

Work in Progress – Developing Networks: Engaging First Year Students in Face-to-Face Networking and LinkedIn

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Abstract – This paper describes continued improvements to a twice annual (once each semester) First Year Engineering Event (FYEE), which connects first-year engineering students at Northern Arizona University (NAU) with professional engineers. Specifically, the improvements focus on an in-class, pre-FYEE workshop on LinkedIn and a related networking activity held during the FYEE.

Index Terms - Design, LinkedIn, Networking.

INTRODUCTION

Design4Practice (D4P) is a sequence of engineering design courses at Northern Arizona University (NAU) that strive to enhance student knowledge and skills in the areas of 1) engineering design, 2) communication, 3) teamwork, and 4) professionalism. With support from an industry sponsor during the 2013-14 academic year, D4P was able to organize two inaugural First Year Engineering Events (FYEEs) to provide students with industry perspectives on the importance of knowledge and skills within these four areas. The inaugural FYEEs are described in an earlier paper [1].

With continued support, FYEEs have been held every semester, bringing together all students enrolled in EGR 186: Introduction to Engineering Design and engineers from industry. Every semester, the FYEE undergoes incremental improvements to enrich the student experience based on observations from faculty, staff, peer teaching assistants, and practicing engineers. For this paper, we focus on the improvements made on networking activities at the event and how those activities connect to an in-class, pre-event workshop on developing a LinkedIn profile.

IMPORTANCE OF DEVELOPING NETWORKING SKILLS

Students are often intimidated by the thought of networking, typically because of the misconceptions most people have about networking. Networking is thought to be a sales pitch only given at cocktail parties and on the golf course. However, this activity introduces the concept of networking in a way that breaks down these misconceptions. First, the activity highlights the fact that networking can happen anywhere. It incentivizes students to practice by discovering simple bits of information about each other. By setting the

activity up in this way, students are less intimidated to approach someone unfamiliar to them.

Besides encouraging students to ‘dip their toe’ in the networking pool, this activity supports behavior that promotes development of weak ties. The concept of weak ties is that “...the people with whom we are the least connected who offer us the most opportunities” [2, 3] and as one way to diversify a network.

Ultimately, if students can master the skill of networking, synergized by the use of weak ties, they will be successful in accelerating their career path.

IN-CLASS LINKEDIN WORKSHOP

To help students begin connecting their academic coursework to their personal career goals, the authors introduced a homework assignment during the Fall 2014 semester requiring all students to create a LinkedIn profile. Students in all sections were provided informational material containing tips for creating an effective profile (from <https://university.linkedin.com/linkedin-for-students>), but an in-class workshop was presented to 1 section as a pilot to determine usefulness. After a comparison of homework submissions of the LinkedIn profiles, the authors determined the in-class workshop reinforced the concepts from the informational materials, which lead to students incorporating those characteristics in their profiles. As a result, the in-class LinkedIn workshop became a regular activity within the first week of the semester starting in Spring 2015.

The LinkedIn workshop guides students through each section of a profile, providing tips on effective content. One example of effective content is using action verbs and quantifiable impacts to describe their role at former jobs in the Experience section. While discussing the Skills & Expertise section, students are introduced to transferable skills employers desire when hiring graduates (as indicated by the current Job Outlook from the National Association of Colleges and Employers), and students are encouraged to only endorse others when they have direct knowledge that individual possesses that skill or expertise.

In addition to profile-specific content, the workshop also introduces students to the Find Alumni tool and strategies for finding groups to join and companies to follow. For a first year student, these features provide specific strategies to connect with the engineering

profession to determine interests within the profession and possible career paths.

DESCRIPTION OF THE NETWORKING ACTIVITY

The FYEE, described in an earlier paper [1], brings together 200+ students each semester to showcase student designs. In addition to demonstrating their device, the students participate in a competition to showcase their creativity by delivering an elevator pitch to a group of practicing engineers from the sponsoring organization. The remainder of the time is spent enjoying lunch, with the opportunity to network with other students as well as the practicing engineers.

The most recent improvement has focused on developing a networking activity to help students develop the ability to start conversations with professionals they do not know and maintain those contacts on LinkedIn. With the current ratio of students to engineers at 20:1, we decided to primarily focus networking efforts to engage students in developing weak ties to students in other sections. We hoped this would also serve as an introduction to the practice of networking – an activity that is so important to individuals' paths, yet also widely misunderstood and even feared! We chose a scavenger hunt activity, with an incentive of a raffle at the end of the event. In the scavenger hunt, students were asked to record the names of other students that meet specific conditions. We generated a list of 14 specific conditions and, to ensure networking across sections, randomized the networking activity sheets. For example, one sheet may require a student to find someone in section 4 that "prefers cats over dogs", while another sheet might direct the student to find someone in section 7 for the same condition.

