

## Introduction

With most Americans now at least one generation removed from a farm, communicating the story of American agriculture has become a necessity. No longer does the public readily understand the complex challenges that agriculturists face in their mission to feed and clothe an ever-growing population. These challenges – food safety and security, climate change, water availability, renewable bioenergy production, and childhood obesity, among others (USDA NIFA, n.d.) – are part of what defines this industry and directs its path for the future. In order to meet these challenges and remain relevant in the face of change, land grant and other agricultural universities must prepare students to become robust communicators capable of discussing difficult issues amidst a wide variety of people and situations (Dailey et al., 2001; Morgan & Rucker, 2013; Steede et al., 2017).

Unfortunately, we are not communicating our story well enough. In a time when consumers are more curious than ever about their food (Smith, 2014), skepticism, misunderstanding, and misinformation still reign (Kubitz et al., 2013; Ruth et al., 2015). Funk and Raine (2015) identified a large gap between the opinions of scientists and the public across 13 different areas, many of which – such as GMOs, pesticide use, climate change, and biofuels – are directly related to agriculture. Other studies show Americans largely disbelieve scientists, especially when controversial topics are discussed or placed in opposition to deeply held beliefs (Hmielowski et al., 2013; Ruth et al., 2015; Funk, 2017). Again, many of these topics – climate change, GMOs, vaccines – relate to agriculture (Funk, 2017). Deliberate suppression of information or seeding of misinformation by anti-agriculture activist groups is also a threat (Steede et al., 2017; Animal Agriculture Alliance, 2019). The Animal Agriculture Alliance (2019) has identified over 20 such organizations which have, at one time or another, used varying tactics to communicate their anti-agriculture views.

If we are to continue to support the American agricultural industry against these threats, we must ensure that the agriculturists of tomorrow are well-prepared to tell their story to a doubting public (Large, 2014). One of the most direct ways to achieve this goal is to train students in the art of verbal communication. While other subjects such as public relations and journalism are important parts of a student's agricultural communications development (Corder & Irlbeck, 2018), practicing verbal communication helps students not only express themselves and develop leadership ability (Harris, 2017), but also become more desirable in the workplace (Bentley University, 2014; Hendrix & Morrison, 2018; Brooks, 2019) and “more effective in other communications settings” (Verderber et al., 2011, p. 2)

Verbal communication has long been a core part of both formal and informal agricultural education. Early extension agents acted as informational conduits, relaying knowledge from governmental and academic sources to rural communities, a role which they still play to this day (Whitford, 2017). The agricultural communications program at Texas A&M University began in 1918 (Corder & Irlbeck, 2018), and early secondary agricultural education programs involved students reciting the FFA Creed (Connors & Velez, 2008) and participating in public speaking events as early as 1930 (FFA History, 2019). Today that trend continues. Extension programs across the nation still provide guidance and relay knowledge to local communities. Corder and Irlbeck (2018) confirmed 19 universities with agricultural communications majors, and also found many more that offered either minors or concentrations in the field. Other related areas of study such as agricultural sales, education, and extension include verbal communications practice to prepare students for the needs of their future careers. Both 4-H and the National FFA

Organizations now offer a variety of speaking and communications events, which touch on reaching a variety of audiences (Career and Leadership, 2019; 4-H Programs, 2019).

Corder and Irlbeck (2018) found verbal communication skills including public speaking, conflict management, and interpersonal communication to be important parts of an agricultural communications curriculum. McGaha (2000) ranked verbal communication as the most important employability skill for communications graduates. Morgan (2010) found public speaking and verbal communication to be core behavioral skills needed for career success. Hendrix and Morrison (2018) found verbal communication was the skill most in demand from agricultural employers, with 66% of surveyed job postings mentioning it directly.

Despite the educational, occupational, and personal benefits of improving one's verbal communication ability, students still struggle with mastering the intricacies. Industry professionals have indicated a need for improvement in agricultural communications students' skills, specifically regarding face-to-face communication, professional relationships with colleagues, and negotiation (Irlbeck & Akers, 2009). Research by Hendrix and Morrison (2018) found students at Mississippi State University had low self-perceptions of their ability to present information to others and participate in discussions, despite admitting that such skills are important to life and career success. Harsh et al. (2018) saw that undergraduate agriculture students at three universities had a low level of willingness to communicate with others about various agricultural issues even after completing an agricultural communications course that integrated case studies into the curriculum.

