

AC 2009-2252: ENGINEERING STUDENT RECRUITERS: A REVIEW OF THE ROLE OF WOMEN AS PEER RECRUITERS FOR POTENTIAL ENGINEERING STUDENTS

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Engineering Student Recruiters: Review of Role of Women as Peer Recruiters for Potential Engineering Students

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Abstract

For the last three years, the UT Arlington College of Engineering has had a group of undergraduate peer recruiters. These student recruiters represent UTA Engineering at college fairs, at University Preview Days, and on classroom visits to area high schools accompanying the Engineering staff recruiter. The student recruiters lead hands-on engineering activities in high school classrooms, do follow up contacts with potential students, answer questions from potential students and parents, help prepare material for recruiting events, and do other tasks to support the recruiting efforts of the University.

In this paper, we will discuss how the recruiting process works including what types of classrooms are visited. We will review the impact of the engineering student recruiters on our recruiting efforts, the benefits of the student recruiter program to potential students, and the logistics of managing this recruiting staff. We will look at the balance of male to female peer recruiters and this same balance in the College as a whole as well as the qualitative impact of female and male peer recruiters in the high school classrooms and at other recruiting venues. We will also discuss the benefits of being a peer recruiter student and what impact it has on the recruiting students themselves. The paper has female student peer recruiters as co-authors.

What is peer recruiting?

The University of Texas at Arlington College of Engineering uses many approaches to recruit students. In 2003, the College hired a full-time staff undergraduate recruiter to work on increasing engineering enrollments. The staff recruiter visits high schools and represents UTA Engineering at college fairs. Typically high school visits are arranged with an individual math, science, computer science, or engineering teacher at a high school and the recruiter stays to talk with many classes during the day. Since a large percentage of our student population is from the surrounding cities (Arlington sits in the middle of the Dallas-Fort Worth Metroplex), the recruiter makes day visits to schools in the 17 school districts in our immediate area then takes infrequent longer trips to schools further from our base. UT Arlington also participates in college fairs across the state including fairs hosted by individual schools, by school districts and by areas. The College of Engineering sends recruiting representatives to some of these fairs based on the populations of students that they target.

In Fall semester 2006 it was decided to hire undergraduate engineering students to work as peer recruiters under the direction of the staff recruiter. The goal of the student peer recruiters was to better connect with our target audience for recruiting. These student peer recruiters, also called student ambassadors, represent UTA Engineering at college fairs, at University Preview Days, and on classroom visits to area high schools accompanying the Engineering staff recruiter. The student recruiters lead hands-on engineering activities in high school classrooms, do follow up

contacts with potential students, answer questions from potential students and parents, help prepare material for recruiting events, and do other tasks to support the recruiting efforts of the University.

As part of the classroom visits or fairs, prospective students are asked for their name, contact info and area of engineering interest. The data for these potential students is kept in the College and is passed to the UTA admissions and recruiting department for follow-up. The follow-up activities may include calling the prospective student with information or to answer any questions the student might have. Other follow-up can come in the form of e-mails or other communication. Peer recruiters also make calls to students who have applied to UTA COE and students who have been offered a UTA Engineering scholarship to build relationships with them and answer questions.

Why do we have peer recruiters and how does this program work?

Our goal for having peer recruiters is to better connect with our prospective student population. Peer recruiters serve in a variety of roles. Below one of the current peer recruiters describes some aspects that she focuses on when talking with prospective students:

“UTA’s close proximity to two major cities has resulted in a large populous of high school students expressing interest in a university that is less than 30 miles from their childhood home. Therefore, we’ve tailored our recruiting efforts to appeal to North Texans. In order to effectively do this, a majority of our student ambassadors have graduated from North Texas high schools. This allows for a common bond to develop while common misconceptions are addressed and concerns allayed.

Mentioning this common bond the ambassadors and high school students share helps our ambassadors gain the trust of the prospect. The prospect can now get a glimpse of what someone—from a background not too different from his own—has become with the aid of UTA. Now that the prospective student has formed a relationship with a peer, the ambassador has a chance to address issues that are probably on the student’s mind.

Our ambassadors also succeed in recruiting efforts, because they try listening rather than preaching. We can give them all the information we have, but we will never know if the information we are pushing is of any interest to a particular prospective student, unless we find out their interests. The ambassadors tend to spend a large amount of time at the introduction of a conversation finding out what the student cares about, and then catering presentations to that individual student. Such personal attention, not only allows the student to feel as if he’s more than a number to us, but also gets him the information he needs to make an informed decision.

Our ambassadors are willing to take the time to research a question or point a student has and get back to that student personally. Often our ambassadors have

taken it upon themselves to learn about what jobs are available to students looking to break into video game design, for example, and educational requirements students need to attain to be successful in that industry. The ambassadors are then able to inform the students of the facts about the industry and decipher exactly what the student wants to do within the field.

