Teaching “people networking” skills for CIS students

Louise Soe  
Cal Poly Pomona  
llsoe@csupomona.edu

Ruth Guthrie  
Cal Poly Pomona  
raguthrie@csupomona.edu

Elaine Yakura  
Michigan State University  
yakura@msu.edu

ABSTRACT

Recent research on organizational social networks has continued to emphasize the importance of networks for individual as well as organizational performance in the U.S. Given the importance of networks and networking, we argue that IT students must learn networking skills in addition to technical skills in order to better understand the role of technology in organizations and to increase their chances of success in their careers. The goal of this paper is to describe a teaching module that we developed for CIS undergraduate students to improve their networking skills.

Keywords (Required)

Teaching, networking skill development, information technology career development, CIS students.

INTRODUCTION

Recent research on social networks in and across organizations has emphasized the importance of network theory both for organizations and for individuals in the U.S. (Kilduff and Brass, 2010; Porter and Powell, 2006). In particular, individuals must develop networking skills for success in their careers and to deepen their understanding of what goes on in organizations (Tung, 2002). For many years, research has shown that social networks influence a wide range of individual career-relevant outcomes. Granovetter (1995) found that people get jobs through their weak ties; Burt (1992) showed that people with more social capital are paid more and promoted more quickly. Networks can also affect outcomes such as longevity and health (Christakis and Fower, 2008; 2007). Unfortunately, CIS students, like engineering students, tend not to focus on these kinds of “soft” skills (Shuman, 2005), and the traditional CIS curriculum ignores these skills, as well. However, as Bassellier and Benbasat (2004) have argued, networking is part of a set of skills that allows IT professionals to partner with business clients. Based on our research, we see more and more evidence that teaching students basic “people” networking skills and concepts is just as important as teaching them programming or other technical skills. Networking skills do not just help with individual career decisions, these skills can also provide professionals access to much-needed tacit information about how expertise and knowledge flows in the workplace. This type of information is particularly important for socialization of new entrants to the workplace, or for success as one moves up the career ladder or changes jobs.

Thus, the objective of this paper is to outline a teaching module for introducing CIS students to people networking. The paper begins with definitions of our central concepts, since terms like “social network” can have so many different connotations. Next, we briefly describe some of the teaching and research literature underlying our approach, and then present the modules we have developed for teaching networking skills and concepts in the CIS curriculum.

DEFINITIONS AND DISTINCTIONS REGARDING THE TERM “NETWORKING”

In contemporary life, “networks” and “networking” are terms with many meanings. Here, we want to avoid confusion with terms related to “social media” networking (e.g., Facebook) or “computer” networking (e.g., TCP/IP). In this paper, we use the term “social network” to refer to an individual’s ties to other individuals. While students often assume that the term “social network” is synonymous with their network of Facebook friends, we take pains to point out that these two sets of people are not necessarily identical.
Another key concept is that of an individual’s “social capital,” which Kilduff and Brass (2010: 357) define as consisting “of benefits or potential benefits that accrue to an actor as a result of social network connections.” Contrasted with human capital, which is the set of experiences, skills, and expertise that resides in a particular individual, social capital refers instead to the resources that reside in that individual’s social network.

There have been a number of theoretical reviews of social network theory from different disciplinary perspectives (see, for example Kilduff and Brass, 2010; Borgatti and Foster, 2003). Our recent research on the successful careers of women in the IT professions (Yakura et al., 2012; Guthrie et al., 2010) indicates that the careers of the 38 women we interviewed were enhanced by both their technical and their social or “soft” skills. Their technical skills are expressed in their ability to solve problems for their clients, which relies on their formal education and their ongoing professional training. The social skills included a political understanding of the workplace, their ability to work on teams, their networking practices, and, if they were lucky, a boss or sponsor to support, mentor, and promote them. Mentors were particularly important when the women were starting careers or were in transition from one position to another.

However, only a few of the women in this study were fortunate enough to have a single, strong mentor (usually male and often their first boss). Most of the women had what amounted to a network of mentors (Guthrie et al., 2010). These relationships were less structured in nature, with different mentors providing different types of support in different situations and at different times in their careers. The developmental network approach complements traditional one-to-one mentoring. Like a traditional mentoring relationship, a developmental network can provide participants with a broad range of career advice and support (Higgins, Chandler and Kram, 2007). But instead of relying on a one-to-one mentor-protégé relationship, a developmental network seeks to enable a more diverse “many-to- many” set of relationships. One-on-one mentoring relationships have been associated with positive career outcomes for both men and women (Ramaswami et al., 2010; Dougherty and Dreher, 2007). However, while mentoring can be very helpful, it has limitations, and may be less effective for women and other members of underrepresented groups (Ibarra, Carter, and Silva, 2010). Research has consistently demonstrated that network structures with its multiple ties are the most effective way to access and disseminate employment and career relevant information (Granovetter, 1985; 1973).

