

**The Thesis committee for Phoebe Long**

**Certifies that this is the approved version of the following thesis:**

**The Role of Self-Compassion  
in Student Communication Apprehension and Behavior**

**APPROVED BY**

**SUPERVISING COMMITTEE:**

---

Kristin Neff, Supervisor

---

Diane Schallert

**The Role of Self-Compassion  
in Student Communication Apprehension and Behavior**

by

**Phoebe Long, B.A.**

**Thesis**

Presented to the Faculty of the Graduate School  
of the University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

**Master of Arts**

The University of Texas at Austin

May 2015

**Abstract**

**The Role of Self-Compassion in Student Communication  
Apprehension and Behavior**

by

Phoebe Long, M.A.

The University of Texas at Austin, 2015

SUPERVISOR: Kristin Neff

Self-compassion refers to being kind to one's self, feeling connected to others, and being mindfully aware of one's experience during moments of difficulty. This study tested the hypothesis that self-compassion would be inversely related to student communication apprehension, or the tendency to experience anxiety in communication scenarios, and positively related to adaptive student communication behaviors such as question-asking, help-seeking, and out-of-class communication. A small but significant correlation between self-compassion and student communication apprehension and adaptive academic communication behaviors was found. In general, as college student self-compassion scores increased, communication apprehension scores decreased, and the likelihood that a student would ask questions, seek help, and speak with their instructor improved. Additionally, it was evident that students' concerns with being negatively perceived by others (fear of negative evaluation) and student beliefs in their ability to learn and perform (academic self-efficacy) mediated the relation between self-compassion and many of these communication variables. The results suggest that self-compassion may be a source of resilience throughout students' affective experiences and behaviors related to communicating with others. Although experimental research needs to be carried out to explore the causal connection between self-compassion and these communication variables, educators may want to consider including self-compassion practices in interventions and curriculum designed to decrease student communication apprehension and increase communication behaviors.

## Table of Contents

<b>Abstract</b>	<b>iii</b>
<b>Introduction</b>	<b>1</b>
<b>Literature Review</b>	<b>3</b>
<b>Student Communication Behavior</b>	<b>3</b>
<b>Student Communication Anxiety</b>	<b>6</b>
<b>Self-Compassion</b>	<b>12</b>
<b>Self-compassion, communication behavior and apprehension</b>	<b>17</b>
<b>Research Hypotheses</b>	<b>19</b>
<b>Method</b>	<b>24</b>
<b>Participants</b>	<b>24</b>
<b>Instruments</b>	<b>24</b>
<b>Procedures</b>	<b>28</b>
<b>Data Analysis</b>	<b>28</b>
<b>Results</b>	<b>30</b>
<b>Discussion</b>	<b>35</b>
<b>Appendices</b>	<b>41</b>
<b>References</b>	<b>47</b>

## Introduction

Recently, psychologists have become increasingly interested in the role emotions play in learning, such as how they consume students' attention, affect memory and comprehension, and facilitate effort and persistence in academic tasks (for a review, see Pekrun, Elliot, & Maier, 2006). Emotional experiences can also impact student communication behavior (Frymier, 2005). For example, feelings of fear or anxiety can prevent students from asking questions in class, seeking help when they need it, and approaching their instructors, behaviors that facilitate self-regulated learning, comprehension, and academic performance (Daly, Kreiser, Roghaar, 1992; Martin & Myers, 2006; Pedrosa-de-Jesus & Watts, 2012). Given the importance of communication in student learning processes and performance outcomes, it is necessary for educational research to address the emotions that may help or hinder students' productive academic communication.

