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Communications of the Association for Information Systems

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Wisdom of the Sages: Preparing Students for Career Skills

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Abstract:

Information systems faculty strive to educate students and provide them with the knowledge and skills they need to succeed as IS professionals. Given the dynamic nature of the IS discipline and workplace, what to teach our undergraduates, especially regarding the issue of balancing technical and “soft-skills,” presents an ongoing challenge. While the ACM/AIS IS 2010 Curriculum offers faculty a place to start, we suggest an approach to enhancing traditional IS curriculum guidelines through active engagement with an industry Advisory Board. During the course of a fall and a spring meeting, we posed two questions to our MIS Advisory Board members: “If I only knew _____ [during college, first job, etc.]” and “How do we share and impart your wisdom with our students?” This article illustrates the method (modified Nominal Group Technique) we used to collect our Board’s wisdom and advice, refine it, and deliver it to our undergraduate students. We also share several ways that our MIS faculty integrate professional development into our undergraduate MIS program.

Keywords: IS curriculum, MIS Advisory Board, professional development, professional skills

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I. INTRODUCTION

As professors, we strive to provide students with the short and long-term skills needed to do well in their careers. We accomplish this in a variety of ways: teaching in the classroom, meeting with students, and providing professional development activities (e.g., guest lectures from IS and business practitioners). Some skills, like data modeling and SQL, are best taught in classes. Others, such as interviewing tips, are best communicated through one-on-one conversations and workshops.

The MIS Advisory Board at the University of Georgia has existed for over twenty-five years. It is the department's primary mechanism for interacting with the business community. Board members and their companies hire our students, speak to classes, provide internships and scholarships, and participate in research studies. Keeping the Board members actively engaged throughout the year is a key challenge. Through semiannual meetings, Board members provide guidance about the curriculum and advice about what skills should be imparted to students [Watson and Huber, 2000]. Board members give up valuable time, and it is important to make sure their time is well spent. Because of this, we often ask Board members to make presentations, lead and participate in panels and breakout groups, and conduct debates. Our Board meets once in the fall semester and again in the spring semester, and we try to vary the activities from year to year to maintain interest.

At our Fall 2011 Board meeting, we used the Nominal Group Technique [NGT] to explore the question of what skills should be imparted to our students before they graduate. We thought that, with their years of experience in the MIS field, Board members would have interesting insights about the skills that have served them well. We took this information, organized and analyzed it, and presented our preliminary results to the Board at our Spring 2012 Board meeting. Following a lively discussion, we used breakout groups to focus on specific ways to incorporate their wisdom into our MIS curriculum and other student-related activities.

In this column, we describe what others have written on the topic; the MIS Advisory Board at Georgia; the Nominal Group Technique and how it was used at our Fall Board meeting; what was learned from the exercise; the process we used at our Spring Board meeting to share the results and identify specific strategies for sharing the collected wisdom with our students; and how we are implementing the findings into our MIS program. What we learned is highly portable to other MIS programs.

II. SKILLS THAT STUDENTS NEED

The MIS discipline is an applied field that finds value in the creation and implementation of technology-supported solutions to real-world problems in the private and public sectors. As such, the link to practice takes many forms. One of the strongest links is through the students we teach in our undergraduate programs. These students graduate from our programs and must immediately apply the knowledge and skills they've learned to the challenges and opportunities they encounter. The question then is, what are the appropriate skills we should impart to enable our undergraduate students to develop the behaviors and practices they need to succeed, both short term and long term? Through a brief review of the literature, this section examines and highlights some of the existing answers to this question.

One place to start is the latest guidelines for undergraduate IS curricula: the ACM/AIS IS 2010 Curriculum [Topi, Valacich, Wright, Kaiser, Nunamaker, Sipior, and de Vreede, 2010]. This curriculum model reflects the collected wisdom of our field regarding the important topics and learning objectives that should be covered in an IS curriculum. Skills suggested range from IS specific skills like designing and implementing information systems solutions to "soft-skills" such as leadership and collaboration [Topi et al., 2010]. Consistent with this model, other researchers have described a varying mix of skills as essential to the success of our students.

Consistent across several studies and in agreement with the general wisdom of our Advisory Board is the need for so-called "soft skills," laid upon a solid base of technical knowledge. For example, Kesner [2008] suggests that MIS training should move to more of a people- and process-related focus. Abraham, Beath, Bullen, Gallagher, Goles, Kaiser, and Simon [2006] concur, adding the caveat that senior IT management looks to hire graduates with a sound foundation of technical skills. Which technical skills to impart remains open to question, though one study suggested that traditional IS skills such as database, programming, and Web skills are essential to the early career success of

our undergraduates [McMurtrey, Downey, Zeltmann, and Friedman, 2008; Salisbury, Huber, Piercy, and Elder, 2004].

