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IS Career Day in a Class: Raising College Student Awareness and Interest in Information Systems

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Abstract

Organizations are constantly seeking college graduates with IT and digital skills. This shortage of IT talent is cited as a barrier to implementing emerging technologies at many organizations. Nevertheless, when asked why they are taking an Introduction to IS class, students respond with, "this class is required." This paper describes how a career day, job fair, and day-in-the-life were combined to create an IS Career Day in a Class. During this session, college students engage with IT hiring managers, IT recruiters, recent information systems alums, and current students with internships to understand the academic and career pathways available through the information systems program. This paper also addresses stereotypes around diversity and coding. Quantitative and qualitative data were collected to understand student interest in IS and to provide feedback about the event.

Keywords: IS career path, IS academic path, IT employability

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1. Introduction

The need for information technology (IT) workers has grown throughout the COVID-19 pandemic of 2020 and 2021. In fact, 79% of CEOs surveyed expressed concern about the lack of talent for technology-related roles (English, 2021). Similarly, Gartner (2021) notes that 64% of IT executives see the talent shortage as the most significant barrier to adopting emerging technologies, up from just 4% in 2020. The need for skilled college graduates creates industry pressure on our program to increase job shadows, internships, and graduates with digital and technical skills. Like many business programs, those offered by our university require undergraduate students to take an introductory course in Information Systems. When asked why they are taking the class, most students reply, "because it is required" or "I don't know, my advisor said I needed to." Many college students do not understand what an information systems (IS) focus means nor how a focus in IS can impact their career options.

While instructors hope that the structure of our course and class activities will naturally draw students into our IS discipline, this is not always the case. Li et al. (2014) illustrated that the impact of unique promotional events increases positive perceptions of the Information Systems program, and students are more likely to select an Information Systems program. Similarly, guest speakers and panels allow students to learn about careers, hear what professionals enjoy about their work, required skills, confidence in career choice, and salary and promotion opportunities (Metrejean et al., 2002; Walker et al., 2022). Finally, career days can assist students in exploring career options and assessing how they will fit in the IT industry (Lee et al., 2020).

We created an IS Career Day in a Class event to address this problem. Students engage with hiring IT managers, human resource recruiters, and recent IS alums during the session. This unique in-class event combines elements of a career day, job shadow, and panel presentation to expose students to our IS discipline and show them both academic and career paths within IT. To accomplish this, we showcase specific industry needs, opportunities, and jobs (including salary) within the information technology departments of companies across the region. Similarly, the IS Career Day in a Class highlights that companies seek graduates with digital and technical skills, regardless of the specific job. Students hear about various roles and an IT employee's "day in the life." By focusing on the social and technical aspects, students gain an insight into the role and what they could expect as an employee. Panelists also share information regarding their companies and industries. Students are often unaware of many local and regional companies or their products and services. Students learn why their peers pursued IS-related majors, minors, or certificates. They hear about the jobs that these recent graduates accepted upon graduation. Students can ask panelists questions throughout the event. The IS Career Day in a Class also has a breakout period where students can interact with each panelist in a smaller group.

Several relevant theories guided the development of the IS Career Day in a Class. First, through the IS Career Day in Class interactions, students experience socialization with IS careers, including the nature of the work, insight into the working environment, and what to expect from a career in IS (O'Brien, 2018; Olsen, 2021). By speaking with professionals in the IS field, students can explore various careers and learn more about what they want to do in the future while feeling more confident and comfortable. Similarly, this event builds academic and career self-efficacy within students. Students learn more about potential academic and career pathways, hear from peers and professionals, learn skills and roles, and ultimately feel better about managing their academic and professional careers (Bandura, 1986; Kitchen et al., 2021; Kossek et al., 1998). Next, we recognize the importance of engaging IT speakers with ethnic and gender diversity to engage all students in pursuing IS courses and careers (Deng et al., 2022). Finally, the event attempts to shatter many students' computer science stereotypes. These Stereotypes of IT professionals include technology-oriented obsession, innate genius, social awkwardness, unattractive physical appearance, and masculinity (Vera, 2021).

