CHAPTER 1 — INFORMATION SYSTEMS AND YOU

CHAPTER OVERVIEW

We like to begin the first lecture with an introduction to the course, the instructor, and the grading scheme. We follow this with questions and a short break before starting in on the material for the course. Handling the administration early in the session lets students get the questions that are bugging them out of their heads so we can get on with the learning. For this reason, we also take questions for the first 5 minutes or so at the start of every class. We find that we can learn quite a bit about how the course is going by asking for questions.

The most important topic for the first lecture is to drive home the idea that systems are larger than just machines and software. Systems involve people and procedures too. The Social Media case provides some Canadian examples of how social media can change an organization's relationship with its customers. This is particularly true with small and medium sized businesses The "Google Knows Best" case also provides some examples of how valuable information resources can be. The Running Room example at the end of the chapter also shows how information systems extend the services of traditional business. It is an example of how the system serves to connect people and offer services that were not available without the system.

Students will also be interested in the data from the Information and Communication Technology (ICT) industry. The website (http://strategis.ic.gc.ca/epic/site/ict-tic.nsf/en/h_it07229e.html.) provides a great summary of the industry. These numbers surprise most people. Perhaps most important is to bring student's attention to the wages and the difference between the average wage across all industries and those in the ICT industry. Ask students why people in the ICT industry get paid more? Also note that the Services sector is the fastest growing part of the industry. ICT services mean interacting with clients to analyze and implement information systems. That is exactly what MIS skills are focused on. Part of increasing engagement is giving students a reason to consider more MIS training. Talking about innovation, and wages, is a good way to do that.

CHAPTER OBJECTIVES

1. Understand what is meant by an information system.
2. Know what is meant by MIS.
3. Understand how information systems (IS) differ from information technology (IT).
4. Understand the role that information and communication technologies have in our economy
5. Understand how successful business professionals use IS.
6. What is the shape of things to come?
7. Understand the goals of this class.

CHAPTER OUTLINE

Q1, What is an information system?
Q2. What is MIS?
Q3, How does IS differ from IT?
Q4. How important are IS to our economy?
Q5. How do successful business professionals use IS?
Q6. What is the shape of things to come?
Q7. What is this class about?

ANSWERS TO USING YOUR KNOWLEDGE QUESTIONS

1. "Outlook on Human Resources in the ICT Labour Market: 2008-2015" suggests that ICT workers need to have several core skills:.
a. What are these key skills?
- Technical skills
- Specific technology and industry experience,
- Satisfactory communications and other business skills

b. Identify ways that a student could best obtain these skills.
- Technical Skills: In this class
- Specific technology and industry experience: Co-op
- Satisfactory communications and other business skills: business classes

c. Do you believe a business student can work effectively in the ICT industry? Would a business student have a competitive advantage over a computing science student? Why or why not?

Yes, because as the ICTC report displays three different occupations that are all very business-centric. A business student can have an advantage based on their communication and business skills which is unlikely to be taught in a specific engineering or computer science courses.

2. The interview with Hal Varian, chief economist at Google, focuses on six themes: 1) flexible corporations, 2) corporations and work, 3) free goods and value, 4) workers and managers, 5) computer monitoring and risks, and 6) changes in industries. Choose one of these themes and discuss in more detail the implications of the change for you personally. Provide specific examples where possible. You can find the article at www.mckinseyquarterly.com/Strategy/Innovation/Hal_Varian_on_how_the_Web_challenges_managers_2286*.*

Note: There will be a number of answers to this question. More successful answers will be able to show how these themes might affect their own personal lives. Encourage students to use examples in their own experiences.

3. *Consider costs of a system in light of the five components: costs to buy and maintain the hardware; costs to develop or acquire licenses to the software programs and costs to maintain them; costs to design databases and fill them with data; costs of developing procedures and keeping them current; and finally, human costs both to develop and use the system.*

    a. *Over the lifetime of a system, many experts believe that the single most expensive component is people. Does this belief seem logical to you? Explain why you agree or disagree.*

       It is likely that this belief is true. An information system is only as good as the people who have developed it and who make use of it to perform their business functions more effectively and efficiently. It is very costly to hire and retain qualified, creative, and motivated people. Without those people, however, even the most technically sophisticated system will be of little value to the organization.

    b. *Consider a poorly developed system that does not meet its defined requirements. The needs of the business do not go away, but they do not conform themselves to the characteristics of the poorly built system. Therefore, something must give. Which component picks up the slack when the hardware and software programs do not work correctly? What does this say about the cost of a poorly designed system? Consider both direct money costs as well as intangible personnel costs.*

