

Xavier University of Louisiana  
and the  
Center for the Advancement of Teaching  
present the  
  
Preparing Mentors and Advisors  
at Xavier Workshop

The Preparing Mentors and Advisors at Xavier program is supported by the Building Infrastructure Leading to Diversity NIH RL5MD009597 (BUILD) grant.



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# SESSION I

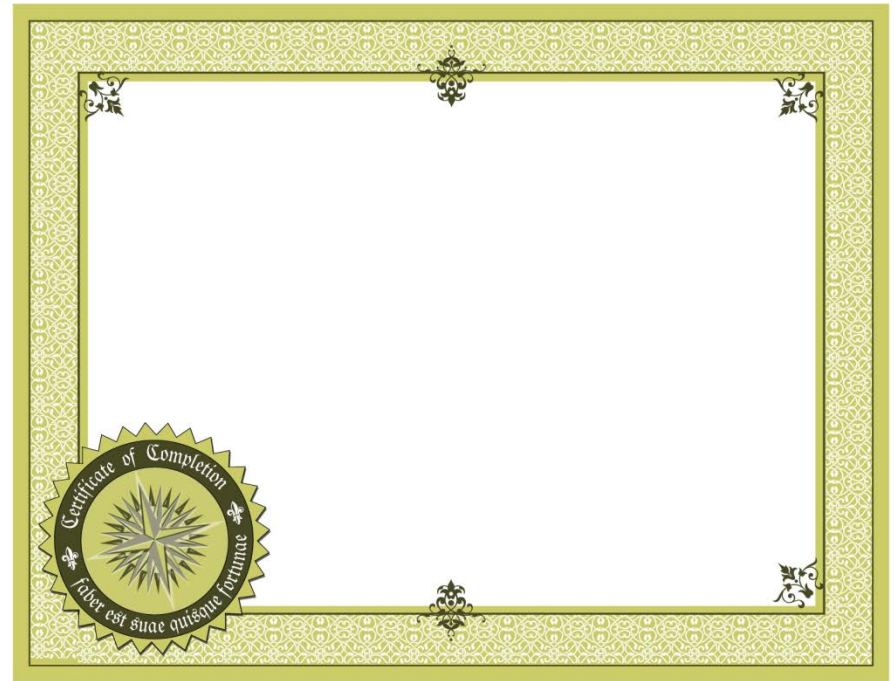
## Welcome, Overview and Self-Assessment



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# Full P-MAX Program

- 1 – eight-hour workshop (summer)
- 3 – one-hour workshops (fall)
- 3 – one-hour workshops (spring)



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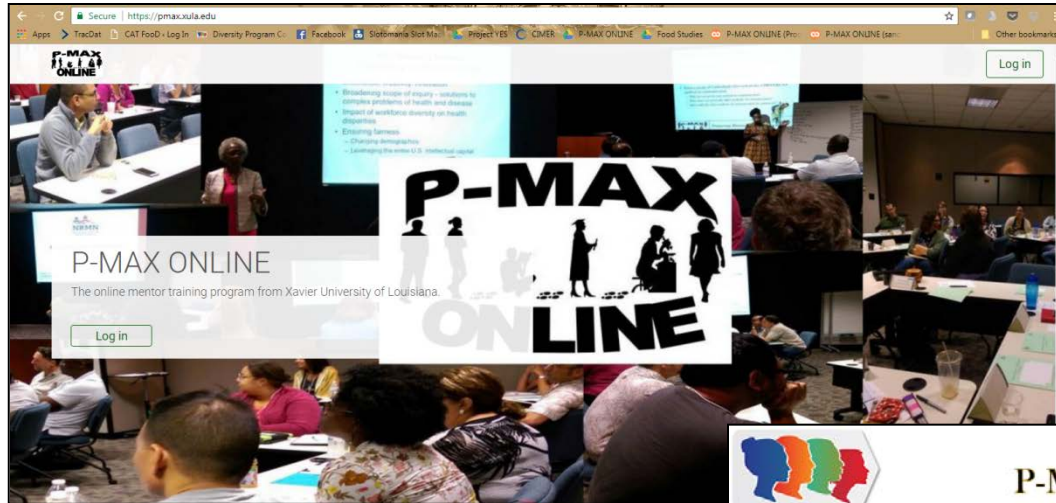
# What's In Your Workshop Packet?

- Agenda
- Name badge
- Session documents
- Note paper
- Release form
- NRMN card
- Workshop evaluation
- P-MAX pin



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# Release Form



## P-MAX: A Project Pathways Initiative

Tiera S. Coston, Elizabeth Yost Hammer, Maryam Foroozesh  
Xavier University of Louisiana



### INTRODUCTION

Xavier University of Louisiana is accomplished in preparing its students for successful careers, especially those in the biomedical and physical sciences. One of the important factors in this accomplishment is the advising and mentoring that Xavier provides to its students. Xavier was established by Saint Katherine Drexel and the Sisters of the Blessed Sacrament with the ultimate goal that its alumni would become leaders and educators and improve their community. Throughout its history, Xavier has maintained a culture of nurturing mentorship that is so strong and pervasive that it guides the collective expectations of the entire Xavier community. In recent years, Xavier has progressed toward formalizing this culture to ensure its lasting impact, and this process has led to the establishment of the Preparing Mentors and Advisors at Xavier (P-MAX) mentor training program.

**Targeted Population:** P-MAX is designed to provide participants with the knowledge and skills needed to mentor and advise undergraduate students, especially those engaged in research. Ultimately, the goal of P-MAX is to assist mentors in developing effective relationships with

### P-MAX IN ACTION



### FINDINGS & OUTCOMES



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## Preparing Mentors and Advisors at Xavier

### Workshop Agenda

July 22, 2017

Mellon Seminar Room, Library Resource Center, Room 532B

8:00 AM – 4:00 PM

7:45 – 8:15 AM – Check-In

#### SESSION I

8:15 – 8:45 AM – Introduction

Facilitator: Tiera S. Coston

- Welcome and agenda overview
- P-MAX Self-Assessment

#### SESSION II

8:45 – 9:15 AM – Why We're Here

Facilitator: Tiera S. Coston

- Participant introductions
- Workshop objectives
- BUILD, Project Pathways, & NRMN
- Scholarship on mentoring and advising
- Reflection: Why are you here?

#### SESSION III

9:15 – 9:45 AM – Mentoring Philosophy

Facilitator: Elizabeth Y. Hammer

- Session objectives
- How do you mentor?
- What's in it?
- Why write one?
- Your mentoring philosophy

#### Session IV

9:45 – 10:45 AM - Setting and Aligning Expectations

Facilitator: Florastina Payton-Stewart

- Session objectives
- What's in a word or phrase?
- "Projects"
- Research project descriptions
- Mentor-mentee contracts
- Communication Methods
- Individual Development Plan (IDP)
- Reflection: Personalized mentoring agreement

10:45 – 11:00 AM – Break

#### Session V

11:00 AM – 12:00 PM – Effective Communication

Facilitator: KiTani Lemieux

- Session objectives
- Communication and intake process
- Active Listening: Mentoring challenges
- Reflection: Active Listening
- Strategies for improving communication

12:00 – 1:00 PM – Lunch (open discussion)

#### Session VI

1:00 – 2:30 PM – Stereotype Threat, Bias and Identity

Facilitator: Elliott Hammer

- Learning objectives
- Identity and privilege
- Stereotypes, prejudice and discrimination
- Stereotype threat, implicit bias, and the Implicit Association Test (IAT)
- A mentee's journey
- Combating bias

2:30 – 2:45 PM – Break

#### SESSION VII

2:45 – 3:15 PM – Mentoring Philosophy Revisited

Facilitator: Elizabeth Y. Hammer

- Reflect on your mentoring philosophy
- Opportunities for support and development

#### SESSION VIII

3:15 – 3:45 PM – Reflection & Closing Discussion

Facilitator: Tiera S. Coston

- Next steps and potential challenges
- Questions

3:45 – 4:00 PM – Workshop evaluation



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# SESSION II

## Why We're Here



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# Participant Introductions

Name?

Department?

Mentoring role?



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# Workshop Objectives

- Establish the need for and role of mentoring in undergraduate success
- Present tools and resources for effective mentor/mentee communication
- Introduce techniques to align mentor/mentee expectations
- Establish role of conscious and unconscious assumptions, preconceptions, biases and prejudices in mentoring



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# BUILD and Project PATHWAYS

## NIH Building Infrastructure Leading to Diversity (BUILD)

- a NIH initiative intended to enhance diversity in the biomedical, behavioral, clinical, and social sciences research workforce by transforming undergraduate research training and mentorship

## BUILD Institutions

California State University, Northridge	University of Alaska Fairbanks
California State University, Long Beach	University of Detroit Mercy
Morgan State University	University of Maryland, Baltimore County
Portland State University	University of Texas at El Paso
San Francisco State University	Xavier University of Louisiana



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# BUILD and Project PATHWAYS

Building Integrated Pathways to Independence for Diverse Biomedical Researchers (Project PATHWAYS)

- Xavier's BUILD initiative consisting of several components targeting students, faculty, including curriculum enhancement and faculty and student mentoring training



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# Advisor vs. Mentor

Advisor	Mentor
Contractual	Intentional
Directs	Guides
Tends to be one-way flow of information	Tends to be an exchange of information
Tends to support short-term decisions	Tends to support long-term progress
Tends to be professional	Tends to be personal and professional
Focuses on things that affect you	Focuses on you



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# Defining Mentoring

A personal and professional relationship between two people in which one uses his/her own experience to guide another person through an experience that requires growth and development

Yaffe, K., Bender, C. and Sechrest, L. (2012). What is a mentor? *CUR Quarterly*. 33(2), 34-38.

Mentoring helps students think about their potential future lives as professionals in a discipline and develop the internal motivation to realize career and personal goals.

Temple, L., Sibley, T.Q., and Orr, A.J., (2010). How to mentor undergraduate researchers. Council on Undergraduate Research, Washington, DC.