An understanding of self-efficacy also guides the approach to the IS Career Day in a Class. According to Bandura (1986, 1997), students' beliefs in their ability serve as a powerful motivator to act and provide persistence and coping mechanism when setbacks occur. Further, Bandura (1986, 1997) proposed four sources of self-efficacy, including mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal, with mastery experiences postulated as the most potent source. Our students in this introductory course have minimal to no mastery experience. Given this lack of mastery experience, we built the event to showcase vicarious experiences and verbal persuasion as the primary motivator for enhancing student self-efficacy beliefs (Tschannen-Moran & Hoy, 2006).

Students found the IS Career Day in a Class to be a valuable experience (82.9%). Similarly, 43.8% of students surveyed after the event indicated they would be interested in pursuing an IS-related career, up from 19.8% before the event. In addition, this study captured qualitative data around activities to start, stop, and continue related to the IS Career Day in a Class. For example, students indicated that IS Career options and opportunities, a roundtable with panelists, and small group breakouts should continue. Conversely, when asked what to stop, nearly 73% offered no response or indicated

"nothing" or "good job." Most other comments were suggestions to improve the event.

This paper will proceed as follows. Part two provides an overview of the IS Career Day in a Class goals. Next, we address the actual execution of the event. Part four will offer implementation suggestions. Part five discusses participants' perception of the event and their interest in pursuing an IS academic path (IS major, minor, or certificate). Finally, part six will offer a discussion and conclusion.

2. IS Career Day in a Class Goals

Several goals were established to set guidelines and expectations for students, professors, and panelists as they prepared, presented, and attended the sessions.

2.1 Consider the value of technology and digital skills

First, the IS Career Day in a Class highlights the technology, digital skills, and opportunities hiring organizations have for all students they hire. Information Technology does not start and stop in the IT department. All employees must have technical and digital knowledge and skills (Munoz, 2021). This event helps the students understand that they should embrace these skills. This mindset opens the door to considering career and academic paths. Moreover, having worked and learned through the COVID-19 pandemic, most students saw the value of technology in support of their work and learning from remote locations (Dhunjishah, 2021).

2.2 Understand a Day-in-the-Life of an IT Employee

Participants in this event are encouraged to talk about the daily activities performed by many IT employees. The key stereotype is that IT employees code all day. One paper titled "I Don't Code All Day": Fitting in Computer Science When the Stereotypes Don't Fit (Lewis et al., 2016) explicitly targets this notion. In addressing the stereotype around "coding all day," IS Career Day in a Class, panelists showcase their day-in-the-life tasks. For many in the IT field, these tasks include face-to-face and virtual meetings with business users, meetings with different IT employees, translating business requirements into IT deliverables, documenting requirements, and completing reports and status updates. Some IT employees have periods of coding, database development, networking activities, and the more technical nuts and bolts of running an IT department supporting the business. It is essential that students hear a wide range of social-technical perspectives and related daily activities from the panelists. These career stories will better equip the students to see themselves performing various IT-related tasks. We must help students overcome the misconceptions around coding all day. This day-in-the-life understanding helps students grow their career self-efficacy and become open to considering both IS-related career paths and academic paths.

2.3 Explore the Numerous Information Systems-Related Career Paths

Similarly, as students are exposed to the value of technology and digital skills and understand the day-in-the-life of an IT employee, the discussion moves to the various career paths for information systems students and those students who complete IS-related minors and IS-related certificates. Our panelists highlight the quality, quantity, and starting wages associated with internships throughout the session. The discussion will highlight the number of open jobs for graduates. Students are often surprised that every company they hear about and physically drive-by daily has an IT department, often with our alums working there. Finally, we discuss the average starting salary for information system students. Within the College of Business, information systems represent the highest-paid major.