       If a system does not meet its requirements, the people and procedures will have to adjust and "pick up the slack." People will have to change their behaviors to work with the system. This may result in reduced productivity at a minimum. In addition, annoyance and frustration may build to the point where people actually avoid the system in some fashion…they may find a way not to use the system at all (thus defeating its purpose); they may avoid using it by increasing absenteeism; or they may find another job.

    c. *What implications do you, as a future business manager, take from questions (a) and (b)? What does this say about the need for your involvement in requirements and other aspects of systems development? Who eventually will pay the costs of a poorly developed system? Against which budget will those costs accrue?*

       It is hoped that students will appreciate how important it is that the business professionals play an active role in systems development. Requirements not only must be delineated for the system, but business managers (who are paying the bills) must ensure that the requirements are being fulfilled in the new system. If they are not fulfilled, the business unit not only will have wasted the development costs; it will experience ongoing costs of decreased productivity and possibly higher staff turnover.

ANSWERS TO COLLABORATIVE EXERCISES

1. Watch the video "Did You Know 3.0" (www.youtube.com/watch?v=jpEn Fwiqdx8). Discuss this video with your group and identify three specific impacts that you think the information in this video will have on your business career. Be as specific as possible, and link the ideas to your intended major, interests, and career aspirations.

Answer: There is of course no single answer to this question. This is a common theme in collaborative exercises. The answer is not as important as the process that the students go through in developing their answers to the questions. The question is intended to get students thinking about changes in technology and linking these changes to the business environment around them. It is important for students to try to get specific as they learn more when they tie these ideas to things happening in their own lives.

Note: An updated link (Did you Know 4.0) is located here:
http://www.youtube.com/watch?v=6ILQrUrEWe8

2. Watch the video "A Vision of Students Today" (www.youtube.com/ watch?v=dGCJ46vyR9o). Discuss this video with your group and identify three ways that courses could be designed to improve the way students engage in the course. Be as specific as possible and be prepared to share your ideas with the class.

Answer: Again, no simple answers. Encourage the students to Google "A Vision of Students Today" and the read through blogs about it. Ask them to form their own opinions This can be done as an in class exercise. I would suggest a three step process:
   1) Show the movie
   2) Have students form small groups of 3 or 4 to talk about it for a few minutes
   3) Elicit some opinions from the class

This is a good way to start the class as it is likely to intrigue students and start them thinking about the class in a different way.

ANSWERS TO CASE STUDIES

MIS In Use - Social Media: Changing the Relationship between Customers and Business

1. Are the social media sites that Mabel's Labels uses Information Systems?

Yes these are systems. Information is collected, processed and distributed. They may not be thought of as traditional applications but information is the key resource in these systems and they support the company's processes.

2. What do you think are the benefits to Mabel's Labels of joining and participating in their various social media sites? What are the costs?

The benefits are accessible to a wider audience and hence a wider customer base than using traditional marketing (newspapers, flyers in the mail, etc. What is remarkable is that many of these systems do not have an obvious application cost. They are largely free to participate it. However, the cost of maintaining the web presence on these applications can be quite onerous. The major cost is the time that has to be spent monitoring and replying. This time should be factored in when considering whether to invest in these technologies.

3. Can larger companies do the same social media marketing and promotion that Mabel's Labels can? Do you think small businesses have an advantage in social media promotion over larger organizations? Justify your answers.

Small businesses may have an advantage over larger businesses in that small businesses have more ready access to free sites such as Twitter, Facebook and MySpace. Larger companies can use these spaces, but it is often awkward for them to do so. Small businesses may have easier access, but in the long run, larger companies have access to resources that will help them monitor and reply to the media attention. Small businesses can be overwhelmed due to a lack of resources.

4. What risks does Mabel's Labels face in their social networking strategy; that is, what are the downsides to using social media for small businesses?

Some examples include:
- Increased time and effort required to support social media efforts
- Privacy and security risks due to profile on sites
- Lack of control over features and advertising on social media sites
- Customers can more easily organize themselves and develop damaging material to the company
- Competitors can view your site

5. Some people have suggested, based on the fact that social networking sites do not make money, that social networking sites are a temporary fad that will eventually be absorbed by other more profitable companies. Do you think social networking is something that will last? Justify your answer.

This question has no definitive answer and we should not suggest there is one to be found. It is important to encourage the students to form their own opinions about topics such as these and to continue to shape that opinion as they move through the semester.