In many cases good communication can be hindered by psychological barriers such as fear, low self-perception or self-esteem, poor emotional management, disinterest, or misunderstanding the audience or subject matter (Harris, 2017; Psychological Barriers, 2017; Barriers, n.d.). This study sought to identify and categorize how undergraduate agriculture students responded psychologically and emotionally to communication with different audience situations. Controlling these barriers in many different communication situations can lead to clearer and more effective communication and greater understanding on both the parts of the speaker and the listener. Knowledge gained from this study will be used to help current undergraduates and entry-level professionals in the agricultural industry recognize some of the emotions experienced when speaking to different audiences and in different situations. By helping students master these emotions and overcome psychological communication barriers, they will ultimately become more well prepared for their future careers and future roles as ambassadors for the American agricultural industry.

## **Review of Literature**

Hyden et al. (1994) defined communication as "the exchange of thoughts, information, ideas, and feelings" through the media of speech, writing, and signals (p. 2). Effective communication relies on one's ability to explain internal processes and states to an external audience who is not privy to the nuances and intentions that underlie a message. Emotions play a large role in this process, both in regards to sending and decoding specific messages (Mehrabian, 1971; Schmitz, 2016). When emotions are expressed appropriately, senders are able to formulate a message that reflects their internal status and intentions while considering audience needs and perceptions. The audience, too, benefits by receiving a clearer and more easily understood message.

Emotions affect communication in many ways. Humans use communicatory cues such as word choice and stress, volume, pitch, tone, rate of speech, facial expression, and physical

movement to express distinct emotions and provide deeper insight into communication than words alone might convey (Hyden et al., 1994). Someone feeling happy might smile, speak loudly, and make relaxed movements, while someone experiencing sadness might cry, frown, speak in a flat tone, and demonstrate poor posture (Emotional Body Language, n.d.). Paying attention to these often-subtle messages provides one with hints about unspoken implications and intentions, adds context to a message, and decreases the chance that misunderstandings and conflicts will arise (Hyden et al., 1994; Schmitz, 2016).

Poor emotional mastery can lead to issues with communication (Mehrabian, 1971; Schmitz, 2016). Attempting to communicate one emotion while really feeling and displaying the signs of another can lead to mixed messages that leave audiences confused or disconnected (Mehrabian, 1971; Schmitz, 2016). Mehrabian (1971) said “a person’s nonverbal behavior has more bearing than his words on communicating feelings or attitudes to others,” and noted that about 93% of the emotion within a message is conveyed through nonverbal means (p. 44). Audiences readily understand the real, emotional meaning being communicated even when verbal and nonverbal signals clash, making it essential for communicators to master their own emotions to better express ideas to an audience (Mehrabian, 1971).

An angry speaker may lash out at listeners, use language they do not mean to, and display inappropriate body language and facial expressions (Franchetti, 2016; Schmitz, 2016). A speaker who experiences anxiety is likely to avoid communication altogether when possible, and demonstrate unnatural body language, poor enunciation, distracted thinking, and overall impaired delivery when required to speak (McCroskey & McCroskey, 2002; LeBlanc, 2018). Such behaviors can have negative effects across many aspects of life, including personal relationships and careers (Franchetti, 2016).

In order to manage these emotions and their associated cues, it is important to understand their underlying causes. One major source of negative emotion when communicating is fear (McCroskey, 2016; Harris, 2017). Fear of communication in general (but usually referring specifically to public speaking) is a common affliction which impacts the performance of both novices and experts alike (Harris et al., 2002). Such anxiety usually stems from fear of criticism or evaluation by others, but can also be traced to other factors such as past experiences and fear of the unexpected (McCroskey, 2016; Harris, 2017).

McCroskey (2016) identified four types of communication anxiety: trait, context, audience, and situation. Trait anxiety is related to one’s personality and will not change based on circumstances or setting (McCroskey, 2016). Some people are simply more nervous about communicating than others, and this level will usually remain constant no matter the situation. Context, audience characteristics, and other factors have little effect on a person with high trait anxiety; McCroskey (2016) even notes that many times such people will feel afraid even when they have little rational reason to do so.

Context anxiety concerns itself with the background against which communication occurs, and can be impacted by several factors such as audience size, formality of the occasion, and the location in which communication takes place (McCroskey, 2016). For example, it is common for people to find themselves completely at ease when speaking with a small group but extremely nervous when faced with a larger audience. In the same manner, a communicator might feel nervous when writing a formal business letter but not when writing a casual email.

Audience-based anxiety is determined by the audience with whom one is communicating (McCroskey, 2016). Factors that impact this type of anxiety include similarity, status, and familiarity with the audience. McCroskey (2016) illustrates this type of anxiety by comparing

imaginary communication occurring between a student and a friend, and then between a student and a principal. In the first case, the student would likely feel little anxiety and respond more naturally and openly. In the second, the student would alter their communication for the specific audience and become much more nervous and formalized. A study by Witt et al. (2006) found subordinates often feel more anxiety when communicating with supervisors than they do with those of the same social or business rank. McCroskey (2016) also noted that speaking to an audience of strangers can feel much different than speaking to an audience of friends, even if the audience size is similar. Some people prefer communicating with strangers, while others would rather talk to their friends (Harris et al., 2002).