Before development of this networking module, we tried various activities related to mentoring and networking as part of both CIS and management courses. For example, we have had panels consisting of alumni who are working in IT organizations speak to the class about their work and careers. Also, we have created alumni/professional mentoring assignments, where individual students are matched with an alumni or IT professional and conduct an informational interview about their work. However, students have had a mixed reaction to these activities. While some students gather new information about the IT field as a result these activities, and/or develop new relationships, many students appear to listen and complete the assignment in a rather perfunctory fashion.

When armed with more information and practice, we believe that students can become more effective at networking, and can then take advantage of the benefits that developing a social network can bring. Based on the recommendations of other research and on our own research results, we designed and taught a course session module that would provide all students with some basic theoretical concepts about networks and networking. We focused on practicing fundamental skills that might help them to begin to build a professional network with alumni and IT professionals, with other CIS students. The next section provides a description of the teaching activities.

TEACHING ACTIVITIES

Our approach to teaching networking consists of several related activities. Because this is skill-based learning, we designed these activities to emphasize active participation by the students. Each of the class activities is short, and involves the students in a variety of tasks. This format makes it feasible to choose one part of this module as a short activity, or combine them together as a stand-alone class on networking. Also, these activities can readily be modified to accommodate the participation of alumni, recruiters or industry professionals, who can add insights concerning placement and provide an understanding of the local industry or the trajectory of a professional career over time.

Activity 1: Introduce Network Concepts

While everyone is familiar with the idea of “networking”, there are several specific concepts that we have found students need to know. These include:

- Social network (as distinguished from social media)
- Social (vs. human) capital
- Network ties: Strong vs. weak
Defining these concepts (which takes approximately 10-15 minutes) also helps clarify that this session is not about “how to use Facebook” or “how to use LinkedIn.” A reading assignment can help students understand the importance of these concepts in work organizations (e.g., the *Harvard Business Review* article by Ibarra and Hunter (2007) entitled “How leaders create and use networks.”) These concepts have important practical implications: research shows that we often get jobs through weak ties (Granovetter, 1995). Strong ties are close connections; weak ties are more distant.

We have found that it helps to relate these concepts to their prior experiences. By posing a few questions for class discussion, there is an opportunity to surface assumptions that students have about networks and networking. Questions related to the students’ daily experiences can demonstrate that even routine information resides in a class network. For example, one might ask: “what is the fastest [or “best” or “cheapest”] place to get a meal before [after] class?” or “where is the closest [or “cheapest”] place to park near/on campus?” The discussion can be extended to more formal situations by asking: “have you ever been to a career fair?” If some students answer in the affirmative, ask them to describe their experiences. This also helps students to understand the importance of the next activities. The notion of networking can be intimidating for both student and professional alike (deJanasz and Forret, 2008). Assuring students that the class networking activity will be “active” and a change from sitting and listening to a lecture or working on a computer can help pique their interest. Moreover, the next step allows them to practice in a relatively risk-free context.

**Activity 2: Networking Introductions (aka “Elevator Pitches”)**

Most students have not had much practice formulating introductions or practicing them. This activity helps them write and revise their introductions, and, in the process, become more comfortable with them. Since most students are familiar with the idea of campus career fairs, where the pressure to introduce oneself rapidly is high, they typically understand the necessity of practice for this activity. In terms of network concepts, introductions are a critical first step in forming network ties, and for building and accessing their social capital.

Steps in this activity:

a) Ask the students to write out their introductions, which should consist of at least 2 or 3 sentences. The first sentence should state their name, and can take the format, “Hello, my name is ______.” The second sentence should provide some personal detail of interest, which might consist of the type of information technology career that you are interested in (eg, “I would like to work on mobile apps”), or some hobby or activity (eg, “I like to travel and backpacked in Alaska last summer”). Writing out their introductions before saying them aloud is a useful process in itself (see Bishop and Fulwiler, 1997, for a discussion of writing to learn).

b) Next, have each student pair with another classmate, and practice delivering their introductions to each other. Each partner should time the other’s introduction (approximately 30 to 45 seconds would be fine), and be able to repeat their name. If someone’s name is somewhat difficult to pronounce or unfamiliar, explain that the student should provide constructive feedback in saying their partner’s name slowly and clearly so that it can be easily understood.