At least four of our ambassadors are not only of minority descent but are also female. This fact enables us to make a strong, though unspoken, point to families who are concerned about racial issues. Historically, minorities and women have been seen as inferior and incapable of being of any value in the engineering community. Yet our female minority student ambassadors have risen above this stigma and proven that women of color can not only go to college, but can succeed in a field that has a low percentage of minorities and gain successful employment. When parents and prospective students see that we not only recruit and educate such individuals, but we help mold them into individuals that are deserving of respect and are exceptional representatives of our school, they are encouraged.”

As the preceding section shows, the engineering student ambassadors do more than just show up at an event and talk. They take on the role of mentoring for the high school students who are trying to make decisions about what path to take after high school. To do this effectively, the peer recruiters speak from their own experiences and from the experiences of their group to reach to prospective students. The student ambassadors also bring back questions to the group from their audience, research answers, share them with their peer recruiter colleagues, and then take this knowledge with them to future events.

The benefits of using engineering peer recruiters is that high school students relate differently to students near their age (peers) than they do to older faculty or staff members. Peers can more nearly address the students concerns. Another benefit for prospective students is that they can ask about non-classroom issues and get answers from these current students about things like the whether they will really get a job and what college life is like. UT Arlington Engineering also benefits tremendously because the peer recruiters extend our reach beyond what the staff recruiter can do himself. In order to develop relationships with teachers and schools, the recruiter typically schedules a minimum of two visits a year to interested high schools. With the peer recruiters, we are able to extend both in duration and frequency the number of times that UTA Engineering can come interact with students at that school. We are also able to attend college nights and other events for pre-college students.

The structure of the engineering peer recruiter/student ambassador program at UT Arlington is to hire current undergraduate engineering students for 10 hours a week for one per semester commitments which are renewable for each long semester (Fall and Spring).. We have been fortunate to have up to two peer recruiters per undergraduate engineering department in the past year which gave us a total of 10 student ambassadors per semester. The compensation for the student ambassadors is \$500 per month or approximately \$12.50 per hour. Peer recruiters must have their own transportation and are expected to get to and from their high school visits and other events on their own and to participate in some weekend events as needed. The peer

recruiters' work schedules are arranged with the staff recruiter around the student's classes for that semester. Peer recruiters report to the College of Engineering staff recruiter who in turn reports to the Assistant Dean for Student Affairs. Training for peer recruiters is a mix of formal training and "job-shadowing" to learn the tasks. The formal training includes internal UTA training about communication skills, legal training in recognition of sexual harassment, and one-on-one training with the staff recruiter about the job tasks and goals. Student ambassadors also learn through "job-shadowing" by accompanying the staff recruiter and experienced peer recruiters to events and "learning by doing." The staff recruiter takes applications and interviews candidates for the positions when they are available. Hiring decisions are made by the recruiter and the Assistant Dean.

Since the peer recruiter program started, most students who have been hired as recruiters have stayed in that position until they graduated. (see Table I below). We have found that the graduating student ambassadors tend to suggest potential peer recruiters from their UT Arlington peers and in general these have led to the replacement hires for the student ambassadors. This process works well because outgoing student recruiters know exactly what it takes to make a good student ambassador and they recommend students who have these qualities. When current recruiters make recommendations for open positions, the staff recruiter takes applications and interviews candidates for the positions. When no clear candidates are available, the Assistant Dean advertises the position to all engineering undergraduates. The staff recruiter and/or the Assistant Dean do interviews with eligible candidates. Hiring decisions are made by the recruiter and the Assistant Dean.

Student ambassadors are required to have good academic standing (preferably a 3.0 GPA or higher) in an undergraduate engineering major. We prefer students who have attended high school in the United States although one or two students have had international backgrounds. We make sure that the pool of student ambassadors is ethnically, racially, and gender diverse so we look for candidates who keep that balance. The UT Arlington College of Engineering has five undergraduate departments plus two departments that grant only graduate degrees. The five undergraduate departments grant a total of 8 unique undergraduate degrees. In hiring peer recruiters we insure that we represent every undergraduate department but we may not always have a representative of each unique degree offered.

We also look for excellent communication skills, an outgoing personality, self-motivation, a positive attitude, and someone who likes their academic major and likes UT Arlington. Our peer recruiters are promoting engineering but they are also promoting UT Arlington so they have to feel positively about the school so that they convey it in its best light.

How do female engineering students fit in this picture?

In Fall 2008 our student ambassador team had nine students, six females and three males. Two recruiters were African American (both female), three were Hispanic (two female), and one was international (female). The students' majors were Aerospace Engineering, Bioengineering, Civil Engineering (2), Computer Engineering, Computer Science, Electrical Engineering, Industrial Engineering, and Mechanical Engineering. The Bioengineering major is technically an undergraduate Biology major who is intending to complete the Fast-Track program entering the

Bioengineering MS degree. There were six seniors, two juniors, and one Master’s student who had completed her undergraduate degree the previous year at UTA and been a peer recruiter already. In general, the peer recruiting team has been half female and often the percentage is higher as in Fall 2008.