IS departments face challenges that limit the number and kind of technical- and business-oriented classes they can offer. First, many IS departments must comply with business school curricula that limit the number of major-related courses that their students can take and/or count toward graduation, effectively capping the number of courses offered, independent of student demand. Second, the decline in higher education funding, combined with the increase in hiring of IS graduates and the ongoing retirement of older IT workers, is creating an IS-curriculum “perfect storm” of high demand but limited resources for meeting the demand. In response, for many successful IS programs, external curriculum constraints and a decline in funding may create an “if it ain’t broke, don’t fix it” mindset. With increasing numbers of graduates getting jobs, the inclination may be for IS programs to stick with curricula that are working, especially as this practice conserves scarce teaching resources, especially for departments prevented from hiring faculty to expand technical or business-oriented course offerings [Bullen, Abraham, Gallagher, Simon, and Zwieg, 2009]. However, will doing more of the same prepare students and faculty for the demands of a constantly changing business and technical landscape?

From this brief discussion, it is evident that from an academic perspective, understanding the skills needed by IS undergraduates is an essential component for designing and implementing effective and meaningful IS curricula and programs. We believe that, while it is important to start with a broad framework such as the IS 2010 Curriculum, a successful IS program will enhance this broad understanding with additional wisdom gathered from the practitioner community. From a practitioner perspective, many sites offer annual lists of top skills for IT professionals (e.g., *CIO Insight*, *Computerworld*) or discussions of IT trends from which essential skills can be deduced (e.g., Gartner, IBM, etc.). While these lists provide a useful start, one of the goals was to gather additional insights into the essential skills for our undergraduates. To help us generate this wisdom, we chose to engage our MIS Advisory Board.

III. ENGAGING THE MIS ADVISORY BOARD

The UGA MIS Advisory Board is a highly motivated group of IS managers and professionals who meet formally twice each academic year with faculty and students. Active engagement with these individuals results in many positive suggestions for improving our curriculum and our professional development activities for our students. For AY 2011–2012, we followed a two-phase process that was designed to elicit ideas and personal experiences from Board members about the short- and long-term skills that our students will need in order to be successful professionally, and then to have the Board members suggest *how* to implement their ideas in our curriculum and extracurricular activities. We began at the Fall Meeting by using Nominal Group Technique to capture the Board’s ideas.

III. USING NOMINAL GROUPING WITH THE MIS ADVISORY BOARD

The MIS Advisory Board has a fall meeting at the Terry Executive Education Center in Atlanta and a spring on-campus meeting in Athens. Over the years, we have conducted a variety of activities with the Board. For example, we have used group support systems to gain input on the curriculum. We have had a debate on the topic, “Outsourcing is good for employees, companies, and the nation,” with teams of Board members, faculty, and students taking the affirmative and negative positions. For the social part of the Athens meetings, we have had a dinner at the State Botanical Gardens of Georgia and attended a University of Georgia baseball game. A common purpose across the meetings, however, is to obtain Board member input on how we can best prepare students for the workplace.

The Board meetings are typically attended by twenty-five to forty MIS managers and professionals, five to seven faculty, and five to eight student Board members. To ensure a broad, varied perspective, some Board members are recent graduates of our MIS program, while others are MIS managers and professionals, campus recruiters, partners of leading consulting firms, and CIOs. Students have been Board members for only the past seven years, but adding students to the Board is probably the best decision that we have made. Our students bring a unique perspective to the meetings and their presence is thoroughly enjoyed by the other Board members. In addition to helping plan and execute Board meetings, the students on the Board take on projects to help the MIS department and represent the department at various events. It is always worth remembering that most Board members participate in the Board because they are interested in and want to help students (including hiring them).

At the Fall 2011 MIS Advisory Board meeting, we had a social hour, dinner, and a two-hour Board meeting. Twenty-seven Board members, six student Board members, five faculty, and one Ph.D. candidate attended the fall meeting. Table 1 summarizes Board members’ current organizational position and number of years of work experience since completing their undergraduate degrees. The students on the Board have no years of post-graduation work

experience, though most of them have had summer internships. The focal point of the meeting was to gain insights on what skills to impart to our students.

