Reading Assignment

Chapter 2:
Collaboration Information Systems

Chapter 3:
Strategy and Information Systems

Suggested Reading

See information below.

Learning Activities (Non-Graded)

See information below.

Course Learning Outcomes for Unit II

Upon completion of this unit, students should be able to:

4. Explain how IS can be used to gain and sustain competitive advantage.
7. Discuss the requirements for successful collaboration as it pertains to Information Systems Management.

Unit Lesson

Chapter 2 investigates ways information systems can support collaboration. The chapter defines collaboration, discusses collaborative activities and criteria for successful collaboration, discusses kinds of work collaborative teams do, identifies requirements for collaborative information systems, and examines important collaborative tools for improving communicating content. Three different collaboration IS are presented for student collaborations. The chapter ends with a discussion of collaboration in 2024!

Collaboration and Cooperation

Cooperation occurs when people on a project work independently from each other, by dividing the project into separate tasks, and work without consultation with the other group members. Collaboration occurs when people work together to achieve a common goal, result, or work product.

Feedback and iteration is involved so that the results of the collaborative effort are greater than could be produced by any of the individuals working alone.

The author of your textbook further illustrates this point with the following:

> Using feedback and iteration, one person will produce something, say the draft of a document, and a second person will review that draft and provide critical feedback. Given the feedback, the original author or someone else will then revise the first draft to produce a second. The work proceeds in a series of stages, or iterations (Kroenke, 2015, p. 37).

The three criteria for successful collaboration are successful outcome, growth in team capability, and meaningful and satisfying experience. The four primary purposes of collaboration are becoming informed, making decisions, solving problems, and managing projects. Collaboration tools can be used to manage shared content such as shared content with no control, shared content with version management on Google Drive, and shared content with version control.

In short, a collaborative group works together to achieve a common goal *via a process of feedback and iteration* by communicating, sharing information, sharing knowledge, combining skills, and sharing time. The qualities, attitudes, and skills of a good collaborator are shown in Figure 2.

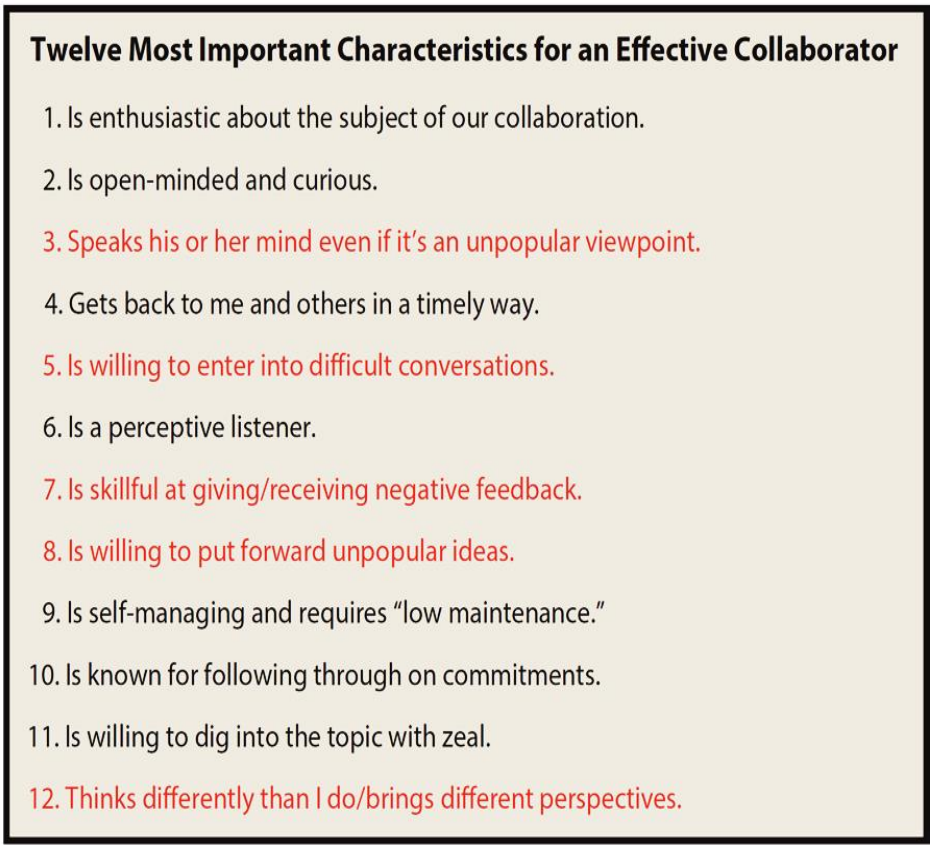

Figure 1. Twelve Most Important Characteristics for an Effective Collaborator
(*Kroenke, 2015, p. 38*)

Many people are surprised to learn that 5 (in red) of the top 12 characteristics involve disagreement.

