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ABSTRACT

To be an effective communicator, students need to learn how to select the appropriate means of communication and be aware of potential obstacles. The Model of Communication Process can be an effective framework for students to understand many pitfalls of the communication process. The described activity enables students to experience different levels of richness (e.g., face-to-face, instant messaging or email) and with varying levels of feedback and noise. After completing the activity, students will understand the importance of precise, rich messages, seeking and providing feedback, and the difficulties that can occur at every step in communication.

Keywords: Communication process model, millennials, experiential exercise, feedback, text-messaging

Introduction

Recent research in business and education focuses on the generation born between the early 1980s and 2000 and referred to as Millennials (Hershatter & Epstein, 2010; Myers & Sadaghiani, 2010; Ogbeide, Fenich, Scott-Halsell & Kesterson; Rickes, 2009; Schaub, 2010). Much of the research surrounds challenges associated with the fact that Millennials approach the world differently than previous generations due to having grown up with technology. Technology has modified the way all people in developed civilizations interact and behave (McQuillen, 2003). This is especially so with Millennials who never knew life without immediate access to an abundance of resources available simply by clicking a button, and the array of opportunities that arise from these same resources (e.g. information, social networks, education, jobs, etc.). An unintended consequence of immediate access to resources, is an expectation of immediacy, that is, information should be quickly attained, answers should be brief, and rewards should occur instantaneously (Wilmer & Chein, 2016).

As this cohort enters the workplace, Millennials may pose a difficulty for managers due to attitudes of entitlement, high expectations of treatment and rewards, and communication preferences mediated by new and advanced technology, making them difficult to work around and with other generations represented in the workforce (Hershatter & Epstein, 2010; Myers & Sadaghiani, 2010; Ogbeide et al., 2009). In fact with respect to communication preferences, we polled 119 Millennial age students (who did not participate in this exercise) in an organizational behavior course in a business school of an urban public university and found that even though this group felt they communicated better when they were face-to-face, their preferred choice of communication was through mobile phone text messaging.

Brief History of Technology and Communication

Prior to the 1980s, the primary method of interpersonal communication was face-to-face, or voice-to-voice. These earlier forms of interpersonal communication provided rich cues such as tone, inflection and in the case of face-to-face communication, physical cues. The challenge with face-to-face or voice-to-voice communication, however, was lack of immediacy. Communication could be delayed due to accessibility (e.g. feasibility of being available in person at the same time, having access to a phone, time zone changes, schedule conflicts, etc.). Mobile phone devices helped ease some of the access problems by allowing people a possibility to use a phone at any time. Further, adding additional communication features to mobile phones increased communication options and opportunities. In fact, between the years of 2007 and 2012, text messaging became one of the most widely used data feature of mobile phones (Pew Research Center, 2012). Text messaging is desirable as it allows communication to be quick, direct, and essentially usable at any time.

Even though opportunities to communicate have increased, communication depth has decreased with fewer words used to express any given message. With its accessibility, brevity, and expediency, technology has simplified communication and it has simultaneously made communication more complex by having a negative impact on preferences for face-to-face interactions, especially among Millennials. Even though Millennials are in constant communication with others and they often participate in multiple conversations at one-time, and, as stated earlier, their communication is often through a technology-mediated forum, and they are less likely to engage in face-to-face, or even voice-to-voice interactions. As a result, employment blogs and job posting boards reveal a rising concern that Millennials lack basic communication skills and that this deficiency will hamper productivity in the future (Alsop,

2013; Rossheim, n.d). Therefore, teaching business students about communication processes and how to engage in effective communications has become increasingly important.

Communication Model Concepts

Core Organizational Behavior texts use a common simplified transactional process model of interpersonal communication (George & Jones, 2012, p. 410; Osland, Kolb, Rubin, & Turner, 2007; Robbins & Judge, 2015, p. 301; Scandura, 2016; Uhl-Bien, Schermerhorn & Osborn, 2014) based on Berlo's research (as cited in Rogers & Argarwala-Rogers, 1976, p. 10) (See Figure 1). All the transactional process models share the same components: encoding, decoding, noise, channel or medium, and feedback, as discussed in the section below.

