CIC SROP Program Evaluation

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Executive Summary

The CIC Summer Research Opportunities Program (SROP) is an undergraduate summer research program designed to increase educational access for students underrepresented in graduate education. The goal of SROP is to increase the number of students from underrepresented groups who enroll and graduate from graduate programs at CIC universities. This report is a summary of a program evaluation conducted in 2009.

Established in 1986, CIC SROP has provided 11,819 research experiences to underrepresented students nationwide, serving as an important gateway to graduate education. To date, the program has confirmed 323 program alumni who have completed the Ph.D. degree, and has successfully tracked more than 3,000 alumni who have pursued graduate study.

While the many campus-based programs that comprise CIC SROP have developed and adapted over the program's history, CIC SROP has a long-standing, national reputation as one of the nation's premier undergraduate research programs. CIC SROP has cultivated a network of faculty and staff at CIC universities who support diversity in graduate education, and the program has cultivated a strong network of program advocates at minority serving institutions and organizations nationwide.

Local SROP programs are diverse in their organizational and administrative practices, reflecting the local cultures and priorities of the participating universities. The evaluation process revealed a high level of agreement on the overall goal of SROP as a strategy for recruiting graduate prospects to enroll in graduate study at the host university. There were several key areas identified for improving program outcomes and strengthening program impact:

- SROP program staff should work more closely with faculty mentors to select the most promising students. This process can strengthen the student-mentor relationship and the mentor's investment in recruiting and advocating for the student during the graduate admission process.

- Faculty partners should be enlisted in developing the program schedule to ensure that students and mentors have adequate time for research; to ensure that research and professional development skills are appropriate to the field of study; and to ensure that key learning outcomes are addressed.

- Investment in post-SROP recruitment efforts should be deployed to increase the graduate yield. A substantial portion of SROP alumni choose to enroll in non-CIC universities for graduate study, and many other students delay graduate school plans. SROP programs should

sustain the recruitment relationship beyond the summer experience through the graduate admission and enrollment process.

- SROP programs should implement systematic tracking and reporting as a core component of their program administration practices. Comparisons of graduate enrollment rates reported for SROP alumni and national baccalaureate populations suggest that insufficient tracking
- Eight institutions are currently rotating as hosts for the annual research conference. Given the cost in staff time and other resources required, more institutions need to commit to hosting the conference or CIC SROP programs should explore alternate models.

Introduction

The program review is a formative evaluation of SROP focusing on implementation aspects of the program and progress toward the program goals. The primary goal of SROP is to increase the number of underrepresented students who enroll in graduate programs at CIC universities. Each program seeks to recruit their own SROP students, but through collaborative activities, SROP students also apply and enroll across the consortium. Thus, recruiting students to universities the CIC consortium is also a key goal. Increasing the number of underrepresented students who attain a graduate education, regardless if where they enroll, is a secondary goal.

The evaluation framework was planned by a committee comprised of representatives from the CIC Graduate Deans, the CIC SROP Coordinators, and CIC headquarters staff.[1] Key questions guiding this evaluation include:

- Is there agreement among program stakeholders on the primary goals of SROP? Are the program goals being met today?
- How do stakeholders measure program success? How is this information incorporated into the ongoing implementation of this program?
- How can the program be improved to increase program impact and maximize efficiency?

Data sources include historical reports and student tracking data maintained by the CIC, and meeting notes. The following surveys and interviews were administered to collect participant feedback:

- SROP alumni, 2006-2008: Recent alumni were surveyed in October 2009 about where they applied for admission and where they enrolled for graduate study.
- SROP 2009 cohort: Graduating seniors were surveyed in October 2009 about their post-baccalaureate plans and where they planned to apply for graduate admission.
- SROP 2009 cohort: All SROP participants were asked to complete a program evaluation with items specific to the SROP conference and items specific to their overall summer experience.
- SROP Coordinators: Surveyed October/November 2009 regarding their administrative practices and SROP program components.
- Faculty Mentor Survey: SROP Coordinators were asked to forward a survey invitation to their faculty mentors in October 2009.
- CIC Graduate Deans: Graduate Deans were interviewed individually in January/February 2010 to solicit feedback about SROP as a strategy for recruiting diverse graduate students.

[1] Program Evaluation Committee members include Jon Story, Purdue University; John Keller, University of Iowa; Cyndi Freeman, Ohio State University; Suzanne Adair, Penn State University; Charity Farber, CIC; and Yolanda Zepeda, CIC.

Program Outcomes

A key benchmark for measuring SROP impact is the number of students who complete a PhD. To date, CIC SROP has documented 323 PhDs earned by alumni. University of Illinois-UC and Purdue University report the largest numbers of PhDs earned by program alumni, each with 50 earned PhDs (Table 1).

Since the program's inception, CIC SROP has sponsored 11,819 research internships and has documented 3,046 graduate or professional program enrollments, producing an overall graduate enrollment rate of 25%. The programs at the University of Iowa and Northwestern University report the highest rates of graduate enrollment, with 38% and 34% of their SROP alumni enrolling in a graduate program after the summer experience.

Table 1. Graduate Outcomes By Host, 1986-2009*

SROP Host	SROP Interns Hosted	Grad/ Prof Enroll	PhDs Earned**
UC	493	133	14
UIC	929	167	8
UIUC	1630	419	50
Indiana	456	125	8
IUPUI	632	94	2
Iowa	549	211	25
Mich	1211	307	29
MSU	1369	362	38
Minn	499	129	6
NW	470	164	16
OSU	845	277	22
PSU	545	133	13
Purdue	897	244	50
UW-Mad	917	172	15
UW-Mil	377	109	11
Total	11,819	3,046	307

* Recorded as of March 12, 2010
Completed PhDs are included in Grad/Enroll count.

Graduate enrollment rates for SROP alumni are likely higher than is demonstrated by the data reported. According to the National Science Foundation's National Survey of Recent College Graduates, half of all Black and Hispanic students who receive a bachelor's degree in science and engineering subsequently enroll in graduate school within four years (Tsapogas, 2000). This trend is based on national cohorts who earned a bachelor's degree between 1993 and 1997. Ten years after receiving the bachelor's degree, the rate of graduate enrollment for Black and Hispanic bachelor's degree recipients in all fields is approximately 45 percent (Nevil & Carroll, 2007).

Comparing SROP rates against national trends, we would expect much higher rates of graduate enrollment for SROP students since they have been selected on the basis of graduate school expectations, high GPA, and other academic qualifications. It is clear that the outcomes data reported for SROP alumni are incomplete and do not represent an accurate indicator of program impact. Yet, in order to judge the impact of SROP on its goals of increasing student access to graduate study, SROP programs must improve the tracking and reporting of graduate outcomes for their students.

CIC Graduate Enrollment Yields

Considering SROP as a tool for recruiting graduate students, Table 2 indicates graduate yields for CIC universities from each SROP cohort year, 2006-2009. Alumni may be recruits from any CIC SROP program. The University of Illinois at Chicago reports the highest yield from the 2006-2009 cohorts, with 41 enrollments to date. Illinois and Penn State follow with 23 enrollments each.

