Optimally Engage in Research

Participation in undergraduate research can provide students with the experiences, skills, and knowledge to succeed in their future careers. As such, it is important that students think critically about how they participate in research in order to gain the most from their participation. This guide is designed to give students suggestions on how to succeed in and capitalize on their undergraduate research experiences.

PREPARATION

Once a student is presented with a research opportunity, it is important that they amply prepare themselves for participation. Preparation may involve a variety of different things depending on the specific nature of a research project. However, it is generally advisable to complete the following:

1. **Trainings** –Students need to ensure that they have completed all required training to qualify as a student researcher. This includes ensuring that all ethical requirements have been met.
2. **Literature review** – Students should spend significant time reading related literature to have adequate background knowledge and to situate their research within a larger context. Check with your research mentor for appropriate readings & journals.

TIME MANAGEMENT

Research can be time demanding and students often conduct research while juggling many other responsibilities. As such, it is important to maintain good time management to complete all necessary tasks and remain on a timely schedule. These skills are required of researchers at the professional level, such as your research mentor, so it is best to practice implementing them as an undergraduate. Below are effective methods for managing your time in a research project.

1. **Long-term goals** – At all points during research, it is important to be aware of the ultimate deadlines that must be met, even if they seem far in the future. Working backwards from these deadlines, determining what you will complete each week or month leading up to the deadline, can be a useful method for discouraging procrastination.
2. **Short-term goals** – Setting and completing short-term tasks is crucial to meeting your ultimate goals. Assigning attainable tasks to complete on a daily or weekly basis will help ensure completion of the research project.
3. **Time tracking** – Keep track of the amount of time that is spent on research tasks; use this to help better plan for future research.
4. **Balance** – Schedule time to do things that are not related to research or work. Neglecting rest will make the process unenjoyable and can lead to burnout.

ORGANIZATION

In addition to organizing time, it is essential to maintain the organization of all research materials, documents, and data. Below are several organizational strategies to consider:

1. Consistently save all articles and helpful files
2. When renaming documents, do so systematically
3. Create a backup of all files
4. Keep a running annotated bibliography
5. Develop a key for notetaking
6. Consider using a citation manager
7. Digitize physical notes

8. Schedule time to reorganize
9. Track all revisions and keep old copies
10. If working in a team, ensure that a consistent organizational style is maintained

COLLABORATION

Whether working with a research mentor or a larger research team, collaboration is a central tenet of being a good researcher. There are several aspects of good collaboration, some of which are outlined below.

Communication
Good collaboration cannot occur without effective communication. Researchers must communicate their goals, expectations, and limitations with other members of a research team in order to be successful. Frequent and prompt communication regarding changes or unexpected situations that arise is crucial.

Clear Division of Labor
Ensure each team member knows what is expected of them and when these expectations should be met. Avoid duplication of tasks and make sure all tasks are assigned.

Work Ethic
When working in a research team, it is especially important that each member does as they are asked. Failure to complete your tasks may affect the integrity of the research or the reputation of other team members.

RESILIENCE

Research can be demanding, frustrating, and unpredictable. To succeed, researchers must not become overly discouraged if research proves more difficult than anticipated or if desired results are not achieved. Failure is part of research and is okay! Perseverance in the face of failure is the real key to being a successful researcher.

SOURCES

https://www.researchgate.net/publication/230623342_Time_Management_Strategies_for_Research_Productivity
https://lib.guides.umd.edu/c.php?g=656682&p=4761358
https://www.data.cam.ac.uk/data-management-guide/organising-your-data
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