Since the 1970's, a vast body of literature has explored a construct known as communication apprehension—"an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (McCroskey, 1978, p. 192). In academic contexts, student communication apprehension is associated with expectations for and fear of negative evaluations from others, low perceptions of one's communication and academic abilities, and reduced communication behavior (Daly, Caughlin, & Stafford, 1997; Richmond, 1997). However, while much research has described the correlates and consequences of student communication apprehension, significantly fewer studies have investigated resources that may aid students in the regulation of their sometimes-difficult emotional experiences. This study examines whether self-compassion, a type of self-to-self relationship that promotes self-

acceptance and feelings of social connectedness, can help mitigate student levels of communication apprehension and spur adaptive student communication behavior.

## **Literature Review**

### **Student Communication Behavior**

Student verbal communication plays a fundamental role in their learning and classroom performance. Many classroom activities require students to demonstrate both their effort and comprehension by participating in class discussions, giving presentations, and asking and answering questions. Such communicative tasks can be viewed as socializing students for life in U.S. society, which Richmond (1997) describes as “an almost continuous series of communication encounters” (p. 258). Additionally, as the socio-cultural theorist Lev Vygotsky (1978) wrote, learning is inherently social, and independent thinking often develops through interpersonal interaction. By demonstrating, through communicative acts, what they already know or do not yet understand, novice students portray to more knowledgeable teachers or peers how to help improve their comprehension (Fordham & Gabbin, 1996).

Over the past several decades, education and communication researchers have studied the intricate connection between student communication, learning processes, and student performance. Frymier (2005), for example, found students’ attention and interaction in the classroom, conversations with instructors outside of the classroom, and general communication competency to be positively related to their self-reported learning processes and motivation to study. Others have found that student question-asking, help-seeking, and out-of-class communication with instructors facilitates their learning and performance (Pedrosa-de-Jesus & Watts, 2012; Karabenick, 2003; Martin & Myers, 2006).

For example, student-initiated questions are associated with heightened interest and involvement (Newcastle, 1970) and increases in student motivation (Chickering, Gamson, Barsi, 1987) and knowledge (Gall, 1970). The process by which student-questions facilitate these

outcomes is outlined by Pedrosa-de-Jesus & Watts (2012), who write that the act of constructing a question necessarily involves a learner's awareness of the gap between their pre-existing knowledge and new information presented to them in the classroom. Deriving a question, then, signifies active involvement in the attempt to acquire new forms of information. The authors observe that the encouragement of student questions fosters creativity, collective comprehension, increased trust between teachers and students, and student agency in their own learning processes (Pedrosa-de-Jesus & Watts, 2012).

Seeking help from professors, tutors, and fellow students is another way student communication can facilitate their comprehension of course material and assignments. Inevitably, students will experience frustration and confusion in learning environments, particularly if they are being appropriately challenged. Adaptive help-seeking behavior is tied to student autonomy, self-regulated learning (Karabenick, 1998; Newman, 2000), motivation, and strategic learning (Alexitch, 1997; Ames, 1983; Karabenick & Knapp, 1991; Karabenick & Sharma, 1994; Schwalb & Sukemuni, 1998). Additionally, Karabenick (2003) found a positive, significant association between instrumental help-seeking and student self-efficacy, interest, and mastery achievement orientations. These findings show how adaptive help-seeking behaviors are associated with, and may facilitate, deeper learning and higher cognitive processing.

Finally, Frymier (2005) notes that effective students often interact with their professors outside the context of the classroom, a behavior researchers label "out-of-classroom communication" (OCC). She writes:

Students who seek clarification on material, discuss content, seek advice, or just "get to know" the instructor are likely to do better in the class because they are more engaged with the class and/or the instructor... Students who do not engage in OCC often stumble through assignments not really understanding what they are to do, or prepare for an exam not really understanding some of the content. (2005, p. 201).

The author found that OCC was significantly associated with student motivation to study and positive attitudes towards learning and coursework. Interestingly, an OCC item regarding speaking with one's instructor about content unrelated to the course was significantly associated with students' grades. Other studies have validated a connection between OCC and grades (Dobransky & Frymier, 2004), student motivation, and learning (Jaasma & Koper, 1999; Martin & Myers, 2006). Such findings show that even beyond the context of the classroom, student communication is associated with their learning processes and performance outcomes.