In addition to networking with other students, an additional scavenger hunt worksheet required the students to ask 2 engineers about 1) becoming a strong applicant for internships and 2) preparation for transitioning successfully into a career. In addition to recording the engineers' names, the students also needed to summarize (rephrase in their own words) the advice.

After students had completed either or both worksheets, they were asked to fold the papers and deposit them in 2 labelled bins (1 for the student questions, and the other for the engineer questions). After the other awards were presented, sheets were randomly drawn from the bins for attendance prizes. In order to be eligible, the worksheet must have been completed and the student must still be in attendance. If either of these conditions were not met, another sheet was drawn until the remaining prizes were distributed.

During the next class period, both sheets were returned to the students. They were encouraged to connect on LinkedIn with those students they met through the networking activity as well as with any of the engineers, but we did not require these connects and had not devised a method for checking who connected.

OBSERVATIONS FROM FACULTY

Even though particular challenges arose the morning of the event, the FYEE roughly followed the typical schedule from previous semester with the inclusion of the networking activity. The networking activity appeared to engage students across sections, rather than students sitting with their teams or friends from the same section. Also, many students approached the engineers. In the past, the engineers would typically approach groups of students to engage in conversation.

Lastly, the number of worksheets collected shows that a large majority of the students participated in the networking activity. Of the 230 students enrolled in the course that morning, 216 attended the event. Over 90% (196 students) submitted a completed worksheet based on the questions to ask other students. Nearly 83% (179 students) submitted a completed worksheet with the questions to ask the engineers.

OBSERVATIONS FROM THE ENGINEERS

At a debriefing meeting, the engineers expressed appreciation about how the networking activity changed the dynamic of conversation. During past events, the engineers typically initiated and directed conversations with students. The students were typically reserved, with little to say to the engineers. Conversely, with the scavenger hunt sheets, the students were able to initiate conversations, and they generally had more to discuss beyond the questions about desirable characteristics of an intern and preparedness for their future career. One particular improvement the engineers suggested was to modify the networking questions to engage in more technical content of the design students showcase at the event. In particular, the engineers would like to see more questions relating to 1) the students' utilization of and appreciation for the design process, 2) the role of creativity within engineering design, 3) challenges throughout the process and how they overcame challenges, and 4) the role of iteration in developing their final prototype.

In addition to modifying the networking questions, the engineers also felt increasing the difficulty of the design challenge could lead to better discussions. Every semester, the kit of materials has been modified, removing quantities of current items and/or adding a new item or items. Even with the kit modifications, teams present similar design every semester. Through brainstorming with the engineers, three particular modifications were identified that could increase the difficulty of the design challenge and, potentially, more closely mimic a realistic rescue scenario: 1) providing a variety of stuffed animal dogs to rescue, 2) altering the conditions in the bottom of the trashcan by adding rocks to more closely simulate dry wells, 3) requiring devices fit in a specific container and be assembled within the rescue time limit, to recreate similar conditions firefighters and emergency service personnel face when utilizing equipment in the field.

FUTURE IMPROVEMENTS

The first improvement regarding networking will be providing additional information about and context for the networking activity at or before the FYEE. Most students seemed to understand the directions; however, having faculty explain the instructions in class periods preceding the FYEE could lead to less confusion and wasted time.

At the request of the engineers, the questions for the engineers will be examined and modified or expanded to include a wider variety of questions. If a longer list of questions is produced, the students could participate in a jigsaw activity by creating worksheets that include a subset of the questions. Then, another assignment could follow the FYEE to have students share responses, either through face-to-face communication or a discussion board type of medium, and summarize the findings of their peers for all of the questions.

One last improvement is to develop a reflection assignment for the students to describe their experience of approaching unfamiliar students and practicing engineers. In addition to reflecting on the experience, students will be asked to articulate the specific skills and strategies for engaging in conversations with unknown people. Students will also reflect on their understanding of networking, based on the in-class workshop as well as the networking activity at the FYEE. Lastly, students will articulate strategies for developing connections with engineers within their desired careers.

REFERENCES

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