Optimizing Mentoring Relationships

Introduction to the Science of Mentorship
Giving Feedback: Effective Communication and Building Self-Efficacy

Christine Pfund, PhD.

Director, Center for the Improvement of Mentored Experiences in Research (CIMER)
Co-PI, National Research Mentoring Network (NRMN)
Wisconsin Center for Education Research
Institute for Clinical and Translational Research
University of Wisconsin-Madison

Interacting with the presentation via GoToWebinar

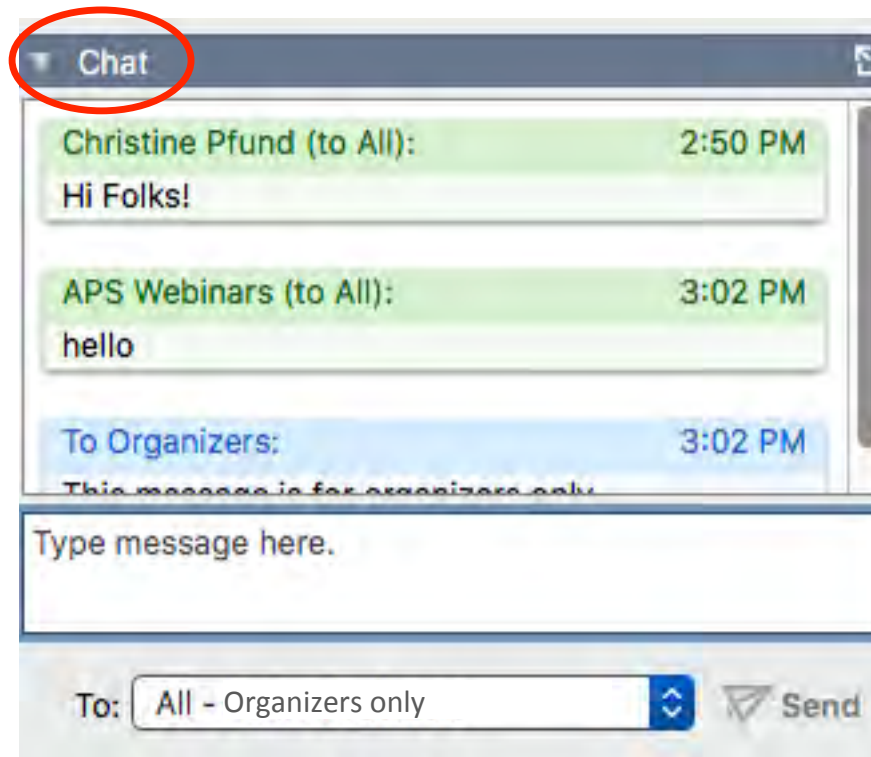# Asking questions during presentation
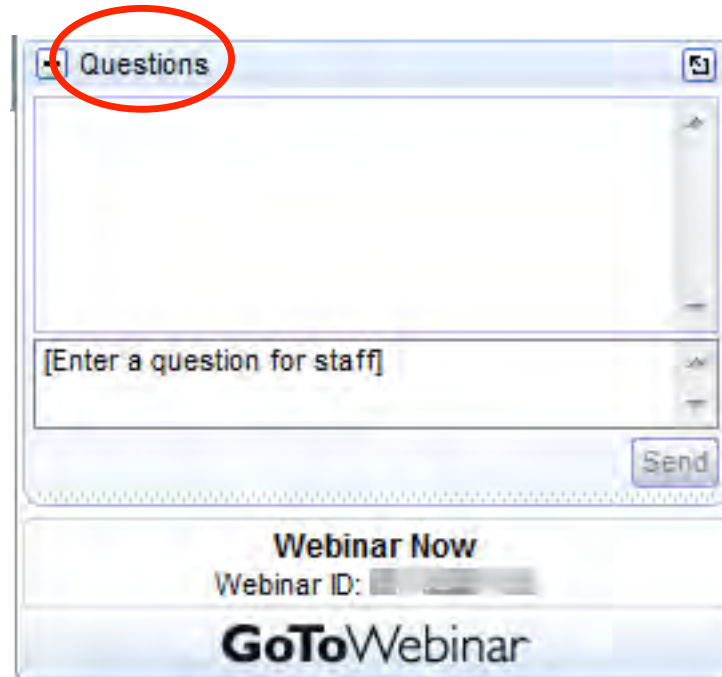
Responding to polls

Just for practice: What's your favorite color?

