

Mentoring Students in the Laboratory

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A confession

What I thought about mentoring and group culture as a new faculty member:
“If I have a clear idea of what I want our culture and my mentoring style to be, I will naturally create that and live it out.”

In reality, what happened was:
Not that.

Good mentoring and healthy lab culture are the product of intentional design, clear communication, and consist implementation

Equip you to approach mentoring as an *intentional process*, rather than one that just happens by chance or circumstance.

Developing strategies to:

- ✓ communicate expectations to your research mentees
- ✓ create an inclusive environment that provides equitable access to knowledge and resources
- ✓ engage in difficult conversations
- ✓ review mentee progress and development and provide feedback on performance
- ✓ help mentees explore and communicate career aspirations, and make realistic action plans to facilitate their professional growth
- ✓ foster a productive and collegial group culture

Mentoring and Diversity, Equity, Inclusion, and Respect

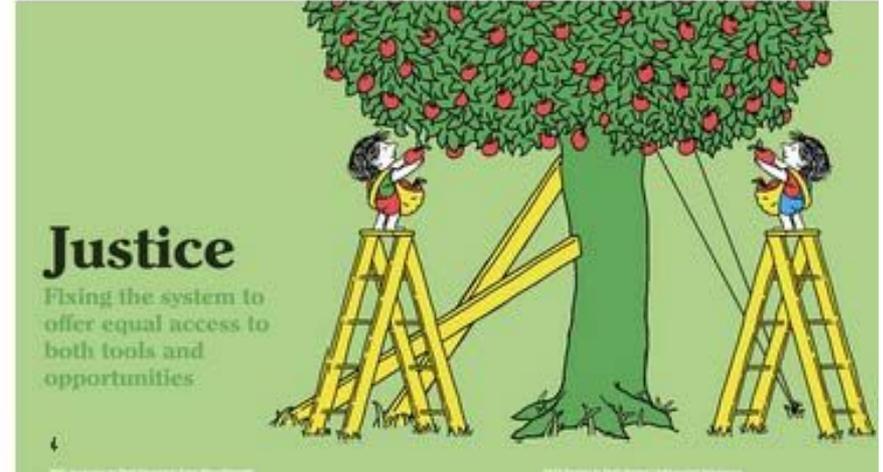
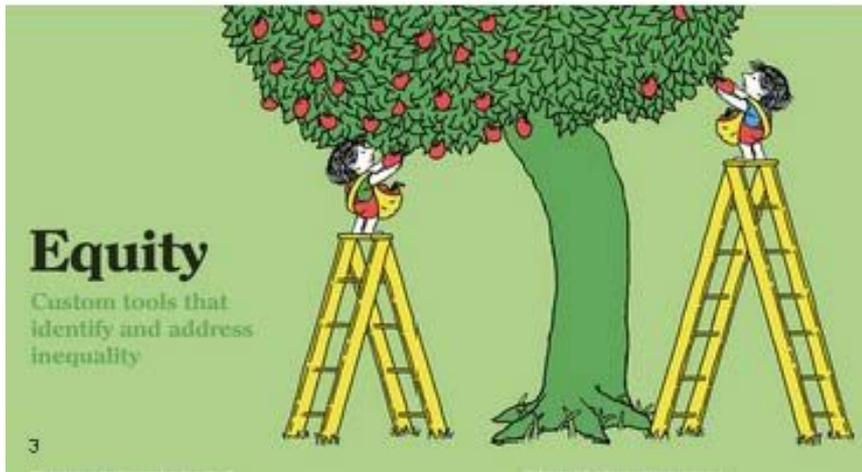
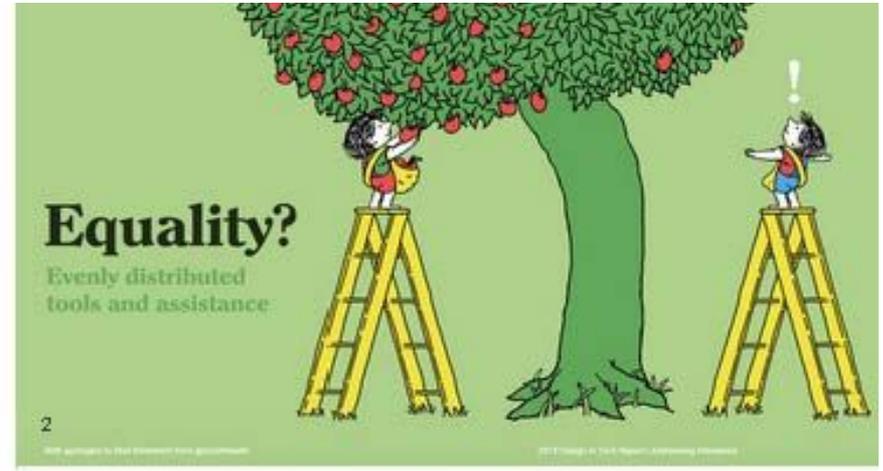
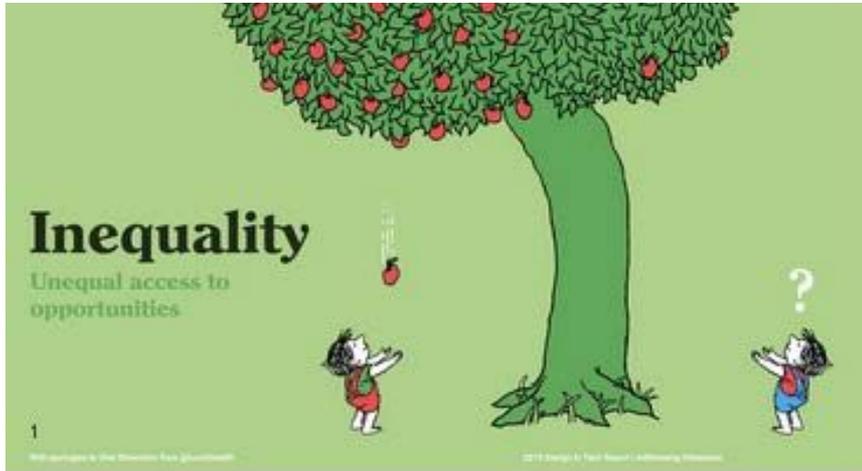
- ❑ Mentoring, mental health and well-being, and DEIR are all intertwined and connected
- ❑ Good mentors are good allies – you can help mitigate the challenges faced by marginalized students
- ❑ We each have a natural **mentoring style**, but more important is to focus on individual **student needs**