MIS in Use - Google Knows Best

1. Do people who use free email systems understand the implications of the tradeoffs that they have made? (Hint: Do you?)

Some people will understand and some people will not. A majority of the people signing up for gmail are not aware of the details of the site's user agreement. Some people are quite surprised to learn that Google can scan through the e-mail and use some of the information from the mail system for the purpose of advertising.

2. Is email different from postal or telephone services? Is it more like a postcard, where privacy should not be assumed?

This is a matter of opinion. Some students will suggest the former and other that latter. Using the analogy of the telephone system is a good argument to make. If someone is talking on their cell phone in a public place and you overhear the conversation, is that any different than reading e-mails on the Internet? Again, the point of this question is to encourage discussion and to have students view their use of g-mail from a different standpoint.

3. How complete a profile can Google assemble of a typical user? (Hint: what Google services—Calendar, Google Maps, etc.—do you use?).

This is an interesting class exercise. Once students begin to think of all the different applications they use (Google Doc, e-mail, Google search engine, Google earth, it will be come clear just how much information a company like Google could have on each individual.

4. Is there a way you could use free email systems yet still prevent your messages from being contextually scanned?

Some students might think about encryption and using encrypted attachments or other ideas to get around contextual scanning. Others might get more interested and look for other ways. The important point is that there are ways around contextual scanning and some research in this area will show students some of the latest examples.

5. Should these forms of communication service be regulated? If so, how and by whom?

A discussion of completely free access versus controlled access is another good example of a class discussion question. Most students start out arguing for free access, but when you note that organized crime and other related groups use these communication channels as well, the idea of limits and controls begins to become more appealing. Keeping students sensitive to the pros and cons of limiting access is the important point to make here.

6. Is there a difference between what Google is doing and how spam filters work?

Spam filters read through e-mail looking for "inappropriate" content or indications that the message has been sent by spammers. Over 90% of all mail sent on the net is spam. So spam filters are reading e-mail content but they are generally recognizes as good things. So can Google's reading of e-mail be viewed for this perspective? The difference is that Google uses the information for marketing whereas spam filters use it to limit e-mail coming to e-mail users and does not use the information for marketing.

7. What are your privacy rights and expectations while using the internet?

This is a question students need to consider and research. Much of this is a matter of ethical behaviours, but it is important that there are no ethical standards applied on the Internet.

Running at the Speed of the Web: The Running Room

The Running Room (www.runningroom.com) is North America's largest specialty retailer of sporting goods, apparel, and footwear for runners and walkers. The company operates over 90 corporately owned stores in Canada and the United States. The Running Room website was created in early 2000.

Questions

1. Do you think The Running Room would be as successful as it is if it didn't have a website? In other words, is the company's website a critical component for success, or simply a nice"extra" for its customers?

The website has clearly become a critical component for the Running Room. It supports the expansion of the firm and helps to connect the stores with customers in a meaningful way. Customers are using the website to organize their own events so it is much more than just an extra "nice to have"

2. Could the Running Room provide the same customer experience without using its website? For example, could the company use more mailings and telephone calls to stay in touch with its customers?

Perhaps. Many of the services could be replicated with mailings and telephone calls. However, scheduling events and other more sophisticated services would be difficult to match using telephone and mail. What should be very obvious are that the costs of providing these services goes way up when you rely on telephone and mail. So while it might be able to be accomplished, it will certainly cost more to use mail and telephone.

3. Do you think the Running Room's website creates a barrier to entry for its potential competitors? Explain your answer.

Other competitors could develop a similar website. But the competitors would have to develop it and integrate it with their stores and people. This will take time and money. Also the competitors would not have a large user base to start so could not offer the full range of services. So the site creates a competitive advantage for the Running Room.

4. Check out The Running Room's mission statement. Does the website help the company meet these goals? Discuss why or why not.

The Running Rooms' mission is: "The Running Room will always be driven by its emphasis on continuous improvement, customer service, and community involvement. We are not just selling shoes and equipment, we are selling a commitment to active living." See http://www.runningroom.com/hm/inside.php?id=3036
The website clearly supports this by limiting the active community, supporting events and charitable causes and developing strong ties to customers and support their lifestyles thought events hosted on their site.

DULLER THAN DIRT

Goals
- Share our excitement about MIS with our students
- Establish the fact that this class is work. Some topics take time and effort to learn. That's OK.
- Discuss strategies for making the subject interesting.
- Introduce students to the idea of "waking up to your life"

Background and Presentation Strategies

See the annotation for the start of this chapter. You might choose to use some of that material with this Exercise at the end of your presentation. I use the "waking up to your life" theme as a wrap up for this lecture. See the Wrap Up.