Table 1: Organizational Position—Fall 2011 MIS Advisory Board Meeting

Organizational position	Number of participants	Median years since completion of undergraduate degree
CIO	1	27
IS Manager	4	22.5
IS Professional	3	20
Consulting Partner, Principal or Director	8	13
Consulting Manager	3	5
Consultant	5	2
Human Resource Manager or Professional	1	6
Professor	5	31
Student	6	0
Other*	3	10

*Other positions were President/Executive Director, Business Development Manager and Ph.D. Candidate

We chose to use the Nominal Group Technique [Van de Ven and Delbecq, 1971, 1974] to collect and process data about skills. We have had good success with this technique in the past, especially with its ability to keep people involved and engaged. Our process incorporated the essence of traditional NGT, adapted to the time constraints of our Board meeting. We introduced our main theme to the group and asked them to respond to the following statement: "If I only knew _____ when I was in college, it would have helped me in my professional career." We stated that our goal was to help our students benefit from our Board members' wisdom and experience and that they should generate ideas that would help the students succeed professionally.

Following the introduction and instructions, the group silently generated ideas at each dinner table. Prior to the meeting, we trained our student Board members on NGT, and at the meeting they served as the table facilitators. Each Board member was asked to generate two ideas related to our main theme. After ten minutes, participants ceased writing, and the facilitator at each table asked each member to state (not discuss) one idea which the facilitator then wrote on flipchart paper. This data-collection step continued until all members contributed two ideas. In the event of duplicates, a member was allowed to suggest an idea not on the list, even if it was not one of that member's top two ideas. Once all the ideas were on the flipchart, groups were given time to clarify the meaning of their ideas. Next came the selection of the top two ideas—the two pieces of wisdom most important for our students to know. Each member was given stickers to use to cast his or her vote for the most important piece of wisdom generated at the table. The top two vote getters were selected, with a revote used to resolve any ties.

A similar process was followed in the sharing of each table's top two ideas. Once all of the tables reported that they were ready, the overall meeting facilitator collected the top two ideas from each table and recorded them on a flipchart at the front of the room. As with the process at the tables, participants could add their third or fourth choices if their top two ideas were suggested by other tables. The group's ideas were then attached to a wall, and participants were asked to use a sticker to vote for the top idea on the list. After all members voted, there was a short break prior to the next part of the meeting. During this break, votes were counted; there were no tie-votes among the top issues. The vote prioritized the group's collective judgment and resulted in a rank-ordered list of twelve pieces of wisdom Board members wished to share with our students. Table 2 shows the relative rank of each idea as well as the number of votes that each idea received.

After presenting the results of the vote, the meeting facilitator asked the participants to choose a wisdom from the list, other than one they suggested, and discuss what the "wise" behavior or skill meant to them and its importance to our students' professional success. Board members were asked also to share any relevant personal experiences. A lively discussion ensued as the participants elaborated on the twelve items. Many comments were offered about each one. In the following discussion, there are hyperlinks to videos of Board members talking about the various items.

Table 2: Ranked Group Responses to “If I had only known ...”

Rank	Wisdom	Number of votes
1	People skills are as important as technical skills.	13
2	Find a mentor early.	11
3	Network and maintain a network.	8
4	Build your brand (how to sell yourself).	7
5	Have a long-term perspective for your career.	7
6	Realize the value of non-[IS]-major classes (e.g., Communication or Accounting classes).	3
7	Develop a better understanding of data gathering and analysis skills (how to find and collect data <i>independently</i> , not just how to analyze what’s given to you).	3
8	The importance of presentation skills <i>with all media</i>	3
9	Know the separation between professional and personal life.	2
10	Recognize career paths/opportunities earlier.	2
11	Establish a realistic work–life balance.	1
12	Recognize the importance of prioritizing and executing.	1

We spend considerable time helping students develop their technical skills. However, people (i.e., “soft”) skills (<http://www.youtube.com/watch?v=8BsvADNzIxA>) are at least as important to career success (#1). While needed technical skills change over time, people skills (<http://www.youtube.com/watch?v=0M5h4xOiqyl>) are always in demand. One Board member commented on how infuriating it is to work with “pure” techies. Another said that little things like sending cards for birthdays are important. Another Board member commented on the problem of promoting people based on their technical skills, only to discover that they seriously lack people and leadership skills. In response, her company has created a separate technical career path and implemented leadership classes. At another company, it was stated that “for managers you are evaluated not only on what you do, but on how you do it—and that is leadership.”