Mentoring and Diversity, Equity, Inclusion, and Respect

- ❑ Most people have some identities that create challenges for them
- ❑ These experiences will make them aware of **some, but not all** of challenges faced by others
- ❑ When someone brings a challenge to you that you haven't experienced, remember:
 - You are helping them navigate the situation with the goal of giving them an opportunity to be successful
 - If the support involved is disproportionate to what you've offered others, you might feel like you aren't being fair. That's okay if you are being **equitable**

Equality, Equity, and Justice



High-impact Mentoring Practices

- ❑ **Care genuinely** about the success of every person you mentor
- ❑ Recognize that mentoring is helping each person identify and **achieve their career goals**, not replicate your career goals
 - Nobody is exactly like you – be aware of “hidden curriculum” and diverse work styles/needs
- ❑ Set goals and evaluate progress in a **clear and transparent** way
- ❑ **Create clarity** around responsibilities and protocols for lab members, *e.g.* via lab manual and structured feedback/evaluation
- ❑ **Foster ownership** – involve your entire group in decisions about lab culture and report/meeting format

Be systematic

Vision: what do you value, and what do you want your group to value? what are the systemic challenges to living out these values?

Plan: what is a system you can put in place to achieve your desired outcome? (this is just like designing your teaching!)

Communication: how can you communicate that system to everyone in your group with a high level of clarity?

Action: what are the things that will make it tough to follow through and how can you overcome that?

Be systematic - example

Vision: professional development and leadership skills are important for success, and this information should be distributed equitably, rather than only in ad hoc in 1:1 interactions

Plan: 10-20 min professional development presentation by me or group members at every group meeting

Communication: outline this in group policy manual; create document for group members to request topics; make slides available on OneDrive folder

Action: this requires some of my time, but I learn a ton by doing it; can recycle presentations occasionally as new members join; group members sometimes volunteer to present

Be systematic - example

Vision: we want our selection process for new group members to be equitable but group joining is filled with “hidden curriculum”

Plan: generate rotation “curriculum” with clear expectations and assigned mentors to help each rotator navigate and receive feedback

Communication: rotation schedule with assigned mentor list sent at start of rotation; set up meetings with mentor and myself right at start

Action: this takes time from group members, but I can communicate that I understand that research progress will slow during this time and we can structure activities so that they also benefit lab members (e.g. journal club)

Your turn!