1. Blue
2. Green
3. Red
4. Mauve
5. Other

Responding to open-ended questions: use the Chat option

Webinar Agenda

Introductory Activity

Who is in the 'room'?

Science for Mentorship: Attributes for Effective Mentoring and Mentor Training

Today's Topic: Providing Feedback

- Effective Communication
- Culture and Communications
- Research Self Efficacy

Next 2 webinars:

       March 27, 2-3pm CT   - Topics TBD today

       April 24, 2-3pm CT   - Topics TBD today

Introductory Activity

In chat window, please share:

Name of the institution at which you did your graduate work

(if not applicable, list one institution you have attended)

Poll: What Career Stage are You?

1. Faculty
2. Research Staff
3. Post-doc
4. Graduate Student
5. Other

Poll: How many mentees are you currently mentoring?

1. 1
2. 2
3. 3
4. More than 4
5. None

Poll: What Career Stage are Your Current Mentees?

1. Junior Faculty
2. Research Staff
3. Post-doc/ Graduate Student
4. Undergraduate
5. More than one of the above

If none of the above, skip this question.

Science of Mentorship

Definitions
Attributes
Training

Defining Mentoring

A **collaborative learning relationship** that proceeds through purposeful stages over time and has the primary goal of helping mentees acquire the essential competencies needed for success in their chosen career.

It includes using one's own experience to guide another through an experience that requires **personal and intellectual growth and development**.

Applies to research mentoring, career coaching, peer mentoring, virtual mentoring, and in some cases advising


Pfund *et al* 2016: McGee 2016

A Mentored Research Experience and Strong Mentorship has been linked to:

▶ **Enhanced research identity, sense of belonging and self-efficacy** (Palepu *et al*, 1998; Garman *et al*, 2001; Paglis *et al*, 2006; Lopatto, 2007; Bland *et al*, 2009; Feldman *et al*, 2010; Cho *et al*, 2011; Chemers *et al*, 2011; Thiry and Laursen, 2011; Byars-Winston et al., 2015)

▶ **Persistence** (Gloria *et al*, 2001; Solorzano 1993; McGee and Keller, 2007; Sambunjak *et al*, 2010; Williams *et al*, 2015; Bordes-Edgar et al., 2011; Campbell and Campbell, 1997

▶ **Research productivity** (Steiner and Lanphear, 2002; 2007; Wingard *et al*, 2004)

▶ **Higher career satisfaction** (Schapira *et al*, 1992; Beech *et al*, 2013)