People can benefit from having mentors (<http://www.youtube.com/watch?v=0cEt-tC0j90>) (#2); however, one Board member cautioned them on whom you pick. His advice is to avoid someone who the company has asked to be your mentor. Find someone who is more senior than you, knows the company, takes an interest in you, and is glad to help. The ideal mentor is someone outside of your team. If you have a peer or supervisor as your mentor, at the end of the day, there will always be conflicts of interest. You may also want a mentor who is outside your company and industry. When you have a mentor, it is important to let the person know that you are listening and putting his or her advice into practice. When you follow advice, call your mentor and let him or her know that you did and that you appreciate it. If you do this, your mentor will want to help you more.

Networking skills (http://www.youtube.com/watch?v=_09glbROQyk) are very important (#3). While networking sites like LinkedIn are useful, several Board members stressed the importance of face-to-face networking, because this is how strong relationships are built. One Board member is with a consulting company which has 220,000 employees. He observed that, in a firm this size, the odds of someone knowing your name are small and that getting the best projects is based on the network of people who know and respect you. He networks (<http://www.youtube.com/watch?v=RxUJEvphR4k>) with people around the world, and, though he may not have met them face-to-face, they know his strengths and abilities.

Brands are not only important for companies and products, but also for individuals (#4). A person’s brand reflects who a person is and how he or she is perceived. Is a person trustworthy, hard working, ethical, a team player, and dependable? Just as companies are protective of their brand, so too should be individuals. One Board member had an interesting perspective on thinking about your brand when he said, “What would a *Wall Street Journal* article say about you?” Another Board member commented that as part of developing a personal brand, students need to be able to sell themselves. This is especially true when interviewing for a job. Students need to be able to communicate their special qualities (e.g., skills, personality) and explain why they are an excellent fit for the position. Looking beyond that initial job, one Board member said, “The longer I go in my career, the more I learn that if you want to move up you have to be successful at expanding your skill set and taking on (and delivering!) new things. Management rewards people who succeed at many things—not just one. If you don’t expand, you will NOT move up.” Another Board member recommends taking on projects that other people have avoided in order to create a career-long “can-do” brand.

Several things were suggested (#5) for students thinking about their long-term career paths. While students often focus on starting salary, Board members suggested questions that might help students evaluate the career potential of an initial job offering, such as, “What’s the upward salary potential in the company?” and “What is the environment

you will be working in, the organization's culture, the colleagues, etc.?" Students were advised to keep in mind their value to a company. In today's fiscally-constrained environment, it is important to be perceived as adding value. The creation of value was linked to personal career aspirations as well. A Board member described the long-term approach he is taking to his career. He wanted to be in a leadership position and developed a roadmap and development plan that identified the positions, locations, responsibilities, salaries, etc. that he wanted to achieve by various points in time. He stated his aspirations to his direct and indirect managers and colleagues in order to build his network and to ask for honest and open feedback in formal and informal reviews of his performance and value creation.

The value of non-IS courses (http://www.youtube.com/watch?v=Ghm2_jlL9K0) resonated with one Board member who took courses in philosophy, art, literature, and languages when she was in school (#6). These courses helped when her job with a global company required her to travel extensively in Europe. She identified with people on a cultural level to create a rapport that went beyond her IS background. She also said that her non-major courses in the Business School (e.g., Accounting) were important, as IS people in her company have to understand and be able to support the business. She observed that "the days of the technical guru just sitting in the corner are over."

As the co-owner of a small consulting company, a Board member said that he has people with very good technical skills, and when you give them the data and tell them the type of analysis to perform, they do an excellent job. But, if you place them in a consulting role where they have to identify what data to collect and how to analyze it, they often struggle. For him, teaching students to understand how to gather and analyze data are very important, especially in smaller organizations where the blending of job roles is the norm, not the exception (#7).

Switching from analysis to presentation and communication skills, Tony Jeary, known as Mr. Presentation, was mentioned by a Board member to stress the importance of communication skills (#8). According to Jeary and this Board member, life is a series of presentations. Each time you interact with someone, it is a presentation, and the first thing that you need to do is understand your audience and their perspective. For example, someone in marketing is interested in how much a project will cost and its anticipated completion date, while someone in IT will want to know what databases will be used. Also, how do various people prefer to communicate? Is it face-to-face, calls, e-mail, or texting? Communication is also a challenge with virtual teams, with team members possibly spread around the globe. A senior IS manager for a global package delivery company added that knowing the language of the business is critical to success. He often sends new college graduates out on delivery trucks so they understand how the business works and the language used.