Vision: what do you value, and what do you want your group to value? what are the systemic challenges to living out these values?

Plan: what is a system you can put in place to achieve your desired outcome? (this is just like designing your teaching!)

Communication: how can you communicate that system to everyone in your group with a high level of clarity?

Action: what are the things that will make it tough to follow through and how can you overcome that?

Think (5 min) about your vision, plan, communication, action

Pair: move into breakout rooms

Share (10 min) your responses with other participants

Share+ share your system via the [google doc in the resources folder](#)

Mentor planning

[Link to June 21 \(Monday\) NFW Resources](#)

- Introduction to the laboratory
 - Expectation setting / lab mission statement

- Work plans
 - Focus on course requirements & program milestones
 - Establish path to degree completion



Mentor planning

[Link to June 21 \(Monday\) NFW Resources](#)

- Review student research progress
 - Focus on research and professional skills
 - Set productivity goals for lab
 - Formative assessment for where student should spend effort on skills development

- Individual development plans (IDP)
 - Career focus
 - Student reflection on what they enjoy and are good at in their work life
 - Fosters discussion on long-term aspirations
 - Discuss what it will take to succeed in chosen path
 - Set action plan for career exploration



Nobody should wonder how they are doing

- ❑ What matters to you?
 - program milestones
 - research goals and progress
 - publications and presentations
 - professional development and formulation of career plan
 - grades (especially for undergraduates)

- ❑ How can you evaluate and communicate?
 - weekly or monthly 1:1 meetings
 - annual review or evaluation
 - group meetings
 - program requirements

The format of reports and meetings should be designed to evaluate all things that matter!

Individual development plan (IDP) resources

myIDP



- Exercises to examine skills, interests, and values
- List of two dozen career paths, determining the best fit to the skillset
- Tool for setting strategic goals for a year ahead
- Articles and other resources

<https://myidp.sciencecareers.org/>

ChemIDP



- Assess professional and technical skills
- Strengthen professional and technical skills
- Develop and prioritize goals and values
- Explore career options
Browse through a range of career areas, sectors or roles of interest

<https://chemidp.acs.org/>

Case study: The sulky undergraduate

Breakout rooms: **even #s**

I mentored an undergraduate student who came from another university for the summer. I explained the project to him and taught him some basic techniques and approaches needed for the work. Because my professor and I did not think he had sufficient background for a more complicated project, we chose to have him work on a more basic one. He was very quiet for the first ten days, and then he went to my advisor and complained about the project. He said he wanted a project “like Mark’s.” Mark was a student with a strong disciplinary background and his project was much more advanced. My advisor 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 much, if any, of his work done, I began to wonder if he understood what we were doing or even cared about it.

Think about your role as the advisor in this situation.

What could you have done to help the student mentor & the student researcher?

Case study: Explosive personalities

Breakout rooms: odd #s

You run a research group with many personalities. One afternoon Carly, a 3rd year graduate student, comes to you visibly upset. James, a 4th year graduate student in your group has referred to her as a “bitch”. You call James into your office, where you clearly express that in your laboratory there is zero tolerance for derogatory statements towards a fellow group member based on gender, race, age or any other stereotype. As the PI you understand that there will be disagreements, but statements like this are inflammatory and are completely unproductive towards settlement of any conflict. James apologizes to you and agrees that the use of this word was in poor taste and further agrees to apologize directly to Carly. He marches into lab, and announces loudly to everyone present (who by now know what is going on) that he was wrong, and he regrets calling a Carly a “bitch”, what he meant to say was that she is an “asshole”. His opinion is that there is no way that could be construed as a gender-biased statement, so he is in the clear.