2.4 See that Diversity in Information Systems is Valued

Lack of diversity represents another common challenge in recruiting students into the information technology field. Students commonly report that their computer science stereotypes include being male, singularly focused, asocial, and competitive (Lewis et al., 2016). As we build panels, we carefully consider gender and other diversity so we can represent and showcase to students that racial and gender diversity is valued in the workplace. Similarly, we include aspects of Rowland & Notebook (2018) CLASS Anchor Model, including life system (work-life balance), security (career opportunities and financial security), and service (they see female IS leaders on the panel).

2.5 Explore Information Systems-Related Academic Paths

Once the importance of having technical and digital skills is established, we explore the day-in-the-life of IT professionals so that students can see an IS-related career path. We then turn our attention to the academic pathways supporting this new insight. We explore the information system major, cover the information systems-related minors, and cover the potential for marketing, management, HR, supply chain, finance, and accounting students to earn an IS-

related certificate.

2.6 Consider an IS Job Shadow

Finally, we ask students to express an interest in completing a job shadow if they are still determining the next steps in their academic planning and career selection. Our department works with several local organizations to support job shadows. The job shadow program is not specifically part of the Career Day in a Class but a separate initiative our department supports.

3. IS Career Day in a Class

This section will describe the IS Career Day in a Class, including the pre-event tasks, day of event flow, an agenda, and the post-event. This activity covers one class session.

3.1 Pre-Event Activities

Several pre-event activities are required to ensure a successful IS Career Day in a Class. Securing panelists is the most time-consuming and time-sensitive activity. For each event, we try to have 3-5 panelists, including the following:

- Recent alums with an IS-related major, minor, or certificate (1 or 2 panelists)
- Technical Human Resource Recruiter (no more than one panelist)
- Current student in IS-related internship (no more than one panelist)
- Hiring IT Manager (1 or 2 panelists)

These potential speakers can be identified through professional connections, college career fairs, industry events in the region, connections from colleagues, and even the use of LinkedIn for cold-call introductions. As part of securing panelists, we communicate expectations about the event. These panelist-related expectations include logistical information (where, when, parking, etc.), the event's goals, and the agenda and flow of the event. Similarly, we communicate information about the event to students via the course learning management system (LMS) announcements and in-class discussions highlighting the event to ensure our students are aware, excited, and prepared for the event.

3.2 Day of Event Activities and Agenda

Ensure that panelists have parking information as well as classroom location. We provide chairs placed in the front of the class. The event follows the agenda, which has been shared with the panelists before the event. Our college offers this course in either a 60-minute version or 90-minute version. I have included approximate time allocation for both versions. The full schedule includes the following components:

3.2.1 Introductions (10 minutes | 10 minutes)

The faculty moderator will ask each panelist to introduce themselves and provide their name, role, company, education, and a short elevator pitch. Ensure panelists describe what their company does as many students are unfamiliar with the organization.

3.2.2 Why are you in Information Systems? (10 minutes | 15 minutes)

Have each panelist describe how they got into IT and what interested them in pursuing an IS-related program. Alternatively, they can explain how they ended up working in the IS field if they do not have an IS-related education.

3.2.3 Describe a "day in the life" of an IT employee (10 minutes | 15 minutes)

Encourage each panelist to share the "day in the life" of an IT employee. Additional follow-up questions or prompts include:

- How are you making a difference for your organization?
- Don't you write code all day? (Here, we try to show the breadth of job and daily activities and the fact that IT employees are often meeting and talking to others in the organization)
- Give an example of a recent project. Talk about the who, what, where, why, etc.

3.2.4 IS Major, Minor, or Certificate Options (not included | 10 minutes)

The faculty member provides a handout on IS Major, Minor, and IS-related Certificates and notes the specific classes

offered the following semester that students are eligible to enroll in.