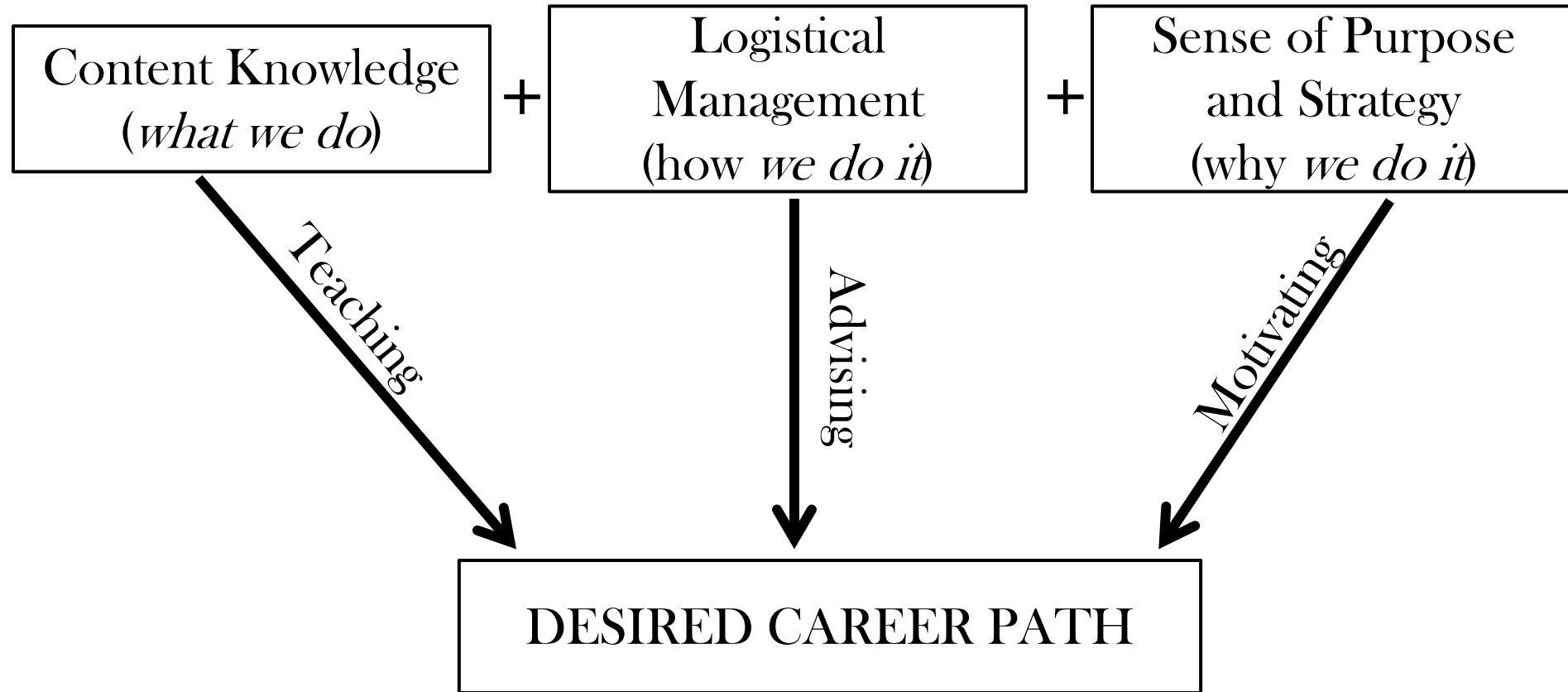
The role of mentor is critical in college and career success.

Coles, A. (2011). The role of mentoring in college access and success. Institute for Higher Education Policy. Retrieved from <http://files.eric.ed.gov/fulltext/ED520415.pdf>.



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# Defining Mentoring



Temple, L., Sibley, T.Q., and Orr, A.J., (2010). How to mentor undergraduate researchers. Council on Undergraduate Research, Washington, DC.



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# Mentoring Matters

Strong mentorship has been linked to:

- enhanced self-efficacy (Bland et al., 2009; Cho et al., 2011; Feldman et al., 2010; Garman et al., 2001; Palepu et al., 1998).
- desire to pursue a Ph.D or M.D/ Ph.D (McGee and Keller, 2007).
- persistence (Sambunjak et al., 2010; Alberta et al., 2001; Solorzano 1993).
- research productivity (Steiner et al., 2002; Wingard et al., 2004).
- higher career satisfaction (Schapira et al., 1992; Beech et al., 2013).
- enhance recruitment of underrepresented groups into biomedical research-related career pathways (Hathaway et al., 2002; Nagda et al., 1998).



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# Underrepresented Populations & Mentoring

Members of underrepresented groups typically receive less mentoring than their majority peers (Thomas et al., 2001; Helm et al., 2000; Morzinski et al., 2002).

Investigators from underrepresented groups indicate that inadequate mentoring posed obstacles to obtaining funding (Ginther et al., 2011).



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# National Research Mentoring Network (NRMN)



Impetus: Inadequate mentoring for trainees at all stages in their career path.

Source: <http://commonfund.nih.gov/diversity/Initiatives>

## NRMN

- Mentoring to diversify the biomedical workforce
- Provides opportunity and resources to improve mentoring

Source: <http://nrmnet.net/>



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<https://nrmnet.net/>



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**Catalyzing career progression**



**UNLOCKING SCIENTIFIC POTENTIAL  
THROUGH MENTORSHIP**

The National Research Mentoring Network supports your advancement at every career stage of research in the biomedical sciences.

Experience mentorship and professional development programs designed to hone your practices and deepen your connection to the diverse nationwide scientific community.

[JOIN NRMN](#)

Feedback

**UNDERGRADUATE  
STUDENTS**



**GRADUATE STUDENTS &  
PHD CANDIDATES**



**POSTDOCTORAL  
RESEARCHERS**



**JUNIOR & SENIOR  
FACULTY**



**NON-FACULTY  
RESEARCHERS**



**ACADEMIC  
ADMINISTRATORS**



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## OUR PROGRAMS

MyNRMN

Guided Virtual Mentorships

Coaching Groups for Grant  
Proposal Writing

Research Mentor Training

Research Mentee Training

Building Capacity for  
Research Mentor & Mentee  
Training

NRMN Mentor Certifications

NRMN Supplement and Pilot  
Projects

# MyNRMN

## MyNRMN

**MyNRMN** is a powerful social networking platform for students and researchers across the biomedical, behavioral, social, and clinical sciences to connect with one another for anything from general questions about research and professional development as a scientist to scheduling more formal mentorship appointments one-on-one or as a group.

- Browse profiles of registered NRMN mentors and mentees from around the country
- Build your network by connecting with mentees and mentors that share interests with you
- Send direct messages to your connections (SMS and posts)
- Share documents
- Build your CV using the CV Builder tool (for mentees)
- Set appointments with your mentee/mentor through your personalized calendar
- Invite new mentees/mentors to the NRMN network to connect with you

**Haven't registered yet?** [Click here](#) to create your NRMNet profile and start building your network with **MyNRMN** today!



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# Reflection: Why are you here?

Take a few minutes to think about why you've chosen to be mentor and enhance your mentoring skills.

Consider:

- Mentoring is learned, not taught.
- Mentoring principles, not practices are universal.

Source: Handelsman, J. et al. (2005). *Entering Mentoring: A Seminar to Train a New Generation of Scientists*, Madison, WI: University of Wisconsin Press.



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# SESSION III

## Mentoring Philosophy



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# Session III Objectives

Mentors will have the knowledge and skills to:

- articulate the purpose of a mentoring philosophy.
- outline their own mentoring philosophy.



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# Writing Prompt

Imagine that you are interviewing for a position and you are asked to describe your approach to mentoring. How would you respond?

Share in pairs.



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## What is a Mentoring Philosophy?

Your mentoring philosophy is a statement that explains and justifies the way you approach personal and professional relationships with students as you guide their development into professionals.

Source: Pfund, C., Branchaw, J. and Handelsman, J. (2014). *Entering Mentoring*. New York, NY: WH Freeman & Company.



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# Your Mentoring Philosophy

- Why write one?
  - Help maintain your focus
  - Can share with students
  - Can fold into your teaching philosophy
  - Can help with grant writing

Source: Pfund, C., Branchaw, J. and Handelsman, J. (2014). *Entering Mentoring*. New York, NY: WH Freeman & Company.



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# Your Mentoring Philosophy

- What's typically included?
  - Definitions of mentor, mentee, and learning
  - View of mentee role
  - View of mentor role
  - Goals and expectations of the relationship
  - Mentoring methods and evaluations
  - Personal context
- Share sample

Source: Pfund, C., Branchaw, J. and Handelsman, J. (2014). *Entering Mentoring*. New York, NY: WH Freeman & Company.



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# Your Mentoring Philosophy

- Try it!
  - Take a moment and reflect on your mentoring philosophy. Then make an outline of what you would include in your philosophy.
  - Keep this handy through the workshop today and we will revisit it at the end.



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# SESSION IV

## Setting and Aligning Expectations



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# Session IV Objectives

Mentors will have the knowledge and skills to:

- design and communicate clear goals for the research project.
- listen to and consider the expectations of their mentee in the mentoring relationship.
- consider how personal and professional differences may impact expectations.
- clearly communicate expectations for the mentoring relationship.
- align mentee and mentor expectations.
- ensure that mentee and mentor possess work life balance.



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# What is Mentoring?

“a dynamic reciprocal relationship between an advanced career incumbent and a less experienced professional (protégé) aimed at promoting the development and fulfillment of both” (Haley, 1997)



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# Mentoring and Scientific Teaching

Scientific Teaching	Research Mentoring
Should be faithful to true nature of science	Mentored research is one of the best ways to engage students in science
Involves regular assessment and improvement of teaching	Systematically adjusting mentoring based on interactions with mentee is a form of assessment
Reaches diverse students	Effective mentors work to include mentees and enhance environment by embracing diversity



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# What's in a Word or Phrase?

Share one word or phrase that describes the typical undergraduate research mentoring experience in your discipline.

Focus on what undergraduate research mentoring means to you



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# Case Study: Projects

I mentored an undergraduate student who came from another university for the summer. I explained the project to him and taught him how to make media and grow bacteria. Because my professor and I did not think he had sufficient genetics background for a molecular project, we gave him a microbiology project.

He was very quiet for the first ten days of the project and then he went to my adviser and complained about the project. He said he wanted a project “like Mark’s.” Mark was a student with a strong genetics background and his project was to clone and sequence a gene. My adviser insisted that my mentee keep the project I had designed for him, but the student became sulky. As the summer went on and he didn’t get any of his experiments to work, I began to wonder if he understood what we were doing or even cared about it.



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# Case Study Instructions

- Each group will choose one person to be the facilitator
  - The facilitator guides the discussion (may use question prompts provided)
  - Groups should be ready to report one or two points that came up in the discussion
- 

1. Should the mentee keep the project?
2. What advice would you give the faculty advisor?
3. What are strategies for dealing with a sulky student?
4. What implications does this case have for your own mentoring?

**20 minutes**



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# Payton-Stewart Research Project Descriptions

## ABSTRACT

Cancer is the second leading cause of death, following heart disease, accounting for 1 in 4 deaths in the United States. Despite the advances in chemotherapeutic agents for breast cancer, an acquired resistance to endocrine therapy still remains a major obstacle in the treatment of breast cancer. Studies have found that phytochemical, berberine, a benzyl-tetra isoquinoline alkaloid extracted from plants of the Berberidaceae family, has been extensively used for many centuries in traditional Chinese and Native American medicine. berberine is a nucleic acid-binding isoquinolone alkaloid with wide potential therapeutic properties. It is found in plants such as berberis. Berberine is usually found in the roots, rhizomes, stems, and bark. It exhibits antifungal, antiviral, anti inflammatory and anticancer properties. Berberine has been found to suppress a wide variety of tumor cells including breast, leukemia, melanoma, pancreatic, tongue, prostate and gastric cancer. Studies have shown that berberine is a radiosensitizer of tumor cells but not normal cells. These studies suggest that berberine would be an effective candidate as an anticancer agent. We **hypothesize** that structural modifications of berberine may lead to effective anticancer agents used to overcome endocrine resistance in breast cancer.