Encoding

Once the decision has been made to convey a message, the first step in the communication process is the act of encoding. Encoding is the responsibility of the person sending the message and involves creating a communication code. The person must decide what needs to be communicated (e.g. what am I trying to get across?), how the message will be communicated (e.g. word choice, symbols, codes) and through what channel it will be communicated (e.g. face-to-face, technology mediated, etc.) (Hall, 1980).

At this encoding stage, choices can be made that may be detrimental to decoding. For example, a sender may choose to use jargon, a contextually based syntax. Jargon can be words, symbols, or abbreviations whose meaning may vary across industries, as well as generations. When communicating with similar others, jargon may be appropriate. However, jargon used in specific industries (e.g. medical terminology, computer speak, legal ease) may require a communicator within the industry to style shift when communicating with others outside of the industry. Similarly, communication codes or slang appropriate in one generation or culture can

be obscure in another. For example, American students in the 1980s described something good as being “radical” or “rad” for short. To his or her American parents, who were students in the late 1960s, “radical” meant someone who, or something that, was anti-establishment. Similarly, in the late 1990s to early 2000s, American students described something desirable or someone popular as “hard” and something undesirable or someone unpopular as “soft”. These words would not be easily understood as having the same meaning to a different generation. In this way, encoding a message using jargon or communication codes could harm mutual understanding.

Good communicators understand that meanings may vary across contexts and may engage in code-switching or style-shifting, a process used by bilinguals and biculturals who consciously shift from one vocabulary to another to convey certain contextual messages (Bullock & Toribio, 2009). For example, the language of electronic communication consists of many acronyms and abbreviations that are not appropriate in formal business correspondence; therefore, in a professional business letter, one would not see a communication like “C U soon”, even though such abbreviations are commonly seen in instant or text messages. Similarly, emoticons or emojis (small pictures or clip art) are used increasingly in instant messaging communications instead of words (Moss, 2013). An effective communicator knows what kinds of messages and which audiences are appropriate for the use of acronyms and images.

The chosen encoding medium can also have an impact on mutual understanding. For example, communicating a complex message in a medium with limited means of encoding and transmission (e.g. Twitter, email, time limited face-to-face communication) can result in communication errors.

Decoding

The act of receiving, interpreting and understanding an encoded message is decoding. Decoding can be easy or difficult. For example, receiving a simple message, in a common and familiar context, may easily result in an accurate interpretation and mutual understanding. On the other hand, receiving a complex message, from an encoded source whose chosen communication code does not adequately support the complexity of the message, can result in misinterpretation and miscommunication. Additional misinterpretations and miscommunications can occur based on assumptions and schemas of the decoder (Hall, 1980). Decoding requires interpretation, and therefore may be influenced by the cultural background of decoders, their immediate environment, and other biasing elements.

Barriers to Communication

In earlier models of communication (Shannon & Weaver, 1949), noise was defined as obstacles to accurate transmission of a message. Now, however, anything that occurs within the communication process and interferes with mutual understanding is considered noise. Examples include differences in how encoding or decoding processes occur, differences in the states of mind, body and perspective between sender and receiver, and anything in the environment in which the communication takes place. Individual differences include culture, language, listening skills, previous experiences and knowledge, mental models, time pressures, physical health, and one's emotional state of mind at the time of communication. Environmental noise refers to any state of the environment in which the communication takes place and includes, audible sounds, choice of words or symbols, illegible writing, environmental temperature, density and configuration of the environmental space, and proximity of the communicators.

Feedback

Early models of communication were one directional with messages flowing from encoder to decoder only (Shannon & Weaver, 1949). Such communication prohibits any clarification and later models integrated a role for feedback (Rogers & Agarwala-Rogers, 1976), a transactional process that occurs between the encoder and decoder. Once the message from the encoder is received, the decoder deciphers the message and "feeds back" a response. The response fed-back into the process can take different forms (e.g. words, symbols, expressions, etc.). Although the role of feedback is to enhance mutual understanding, feedback is also a message that is encoded by a sender and decoded by a receiver, and therefore subject to all the forces that may lead to misunderstanding. It is important to note that feedback arises from how the receiver decodes the original message, and feedback is the system that connects the two processes and allows outputs to be transformed into inputs and for the encoder and decoder to switch roles. This role switching is known as the feedback loop. Research demonstrates the importance of feedback (Rogers & Agarwala-Rogers, 1976) and resultant lack of understanding and miscommunication when feedback is not present.