3.2.5 Internships & Job Shadows (10 minutes | 15 minutes)

Faculty ask panelists about their internship experience or a recent intern they worked with at their company. The event should showcase IT-related internships available for students. The facilitator also indicates that job shadows are available for students interested in learning more before committing or making a final decision.

3.2.6 Small Group Breakout (10 minutes | 15 minutes)

Faculty will divide the class into small groups (divide the number of students/panelists). Assign one panelist to each group of students and rotate every couple of minutes. These smaller groups often generate discussion and questions from students, especially introverts or students who lack confidence.

3.2.7 Next Steps (5 minutes | 5 minutes)

Faculty should note several items:

- The role of this introductory course is to provide an overview of IS for all business and other interested students.
- Talk to an academic advisor to learn more or add a major, minor, or certificate.
- Share the location of the Job Shadow interest form (place in an LMS announcement).
- Consider a double major or minor if initially interested in a non-IS major.

3.2.8 Survey & Closing Comments (5 minutes | 5 minutes)

Ask students to complete the survey while panelists make any closing comments.

3.3 Post-Event Activities

There are several post-event activities. First, we send a thank you email to each panelist and include any follow-up from the event. Second, there are a few post-event activities with students. These include a follow-up post in the LMS with detailed contact information for each panelist and a link to their LinkedIn profile. We also provide a link to a job shadow form for students interested in exploring a job shadow. Finally, we again encourage questions and discussion while welcoming students to join our discipline and becoming IT professionals.

5. Implementation Suggestions

Several suggestions are offered to ensure a high-quality event for panelists and student participants.

5.1 Prepare Students for Event

Students should not be surprised when they walk into the classroom and find a panel of speakers. Pre-communication represents an excellent opportunity to make students aware of the event, get them excited, and share preliminary information about the panelists and its outcomes. We post an announcement in our LMS introducing both the goals and panelists. Hype it up. Make it sound fun.

5.2 Prepare Panelists for Event

Ensure the agenda and question guide are shared with the panelists. They should understand that they are part of a panel and the overall goals for the event. Ask that they prepare responses and think about examples from their day-to-day work. Students are interested in hearing about the organization the panelists work for and especially about a typical day. We recommend having only one technical recruiter as the students prefer to hear from hiring managers and recent alums. Students value having at least one panelist closer in age (recent graduate or current students in internship) as they find these panelists relatable.

5.3 Logistics

We have noted several necessary event logistics. First, it is essential to manage time carefully. For example, introductions can become very long-winded. Panelists are asked to have a brief elevator pitch while simultaneously encouraged to explain their organizations, as students may not know local companies in the region. Second, we also want to ensure we leave time for the small group Q&A panel during the session. Rotating the different panelists through small groups generates the most interaction and questions from students and allows a real one-on-one experience. Similarly,

in the spirit of changing modes of teaching, having a short presentation where the instructor talks about the different IS-related programs and related IS courses allows for a change of mode and reengages students. Alternatively, this presentation could be completed outside of the actual IS Career Day in a Class. We have a one-hour and an hour and a half class. The one-hour classes are structured to minimize the introductions (placed in a pre-class announcement in the LMS). Similarly, coverage of the specific IS programs can be removed from the session and covered briefly in a follow-up class or as an announcement in the LMS.

5.4 Panel Diversity

Attempt to have diversity in the panelists. In securing nearly 25 panelists for the six sessions offered across different days and times, we cannot always control who can attend which session. Recently, we had two sessions that only had male panelists, and several students noted this on the survey.

5.5 Panel Moderation

While moderating the panel, it is recommended that you alternate the order for responses. Encourage students to ask follow-up questions. Don't hold all questions until the end—the more engaging and interactive the session, the better. Focus on jobs, salaries, internships, and skills students can work on and take for college courses. Finally, we have found that avoiding any IT theory-based comments results in more engaged students. Additional suggestions can be identified from the Start, Stop, and Continue comments listed in section 4 evidence and student feedback.