In this study we explored the potential anticancer properties of berberine analogs by alkylating the C-13 position of the isoquinoline while keeping the berberine skeleton intact. Using molecular modeling as a guiding tool, we have designed and synthesized several berberine analogs. We also evaluated the effect of berberine and berberine analogs on cell proliferation of triple negative breast cancer cells MDA-MB-231 and MDA-MB-468. We will continue to evaluate the mechanism of action of these berberine analogs and unravel the structure activity relationship.

- Discussion of research project
  - Who can explain my project?
  - What is the focus/what is the students job?
- How can descriptions be improved to convey the excitement of research as well as accurately reflect expectations for the mentee?



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# Effectively Communicating Research Project Descriptions

- Begins with understanding that students will not completely understand your project.
- Our job to explain our project
- Explain what the student will do to contribute
- Exemplify how all parts are key to productivity

Schedule for the first week:

1. review projects
2. review lab expectations
3. review BUILD/summer program requirements
4. review summer schedule



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# Mentor-Mentee Contracts

## Mentor-Mentee Contract

### Objectives:

- Students will meet and begin the process of getting to know their research mentor.
- Students and mentors will begin to define their working relationship, goals and expectations for their research project using a mentor-mentee contract.

Meet with your mentor to discuss what each of you expects from this relationship. After this meeting, you will be able to complete a mentor-mentee contract. To prepare for this meeting, consider the following questions:

1. Why do you want to do research? Why does your mentor want to supervise you?

## Mentor – Mentee Contract

Mentee (print): \_\_\_\_\_

Mentor (print): \_\_\_\_\_

This contract outlines the parameters of our work together on this research project.

1. Our major goals are:

A. research project goals –

## Graduate Mentee Contract

(Professor Trina McMahon, University of Wisconsin–Madison)

### The broad goals of my research program

## Expectations for Undergraduate Mentees

(Ashley Shade, UW–Madison research mentor)

1. **Send me weekly email updates on Fridays by 5 pm**, describing briefly what you've been working on, what you plan to do the following week, and any questions or troubles you had. Important things to include: project you've worked on, broken equipment, storage/equip conflicts, if your data look weird.
2. **Attend lab meeting.** The entire lab assembles approximately once a week to discuss our research. Generally, the person leading lab meeting will distribute reading materials in advance. You should read these materials and come prepared to participate actively in the discussion.

to write grants and initiate research that will make a difference in the community, and society. You will be helping me carry out good scientific method, and conduct ourselves in an ethical manner. The ultimate goal of our research is publication in a peer-reviewed journal.



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# Reflection: How Would Your Contract Look?

- What were your initial thoughts about using a mentor-mentee contract?
- Choose three contract provisions that you would incorporate into your mentoring agreement.
- Consider and tell why these provisions are important to you.



# Methods

- Standard Operating Procedures
- Weekly Meetings
- Open Door Policy
- Weekly Reports
- Group Meetings



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# Individual Development Plan (IDP)

## Individual Development Plan (IDP) For Undergraduate Researchers

The Individual Development Plan (IDP) supports undergraduate researchers to set goals and identify strategies that will help them to reach those goals. It is a self-tracking tool that can also be used to facilitate mentor-mentee communication and alignment of expectations.

Use the following five questions to guide development of the IDP. Annual (or more frequent) review of the plan provides opportunities to celebrate achievements, incorporate revisions and ensure progress toward goals.

### 1. What are your goals?

- **Ultimate goal**
  - ✓ *I will be a professor of neuroscience at a research university.*
- **Long-term** (5-10 years)
  - ✓ *I will be a postdoctoral fellow studying the genetic basis of neurological disorders.*
- **Intermediate-term** (2-5 years)
  - ✓ *I will earn my Ph.D. degree in Neuroscience.*
  - ✓ *I will contribute to the discovery of the genetic basis of Alzheimer's disease.*
- **Short-term** (1-2 years)
  - ✓ *I will earn my B.S. degree in Genetics.*
  - ✓ *I will publish my undergraduate research project in a peer-reviewed journal.*
- **Immediate** (6 months – 1 year)
  - ✓ *I will earn an "A" in Biochemistry class.*
  - ✓ *I will learn brain slice immunohistochemical staining techniques.*
  - ✓ *I will participate in a summer research program to experience another university.*

### 2. What competencies and skills will you need to successfully reach your goals? (See the list at the end of this document for specific ideas)

- Disciplinary knowledge
- Research and technical skills
- Professional and Interpersonal skills
- Management and leadership skills



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# Project Ownership



1. *Ownership as responsibility* relates to the student's role in his or her educational activity. Students have ownership over their learning process when they take personal responsibility for the choice of study and the outcome of their work.
2. *Ownership as buy-in* refers to the commitment, engagement and loyalty that a student has towards his or her educational program or project. Students expressing ownership have “bought into” the importance of the educational project.
3. *Ownership as self-identification* refers to a sense of belonging and identification with the educational program or project. A student with ownership has a deep personal connection and sees the project as an extension of him/herself.

**Linguistic Analysis of Project Ownership for Undergraduate Research Experiences**

**D. I. Hanauer, J. Frederick, B. Fotinakes, and S. A. Strobel**

**CBE—Life Sciences Education Vol. 11, 378–385, Winter 2012**



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# Setting and Aligning Expectations

- Foster a sense of guidance for mentee
- Outlining expectations of mentee and mentor
- Ensure mentee understands research project
- Open door policy (approachable)
- Meet regularly



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# BREAK

10:45 – 11:00 AM



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# SESSION V

## Effective Communication in Mentoring



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# Session V Objectives

Mentors will have the knowledge and skills to:

- use multiple strategies for improving communication
- engage in active listening
- communicate clear expectations
- provide constructive feedback



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# Personal Commitment to Mentoring: Students are our Scientific Legacy

- Produce the next generation of scientists
- Train those who will eventually replace us
- Demonstrate commitment to excellence



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# Good Intentions

I am Dr. Angela Woods, an associate professor of biochemistry with a productive research group that includes a research assistant and two undergraduate research mentees. I typically teach two, 3-hours lecture courses each semester and I serve on a number of university committees. My teaching, research, scholarship and service keep me so busy that sometimes I don't know how I will get everything done. Despite how busy I am, mentoring successful research students has always been very important to me. So, when an undergraduate student, Resean, told me that he was interested in joining my research group, I invited him to come interview with me. After speaking with Resean for about 30 minutes about his plans for the future and reviewing his academic record, I gladly accepted him into my lab. Funding is available to support Resean's work in my lab, however, I don't know how I will find the time to work with him the way I would like to.

1. What advice would you offer to Dr. Woods in this situation?
2. What affect do you think Dr. Woods' situation might have on Resean?



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# Intake Process

- One-on-one interview
- Binder of lab materials
- Weekly lab meetings
- Shared research data folder
- Peer-peer mentoring
- Accountability in research



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# Receiving the Message: Active Listening



- Conscious effort
- Give your full attention to what the speaker is saying
  - Maintain eye contact
  - Able to paraphrase
- Understand the speaker's intent
  - Use open-ended questions for clarification
  - Attend to the feelings behind the words



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# Are You Listening???

- Form a new group of 3 individuals
  - Mentor #1 shares a current challenge that he or she is facing in a mentoring relationship.
  - Mentor #2 practices active listening and tries to help Mentor #1 develop a plan of action to resolve the situation.
  - Mentor #3 acts as an observer and notes tone, body language, facial expression, *etc.*
- Share what you learned from your active listening exercise and how it may impact your mentoring.



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# Strategies for Improving Communication

Barrier to Effective Communication	Solutions to Overcome Barrier	Indications of Improved Communication
Lack of time to meet one-on-one	Frequent email, telecoms or instant messaging chats	Fewer misunderstandings and stalls in research project



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# LUNCH

(Open Discussion)

12:00 – 1:00 PM



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# SESSION VI

## Stereotype Threat, Bias and Identity



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# Session VI Objectives

Mentors will have the knowledge and skills to:

- build an appreciation of identity to facilitate the mentoring relationship.
- recognize the impact of conscious and unconscious assumptions, preconceptions, and biases and prejudices on the mentor-mentee relationship and acquire skills to manage them.
- identify concrete strategies to combat the effects of bias in the mentoring relationship.



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# Cultural Identity Competence

Ensuring the success of ALL of our  
mentees, no matter who they are



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# Identity

Answer the following in as many ways as come to mind:

I am \_\_\_\_\_

These are all potential areas of difference, discomfort, misunderstanding....

And success, and failure



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# Blatant vs. Subtle Prejudice



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# Imagine...

- Imagine that you suspected (but didn't know for sure) that your mentee had stolen some equipment from your lab.
- In what ways would that suspicion impact your relationship with that mentee?
- How would it affect the productivity of your research?
- Put yourself in the position of our students!



# Privilege



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# My Privileged Identity

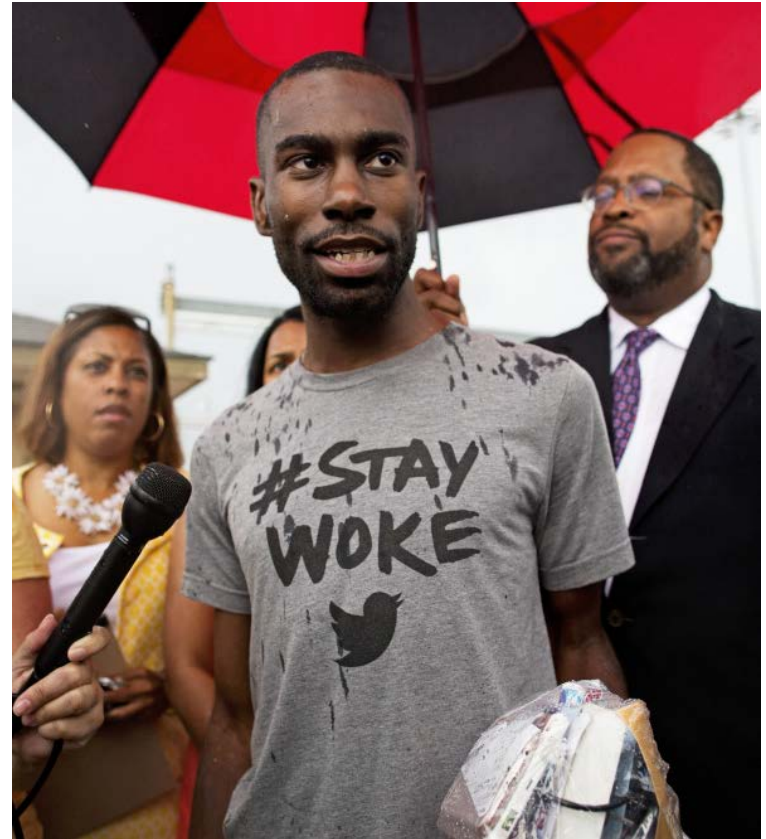
- White
- Male
- Heterosexual
- Non-Jewish; Non-Muslim
- Not disabled
- Not (too) overweight
- Cis-gendered
- Not poor
- US-American



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# Check our privilege & attempt to identity as “Woke”

- Being Woke means being aware... Knowing what’s going on in the community (Relating to Racism and Social Injustice)  
– [urbandictionary.com](http://urbandictionary.com)



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# A Quick Primer on Stereotypes

- *Stereotypes* are **cognitive**—beliefs, assumptions, memories, that overgeneralize to a social category

As opposed to...