The fourth source of communication anxiety is dependent upon the overall situation in which communication occurs (McCroskey, 2016). While traits, context, and audience all play individual roles in shaping the level of fear one experiences, their interaction with each other and with outside forces can also create a “unique communication situation that is different from any previous communication event” (Harris, 2017, p. 27). When assessing the causes of situational anxiety, it is necessary to consider the communicator’s physical and mental states, the time in which the communication occurs, and the cultural background and expectations against which the communicator is expected to perform (Harris, 2017).

When a communicator gives a speech, their anxiety is generally expected to peak in the minute before the speech begins and then decline as it progresses (Harris, 2017). Many speakers feel they are alone in experiencing such emotions, but it is a trait common to most people (McCroskey, 2016). Understanding and managing this phenomenon is an important skill for young communicators. Harris (2017) suggests thinking positively, anticipating personal needs, considering the audience’s mindset, and preparing for possible circumstances as techniques for managing anxiety.

Both Harris (2017) and McCroskey (2016) stress that practice is the best way to learn to overcome anxiety, display appropriate emotions, and improve one’s communication ability overall. It is important that the practice situation be as similar to the real-world situation as possible, as this will decrease the number of unknown factors which could cause distress. During practice, a communicator can make changes to their communication style, message, or approach as necessary. They can also become familiar with the location, equipment, and audience characteristics and expectations. In addition, practice offers a communicator the opportunity to improve their skill, gain experience, and build confidence in their abilities, all of which can decrease nervousness (Witt et al., 2006). McCroskey (2016) notes that with experience and training, it is possible for a communicator to manage fear and speak more confidently and coherently.

### **Theoretical Framework**

Recognizing how one’s emotional state affects behavior and communication is a component of emotional intelligence (Salovey & Mayer, 1990; Goleman, 1995). Emotional intelligence (commonly abbreviated as EI or EQ) is defined as “the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990, p. 189). High emotional intelligence has links to increased problem-solving ability, creative thinking, planning, motivation, empathy, and verbal and non-verbal communication, all of which are necessary in any area of the modern workforce (Salovey & Mayer, 1990). It is also an effective predictor of employee performance, leadership, relationship development, and happiness on the job (Lopes et al., 2006; O’Boyle et al., 2011).

This need for effective communication is doubly important when considering fields such as education and medicine that require high levels of personal interaction and emotional input (Fallowfield et al., 2001; Simonds & Cooper, 2011).

Emotional intelligence is divided into a hierarchy of four branches. These branches each explore the relationships between emotion and reasoning (Mayer et al., 2001). The lowest and most fundamental level of the hierarchy concerns itself with perception and expression of emotion (Brackett et al., 2019). Those who master this step are able to “identify emotions in themselves and others” through various cues, “express emotion accordingly,” and “communicate emotional needs” (Brackett et al., 2019, para. 10).

The second level involves using one’s recognition of emotion to “facilitate thinking” and determine the effects of emotional states upon different situations and outcomes (Brackett et al., 2019, para. 11). Brackett et al. (2019) offer the example of someone realizing that frustration-generated adrenaline may be useful when participating in athletic events such as football or wrestling, but not when completing algebra problems or writing an essay. In a communications setting, one might consider how mood affects intensity, word choice, speaking speed, body language, and facial expressions. Harris (2017) and Whalen (2006) note that when speaking with others, a little nervousness can actually be a positive, as it provides the speaker with energy and enthusiasm.

Level three addresses one’s understanding of the nuanced causes which underlie complex emotions, as well as one’s ability to predict the outcomes of emotion-driven behavior (Brackett et al., 2019). For example, a person who feels anger would be able to, through reflection, identify the specific factors that caused such a response and use the information to avoid similar triggers in the future. A person operating at level three should also be able to understand and predict the effects that emotional expression has on those around them (Brackett et al., 2019). In a business setting, a supervisor who expresses extreme anger needs to realize their behavior makes coworkers fearful and less willing to approach them. This in turn can lead to hostile and less productive work environments. In a communication setting, a speaker should realize how their display of anxious body language makes the audience nervous as well, which undermines the speaker from the start (Harris, 2017).

The final and highest level of the emotional intelligence hierarchy is the effective management of emotion. At this level, a person is capable of recognizing emotion, understanding the effects and causes of that emotion, and then using their knowledge to make proactive decisions intended to limit undesired behavior (Brackett et al., 2019).