Most people think avoiding conflict and having similar ideas and opinions makes a group better. While social ability is important, research indicates the importance of having different ideas and opinions expressed. Team members must have the skills to accept critiques, criticism, and revisions of their work. In some student teams, the focus is strictly on fulfilling a requirement and not necessarily producing the highest quality work product possible through the collaborative efforts of the team members. The characteristics of an ineffective team member will include lack of interest and commitment, unwillingness to give or take criticism, unwillingness to listen, and indifference. Students are typically not too tolerant of ineffective team members, but are not always willing to boot them off the team, preferring instead to just work around

them. Characteristics of collaborative success center on the output of the group being superior to the output that could have been created by an individual working alone, including such things as being more productive, more creative, and generating more and better ideas. When forming a collaborative group, it is useful to begin with a discussion of critical feedback guidelines (Figure 3).

Guideline	Example
Be specific.	"I was confused until I got to Section 2" rather than "The whole thing is a disorganized mess."
Offer suggestions.	"Consider moving Section 2 to the beginning of the document."
Avoid personal comments.	Never: "Only an idiot would miss that point … or write that document."
Strive for balance.	"I thought Section 2 was particularly good. What do you think about moving it to the start of the document?"
Question your emotions.	"Why do I feel so angry about the comment he just made? What's going on? Is my anger helping me?"
Do not dominate.	If there are five members of the group, unless you have special expertise, you are entitled to just 20 percent of the words/time.
Demonstrate a commitment to the group.	"I know this is painful, but if we can make these changes our result will be so much better." or "Ouch. I really didn't want to have to redo that section, but if you all think it's important, I'll do it."

Figure 2. Critical Feedback Guidelines
(*Kroenke, 2015, p. 39*)

Bottom line: The two key characteristics of collaboration are iteration and feedback.

Collaboration Information Systems

There are five components of an IS for collaboration:

- Hardware: for participating, sharing, saving group's work
- Software: email, text messaging, Google Drive, Microsoft Web Apps, other tools that support collaborative work
- Data: project data, project metadata (Project metadata is data that is used to manage the project.)
- Procedures: usually designed by the team
- People: know how and when to use collaboration applications

Solving Problems

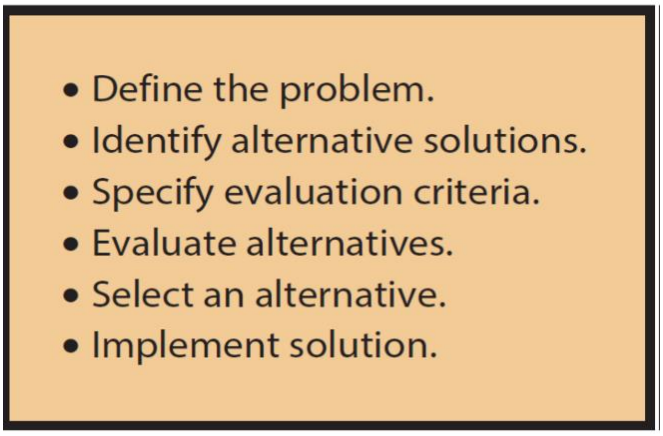

Figure 3. Problem-Solving Tasks
(*Kroenke, 2015, p. 44)*

- *Define the problem*: Problem definition varies due to differences in experience, education, training, personal goals, or job responsibilities. Group needs to develop a shared definition of the problem through research, discussion, and compromise.
- *Identify alternative solutions*: Identifying possible solutions may involve investigative research and brainstorming.
- *Specify evaluation criteria*: Determine the benchmark or standard measures to be used to evaluate the problem.
- *Evaluate alternatives*: Evaluating alternatives involves comparing test results to identify and eliminate infeasible, substandard, or unacceptable solutions and to identify feasible, superior, or acceptable solutions.
- *Select an alternative*: Selecting a solution may be based on majority vote, consensus, or compromise.
- *Implement solution*: Implementing the selected solution includes monitoring and modifying as needed.