Information-richness

Research in communication reveals that 7% of intended meaning is words only (i.e. lean communication) (Mehrabian, 1981). Many forms of technology-mediated communication are unidirectional, lean forms of communication, lacking expression and emotion (Daft & Lengel, 1986; George & Jones, 2012), and even if intended to be bidirectional, responses are often delayed compared to response times in a face-to-face communication. Additionally, technology-mediated communication tends to be terse, lacking deeper thought or meaning due to space limitations, time constrictions, and opportunity for further development.

Nonverbal Communication

Other meaning is derived from tone and inflection, and non-verbal cues such as body language and facial expressions (i.e. rich communication) (Daft & Lengel, 1986; Mehrabian, 1981). Many written forms of communication have limitations in terms of richness because the nonverbal elements are lacking. For example, people are often unable to detect humor and sarcasm in text-based communications (Kruger, Epley, Parker & Ng, 2005), although emoticons may used to indicate humor (Moss, 2013).

The brief style of communication to which Millennials are accustomed, and their lack of experience, skill and/or preference for face-to-face communication, can have multiple implications for business and interpersonal interactions. In a workforce where Millennials represent one demographic among an overall demographic that sometimes spans 5 generations (Osland, et al., 2007), it becomes incumbent upon academic institutions to effectively teach interpersonal communication.

Motivation and Goal of the Exercise

Teaching the communication model to Millennials can be challenging, as students may view the model as old and irrelevant in today's technologically rich environment. Therefore, it becomes incumbent upon instructors to not only demonstrate the importance of the classic model, but also teach students how and when face-to-face communication should occur.

Drawing on Kolb's approach to experiential learning (Kolb, 1984), the presented communication exercise helps students in large, small, and online classes identify the elements of good communication. The described activity emphasizes that communication failures can be blamed on both message senders as well as receivers and occur at every step. In addition, the communication barriers specific to digital communication (e.g. text messaging, email) are

addressed. Two versions of the exercise, one engaging face-to-face communication and one using text-based messaging, are described here, as well as modifications for online courses.

Sketchy Communication Exercise

Objectives

This exercise has the following learning objectives:

1. Identify the elements in the communication process (e.g. encoding, decoding, barriers to communication, feedback, information richness).
2. Identify how environmental factors can cause noise in communication.
3. Evaluate the appropriateness of unidirectional and bidirectional communication.
4. Explain the responsibility of both senders and receivers to engage in accurate communication in order to reach mutual understanding.

Timing

The exercise is targeted at upper-division, undergraduate business management and organizational behavior classes and masters' level seminars. We have used this exercise on class sizes ranged from 16 (small seminar) to 50 students (lecture) to 120 students (large lecture), with one asynchronous online section (55 students). Larger sections were taught in lecture halls in which seats were permanently attached to the tables, with stadium-style seating. The activity takes up to 45 minutes depending on whether students play multiple roles and the different options of the activity implemented.

Advance Preparation by Students

Students are assigned the chapter on "Communication" in their required organizational behavior textbook.

Preparing Materials

Before class, the instructor will prepare two (or more) versions of a complex, abstract, line drawing for each round of play. The same drawings can be used for the entire class, although for closely packed classrooms, multiple drawings could be used. Two sample drawings are provided in Appendix A. Students will also need a blank sheet of paper for drawing. This paper can be provided by the instructor or the instructor may ask students to use their own paper.

Teaching Notes

Instructions for Running the Exercise in Class (Part I)

Step 1: Introduce the exercise and pair off students

Students are told that they will be doing a communication task and they should pair up. Once they have paired up, explain that one person should take on the role of Communicator and the other should take on the role of Sketcher. If there is an odd number of students, a group of three may be formed (one Communicator, two Sketchers). This should take about five minutes.

Step 2: Review the goals of each role

The goal of the Communicator is to describe a picture that only he or she can see to the Sketcher. The goal of the Sketcher is to create an accurate copy of the picture that the Communicator is holding, based only on what that Communicator conveys to him or her. See Appendix B for instructions. This should take about three minutes.