However, some people communicate too well and share too much about their personal lives with co-workers. New graduates should be careful to separate their personal and professional lives (#9). To an extent, this is more of a problem with younger workers who grew up with Facebook and Twitter and have always shared personal information. When you add in the long hours that people work, the chances for saying things you shouldn't are great. Employees should be careful about how much information they share at work regarding what they do away from work. Current and new graduates should be careful with what they place on social media such as Facebook. Potential and current employers may look at the material posted, sometimes even asking for a password. The fun picture for friends may reveal a person's side that shouldn't be shared with work colleagues. Seemingly innocent sharing of too many details or of unprofessional personal details can result in damage to your personal brand at work—or worse.

Some students start working on securing a job early in their undergraduate career, while others wait until they are close to graduation or have graduated (#10). This latter approach doesn't serve them well, because they are unlikely to end up with as good a job as they could have had by starting earlier, giving a little more effort to their search, and by using the resources of their MIS program and their school's career center. Another part of this is that, in the current job market, strong MIS graduates are getting multiple job offers. Students should be advised to look beyond the starting salary and the name appeal of a company to assess the long-term opportunities with that company and how the opportunities mesh with what is important to the student. Students may discover that smaller, less well-known companies may offer a better fit and career opportunity.

Many new graduates encounter a workplace where people put in exceptionally long hours. Work-life balance can be a problem, and the Board members had some advice on this topic (#11). To succeed, it is important that new hires be aware of this possibility and quickly understand and adapt to the company's work culture. One recent grad said that he struggled with moving from going to class a few hours a day to the long hours of working for a consulting company. He stepped back and asked what was really important and concluded that playing sports on the weekend was important. He joined a weekend soccer league and now plays soccer for a couple of hours to achieve some work-life balance. How does this address work-life balance? He said that when he is at work, he is 100 percent devoted to work, but during his personal time, it receives a 100 percent commitment.



In today's fast-paced work environment, priorities can change rapidly, and people need to be able to execute quickly on the new priorities (#12). One BI Director said that his company's use of agile development supports the need to be able to reprioritize and execute. They have weekly planning meetings with all of the business areas represented. When different competing business interests are vying for the same scarce resources, the team discusses the business impact and urgency of each request and comes to an agreement on which requests should go first. Frequently, an urgent business request will arise in the middle of a planned iteration. Since the tasks are already prioritized, the new urgent task can be inserted into the current work period and the lowest priority task(s) are pushed to the next iteration. When deciding which tasks to push, not only is priority order considered, but also the team member skills required and the size of the new task are factored into the decision.

IV. GATHERING IMPLEMENTATION STRATEGIES FROM THE MIS ADVISORY BOARD

The Spring Board meeting complemented the fall meeting, but followed a different agenda. We began with a lunch, followed by a four-hour meeting. Later in the day there was a social hour and banquet with all of our MIS students. As with the fall meeting, there was a wealth of industry and faculty experience in attendance, with thirty-six Board members, seven student Board members, seven faculty, and two guests. The participants' organizational positions, and the median years since they completed their undergraduate degree were all very similar to the data for the Fall Board members. The Dean of the Terry College of Business and various faculty members presented updates on developments in the department and college, including highlights of some of the projects our faculty and students are involved in. However, most of the time was spent presenting the findings from the fall meeting and challenging the Board members to develop specific strategies for how to share their wisdom with our students and to help the students internalize the Board's wisdom.

We began by recapping the top-twelve-ranked group responses to the statement, "If I had only known ..." (see Table 2 for the ranked list). We then broke the group into six smaller working groups with at least one faculty member, one student Board member, and several Board members assigned to each group. Each of the six tables was assigned two of the ideas generated at our Fall Board meeting. Board members selected a table based on their preferences for the ideas assigned to that table. After forty-five minutes, the student Board members at each table reported the working groups' recommendations to the entire group. After all presentations were made, an enthusiastic discussion ensued that carried over into the start of the social hour. As at the fall meeting, at each table, recordings and written minutes were made of the presentations and subsequent discussions. The breakout groups generated a variety of ideas for how the various skills can be imparted to our students.

A number of ideas were suggested for improving students' people skills (#1). One was to have students shadow a manager with strong interpersonal skills to see how he or she interacts with people. Another was to have managers from different companies make presentations on the kinds of skills students need in business, such as oral presentation skills when speaking to a room of C-level executives.