▶ **Enhanced recruitment of URMs** (Hathaway *et al*, 2002; Nagda *et al*, 1998).
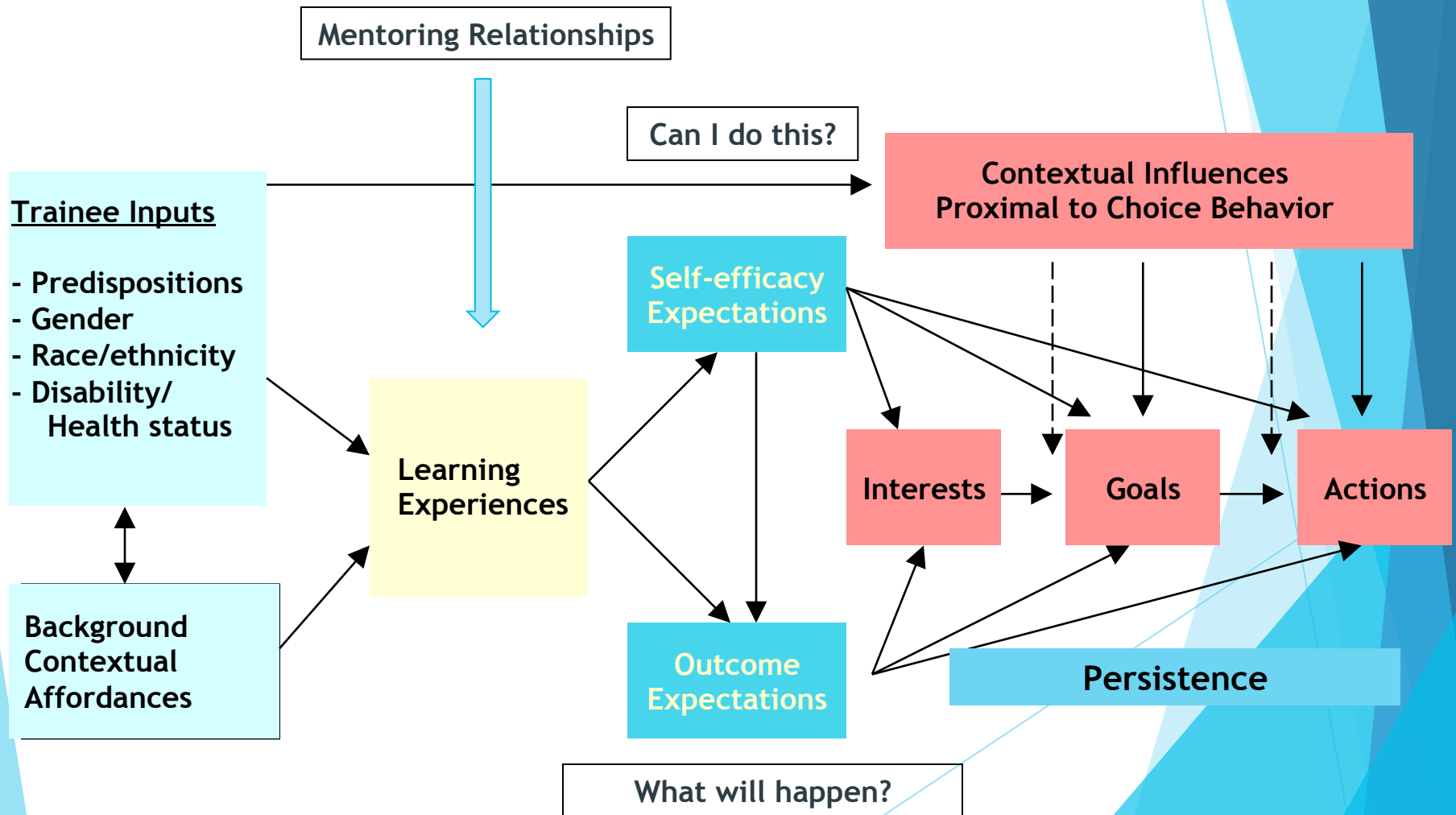
...we developed a mentor training curriculum...
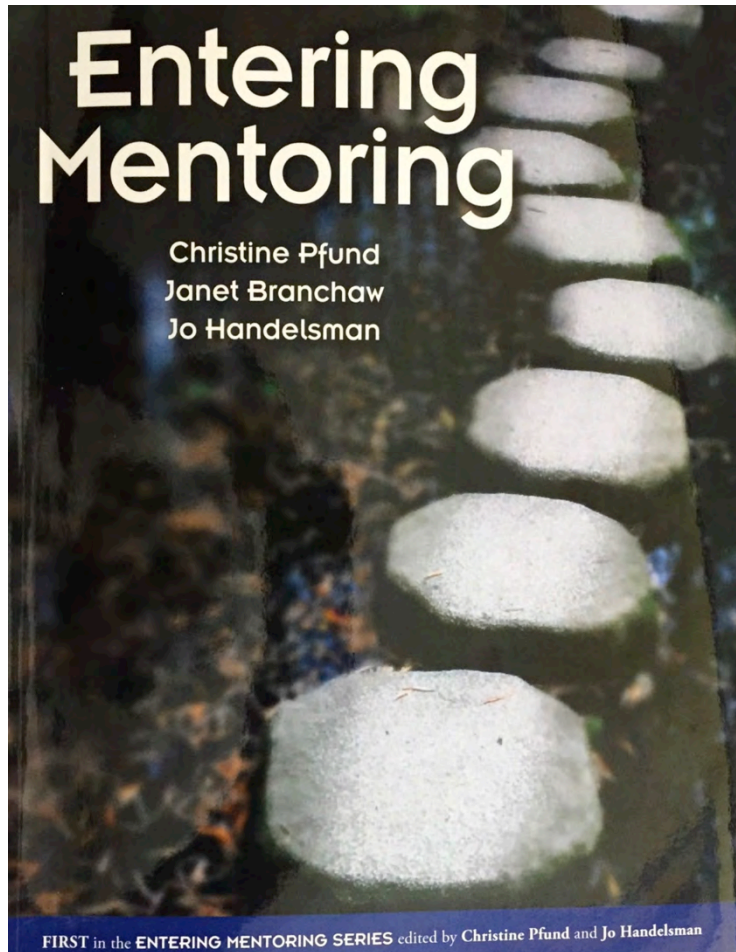
Key elements of mentor training:

- Process-based using case studies and group problem solving

- Aimed at awareness-raising and reflection

- Provides a confidential and brave forum to share the collective experience of mentors across a range of experiences

- Distribute and adapt resources to improve mentoring

...with standardized competencies...

- Aligning expectations

- Promoting professional development

- Maintaining effective communication

- Addressing equity and inclusion

- Assessing understanding

- Fostering independence

- Cultivating ethical behavior

- And more in development!

...and adapted it for different career stages and disciplines...

...and we studied it a lot.

Pfund, C., Pribbenow, C., Branchaw, J., Miller Lauffer, S. and Handelsman, J. (2006). The merits of training mentors. *Science* 311:473-474.

Pfund C, House S, Spencer K, Asquith P, Carney P, Masters K, McGee R, Shanedling J, Vecchiarelli S, Fleming M. (2013). A Research Mentor Training Curriculum for Clinical and Translational Researchers. *Clin Trans Sci*. 6:26-33.

Fleming M, House S, Hanson VS, Yu L, Garbutt J, McGee R, Kroenke K, Adebin Z, Rubio D. (2013). The Mentoring Competency Assessment: Validation of a New Instrument to Evaluate Skills of Research Mentors. *Acad Med*. 88(7):1002-1008.

Sorkness CA, Pfund C, Asquith P, Drezner M. (2013). Research Mentor Training: Initiatives of the University of Wisconsin Institute for Clinical and Translational Research. *Clin Transl. Sci*. 6(4):256-258.

Pfund C, House SC, Asquith P, Fleming MF, Buhr KA, Burnham EL, Eichenberger Gilmore JM, Huskins WC, McGee R, Schurr K, Shapiro ED, Spencer KC, Sorkness CA. (2014). Training Mentors of Clinical and Translational Research Scholars: A Randomized Controlled Trial. *Acad Med*. 89:774-782.

Pfund, C., Spencer, K., Asquith, P., House, S., Miller, S., Sorkness, C. (2015). Building National Capacity for Research Mentor Training: An Evidence-Based Approach to Training-the-Trainers. CBE Life Sciences Education 14 (2).

McDaniels, M., Pfund, C. and Barnicle, K. (2016). Creating Dynamic Learning Communities in Synchronous Online Courses: One Approach from the Center for the Integration of Teaching and Learning (CIRTL). Online Learning.

NRMN serves as a national training hub to improve mentoring relationships

Activities:

- Face-to-face mentor training workshops

- Face-to-face mentee training workshops

- Self-paced online training

- Synchronous online training

- Train-the-trainer workshops

- New modules

Skill Building Across Attributes for Effective Research Mentoring Relationships

|	
RESEARCH SKILLS · Developing disciplinary research skills · Teaching and Learning disciplinary knowledge · Developing technical skills · Accurately assessing mentees' understanding of disciplinary knowledge and skills · Valuing and practicing ethical behavior and responsible conduct of research	**DIVERSITY/CULTURALLY-FOCUSED SKILLS** · Advancing equity and inclusion · Being culturally responsive · Reducing the impact of bias · Reducing the impact of stereotype threat
INTERPERSONAL SKILLS · Listening actively · Aligning mentor and mentee expectations · Building trusting relationships/ honesty	**SPONSORSHIP SKILLS** · Fostering mentees' independence · Promoting professional development · Establishing and fostering mentee professional networks · Actively advocating on behalf of mentees
PSYCHOSOCIAL SKILLS · Providing motivation · Developing mentee career self-efficacy · Developing mentee research self-efficacy · Developing science identity · Developing a sense of belonging	Pfund *et al*. 2016