Step 3: Hand-out drawings and sketch time

Each pair of students should be sitting back to back. The instructor will then hand out the drawing to the Communicator. After Sketchers have materials ready and students are sitting back to back the drawings are handed out with ***strict*** instructions to shield the drawing so other students in surrounding teams cannot see the image. Student are then told to begin the exercise.

The instructor should set a 5-minute timer. While students engage in the activity, the instructor should circulate, listening for descriptive terms used. These can be useful in the debriefing. When time is up, have pairs share the original and the copy and begin the debriefing. This is described in further detail below in the debriefing section, "Debrief Exercise Part I." This should take seven minutes.

Instructions for Running the Exercise in Class (Part II)

Step 4: Introduce the exercise and pair off students

The second part of the exercise is introduced by telling the students that they are to switch roles; Sketchers will take the Communicator role and Communicators will take the Sketcher role. The new Communicators are given a new drawing, again with strict instructions to shield the drawing from all eyes in the room. The pairs can now face each other, but neither party can talk. Students are told they have five minutes to replicate the drawing. The timer is again set for five-minutes and students are instructed to begin. After five minutes, time is called and Communicators are asked to share the original picture with the Sketchers, if they have not already done so. Next, debrief the exercise, "Debrief Exercise Part II." This should take fifteen minutes.

Alternative Procedures for Text-Based Communication

For many Millennials (born between 1980 and 2000), communication occurs primarily via text, emoji, and photo images. This version of the activity uses text communication for synchronous communication.

For a classroom-based course, students can use their smartphones or other devices with instant messaging capability. Instead of remaining in the room, communicators leave the room or step away from their partners to complete the task. Once the partners are separated, the

Communicator is given the picture and instructed to describe the image using only words (they are not allowed to send a photo of the drawing). Sketchers cannot text back. Students find this version of the activity more frustrating and may experience lags in communication due to technology issues. In addition, when roles are reversed and a new communicator takes over, unlike in the face-to-face versions, improvements in the drawings are not always observed.

Alternative for Online Courses

For an online class, two options are available. In a course with synchronous communication options, the Communicator and the Sketcher are both online (via text or chat or via text in the classroom) with the Communicator giving instructions. With asynchronous options, the Communicator can email or post instructions and the Sketcher can draw based on those instructions. Again, the Communicator cannot see what the Sketcher is doing and instructors can implement different rules regarding feedback. The synchronous options mimic instant messaging, while the asynchronous mimics email or other written communication. Often, students find asynchronous communication frustrating and text-based communication to be slow. Implementation of these rules can lead to a discussion of the importance and efficiency of face-to-face voice communications for some purposes.

Debriefing can be conducted by having students post on a shared discussion forum or through synchronous discussion.

Additional Exercise Options

This is a very flexible exercise and many different rules could be invoked to highlight different aspects of communication. After beginning with students sitting back to back with the Communicator unable to see what the Sketcher is drawing and the Sketcher unable to see the picture the Communicator is holding, the instructor may relax rules or invoke new ones. In

addition, distractors may also be made available, to highlight the consequences of multi-tasking. For example, a distracting movie could be shown during the game, or students could be tasked with keeping track of specific events during the movie. Table 1 provides a description of how different rules could be invoked and how they could affect the exercise.

Insert Table 1 about here

Additionally, these rule options can be implemented in the synchronous version in the online course, depending on discretion of the instructor and the communications software used by the students.

Debrief and Discussion

The communication exercise is generally well-received by students and is effective as an experiential activity for students to learn important concepts in communication, especially among Millennials. It is important to note when facilitating this exercise is that during the first activity, the room got extremely noisy and some student pairs were frustrated and gave up well before the five-minute time allotment. In those cases, the students shared the drawing early on and began a side conversation. While this may be a challenge to overcome, the sharing of the drawing early on can distract and ruin the activity for other students. To overcome this, when giving the initial instructions, the facilitator might want to urge students to stick to the task and not spoil it for others, if there is a desire to give up. However, if the pair of students do give up, ask them to quietly wait for the rest of the class to finish.

