

Name of Assessment Project: MARC Program -- group attendance at Annual SACNAS National Conference

Name(s) of Person(s) Responsible for Assessment Project: Coordinator (Kirsten Kung)

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Units/Departments Involved in Assessment Project:
Program, Service, or Event Related to Assessment Project:

The UCSD Maximizing Access to Research Careers (MARC) Program is designed to prepare traditionally underrepresented undergraduates for success in advanced degree programs in biomedical and behavioral sciences. The two-year program, funded by the National Institutes of Health, provides juniors and seniors with the opportunity to work closely with faculty mentors on research projects that are related to the students' interests. In addition to research experience during the academic year, the MARC Program includes two summers of intensive research experience, one at UCSD and the other at another research institution in the United States. Additional training opportunities also aid in MARC scholars' preparation for graduate school. MARC scholars receive a stipend and partial reimbursement for tuition throughout the program, as well as support for living expenses and travel to the external summer research experience.

One integral component of the MARC Program is students' attendance at scientific conferences; they are required to attend at least one conference per year. These conferences provide a number of benefits to students, including exposure to research in their fields, the opportunity to network and interact with colleagues and potential mentors, experience presenting their own research, and inspiration. The MARC students have traditionally attended both domain-specific conferences geared toward established researchers within a given field as well as conferences designed primarily for undergraduate and graduate students across fields. The UCSD MARC Program recently added attendance at one particular student-oriented conference as a required element of the program. Specifically, all MARC scholars are now required to attend the Annual Society for Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS) National Conference (<http://sacnas.org/events/national-conf>). This policy was instituted because we believed that this conference would be particularly beneficial for students for a number of reasons. This interdisciplinary conference is highly interactive and is geared towards providing underrepresented students with experiences that will enhance their interest in pursuing advanced degrees and careers in STEM fields. Further, we felt that having the students attend as a group would offer additional advantages, including contributing to a sense of cohesiveness and community within the MARC Program.

Assessment Project Description: The current assessment was designed to meet several goals. First, we wanted to confirm that the SACNAS conference does in fact provide as many opportunities and benefits as it appears to. Specifically, we wanted to verify the nature of the resources available at the conference and the relative ease of taking advantage of these resources.

Second, and importantly, we wanted to gather preliminary information that could be used to develop a more comprehensive assessment of the conference experience. That is, this assessment's primary purpose was as exploratory research designed to give us a better sense of what the experience of attending the conference as a group was like for the MARC students. Although we intuitively had a sense of the benefits to the students of attending the SACNAS conference, including the benefits of attending as a group, we wanted to determine whether there were elements of attending that were particularly meaningful to MARC students. Our goal therefore was to investigate students' perceptions of the experience and to gather information that would allow us to be more concrete in assessing the experience more formally; we want to develop an assessment that will accurately depict the effects of requiring the MARC scholars to attend SACNAS as a group. We plan to conduct this larger more comprehensive assessment shortly after the students attend the conference in the fall of 2014.

Thus, the results of this assessment will be put to almost immediate use as they will inform the design of the post-SACNAS survey to be administered in November, 2014. An additional and significant benefit is that even these preliminary results can be shared with students in anticipation of their attending SACNAS. By providing them with input from previous generations, so to speak, we can highlight the aspects of the conference that are most worth their attention and can better prepare them to make the most of their attendance. Finally, if the results from this initial assessment suggest that attendance was not as beneficial as we had anticipated, it would cause us to re-evaluate our decision to require all MARC scholars to attend the conference. Given that this is a preliminary assessment, it is likely that we would want to gather more information before making a broad policy change, but we are open to the possibility that the results might not be as supportive of conference attendance as we anticipate.

Unit/Program Specific Goals and Learning Outcomes: This assessment is designed to be a preliminary step in determining the benefits for MARC students of attending the Annual SACNAS National Conference as a group. Thus, the specific goals of this assessment are

- to confirm the resources that are available to students who attend the SACNAS conference
- to ascertain what the experience of attending the conference is like for the students so that we can more effectively assess specific elements of the conference in the future

We anticipate that students will experience a number of benefits from attending the conference. As noted previously, these benefits are not being quantitatively assessed currently but rather we are trying to further refine what/how we perform future assessments of the conference attendance. We anticipate that as a result of having attended the SACNAS conference as a required component of the MARC Program, students will report experiencing

- a sense of community, both with other UCSD MARC students and with the scientific community as a whole
- networking opportunities
- inspiration and motivation related to a career in research

