Solutions for Experiencing MIS 8th Edition by Kroenke

EXPERIENCING MIS

8TH EDITION

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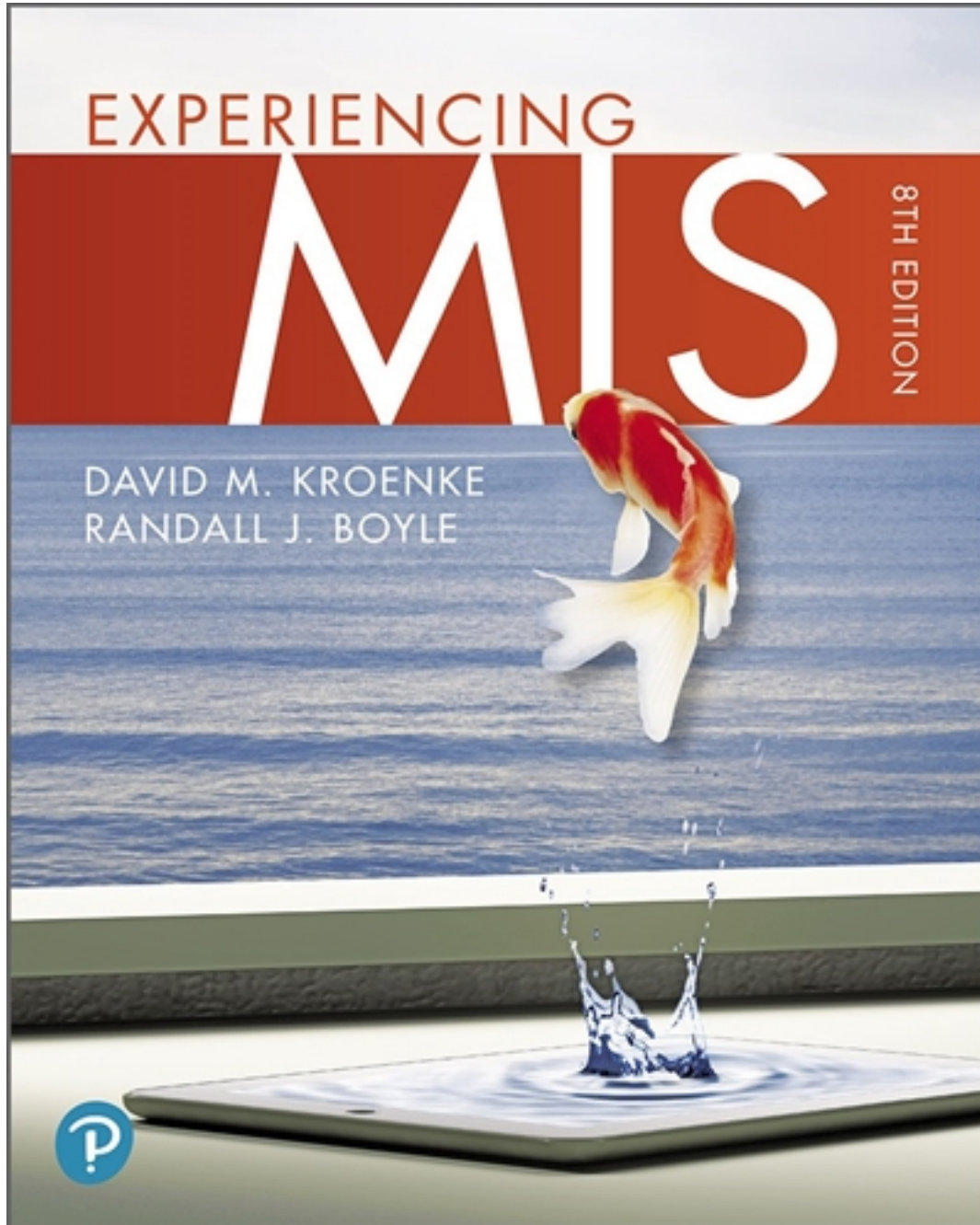
Solutions

1 | The Importance of MIS

LEARNING OBJECTIVES

1. Explain why Introduction to MIS is the most important class in the business school.
2. Explain how MIS will affect you.
3. Discuss why MIS-related jobs are in high demand.
4. Define "MIS."
5. Describe your role in IS security.