In order for students to master their emotions when communicating, they must begin working through the emotional intelligence hierarchy (Brackett et al., 2019). This begins on the lowest level by realizing how one feels during the communication process. Despite the apparent simplicity of such a task, in reality it can be a challenging undertaking (Whitbourne, 2014). Emotions can be complex and overwhelming at times, and some people have great difficulty expressing their feelings in words. In some situations, the amygdala – the emotional center of the brain – can “hijack” rational thoughts and behaviors and cause us to emotionally overrespond (Goleman, 1995, p. 14). This is a common occurrence for many when communicating, especially if the communication occurs in a public setting (DeVries, 2019). Even though there is no real danger, the brain still equates psychological distress with physical distress and activates the fight-or-flight reflex (Sapolsky, 2004). This causes a speaker to demonstrate emotional cues that signal fear or detract from the speaker’s performance overall (Sapolsky, 2004; Whalen, 2006).

## **Purpose and Objectives**

The purpose of this study was to identify and categorize student emotional responses to different speaking situations in order to create graphics that are easily understood by undergraduates and recent graduates. Effective communication is highly dependent upon the appropriate expression of emotion. By helping students realize how they feel when speaking, they can better understand the roles emotion plays in communication, and how specific circumstances such as audience size or makeup affect their performance.

helping students to identify how they feel in different situations, educators can

The following research objectives guided this study:

1. Identify and categorize the emotions that students experience when communicating in an interpersonal setting.
2. Identify and categorize the emotions that students experience when communicating in a small group setting.
3. Identify and categorize the emotions that students experience when communicating in a large group setting.
4. Identify and categorize the emotions that students experience when communicating in a public speaking setting.

## **Methodology**

Participants in this study ( $N = 103$ ) were members of two undergraduate agriculture classes at Mississippi State University. Both classes were intended to teach students communications skills that they will use in their future careers. Students in these classes came from a wide range of majors and concentrations, which included agricultural education, leadership, and communications; agribusiness; agricultural engineering; agronomy; animal and dairy science; biochemistry; horticulture; and poultry science.

The first course focused on professional public speaking in informative, persuasive, and career-related situations. The second course focused on a wider range of communication techniques that included visual, oral, and written communication. All participants completed the survey during their regularly scheduled class times, and received five extra credit points for participation in the study. Permission to perform the study was given by the university's Institutional Review Board (IRB).

Participants in the study were asked to consider themselves in four different situations involving verbal communication - interpersonal communication, small group communication, large group communication, and public speaking. These four situations were selected from the four sub-score areas of the Personal Report of Communication Apprehension survey instrument (McCrosky, 1982). This survey instrument was provided online for free use in communications research. For the purposes of this study, interpersonal communication was defined as communication with one other person. A small group was defined as a group with 3 to 15 members, and a large group was defined as a group containing 16 to 30 members. A public speaking audience was defined as any group with more than 30 people. All four of these settings are commonly experienced in both educational and professional worlds, and most students will be expected to communicate effectively across them for both school- and work-related purposes.

Participants were then asked to select one or more emotion-related words indicating how they personally felt when confronted with each situation. These words were then arranged on Posner et al. (2005) Circumplex Model of Affect. This model, originally based off Russell's (1980) Valence-Arousal Model of Emotion, divides emotions into four quadrants. The x-axis indicates the level of pleasantness associated with the emotions, and the y-axis indicates the level of activation or arousal associated with the emotions. The top right quadrant contains the pleasant activation emotions, which include happy, alert, and excited. The bottom right quadrant contains the pleasant deactivation emotions such as contented, calm, and serene. Unpleasant deactivation emotions such as sad, depressed, and fatigued are found in the bottom left quadrant, and unpleasant activation emotions like tense, nervous, and upset in the top right.

Posner et al.'s (2005) model was used for two primary reasons. First, it offered a standardized list of emotions that could be more easily analyzed than open response. Second, it covered a range of specific, nuanced emotions which provided better insight into participants' real feelings and were less likely to be conflated with broader emotional states. Results for each communication setting were analyzed for frequencies and illustrated on a graphic of Posner et al.'s (2005) model. Correlations were not included in this data set because the intent of the study was to create an easily-readable visual display intended to encourage communication skill development in undergraduate students and early career agriculturists. Many of these students and professionals have not completed statistics courses, and so are unlikely to find more complex results useful or relatable.

## Results

Participants in the study ( $N = 103$ ) were members of undergraduate agricultural classes at Mississippi State University. They ranged in age from 18 to 27 years ( $M = 21.01$ ,  $SD = 1.14$ ), and consisted of 54 men (52.4%) and 40 women (38.8%). Nine participants (8.7%) did not report their gender. The majority of respondents were Caucasian/White (89%), and were also completing a degree in agriculture (94%).