5.6 Timing

We offer this event one week before many students register for the following semester. We hope to encourage students that are excited or intrigued or want to explore the next step to register for additional information systems classes the following semester.

6. Evidence and Student Feedback

During the last few minutes of class, students were asked to complete an anonymous survey to allow us to understand the impact of the IS Career Day in a Class as well as their intentions relating to academic and career pathways. Finally, we gather basic feedback to improve the session through a series of Start, Stop, and Continue questions.

6.2 Was attending IS Career Day in a Class Valuable?

Students were asked if attending the IS Career Day in a Class was valuable. Nearly 83% of students indicated it was valuable or highly valuable, compared to only 6.6% who indicated the event was not valuable or highly not valuable. See Figure 1 for details.

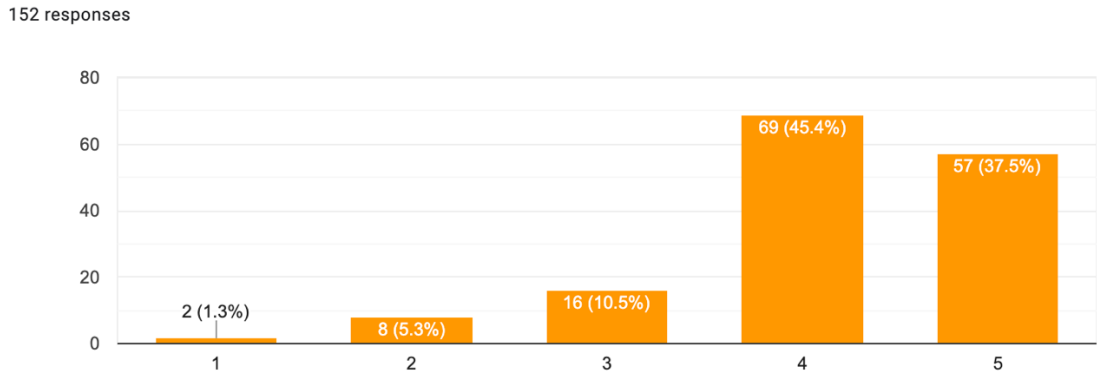

Figure 1. Was attending IS Career Day in a Class Valuable
(1 being highly not valuable and 5 being highly valuable)

6.3 Interest in Pursuing IT Career Before and After IS Career Day in a Class?

Students were asked two similar questions about their interest in pursuing an IT career. The first question asked about their interest in an IT career before the IS Career Day in a Class. As Figure 2 shows, 65.1% of students were not interested or highly not interested in pursuing an IT career. Conversely, only 19.8% of students indicated they were interested or highly interested in pursuing an IT career.

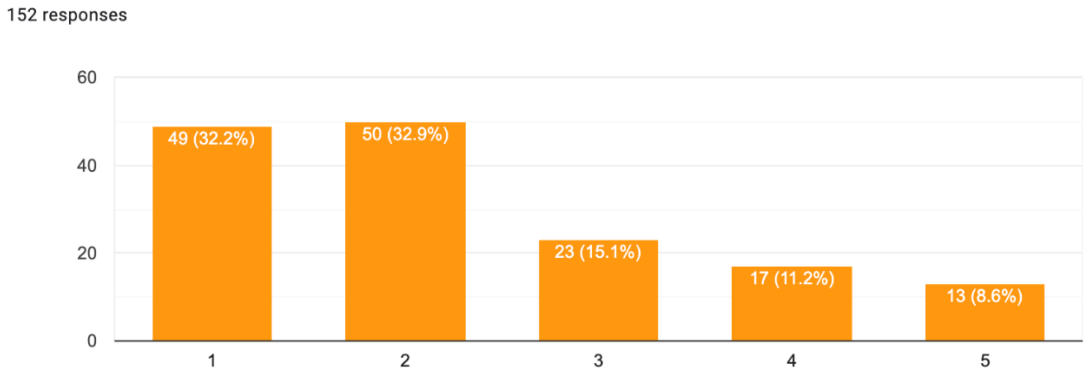

Figure 2. Interest in pursuing IT Career BEFORE attending IS Career Day in a Class
(1 being highly not interested at all and 5 being highly interested)

When asked about their interest after attending the IS Career Day in a Class, 43.8% indicated they were interested or highly interested, while 23.4% of students were not interested or highly not interested in pursuing an IT career. See Figure 3 for interest in pursuing IT career after the event.