Another issue that arose during this exercise is that Communicators were so focused on communicating the drawing accurately that they forget to keep the drawing shielded, allowing

surrounding Sketchers to see the image. To overcome this, the facilitator may need to walk around and remind Communicators to keep the drawing shielded or provide different drawings to different groups. Another way to help facilitate this exercise in a large group is to enlist the "third" student, when there are uneven groups of three, to walk around and help remind Communicators to keep the drawing shielded. Another possible option to shield the drawing is place the drawing in a shoebox.

Debrief Exercise Part I

In the debrief, first focus on the unsuccessful attempts of the Sketchers, as these are the most common outcomes. Ask, "For those of you who were not successful, what happened?" The most common answers are, "It was too noisy, we couldn't hear"; "The drawing was too complicated"; "I didn't understand what was being described"; "I didn't know if my paper should be vertical or horizontal"; "It's really hard when you can't see". See Table 2 for more details.

Insert Table 2 about here

Because noise is one of the most commonly stated problems, the discussion starts with the concept of noise. The most obvious point of discussion is environmental noise; however, the concept of physiological noise (if students were hungry or tired during the exercise) or psychological noise (if students were upset or frustrated) is also discussed.

Next, the complexity of the drawing opens up the discussion to one-way communication and lack of feedback, especially in lean, unidirectional communication channels, and the appropriateness of such channels when communicating complex messages.

The lack of understanding gives way to a discussion about encoding, decoding, jargon, unidirectional communication and lack of feedback. For example, if a Communicator described part of the drawing as a “unilateral triangle”, the Sketcher had to recall from geometry class what a unilateral triangle looks like. In some cases, students could not recall the concept and therefore, could not decode it, could not ask about it, and could not receive any feedback on whether the concept is accurately recalled.

The comment that students did not know how to orient their drawing on the paper opens up the discussion to the concept of perception as a barrier to communication.

Finally, the lack of visual cues gives way to a discussion on the richness of non-verbal communication, which segued nicely into the second part of the exercise.

None of the Sketchers drew an exact replica of the picture, but for those student pairs where the drawing is close to the original picture, the question posed, “what made you successful?” Most students believe they were successful because of the words and sequence of words the Communicators used and how those words and sequence of instruction made sense to the Sketchers, allowing them to more or less properly sketch the picture. This opens up a conversation about coding, decoding and perception.

Debrief Exercise Part II

After the second part of the exercise, the debriefing starts with the question, “was this easier?” Most students agreed that the second attempt is much easier, but some students still found the task difficult. Because the majority of student pairs find the second attempt easier, the debriefing focuses on the successful outcomes. The students are asked, “Why was this attempt more successful to most?” Answers given were, “Because we could see each other” and “Because it was quiet and we could focus” and “Because we could tell by the other person’s

reactions if we were doing it right." Student responses opens up the conversation to the importance of non-verbal communication, the importance of feedback, and the richness of face-to-face communication.

Student pairs who still felt they were not successful are given an opportunity to discuss what made the task challenging for them. Many students voice that because there was a time limit, they felt stress and therefore, unable to be successful. This opens up an important conversation about the role that time plays in effective communication, especially with respect to complex tasks and project outcomes. Although time is not part of the communication model, time can be a barrier to communication by causing psychological noise.

Some additional debriefing questions that may work nicely with Millennials who prefer leaner communication channels are:

1. "Have you ever experienced a one-way communication where there is no feedback? If so, when?"
2. "When is one-way communication appropriate? When is it inappropriate?"
3. "Have you ever misinterpreted a text message? What happened?"

As a follow-up on the task, students may be asked to reflect on a discussion forum about the activity and connect it to a real world situation, identify examples of each of the elements of the communication model from the activity, or describe when different kinds of communication may be appropriate.

Student Feedback

The activity was taught in four sections at a large state university. Three sections were taught as a text-based activity and one section as a standard activity, and student evaluations and a brief assessment of learning was conducted. After students had completed one round of the

activity, they were asked to complete a brief survey asking them about their experience during the activity (fun, frustrated, embarrassed, satisfied, proud, annoyed, challenged) on a five point Likert scale (1 = Not at all, 5 = Extremely). They also rated their agreement with four statements about learning and working the partner, and six statements related to the learning outcomes. See Table 3 and Table 4.