- *What could the PI have done differently in this situation? (keeping in mind that hindsight is always more clear...)*
- *What actions could/should be taken with respect to James? Will any of these potential actions help to fix the problem? Is there a risk that some of the possible actions might further exacerbate an already bad situation?*
- *Are there ways to diffuse the broader tensions in the lab as a result of this altercation?*

Prioritize your researchers

Good mentors are available mentors

- Plan time to prioritize your group members and your mentoring
 - Before the semester starts, block out all group/individual/research meetings
 - Communicate how group members can meet with you (e.g. drop by, email to schedule, outlook calendar)

- Create communication channels for your group members
 - Personal contact info (with boundaries)
 - Email priority
 - Slack or other app

- Enable your group to make plans and organize events (with your review and consent), and then be there when they do

Mental health crisis in academia

Degrees and depression

PhD and master's students worldwide report rates of depression and anxiety that are six times higher than those in the general public (T. M. Evans *et al. Nature Biotech.* **36**, 282–284; 2018). The report, based on the responses of 2,279 students in 26 nations, found that more than 40% of respondents had anxiety scores in the moderate to severe range, and that nearly 40% showed signs of moderate to severe depression. The high rates suggested by this study are alarming, says Teresa Evans, a neuroscientist at the University of Texas

Science **2018**

Nature Biotechnology (2018) 36, 282-284
DOI: 10.1038/nbt.4089



Mental health crisis in academia

News > Campus Beat > More and more students need mental health services. But colleges struggle to

More and more students need mental health services. But colleges struggle to keep up

By Caroline Simon, University of Pennsylvania 2:28 pm EDT May 4, 2017

LEARNING RESILIENCE

Colleges Get Proactive in Addressing Depression on Campus

EMPLOYMENT

How to create a supportive mental health environment in your lab

Faculty can do these 3 things to help their students struggling with mental health issues

by Jen Heemstra

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HEALTH + BEHAVIOR

ENVIRONMENT + CLIMATE

NATION, WORLD + SOCIETY

ARTS + CULTURE

STUDENTS + CAMPUS

Study shows stigma around mental health on campus correlates with students not seeking treatment

UCLA-led research team examined data from the Healthy Minds Study, which surveys campuses across the country

Jessica Wolf | January 23, 2018

Mental health crisis in academia

You are a “first responder”!

Is the student a danger to self, or others, or does the student need emergency assistance?

“Yes”

The student’s conduct is clearly and imminently reckless, disorderly, dangerous, or threatening and is suggestive of harm to self or others in the community.

**Call 911 or
Campus Police 949.824.5223**

After speaking with police report the concern to: Campus Consultation Team by contacting the Associate Vice Chancellor 949.824.4642

“I’m not sure”

The student shows signs of distress, but I am not sure how serious it is. My interaction has left me feeling uneasy and/or concerned about the student.

**Call the Counseling Center
for consultation 949.824.6457
After Hours & Holidays: select the after
hours service option to be connected
to a live mental health specialist**

“No”

I am not concerned for the student’s immediate safety, but he/she is having significant academic and/or personal issues and could use some support or additional resources.

Refer student to an appropriate campus resource. See back panel for options.

For a complete list visit:
www.whcs.uci.edu/csw

- Get to know your campus counseling staff (invite to faculty/group meeting)
- Carry relevant numbers/brochures with you
- Be willing to walk/introduce students to key resource people
- Write lab policies that support self-care and mental health

Mental health crisis in academia

Take care of you!

- ❑ You cannot be an effective leader and mentor when you are not taking care of yourself
- ❑ Sharing your own struggles destigmatizes mental health challenges
- ❑ When you devote time to self-care, you give your group members permission to do the same

As far as small dog can tell, you're doing your best given the circumstances!



small dog admires you for your effort!

Takeaway messages

- Past mentoring relationships shape the way you mentor current students, but each student has *individual needs*
- Be *intentional* with your plans and actions and establish clear lines of communication between yourself and your mentees
- Mentoring documents *increase clarity* and ensure equitable communication of policies and procedures
- *Be aware* of academic, physical, and psychological indicators of distressed students. Know how to respond and make referrals
- *It is OK to make mistakes!* Admit them and learn from them – you will grow as a mentor, just as you do as a scientist
- Leadership and mentoring is an *experiment* – talk with your group about what you want to change, try new things, and evaluate