A National Focus on Mentoring

- National Science Foundation (NSF)
  - Undergraduate research AND mentoring programs
  - AAAS/ PASEMEN STEM Mentoring 2030 Meeting
- National Academies of Science
  - New Report on Mentored Undergraduate Research Experiences
  - Participatory Workshop on Effective Mentoring in STEMM and now full study
- HHMI
  - Mentor and mentee training program for the Gilliam Scholar Programs
- National Institutes of Health (NIH)
  - Mentored K awards
  - Individual development plans (IDPs)
  - National Research Mentoring Network (NRMN)
- **APS**
  - **Curriculum for mentors of undergrads in Physics**
  - **National Mentoring Community**
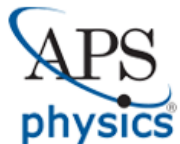
Today's Topic: Providing Feedback
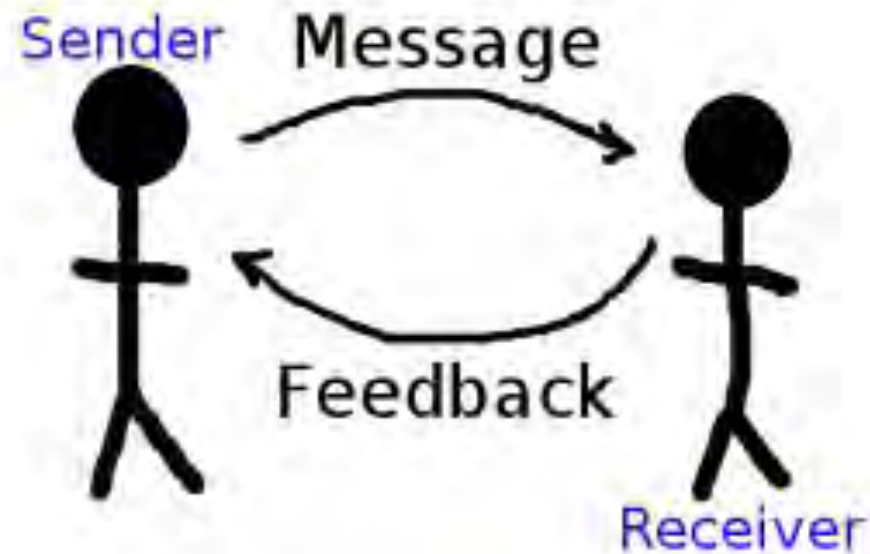
- Effective and Constructive Feedback
- Communication Across Difference
- Research Self Efficacy

What is One Challenge You Have Experienced When Giving Feedback?

Please share in the chat window

Tips on Constructive and Effective Feedback

- Establish an atmosphere of mutual trust and regard. When a feeling of trust has been created, it is easier both to give and to accept feedback.

- Acknowledge the mentee's contributions along with the areas in which you are needing more.

- Be specific in providing feedback. It is not terribly helpful to say, "You are not producing." It is much more useful to describe the specific element of work that concerns you.

- Keep the feedback simple. When planning to give feedback, decide on a small number of areas that you want to cover.

- Hold the meeting in your office or other private space – never provide negative feedback in an open area with others around.

- While you are giving feedback, maintain eye contact and a measured tone.

Adapted from the Institute for Clinical Research Education Mentoring Resources, University of Pittsburgh www.icre.pitt.edu/mentoring/overview.html

How have you seen cultural difference impact the experience of mentees receiving feedback?

Please share in the chat window

Communication Across Difference

Be aware of your own assumptions.
Increasing your awareness of the ways you are a product of your past can help you avoid assuming that others see the world in the same way.