CHAPTER OUTLINE

- Why is Introduction to MIS the most important class in the business school?
    - The digital revolution
    - Evolving capabilities
    - Moore's Law
    - Metcalfe's Law
    - Other forces pushing digital change
    - This is the most important class in the school of business
- How will MIS affect me?
    - How can I attain job security?
    - How can Intro to MIS help you learn nonroutine skills?
- Why are MIS-related jobs in high demand?
    - What is the bottom line?
- What is MIS?
    - Components of an information system
    - Management and use of information systems
    - Achieving strategies
- What is your role in IS security?
    - Strong passwords
    - Password etiquette
- How does the knowledge in this chapter help you?

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SO WHAT?

A is for Alphabet

1. *The feature identified the Internet as a catalyst for the Information Age. What other innovations have contributed to the era of unprecedented access to information via computers?*
   Student answers will vary. Several important innovations that may be mentioned include the development of the PC, wireless networking technologies, development of smart mobile devices, the cellular communication system, satellite communication systems.

2. *Think about your daily use of phones, tablets, and traditional desktop/laptop computers. How many searches do you perform each day? What types of things do you search for on the Internet? Do you use Google for these searches? If not, what search engine do you use? Why do you use that search engine?*
   Student answers will vary, depending on each individual's routines regarding search. For some context, studies show that over 6.5 billion searches are conducted using Internet search engines each day (globally). As of April 2017, 77% of those searches were conducted using Google. Notably, that percentage is up 10% from the previous year. (See http://www.smartinsights.com/search-engine-marketing/search-engine-statistics/ for up to date information).

3. *Conduct an Internet search to find a project or product offered by Alphabet that you had not heard about before reading this feature. Are you surprised at the diversity of the company and its projects and research initiatives?*
   Students are likely to discover unexpected projects in a wide array of areas. If necessary, have your students look at https://x.company to learn more about the Alphabet company that is termed a "moonshot" factory: tackling huge problems with radical solutions and breakthrough technologies.

4. *What technological innovation do you think will drive the next great era in humanity? What do you think the defining elements of that era will be?*
   Student responses will vary. This question should generate some interesting discussion. As a starting point, try focusing the discussion on the area of artificial intelligence and machine learning using the self-driving car context.

COLLABORATION EXERCISE 1

Before you start this exercise, read Chapter Extensions 1 and 2, which describe collaboration techniques as well as tools for managing collaboration tasks. In particular, consider using Google Drive, Dropbox, Microsoft OneDrive, Microsoft SharePoint, or some other collaboration tool.

Collaborate with a group of fellow students to answer the following questions. For this exercise, do not meet face to face. Coordinate all of your work using email and email attachments only. Your answers should reflect the thinking of the entire group, and not just one or two individuals.

1-4.   *Abstract reasoning*

 a. *Define* abstract reasoning, *and explain why it is an important skill for business professionals.*
  Abstract reasoning is the ability to construct and use a model or representation. Being able to construct a model or representation of a complex situation through abstract reasoning is an important skill for business professionals, who frequently must make decisions under uncertain and highly complex situations. This is a highly marketable skill. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

 b. *Explain how a list of items in inventory and their quantity on hand is an abstraction of a physical inventory.*
  The inventory list and quantity on hand is a representation of the actual items on shelves in the warehouse. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

 c. *Give three other examples of abstractions commonly used in business.*
  Student answers will vary, but some examples include projects plans, budgets, and business process models. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

 d. *Explain how Jennifer failed to demonstrate effective abstract reasoning skills.*
  Jennifer was unable to develop a model to evaluate prospects for 3D printing opportunities. She identified parts that can't be 3D printed and listed future drone models that don't have the capacity to carry cameras. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

 e. *Can people increase their abstract reasoning skills? If so, how? If not, why not?*
  Yes, abstract thinking skills can be developed with practice. Working with existing models is a place to start, but creating actual models and examining their usefulness is even more essential to develop these skills. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

1-5.   *Systems thinking*

 a. *Define* systems thinking, *and explain why it is an important skill for business professionals.*

Systems thinking involves identifying and modeling the components of a system and connecting the inputs and outputs among those components into a sensible whole, one that explains the phenomenon observed. This is an important skill because business people must be able to identify and understand the relationships among the elements that form a complex situation. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

b. *Explain how you would use systems thinking to define why Moore's Law caused a farmer to dig up a field of pulp wood trees. Name each of the elements in the system and explain their relationships to each other.*
    Pulp wood trees are inputs in the production of paper. Moore's law implies that more and more content will be stored digitally, and there will be less printed material produced. Consequently, the demand for paper will fall. The farmer recognizes that the value of his trees will decline over time as there is less demand for paper, so he decides to use his land to produce a product with a higher projected value. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

c. *Give three other examples of the use of systems thinking with regard to the consequences of Moore's law.*
    Student answers will vary. Some examples include Kodak shifting its business away from film cameras and film development to digital cameras and photo printers; Google's project of scanning and digitizing books; and Amazon and Sony developing electronic reader devices. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

d. *Explain how Jennifer failed to demonstrate effective systems-thinking skills.*
    Jennifer was unable to understand and model the correct components and relationships between parts that can be 3D printed and drones that can carry cameras. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

e. *Can people improve their systems-thinking skills? If so, how? If not, why not?*
    Yes, systems thinking skills can be developed with practice. Applying existing models to different situations is a place to start, but creating actual models, critiquing the models, and examining their usefulness is even more essential to developing these skills. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