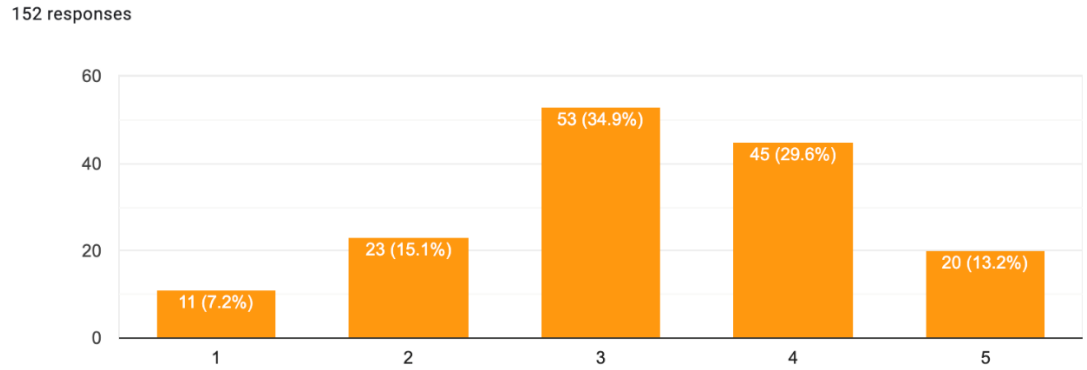

Figure 3. Interest in pursuing IT Career AFTER attending IS Career Day in a Class
(1 being not interested at all and 5 being highly interested)

There was a significant increase in interest in pursuing an IT career after attending the IS Career Day in a Class (M=3.26, SD=1.096) than before attending the IS Career Day in a Class (M=2.31, SD=1.267); t(151)= -13.048, p=0.001.

6.4 Specific Interest Moving Forward

Students were asked about their specific interest in pursuing a major, minor, or certificate. Nearly 60% of students express interest in pursuing a major (19%), minor (21%), or certificate (20%). See figure 4 for details. Not surprisingly, 40.8% of the students expressed no interest. This is a survey course that is required of all College of Business students. Some of these students have already selected and worked toward a non-IS major prior to taking this course.