Although student communication behaviors inside and outside the classroom facilitate attaining both performance (grades, recognition) and mastery (clarification, competency development) goals, many students remain reluctant to ask questions or seek help when they are confused, participate in classroom discussions, and some may even avoid courses that require speeches or presentations (Beatty, 1987; Richmond, 1997). Understanding why students are reluctant to communicate is important for developing curriculum and interventions designed to encourage adaptive student communication behaviors. For example, do students fail to ask questions or seek help simply because they are not interested in course material, or are they silent for other reasons?

The public nature of the classroom (Doyle, 1986), self-image concerns, lack of belief in one's ability to learn (self-efficacy), and high levels of communication apprehension are just a few hindrances to adaptive student communication (Beatty, 1987; Cunconan, 2002). Dillon (1990) found one reason students fail to ask questions is that they fear other students or their teacher will respond to them negatively. Concerns about the self are also tied to reduced student question-asking and help-seeking behaviors. For example, students with low self-esteem were significantly less likely to ask questions in Daly, Kreisar, and Roghaar's study, which examined

questionnaires gathered from close to 25,000 students across the nation (1994). Students were also less likely to seek help if they felt they would be embarrassed (Shapiro, 1983) and more likely to seek help if they had high self-esteem (Karabenick & Knapp, 1991).

### **Student Communication Anxiety**

Student communication behavior is also influenced by individuals' predispositions towards communication in general (Martin & Myers, 2006; McCroskey, 2012). Researchers have studied why people communicate to varying degrees, or are likely to approach or avoid communication scenarios, using a variety of affective, cognitive, and behavioral constructs. These constructs include: communication apprehension, willingness to communicate, reticence, and predisposition towards verbal behavior (McCroskey, 2012). The affective experience of communication apprehension (anxiety or fear) will likely precede, or influence, an individuals' willingness to communicate, as well as the quantity of their verbal behavior (McCroskey, 1978; Richmond, 1997). Additionally, one's general tendency to verbalize (a behavior), as well as their willingness to communicate (a cognitive intention), likely influences their degree of their communication competency or reticence, as practice leads to skill development (McCroskey, 2012). The differences, similarities, and relations between these cognitive, behavioral, and affective communication constructs are important to note, as each have unique implications for treatment interventions. Communication apprehension will be highlighted in this paper because of the specificity with which it describes fear, nervousness, or anxiety as the cause of communication avoidance or withdrawal.

Support for distinguishing communication apprehension from other communication constructs is provided by McCroskey and Richmond (1982), who found that reduced communication can stem from a variety of causes. The researchers studied both self-report and

observer measures of shyness and communication apprehension. While observers could not distinguish shyness and communication apprehension from people's external behavior, individuals reported significantly different internal reasons for withdrawing from or avoiding communication. Shy behavior may stem from a variety of causes (i.e., low skills), whereas communication apprehension, very specifically, is the result of emotional fear. Similarly, Heiser, Turner, Beidel, and Roberson-Nay (2009) found that some self-identified shy participants experienced high levels of social phobia, while others did not. Both studies portray how varying internal experiences can manifest in the same external behavior.

The close connection between communication fear and communication behavior makes sense when one considers the theory that the experience of anxiety or fear is associated with the desire to avoid the anxiety provoking stimuli (Dumont, Nishida, & Nakayama, 2005). Indeed, individuals who experience high levels of communication apprehension, who feel fearful, nervous, or anxious when communicating or awaiting a communication scenario, are more likely than non-apprehensives to avoid situations that might require communication (Beatty, 1987; Daly, Caughlin, & Stafford, 1997). Additionally, if communication is unavoidable, such individuals' speech is quantitatively lower and qualitatively poorer than non-anxious individuals (Allen & Bourhis, 1996) and many experience "disrupted" speech, such as stammering and long pauses (Beatty, Dobos, Balfantz, Kuwabara, 1991, p. 55).