Shared Tools

Collaboration tools for communication enable and support team communication and are major functions of collaboration systems. Tools depend upon ways a team needs or wants to communicate. For most class projects, students should forego face-to-face meetings and use conference calls, multiparty text chat, screen sharing, Webinars, or videoconferencing.

Egocentric Versus Empathetic Thinking

Egocentric thinking centers on the self. A person who is egocentric believes that their view is the only view available and are often not able to think “outside the box.” Empathetic thinking is the ability to see more than one view: the ability to understand the other person’s perspective. A person who is empathetic is able to consider multiple view points and realize that people who hold a perspective different from their own are not necessarily wrong (but you do not have to be wrong either). Using empathetic thinking is smart and results in better relationships because you do not need to change your way of thinking to match the other person’s way of thinking. Business is people working together in relationships. Better relationships equate to better business.

Negotiators, for example, need to know what the other side wants, what is important to it, what issues they can give on, and which ones are nonnegotiable. Another example is a business meeting that appears to be going nowhere. Whenever we find ourselves in such a meeting, is the problem due to different perspectives? If so, one can sometimes find the root cause by engaging in empathetic thinking.

In Chapter 3, we will practice using Porter's five forces model: competitive strategy is threatened by 3D printing, learn the application of competitive strategy, consider the risks of changes in the market to competitive strategy, understand that major changes in company operations (3D printing), necessitate major changes in processes and IS, and analyze the five forces and the competitive strategy of AllRoad.

Figure 5 summarizes a planning process used by many organizations. Start with Porter's five forces to analyze industry structure.

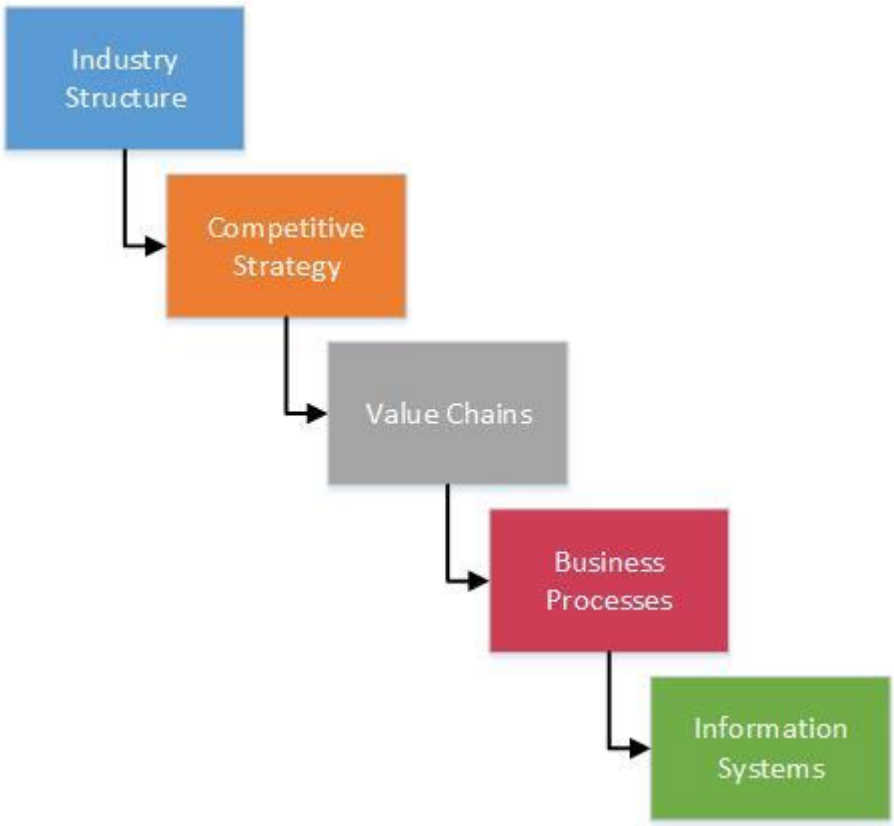

Figure 4. Organizational Planning Process
(*Kroenke, 2015, p. 83*)

Competitive strategy determines value chain structure by primary activities in the value chain, support activities in the value chain, and value chain linkages. Information systems provide competitive advantages via products and via business processes.