Table 2. SROP Alumni Recruited by Grad Institution and Cohort, 2006-2009

Grad Institution	Grad Enrollments			
	SROP Cohort Year			
	2006	2007	2008	2009
UC	2	3		
UIC	20	18	3	
UIUC	13	7	3	
IUB	2	1		
IUPUI	1	2	3	
Iowa	9	5	2	1
Mich	6	8	1	
MSU	6	3	2	
Minn	4	4		
NW	4	3	4	
OSU	11	7	1	
PSU	7	12	3	1
Purdue	1	4	4	2
UW-Mad	2	5	3	1
UW-Mil		1		
Total	87	80	26	5

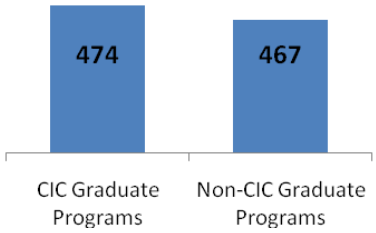
It is expected that there is a delay in reporting graduate enrollments for recent SROP cohorts. SROP alumni may not complete their undergraduate degree for a year or two after their participation in the program. Others may delay graduate study for a period of time, and still others may lose contact with their SROP program and only later reconnect with program staff when they actively apply or enroll in graduate study. Thus, is it likely the enrollment numbers reported here will increase for a time, particularly for the 2008 and 2009 cohorts. For this reason, tracking efforts must be sustained for several years after a given cohort completes SROP.

Graduate yield trends for cohorts prior to 2006 are less reliable and therefore not included here. The original CIC longitudinal database is not adequate for tracking graduate enrollment data. The CIC implemented a new database starting with the 2006 cohort, one which was designed to better manage and track graduate applications, admissions and enrollments. In recent years, the CIC has implemented annual reporting processes to solicit tracking updates from SROP programs, and has instituted direct communications with recent alumni to track their graduate plans and promote graduate opportunities in the CIC.

Student Reported Outcomes

Recent SROP alumni (2006-2008 cohorts) who expected to complete the baccalaureate by January 2010 were surveyed about their graduate plans (n=1561). Approximately 25 percent reported that they applied for graduate admission, and 20 percent reported that they had enrolled in a graduate program.

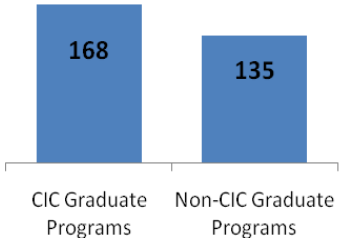
Applications Reported, 2006-2008 Cohorts



For those who applied for graduate admission, CIC schools were among their desired destinations. SROP alumni reported slightly more applications to graduate programs in the CIC than they reported for all other (non-CIC) graduate programs combined. Responses were received from 378 students who reported a total of 941 graduate applications submitted.

Graduate programs in the CIC proved a good match for more than half of the alumni who enrolled in graduate study. Of the 303 respondents who were enrolled in graduate study at the time of the survey, 168 were enrolled at a CIC university.

Enrollments Reported, 2006-2008 Cohorts



In addition to CIC universities, graduate destinations of the 2006-2008 SROP alumni include other top research universities such as Stanford (3), UC Berkeley (2); Harvard (2); Duke (2) ; MIT; Cornell; Princeton; UT-Austin; and UCLA, among others. Graduate destinations span across 33 US states and include a broad range of institutional types. The graduate destinations list affirms that students in the SROP pool are highly competitive for CIC programs. Since many students are applying for admission to CIC universities but enrolling at other top schools, greater recruitment efforts post-SROP are needed to increase graduate yield rates.

There are a variety of strategies that can be employed to sustain relationships with SROP alumni through the graduate admission and enrollment process. Such strategies might include travel grants for graduating seniors to attend a conference with the faculty mentor or campus visits for prospective students who have been admitted but haven't yet accepted graduate admission. Some campuses have also developed multi-year funding packages for SROP alumni who gain admission for doctoral study.

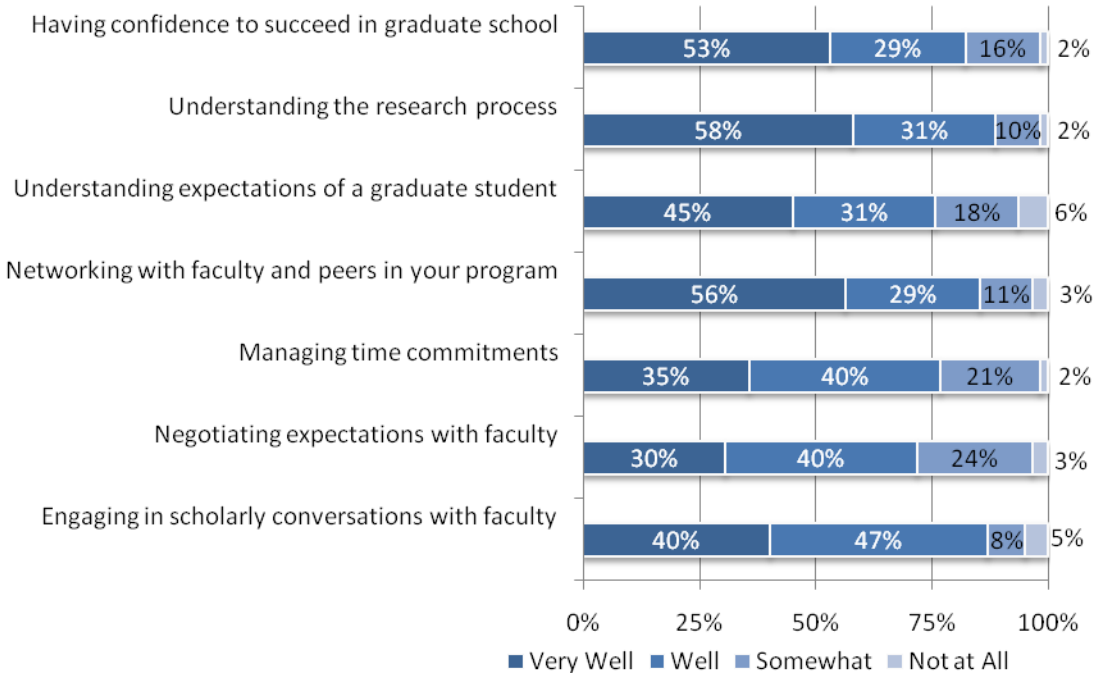
Graduating seniors from the 2009 cohort were surveyed regarding their graduate application plans. Of the 440 total alumni, 273 expected to graduate by June 2010. Responses were received from 61 alumni. Eighty percent of those who responded reported that they were in the process of preparing graduate applications. Those who reported that they were not preparing graduate applications cited plans to take time off before graduate study; indecision about attending graduate school; or plans to work or pursue other goals. It is not clear whether the relatively low response rate (61 of 273) was due to outdated email addresses or disinterest among recipients. This further reinforces the need for SROP programs to work in partnership with the CIC headquarters to maintain current tracking information.

Graduate Student Feedback

In order to better understand how SROP has impacted students who successfully matriculate in graduate programs, we surveyed currently enrolled graduate students about the benefits of the program. Surveys were sent to 658 alumni who are currently enrolled in graduate programs. Sixty-two responses were received.

More than half reported that, compared to their peers who were not in SROP, the program prepared them very well by giving them the confidence to succeed; helping them understand the research process, and preparing them to network with faculty and peers.

How well did your participation in SROP prepare you for graduate school compared to your peers in the following areas:



Decision to Pursue Grad Study. When asked how SROP impacted their decision to pursue graduate study, many respondents reported that SROP solidified their decision to pursue a Ph.D., often noting that they became convinced through their research that the degree was obtainable or that a research degree was more attractive to them than a professional degree. Many responses cited the assistance of their mentor and program staff and the application fee waiver as key factors in their decision to apply to programs in the CIC.

- *"I was challenged and motivated by seeing all the other students of color working towards their masters or Ph.D. It reinforced my goals and*

provided the resources that helped give me that added push to apply and go to graduate school."

- *"SROP let me know that I could be successful in pursuing graduate school. Moreover, my participation in the program allowed for free applications to all Big-Ten schools - this further pushed me to apply for graduate programs".*

- *"SROP strongly influenced my decision to attend graduate school, from the application fee waivers to the GRE class to the reviews of my personal statements. SROP staff played a large role in my admission to a PhD program. I was actually considering applying to masters in pubic health programs, however, the SROP coordinator and my SROP faculty advisor thought I should apply to PhD programs as well. I entered a joint MA/PhD program"*

Preparation for Graduate Study. Alumni were asked to describe how SROP prepared them for graduate study. Common themes among their responses highlighted the self-confidence gained from conducting research and the advantage it gave them when applying for graduate admission. Responses also pointed to the benefit of GRE preparation and the relationship with their mentor as valuable to their graduate preparation.