Relationship to Student Affairs	Communicate Effectively, Advance a Plan for Personal, Academic, and Professional Success				
Learning Outcomes:					
Assessment Project Start:	7/1/2013				
Assessment Project End:	6/30/2014				
Population/Sample:	In 2012, 15 MARC scholars attended SACNAS; in 2013, 17 MARC scholars attended SACNAS. Because the MARC Program is a two-year program, some of those who attended in 2013 had also attended as part of the MARC Program in 2012. There were a total of 27 students who attended SACNAS as a required component of the MARC Program in 2012, 2013, or both. All of these students (N = 27) provided feedback about their experience via email, in interviews, or in group meetings.				
	Information about the resources available at SACNAS was also gathered by the MARC Program Coordinator (Dr. Kirsten Kung), the MARC Program Director (Dr. Jaime Pineda), and the Dean of Undergraduate Research Initiatives (Dr. David Artis).				
Type of Assessment:	Satisfaction study, Other: Please enter text below				
Other Assessment Type(s):	Impact study				
Assessment Methods:	Interviews, Observation, Other: Please indicate below				
Other Assessment Method(s):	Requesting general perceptions and other information via email				
Data Collection Tools:	Following the conference, there were several group meetings where students were interviewed and discussed their impressions of and experiences at the conference. Students also provided feedback during individual interviews with the Program Coordinator (PC), as well via emails to the PC. The PC, Program Director, and Dean of Undergraduate Research Initiatives also gathered information at the conference by determining the types of resources available to attendees.				
Data Analysis Methods:	The information gathered from the group meetings, the individual interviews, and the emails was compiled and reviewed. Similarly, the information about the resources available at the conference was compiled.				
Presentation of Findings:	The findings have been presented to and discussed by the Program Coordinator, the Program Director, the Dean of Undergraduate Research Initiatives, and the Program Evaluator. Portions of the results have been included in reports to the National Institutes of Health; for instance, in submitting an application for a renewal of our funding, we highlighted some of the benefits of having attendance at SACNAS be a required component of the MARC Program. Components of these results have also been discussed with the AVC-SA.				
	These findings have been instrumental in guiding us in developing a more comprehensive assessment, which will be administered shortly after this year's SACNAS conference. The current exploratory research has given us a better idea of what the experience is like for the students, allowing us to be more concrete in determining the questions that we want to answer with the full survey.				
	Finally, and importantly, these results have also been shared with the students. Hearing what aspects of the conference their fellow students have found to be particularly valuable has helped the students prepare both for SACNAS and for other opportunities, such as other conferences and their Summer Research Experiences at other institutions.				
Progress:	100%				
Link Assessment Project in Campus Labs Baseline :	<table border="1"> <thead> <tr> <th>Name</th> <th>Source</th> </tr> </thead> <tbody> <tr> <td>No items to display.</td> <td></td> </tr> </tbody> </table>	Name	Source	No items to display.	
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Summary of Findings:	The conference did indeed include the types of resources we anticipated. For instance, each year more than 300 institutions and sponsors had exhibits that provided students with information about graduate school and career opportunities. Many of the graduate schools offered waivers of their application fee, which can be very helpful to students. Further, there were more than 70 professional development and scientific sessions each year, giving students ample access to sessions related to their individual pathways and questions. In addition, there were over 1000 research presentations each year. These presentations are an excellent venue for students to become more familiar with cutting-edge research that is occurring in their fields. The fact that there were nearly a dozen presentations by UCSD MARC students also attests to the opportunity they had to develop their speaking and communication skills. Each of the resources above was easily accessible, although with so many opportunities it is not possible for a student to take advantage of all of them. Thus, it is important for students to prioritize. Having information about what previous attendees found to be useful can be one important tool to help students prioritize their time at the conference.				
	Students reported a number of benefits of attending the conference, including benefits related to attending as a group. These benefits fell into several broad categories:				
	<u>Community</u>				
	The vast majority of students indicated that they enjoyed the fact that there was a large group of students from the MARC Program there. They indicated that knowing there would be so many people they knew helped them feel at ease in what might otherwise feel like an overwhelming situation. The students also indicated that having attended the conference with their fellow MARC students allowed them to get to know one another better and led them to feel more connected with the other students and the program in general. The students also indicated that attending the conference provided them with a sense of being part of a larger scientific community; for many students they had not experienced this feeling previously.				
	<u>Networking</u>				

Students also reported enjoying the opportunity to interact and network with people at the conference. For instance, a number of students were able to find out information about institutions that were of interest to them for either graduate school or for their "Summer Research Experience" (SRE; MARC students are required to conduct research at another institution during one of their summers in the program). In fact, one student ended up meeting the researcher who would end up being her mentor during her SRE; the interactions that occurred at the conference led to a relationship that continued throughout the year and that was instrumental in having the student accepted to a prestigious summer research program. Students also reported that in addition to meeting potential mentors and making connections with those with a great deal of experience in their fields, they also really enjoyed meeting other students, particularly those from other MARC programs.