In the context of the classroom, which tends to require communicative action constantly, high levels of communication apprehension can hinder student communication behavior and negatively affect their learning. For example, highly apprehensive students tend to avoid interactive seats in the classroom (choosing seats on the edges or in the back), enrolling in small classes, and are less likely to use tutors when they need help (Fordham and Gabbin, 1996).

Additionally, high levels of communication apprehension are associated with students' reduced willingness to ask questions (Aitken & Neer, 1993) and demonstrate their knowledge by speaking in front of others (Richmond, 1997). Daly also notes that highly apprehensive people "feel more isolated in academic settings (Hurt et al., 1976) (and) feel they know fewer faculty members in college (McCroskey & Sheahan, 1978)" (1997, p. 39). It is likely that such feelings of isolation stem from reduced willingness to engage in communication behavior, such as out-of-class communication with instructors, as Martin & Myers found of highly apprehensive students (2006).

Student communication apprehension also negatively effects student academic performance. McCroskey reported that students who fear speaking learn less and perform academically below their peers, as indicated by standardized tests (ACT), college GPA,<sup>1</sup> and instructor evaluations of small classes (1977). And an important finding by Ericson and Gardner (1992) revealed highly apprehensive students were significantly more likely to drop out of college after their first year as compared to their peers who did not fear communication. Finally, Blume, Baldwin, and Ryan (2013) found that business students who feared communicating were less likely to take leadership initiative and less adaptable overall, important traits in a variety of high-paying professions. In sum, communication avoidance that is motivated by fear or anxiety (i.e., communication apprehension) has important implications for learning and success in both academic and professional contexts. Understanding how to reduce communication apprehension, and increase the student communication behavior that is associated with student motivation, interest, involvement, and performance, is one way educators can help improve student learning.

---

<sup>1</sup> Other, more recent, studies have found no significant differences in college GPA, however (Blume, Baldwin, & Ryan, 2013; Ericson & Gardner, 1992).

Variation in student levels of communication apprehension is likely due to a complex combination of biological and experiential factors, with some researchers privileging the former over the latter (Beatty et al., 1998; Gearhart & Bodie, 2012) and vice versa (Daly, Caughlin, & Stafford, 1997; Jones, 1994). For the biological side of the argument, Beatty et al. argue that, “trait communication apprehension (is) the manifestation of neurotic introversion in contexts requiring social interactions” (1998, p. 199). The authors found that together, neuroticism and introversion scores predicted 74.9% of the variance in CA scores (Beatty et al., 1998).

Neurobiological structures contribute to the expression of these personality traits and likely influence communication apprehension levels as well (Beatty et al., 1998). For example, psycho-biologists have found variation in the responsiveness and arousal thresholds of individuals’ limbic systems, a part of the brain linked to both the cognitive and behavioral components of emotion (Beatty et al., 1998). Individuals with sensitive limbic systems are more easily alerted to nuances in their environment, emotions of others, and are more vigilant of threat (Gray 1991), which is why they have a tendency to experience anxiety (Kagan, 1998). This “increased attentiveness towards external stimuli” can decrease cognitive capacity to perform socially and attend to necessary tasks (Gearhart and Bodie, 2012, p. 29). Limbic-system sensitivity, then, may explain why high-levels of communication apprehension are associated with lower levels of communication performance (Allen & Bourhis, 1996).