- *"I made valuable connections with faculty that aided me in choosing graduate programs to apply to, as well as contributing to continuing research relationships that allowed me to report significant research experience when I applied."*

- *"Engaging in conversation with faculty is often daunting not only because of the knowledge difference but also the power differential. SROP provided me with the skills to approach and work with faculty and to realize that working with faculty is incredibly rewarding, and that often times faculty become lifelong mentors well beyond SROP summers"*

Developing diverse peer networks was also noted as a valuable benefit:

- *"The experience helped me realize that there were other Latino and ethnic minority students that shared a similar background and set of experiences and had similar educational goals. Making friends in SROP helped me become even more energetic and motivated to continue on to graduate school. I was also able to get the emotional and instrumental support from them. "*

How to Improve SROP. Graduate students were asked, based on their experience in graduate school and SROP, how we can improve the program to better prepare students for graduate success. In addition to frequent mentions of GRE preparation and assistance with preparing graduate applications, they repeated a common call for engagement and support beyond the summer experience.

- *You can prepare faculty more thoroughly, ensuring that they are willing to maintain their relationships with students following SROP, as to facilitate intermittent guidance and recommendation letter support.*

- *Have activities throughout the year so that relationships with participants can be maintained even when they return to their home schools*

- *I was disappointed to have very little support once I started graduate school. I also think that the program should do a better job of helping students pick good labs and major professors.*

Another theme that emerged was the recommendation to better integrate the summer research experience within the student's area of academic inquiry. These comments underscore the need for SROP programs to work in close partnership with the faculty mentors and graduate programs, and to select mentors who are active researchers.

- *It would be helpful to connect with students (minority and non-minority) from the department because the more perspectives you have the better.*

- *It would have been very useful to have a faculty member who was actively pursuing research.*

- *More training in methods.*

- *Tailor advice/sessions to field specific areas. For instance, a lot of time was spent advising people interested in graduate school in the art, or social sciences. I was an engineer.*

- *SROP could better align itself with respective graduate programs on campus, allowing students the opportunity to officially participate in classes, receive course credits, etc.*

Learning Outcomes

In 2008, SROP Coordinators adopted a set of learning outcomes that all SROP students were expected to attain during their summer experience. (See Appendix B for full list of learning outcomes.) Learning outcomes address five knowledge or skill areas:

- Knowledge about graduate programs and career paths
- Understanding of the research process
- Understanding of how to fund graduate education
- Communication Skills
- Navigating your graduate career

The 2009 SROP conference evaluation asked students to rate the impact that their overall summer experience had on specific learning outcomes. The highest rated items were understanding of the expectations of the role of a graduate student; research presentation skills; and knowledge of graduate and research opportunities.

Understanding research ethics ranked among the lowest rated items. *Twenty percent of respondents reported that their summer experience had "very little impact" or "no impact" on their knowledge in this area.* This pattern is troubling, particularly because an understanding of responsible research practices should be the foundation of any research experience. Even if SROP programs do include research ethics in the program curriculum, the ratings suggest that a substantial portion of students felt that SROP had not impacted their understanding of research ethics in a meaningful way.

Table 3. SROP 2009 Student Ratings of Impact on Learning Outcomes (1=no impact; 4=great impact; N=173)

Knowledge/Skill Area	Average Rating
Expectations of the role of a graduate student	3.69
Preparing and presenting research to others	3.67
Range of graduate degree and research opportunities	3.66
Understanding the research process	3.65
Benefits and responsibilities of a mentoring relationship	3.62
Financing your graduate education	3.56
Composing a written abstract	3.38
Communication etiquette with faculty and professional contacts	3.36
Comprehending ethical responsibilities of researcher	3.25
Navigating library and other research resources	3.02

These brief survey questions do not measure the depth of knowledge that students acquire during their summer experience. However, they do reflect student impressions of what they gained during the summer. SROP Coordinators should continue to review and refine their program content and activities to ensure that they address the learning outcomes that carry highest priority. Faculty mentors should be enlisted as partners to help shape the learning outcomes and program content.

Program Implementation

The CIC Summer Research Opportunities Program is a collaboration of locally-administered summer programs sponsored by 14 participating universities. SROP programs are supported locally through a variety funding sources, including departmental matching funds, grant funds and university (central) funds. (See Table 4 below.) All programs are administered by the graduate school unit, but in some cases, the graduate school partners with departmentally-based programs or other central units on campus.

All programs provide a common set of benefits including a stipend and full-time research experience, professional development and enrichment activities. (For details, see Appendix A ,Table 3-A.)

Table 4. SROP Program Funding Sources by Campus

SROP University	Central Administration	Graduate School	Department	Grant	Corporate Sponsors	Endowment
UIC	X	X				
UIUC	X					
IUPUI	X	X	X			
Iowa		X		X		
U-M		X				
MSU	X	X				
U Minn	X					X
NU		X		X	X	
OSU	X	X		X		
PSU	X	X	X	X		
Purdue		X	X	X		
UW-Mad		X	X	X		
UW-Mil	X					

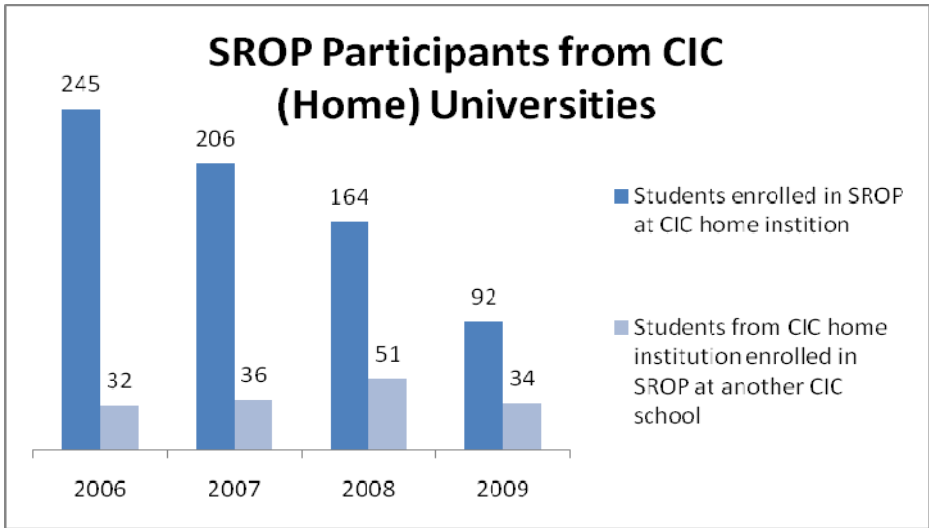
CIC headquarters staff support local programs by providing overall planning and coordination of collaborative aspects of the program. These include

- facilitating communication and best practice sharing among SROP staff;
- managing a common SROP application process;
- coordinating communications and logistical support for the annual SROP conference;
- maintaining and reporting longitudinal program data;
- providing marketing support and targeted outreach efforts.

Program Participants

Two-thirds of SROP participants are women, and 79% are members of underrepresented minority groups. These trends have remained fairly stable over time, although recent cohorts include slight increases in the proportion of Hispanics and non-Hispanic White students. Pell Grant recipients comprise more than 40% of the recent cohorts, and McNair Scholars represent approximately one quarter of participants. Table 1A in Appendix A details cohort size by SROP host and year, and Table 2 A details selected demographics for 2006-2009 cohorts.