Let's take a look at Case Study 3 (Fulfillment by Amazon (FBA)) from the textbook. What is the competitive strategy of AllRoad Parts? AllRoad Parts has chosen the differentiation strategy of having the largest inventory of spare parts for the off-road cycling, dirt bike, and off-road vehicle markets.

What are the advantages and disadvantages for AllRoad Parts to sell items via Amazon.com? AllRoad Parts could sell items via Amazon.com and gain access to the

huge number of shoppers that use that site. It would have to do business following Amazon's rules, however. In addition, AllRoad Parts is "the place to go" for spare parts for off-road cycles, dirt bikes, and off-road vehicles. So, AllRoad Parts might want to keep customers coming to its web site rather than lose the customers to Amazon's site.

For items that AllRoad Parts sells itself, AllRoad Parts' cost of using FBA to process (Question 3-6, p. 107):

a. *An order of 10 sets of bicycle pedals weighing a total of 25 pounds.*

Order Handling (per order):	$ 1.90
Pick & Pack (per item): $.60 * 10 items	$ 6.00
Weight Handling (per pound): $.45 * 25 lbs	$ 11.25
Total*:	$ 19.15

*Assumes no storage costs due to immediate repackaging and shipping after the order is received at the Amazon warehouse.

b. *An order of a single set of bicycle pedals weighing 2.5 pounds.*

Order Handling (per order):	$ 1.90
Pick & Pack (per item): $.60 * 1 item	$ 0.60
Weight Handling (per pound): $.45 * 2.5 lbs	$ 1.125
Total*:	$ 3.625

*Assumes no storage costs due to immediate repackaging and shipping after the order is received at the Amazon warehouse.

c. *The cost of a cycling shirt weighing 10 ounces.*

Order Handling (per order):	$ 1.90
Pick & Pack (per item): $.60 * 1 item	$ 0.60
Weight Handling (per pound): $.45 * .625 lbs	$ 0.28
Total*:	$ 2.78

*Assumes no storage costs due to immediate repackaging and shipping after the order is received at the Amazon warehouse.

d. *The cost of storing 1,000 sets of bicycle pedals for three months*

Assuming a box containing a set of bicycle pedals requires one cubic foot of storage, 1,000 boxes would require 1,000 cubic feet of storage space. For three months of storage, this would cost $1,350 (1,000 cu ft. * $.45/cu ft. * 3 months).

If AllRoad Parts were to use FBA, what business processes would it not need to develop? What costs would it save? AllRoad Parts would not need to develop business processes for receiving, repackaging, and shipping. It would save on labor costs associated with these processes, plus it would no longer need warehouse space for these processes. AllRoad Parts could use FBA's systems for placing orders with its vendors and paying its vendors for these orders; it would also not need to develop systems that interface with the shippers. AllRoad Parts would save the costs of developing and supporting these systems.

Suppose AllRoad Parts were to use FBA, how would it integrate its information systems with Amazon's? (Google the term Amazon MWS.) Amazon's integrated Web Service API (application programming interface) helps Amazon sellers to

programmatically exchange data on listings, orders, payments, reports, and more. XML data integration with Amazon enables higher levels of selling automation, which helps sellers grow their business.

Does it make sense for AllRoad Parts to use FBA?

By no longer needing to have warehouse space set aside for the fulfillment of the customers' orders, AllRoad Parts could benefit greatly. Utilizing Amazon's existing fulfillment capabilities and warehouse capacity should deliver significant savings in AllRoad Parts' cost structure.

What would happen if AllRoad Parts makes some of its parts using 3D printing? The major process changes if AllRoad Parts decided to use 3D printing would be inserting a manufacturing step after the receipt of an order for a 3D printed part. AllRoad Parts would not have to maintain that part in inventory any longer so it would not be sorted in Amazon's warehouses. However, AllRoad Parts would have to receive notification of the order for the 3D printed part, then manufacture the part and arrange for shipment to the customer.