Behavioral reactions to the experience of anxiety throughout one’s lifetime are also thought to contribute to generalized communication apprehension levels. Beatty, Dobos, Balfantz, & Kuwabara (1991) tested a pathway model of communication apprehension and concluded that state anxiety and behavioral disruption (stammering, long pauses) while communicating each uniquely contributed to people’s generalized fear of speaking. The memory

of experiencing anxiety in communication situations and the embarrassment of not performing ideally may lead people to expect similar experiences in other communicative contexts. Often, the expectation one will experience anxiety is accompanied by the desire to avoid the anxiety-provoking stimuli (Duronto, Nishida, & Nakayam, 2005). However, as Friedrich, Goss, Cunconan, & Lane (1997) write, “avoidance patterns, over time, become habits. By continually avoiding communication situations, people reinforce their feelings that these situations are noxious. Communication apprehension thus becomes a vicious cycle—and a difficult one to break” (p.318). Behavioral avoidance of communication, then, is likely to strengthen communication apprehension.

In addition to biological and experiential factors, negative conceptions about the self contribute to high levels of communication apprehension as well. For example, self-esteem was strongly, negatively related to communication apprehension in a variety of student and community samples (range:  $-.52$  to  $-.72$ ) (McCroskey, Daly, Richmond, and Falcione, 1977). Similarly, McCroskey (1978) discovered a strong, negative relationship between self-acceptance and communication apprehension ( $-.52$ ). McCroskey et al. (1977) theorize that because people develop an image of themselves through their interactions with others, and because high communication apprehensives both avoid interaction and perceive themselves negatively during interaction, self-esteem and communication apprehension have a “reciprocally causal relationship” (p. 271).

Communication apprehension is also inversely related to other measures of self-regard, such as perceived competence and self-efficacy (Hopf & Colby, 1992; Rubin, Rubin, & Jordan, 1997). Self-efficacy describes the 1) belief in one’s ability to perform a particular skill and 2) confidence that the action one takes will lead to a desirable outcome (Bandura, 1982). Bandura

predicted that if one believed their skills were insufficient for the demands of a task, they would experience anxiety. Indeed, Hopf and Colby (1992) found a negative correlation (-.41) between the self-efficacy subscale of the Gecas (1971) self-esteem measure and interpersonal communication apprehension. Rubin et al. (1997) also reported several findings of a negative relation between communication apprehension and the “Self-Perception of Communication Competence” self-report questionnaire (range -.42 to -.63). Finally, Daly et al. (1997) summarize numerous research findings depicting the relation between communication apprehension and negative perceptions of one’s communication skills and ability to produce desirable outcomes (the two main components of self-efficacy):

highly apprehensive individuals...underestimate their ability in and quality of speaking when compared with observer ratings (Gilkinson, 1943);...expect less success when speaking (Miller, 1987);... are less satisfied with their abilities to express self, to lead, to meet people, and to make decisions (Crozier, 1979)... feel they fail to meet audience expectations (Ayres, 1986);...perceive the same evaluative feedback more negatively (Smith & Sarason, 1975); (and) expect more negative evaluations (Daly, Vangelisti, & Lawrence, 1989) (p.38-39).

The authors summarize the powerful role of negative self-beliefs in maintaining communication anxiety: “highly anxious individuals make attributions that tend to confirm their anxiety, thus preventing them from incorporating positive experiences into their lives” (Daly et al., 2007, p. 39). Because low expectations for one’s ability to carry out a task is unlikely to motivate a person to approach the task, low self-efficacy likely influences communication avoidance tendencies that reinforce anxiety in communication contexts (Friedrich et al., 1997). Such a relation portrays the powerful link between self-perceptions, emotion, and behavior.

Interventions that aim to decrease high levels of communication apprehension among students, and increase communication behavior, must address the self-concept, experiential, and biological components of communication apprehension including 1) the negative lens of self-

perceptions 2) the necessity of approaching, rather than avoiding, communication and 3) the physiological response of nervousness, anxiety, and fear that distinguishes communication apprehension from other communication constructs. One factor that may be important to consider with regard to such interventions is self-compassion.