The number of *local* (CIC) students in SROP programs has diminished substantially in recent years, decreasing from 245 in 2006 to 92 in 2009. SROP programs often served as an enrichment experience for local students, but as the programs have become more strategically focused on recruiting graduate prospects and realizing that departments are reluctant to admit their own undergraduates, SROP programs now admit few local students. We might, therefore, anticipate a corresponding increase in the number of students enrolling in SROP at other CIC schools. This number did not increase. In 2006, 32 students from CIC universities enrolled in SROP at another institution, and in 2009, this number was 34. Thus, the pool of undergraduates enrolled at CIC universities may represent an underutilized recruitment opportunity for SROP programs.



STEM majors represented more than half (57%) of SROP interns in 2009, with the largest group in the life sciences. Current trends show a notable increase in the number of students in the physical sciences and decreases in humanities and education. Nearly one third of SROP interns major in social science fields.

Table 5. Distribution of Student Majors Across Disciplines by Cohort Year, 2006-2009

Discipline	Total Students	2006	2007	2008	2009
Education	73	3.4%	3.0%	3.9%	2.3%
Engineering	221	11.6%	7.9%	10.8%	8.6%
Humanities	141	6.7%	7.1%	7.4%	3.0%
Life Sciences	741	34.7%	34.4%	30.7%	31.8%
Physical Sciences	305	10.7%	14.3%	13.1%	16.8%
Professional	133	7.4%	5.4%	5.0%	5.9%
Social Sciences	638	25.5%	27.8%	29.1%	31.6%
Total	2,252	100.0%	100.0%	100.0%	100.0%

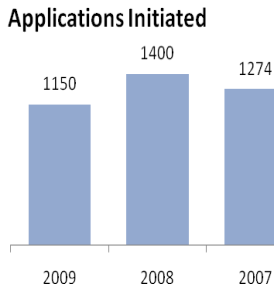
The majority of SROP students are within one year of earning an undergraduate degree when they complete the summer experience. In 2009, 62% of SROP interns expected to graduate by the following summer, up from 59% in 2008. This increase may be due to smaller cohorts, in accordance with the Graduate Deans Recommendations adopted in fall 2008.

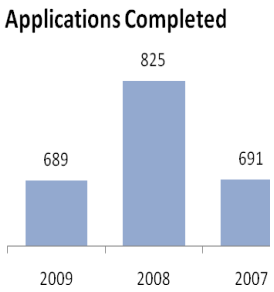
CIC Common Application

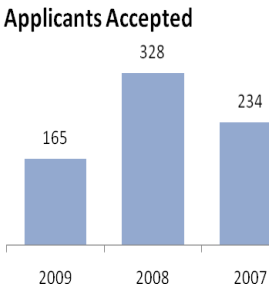
The CIC SROP common application is a web-based application system that provides distributive access to applicant data for all CIC faculty and staff users. The common system enables local programs to develop a rich, national applicant pool, and is intended to minimize duplication of effort by eliminating the need to maintain separate application systems at each SROP host site. Working together under the CIC umbrella, local SROP programs have a stable, national presence among external stakeholders, including McNair programs and minority-serving institutions. Benefits cited by external constituents include having a single location where students can gain access to the many programs in the CIC; the lower cost for applicants since only one transcript is required, and reduced burden for faculty who need only provide one set of recommendations.

When surveyed about their use of the CIC common application, SROP coordinators reported that the application provides adequate information about the student to make SROP admission decisions and to match students with appropriate mentors. Those who responded that it was not adequate noted that it was essential to communicate directly with students before such decisions could be made or that it depended on the degree of specificity in the student's research statement. The primary disadvantage of the common application reported by SROP coordinators is that it attracts students interested in summer research, but not necessarily students with specific interest in their own university or program. Other SROP programs treat the common application as a "pre-application" of sorts, instructing viable applicants to submit additional information in a second step. This process includes student proposals for potential mentors or specific research projects and serves to narrow the applicant pool to students who present a good fit with their own program.

CIC SROP Common Application







A consistent web presence and brand recognition of the CIC SROP remain important advantages of collaboration. During the most recent application cycle (October 2009 - February 2010), the SROP program site received 65,450 page hits, and 44,084 unique page views (visits during which one or more of the SROP pages was viewed). Nearly one third of visitors browsed directly to the SROP page; they were not directed there from a search engine or from another web site. Another third were directed to the SROP site from search engines (Google and Bing). Analysis of the keywords used to find the site show that the most common keywords used were "CIC," "CIC SROP," or "SROP Big Ten," and only in rare occasions did they use generic terms such as "summer research" or "summer internships." This suggests that viewers are seeking out the CIC SROP program and not merely finding the program as they look for general summer research opportunities.

As campus programs further customize their practices to best fit their own needs, the common application no longer serves a critical need for all SROP programs. Meanwhile, the national pool of students who apply for summer research has expanded to such a degree that institutions are better able to develop adequate pools locally without drawing on the common application. Thus, the CIC headquarters should continue to maintain the common application for those institutions that subscribe to it, but the CIC staff should focus efforts on redesigning the CIC SROP website to serve as a gateway to all SROP programs, regardless of their use of the CIC application.

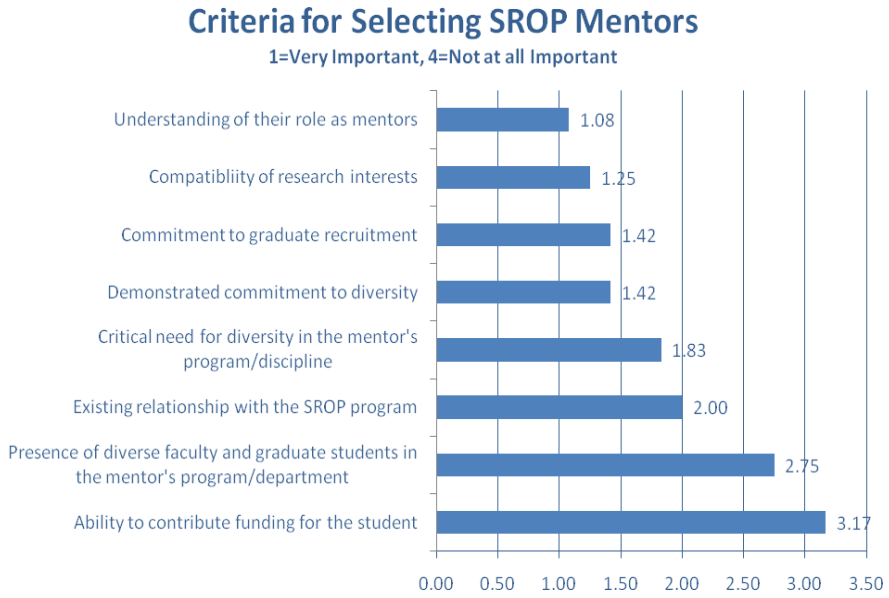
Minority students are severely under-represented in science and engineering (STEM) fields, and there are more SROP internships available in these fields than in the social sciences. Yet, social science students apply to SROP in greater numbers than STEM students. CIC staff should refine program communications and outreach to encourage more STEM applicants and help raise the quality of applications. The CIC SROP website should provide better information about researching graduate and summer research programs in the CIC and should provide guidelines for preparing more competitive applications.

Campus Administrative Practices

SROP Coordinators were surveyed in October 2009 about their program structure. Most Coordinators reported that they meet weekly with their students, and one campus reported bi-weekly meetings. Of those who meet on a weekly basis, the average time spent in student meetings was 4.3 hours per week, with responses ranging from 2 hours to 8 hours per week. The question did not specify whether meeting times took place during the day or during evenings/weekends.

In a mentor survey discussed later in this report, however, a number of faculty noted that their students spent too much time in program activities and therefore had too little time for research. Mentors called for greater involvement in program planning to help shape the activities and maximize allocation of student time to best meet the program goals.