1-6.   *Collaboration*

a. *Define* collaboration, *and explain why it is an important skill for business professionals.*
    Collaboration is the ability to work productively with others when developing ideas and plans. A good collaboration results in a final work product that is superior to one that would be developed by a person working alone. (LO: 1, Learning Outcome: Describe the components of an information system (IS),

AACSB: Reflective Thinking)
b. *Explain how you are using collaboration to answer these questions. Describe what is working with regards to your group's process and what is not working.*
Student answers will vary. It is important that you stress that students should not just divide the work up between the group members and assemble the individual contributions into a whole (a typical student approach to a group project assignment). Good collaboration involves several iterations in which ideas are contributed, reviewed, critiqued, and refined. All members contribute to the development and refinement of ideas. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Interpersonal Relations and Teamwork)
c. *Is the work product of your team better than what any one of you could have done individually? If not, your collaboration is ineffective. If that is the case, explain why.*
Student answers will vary. It is likely that students have not spent enough time and effort reviewing and evaluating each other's ideas and improving the work product. Often student groups are satisfied with whatever is contributed and little attention is paid to critique and refinement. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Interpersonal Relations and Teamwork)
d. *Does the fact that you cannot meet face to face hamper your ability to collaborate? If so, how?*
Student answers will vary. Email is not a very easy way to collaborate due to the time lag involved between messages being sent and eventually being read. Because there is no central repository of the work product that all members can access, it is difficult to know what the latest version of the work product is and to keep track of changes to the work product. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Interpersonal Relations and Teamwork)
e. *Explain how Jennifer failed to demonstrate effective collaboration skills.*
Jennifer was unwilling to share her ideas and work-in-progress with others because she wanted to wait until she felt she was "done." She failed to seek out the benefit of having others review her ideas as they were developing and help her improve upon them. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)
f. *Can people increase their collaboration skills? If so, how? If not, why not?*
Collaboration skills can be improved with practice. It may be hard for some people to offer up half-formed ideas to others and to subject themselves to criticism, but the benefits will help them overcome this reluctance. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

1-7. *Experimentation*

a. *Define* experimentation, *and explain why it is an important skill for business professionals.*

Experimentation involves creating and testing promising new alternatives, consistent with available resources. In today's demanding business environment, new ideas will be essential to success, and business people have to overcome their fear of failure and pursue new approaches rationally. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

b. *Explain several creative ways you could use experimentation to answer this question.*
Students could experiment with different ways of collaborating, other than emailing. For example, the group members could arrange to meet in a chat room and work together on developing their answers by communicating in that forum. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

c. *How does the fear of failure influence your willingness to engage in any of the ideas you identified in part b.*
If any of the group members respond to a suggested process with the comment, "that will never work," he may be reflecting his fear of failure. Unwilling to try a new way of doing things may be an accurate assessment that the approach is unworkable, but it could also be an unwillingness to work in a new way. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

d. *Explain how Jennifer failed to demonstrate effective experimentation skills.*
Jennifer was unable to share new ideas with other. She was willing to do what she was told, but did not have the confidence to discuss any new ideas she had with others in case the ideas did not work out. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

e. *Can people increase their willingness to take risks? If so, how? If not, why not?*
It is hard for some people to change their innate willingness to take risks. The best way to overcome this is to work with a group that accepts new ideas with enthusiasm and does not ridicule a member for suggesting a new approach. Once some success is gained, it will be easier to take risks in the future. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