### **Self-Compassion**

The construct of “self-compassion” was introduced to the field of psychology relatively recently by Neff (2003b). She derived the concept from the Buddhist understanding of the self as intricately connected to and affected by its surroundings. Self-compassion shares a number of similarities with other self-concepts, such as self-esteem and self-efficacy, in that it describes positive regard for oneself. However, in contrast to representational understandings of the self (the levels of which can be increased or decreased by positive or negative evaluations of one’s performance), self-compassion refers to a consistently kind orientation towards one’s lived experiences, regardless of whether or not they are positive or serve to enhance one’s self-image (Neff, 2003a). Additionally, self-compassion is defined as being a response to moments of suffering. The three dimensions of self-kindness, common humanity, and mindfulness, comprise self-compassion (Neff, 2003a).

First, self-kindness denotes an attitude of goodwill directed towards the self. When compassion is felt for others, rather than blaming those who suffer for the predicament they find themselves in, people typically adopt a benevolent and accepting attitude towards others’ experiences of pain. Self-kindness refers to taking a similar stance towards oneself, by, for example, understanding the multitudes of factors that led to the moment of suffering (Neff, 2003a). Alternatively, one might reprimand oneself for failing to perform up to an ideal

standard—for a quivering voice during a speech, for instance. Such self-judgment is the opposing dimension of self-kindness.

The second dimension of self-compassion, common humanity, further distinguishes self-compassion from self-esteem. Painful feelings of inadequacy or hardship can be met with an accepting attitude if one understands that such experiences are inherent to the human condition. Additionally, rather than feeling isolated, in moments of distress, individuals may feel a deeper sense of connection with other people if they can remember that everyone experiences suffering just as they do. Neff, Kirkpatrick, and Rude (2007) further elaborate on the link between self-kindness, common humanity, and an interconnected sense of self:

Self-compassion...provides positive self-affect and a strong sense of self-acceptance. However, these feelings are not based on performance evaluations of the self or comparisons with others. Rather, they stem from recognizing the flawed nature of the human condition, so that the self can be seen clearly and extended kindness without the need to put others down or puff the self up (p. 140).

Here Neff et al. describe how through self-compassion, connection to the rest of humanity is felt as an inherent aspect of human existence, in contrast to the belief that a certain level of performance, or other contingent factors (communication skill), is required to feel accepted by others. Because of common humanity, self-compassion also promotes positive regard for oneself that is not derived from evaluations deeming the self separate from or better than others.

The third component of self-compassion, mindfulness, contributes distinctly to the construct and is also necessary for the enactment of both self-kindness and common humanity (Barnard & Curry, 2011). Mindfulness entails observing one's thoughts, emotions, and perceptions with a perspective that is balanced, non-reactive or judgmental, and open (Neff,

2003b). Here, Neff's point that mindfulness is fundamental to self-compassion is important to highlight:

In order for individuals to fully experience self-compassion, they must adopt a mindful perspective: They must not avoid or repress their painful feelings, as it is necessary to acknowledge one's feelings in order to feel compassion for them, but they must not become over-identified with their feelings either, as a certain amount of "mental space" (Scheff, 1981) is necessary to extend oneself kindness and recognize the broader human context of one's experience (2003b, p. 224).

Mindfulness promotes an observant perspective during moments of difficulty, a middle point between over-identification with and avoidance of the painful experience. Such awareness can create space for people to shift what may be a habitually critical internal monologue to a more accepting one.

Not surprisingly, self-compassion is significantly associated with a variety of positive learning indicators, including students' perceptions of their academic competency, mastery achievement goals (Neff et al., 2005), and the desire to improve following a failure (Breines & Chen, 2012). As Claxton (1991) notes, learning necessarily involves risk-taking and "moving out from the safety of the known into the unknown" (p. 99). Self-compassion may be an important, stable internal resource students can draw from throughout the sometimes-unpredictable and uncomfortable process of learning.