Coordinators were asked about the criteria they applied when selecting mentors. They rated "mentor understanding of their role as mentors" as the most important criterion, followed by compatibility of research interests. Although SROP coordinators report that that they match students and mentors based on compatibility of research interests, mentor feedback suggests that a disconnect exists between faculty expectations and student interest or expectations (see p. 20). This incongruence further underscores the need for SROP program staff to work closely with faculty in screening and matching students with mentors.



The Coordinator survey solicited best practices that Coordinators have implemented and would recommend for other SROP programs. Their responses are summarized below. The survey was followed by a fuller discussion of best practices at the Coordinator's annual meeting. A report of the discussion is provided in Appendix D.

- Early faculty mentor contact with student. Project agreement before they arrive and reading preparation before program. Strong mentor participation throughout the summer in speaker series and other programming.
- SROP students complete a graduate application before leaving the program, and rising seniors will participate in a GRE institution prior to the start of the summer session.
- All students complete a poster, abstract, and oral presentation at the end of the summer.
- Students work on the personal statement, meeting with the Graduate Student Mentor to go over the statement, re-write, and re-submit over the course of the program.
- Provide first and dissertation year fellowships for SROP admits contingent on 4 interim year support from admitting program for 10 students.
- Require the students to do weekly presentations. It helps them to stay on track and also builds their presentation skills.
- Screen out pre-med students.
- Conduct individual practice sessions (with immediate feedback) for each Scholar to prepare them for presenting their research at the Symposium.
- Discipline Specific Workshops. Weekly seminars taught by senior level doctoral students on instructional research methods and other areas pertaining to graduate study.

Annual SROP Research Conference

The annual CIC SROP conference convenes students from all participating programs for a two-day, professional development event that rotates among participating SROP host sites. The key value for CIC universities of a consortium-wide event is that it provides a cost-effective opportunity to recruit students from the broader SROP pool, and it gives university hosts an opportunity to showcase their campus and programs to this competitive, national talent pool. Through the poster sessions, research roundtables and recruitment fair, faculty and recruiting staff are able to identify and interact with students in their related field of study.

I thought that the entire conference was extremely successful. It was a terrific recruiting venue and I am confident that we will significantly increase our URM applications/ enrollment for 2010. In both of my presentation sessions with the students on Friday, I found them to be very bright, creative, and enthusiastic about biomedical science.

-Faculty participant, SROP 2010

The 2009 conference included registrations from 65 faculty and staff from CIC schools. In addition, many faculty from the host campus, (the University of Michigan) served as round table facilitators but did not register for the full conference. In the post-conference evaluation, 96% of faculty and staff responded "Yes" when asked if they met the quality of students they expected to meet at the conference. When asked if they would recommend the conference as a recruitment strategy for graduate programs on their campus, 82% responded "Yes."

The collective SROP pool does appear to be useful for generating graduate applications to programs in the CIC. For the 2006-2009 cohorts, SROP universities as a group accrued 214 graduate applications from their own students, but they also yielded 327 applications from students of other SROP programs. SROP hosts enjoy a clear advantage among their own students in the conversion of applications to enrollments. SROP programs yielded 138 graduate enrollments from their own program, versus 58 students from other SROP programs. See Table 6 for the number of graduate applications and enrollments generated by SROP alumni from cohorts 2006-2009.

The annual conference provides valuable professional development benefits for students as well. The program gives students an opportunity to hone their academic communication skills by presenting research posters and participating in research roundtables; and structured networking activities connect students with peers and faculty in related areas of study. The recruitment fair gives them opportunities to learn about graduate programs and admissions at other CIC universities, and because of the scale and quality of the aggregate SROP pool, the conference attracts representatives from national fellowship programs who value this opportunity to interact with a diverse, highly qualified prospect pool. Students consistently give high ratings to their experiences at the CIC SROP conference, and the intensity and scale of the event undoubtedly create a meaningful impression.

Table 6. Graduate Applications and Enrollments of SROP Alumni by SROP Host Campus, 2006-2009

	Grad Applications		Grad Enrollments	
Graduate Institution	Recruits from own SROP pool	Recruits from other SROP pools	Recruits from own SROP pool	Recruits from other SROP pools
UC*	--	23	--	5
UIC	52	19	35	6
UIUC	24	29	16	8
IUB	2	13		3
IUPUI	3	7		
Iowa	18	12	13	3
U-M	18	42	10	5
MSU	14	17	9	2
U Minn	2	25	2	7
NU	10	25	9	2
OSU	22	28	15	4
PSU	25	24	19	4
Purdue	9	25	4	5
UW-Mad	9	33	6	4
UW-Mil	6	5		
Total	**214**	**327**	**138**	**58**

* Although they do not attend the conference, University of Chicago participates in FreeApp, and SROP students are encouraged to use the program when they apply.

For a variety of reasons, however, the number of SROP campuses willing or able to host the conference has decreased over time, and currently there are eight campuses that rotate as conference hosts. The costs associated with hosting the conference can be substantial. The host is required to dedicate staff time for conference planning and implementation, and there are typically associated expenses that are not recovered in registration fees. Host campuses must have the capacity to house a large number of students on campus, thus constraining the number of institution that are able to share in hosting the event.

Conference evaluations show a high level of satisfaction on the part of students and faculty/staff attendees, but actual graduate enrollment yields raise questions about whether similar outcomes can be gained without the conference. Campus SROP programs do provide local symposia where students can practice research and poster presentation skills and can develop academic networks with their campus peers and faculty. As some programs have scaled back in size and others have targeted their resources on smaller, more sharply defined prospect pools, recruiting from the broader CIC SROP pool is not a primary objective for local programs. This

suggests that the primary benefits realized from the conference are in student professional development. With a conference budget of some $200,000, the cost of attending the conference is $400 per student, plus travel costs for students and staff. As such, campus programs may be able to provide the developmental experiences locally at a much lower cost, thereby freeing resources for post-SROP recruitment.

There may be other, less tangible benefits that accrue from bringing students together for a collective experience that translate to a recruiting advantage for SROP universities. The conference may promote staff development and program improvement by facilitating best practice sharing and benchmarking, and reinforcing shared commitment to developing diverse, graduate pipelines. There is no doubt that the intense experience is rewarding for students and non-student attendees alike. However, as the burden of planning and hosting falls to fewer host sites, the cost of sustaining the current model is challenging, particularly in the current environment of scarce resources.

Faculty Mentor Feedback

Faculty mentors were surveyed in October 2009 regarding their understanding of the SROP goals and the effectiveness of SROP as a research program and recruitment strategy. SROP Coordinators distributed the web survey to the faculty mentors in their program, and 87 responses were received. A detailed summary of mentor responses is provided in Appendix C.

Mentors reported a strong understanding and support of the graduate recruitment goal of SROP (98%) and of the expectations associated with their role as a mentor (90%). The overwhelming majority also reported that their protégé held qualifications that were a good fit for their own graduate program (85%) and that their protégé fulfilled the mentor's expectations for the summer program (89%). Mentors also commented on the satisfaction they felt when the match was positive:

> *"One of my two mentees was one of the most gifted and interesting students I have ever known."*
>
> *"I thoroughly enjoyed the two students that I worked with. My only recommendation is to continue to recruit great students."*
>
> *"I have had a great initial experience, especially with the student assigned to me."*

The qualitative responses, however, revealed some faculty frustration about the program. Mentors cited concerns about student preparedness and student goals, and lack of congruence between research priorities of the mentor and priorities of the student. A number of responses reflected a concern that SROP program requirements and activities compete with, rather than reinforce, the student's research experience. Mentors asked for a greater role in shaping the program

agenda, for less time dedicated to structured activities outside of the lab or research activities, and more flexibility in program curriculum and assignments to better reflect differences of methods employed across disciplines. For example,

> *"The SROP staff often seemed more concerned with executing their own agenda for training than in trusting my expertise as a faculty member in the target field about what preparation is necessary for a successful graduate application/thesis."*
>
> *"I believe that there should be more faculty involvement in planning the summer SROP experience, and I think mentors and mentees need to have the roles/responsibilities publicly discussed together."*
>
> *"I think there needs to be either more flexibility in the programming or a more serious consideration of the balance between "soft" skills (classes on ppt presentations for example) and the opportunity to engage in real graduate level research. With the abbreviated timeline there was not time to adequately address both."*

Other suggestions called for opportunities for faculty mentors to confer with one another and for better communication between SROP staff and mentors. Mentors also asked for better screening of students and an opportunity to communicate with student prior to their arrival on campus. It is clear from their responses that faculty mentors support the SROP and that the program staff should work more closely with their mentors, enlisting mentors as full partners for selecting students, planning program curriculum and negotiating student requirements.