### Objective 1

Objective one involved identifying and categorizing emotions that students experienced when communicating in an interpersonal setting. Results indicated that interpersonal communication with one other person evoked the most positive and least varied emotions of all the possible communication settings (Figure 1). There were 349 emotions reported in total for this setting. Respondents most commonly reported feeling "calm" ( $f = 70$ ), "relaxed" ( $f = 65$ ), "alert" ( $f = 55$ ), "contented" ( $f = 46$ ), and "happy" ( $f = 39$ ) when speaking with one other person.

When arranged along Posner et al.'s (2005) model, 91.40% of reported emotions were on the right, or pleasant, side of the graph. Of these, 54.15% were in the pleasant deactivation quadrant, and 37.25% were in the pleasant activation quadrant. Only 8.60% of responses fell on the unpleasant side of the graph. Thus, responses are very heavily skewed towards the right side of the model, with specific emphasis on the lower right side.

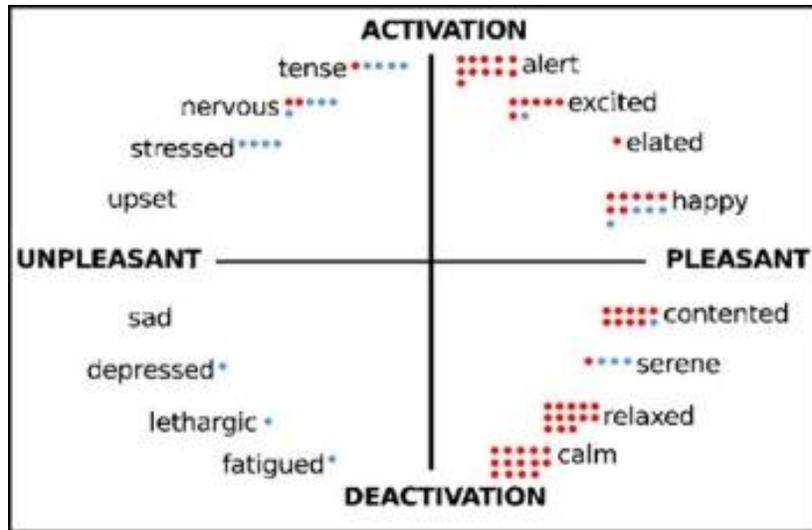


Figure 1. Interpersonal setting

Note. A red circle represent 5 participants, and a blue circle represents 1 participant.

## Objective 2

Objective two was concerned with identifying and categorizing the emotions students felt when communicating in small groups of 3-15 people. While this setting was similar to the interpersonal setting, a small increase in audience size brought with it small increases in emotional arousal and negative affect (Figure 2). The most commonly experienced emotions in small group settings were “alert” ( $f = 62$ ), “calm,” ( $f = 51$ ), “relaxed” ( $f = 42$ ), “contented” ( $f = 46$ ), and “nervous” ( $f = 34$ ). Of the 333 emotions reported overall, 76.28% were pleasant and 23.72% were unpleasant, a marked change from the 91.40% of pleasant emotions reported for interpersonal settings.

There was also a slight shift towards more activated emotions, with the largest area of growth occurring in the unpleasant activation quadrant (22.22% of responses). Still, the pleasant deactivation quadrant had the most emotions of all (42.34%), followed by the pleasant activated quadrant (33.93%), the unpleasant activated emotions (22.22%), and then the unpleasant deactivated quadrant (1.50%). When observed on the Circumplex Model of Affect, most responses still fell towards the lower right side, but a growing number of emotions could be found in both the top right and left quadrants.

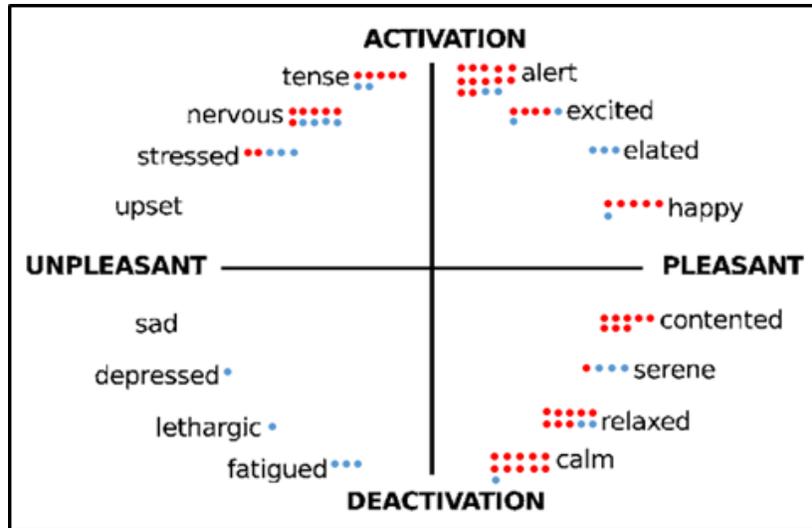


Figure 2. Small group setting.

