

Workshop 2: Goal Setting and Mentorship within Research

Agenda:

- I. Welcome (highs and lows from the past week)
- II. Revisit of group norms for the quarter
- III. Defining success for yourself in research
- IV. S.M.A.R.T. goal setting
- V. Three Mentors

Learning Objectives:

Students will:

- Discuss the different ways success can be defined in research
- Explore what their goals for doing research are
- Practice goal setting and breaking down big achievements into doable, measurable goals
- Identify the different ways mentors play a role in helping students achieve and navigate their goals.

Poll Everywhere information:

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Defining Success for Yourself in Research

In contrast to taking courses where “success” can be achieved by mastering a particular concept or getting a certain grade, defining success in the context of research is much more ambiguous and unique to each individual.

Presented here is a non-exhaustive list of different components of a research experience:

- Gaining new knowledge
- Presenting at a conference
- Being an author on a published paper
- Enhancing your resume/CV (career prospects)
- Networking with professors and other students
- Developing a tool for instructors or students to use

Take a moment to rank these components in an order that represents how each could contribute to your experience feeling like a success.

We will discuss and share our rankings as a group.

S.M.A.R.T. Goal Setting

Now that we have discussed some different components that contribute to what success means to you, we are going to practice translating these components into S.M.A.R.T. goals.

A S.M.A.R.T. goal is:

- Specific**—The goal is clear and focused.
- Measurable**—You can easily determine whether or not you have achieved it.
- Action-oriented**—The action plan for achieving your goal is clear and logical.
- Realistic**—The goal is attainable given the difficulty of the task and the timeframe in which you have to complete it.
- Time-bound**—You have specified a deadline.

Write at least one S.M.A.R.T. goal that relates to what success would look like for you in your research experience.

As you formulate your goal, consider different skills you may want to build and goals that may help you develop these skills.

Research and Technical	Professional and Interpersonal	Management and Leadership
<ul style="list-style-type: none"> • Critical reading (research literature) • Experimental design • Experimental techniques • Computer skills • Documentation/lab notebook • Problem solving and trouble-shooting • Data and statistical analysis • Critical analysis • Responsible conduct of research • Identification of new research directions and next steps 	<ul style="list-style-type: none"> • Reliability and follow-through • Communication (oral and written) • Writing (manuscript, grant, fellowship) • Teaching • Mentoring • Collaborating and working in teams • Giving/receiving constructive feedback • Collegiality • Networking 	<ul style="list-style-type: none"> • Time management (meeting deadlines) • Prioritizing and organizing work • Leading and motivating others • Research project management • Budget management • Supervising/managing people • Delegating responsibility

We will discuss our goal(s) together and share how each of our goal(s) connects to our ideas of success in research.

Three Mentors

Read the descriptions of three different types of research methods. From your perspective, describe the advantages and disadvantages of working with each mentor.

Mentor 1:

This mentor is very hands-on and likes to be the primary mentor for undergraduate researchers in the lab. The mentor works directly with trainees much of the time and wants to know everything that goes on all the time. The mentor sets up weekly individual meetings and engages in frequent dialogue about the research.

Advantages:

Disadvantages:

What qualities/attributes or skills are needed for a trainee to succeed in this environment?

Mentor 2:

This mentor is very famous and travels a great deal. Because of this, they have a formal system in which the senior researchers in the group act as mentors for the newer trainees. The mentor keeps up-to-date on the progress of each trainee via frequent emails and meetings when they are in town.

Advantages:

Disadvantages:

What qualities/attributes or skills are needed for a trainee to succeed in this environment?

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Mentor 3:

This mentor is hands-off. The mentor is around, but likes to give students space to see how they handle independence. The mentor typically has senior trainees informally mentor the newer ones. The mentor typically hands students research questions that are related to funded grants, but is open to discuss other research questions as long as they relate to the mentor's topic of research. This mentor meets with each student once a month and holds regular structured lab meetings.

Advantages:

Disadvantages:

What qualities/attributes or skills are needed for a trainee to succeed in this environment?

We will discuss our responses as a group. We will also consider the following questions:

- Which mentor would they prefer and why?
- Considering their current mentors, which mentor from the activity are they most like?
- Knowing your mentor's style, in what ways can they support you in making your research experience a success?
- What supports do you need to navigate your relationship with your mentor?

CIMER References

Branchaw, J., Butz, A., & Smith, A. (2020). *Entering research: A curriculum to support undergraduate and graduate research trainees* (2nd ed). Macmillan.

Center for the Improvement of Mentored Experiences in Research. (n.d.) *CIMER: Providing resources for organizations and institutions to improve research mentoring relationships*. <https://cimerproject.org/>

Pfund, C., Branchaw, J., & Handelsman, J. (2014). *Entering mentoring* (2nd ed.). W.H. Freeman.

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