- *Prejudice*, which is **affective**—feelings, emotions, about that social category

As opposed to...

- *Discrimination*, which is **behavioral**



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# The Incipience of Stereotypes (Katz & Braly, 1933)

intelligent  
brilliant  
scientifically-minded  
witty  
sophisticated  
alert  
shrewd  
sly  
meditative  
imaginative  
stupid  
ignorant  
superstitious  
naïve  
industrious  
lazy  
honest  
deceitful  
unreliable  
evasive  
faithful  
treacherous  
cowardly  
cruel

kind  
generous  
grasping  
mercenary  
materialistic  
revengeful  
quarrelsome  
gluttonous  
pugnacious  
aggressive  
conceited  
boastful  
ambitious  
ostentatious (showy)  
individualistic  
talkative  
loud  
rude  
suave  
courteous  
conventional  
argumentative  
straightforward  
slovenly

suspicious  
reserved  
quiet  
stolid  
ponderous  
stubborn  
impulsive  
quick-tempered  
suggestible  
passionate  
sensual  
pleasure-loving  
jovial  
happy-go-lucky  
humorless  
sensitive  
methodical  
neat  
persistent  
imitative  
frivolous  
gregarious  
practical  
progressive

conservative  
musical  
artistic  
sportsmanlike  
tradition-loving  
efficient  
very religious  
extremely nationalistic  
physically dirty  
loyal to family ties  
arrogant  
radical



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# Katz & Braly's groups

- Germans
- Italians
- Negroes (sic)
- Irish
- English
- Jews
- Americans
- Chinese
- Japanese
- Turks



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# Let's Replicate Katz & Braly!



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# Automatic vs. Controlled Components

- Devine (1989)—Most of us within a given society agree on what the stereotypes *are*
  - Difference is *endorsement*
- Implicit Association Test (Greenwald & Banaji; [projectimplicit.com](http://projectimplicit.com))
  - Stereotypes are often implicit and unconscious
- Associations of gender



# Where Stereotypes Come From

- “Stereotypes are a real time saver”—*The Onion*
- “in the air”—Steele
- Modeling
- Biased memories
- Biased perceptions
- Cognitive load



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# How Do Stereotypes Affect People?

- Overt discrimination is obvious
  - Job discrimination
  - Hate crimes
  - Direct insults and demeaning comments
- But what about subtler forms?
  - Microaggressions
  - Implicit bias



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# Implicit Bias



- Mike Pence during 2016 VP debate:
  - “When an African American police officer is involved in a police... shooting involving an African American, why would Hillary Clinton accuse that African American police officer of implicit bias?”

# Simone Manuel – 1<sup>st</sup> African American to win individual gold



- “This medal is not just for me. It’s for a whole bunch of people who have come before me, and have been inspirations for me—Maritza, Cullen—and it’s for all the people after me who believe they can’t do it.”

Nymag.com

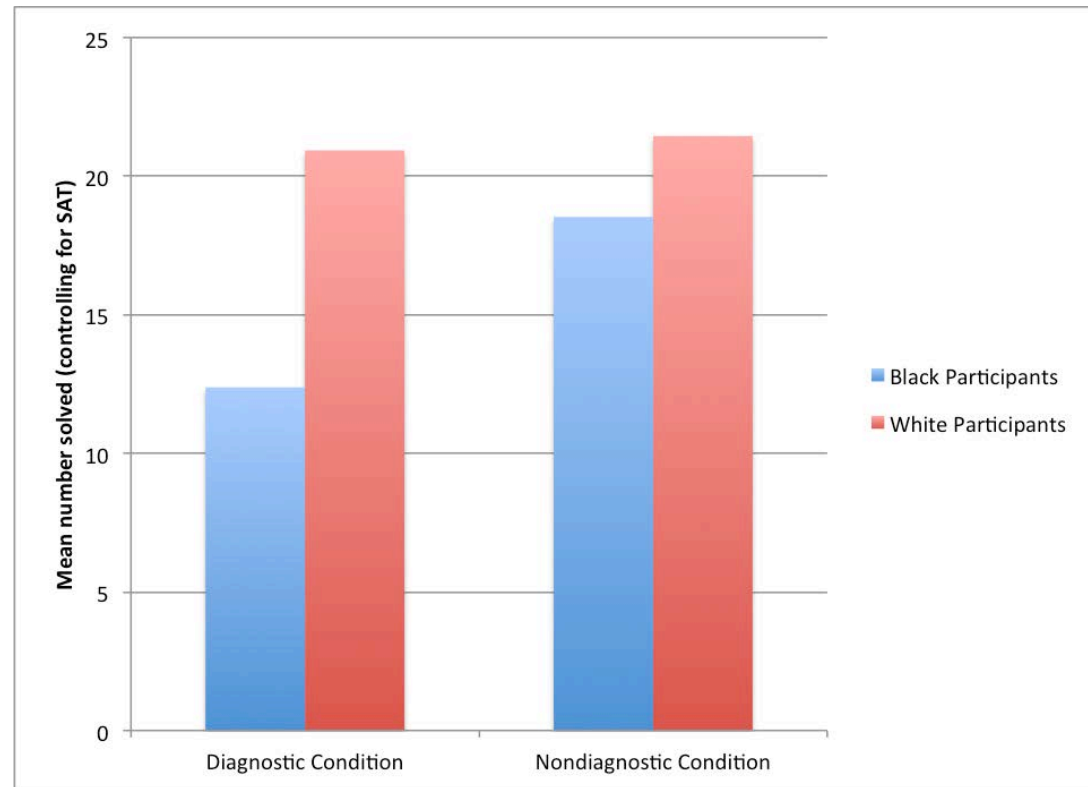


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# Stereotype Threat

- The origins of “The Beast”

- Steele & Aronson (1995)—African Americans & academic performance
- Diagnostic instructions: “various personal factors involved in performance on problems requiring reading and verbal reasoning abilities...genuine test of your verbal abilities and limitations.”
- Non-diagnostic instructions: “psychological factors involved in solving problems...even though we’re not going to evaluate your ability.”

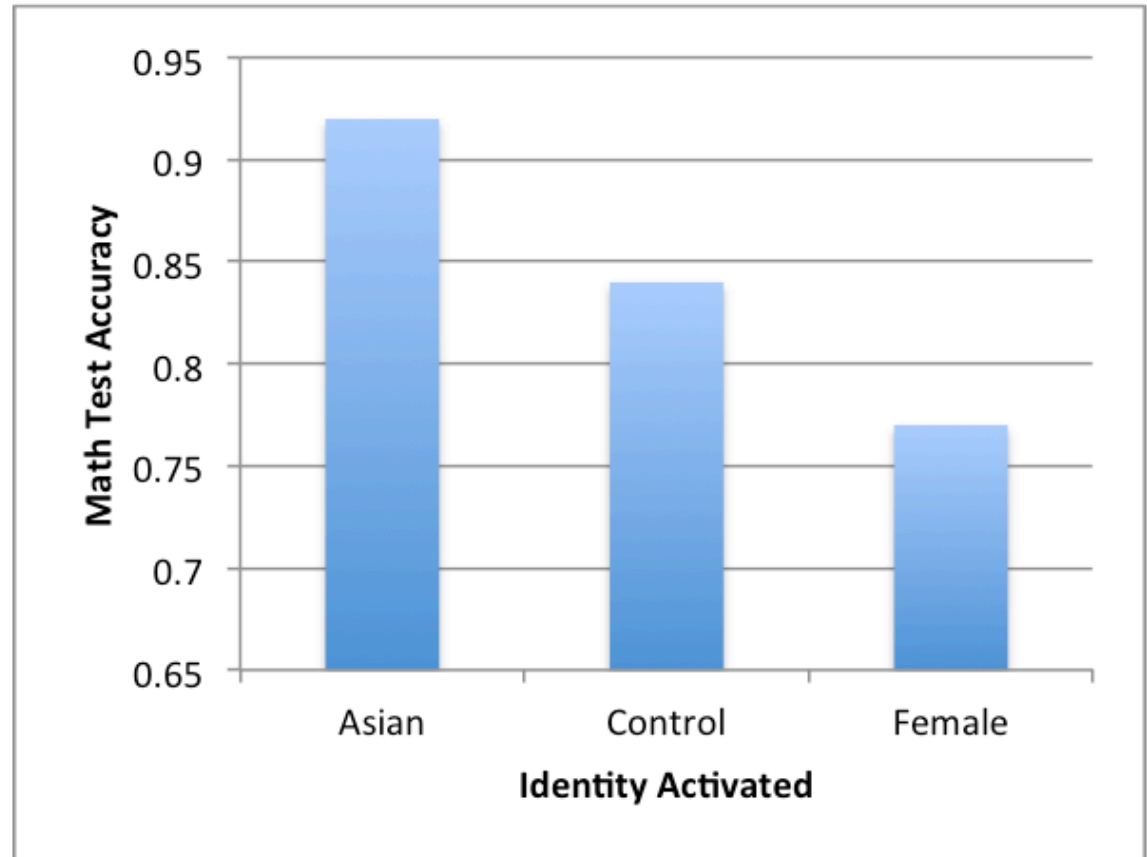


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# Stereotype Threat Research

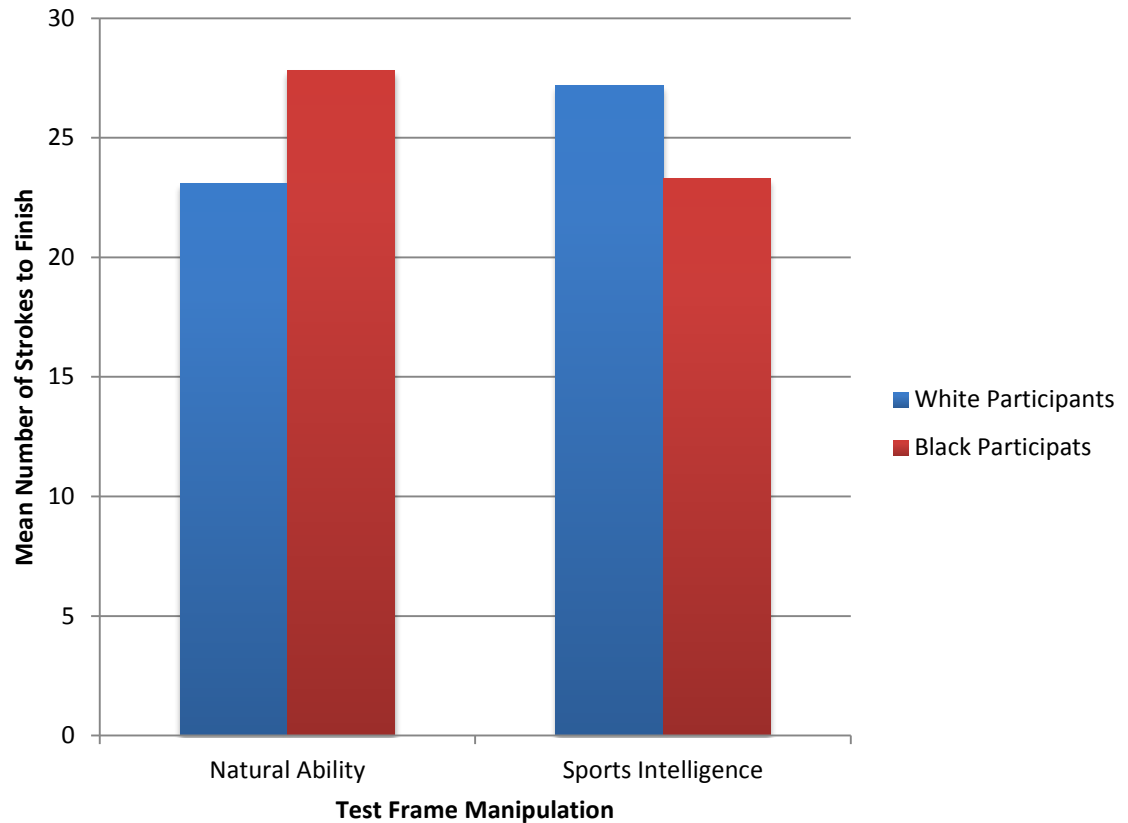
- **Ambady et al. (2001)—Gender & math**
- Asian American middle-school girls; Activated female or Asian identity with loaded questions
- Asian—whether parents spoke another language; whether they had non-Caucasian friends
- Female—whether friends were boys or girls; whether boys or girls are treated differently at school
- Control—favorite season; whether they liked animals