Note. A red circle represent 5 participants, and a blue circle represents 1 participant.

### Objective 3

Objective three identified and categorized student emotions when communication occurred in a large group setting. For the purposes of this study, a large group was defined as an audience of 16 to 30 members. The progression from small group to large group brought about a noticeable change in emotion, once again in regards to increasing levels of activation and unpleasantness (Figure 3). The most frequently expressed emotions were “nervous” ( $f = 64$ ), “tense” ( $f = 61$ ), “stressed” ( $f = 52$ ), “alert” ( $f = 51$ ), and “calm” ( $f = 27$ ).

For large group communication, there were a total of 346 emotional responses provided. This time, a majority of responses fell in the unpleasant half of the model (56.07%), with 52.60% percent being unpleasant activated emotions and 3.47% being unpleasant deactivated emotions. The pleasant half of the model contained 43.93% of all responses, with a more even split between the pleasant activated quadrant (25.72%) and the pleasant deactivated quadrant (18.21%). The illustration of Posner et al.’s (2005) model for large group communication contrasts greatly with interpersonal and small group communication, as the spread of emotions skews heavily to the upper left quadrant.

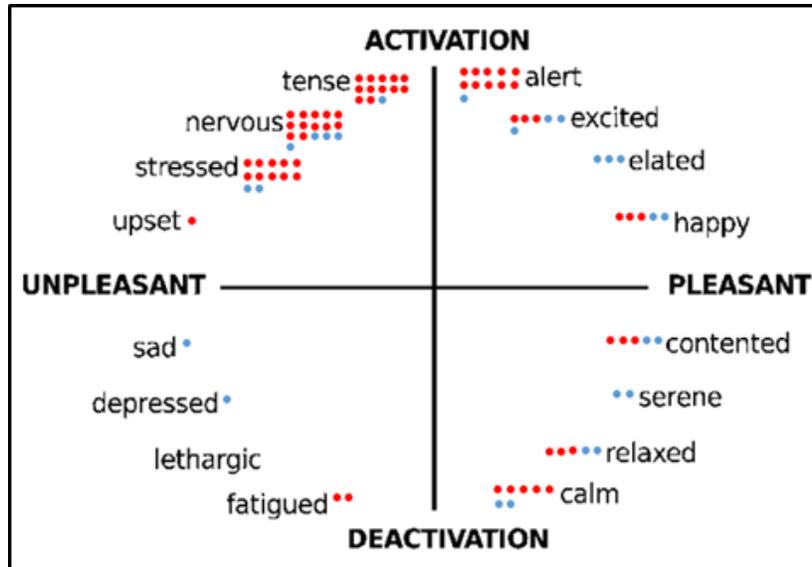


Figure 3. Large group setting.

Note. A red circle represent 5 participants, and a blue circle represents 1 participant.

#### Objective 4

The goal of objective four was to identify and categorize emotions that students experienced when communicating in a public speaking setting (Figure 4). The authors defined a public speaking setting as one in which a speaker communicates to an audience of 31 people or more. Responses for this setting continued the trend of increased audience size correlating with increased unpleasantness and heightened arousal. The emotions receiving the highest frequency of responses were “nervous,” ( $f = 75$ ), “tense” ( $f = 65$ ), “stressed” ( $f = 63$ ), “alert” ( $f = 49$ ), and, interestingly, “fatigued” ( $f = 15$ ). Public speaking was the first setting in which an unpleasant deactivated emotion received a high enough number of responses to be included on a list of the top five experienced emotions.

Public speaking received a total of 349 responses, with 68.48% falling in the unpleasant half of the model and 31.52% falling on the pleasant half. Of the unpleasant emotions, 60.74% were activated and 7.74% were deactivated, a dynamic which remained similar across all four settings. Pleasant emotions were again more evenly balanced, with 19.48% being activated and 12.03% being deactivated. When illustrated on Posner et al.’s (2005) model, emotions in the upper left quadrant easily dwarf the number of emotions seen anywhere else.