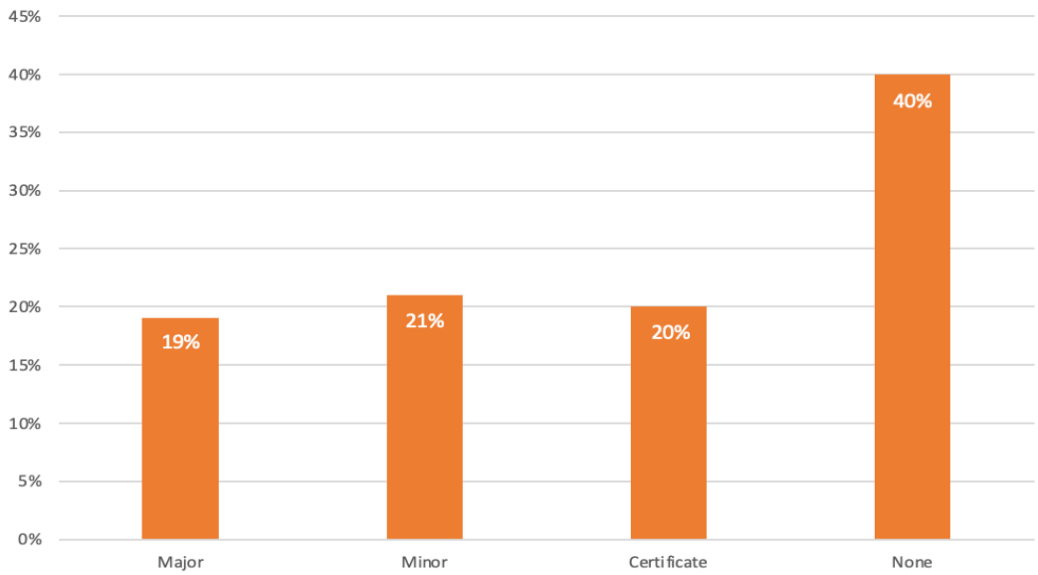

Figure 4. Because of IS Career Day in a Class, Interest in pursuing Major, Minor, or Certificate

6.5 Session Feedback: What are things we should START doing?

The students were asked, "What are things we should START doing during the IS Career Day in a Class? (Please start doing these... they would be helpful to me)". The 153 comments were categorized. Answers that were NA or blank accounted for 19% (23). Twenty-nine responses related to "good job" (10.5%). Table 1 highlights the top 5 categories and selected comments for each category.

Category	Comments
In-Class Logistics (19, 12.4%)	• Small group interactions (6) to allow for discussion and questions. • Use PowerPoint to guide the session so it appears to have more structure (3). • Ensure speakers are visible to everyone in class (2). • Show speakers names, role, and company on whiteboard or in a presentation. • Have all speakers provide an introduction and explain what their company produces or sells. Not all students are familiar with the companies that are presented.
Engage Class (15, 9.8%)	• Have the guest speakers show a small presentation on what their job is like. • More PowerPoints to engage us more. • Allow students to ask questions (I think we were but ran out of time). • Maybe have students ask questions before hand through email or group discussion on canvas which then the professor can ask the speakers. • Try to interact with the class more. • Maybe more activities to keep students' attention. • Have Kahoots set up so that it's more interactive. • Honestly, maybe we can try doing a mock interview on the spot or something along those lines! • More class activities and demos.
Day in the Life (14, 9.2%)	• Possibly a type of hands-on activity, or maybe one of the professionals could do some type of demonstration to better show the things they do during the day. Some of the things the people said sounded really interesting, but for some people it might be better to actually see what's going on. • I think just talk more about what they actually do on a day-to-day basis for their jobs would help us learn more about what jobs look like. • Talk more about the day to day, struggles of their jobs, things they like etc. • Talk more about the daily life and what problems come across in a normal workday. Give more examples so I can see if I would want to go into that field.

	• Possibly have the guests show examples of the work they create
Bridge IS to Business / Career (13, 8.5%)	• Start talking more about how info systems would specially help you get into all aspects of business. • Emphasize the importance of info systems in each college of business major right away to get the students paying more attention. • Talking more about how other majors can use the certificate. • I think it would be good to talk about valuable skills and coursework that was really influential. • Talk more in depth about the types of job responsibilities that people have to get a better understanding.
Panelist Composition (13, 8.5%)	• Bring in a greater variety of business professionals from different IT areas (maybe like 5-6 people instead of just 3). • Bringing in an intern to describe their personnel experience in the IS field. • I think it would be beneficial to have more people that are more in the field instead of recruiters. • Have a wider range of people. • More guest speakers fresh out of college closer to our age. • A female actually working in the industry and not just all men.

Table 1. Categories and Comments Relating to "Start"

Other categories included academic pathways (6, 3.9%), hiring and continuing education (6, 3.9%), internship related (6, 3.9%), panelist – topics (5, 3.3%), and student preparation before the event (10, 6.5%). One student indicated that the event was not helpful under this "start" category.