Findings and Recommendations

CIC SROP is in its 25th year of implementation. The program has become well established as a national model for undergraduate research and for increasing graduate education access for underrepresented students. All participating SROP institutions affirmed their strong commitment to SROP, and the program has been firmly institutionalized among participating universities. Local SROP programs have become tailored to meet the specific needs and to reflect local university cultures of SROP institutions. CIC SROP programs remain committed to the primary goal of increasing the number of students from underrepresented groups who enroll in and complete graduate degree programs at CIC universities.

Analysis of program outcomes and feedback from stakeholders, including Graduate Deans, program staff and mentors, program alumni and external constituents, suggest improvements that can strengthen program impact, maximize efficiencies and advance progress toward the program goals:

- SROP programs should target undergraduates enrolled at CIC universities for SROP and graduate recruitment. As SROP program has reduced the numbers of local students they serve, efforts should

be deployed to recruit underrepresented students across CIC institutions. For example, collaborations with Louis Stokes Alliance for Minority Participation (LSAMP) programs in the Midwest and targeted recruitment of McNair Scholars at other CIC schools may be useful strategies.

- Recruitment relationships with SROP alumni should be sustained beyond the SROP participation year to ensure that top students are not recruited away by other universities when they apply and choose a graduate institution.

- Student tracking and reporting remains inconsistent and is not systematically implemented by SROP program staff. Tracking should be viewed by programs as a regular and essential component of effective program administration.

- To assist with tracking, every graduate application should record whether or not the student participated in SROP. Currently, eight institutions record this information on the graduate application.

- SROP program staff should work closely with faculty mentors as true partners in the student selection process and in planning program activities and requirements. Faculty input is crucial to developing successful mentors, and as true partners, faculty are in a stronger position to advocate in their department for support of SROP and for the students who are served in the program.

- The CIC SROP web presence is highly visible among a national audience. The site should represent all SROP programs in the CIC, not only those that employ the common application. Further, the site should be enhanced to support development of a prospect pool that reflects the qualifications sought by participating programs, and should provide better guidance for prospective applicants.

- The CIC SROP conference, although it enjoys broad support among participants, is increasingly difficult to sustain as fewer institutions are committed to hosting the event. A new model for a consortium-wide conference or recommitment to host from participating universities is needed to sustain this event going forward.

Appendix A: SROP Program Details

Table. 1-A Cohort Size by SROP Host and Year

SROP Host	1986-2005	2006	2007	2008	2009	Total
UC	493	-	-	-	-	493
UIC	704	53	60	67	45	929
UIUC	1383	75	61	70	41	1630
Indiana	359	6	13	35	43	456
IUPUI	324	66	92	110	40	632
Iowa	402	29	38	30	50	549
Mich	1012	48	60	52	39	1211
MSU	1172	66	56	65	10	1369
Minn	452	21	9	17	0	499
NW	372	36	27	22	13	470
OSU	672	47	45	51	30	845
PSU	385	39	42	38	41	545
Purdue	751	42	32	37	35	897
UW-Mad	777	25	33	35	47	917
UW-Mil	308	27	26	10	6	377
TOTALS	**9566**	**580**	**594**	**639**	**440**	**11819**

Table 2-A. Selected Demographics for Recent SROP Cohorts

	2006	2007	2008	2009
Institutions Represented	160	180	188	165
Total Students in Cohort	580	593	639	440
Local students in SROP	245	206	164	92
Students at Another CIC University	32	36	51	34
Low Income/First Generation				
Pell Grant	n/a*	45.5%	41.6%	41.8%
McNair Scholar	n/a*	29.3%	27.1%	23.0%
				Gender
Female	65.7%	66.9%	65.7%	64.3%
Race/Ethnic Status				
African American	50.5%	51.9%	47.1%	47.7%
Asian American	5.0%	5.4%	4.9%	5.2%
Hispanic American / Latina(o)	28.4%	24.5%	29.7%	30.5%
American Indian	1.9%	2.5%	1.6%	1.1%
White	5.9%	9.4%	9.5%	8.6%
Other	7.2%	6.2%	7.2%	6.8%

Table 3-A. SROP Program Size and Benefits by Host Campus

SROP Host University	2009 Cohort Size	2010 Stipend	Acad Credit	Housing	Meals	Travel
University of Illinois, Chicago	45	$3,500	No	Yes	Yes*	Yes*
University of Illinois, Urb-Ch	41	$3,500	Yes	Yes	Yes	Yes
Indiana University	43	--	--	--	--	--
Indiana U./Purdue U. at Ind	40	$3,000				
University of Iowa	50	$3,200	No	Yes	Yes	Yes
University of Michigan	39	$4,000	No	Yes	Yes*	Yes
Michigan State University	10	$3,000	No	Yes	Yes	Yes
University of Minnesota	--	$3,200-$3,500				
Northwestern University	13	$4,000	Yes	Yes	Yes*	Yes
Ohio State University	30	$3,000	Yes	Yes	Yes	Yes
Pennsylvania State University	41	$3,000	No	Yes	Yes	Yes
Purdue University	35	$4,000	No	Yes	Yes	Yes
Univ. of Wisconsin-Madison	47	$3,600-$6,000	No	Yes	Yes*	Yes
Univ. of Wisconsin-Mil	6	$2,800	No	Yes*	Yes	Yes

***Some students receive this benefit, but not all.**

Appendix B: SROP Student Learning Outcomes

By the end of their summer experience, SROP students should gain an understanding of the following:

Knowledge about graduate education

Understanding culture of graduate programs
Awareness about graduate programs, acculturation to grad program/campus
Understanding academic career path – and undergrad experience as part of that training, building on their career.

Understanding of the research process

Role of research, rationale of research
Responsible conduct of research—ethics, human subjects review, data stewardship, academic honesty
Developing a hypothesis
How to write abstract
Understanding research process – question, lit review, methodology, data analysis, dissemination of findings, recommendations
Knowing how to use library and other research resources

Understanding of how to fund graduate education.

Competitive skills for seeking funding for research. Understand how to follow directions (Prospectus – style rules and format appropriate to the field of study).
Have a start at seeking, preparing NSF funding – at time of graduate application

Communication Skills

Help students become bi-cultural
Understanding how to communicate with faculty (etiquette)
Teach students how to "work the room" Student who "comes with everything" but still faces obstacles – how to recognize cues that there are "jerks" out there, how to deal with them

Navigating your graduate career

What it means to be a good mentee. Learning to take/use constructive criticism, challenges
Learning to advocate for self
How to develop timeline, time management and managing your *self*
Stress management and balance, wellness
Toolkit' : 'what skills do students need to negotiate new experiences

Adopted by SROP Coordinators December 4, 2008.

Appendix C: Mentor Feedback

Survey link was distributed by campus SROP staff to their current mentors in October 2009. 87 responses were received.