One example of how self-compassion is associated with an adaptive academic outlook is in the construct's positive relationship with student self-efficacy and perceived competency (Iskender, 2009; Neff, Hsieh, & Dejitterat, 2005). Student perceptions about their own skills and abilities to produce favorable outcomes play an important role in their effort, persistence, and willingness to approach academic tasks (Baldwin, Baldwin, & Ewald, 2006; Bandura, 1997). This is likely why self-efficacy is positively associated with both general and specific academic achievement (for a review see Iskender, 2009). Neff et al. (2005) write that the positive

relationship between self-compassion and perceived academic competence is likely due to that fact that self-compassion facilitates a “balanced perspective of [one’s] shortcomings” through mindful awareness rather than over-identification (p. 267). On the other hand, reacting to failures with feelings of shame (an example of over-identification) is associated with lower levels of self-efficacy (Turner, Husman, & Schallert, 2002).

Neff et al. (2005) found that greater perceived competency and lower fear of failure associated with self-compassion mediated the relationship between self-compassion and mastery-oriented achievement goals. Students with mastery-goals tend to be curious and intrinsically motivated, i.e. learning for the enjoyment of learning, and unself-conscious of their mistakes (Neff et al., 2005). In contrast, self-compassion was negatively related to performance goals, which include displaying one’s level of ability to onlookers (teachers, peers) and comparing oneself to others (Karabenick, 2003).

Additionally, when students experience failure, self-compassion helps facilitate an adaptive response. In an experimental study, Breines and Chen (2012) found that, compared to a self-esteem condition and a control group, participants who reflected on a mistake they had made self-compassionately were more likely to report a desire to improve themselves. The self-compassion prompt was also significantly associated with more time spent studying after failing a test. Self-compassion may fortify resiliency and an approach/growth orientation towards tasks because, as the authors summarize, such a viewpoint promotes an accurate understanding of when and where one can improve, without either overly criticizing oneself or overly enhancing oneself to maintain a positive self-image (Breines & Chen, 2012).

Self-compassion is also significantly related to a variety of personality traits that are relevant to student communication behavior and anxiety, including extraversion (.32) and

neuroticism (-.65) (Neff et al., 2007). Neff et al. suggest two possibilities for the significant relation between extraversion and self-compassion scores: the self-compassionate may feel more socially connected (from high common humanity scores) and also may not be overly concerned about what others think of them, “a concern that can lead to shy and withdrawn behavior” (2007, p. 913). Also, the high negative relation between self-compassion and neuroticism replicates MacBeth and Gumley’s (2012) meta-analysis, which found a strong, inverse relation between self-compassion and psychopathology symptoms. Self-compassionate people may respond more adaptively to internal and external difficulty, making the construct a protective factor during difficult life events (Terry, Leary, & Mehta, 2012).

Self-compassion is also inversely related to the specific psychopathology Social Anxiety Disorder (SAD) (Werner, Jazaieri, Goldin, Ziv, Heimberg, Gross, 2012). SAD and communication apprehension share numerous correlations, which are summarized in Werner et al.’s (2012) statement that individuals with SAD, “view the social world through a lens which emphasizes excessive negative self-judgment” (p. 544). The authors theorize that SAD may be maintained because people lack the positive dimensions of self-compassion, such as the ability to keep a balanced perspective (mindfulness) when they feel they have failed to live up to the very high social standards they set for themselves.

The “negative cognitive biases” about one’s abilities and other’s evaluations of oneself that are associated with SAD (Werner et al., 2012, p. 551) and communication apprehension likely have a neuro-biological origin (Beatty et al., 1998) that self-compassion may help target. Gilbert (2006) theorizes that people who consistently feel ashamed of themselves, believing they are unacceptable from the standpoint of others or in relation to their own high standards, are more vigilant of threat and criticize themselves, or withdraw, in order to feel safe from others’

rejection. Such individuals experience both external and internal worlds as sources of shame and lack a safe, inner world to retreat to during moments of difficulty.