	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008
F	3	3 (continuing)	4 (3 cont.)	4 (3 cont., 1 grad.)	6 (4 cont.)
M	2	2 (continuing)	4 (2 cont.)	3 (3 cont., 1 grad.)	3 (1 cont., 1 grad.)

Table 1: Female and male peer recruiters since program inception

The ratio of female to male student ambassadors is quite unlike the ratio of female engineering students to male students. In Fall 2008 in the College of Engineering at University of Texas at Arlington women made up 14.18% of the undergraduate population ranging from a high of 26% of the Industrial Engineering department to a low of 10% for the Electrical Engineering department. We find that it is easier to find female students who are interested in recruiting and outreach than it is male students which is one reason for the larger number of female recruiters. We also have a desire to promote diversity in our undergraduate population and having female student ambassadors is more encouraging to young women prospective students than male ambassadors.¹

What good does peer recruiting do for potential students and UTA engineering enrollment?

Part of the impact of female engineering peer recruiters is to break down stereotypes about engineering² and who can be an engineer. One of the female student ambassadors says:

“Being a female in engineering, I understand what it means to be a minority in my field and this opportunity to go out into the community to encourage young women has been amazing. I have always been enthusiastic about working with computers and I love sharing my knowledge and experience with potential students.

When we walk into a classroom, it seems always to start a bit quiet and tense but by the end of the presentations the students have so much to ask that it feels so rewarding just to be there. A lot of the young women are very shocked to see other women pursuing engineering careers and it is very encouraging to them.”

Research shows that stereotypes about engineering turn young women away from those careers³ so by having female student ambassadors as role models we encourage young women to consider engineering as a viable career choice. Our peer recruiting program began in Fall 2006 with a group of 3 peer recruiters, one of whom is still a recruiter as a senior. Since 2006 we have seen little variation in our percentage of incoming female engineering majors. In Fall 2006, 55 out of 428 engineering freshmen were women (12.8%), in Fall 2007 52 out of 399 were women (13%), and in Fall 2008 54 out of 468 were women (11.5%). NSF enrollment data for first-time first semester freshmen showed a pretty flat rate of female enrollment in engineering from 2003 through 2006 at 16.4%, 16.3%, 16.2%, and 16.7% respectively. While UT Arlington lags behind the national average in female enrollment, without national comparison data for the years 2007

and 2008, it is difficult to tell if these enrollment numbers are due to our female peer recruiters or if it is simply part of a larger national trend. We also assume the impact of peer recruiters is greater on juniors and sophomores who are less likely to have made up their minds about college plans thus pushing the impact to Fall 2007 and 2008 even though peer recruiters started in 2006. We expect that with two more years of data we will be able to see how our recruiting efforts are impacting enrollment by comparing it with national trend data for engineering enrollment.

What benefits does the recruiter student her/himself receive?

“It is always very rewarding when I see students on campus that had attended one of my past school visits and are now current freshmen.”

This quote from a student ambassador illustrates the personal satisfaction that derives from the job of being a peer recruiter. The student ambassadors also get the opportunity to practice their public speaking and people skills, to interact with teachers and administrators at schools, and to network with the members of the community at recruiting events. The peer recruiter job also gives students a paying position that allows them to work in their field of study. The job itself has enough flexibility that students can pursue interesting tasks, such as designing a new hands-on classroom activity, that allow them to use their creative skills. The ambassadors also participate in on-campus recruiting and outreach events which allow them to interact with faculty members they might not otherwise meet. Finally, the student ambassadors benefit from the interaction they have with one another which broadens their knowledge of the fields of engineering and of the UT Arlington College of Engineering.

Conclusion

Qualitatively we have good anecdotal feedback on the peer recruiters and their activities. Teachers are pleased with the class visits and ask for repeats for other students. Surveys in our freshman classes indicate that the peer recruiters are remembered by those students who saw them in high school visits. The student ambassador program broadens our reach by allowing us to visit more schools and interact with more students than the staff recruiter alone could reach. Future data analysis of enrollment will be done to look at long-term impact of this program. For the peer recruiters themselves, this program is a positive activity that they can enjoy and learn from. The role of peer recruiter broadens their knowledge of engineering, allows them to practice their communication skills and adds to their experience in UT Arlington Engineering.

1. “Propelling Young Women into the Cyber Age: Gender Considerations in the Evaluation of Web-Based Information”, Denise E. Agosto, *School Library Media Research*, Vol. 4, 2001.
2. “To Recruit and Advance: Women Students and Faculty in Science and Engineering”, National Research Council of the National Academies, The National Academies Press, Washington, D.C., 2006.
3. “Geek Mythology and Attracting Undergraduate Women to Computer Science”, Jane Margolis and Allan Fisher, published in *Impacting Change Through Collaboration*, proceedings of the Joint National Conference of the Women

in Engineering Program Advocates Network and the National Association of Minority Engineering Program Administrators, March, 1997