MIS courses often have team projects, and there were several suggestions for how they could be structured to help students develop their people skills. One idea is to intentionally introduce ambiguity into projects, such as what the project's outcomes should be. This would force students to communicate better with stakeholders and each other and is consistent with real-world projects. Though not always easily done within most business school curriculums, it was suggested that there be projects with students from other majors, such as finance and marketing, so MIS students could work with people who think differently and have different skill sets. Another idea is to force students to work in virtual teams, once again much like they will experience in the workplace. One way of doing this would be to have joint student projects with other universities. Projects often conclude with a project presentation, and a final idea was to have peer-to-peer evaluations of the presentations.

Just as shadowing a manager can help students improve in many ways, a mentor can do the same and more. Mentors can come from industry and from more experienced students within the MIS program (#2). An idea for matching students with student mentors is to have a "speed mentoring" session in which students seeking a mentor would meet with different possible mentors for a short period of time in order to find someone who is a good match. To find mentors who are older and established in the workplace, there could be short videos of potential mentors that students could watch. E-mail addresses could be included on the video so that students could contact potential mentors.

Many Board members stressed that students need to be aware of the importance of networks and the various ways of developing and maintaining them (#3). LinkedIn and other social media are options for networking. Students could be required to register; create a profile; and connect with classmates, faculty, and company representatives. Yet, as important as the new social media are, knowing how to network face-to-face is even more important. Expectations and incentives for networking could be made a part of various social and professional events, and students could be

evaluated on their networking. Classes might use scenarios of networking opportunities and have students describe how to network, such as prioritizing whom to talk to first.

Not only while networking, but in all things and throughout their careers, students need to be aware that their behaviors, attitudes, and actions result in a personal brand (#4). Especially for new employees, it is helpful to be perceived as someone who has a valuable skill set, communicates openly and well, and is willing to take on all tasks, including those that others avoid. Information about a personal brand, how it can be developed, and the characteristics of a positive brand can be communicated in classes and workshops. Team projects can be used to help students understand their brand. As part of project evaluations, peer reviews of students' brand can be included.

As students think about their careers, they should take a long-term orientation (#5). The "sweet spot" is the intersection of personal interests, skills, abilities, and marketplace opportunities. There should be classes and special programs to help students understand their career options and support their thinking about what they want to do professionally. Mentors and networking can help, as can internships. Study abroad programs are good for broadening students' perspective, understanding global opportunities, appreciating culture differences, and learning about business practices in other cultures.

There are several ways that students can better understand and appreciate the value of non-MIS courses for broadening their perspective and increasing their business acumen (#6). For example, there could be special sessions and classes with speakers from other disciplines (e.g., Marketing) who talk about how they use IS and how technology and IS impacts their organizations. During internships, MIS students could be assigned to interdisciplinary projects. Students could be encouraged to take advantage of study-abroad opportunities to expand their horizons.

Students should be able to understand data gathering and analysis (#7). In database classes, students learn to create databases, but more time should be spent on analyzing data that is already in a database and having students "tell the story" of what the data analysis reveals. Excel might be used for this purpose, as there was some sentiment that Excel is underutilized by MIS students. There was also support for having more students take the business intelligence course where they could learn what data is valuable and better understand the data collection and analysis process. Another idea was to have student teams take on a database project for a nonprofit organizations.

Students need to be taught how to make effective presentations and then give presentations to hone their skills (#8). Sessions in and out of class can be used to improve students' presentation skills. Students can also be encouraged to join Toastmasters. Classes provide a great opportunity for students to practice and develop their presentation skills. They should make different kinds of presentations. For example, some presentations can be with and without slides, of varying length (e.g., 2, 7, and 15 minutes), and for different audiences (e.g., technical, managerial) and via different media (e.g., Skype, chat, video, and teleconferencing).

Many students are very open about "presenting" (i.e., sharing) details of their personal lives—too open in many cases. It is important that students learn to keep separation between their personal and professional lives (#9). Educating students on the need for separation is perhaps best handled in workshops where recent graduates can speak on the topic. Students need to be told to be careful what they post on social media, not only when they are in school but throughout their careers.

As with separating the personal from the professional, students need to learn and think about career paths and opportunities earlier (#10). This can be facilitated in a variety of ways—classes, company presentations, internships, and shadowing. Too many students wait until they are close to graduation to find a job and then end up in a job or career path that doesn't meet their interests, abilities, or long-term goals. Students may not always know what they really want to do, but they need to be thinking about it early on. Some recommendations for getting on a good career path are to follow your passion, be sure that your personal and professional goals are in sync, and take what you liked in a class and go from there.