Insert Table 3 about here

Insert Table 4 about here

Students, who completed the activity face-to-face experienced more fun, frustration, satisfaction, pride, annoyance, and challenge during the activity and afterwards felt that they were better able to communicate, compared to students who completed the activity using texting. However, the exercise is seen as equally embarrassing and as contributing to the learning experience in both methods.

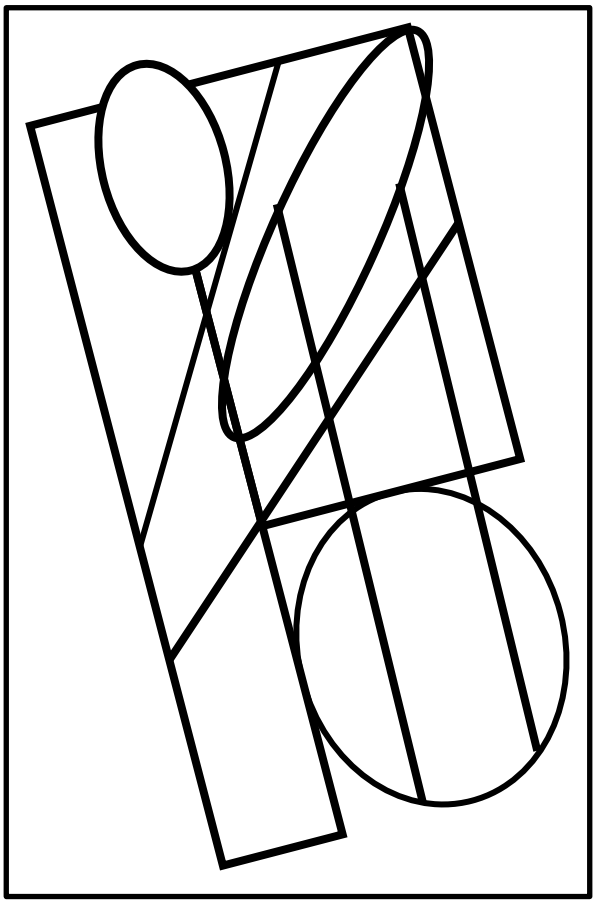
In addition, students in both modes reported agreement with the student learning outcomes, with the exception that students in the texting mode agreeing less with the statement "for complex information, lean communication media (e.g. texting, oneway communication) are inappropriate." These responses indicate that the students believed the exercise met the learning objective. See Table 4 for means.

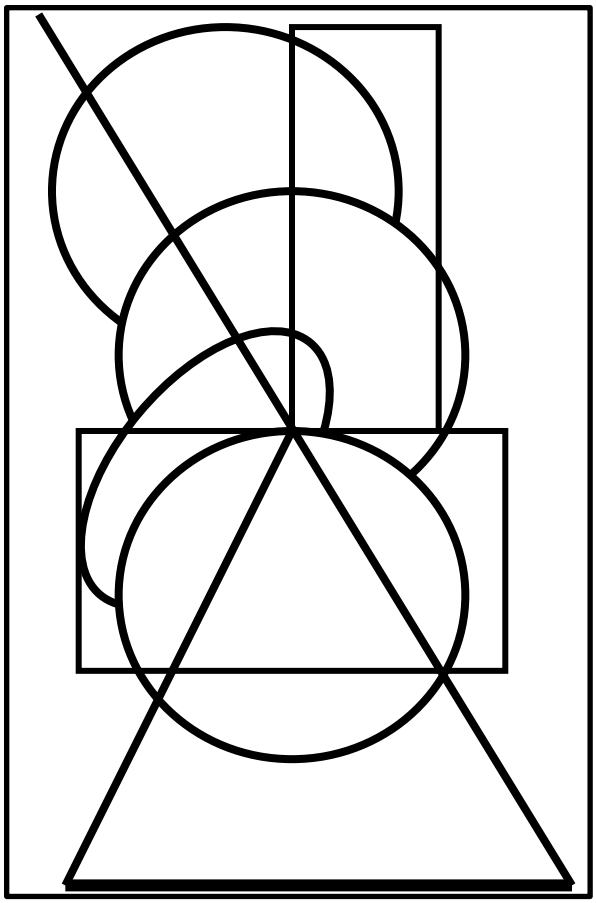
Conclusion

Effective communication is a critical skill for students to develop and practice. An important outcome to this activity is broadening the students' communication toolkit. As students gain awareness of the types of situations face-to-face communication might be a preferred method of communication versus the use of texting or email, their communication skills will lead to effectiveness in the workplace. Furthermore, through this activity students reported have positive experiences with face-to-face interactions, thus creating an opportunity for a discussion about the benefits of face-to-face communication.