**Activity 3: Speed Networking**

Once each student has created and practiced their introductions in pairs, introduce the idea of speed networking. This is a high-energy activity that forces students to practice their introductions from the prior activity over and over again in a short span of time so that they become more comfortable with repetition.

First, set up the room so that half of the students (let’s call them Group A) remain seated, and the other half of the students (Group B) can move from Group A person to Group A person. Even in a room with fixed chairs and tables, this can be arranged by having Group A students stand/sit without moving during this activity. If there is not enough seating, then having Group A students stand in a large circle around the perimeter of the room is another option. Each Group A student will be facing a Group B student at the beginning of the activity. Explain that once the activity starts, each Group A student remains stationary, and only the Group B students will move to the next stationary Group A student.

a) Explain that speed networking is based on a speed dating metaphor, and that each student will be introducing him/herself to the person facing them, and vice-versa, at 1 minute intervals during the activity. When 1 minute is up, the instructor will flash the ceiling lights, and that will be the signal for each of the Group B students to move on to the next Group A person in the circle.

b) Once the room is set up so that each Group A student is matched with a Group B student, announce the beginning of the speed networking activity, and have them begin the introductions.
The first several introductions tend to be stilted and the noise level will remain quiet to moderate. Once they are on their third or fourth introduction, the noise level will rise as the students become more comfortable with their introductions, and they realize that it is not very difficult to introduce oneself in this low-risk setting (e.g., there is not a job on the line).

Once the students have cycled back to their first partners, you can either break them into smaller groups so that every student can meet everyone in the class, or stop with just one round. For an icebreaker activity, it is best to ensure that all students meet each other. However, this is not a requirement of the activity, particularly with very large classes.

**Student Feedback**

Once the students return to their seats, it is a good opportunity to go around the room and ask each student to respond with a single word or phrase to the question, “what is your reaction to this activity?” This allows all students to express their reactions and emotions, and to laugh and empathize with the responses of the other students. In our experience, the reactions range from “fun” to “intimidating” and have included “energizing” “good change of pace” and “interesting.”

We also gathered feedback online. Before the class, the students were asked, “When is the best time to start building a professional network?” Before this class, 56% of the 56 students responded, “when I begin the CIS program.” After the class, 84% responded “when I begin the CIS program,” thus demonstrating that more of them understood the importance of building their network, and beginning early, rather than waiting until they near graduation or after they graduated.

**RELATED ACTIVITIES**

This skill-based teaching module can be augmented with a wide range of other student-oriented activities and assignments (Soe, Yakura and Guthrie, 2012). Of course, more advanced networking simulations are also possible; Friar and Eddleston (2007), for example, provide a description of a more elaborate entrepreneurial networking simulation. For CIS students, however, the quick and easy speed networking activity might suffice. Other related activities can also be introduced in relation to this exercise; in this section, several examples of activities that fit especially well and could be incorporated at various points during this module or elsewhere in a course are briefly mentioned.

**Using LinkedIn as a Networking Tool**

LinkedIn, the professional networking site, proved useful in helping the students view networks in more concrete terms. A retired professor, who had taught generations of students and maintained contact with hundreds of alumni, volunteered to help students establish networks on LinkedIn. Each student was required to join LinkedIn, create a profile, and connect to the retired professor. This gave them access to lists of hundreds of alumni in various careers. They were also provided a list of alumni who had volunteered to become part of students’ mentoring networks, and the retired professor connected students with individual alumni who might be useful to them. The students had an assignment in which they were required to connect with three alumni, and start an online conversation in which they asked career questions. As might be expected, some students embraced this opportunity to connect to alumni, and others did not. Burt and Ronchi (2006) noted that in their field experiment, active participation rather than “quiet participation” on the part of the students was required to reap the career benefits of social networking (e.g., greater likelihood of top performance ratings or greater likelihood of promotions). Mention of this finding might spur students to greater effort (or perhaps not). Pre- and post-surveys uncovered the extent of

<table>
<thead>
<tr>
<th>What best describes how frequently you use LinkedIn?</th>
<th>Pre-class Response % N=56</th>
<th>Post-class Response % N=53</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many times a day</td>
<td>0.0%</td>
<td>1.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Several times a day</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Several times a week</td>
<td>7.1%</td>
<td>54.7%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Several times a month</td>
<td>3.6%</td>
<td>34.0%</td>
<td>30.4%</td>
</tr>
<tr>
<td>I have an account but haven't used it much.</td>
<td>23.2%</td>
<td>9.4%</td>
<td>-13.8%</td>
</tr>
<tr>
<td>I don't have an account</td>
<td>66.1%</td>
<td>0.0%</td>
<td>-66.1%</td>
</tr>
</tbody>
</table>

**Table 1. Frequency of Student Use of LinkedIn Professional Networking Site**
student use of LinkedIn. Table 1 shows the change in usage from the first to the last week of the term. Almost half the students used LinkedIn at least several times a week.