Students should be told that work-life balance (#11) is a potential problem and that they need to think about what interests them, what they value, what their career expectations and aspirations are, and what conflicts might occur. Many jobs require being in an office, at a desk or with a client at the client's desk, for most of the day, in contrast to sitting in class for a few hours a day. Due to the different demands of a job, it is hard to simulate the work-life balance in school. However, students can take steps to develop a sense of a work-life balance. This process should begin in conversations with advisors, career counselors, and faculty. Also, taking on multiple responsibilities (classes, memberships in organizations, leadership roles, volunteering, and work) can help students prepare for

managing balance in their lives. Once on the job, recent grads should have open and honest discussions of work–life balance issues with associates and management. A mentor can also help in achieving an appropriate balance. To make students more aware of the need to carefully schedule various activities, students should be encouraged to keep a detailed weekly calendar to develop time-management awareness and management skills. Self-awareness is also important. Students should be told, for example, if they have a difficult time sitting for a long period of time, to find a job that doesn't require it or, if that isn't possible, to take short walks during the day, because this activity is likely to increase their productivity.

The time-management skills that help students balance their lives can help them develop their prioritizing and executing skills (#12). Many of the ideas suggested revolved around the use of team projects. Faculty should change the requirements for projects in mid-stream so that students get used to making adjustments “on the fly.” Likewise, having teams of unequal size and changing the teams' composition during the project will challenge and hone their abilities to prioritize and execute. Making some of the project deliverables difficult to achieve by the deadlines adds to the “real-world” nature of the projects. Students will perceive all of this as unfair, but the workforce isn't always fair. Students will have to adjust and prioritize their work and then explain the reasoning behind how they prioritized and executed to create deliverables and meet deadlines.

IV. TAKING ACTION

Following the meeting, the faculty met to decide how to integrate the insights into the fabric of our MIS program. Fortunately, structures were in place for accommodating nearly all of them. For example, classes and projects could be tweaked to incorporate the suggestions. Many of the suggestions could be handled through our student MIS organization; our MIS professional development requirement; the MIS Advisory Board, especially the students on the Board; and programs offered through Career Planning and Placement and the Terry College of Business. Some possible implementation strategies were discussed previously in Section III. Also, one faculty member asked his students how to share the insights, and they stated that a message, with a PDF file attached, sent out over the MIS student listserv would be a good choice. We used this method to share the insights gained about the skills with our students. Additionally, faculty members agreed to take some minutes in class to discuss the Board's wisdom with their students.

For over twenty-five years, the MIS program has had a MIS student organization called the Society for Management Information Systems (SMIS). Some career advisors and recruiters say that it is the strongest student professional organization on campus. In 2010 it received AIS's first Student Chapter of the Year Award. Though it has a faculty advisor (Mark Huber), the students truly run it. As part of SMIS's activities, every Thursday, and many Tuesdays, companies make hour-long evening presentations about their company, career opportunities, and internships. For the more popular companies, upwards of 120 students attend. SMIS also sponsors a recruiting dinner, workshops, and social events with alumni. By asking speakers to address topics related to the Board's pieces of wisdom, SMIS can help our students better understand topics such as how to achieve work–life balance and the value of good mentors and how to find one.

Several years ago, the MIS faculty made curricular changes and created a set of required professional development activities as part of every MIS course. In most classes, the requirement represents 5 percent of the student's course grade. Initially, the requirement was to attend at least three company presentations at SMIS. Over time, we have expanded the students' requirements to include:

- Attend an information session on internship opportunities
- Attend a business etiquette session
- Attend a career counseling session
- Have their resume critiqued
- Attend the fall “Back to School” departmental social and corporate networking event
- Attend the fall SMIS recruiting dinner
- Attend the University of Georgia Career Fair
- Participate in a mock interview and
- Attend the spring departmental social

To help students prioritize the events they choose, each MIS course requires a specific subset of these activities. For example, students in a first-semester required Database course have to attend an internship informational session, a career counseling session, and they must attend three SMIS company presentations. Students also take a Business Process Management course in their first semester and have to have their resume critiqued, attend the departmental social, and attend three MIS company presentations. We purposely timed the specific requirements in each course to correspond to when they are most appropriate for students. For example, the requirement for

learning about internship opportunities is in the first semester of the program so that students understand the opportunities and maximize their chances of getting an internship (internships are typically taken between the summer of the students' junior and senior years).