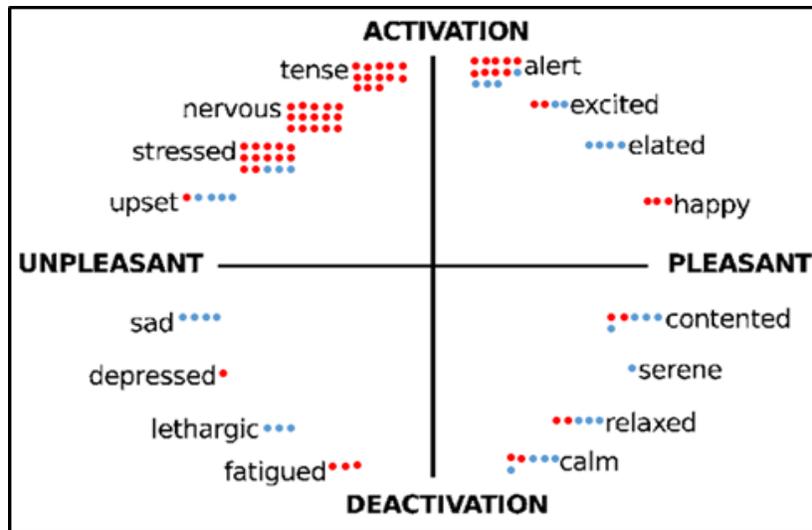


Figure 4. Public speaking setting.

Note. A red circle represent 5 participants, and a blue circle represents 1 participant.

## Conclusions

Results of this study demonstrate the effect of audience size on student emotion when communicating. As audience size grows, mostly pleasant and deactivated emotions progressively give way to the unpleasant and activated emotions. This change can be observed on Posner et al.'s (2005) model, where responses are noticeably seen to migrate from the lower right quadrant into the upper left quadrant as the number of listeners increases. Larger audience sizes also elicited a wider and more varied range of emotions overall. This agrees with McCroskey (2016), who found that communicators' emotions – specifically their anxiety levels – do vary based upon the characteristics of the particular audience at hand. Audience size is one specific part of what McCroskey (2016) called context anxiety, which concerns itself with the background against which communication takes place.

When examining the movement of emotion across the four communication settings, it becomes evident that students made a strong mental distinction between speaking with smaller audiences and larger audiences. Generally, as audience size increased, student emotions became more negative, activated, and fear-based. This agrees with McCroskey (2016), who notes “larger audiences typically [generate] more stage fright” (p. 50), and with the work of Harris (2017), who said “the larger the audience, the more threatening the situation may seem” (p. 27).

Interpersonal and small group communication settings were associated with pleasant and deactivated emotions, specifically “calm” and “relaxed.” This is likely because most day-to-day communication takes place in smaller, informal groups that do not make any one person the center of attention for long. Thus, students feel familiar with and largely unthreatened by the process of speaking to one person or a small group. They are able to easily speak and display emotions without the amygdala sensing danger and prompting an inappropriate response which makes communication difficult.

Communicating with larger groups is an entirely different experience, however. First, it is an unusual undertaking for many, as most people are not required to communicate to large groups on a regular basis. Second, it is much more formalized than communication with smaller audiences, and often requires a speaker to become the center of attention. Placing someone in a

situation where they are not practiced and where they feel observed (and perhaps judged) is an invitation for the amygdala to gain control. Communication anxiety is a common phenomenon, especially when speaking in a public setting where one's words and behaviors may be scrutinized (DeVries, 2019). Student responses agreed with this finding, showing that large group communication made them feel "tense," "nervous," and "stressed" – the exact opposite of emotions elicited by interpersonal and small group communication. These emotions are similar to what might arise in situations where a heightened response really was necessary, indicating that it can be difficult for inexperienced communicators' brains to emotionally differentiate between some speaking situations and real-life emergencies. This is not to say that these communicators are unable to consciously make such distinctions, but rather that their amygdala provides identical responses to a perceived threat. The fact that fear-related physical responses such as increased heart rate, light-headedness, tensed muscles, shallow breathing, and increased adrenaline production also support this finding (Whalen, 2006, p. 83).

"Alert" was a commonly-expressed emotion across all audience sizes. In interpersonal settings, this, coupled with more positive and deactivated emotions, primarily indicates that communicators recognized their role as active participants in the communication process. Remaining mentally aware of thoughts and behaviors, as well as of the background and progression of a conversation, can help a speaker communicate more effectively and appropriately across all channels. According to Harris (2017) and Whalen (2006), a small amount of alertness or nervousness during communication can also help a speaker come alive by sharpening one's performance and channeling passion. As audience size increased, however, speakers' brains became overly alert, progressing towards tense, as they sought out possible threats to life or limb. This reduces a speaker's effectiveness because focus is no longer on contributing appropriately to the conversation, but rather on preserving one's life and fleeing from a dangerous situation. Under such pressure, rational thought becomes difficult and one's behaviors less controlled (Sapolsky, 2004; Whalen, 2006). Audiences are also capable of recognizing this anxiety, and may feel uncomfortable or confused by the conflicting messages being presented (Whalen, 2006).