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# Stereotype Threat Research

- Stone et al. (1999)—  
White people & sports
- Miniature golf scenario
- Natural ability: “one’s natural ability to perform complex tasks that require hand-eye coordination, such as shooting, throwing, or hitting a ball or other moving objects
- Sports intelligence: personal factors correlated with the ability to think strategically during an athletic performance



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# Bias and the journey of a minority student

Specifically, my BUILD student, Chandler



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# Chandler (my BUILD mentee ) at 4



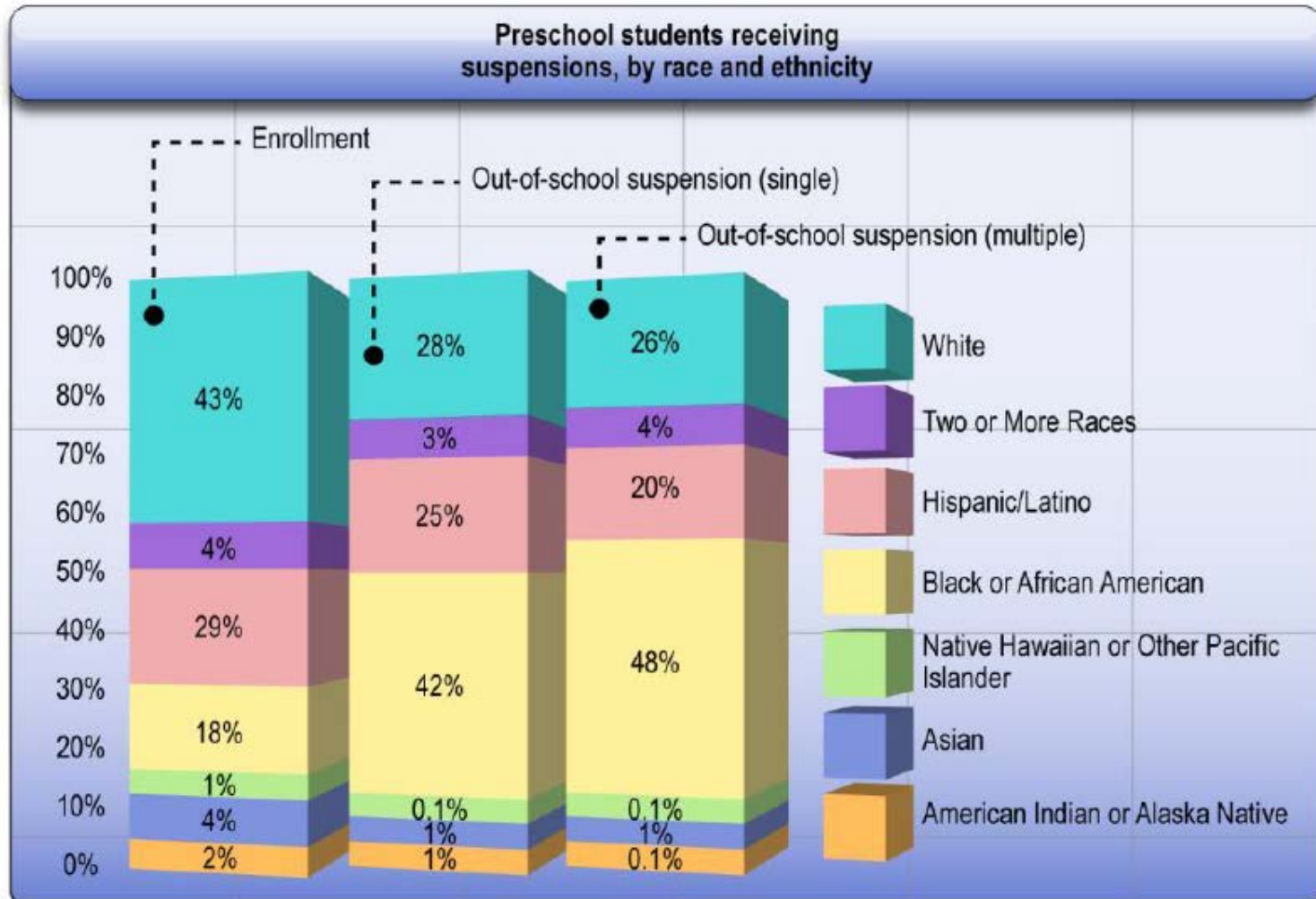
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# How does Chandler identify herself?



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# Preschool



Source: DoE



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# Chandler in Grade School



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# What opportunities come Chandler's way?

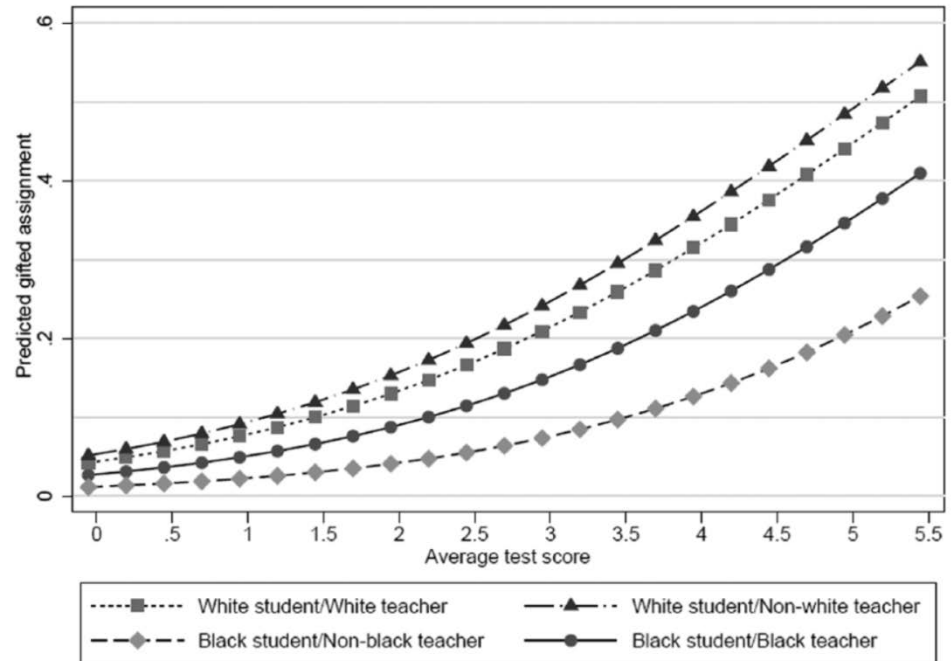


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# Grade School

- Black student w Black teacher (holding test scores, etc. constant): 6.2% assigned to gifted programs
- With non-Black teacher: 2.1%



Grissom & Redding, 2016



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# Chandler in High School



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# Does Chandler identity as a potential college student?



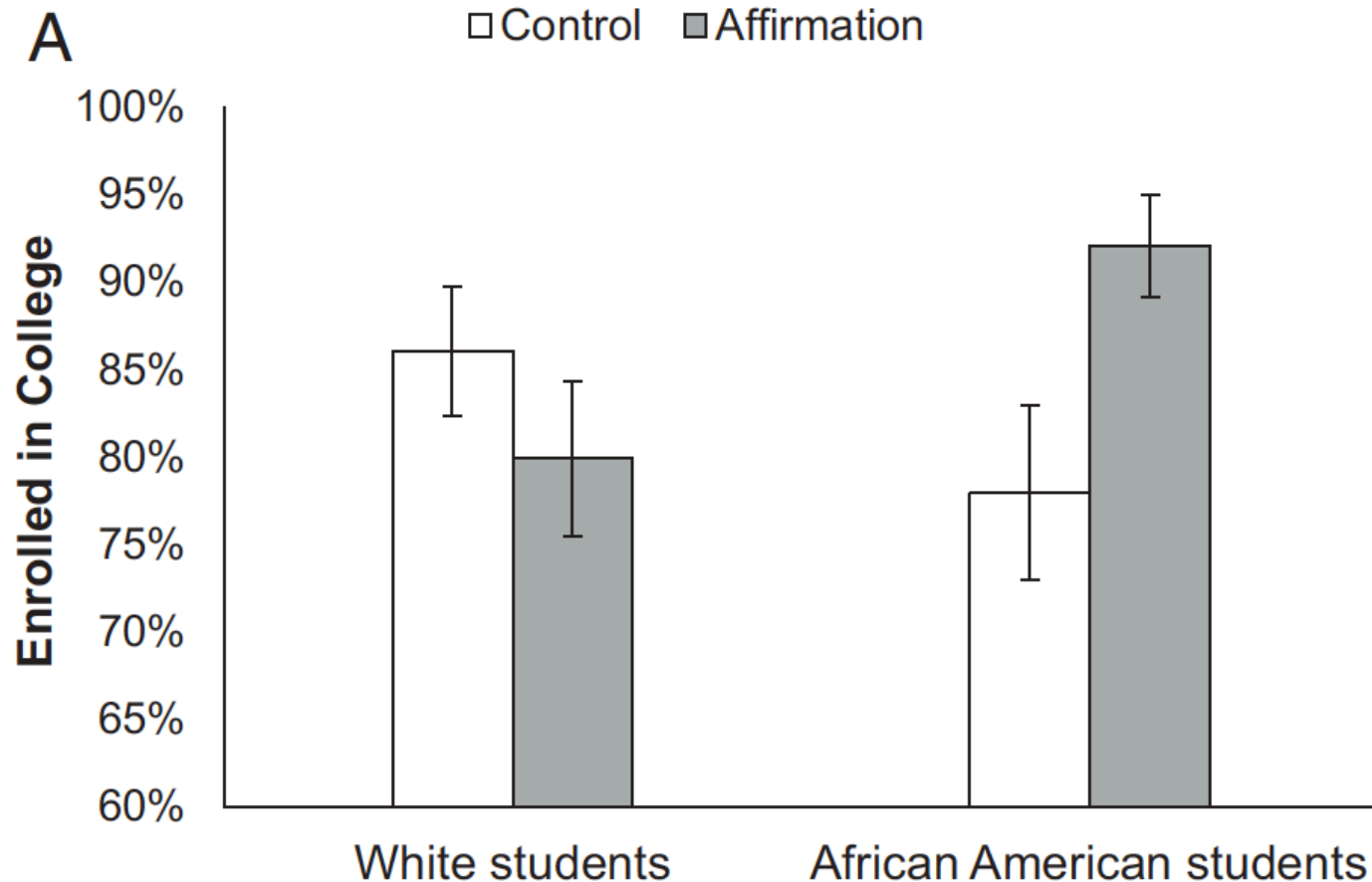
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# High School Changes from 7<sup>th</sup> Grade Interventions

