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COLLEGE OF ENGINEERING AND COMPUTER SCIENCE
HSI-STEM/AIMS²

EXECUTIVE SUMMARY

Post-Program Completion Patterns of Cohort Participants in the AIMS² Program

This case study explored the relationship between AIMS² Cohorts 1, 2, and 3 graduates, cohort experiences, and career development. The study focused on identifying key cohort experiences including student-faculty interaction, peer-peer interaction, and faculty research. The purpose of this study was to explore how student-faculty and peer-peer interactions shaped students' experiences as cohort participants—and how these experiences informed students' post-program completion experiences in the workforce or graduate school.

Given that faculty members taking an interest in their students' academic progress and could potentially make significant contributions in increasing their intellectual and professional development (Anaya and Cole, 2001), the study examined relationships between project participation, program completion, and career/educational patterns. Methodologically, the case study design used a mix criterion and network sampling as a strategy to gather data through telephone interviews. The sample included 25 students (11 females and 14 males) all from Cohorts 1-3 of the AIMS² program. Their majors within the program were mixed and represented all the disciplines of the program (see the tables in the PowerPoint presentation). Data collection consisted of semi-structured, protocol-guided personal telephone interviews. Data analysis included organized themes through the *Atlas.ti* qualitative data analysis program. The data emerged into coded families of themes aiding developing experiential patterns of cohort students.

With respect to post-program employment, 24 of the 25 students interviewed all were employed full-time—and no one was employed on a part-time basis. The one student who was not employed was attending graduate school full-time. Their employment was distributed between the public and private sectors. Within the public sectors their employment included city and county agencies and private firms and companies. In the private sector, students were employed in manufacturing firms, engineering firms, healthcare systems, and consulting groups. A distribution of the sample by post-program patterns can be seen in the PowerPoint Presentation.

In general, the students reported that face-to-face contacts with faculty mentors were the most effective form of communication and most meaningful experiences for their development. The students reflected on the faculty mentor support and lessons that they learned from them. Additionally, faculty mentor support and care related directly to their research development. Also, students reported that faculty mentors seemed to connect students through disciplinary associations, conference participation, career development and opportunities, and graduate school opportunities. Specifically, weekly meetings and workshops that were held within each AIMS² program discipline, and most participants reported these weekly gatherings tended to strengthened their professional networking and career development.

Looking at graduate school plans, students' experiences with graduate education and their aspirations to attain terminal degrees. A student stated, "I'm in grad school now for engineering...I am starting to apply to doc programs now...I just want to keep going." (Mary). Another student reported, "I like my Masters' program...different from the AIMS² program but I am thinking about going for a doctorate." (Paco).

In student reports of their experiences with faculty mentoring, faculty commitment and caring, and advising through faculty research. One student stated, "My advisor was very involved with my research and it helped me to learn a lot of stuff for my job now." (Betty). Another student stated, "I got involved with the clubs on campus because of one of my professors." (Kim). Faculty commitment and caring was seen as an important factor in student success post-completion of the AIMS² program. A student reported, "I needed that weekly check-in with our workshops...yeah that part really helped me." (Eric). When students considered the AIMS² program as a faculty research opportunity, an embedded career and graduate school development and support. effect can be seen. For example, one student stated, "...AIMS² is team oriented and this prepared me for my job...it was like having guidance for my future." (Janice). Specific aspects of the program stood out for another student. "I loved the mock interviews and cover letter talks...they helped me the most." (Mary).

In connecting cohort experiences to career development, students seemed to share the common impression that faculty mentors who take interest in them as students can potentially increase their professional development (Anaya and Cole, 2011). In fact, career decisions and experiences in the AIMS² program seemed to shape career development and interests among students. One student's statement supported this. He stated, "...because of the research I did with my advisor helped me and influenced my career and my job." (Chris). Additionally another student (Susan) stated, "Because of AIMS² I feel it shaped my career..."

Switching gears, much of the interactions was peer-peer and seemed to enhance networking connection among the students. Some students experienced the university's alumni network opportunities as well. One student report, "I went to alumni BBQ and that's how I got my job." (Wendy) In regards to the AIMS² program directly, a student reported, "I wasn't very social before I came to the AIMS² program...it taught me how to talk to people." (Sam) Lastly, faculty who sustain caring and commitment relationships with their students appear to shape experiences academically, professionally, and emotionally. One student stated, "I remember a quote from my advisor, 'Plan everything-stay focused-set and attain your goal' (Kim). Additionally, another reported, "Confidence level increased and I learned how to get the right answers from the right people." (Jack)

In conclusions, this interview-based case study generated meaningful information and afforded insight into the AIMS² program experiences of cohort students and their career development. Given the responses from the participants, the continuation and possible expansion the faculty research and professional and career development opportunities for the cohorts. Encouraging students to participate in the university's alumni services would enhance and increase the cohorts' workforce entry opportunities. Additionally, increasing socials and networking events to foster post-graduate professional contacts would also be beneficial.