I take the students' goal of being a business professional very seriously – occasionally more seriously than some of them do. Given that goal, I'm here to help those who want to learn how to use IS and related topics to help them strengthen their personal competitiveness.

I love this field, and you probably do too. Tell the students why! They will be very interested to know why you picked this discipline, what you like about it, what the challenges are, what you find interesting. Few students will want to be professors, but they will want to know what aspects of your interests will apply to them.

This class can be *fun and incredibly interesting*. Especially if students learn to *personalize the topics*; that is, to constantly to ask themselves, how can I use this knowledge to get a job? To get a better job? To gain a competitive advantage? To be a better professional?

Examples:

- How will I, as a future public relations agent, use this material? What do I need to know to get a public relations job in technology? How can I use data communications technology to make me more productive?

- What do I, as a future general manager, need to know about this subject? What do I need to know about developing information systems? What do I need to know about using IT to advance corporate strategy?

- Should I think about an IS career? Although hardware and software jobs exist, not every IS professional writes computer programs or installs network gear. It's all about the innovative application of IT and IS for the solution of business problems. That could be interesting!

Having said all of that, at times this topic is duller than dirt. No getting around it. So, sometimes a person just has to buckle down and do the work. *Ignorance is curable, but it doesn't cure itself.* Not every topic will be exciting and interesting to every student all the time. That doesn't mean the topics aren't important.

Depending on the students' age and maturity, sometimes I leave it at that. But, if they are young and need coaching, I'll go on with something like:

- Like any challenging course, you cannot succeed by channel surfing. You can't switch channels when the going gets hard. You have to stay with it.
- If you're a CFO and the financial statements have to be filed, they have to be filed, and you make that happen. It's all part of being a business professional.
- If you're a manager, and the computer budget needs to be submitted, you do what you have to do. If you don't know what something is or does, you find out. It doesn't matter how tired you are, how many other things you have to do, you just keep working; it must be done. At least, you do that *if you're a professional*.
- So, learn not to quit when the going gets rough. Learn that behavior now, before you start your career!

Students are students, and undergraduates are undergraduates. Many are young. They get busy with other classes; they get distracted with their friends; they get involved in campus activities that consume their study time. As the class proceeds, I have to keep stoking the fires of their interest by showing them my excitement about the material. Ultimately, however, *it's not my excitement about the class that motivates them; it's their excitement*. Mine just get them going.

Every lecture, I need to do something to build that excitement. If I can do that, this class is a joy to teach. When I don't do that, it's like dragging a 500-pound sack of potatoes across campus. Again, it's the excitement of the students that moves the class along.

Suggested Responses for Discussion Questions

1. You might ask the class the following questions:
    - Do you think about your goals? About how well you're accomplishing your goals? Do you think about what you want to accomplish in "this awkward time between birth and death"?
    - Write a note to remind yourself that you cannot avoid responsibility for your life. Make goals; see how you're doing. Once a week may be too often. How about once a month?

2. The purpose of this question is to ask the students to ask themselves whether they're living their lives by someone else's criteria. I think that's such an important task for undergraduates – especially for the traditional 20-year-old junior. Why do they attend college? Why are they business majors? What do they want to do? Are these their goals or their parents' goals? Are they an interpretation of what it means to be successful?

    If the answers to these questions indicate they chose these goals for themselves, then the students can rededicate themselves to the goals. But if not, now's the time to find out. If you'd rather be a painter, an engineer, or a biochemist, now's the time to figure that out.

3. Because it will help you learn to use IS to solve problems, make better decisions, and become a more complete business professional.

4. The text suggests personalizing it – making the material relevant to the students' goals.

Wrap Up

Sometimes David Kroenke wraps up the first lecture with the following:

- You and I, all of us, have just invested 3,600 heartbeats in the last 50 minutes. That's 3,600 heartbeats we'll never have again. Was it worth it? If not, what can we (that is all of us – you and me) do to make it worth it next time?
- Over the years, I've come to view a class like a woven tapestry. Each of us contributes one string of yarn, one string of the warp or one of the weft. We weave this experience together. I bring my excitement for the topic, my knowledge, my experiences, and I frame the experience. What happens, next, however, is up to you. Did you do the homework? Did you read the assignment? Are you surfing the Web or sending emails or are you listening? Are you relating this material to your goals?
- We make this experience together. I hope we will weave a beautiful tapestry, and to that end, I will do all I can. I hope you will, too. See you next time!