While the Model of Communication process offers a framework for students to consider in developing their communication skills, when taught in lecture-based format, the model is uninteresting and inaccessible to students. Using this experiential exercise, instructors can bring an active learning exercise that students find engaging and useful in exploring the challenges and pitfalls of effective communication.

Appendix A: Line Drawings





Appendix B: Basic Instructions for Students

Instructions for Communicator:
Goal:
- To describe a picture to the Sketcher so that an accurate rendition is created.

Parameters:
- Only you can see the original picture
- You cannot see what the Sketcher is drawing
- The Sketcher cannot speak
- You cannot touch or put your hand near the drawing paper

Instructions for the Sketchers
Goal:
- To create a copy of a drawing based upon the instructions given by another person.

Parameters:
- You cannot see the original picture
- **You cannot talk**

To Play
- Sit back to back
- Communicators cannot see what the Sketcher is drawing
- Sketcher cannot see what the Communicator is holding.
- 5 minutes to complete the task

Figure 1. Model of Communication Process

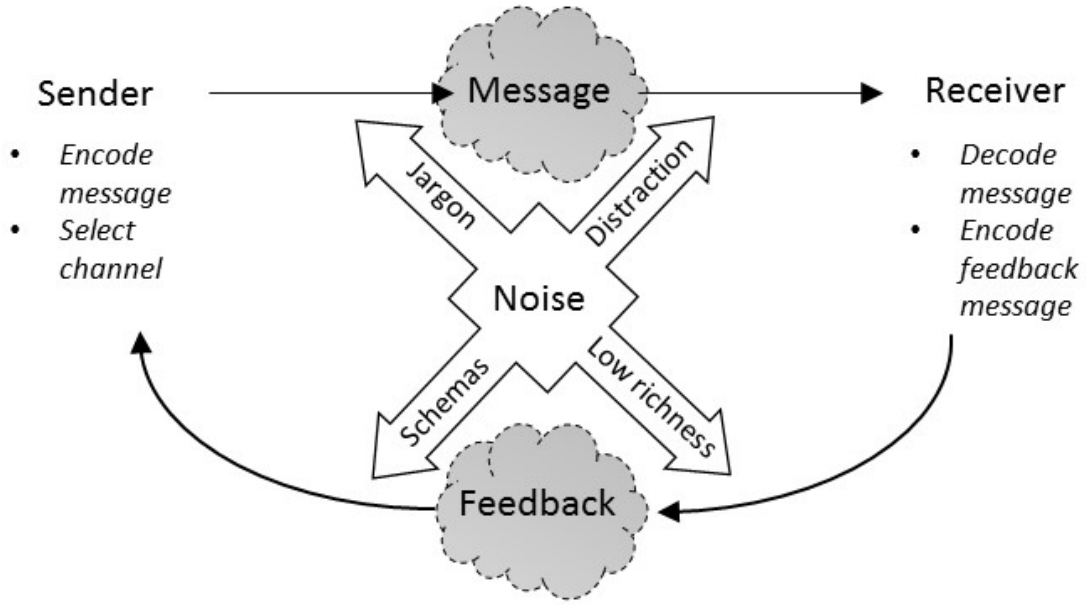


Table 1. Optional rules for play

	Rules	Concepts highlighted	Online versions
Rule Option 1: No feedback, mimicking unidirectional communication	Sketchers are forbidden from talking or asking any questions.	Sketchers are unable to ask clarifying questions, demonstrating the importance of seeking and providing feedback.	Communicators send emails or text messages to Sketchers
Rule Option 2: No speaking	To keep the task challenging after the first round, students switch roles and both partners are forbidden from speaking. The Communicator must use silent gestures and nonverbal behaviors to convey the picture to their partner.	Students are often *more* successful in part because they must be more careful, attentive, and creative in describing the picture. Demonstrates the richness of nonverbal communication	Use of video conferencing (e.g., Facetime, Google hangout, Skype, LMS-supported) can show how information-richness of video conferencing via face to face can vary.
Rule Option 3: See the picture	To alleviate the frustration or move the exercise forward, Communicator may see what the Sketcher is drawing.	Even if the Sketcher cannot speak, the Communicator receives feedback about the effectiveness of his or her instructions. Demonstrates perspective taking as the Communicator guesses where he or she has gone wrong	Students can elect to share desktops to show work or move into a shared document for drawing.
Rule Option 4: Feedback	The Sketcher may be allowed to speak and ask questions of the Communicator. Can be used with Option 3 or alone.	The full communication loop is achieved. Additional obstacles may be highlighted and show that despite best intentions and full communication options, barriers still exist.	Use of synchronous multimedia options, such as Google hangout or Skype with shared desktop.
Rule Option 5: Multiple sketchers	There is one communicator and multiple sketchers. Can be used with any other rule options.	Can highlight diversity of perspectives and how a single message may be decoded multiple ways. With full communication allowed, can demonstrate difficulties of all-channel communication networks.	Multiple students draw a picture based on a single set of directions. These directions can be emailed by the instructor.