Communication

Another element of the conference that students commented on was the value of getting experience discussing their own work. As noted above, a number of students gave formal poster presentations. These students indicated that they really appreciated the feedback they received from the poster judges, as well as from general audience members who viewed their posters. Even some of those who did not deliver a poster indicated that they took advantage of the opportunity to discuss their research with others and that doing so was very valuable. There were even some benefits related to communication that occurred prior to the conference. In the weeks prior to the conference itself, we had a meeting devoted to preparing for the conference. The students who were presenting at the conference gave practice presentations, and they reported that the feedback and commentary they received from the MARC Program Coordinator, the Program Director, and the Dean of Undergraduate Research Initiatives was extremely helpful. The students also appreciated the feedback they received from one another. In general students indicated that both in preparation for the conference and at the conference itself, there were numerous opportunities to discuss their work with others and to become more adept at doing so.

Professional development information

Students indicated that there were a number of sessions related to professional development that were helpful. For instance, a number of students in MARC anticipate applying to MD/PhD programs, and the workshops related to that application process were very popular. Some students also enjoyed the keynote addresses. Other students, however, indicated that they did not find some of the professional development sessions and keynote addresses to be as valuable as they had hoped. Thus, it seems that providing students with guidance as to which sessions and talks are likely to be particularly worthwhile would enhance students' experience at the conference. The more comprehensive assessment to be conducted after this fall's conference should therefore include a determination of the types of presentations (e.g., research presentations, professional development workshops, presentations by senior scientists about their career paths) and examples within each category that students have found to be most rewarding.

Inspiration

Students returned from the conference with a sense of excitement and inspiration. Several of them indicated that attending the conference helped them solidify their goal of wanting to continue on to graduate school and a research career. The students reported feeling motivated to continue their work. A few students stated that they found it particularly moving to hear from senior scientists who were also underrepresented and/or the first in their family to attend college.

Thus, students indicated a number of benefits of attending the Annual SACNAS National Conference, including advantages associated with attending as a group. Highlights include networking opportunities that have led to very concrete outcomes; a sense of kinship, both with the MARC Program and with the scientific community at large; experience communicating about research; and inspiration and motivation as a result of having attended the conference.

In sum, these preliminary results suggest that having the MARC students attend the SACNAS conference as a group has led to numerous benefits for the students. They have enjoyed it and have gained both personally and professionally.

Impact of Assessment: This assessment is already proving to be tremendously valuable as we develop the survey that we will administer after this fall's conference. Through this current assessment we have refined our sense of the types of issues to address in the more formal comprehensive assessment. Knowing more about students' experiences at SACNAS will allow us to design a survey that will focus on the issues that are most important.

We have also determined that our efforts to prepare students in advance for the conference are important. For instance, the feedback received on rough drafts of students' posters and on practice talks was mentioned as something that added to the value of the conference itself. Further, given the tremendous amount of information at SACNAS, having guidance from former attendees as to how to make the most of the conference is especially helpful; this information can be provided in the preparation meeting.

Additionally, the information gathered via this assessment has allowed us to provide our students with valuable information about how to get the most out of a number of professional development activities. While the information gathered is obviously extremely pertinent to attendance at SACNAS, we have discovered that fortuitously it is also useful for students in other situations. For instance, students who were preparing to go to a lab outside of UCSD this summer benefited from the knowledge and insights provided by other students based on their experiences at SACNAS.

Finally, these results suggest that requiring that all UCSD MARC students attend SACNAS together has quite a number of benefits. Thus, we will continue to have attendance as a mandatory element of the program until/unless we gather new data that demonstrates that doing so is no longer warranted.

Lessons Learned: We have gained quite a bit of information that will help us design an effective survey to be administered after the SACNAS conference this fall. For instance, although many of the conference sessions were seen as valuable, there were some that students did not find particularly compelling. Designing a targeted assessment may allow us to see patterns in the types of activities that the students particularly value. Given the limited amount of time available at a conference, discovering which elements tend to be less useful (and therefore can perhaps be skipped) can be just as important as discovering which activities are the most worthwhile.

One issue that we did not assess explicitly has to do with whether this particular conference is the best one to require students to attend. While there are clearly benefits to SACNAS, there are other conferences that are also geared toward underrepresented students in STEM fields. For instance, some MARC programs encourage their students to attend the Annual Biomedical Research Conference for Minority Students (ABRCMS). Ideally it would be useful to get a sense of whether SACNAS has specific advantages that merit our continuing to send students to that conference as opposed to a different one.

**Supplemental
Information:**

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