Professional and student members of our MIS Advisory Board can also be used to help impart the skills. For example, practitioners can offer to guest lecture in classes to model professional communications and behavior, create shadowing programs in their firms, serve as mentors, offer internships, and critique student presentations. They already do most of these things for us, but they can expand the scope to incorporate the skills identified in our meetings. Also, students on the Board undertake projects to help the department. Some of the projects have included the current mentoring programs, the creation of a MIS-related QR coded bumper sticker, a departmental video (<http://www.youtube.com/watch?v=Z0yGT7im2s4>), and a recruiting guide for students. Some of the skills can be imparted through projects such as making changes to the current mentoring program, conducting student-led workshops, and helping connect students with Board members and their companies.

Lastly, the MIS Advisory Board has no better university allies than the UGA Career Planning and Placement office and the Terry College of Business. Both organizations offer a variety of services and workshops for students. For example, Career Planning and Placement offers resume critiques and mock interviews, and the Terry College of Business conducts an etiquette workshop. We can work with these units to expand their offerings to make sure they help cover the skills identified, and then we can include these offerings in our professional development requirements.

V. CONCLUSION

"If you want a job, have technical skills; if you want a career, have people skills."
—UGA MIS Advisory Board Member

In this column, we've shared the story of how we engaged key business and technology leaders—members of the UGA MIS Advisory Board—to help us better prepare our students for their future careers. Since Board members assumed graduates would have good foundational IT skills, their advice focused on soft skills, such as "find a mentor early," "create a network and maintain it," and "have a long term perspective on your career." We believe that by creating, sustaining, and listening to an engaged Advisory Board, we gain new wisdom, help educate our students, and ultimately, help our students get good jobs and launch successful IS careers.

REFERENCES

Editor's Note: The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the article on the Web, can gain direct access to these linked references. Readers are warned, however, that:

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Abraham, T., C. Beath, C. Bullen, K. Gallagher, T. Goles, K. Kaiser, and J. Simon (2006) "IT Workforce Trends: Implications for IS Programs", *Communications of the Association for Information Systems*, (17) Article 50, pp. 1147-1170.

Bullen, K., T. Abraham, K. Gallagher, J. Simon, and P. Zwieg (2009) "IT Workforce Trends: Implications for Curriculum and Hiring", *Communications of the Association for Information Systems*, (24) Article 9, pp. 129-140.

Kesner, R. (2008) "Business School Undergraduate Information Management Competencies: A Study of Employer Expectations and Associated Curricular Recommendations", *Communications of the Association for Information Systems*, (23) Article 35, pp. 633-654.

McMurtrey, M., J., Downey, S. Zeltmann, and W. Friedman (2008) "Critical Skill Sets of Entry-level IT Professionals: An Empirical Examination of Perceptions from Field Personnel", *Journal of Information Technology Education*, (7), pp. 101-120.

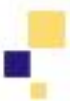
Salisbury, D., M.W. Huber., C. Piercy, and K. Elder (2004) "The AMCIS 2003 Panels on IS Education-I: Let Us Not Throw Out the Baby with the Bath Water: Information, Technology, and Systems All Matter in the Core IS Course", *Communications of the Association for Information Systems*, (14) Article 6, pp. 128-146.

- Scott, C., M. Fuller, K. MacIndoe, and K.D. Joshi (2009) "More Than Bumper Sticker: The Factors Influencing Information Systems Career Choices", *Communications of the Association for Information Systems*, (24) Article 2, pp. 7-26.
- Topi, H., J. Valacich, R. Wright, K. Kaiser, J. Nunamaker Jr., J. Sipior, and G. de Vreede (2010) "IS 2010: Curriculum Guidelines for Undergraduate Degree Programs in Information Systems", *Communications of the Association for Information Systems*, (26) Article 18, pp. 359-428.
- Van De Ven, A. and A. Delbecq (1971) "Nominal Versus Interacting Group Processes for Committee Decision-Making Effectiveness", *Academy of Management Journal*, (14)2, pp. 203-212.
- Van De Ven, A. and A. Delbecq (1974) "The Effectiveness of Nominal, Delphi, and Interacting Group Decision Making Processes", *Academy of Management Journal*, (17)4, pp. 605-621.
- Watson, H.J., and M.W. Huber (2000) "Innovative Ways to Connect Information Systems Programs to the Business Community", *Communications of the Association for Information Systems*, (3) Article 11, pp. 1-32.
- Watson, H.J. (2010) University of Georgia MIS Departmental Video.

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