Asking students to consider their emotions in different communication settings can also help with their development of emotional intelligence. The first level of the emotional intelligence hierarchy focuses on perceiving and identifying emotions, and also on expressing those emotions in an understandable and appropriate way (Meyer et al., 2001; Brackett et al., 2019). This research asked students to consider how they felt in different communication situations, and then to give those feelings concrete, categorizable names that can be used for more effective expression, analysis, and discussion. This can help students reach higher levels of the emotional intelligence hierarchy by making visible the chains of cause and effect amongst emotions, situations, and relationships. For example, a student may realize that large audiences make them nervous, which in turn leads to poor body language and vocal expression, and then to an uncomfortable audience. Or they might realize how nervousness can be transformed into energy, creating a lively and captivating presentation (Whalen, 2006; Harris 2017).

They might also focus on the causes of the emotions they experience and begin identifying and harnessing more nuanced feelings that had previously gone unidentified. Factors which shape emotion are complex and often easy to miss or to misunderstand. McCroskey (2016) describes many independent factors influencing a speaker's anxiety, but notes that sometimes these factors can work together to create unique and complicated situations. One's overall emotional state can also consist of several more basic emotions compounded into a

greater whole. Labeling these factors by themselves can make it easier for students to recognize emotional triggers and stop emotions from feeding one another and growing out of control. From there, they can begin advancing to the fourth level of the emotional intelligence hierarchy, which is the level at which a person is able to effectively manage their feelings and behaviors in everyday life. Increasing one's emotional intelligence can help a person become more effective at expressing themselves and their needs, wants, and ideas both at home and in the workplace.

Effective communication through emotional management is one of the most fundamental skills that students must learn. Even if a student knows everything they should factually upon graduation, an inability to share knowledge and build relationships with others will make them unemployable. The world is increasingly connected and fighting for our attention. If students are to be successful, it is essential that they be able to recognize the emotions of themselves and others, and express their needs and ideas in an appropriate manner.

### **Recommendations for Future Practice**

Developing students' communication skills is an essential part of the education process. Educators can play a vital role in helping students develop the physical and emotional skills they need to express ideas clearly and efficiently in a professional setting. We make several recommendations to help facilitate this process.

First, teachers should help students become active communicators throughout the course of their education. Practicing communication in the classroom gives students a safe environment in which they may experiment with communication basics and receive constructive feedback on their abilities (Witt et al., 2006). Practice can also be an excellent method for helping students learn to manage overwhelming emotions (McCroskey, 2016; Harris 2017) and other outside circumstances that might make communication difficult (Witt et al., 2006).

Increasing the amount of communication required for students may have the added benefit of improving students' attitudes towards speaking to others. The results of this study show students largely felt negative emotions when asked about speaking to larger groups. While this is a natural response for many, it is also a hindrance to clear communication and can cause people unnecessary stress and anxiety. Repeated practice in a classroom setting normalizes formal communication and helps speakers realize there is no real physical threat to be fought or survived. Instead, unpleasant emotions can be dealt with more productively. Whalen (2006) describes experienced speakers learning to convert nervousness into a feeling of excitement that fuels communication instead of holding it back.

Educators must also help students become more aware of their emotional state and its effects on others. This is the first level of the emotional intelligence hierarchy, and it is a gateway to helping students become more effective communicators (Brackett et al., 2019). Educators should remind students that feeling nervous, anxious, or singled out when speaking is a natural response. All speakers, even great ones, still feel a little anxiety from time to time (McCroskey, 2016). It is a function of the brain and a universal human desire for self-preservation that makes us feel the way we do, and although it is not easy it can be overcome. If students want to excel as communicators, they must realize how they feel and then begin developing strategies for managing those emotions and recognizing when they can be made useful (Brackett et al., 2019).

## Recommendations for Future Research

This study sought to develop easily readable displays of students' typical emotional responses to communication situations. Future research should delve further into this topic, specifically reporting correlations between participant characteristics and emotional responses. It could also examine the relationships between emotional responses in each situation and determine if significant differences exist in the number of times each emotion was reported. These specifics could help researchers and educators understand more completely the relationship that exists between emotion and communication for students currently of college age.

Future research should also focus on how the information generated from this study affects students' emotions during verbal communication opportunities. For example, does knowledge of others' emotions and experiences impact one's own communication ability? This knowledge could be used to shape agricultural communications and education course curriculum, as mastery of emotion can lead to more impactful delivery and conveyance of vital information.

This study should also be repeated in other communications and agricultural communications programs to further explore the impact that communication has on students' emotional states. This study utilized a small sample of students from one university, and examining the same question at a wider scope could be impactful. Helping students realize that the emotions they feel when communicating are not unique to themselves – and perhaps universal – could be an important step to building better communicators for the American agricultural industry of the future.

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