**Face-To-Face Interaction between Students and Alumni**

The activity that the students found most valuable and motivating involved bringing them together face-to-face with panels of alumni mentors. These panels spoke to the entire class about their careers, and then each mentor individually spoke with small groups of these students, to answer questions, establish connections, and give the students advice. This face-to-face contact made the connections and relationships relevant to the students, because the alumni became real people to them rather than email connections. It demonstrated to the students that there indeed was a network that included them as well as previous generations of students who were willing to help them. A number of students indicated the week of alumni visits was the most important week of the course. This activity worked well in this course, but can be time-consuming. There are certainly other ways to create opportunities for face-to-face contact. For example, any alumni, recruiter or industry professional will appreciate the importance of networking and is often happy to comment on the topic. If the course includes any guest speakers, asking them to spend a few minutes discussing their own experiences with building a professional network is an easy way to add this element to the course.

**Informational Interviews with Alumni or Local Professionals**

Informational interviews are a valuable learning experience for undergraduates, especially as they near graduation and are starting to look for jobs. When used as an opportunity for networking, informational interviews become especially valuable. Once again, alumni can be an ideal resource for this purpose. Local alumni can participate face-to-face, while more distant alumni (e.g., in Europe or Asia) can participate via Skype or email. The students in this class were required to conduct interviews asking for advice both via email and face-to-face. The value of this activity varied a great deal, depending on the students’ level of effort, and the mentor’s ability and willingness to respond. Some students procrastinated and then were unable to understand that a mentor might not be able to respond to their request immediately, so providing them with milestones for this activity (e.g., interim dates that include contacting the interviewee several weeks before conducting the interview) would be useful.

**Results of Career Exploration, Connections with Alumni**

Student expectations about their careers differed between the first and last weeks of the quarter based on the results from the student pre- and post-surveys. Table 2 displays the responses to these two questions dealing with student expectations:

- What is the dream job that you would like to get when you finish your Cal Poly degree?
- What is your ultimate dream job when you are at the height of your career?

Some of the results show that the students became more realistic about jobs they might have. The one student whose dream job was at the executive level after graduation dropped that goal. More students considered the likelihood of middle management jobs at their career height, although the number who considered that such jobs were plausible after graduation also increased. Many of the alumni with whom the students had contact were middle managers, so the students probably learned more about the availability of such jobs. Interestingly, the number of students who were unsure about their ultimate career goals decreased only slightly by the end of the class.

Some students named companies for which they wanted to work, but did not mention the type of work, so they are not included in these results. Several students were very enthusiastic about working at Google, because they had seen a video in an MHR class that showed the autonomy and freedom that Google workers appear to have. Somehow they equated this autonomy with the idea that Google employees did not work much, which appealed to them. Several students were interested in worklife balance, and income was sometimes not as important as lack of stress. A few wanted to earn a lot of money and use it for good works.

Some unique and somewhat puzzling career goals were: “motivational speaker,” “film maker,” “art director,” and “carpenter” (from a student who already worked a number of years). Perhaps the most puzzling was “working with angels,” which one student gave consistently for both career-stage goals on both pre- and post-surveys.
Creating a YouTube Video Elevator Pitch

An exercise in which students film themselves delivering their elevator pitches, and then post them on YouTube, can be eye-opening for students. Not only does this provide an opportunity for using YouTube for those unfamiliar with the website, but viewing oneself on video always provides crucial feedback about enunciation or speed of speaking. After an analysis of their performance, followed by more rehearsals, the students can create another video, and have concrete evidence of performance improvement. This activity also results in improvement of their more generic presentation skills.

CONCLUSION

Given the significance of social networks for career-related outcomes, it makes sense to include a short teaching module or workshop for CIS students. The activities described here provide a fast, effective and fun way to introduce students to these concepts and skills that are useful for both learning and career advancement. Networking activities are important for students, since many, especially those who are early in their studies, have to overcome a reluctance to start building a network that will help them establish and build a successful career. Introducing these concepts and skill-building exercises in a relatively risk-free context is a useful means of providing the students building blocks for their professional development.

ACKNOWLEDGEMENTS

We would like to thank Fred Gallegos for his leadership in establishing and maintaining the CPP CIS alumni network.

REFERENCES


