Supporting Freshmen to View Themselves As Future Undergraduate Researchers

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Pre-College Experience

A group of prospective freshmen apply and participate in the Freshman Scholars Program, a two-week intensive program of collaborative apprenticeship-style work with faculty. Students explore the literature in respective fields of study connected to the faculty interest and work side-by-side with faculty in hands-on research, culminating in a poster session.

Projects

Collaborative Research Conducted with Faculty
- The Experiences of LGBTQ Adolescents and Young Adults in Rural Appalachia: Identity, Risk and Resilience
- Origami and Mathematics
- Buried Body Remains and Decomposition Rates
- The Production of Biologically Active Compounds by Medicinal Plants of the Appalachian Mountains
- Mycobacterium tuberculosis and cAMP: examination of a possible virulence mechanism for this deadly pathogen
- Development of an animal model for the cognitive deficits observed in Post-Traumatic Stress Disorder (PTSD)
- Population structure of pond turtles and relation to urbanization
- Thoreau Cabin Replicas
- Institutional Readiness for Online Education

The Freshman Conference

A faculty task force evaluated the Freshman Seminar curriculum and recommended curricular changes that made a preparatory undergraduate research experience possible for every freshman, where close to half of the incoming class arrives with some remedial need from an under-resourced K-12 experience. For underprepared students, research is typically not even a familiar term—or if it was something encountered in high school, it is typically narrowly defined. In order to open the potential of undergraduate research to more students, the faculty thought it was essential that all freshmen experience a “Freshman Conference” during which a team research project is presented in poster form. The project introduces college level library resources, information literacy skills, writing a quality paper, and the creation of a poster with oral presentation to the college community. This change in curricular structure has created a sense of energy at the freshmen level to engage further in undergraduate research in the remaining years of the college experience.

First Steps in Undergraduate Research

In order to build future undergraduate researchers, freshmen need very early stages to be carefully scaffolded. Professional library staff guide freshmen in developing important transitions from high school to college level research.

First Steps in College-Level Research and Library Use:

As a part of this freshman seminar course, you will participate in a “Freshman Conference” during which you will have the opportunity to present to a campus-wide audience your research on an area related to our annual Theme that is of interest to you. While you will present the research skills over the next weeks of class, the poster as a first step in your freshman year, this assignment is designed to help you understand many scholarly resources you have (no more relying solely on Google) and how to use them.

As in any such endeavor, you must first define your question. You can’t research efficiently until you know what it is you want to know. Our annual Theme each year is a large topic area. What smaller piece of that Theme would you like to better understand or learn more about?

How, you need to think what beliefs you have about what you just wrote above. What do you expect to find out about this smaller piece of the Theme? What do you think you might prove/disprove in your research? In other words, what hypotheses do you have in mind already?

Next, you need to further refine your question. You have a little more direction because you have thought about your smaller piece of the Theme AND your beliefs/hypotheses about that smaller piece. But you’re still not quite ready. To refine your question, think about what specifically you would like to know in order to begin to prove/disprove your beliefs or form your hypothesis. It is likely you will have several questions here....

You’re getting there. Now you are ready to search. The questions you just wrote will help you begin to conduct your database searches. Choose one or two particular questions you just wrote to explore further. From those one or two questions, identify keywords. A keyword is a single word or two word phrase that you think would be likely to appear in an article that would be very helpful in your research. Write the keywords here and then conduct your search.

What did you find? Record here three citations you found that you think would answer the one or two questions you chose to focus on. You need to record three DIFFERENT sources from the below:
- An article from a popular magazine
- An article from a scholarly, research, or peer-reviewed journal.
- A newspaper article.
- A citation for a print book that is held in Stanley Library

Of course, you’re not quite done. Part of college-level thinking on this will be evaluating what you have found. You found three sources that you cited above. What do you think the value of each resource will be? Will it answer your question? Not every source you find will be useful. So now the task becomes reading and thinking and often even debating with yourself. Do you agree with what you are reading? Why? Disagree? Why? Developing more curiosity to explore further? Great! Go back to the beginning and search some more. That’s what learning in college is all about! You will be completing an annotated bibliography as a result of this work, and you will use this to begin to frame your paper for the Freshman Conference.

Images from the Freshman Conference: Pictures are Worth a Thousand Words!

While nervous about having to make presentations, the engagement that occurs when the work is done is stimulating and results in new understandings of the power of research and disseminating information collegially.