- Intervention condition
  - Reflect & write about core values & why important to them
  - Fosters identification as college student?
- Control condition
  - Reflect & write about unimportant or neutral (e.g., afternoon routine)



# Intervention → Enrollment in College

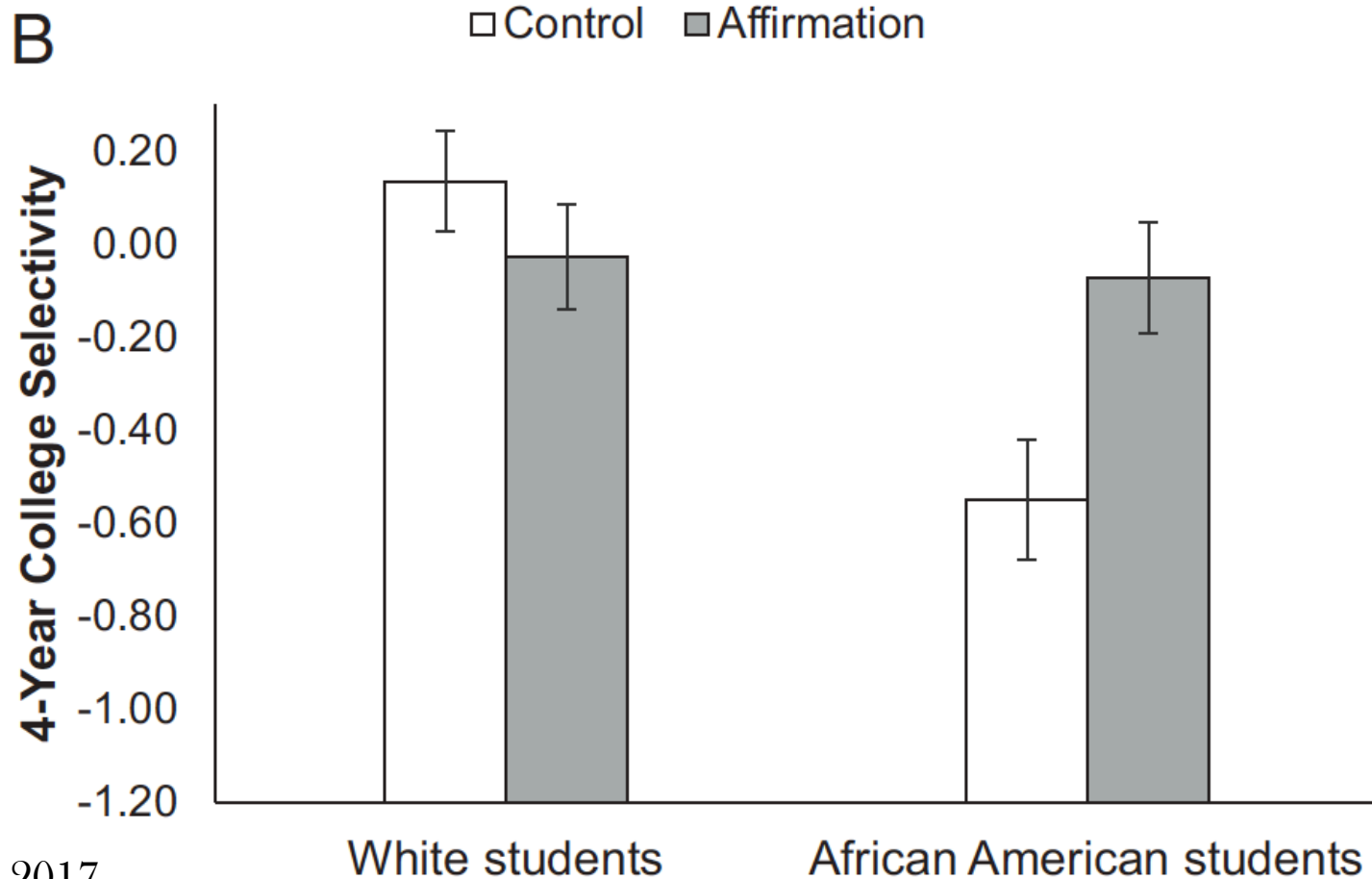


Goyer et al., 2017



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# Intervention → More Selective College



Goyer et al., 2017



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# Chandler in College



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# Does Chandler identify as a successful college student?



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# Barriers Minority & First-Generation Students Face in College

- Stereotypes about their lack of abilities
- Underrepresented in the student body
- Question belonging in college → lower persistence/higher likelihood of dropping out (OR = .66,  $Z = -2.60$ ,  $p = .0009$ )
- Question intellectual perception
- Question cultural fit

Goyer et al., 2017



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# Cultural Mismatch Theory of Inequality

## Feeling at Home in School

### Interventions Connecting School and Self

#### Create a more inclusive college culture

- Provide working-class role models
- Diversify representations of the college experience
- Ensure working-class students are visible and give them voice

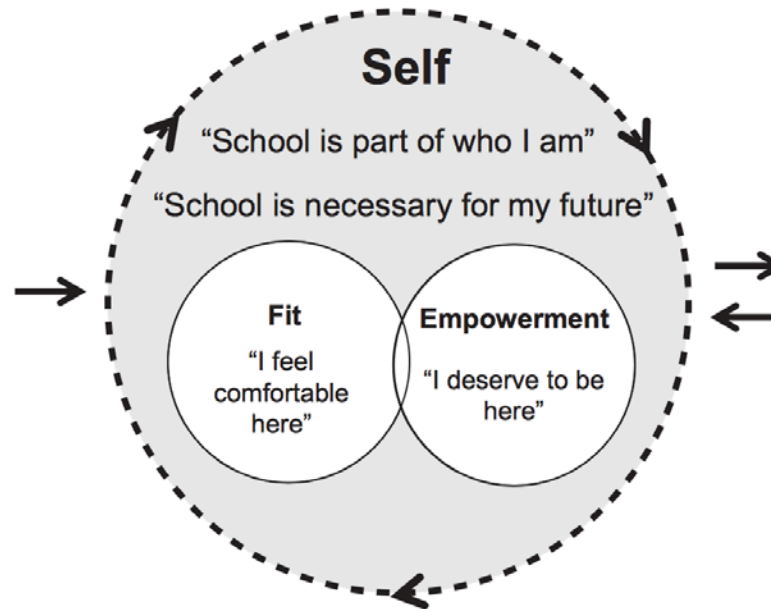
#### Build relationships

- Create peer networks
- Include family in the college experience
- Increase interactions with professors and administrators

#### Provide cultural capital

- Leverage relationships to make the rules visible
- Provide opportunities to enact the rules

### School-Relevant Selves



### Academic Behavior

Engagement

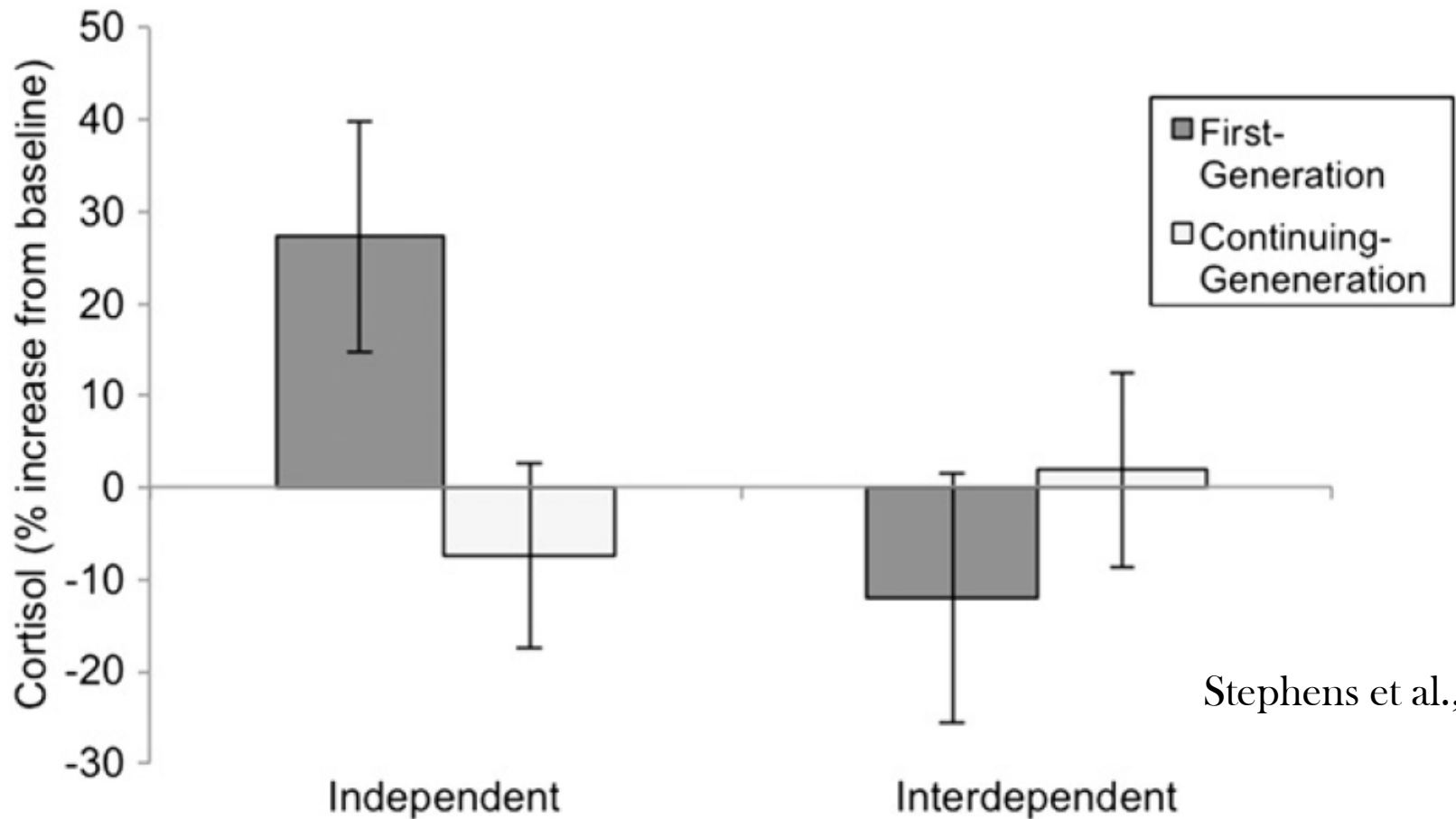
Motivation

Performance



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# Interdependence Intervention & Stress