Did your expectations match those of your protégé for the research experience? If not, what were the key differences?

- I think she was expecting to do her own project as opposed to helping on mine.
- I wanted to show my protege the joy of research. My protege wanted to prepare for entrance into graduate school.
- My proteges were under the impression that I was to foster their individual research instead of working on my project. They assumed that they were free to construct their time as they saw fit as opposed to collaborating with me on times to read, write, and analyze. They were influenced by mentees who had mentors who were away and were not providing much direction. They wanted the same freedom, and so I didn't fight. I let them have it.
- One student appeared to think that I was to assist with the writing of a research paper.
- The student was not fully prepared for the experience. He lacked focus and was not fully committed to the experience.
- There is often a lack of fit between the prof and student's research interests. In my case the student really wanted to be in a different discipline, though he did understand that he was coming to work with someone in a different field.
- yes and no. For the most part I would agree, but the level of dedication of the student was not completely where I would have expected it to be.

Did your protégé hold qualifications that represent a potential good fit for your graduate program?
If not, why not?

- He was not certain of the academic discipline he wanted to pursue for graduate education. 2) Student was distracted by other options during his visit to *city name* (including out of campus activities). 3) His research skills were strong but his ability to analyze his research materials and his writing skills were deficient.
- Based on my interactions with my SROP student, I felt that she was highly motivated to learn, but lacked some of the prerequisite skills that would make her a successful graduate school candidate (i.e., knowledge in the field of psychology, writing skills, etc).
- Both writing and conceptual skills were inadequate.

- She did make clear that she wanted to attend *university name* as her first choice, and we would be her second (or farther down). That made me more reluctant to advocate for admitting her, if that makes sense.
- Her specialization wasn't really in our offerings.
- I would not want this student to work for me as a graduate student. I did not feel that the student was as smart as the graduate students that I normally hire. That is, I felt this student was more in the C range of students rather than the A range of students.
- lack of independent thinking
- One did. The other did not.
- poor math skills
- The goal of SROP student that worked in my laboratory was to apply to the Medical School, he did not consider graduate school
- The SROP program has been very beneficial for our department recruitment. However, a lot of the SROP students our faculty have mentored have been fairly weak and not ones that could be admitted to our program. Often the GPAs of students we are asked to mentor are quite a bit lower than students who would be admitted to our program (and many other *university name* programs as well).
- The student was from Puerto Rico and has difficulty with the English language.
- Unable to complete the work, absent from the laboratory at times. Had to renegotiate the expectations set out by the program.

Did your protégé fulfill your expectations for the summer experience? If not, please explain.

- Did not complete the work independently, graduate students from our lab had to help her beyond what seemed reasonable.
- He completed all required components but not satisfactorily.
- It took too long to read articles/books written in English
- Mixed results. We enjoyed having her in the lab but she had so many other time commitments that she didn't contribute fully.
- more interested in appearance than substance
- My protégé was great, but he wants to go to law school in the end, so he's not a potential candidate for our grad program.
- Not altogether. She has excellent training from an Ivy League institution but did not finish her research paper by the end of the program.
- One did. The other did not.
- The student had already decided that graduate education in basic science was not a career option they wished to pursue. The ideal outcome was to recruit the student to graduate school at university name, but the decision was already negative.
- The student was wonderful. Because of the flood though she was unable to return.
- Yes and no.

Did the SROP program staff provide adequate support to ensure the success of your mentoring relationship? If not, please explain.

- I was a mentor for the PHD program, so I didn't have direct contact with the SROP staff.
- In one case, I needed to meet with my intern before departing for a research trip. It was very important that we meet, and this meeting resulted in my intern arriving late for a scheduled SROP activity. After the activity, my intern went to the front of the lecture hall to explain the situation and apologize for arriving late. Instead of being met with consideration and support, the leader of the lecture made inappropriate comments, saying that my intern was selfish and irresponsible. On the contrary, he was doing everything within his power TO be responsible. These comments were made in front of other interns, and I feel it was unprofessional and demeaning. I understand the need to emphasize attendance, however, I also think it is important to emphasize that in the real world, with real obligations, you will often have conflicting activities, and to be a successful and responsible researcher, you will need to make choices. I don't think our students should be humiliated for showing good judgment.
- Not their fault. I lost my student because of the flood.
- Rather bureaucratic in thinking - time tables and reports. Less interested in conceptual development.
- staff's help was not sought, nor do I recall it being offered in a concretely helpful way.
- The SROP staff often seemed more concerned with executing their own agenda for training than in trusting my expertise as a faculty member in the target field about what preparation is necessary for a successful graduate application/thesis.
- the staff was fantastic

What resources did the SROP program staff provide to aid in the recruitment of your student after the close of the summer experience?

- Beyond recruitment advice, I am not sure that such support was made available
- I am not sure about the others.
- I am not sure whether any of these supports are available for our program - if they are, I am not aware of them
- If SROP provided aid to recruit my student, I wasn't made aware of it.
- I'm not sure about this.
- I'm too new to the program to answer this.
- NA - our student was not eligible yet for grad study.
- NA--student planned grad school in a different discipline
- none, but I knew the student was interested in graduate studies in a different discipline
- Not applicable -- did not wish to recruit students
- nothing - my student was from the UI and I recruited him.

- Preparation of students for GRE exam and learning of lab skills
- So far nothing specific.
- Student application materials
- the followup recruitment was done directly by the department
- The SROP staff provided lots of assistance to complement my work with the SROP student.
- They seem to have provided adequate funding. We didn't use other resources.
- This is not applicable to my situation.
- We have just begun this process. I expect more information later.
- We may co-author a paper from my recruit's project.

What suggestions do you have to improve the experience for mentors and/or students?

- Decrease number of required activities to give them more time with their mentors.
- Don't depend exclusively on the mentor's recommendation. SROP staff (and perhaps experienced faculty) should interview these students before accepting them into the program.
- Eliminate the priority given to some faculty members (holding special agreements with the SROP program) to access the pool of applicants and select or even contact candidates in advance to other faculty who could represent a better match for those students.
- Expedited IRB for SROP projects so that data collection begins promptly. This worked fine for my mentee but she told me about other students struggling with it.
- Find out sooner about the SROP students who are not working with a mentor. Some had no place to work and no mentor to guide the work. May be put these students in a study group or something that they can call home.
- Fine program in current form
- Great program -- advertise it more widely
- Great program.
- I believe that there should be more faculty involvement in planning the summer SROP experience, and I think mentors and mentees need to have the roles/responsibilities publicly discussed together.
- I felt that everything that needed to be done was done!
- I have found students did not always find the class meetings to be useful. Perhaps the curriculum could use some fine tuning.
- I have had a great initial experience, especially with the student assigned to me. Thus, I don't have any suggestions at this time.
- I think more communication between mentor and student before the student arrives would be beneficial.
- I think there needs to be either more flexibility in the programming or a more serious consideration of the balance between "soft" skills (classes on powerpoint presentations for example) and the opportunity to engage in

real graduate level research. With the abbreviated timeline there was not time to adequately address both.

