Mentoring Undergraduate Researchers

FGSR Professional Development Week

August 14, 2013
Introduction

• Who has had a mentor?
• Who has been a mentor?
• Who would be your ideal mentor?
• What is mentorship?
So...maybe you feel like this...?
Why mentor undergraduate students?

Get help with your research

Develop transferrable skills, and help students in the process

Get a fresh perspective

Bolster your CV with supervisory experience, concrete examples for interview questions
What skills can you get from mentoring?

• Communication and interpersonal skills
  - e.g. giving and receiving feedback, listening, team-building, conflict management

• Teaching skills
  - e.g. identifying and evaluating learning outcomes, providing instruction, simplifying/explaining complex concepts,

• Leadership & management skills
  - e.g. managing project outcomes & scope, timelines, learning to delegate, providing performance feedback
Best of all...mentoring allows you to share your passion...and make a difference.

I am exponentially more interested, and more confident in this area of my field. Even though this subject matter is not my strongest point, I now know that the level of "talent" as ascribed to me by my grades is not representative of my true capability to understand and research an area of science.

~3rd year Science student

[Undergraduate research] is a challenge and an opportunity. It takes you out of your element, introduces you to new ways of thinking, and gives you a chance to contribute to the broader university community. It is something you take on when you believe that you can do more than just get by, where one can try to excel and move a field forward.

2nd year Nursing student
What is involved in mentoring a student?

- Mentorship is more than supervision
- Mentors help students develop knowledge, skills, attitudes and connections
- Mentors provide a combination of support, challenge, and vision
Preparing to be a mentor

Reflect on your own experiences starting out in research:

• How did you feel?

• What pressures or challenges did you face?

• What did you learn?

• What role did your mentors play?

• What would your ideal mentoring relationship look like?
How can you find a student?

• If you are a teaching assistant, talk to students in your classes

• Ask your supervisor for help identifying a student

• Volunteer for or attend undergraduate research-related events

• Check the Undergraduate Research Portal for students seeking mentors

• Post a position on the Undergraduate Research Portal
I love the URI portal! I got contacted by about >15 interested students. I think this a really great initiative both for undergraduate students who seek opportunities to broaden their knowledge, as well as for grad students to gain some supervising experience and a little extra help. I wish I had this portal when I was an undergraduate. :) ~feedback from a graduate student

Since September 2012:

- more than 1700 users (mostly students) have registered
- ~40,000 forum views last year
Selecting the right student

• Look beyond GPA
• Consider attitude, interests, goals
• Consider expectations, commitment, desired outcomes
• Consider what their role will be in the project
Developing a research project

• Consider fit with your thesis
• Consider student’s availability and skill level
• Set realistic goals and timelines – build in time for training...and mistakes
• Clearly define the student’s role – encourage a sense of responsibility and ownership
• Have a formalized learning plan
Developing a learning plan

- Define project scope, start & end dates, time commitments
- Outline the knowledge & skills to be gained
- Outline key project milestones and expectations
- Describe communication, reporting, and record-keeping requirements
Introducing your student to research

- Initial conversations
- Introduction to others in the research group
- Orientation to the research environment
- Overall context of the project
- Learning plan document
- First steps with the research
Throughout the term

• Communication, communication, communication

• Revisit learning plan for accountability and focus

• Encourage critical thinking – help students understand not only what they’re doing, but why

• Encourage students to reflect on their learning and on the research process
Common challenges

- Lack of clarity on goals
- Communication issues
- Technical issues
- Concerns or fears of the student:
  - lack of confidence, fear of sounding dumb or incompetent
  - not knowing what to ask for
  - fear of "bothering" their mentors
  - other academic obligations
At the end of the project

- Evaluate project progress
- Reflect on learning experience
- Opportunities for publication, presentation?
- Ensure backup and transfer of relevant data, records
- Next steps
Reflect on your experience as a mentor

- What worked, what didn’t?
- What challenges did you face? What skills did you learn?
- What challenges did your student encounter?
- What would you do differently next time?

Think of examples you could use in an interview to demonstrate your mentoring ability to potential employers.
How URI can help

• Undergraduate Research Portal (recruit students or research participants)

• Undergraduate research-related events (other volunteer, informal mentoring opportunities)

• Funding for undergraduate students (stipend, support fund)

• Online resources for mentors (coming soon!)
Other ways to get involved with undergraduate research
Undergraduate Researcher Stipend

- $5000/student to support a mentored research project
- Two cycles/year (March & October)
- Next deadline: October 28
Undergraduate Research Support Fund

• $500 to help offset the costs of undergrad research
• e.g. Materials and supplies, support for dissemination
• Not travel
Online resources for mentors

- URI online “toolkit” for faculty and grad students is in development – will include templates, case studies, and other resources to help support mentors.
- In the meantime, check out:
  - APEGGA Mentoring Handbook (http://www.apegga.org/members/mentoring/handbook/)
For more information

Crystal Snyder
Undergraduate Research Coordinator, URI

cs2@ualberta.ca
780-492-4183
2-701 SUB

www.uri.ualberta.ca
“uplifting the whole people”

— HENRY MARSHALL TORY, FOUNDING PRESIDENT, 1908