Let's also take a look at Question 3-12 of MyMIS Lab (Please note that we will not be using the MyMIS Lab for this course. We will be looking at this scenario alone for instructional purposes, and will not require access to the Lab) on page 108:

Samantha Green owns and operates Twigs Tree Trimming Service. Samantha graduated from the forestry program of a nearby university and worked for a large landscape design firm, performing tree trimming and removal. After several years of experience, she bought her own truck, stump grinder, and other equipment and opened her own business in St. Louis, Missouri. Although many of her jobs are one-time operations to remove a tree or stump, others are recurring, such as trimming a tree or groups of trees every year or every other year. When business is slow, she calls former clients to remind them of her services and of the need to trim their trees on a regular basis.

Samantha has never heard of Michael Porter or any of his theories. She operates her business, "by the seat of her pants."

a. Explain how an analysis of the five competitive forces could help Samantha.

By looking at the five competitive forces, Samantha can better understand how to achieve a profitable performance in her industry. In this situation, the bargaining power of customers may be relatively strong with the ability to select another tree service based on price and responsiveness. Customers will not perceive differences in quality when removing a tree, other than judging response time and the thoroughness of cleanup. With tree trimming for tree maintenance, quality work will be harder for customers to appreciate. Samantha will have to sell her training and experience. The threat of substitution is a fairly weak force with few alternatives available to customers who have a dead or damaged tree that needs removing. There is, however, the option of doing nothing in terms of tree maintenance. Samantha needs to emphasize the benefits of performing regular tree trimming for long-term tree health. The bargaining power of suppliers of equipment is a weak force with many options available for machinery and equipment. The threat of new entrants is somewhat strong because anyone with a ladder, saw, and no fear of heights could sell him/herself as a tree trimmer. Samantha will have to sell her training and expertise. Finally, rivalry among existing firms is probably strong. Samantha will have to work to make her company's name well known, sell her professional knowledge and training, be responsive, and keep her prices competitive.

b. *Do you think Samantha has a competitive strategy? What competitive strategy would seem to make sense for her?*

Samantha probably has not thought about a competitive strategy. Many small business owners have not stepped back from the hectic pace of just keeping the business going to consider this issue. For Samantha, given her forestry education, a differentiation strategy with a focus on the tree health and maintenance industry segment may make sense. Her education will clearly distinguish her from many others in the field, and she should be able to capitalize on that with residential and commercial properties requiring regular tree maintenance.

c. *How would knowledge of her competitive strategy help her sales and marketing efforts?*

Samantha should not try to be all things to all parts of her market. She should focus her efforts on making her company's name well known, selling her professional knowledge and training, being responsive to customer calls, and keeping her prices competitive but not necessarily rock-bottom.

d. *Describe, in general terms, the kind of information system that she needs to support sales and marketing efforts.*

Samantha needs several things from an information system. She needs to be responsive to customer calls, so she needs a system to help her track and respond to calls in a timely way. This system should also build her database of customer prospects so that she can target her follow up and ongoing tree maintenance sales efforts. The system should allow her to keep good notes about each customer's trees so she can provide helpful information and services as needed to combat diseases that might threaten tree health.

Reference

Kroenke, D. (2015). *Using MIS 2014* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Suggested Reading

Chapter 2 Presentation

Chapter 3 Presentation

Learning Activities (Non-Graded)

Course Flashcards:
http://media.pearsoncmg.com/ph/bp/bp_kroenke_umis_7/flashcards/index.html

From the Textbook:
Ethics Guide, I Know What's Better, Really, pp. 56-57
Ethics Guide, Yikes! Bikes! pp. 86-87
Security Guide, Securing Collaboration, pp. 68-69
Security Guide, Differentiating on Security, pp. 100-101
Guide, Egocentric versus Empathetic Thinking, pp. 70-71
Guide, Your Personal Competitive Advantage, pp. 102-103
Using MIS InClass 2, Does AllRoad Parts Need Microsoft Office? Do You? pp. 60-61
Using MIS InClass 3, Competitive Strategy Over the Web, p. 94
Using Your Knowledge, p. 73

Using Your Knowledge, p. 105
Case Study 2, Eating Our Own Dog Food, pp. 74-77
Case Study 3, Fulfillment by Amazon (FBA), pp.106-107

Non-graded Learning Activities are provided to aid students in their course of study. You do not have to submit them. If you have questions, contact your instructor for further guidance and information.