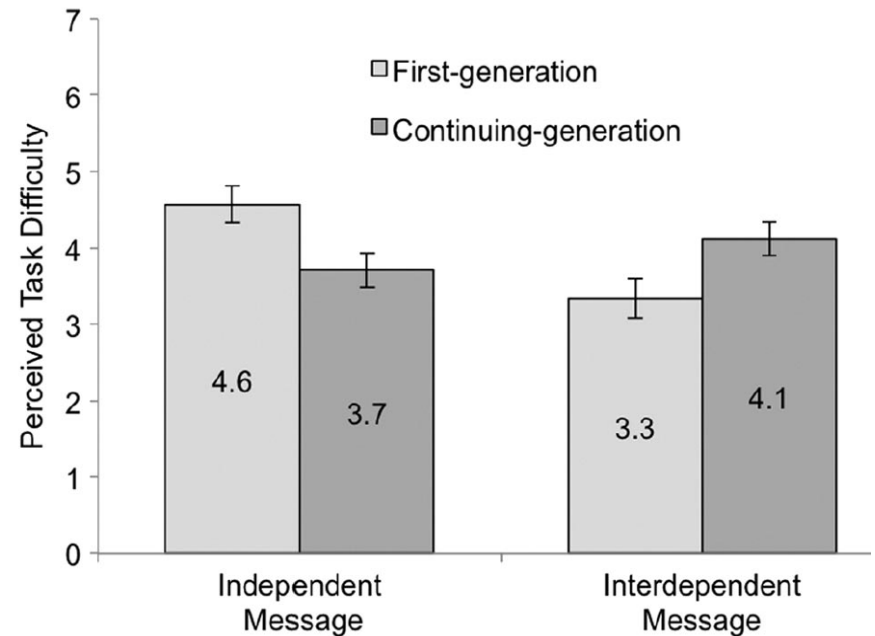
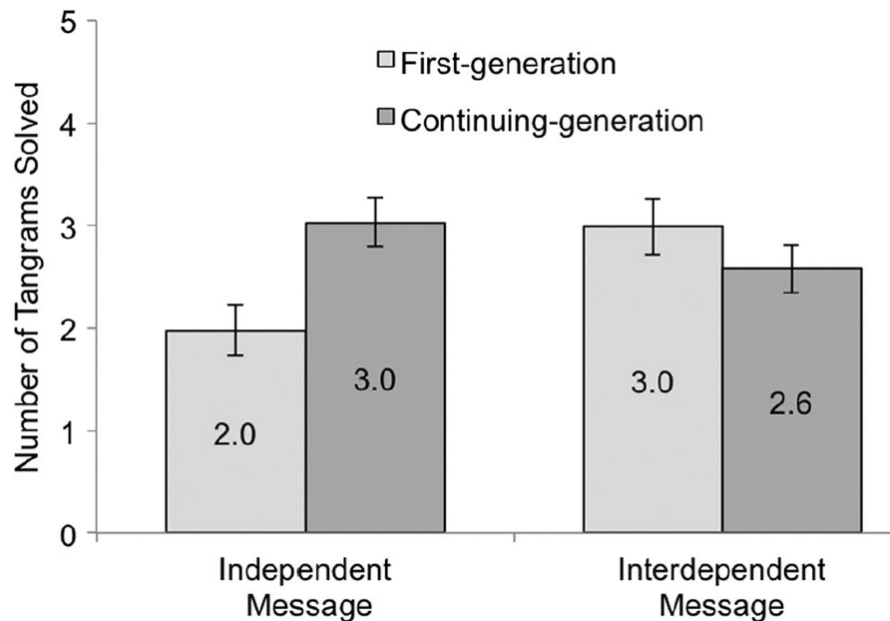


Stephens et al., 2012



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# Interdependence Intervention → Effort & Perception



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# Interventions boost minority & first-generation student success

- Belongingness interventions significantly increase:
  - Campus residency rate
  - Utilization of academic support services
  - Extracurricular participation
  - Development of mentor relationship

Yeager et al., 2016



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# Interventions boost minority & first-generation student success

- Lay theory interventions significantly increase:
  - GPAs of disadvantaged (but not advantaged) students
  - “When a college student does not graduate, he or she can forfeit between \$500,000 to \$1 million in lifetime wages.”

Yeager et al., 2016



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# Chandler Today (well, Tuesday)



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# What will Chandler's identify face going forward?



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# Word et al. 1974: Self-fulfilling prophecies

- Study 1
  - White interviewers—Black & White interviewees
  - Black interviewees—weaker performance
  - Differences in immediacy behaviors (IBs: distance, lean, eye contact, etc.)
- Study 2
  - White interviewers & White interviewees
  - 2 conditions
    - High IBs
    - Low IBs
  - Far superior performance with high IBs



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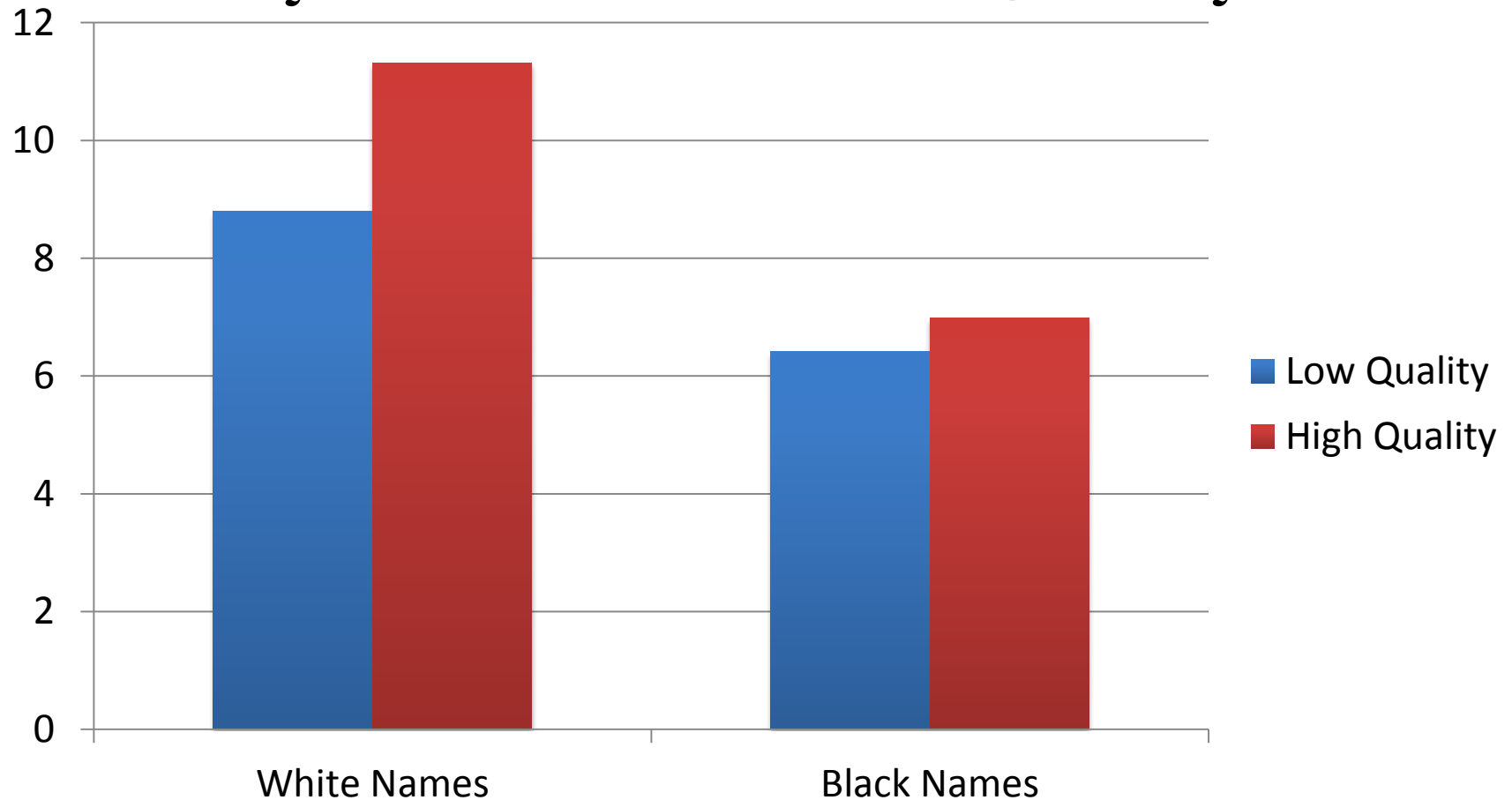
# Bias in Hiring

- Bertrand & Mullainathan (2002): Call-back Rates by Perceived Race of Name
  - Black-sounding names: 6.7%
  - White-sounding names: 10.06%
  - $p < .0001$



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# Percentage of Call-backs by Name Race & Quality



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# But Science is Bias-Free, Right?

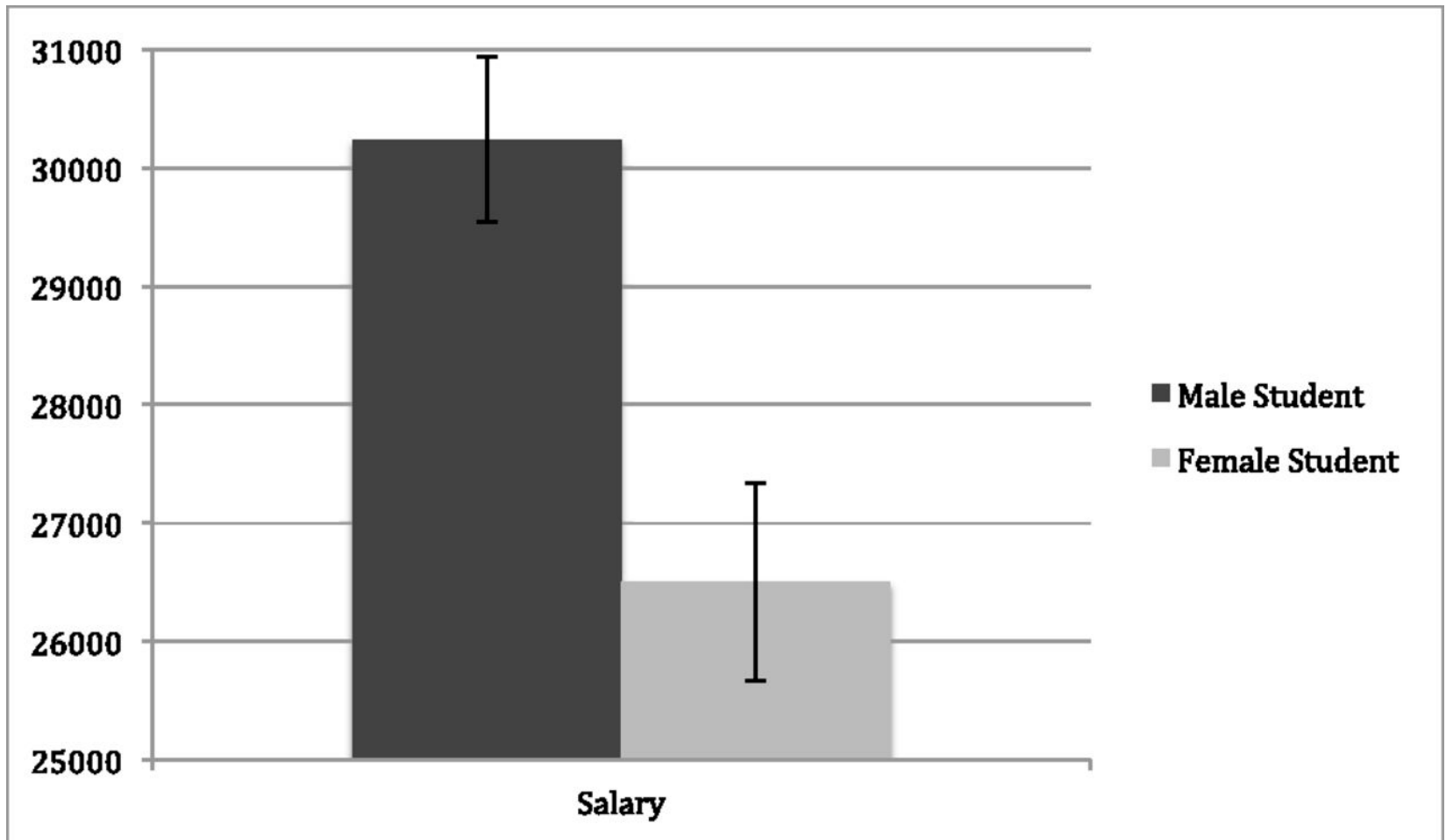
- Science faculty evaluated ostensible student lab manager applications
- Identical applications randomly assigned to have male or female name attached
- Measured perceived competence and salary recommendation