6.6 Session Feedback: What are things we should STOP doing?

The students were asked, "What are things we should STOP doing during the IS Career Day in a Class? (SUBTRACT from the session)". Answers that were NA or blank accounted for 52.3% (80 responses). Thirty responses related to "good job" (19.6%). Eight students indicated that they would like more interaction with panelists in small groups, while 3 students indicated they wanted less interaction with panelists in small groups. Four students commented on the presentation, indicating that the presentation should be either moved to a different session or modified to be more engaging and less repetitive than topics already covered by presenters. The remaining 28 responses did not group into categories and represented one-off suggestions or highlighted subtle differences between the six sessions that were held. Table 2 highlights the top 2 categories and selected comments for each category.

Category	Comments
NA or Blank (80, 52.3%)	• NA • (blank)
Good Job (30, 19.6%)	• Good job • Don't change anything

Table 2. Categories and Comments Relating to "Stop"

6.7 Session Feedback: What are things we should CONTINUE doing?

The students were asked, "What are things we should CONTINUE doing during the IS Career Day in a Class? (These things were very helpful to me. Keep doing them)." The 153 comments were categorized by themes. Answers that were NA or blank accounted for 8.6% (13 responses). Table 3 showcases key categories and select comments for each of these categories.

Category	Comments
Panelists - Career Options and Opportunities (63, 41.4%)	• Bring in multiple different companies/professionals at all levels so we can see how a career progresses and the different opportunities available. • I really like hearing about the professionals' personal academic path and how they got in to the job that they are in now.

	• I liked hearing from alumni to learn about their experiences and recommendations. • I think they did really good, talking about what and how they got to where they are today. It was helpful to know kind of what they have gone through. And it was a big help.
Good Job (22, 14.5%)	• Keep doing the career day in class! Absolutely love this and wish every class had something similar! • Keep what you guys have now, it was well put together.
Small group and rotating panelists (21, 13.8%)	• Having small groups and rotating to have more in depth discussion. • Keep having the panel and conversations amongst students in groups! • Continue going off in smaller groups, it gives more opportunities to ask questions.
Roundtable Format (11, 7.2%)	• The guided questions were very helpful in making sure we get useful information from the guests. • I liked the prepared questions. • Keep asking unique, thought-provoking questions.
Slideshow Presentation showing statistics (7, 4.6%)	• It's good that job placement was highlighted through the fields because the statistics given were really encouraging. • I liked the slideshow showing the statistics and what is needed to pursue certificates, minors, or majors within IS. It was nice to have a visual.
Difference between IS and CS (4, 2.6%)	• Continue: Talking about internships, having a wide variety of companies and professionals come in, emphasizing the difference between IS and computer science.
Other Comments	• Continue bringing in men and women - I always think of IT being a male job and it was nice seeing women in the field. • Continue showing students the salary break-down. • Keep it entertaining and interesting.

Table 3. Categories and Comments Relating to "Continue"

7. Discussion & Conclusion

This teaching tip presents an intentional approach to recruiting students into the IS discipline. Until we instituted the IS Career Day in a Class session, we assumed that students shared our interest in the Information Systems discipline. The lectures and hands-on activities were inspiring, we hoped. Interest in a career relating to IT was piqued, we told ourselves. The IS Career Day in a Class intervention directly appeals to students by exploring internships, careers, and academic pathways in a single setting. This event builds on all the great work we do in the classroom during each lecture and lab activity. The goal is not to "convert" all the students to the information systems major. Instead, this event showcases the depth and breadth of technology across an organization. It allows students to see that technology will play an integral role in their careers regardless of their career paths. Through this vicarious experience and verbal persuasion, we hope to boost student self-efficacy beliefs around their consideration of an information systems-related academic and career path. Our findings suggest that additional research into the value of vicarious experience and verbal persuasion on students' self-efficacy in the absence of mastery experiences is warranted. Finally, the IS Career Day in a Class showcases the majors, minors, and certificates available to students as they think about their future academic and professional selves. Our evidence suggests this experience engaged students and increased student interest in pursuing an IS academic path.

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