Get curious about the experience of mentees who have different life experiences.
Putting yourself in other people's shoes and seeking to understand how they may have come to their different points of view is a critical step in building a mentoring relationship.
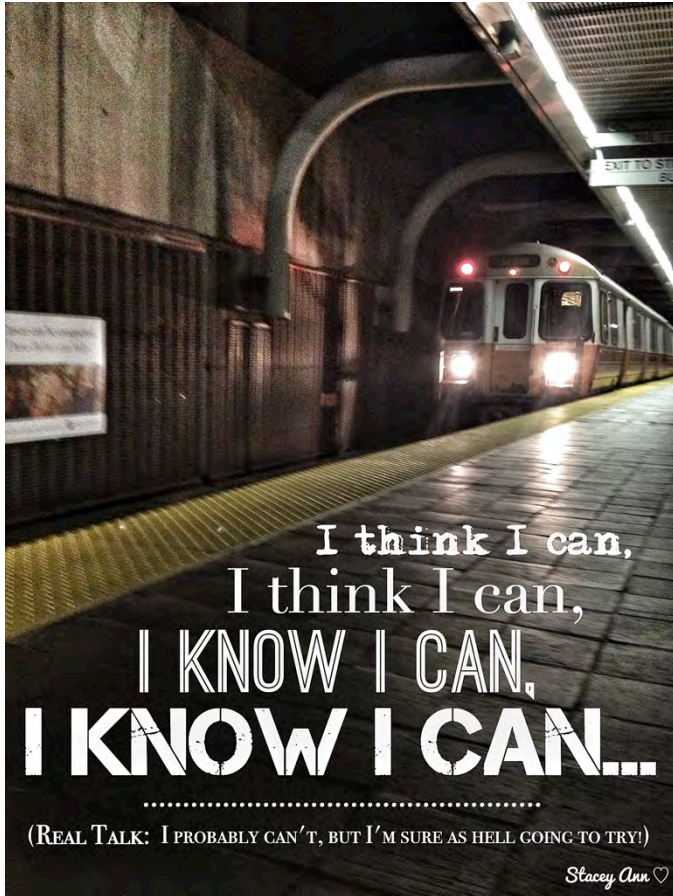
Address differences openly.
While it may initially feel uncomfortable to talk about topics such as race, gender, and/or socioeconomic background, the potential for increased understanding and connection makes it worth the risk.

ictr.wisc.edu/mentoring/mentors-cultivation-phase-resources/

"Feedback, when given well, should not alienate the receiver of the feedback, but should motivate them to perform better."

- *M.O., Manager, Fortune 500 Company*

Self-Efficacy:
The Belief that You Can Do Something

I think I can,
I think I can,
I KNOW I CAN,
I KNOW I CAN...

(REAL TALK: I PROBABLY CAN'T, BUT I'M SURE AS HELL GOING TO TRY!)

Stacey Ann ♡

➢ A Bandera (1977)
Social Cognitive Theory

➢ "The belief in one's capabilities to organize and execute the courses of action required to manage prospective situations."

Self-efficacy = Perceived confidence to succeed at a particular task or situation

Self-Efficacy: Why does it matter?

• Self-efficacy is a powerful predictor of outcomes expectations, goals, interests, and career aspirations among undergraduates (Adedokun et al., 2013; Byars-Winston et al., 2010; Lent et al., 1986; Lent et al., 1991)

• Research self-efficacy has a positive effect on enrollment in PhD and other professional programs (Byars-Winston et al., 2015)

