Mentoring 101 Essential Skills for Mentors & Mentees

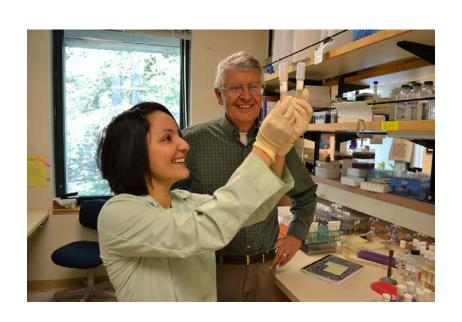
Presented at the 40th SACNAS National Conference, October 6th, 2013

Malika Bell, MS, Director of STEM Diversity Programs Zia Isola, PhD, Director of the CBSE Research Mentoring Institute

UNIVERSITY OF CALIFORNIA SANTA CRUZ

What is a mentor?

- Advisor
- Teacher
- Role model
- Resource
- Ally
- Friend (?)



Activity

Write a short description of a good mentoring experience and share with your group.

What is mentoring?

Mentors are advisors, people with experience willing to share their knowledge; supporters, people who give emotional and moral encouragement; tutors, people who give specific feedback on one's performance; masters, in the sense of employers to whom one is apprenticed; sponsors, sources of information about and aid in obtaining opportunities; **models of identity**, of the kind of person one should be to be an academic (Zelditch, 1990). Taking stock: what makes a good mentor?

What are some essential functions of the mentoring relationship?

- Communication
- Motivation
- Providing feedback
- Building professional network
- Providing structure and guidance
- Developing critical thinking skills
- Time management skills
- Identification of strengths/areas that can be improved
- Career planning

He explained everything very well, trusted me with the work that I could complete on my own, and challenged me."

- mentee comment from the UROC Program at CSU Monterey Bay

What can I do to be a better mentor?

- Help mentees see their potential
- Help mentees develop strategies to overcome challenges
- Help mentees become confident (HOW?)
- Create "scaffold" that allows mentee to become increasingly independent in their research project (applies to other areas of action as well)

Project Scaffolding

Modeling

Scaffolding

Fading

Expert carries out the task, verbalizing the process. Student observes and build a conceptual model of the process.

Student carries out the task, with prompts/support from the expert.

Supports are gradually removed, resulting in independent execution of the task.

Push (just enough)

- Allow for a certain level of discomfort / challenge, but be aware of 'the freeze.'
- Scaffold new information and tasks, progressively leading to more independence.
- Don't hesitate to give (constructively) critical feed back.
- Be clear about expectations, and don't be afraid to hold mentees to high standards, based on their full potential.

Assessing Knowledge

- Establish an environment that encourages questions
 - Be aware of body language and facial expression (furrowed brow to the 'smile-and-nod')
- Use prompts
 - What questions do you have for me...
 - How do you think that relates to...
- Answer questions with a question, leading the student to a better understanding of what they are learning
- Pause. Don't give the answer right away

Considerations When Developing a Research Project:

- Feasibility.
- Challenge (based on the student's ability, knowledge, and drive).
- Appropriate scope or scale.
- Scaffolded from shadowing to independence.
- Built-in difficulties (after the student has developed basic skills and some confidence).
- Build or refine valued skill sets.
- Clarity of hypothesis.
- Connections to significance.
- Likely to generate data the student can present.

What can I do to be a better mentee?

- Develop self-understanding: what is your vision of the mentoring you need?
- Think of previous mentors in your life and the kind of support they provided; look for mentors that might have similar qualities.
- Don't be afraid to communicate your needs-your mentor is not a mind reader
- Reach out to your mentors and let them know when you need support and what kind of support will best benefit you
 - Clarification about expectations
 - Introduction to the culture of the department/lab/profession

What can I do to be a better mentee?

(continued)

- Communicate if you need more/less structure and guidance
- Ask for introductions to professional networks
- Ask for feedback about your strengths/areas that can be improved
- Career planning "how did you do it?"
- Not all mentors are people you have formal "mentormentee" agreements with; think of people who have been ready to help with advice and encouragement, or just by being an example for you.

 Think "multiple mentors" - the more mentors, the better!

Putting yourself in the path of mentoring

- Get to know your professors, post-docs, program managers, and TA's
- Go to office hours, department talks, colloquia, etc.
- Be pro-active in scheduling meetings with your mentors
- Show up on time, and be prepared with questions or topics that you want to discuss
- Value the information-take notes
- Be sure to acknowledge your mentor's contribution of time and energy- say thank you!



Activity

Write down your biggest challenge as a mentor or as a mentee. We'll pick one and discuss solutions as a group.

Why is mentorship so critical?

"For me it's important because I needed to understand that academic excellence was expected of me, and that the level at which I perform is a personal standard set by my own expectations of myself. Previously I viewed education as something that was being done to me – now it's a different relationship: it's something I am doing for myself."

Mentor Assessment: Mentoring Goals & Strategies

Goals	Strategies
Godis	Strategies
Build a productive relationship	
Communicate effectively	

Provide context / background Develop skills (lab, tech., etc.)

Establish appropriate benchmarks

Foster high-level performance

Provide effective assessment & feedback Addressing obstacles & challenges

Foster critical thinking & synthesis

Foster independence

Introductions to the scientific community

Assist with career planning

Setting Concrete Goals:

Mentors and Mentees can participate in creating goals for learning outcomes

- Outcome
 - What will the mentee achieve as a result of this project or assignment?
- Activity
 - What will the mentee 'do' during the project to accomplish the outcome?
- Evidence/Product
 - What will result from these activities?
- Criteria
 - How will those products be judged?

What can the mentee DO as a result of this work?

DEVELOPING YOUR MENTORING PHILOSPHY

Your Mentoring Philosophy

What you expect of your mentee

- Scholarly expectations.
- Level of effort.
- Hours and timeliness.
- Products and outcomes.
- Level of independence.

What your mentee should expect of you

- Level of availability.
- Communication plan.
- Level of assistance.
- Areas you will serve as a resource.

What you expect of yourself as a mentor

Example: Mentoring Philosophy

"The primary goal...is for you, the beginning research student, to develop a proficiency in the study of chemistry by investigating as yet unexplored topics and to learn how to produce good scientific results in the process. Emphasis is placed on the development of your independent scientific thought and practice of experimental design, laboratory work, use of the chemical literature, and in professional writing and speaking..."

A. Monte, University of Wisconsin – La Crosss As printed in the *Council on Undergraduate Research* Quarterly (Dec. 2001)

Example: Mentoring Philosophy

"You have a right to 1 hour a week of my time (and depending upon the project, you may get much more); it will be your responsibility to make sure that you get the time you need. Be careful to use the time well. You can and should also use me as a source of advice on careers as well as your project..."





Zia Isola, PhD CBSE Diversity Programs Director

isola@soe.ucsc.edu

(831) 459-1702

www.cbse.ucsc.edu/diversity/rmi



Malika Bell, MS STEM Diversity Programs Director

malika@ucsc.edu

831-459-4770

www.stemdiv.ucsc.edu

Acknowledgements:

Portions of this presentation are based on content developed by Jessica Brown and William Head, California State University Monterey Bay Undergraduate Research Opportunities Center (UROC) and the mentor-training manual Entering Mentoring: A Seminar to Train a New Generation of Scientists (Jo Handlesman, ed., University of Wisconsin Press, 2009)