

## **Project Title: securing experiential learning during declining University financial support**

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### **Introduction.**

As has been noted many times in FSLI, higher education, especially at research universities, has failed to communicate the value brought by research and scholarship to undergraduate education. This has contributed to the decline in government support for universities that has led to the progressive privatization of the cost of higher education. That has in turn disenfranchised potential students who are averse to rising costs. The combined effects of decreased state support and declining enrollment at some institutions facing demographic challenges has left many universities (including ours) in financial stress.

The department for which I am currently serving as chair is research-heavy with all faculty having research appointments at 75% of their position responsibilities. This heavy research load is possible because we do not teach many “service” courses to students outside our program. We do however have a healthy number of undergraduate majors who take our orientational and upper-level courses. The goal of my FSLI project has been to create experiential opportunities for our majors to demonstrate the value of research and scholarship at our research university. A supporting goal is to insulate the cost of these opportunities from declining budgets and the necessity of using federal grants held by individual research mentors.

### **Details of the project.**

When I began the project I had just started as department chair, and I inherited a healthy enrollment of biochemistry majors that had been stable for decades at about 150. Undergraduates who were involved in research did so by organizing it individually with faculty. Whether a student was paid or received credit for their work, and any financial support for the arrangement was the responsibility of the faculty member and student, which led to inconsistent experiences for students. This informal mechanism did not provide a systematic program that we could use for demonstrating the value of experiential learning, for fundraising, or for recruiting students into research early in their careers. I decided that my FSLI project, and a focus of my job as chair, would be to champion such a program. As a result of my experiences in FSLI, I was careful to articulate this goal clearly to administrators, student recruits and their families, and any time our department was on display. The stated goal for the student experience in our department has become that “professional training starts from day one and we want our students to have paid jobs in biochemistry while they are at Iowa State University”.

In year one we started a program to fund undergraduate research over the summer. This program had two purposes; 1) It served provide research continuity between the spring and fall semesters when many students had to take other jobs to support themselves, and 2) it provided a public focal point for our goal of delivering paid professional experience for our students. This program (the Biochemistry Summer undergraduate Research Program, or BSRP) was initially financed in a large part by extramural research direct costs from individual faculty, and discretionary departmental sources.

Staffing and support for this program has faced serious challenges. As a result of chronic budget cuts dating back eight years, our department is down to one student services specialist who was operating at a level well above the job-grade, and acute budget cuts over the last two years have dropped discretionary funding to the department by 75%, necessitating minimization of funding from the central departmental budget. Thus, the challenges we face are a result of systemic big-picture changes in higher education that have led to very specific issues for our program.

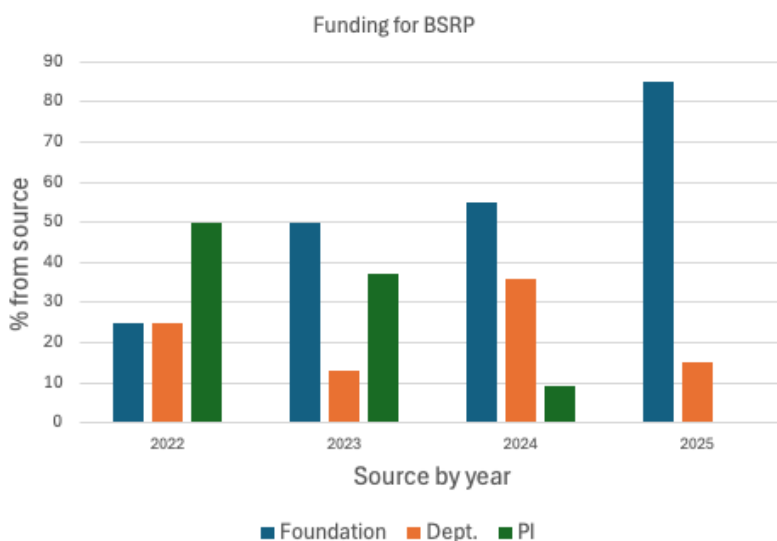
There have been several aspects of FSLI training that have helped me address this challenge. 1) Gaining the ability to clarify the problem and reduce it down to several questions of “WISDOM” (or What I Should Do On Monday). 2) Gaining the perspective to realize that this is just the kind of challenge I need to tackle in my capacity as a department chair. 3) Learning the value of clear and consistent messaging. 4) Learning some great negotiation strategy skills that have worked well with my administrative supervisors. 5) Using strategies to motivate stakeholders by empowering them with a shared vision.

In three years of spreading our vision of paid professional development we have been able to shift existing foundation support from constrained usage sources such as scholarships toward flexible purposes like paying student stipends for research. Even more impactfully, we have generated new foundation support specifically for this purpose that has grown much more rapidly as donors are able to identify with the vision. The clear and novel goal of paid professional experience has played well with our university foundation, leading to our representation in fund raising campaigns specifically for this purpose.

The most significant source of support has come from a specific donor who identified particularly strongly with our message. This donor has set up endowments to support the BSRP and, having been pleased with our management of the funds, recently set up a separate “Biochemistry Student Engagement Excellence Fund” to provide flexible support for our student services activities. The most important outcome of this fund is that it will allow me to upgrade the level of our student services specialist to one that will sustain the more complicated duties associated with the job. This is something I had tried and failed to do from the day I started my job as chair because the university could not cover the additional costs of the higher-level position. This new source of funding allows us to cover this cost internally and will help to insulate us from future budget cuts. Furthermore, it provides our program a competitive advantage in student services which should give us the visibility to grow external support in the future.

The results of our efforts to change funding for our BSRP program are shown in the figure below, which reports the percentages of total support (each year is an ~ \$100,000 cost) from department central budget, donors (foundation), and from extramural sources from Principal Investigators (PI). From 2022 (the first year of the program), the costs to PIs has shifted from 50% of total support to 0%. This has been more than offset by the growth in support from donors. The cost to the our central budget has also steadily declined.

The goals that we are now stating for the program is to extend this model of support for the rest of the academic year. This will be an ~ 10-fold larger financial challenge, but we have the nucleus in place around which to build support by demonstrating our success and bringing our vision to a larger audience.



Sources of funding for BSRP by year.