Table 2 Typical answers to debrief questions and curricular connections

For those of you who were not successful, what happened (standard classroom rules)?	
It was too noisy, we couldn't hear	Environmental noise, distraction, and psychological noise can interfere with message sending as well as comprehension
The drawing was too complicated	Most ideas that we try to convey are complex and require multiple means of communication. With complex messages, lean, unidirectional communication channels may not be as effective.
I didn't understand what was being described	Use of jargon, language barriers and the importance of clarifying questions
I didn't know if my paper should be vertical or horizontal	The importance of perspective, expectations and schemas in creating a foundation for communication
My partner didn't describe the picture very well	The importance of feedback and the idea that both receivers and senders are responsible for effective communication.
I kept hearing other people's instructions and it confused me/made me doubt my partner	Environmental distractions can be linked to the concept of noise and multitasking (the automated processes of listening) and the function of rumors in the workplace.
I didn't know what my partner was doing, so I kept going	In addition to providing feedback, communicators should check for comprehension and ask for feedback.
Why was round 2 (with new rules to remain silence) easier?	
Because we could see each other; Because we could tell by the other person's reactions if we were doing it right	The richness of nonverbal messages
Because it was quiet and we could focus	The importance of attention and avoidance of distraction

Table 3. Student responses to the exercise (means with standard deviations in parentheses).

	Text-based (n = 104)	Face-to-Face (n = 188)
Student Experience		
Fun	3.40 (1.15)	4.20 (0.82)
Frustrated	2.90 (1.17)	2.22 (1.16)
Embarrassed	1.54 (0.90)	1.67 (1.07)
Satisfied	2.37 (1.09)	3.58 (0.96)
Proud	2.28 (1.20)	3.25 (1.24)
Annoy	2.48 (1.29)	1.71 (1.08)
Challenging	4.21 (1.00)	3.92 (1.02)
The exercise helped me learn about the communication model	4.37 (0.70)	4.42 (0.65)
I enjoyed working with my partner(s)	3.80 (0.94)	3.88 (0.95)
I feel like I know my partner(s) better	3.83 (1.00)	4.11 (0.85)
I feel like I can communicate better after doing this activity	4.82 (0.47)	4.84 (0.40)

Table 4: Student Responses for Learning Outcomes

Learning Outcomes	Text-based (*n* = 104)	Face-to-Face (*n* = 188)
Good communication requires clear messages from senders	4.24 (0.93)	4.30 (0.76)
If miscommunication occurs, both the sender and receiver are responsible	4.17 (1.04)	3.91 (0.96)
For complex information, lean communication media (e.g. texting, oneway communication) are inappropriate	4.41 (0.82)	4.53 (0.65)
Environmental factors besides physical sounds can create noise in communication.	4.62 (0.72)	4.55 (0.61)
When a message is complex or abstract, individual differences (e.g. culture, experience, mental models) may affect decoding and interpretation of the message.	4.80 (0.55)	4.71 (0.55)
The goal of communication is mutual understanding	4.24 (0.93)	4.30 (0.76)

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