
- University of Minnesota Clinical and Translational Science Institute Online Learning Modules

The Science of Effective Mentorship in STEMM Online Guide



Assessments

- National Research Mentoring Network (NRMN)
- Center for the Improvement of Mentored Experiences in Research (CIMER)
- University of Wisconsin Institute for Clinical and Translational Research Mentoring Competency Assessments
- SOURCE
- gradSERU

Institutional Alignment

- Who is in your institutional mentoring ecosystem?
- How would you map their relationships?
- Are the values embedded in each area? (assess)
- How are they communicated institutionally and individually? (assess)
- Do the incentives match the values?

Institutional Alignment

Lois J. Zachary, *Creating a Mentoring Culture: The Organization's Guide* (2005)

EXERCISE 5.5 (adapted)			
Organizational Mentoring Strategy Map			
Strategy	**1**	**2**	**3**
People involved in carrying out			
Value(s)			
Goal			
Shared understanding			
Structure required to support			
Communication needed to implement			

Questions and Discussion

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