1-8. *Job Security*

a. *State the text's definition of* job security.
The text defines job security as "a marketable skill and the courage to use it." The text also argues that marketable skills are no longer specific task-related skills, but rather are "strong non-routine cognitive skills." (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

b. *Evaluate the text's definition of* job security. *Is it effective? If you think not, offer a better definition of* job security.
It is likely that students will be dismayed that the more traditional task-oriented

skills they are learning (e.g., computer programming, accounting) will not provide them with job security. That is probably not the message they receive from their parents and grandparents. However, this definition of *job security* should cause the students to think critically about what they are getting from their college education and may cause them to think differently about their experiences in college. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

c. *As a team, do you agree that improving your skills on the four dimensions in Collaboration Exercises 1-4 through 1-7 will increase your job security?*
Student answers will vary, but we hope that thinking about these dimensions will change their attitudes about what comprises marketable skills and how to work to develop them. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

d. *Do you think technical skills (accounting proficiency, financial analysis proficiency, etc.) provide job security? Why or why not? Do you think students in 1990 would have answered this differently? Why or why not?*
Technical skills are not irrelevant to job security, but they are not sufficient to guarantee job security. This circumstance is very different than in 2000, when technical skills probably were sufficient to get and keep a decent job. (LO: 1, Learning Outcome: Describe the components of an information system (IS), AACSB: Reflective Thinking)

CASE STUDY 1

zulily

1-9.   *Go to zulily.com and register. Identify features of the site that make shopping entertaining to mothers and explain why those features entertain. Explain why this is important to the zulily business model.*
Some of the features of the site that are fun and entertaining are a wide array of items that are available for girls, boys, women, and the home; the way that items are organized by theme (an entire section on princesses, for example); the many colorful pictures; the list of new events and ongoing events at the top of the page; the sense of a limited time to purchase items; the ability to look forward to things that will be available tomorrow; the section containing items on their last day of sale; the automatic daily email announcing specials. (LO: 1, Learning Outcome: Describe the effects of e-commerce on the modern business world, AACSB: Analytical Thinking)

1-10. *Go to Nordstrom.com and shop for children's clothes. How does the zulily shopping experience differ from that at Nordstrom? Briefly describe the advantages and disadvantages of each type of experience.*
Nordstrom's site is much different from zulily. Taking the Kids link, there are very few main photos that lead to other sections of the site and many more text links to

take you to specific sections. The Nordstrom's site does not offer the sense of new items, limited time offerings, or things that will be available tomorrow, which are features of the zulily site that will keep customers coming back on a daily basis. With Nordstrom's you can have a more typical shopping experience by selecting the links of interest to you and viewing the items found there. Zulily offers some sense of urgency and excitement that is missing from Nordstrom's. However, many shoppers may prefer the more straightforward shopping experience found at Nordstrom's. (LO: 1, Learning Outcome: Explain how IS can be used to gain and sustain competitive advantage, AACSB: Analytical Thinking)

1-11.   *If you were buyer for zulily, what data would you like to have about customer purchase habits?*
Data of interest to buyers would include: what items sold out and how long did it take to sell out; what colors and sizes sold out most quickly; what items took the longest to sell out; what colors and sizes took the longest to sell out; do customers tend to buy frequently in small quantities in an order or infrequently with larger quantities in an order. (LO: 1, Learning Outcome: Discuss the role of information systems in supporting business processes, AACSB: Analytical Thinking)

1-12.   *If you were a buyer for zulily, what data would you like to have about past vendor performance?*
Data of interest about vendors would primarily focus on the vendors order fulfillment performance — is the vendor providing the right items of acceptable quality in a timely way? (LO: 3, Learning Outcome: Discuss the role of information systems in supply chain management and performance, AACSB: Analytical Thinking)

1-13.   *In the general course of life, 2-year-old boys become 3-year-old boys, 4-year old-girls become 5-year-old girls, etc. How can zulily use this not-so-remarkable phenomenon to customize a customer's shopping experience? What data would you need to do this?*
By keeping track of the typical items purchased by a customer, say, good for an infant boy, zulily could offer that customer special promotions geared toward that child as he grows, such as clothing, toys, school items, etc. The order data from that customer would be the source of this information. (LO: 1, Learning Outcome: Explain how IS can be used to gain and sustain competitive advantage, AACSB: Reflective Thinking)

1-14.   *As a business professional, it is likely information systems professionals will ask you data questions like those in questions 1-11 to 1-13. What is the best way for you to respond? Verbally in a meeting? With a written document? With a sketch or diagram? How will you know if you have been understood?*
Although individuals will vary in terms of their preferred communication style, this is a good place to reinforce with your students how an understanding of information systems will help them regardless of their professional role. The most effective way to communicate these data needs is to show a sketch or diagram of a sample report and be able to discuss in a meeting with the IS staff how you would use the report contents for decision making. The IS staff would have a tangible example of your

information needs and will then be able to focus on the task of finding and organizing the data needed to produce your report. You will know if you've been understood if you receive some prototype reports that include the information you want, so you know the IS staff is on the right track. (LO: 1, Learning Outcome: Discuss the role of information systems in supporting business processes, AACSB: Reflective Thinking)

For an example illustrating the concepts found in this chapter, view the videos in mymislab.com.