Moss-Racusin et al., 2012



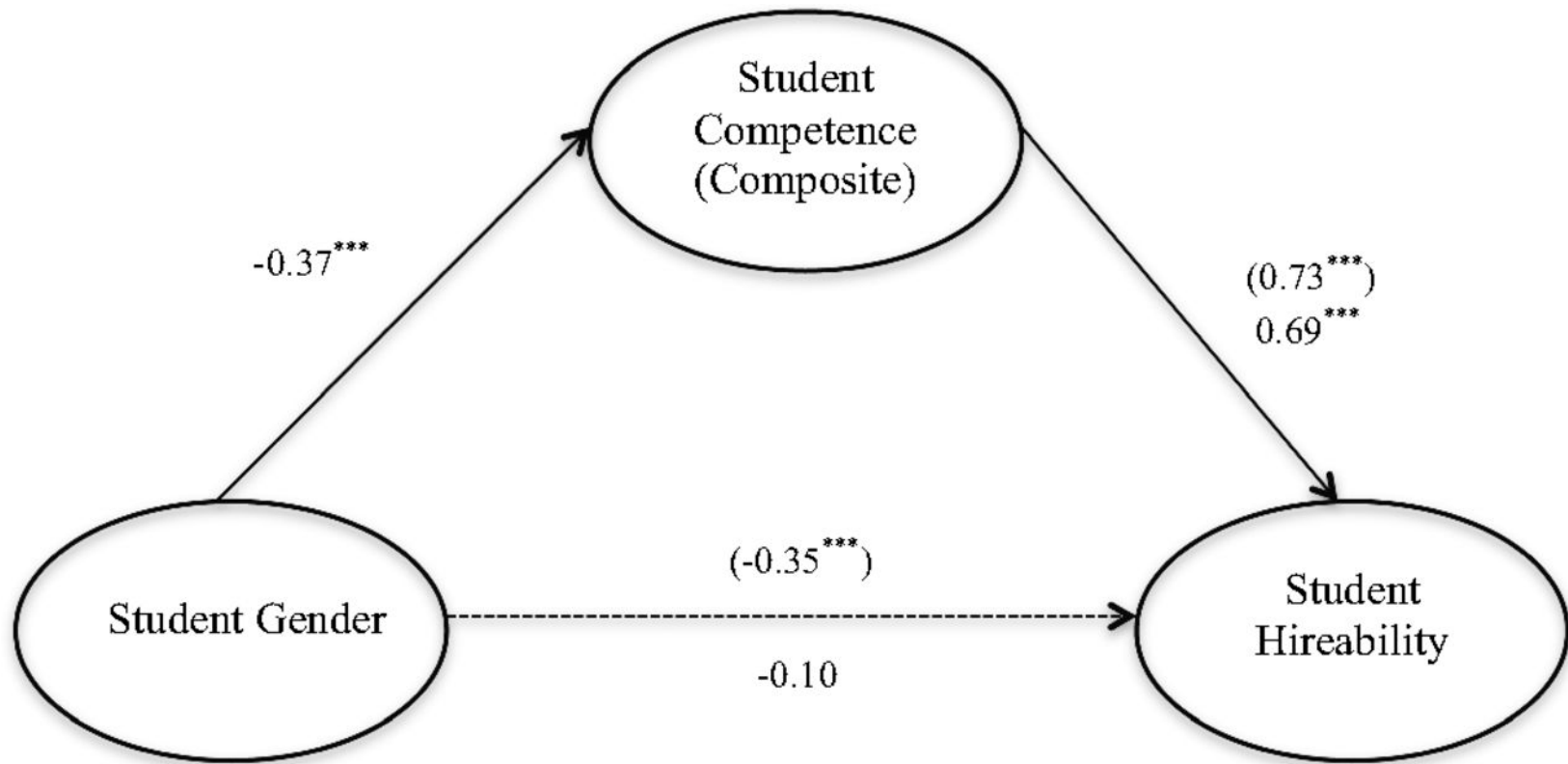
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Salary conferral by student gender condition (collapsed across faculty gender).



Corinne A. Moss-Racusin et al. PNAS 2012;109:16474-16479

# Student gender difference hiring mediation.



Corinne A. Moss-Racusin et al. PNAS 2012;109:16474-16479

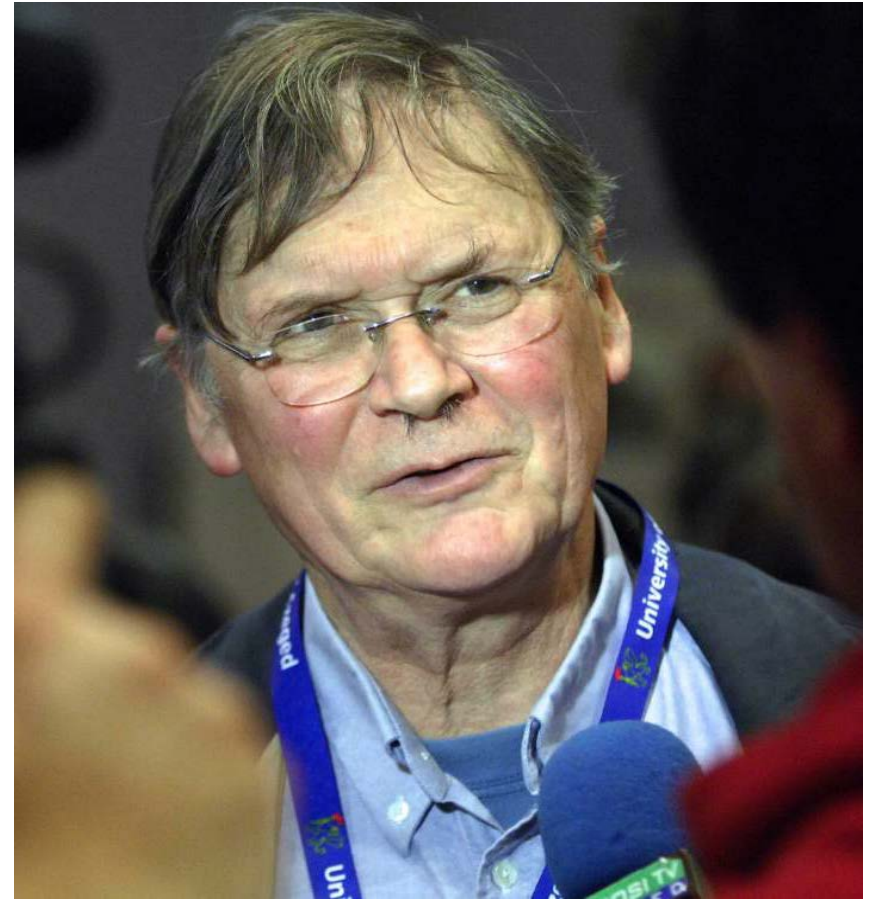
# Matt Taylor on his comet probe landing



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# Nobel Laureate Tim Hunt on female scientists

- “three things happen when they are in the lab ... You fall in love with them, they fall in love with you and when you criticize them, they cry.”



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# How can we combat the effects of bias in our mentoring?

- Acknowledge our biases! (Shelton et al., 2005)
  - Implicit bias → attention & engagement → more favorable rating
- Acknowledge social categories (don't be colorblind)
- Acknowledge our own cognitive limitations (Shelton & Richeson, 2003)
  - Interracial interactions → depleted self-regulatory capacity
- Inoculate students with knowledge (Johns et al., 2005)
  - Women told they were taking a “math test” did just as well as those in the “problem solving” condition—if informed about ST and its effects



# How can we combat the effects of bias in our mentoring?

- Generate an atmosphere of interdependence and independence (Stephens et al., 2014)
- Seek possibilities for affirmation (e.g., Cohen & Sherman, 2014)
- Sympathize across groups; empathize within (Holoien et al., 2016)



Thank you!  
[ehammer@xula.edu](mailto:ehammer@xula.edu)



REVERSE STEREOTYPE

Think about which one of these two has done time

demotioNATION.com



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# BREAK

2:30 – 2:45 PM



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# SESSION VII

## Mentoring Philosophy Revisited



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# Session VII Objectives

Mentors will have the knowledge and skills to:

- reflect on the mentor training experience.
- reflect on behavioral or philosophical changes.
- articulate an approach for working with mentees in the future.



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# Your Mentoring Philosophy Revisited

- Take a moment and look back on your outline of your mentoring philosophy.
- Does it address each of the theme we covered today:
  - Communication
  - Setting and aligning expectation
  - Cultural awareness

Source: Pfund, C., Branchaw, J. and Handelsman, J. (2014). *Entering Mentoring*. New York, NY: WH Freeman & Company.



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# Your Mentoring Philosophy Revisited

- Write at least one paragraph of your mentoring philosophy with these themes in mind.
- How might you use a mentoring philosophy this semester?
- Where do you need more support or professional development yourself?



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# SESSION VIII

## Reflection & Closing Discussion



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# Challenges and Next Steps

- What do you see as your next step in establishing effective mentoring relationships?
- What potential challenges do you foresee in your mentoring relationship?
- What support and resources can we provide to help you?
- Questions?



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- Ms. Amy Billizon
- Dr. Clair Wilkins-Green
- NRMN Train-the-Trainer Workshop: Facilitating Mentor and Mentee Training
- National Institutes of Health (NIGMS)



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# Workshop Evaluation

- CAT+ evaluation



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