- I thoroughly enjoyed the two students that I worked with. My only recommendation is to continue to recruit great students.
- I would like to have at least 1 event throughout the duration of the program, where both interns and mentors gather (other than when the interns present, given that it is difficult to socialize with other mentors in this environment due to attendance of talks, etc.) There were many scheduled lecturs or events for the interns only, but I think it would be worthwhile to have a social event or "round table" that includes everyone. As a mentor, I feel I could benefit from speaking with other mentors in other departments.
- Increased funding.
- Increased time for the students to be in the labs in contact with present graduate students and postdocs.
- It is rare that I get a SROP student who is really interested in research. I think that more screening needs to be done up front. It's a little demoralizing to spend time mentoring someone who really has no interest in research.
- It was fantastic. Not sure what to suggest other than maybe a few more social events that bring together all the mentors and all the students, to have more of a "team" feel.
- Keep up the great track record.
- Make sure that the students are mature enough to be able to come into a research environment and (with support) be able to work. My student usually slept through meetings, had to go to the hospital for alcohol poisoning, did little work, and took the keys she was given and never returned them.
- Make sure the level of English is met before accepting a candidate
- Many of the students I had struggled with time management during the summer. The program has many activities and the students are engaged in active social lives with other SROP participants. I found it challenging to get the students to focus on experiments that required more than two hours of continuous effort.
- I think it was quite good.
- The program was absolutely wonderful and tightly run. The only problems encountered had to do with the student (who looked very promising on paper but did not meet expectations)
- They do a great job.
- OSU program is very well run. kudos
- Over the summer, I heard comments circulated among the SROP students dismissing particular research methods and research from particular areas. Students reported feeling as though their research was put down by their peers. A session describing multiple perspectives around research methodologies and why one chooses an approach is necessary.
- Overall, I really like the structure of the program and it was a good experience. I will do it again.
- Plan and advertise social events further in advance. It would be nice to attend, but it is difficult to do so with a notice of only three or four days.

- Provide even more specific individualized help to students for resumes, etc. The placement office in the College of Education did this for my 2 mentees this summer.
- Providing faculty with a small stipend to cover time devoted to the student - they require a lot of support (and time)!
- Since this was my first time as a PHD mentor, I didn't know what to expect. But looking back, I do think there could have been a more formalized line of communication between SROP and PHD.
- Some activities specific to the areas of interest that students have.
- SROP is great.
- The more information we can have about students and their interest before they arrive, the greater potential for a successful summer.
- The time period is too short to complete the research!
- There needs to be a clearer understanding of the motivations of the mentor and protege.
- This is a great program. You do a good job of getting in students and connecting to mentors. One thought is some mentor on a few students at weekly meetings that focus on students with an interest in the mentor area where they could discuss both science and careers but over several smaller meetings.
- We had a problem with a shortage of time for the SROP student to be in the lab. Successful research requires a lot of time in the lab and the lab has to be the first priority. The student had a lot of meetings etc with the program which I am sure were valuable but nevertheless detracted from her involvement in the research itself.
- We had a very positive experience with a grad outcome.

What suggestions do you have for increasing the graduate enrollment yield for SROP?

- None. The program was absolutely wonderful and tightly run. The only problems encountered had to do with the student (who looked very promising on paper but did not meet expectations)
- OSU program is very well run. kudos
- The more information we can have about students and their interest before they arrive, the greater potential for a successful summer.
- To my understanding, I think that SROP program is doing everything it possibly can. The only thing I wish I could change was it be longer than 8 weeks - it's just a short experience. But I know there are constraints here.

Appendix D: Report on SROP Coordinators Best Practice Discussion, December 2009

SROP Coordinators Meeting
Best Practices
December 4, 2009

University of Illinois at Chicago

1. Civic Engagement – students must write a mission statement that explains how their research will help the community.
2. A writing specialist is brought in to work with students the first week of research.
3. Senior graduate students serve as a team leader.
4. All University of Illinois at Chicago students must secure their own faculty mentor. SROP staff will not place UIC students.
5. Mentors identify what type of research students will be doing:
    a. Own research
    b. Faculty's research
    c. Open to student doing own research or faculty's research
6. Students participate in an intense orientation and an overnight retreat.

University of Illinois at Urbana-Champaign

1. Faculty members sign up to be mentors. They are included in the selection of students.
2. Hosting an SROP reunion – attendance will be limited to Regional alums (Illinois/Indiana). Since SROP students must register as an UIUC student for the summer, they can use the campus system to track students. They hope to hold this even in the Fall 2010 to raise money.

Indiana University/Purdue University Indianapolis

1. Students participate in mandatory brown bags where guest speakers share information with students.
2. Provide optional social events on the weekend to show students the city. This helps students envision themselves living and going to school in the community.
3. University hosted a picnic for the students and a university official's home.

University of Iowa

1. Alumni Profile – this online database helps to track students. It is not viewable to the public. It has the ability to give Iowa the updates on their students' progress.
2. Faculty members are included in activities throughout the summer.
3. Students participated in community service project. This year they helped with Habitat for Humanity, and an SROP student's family was receiving the house.
4. Students must make the first contact with faculty during the application process. SROP staff will not place students.
5. Honored an SROP mentor by providing a mentor award.

Michigan State University

1. Weekly research conferences – students must talk through what they learned in the week.
2. Expanding to a 9 week program – Implementing a 4-day (8hrs/day) statistical workshop. Working with the statistical department and tailoring the program to their needs. This will help prepare students for what they need for graduate school.
3. Building faculty/institutional relationships - They want to develop relationships between MSU faculty and undergraduate institutions that feed into MSU graduate school. Providing funding for SROP undergraduate mentor to attend MSU and meet with MSU faculty mentor. The goal is to create an alliance between the faculty from the other universities so they will recommend students to attend MSU.

University of Minnesota

1. Providing individualized attention - working with students to find the right summer program for them.
2. Grad Day Fair
3. Invites faculty to the campus symposium

Northwestern University

1. Enhancing the quality of the matching process between student and mentor.
    a. Send a call for faculty mentors
    b. Potential faculty mentors are listed on website
    c. Students can select faculty mentor choice 1-4 on application
    d. A smaller group is selected from applicants based on campus "preferred" criteria
    e. Faculty are asked to view applicants and make selections
2. The quality of the students must increase. All students selected need to be admissible to Northwestern University. Students must write a statement about why they want to attend Northwestern University for graduate school in their application. It helps to identify those that are truly interested in attending Northwestern University.
3. Early admission decision – Programs agree to waive the GRE for students that eligible for early admission decision. The students are interviewed before leaving the summer. The students are admitted by October.

Ohio State University

1. SROP Fellowship – 10 OSU SROP alumni are given funding for 4 years. Student must commit to OSU by December 7. This is a recruitment tool to help OSU keep their top SROP students. Student must be MFA or doctoral.
2. Clearly state expectations to students. All students are interviewed prior to selection.
3. Students are given one-on-one attention.

Penn State University

1. Invite campus McNair and SROP alum to present during the school year. This keeps them connected to the office.
2. Black Graduate Student Association is sponsoring students to return to Penn State and present research during the school year.
3. Work closely with faculty prior to students' arrival. Work with faculty to determine what students need to know prior to arrival and upon arrival. Faculty research contracts are developed before students arrive.

Purdue University

1. Developed two types of GRE workshops, 1 higher skill level and another for students that need a more intensive workshop. Students take a pretest to determine which of the two GRE workshops they will participate in.
2. Graduate students serve as leaders for the students. A training has been developed to ensure graduate students are all at the same skill level.
3. Host a lunch each semester for the campus SROP alumni to provide networking opportunities. The lunch includes McNair, AGEP, and SROP scholars.

University of Wisconsin-Madison

1. Students select their top 3 choices for summer research. Students know upfront if they get their 1st, 2nd, or 3rd choice for summer research area. Faculty are highly involved in the selection process, which helps facilitate programs to collaborate.
2. Faculty participate in training with students (research ethics, careers and graduate degrees)
3. All students use the campus writing center to prepare their research abstract in the 1st week. They continue to use this resource throughout the summer.
4. Graduate Resource Fair – students identify the area they are really interested in pursuing for graduate study. Faculty come and meet with the students for 2 hrs. This takes place in the middle of the summer to ensure time for follow-up before student leaves campus.
5. Graduate School Prospective Applicant System – all recruitment information is sent to a database. Faculty and graduate recruiters can use this to find students and communicate with students.

University of Wisconsin-Milwaukee

1. Accepting students from outside institutions. Encouraging former SROP alumni to seek summer experience at another CIC institution.

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