Self-efficacy is informed by four sources
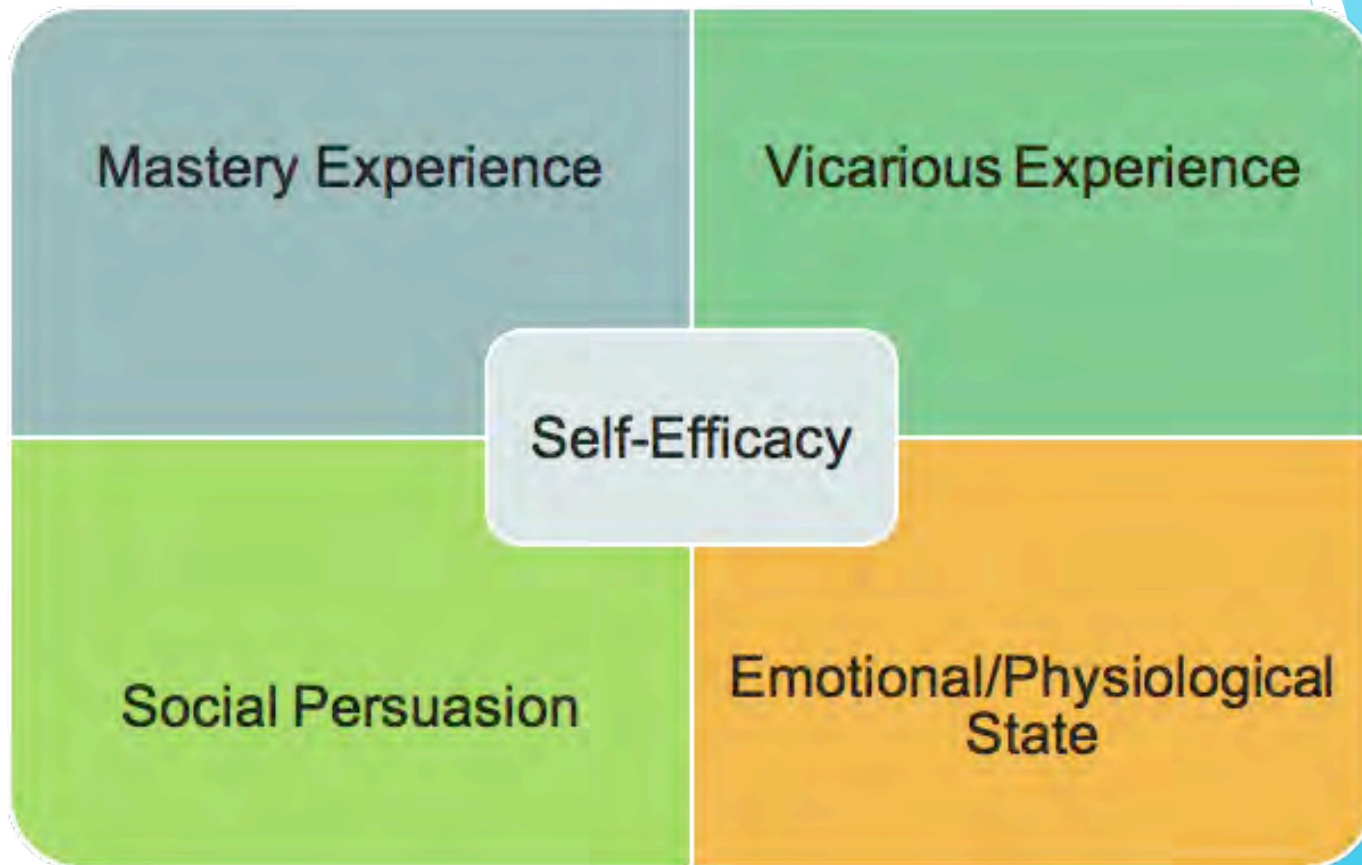
4 Sources of Research Self-Efficacy

Mastery experience: A past accomplishment or success: "I've done this before."

Vicarious experience: A model that has successfully completed the task: "I've seen others do this before."

Social persuasion: A social or verbal message reinforcing ability or effort: "Others have told me I can do this."

Emotional/physiological state: An emotional, affective, or physiological response: "Doing research in the lab makes me happy," or "My heart starts racing when I begin to conduct an experiment."

POLL: As a graduate students, which source contributed most to your sense of confidence/ belief in your ability to write your first manuscript.

1. Mastery Experience
2. Vicarious Learning
3. Social Persuasion
4. Emotional/Physiological State
5. Unsure or N/A

Feedback Email #1

I have included some edits for grammar and clarity in the document. The proposal needs substantial work before I see it again. You have cited a lot of prior research in the introduction and literature review, but it is disorganized and difficult to follow. The method and expected results sections are okay, but I am not convinced of the importance of this research based on this draft. I will take another look once this proposal has been drastically improved.

What are your initial reactions to this feedback? If you were the mentee, how would you feel?

Feedback Email #2

This is a good first draft of the research proposal. I have included some edits for grammar and clarity in the document. I can tell that you have put in a lot of time and effort into reviewing the literature. You have written literature reviews in the past so I know this is an area of strength for you. The methods and expected results are clearly articulated and are explained in a way that should be accessible to a broad audience, which should leave us well-prepared to present and eventually publish this work. The implications section needs some work, particularly where you are trying to make the case for the importance of this study. I can provide you with some good examples if they would be helpful. I think you could also spend a little more time in the introduction setting up the study and doing a little foreshadowing for the reader. I would like to review the proposal again once you have addressed these comments. I know writing can sometime be stressful but I have every confidence that you can get this draft to where it needs to be.

Resources

Acknowledgements

Many, many partners and collaborators with specific thanks to Drs. Angela-Byars-Winston and Amanda Butz for materials related to research self-efficacy

You!