Alertness to potential sources of threat, as well as the ability to reassure oneself, are influenced by neurobiological systems (which respond to signs of both threat and affiliation) and early childhood experiences. If a child lacks a model that can demonstrate appropriate self-reassurance, Gilbert & Procter write:

The threat systems for these children may be over-stimulated (Perry et al., 1995), making them more sensitive to threat and less emotionally regulated—in part because they may not have soothing experiences/memories that form the foundation for self-soothing (2006, p. 356).

Thus, self-compassion should provide the self-soothing necessary to quell anxiety when the threat system is evoked, which in turn should help improve communication behavior and reduce communication-related anxiety.

### **Self-compassion, communication behavior and apprehension**

The research outlined above suggests self-compassion may be positively related to adaptive student communication behavior, such as question-asking, help-seeking, and out-of-classroom communication. Asking questions in classrooms can be a vulnerable experience for students, because it exposes their levels of understanding in a public setting and in front of their peers (Cunconan, 2002; Doyle, 1986; Pedrosa-de-Jesus & Watts, 2012). Adaptive help-seeking behavior is also hindered by students' concern with their self-image and low-levels of self-esteem (Karabenick, 2003; Martin & Myers, 2006). In contrast, students who are highly self-compassionate feel warmly towards themselves, regardless of the outcomes of their actions, and feel connected to others during moments of difficulty. These qualities of self-compassion are likely to reduce concerns with potential threats to one's self-image (the fear of sounding dumb when asking a question in class or seeming incompetent when asking for help). Indeed,

researchers have found the highly self-compassionate are less likely to hold self-image concerns (Crocker, Canevello, Breines, & Flynn, 2010) or fear failure (Neff et al., 2005). Additionally, in the same way students in Breines and Chen's (2012) study spent more time studying after failing a test under a self-compassion prime, the "realistic self-appraisal" self-compassion engenders through self-kindness may move students to ask questions or reach out for help from others in order to grow and improve (p. 1134). In sum, it is likely that self-compassion is associated with communication behavior that leads to increased knowledge, skill development, and social connection (Frymier, 2005).

Self-compassion may also be associated with reduced student communication apprehension levels. In contrast to the three dimensions of self-compassion (self-kindness, common humanity, and mindfulness) students who experience high levels of communication apprehension are likely to be highly self-critical, feel isolated and lonely, and avoid scenarios that may require communication (Beatty, 1987; Daly et. al., 1997; Richmond, 1997). Feelings of warmth directed towards the self decrease critical ruminations about one's abilities (here, communication), which may exacerbate levels of anxiety and fears of failing at communication attempts. Being kind to oneself may also be a "self-soothing" mechanism during anxiety provoking situations (such as speaking in class) (Gilbert & Procter, 2006). Similarly, the dimension of common humanity may enable students to understand that people are rarely perfect in their speech or spontaneous conversations with others, reducing overly high expectations for oneself that contribute to feelings of anxiety (Rappee & Heimberg, 1997). Finally, students who are mindfully aware of their experiences may be less likely to over-identify with either their state experiences of apprehension or the relative success or failure of their communication. The objectivity promoted through mindfulness could allow students to orient themselves towards

approaching, rather than avoiding, anxiety provoking situations such as communicating. For this reason, self-compassionate students may be less likely to avoid or withdraw from communication, behaviors that reinforce communication apprehension (Friedrich et al., 1997).

In sum, self-compassion has positive implications for both mitigating levels of communication apprehension and spurring adaptive student communication behavior, such as question-asking, help-seeking, and out-of-classroom communication. However, preliminary research regarding the connection between communication variables and self-compassion, and the mechanisms through which they are related, is currently missing in the literature.

The present study was designed to examine the relationship between self-compassion and student communication behavior and apprehension. Information was collected about students' tendencies to ask questions, seek-help, and communicate beyond the context of the classroom with their instructors. Additionally, information about students' levels of both general and classroom specific communication apprehension was collected. Students also reported their levels of self-compassion, academic self-efficacy, and tendencies to fear negative evaluation from others.

### **Research Hypotheses**

Hypothesis One: Self-compassion will positively predict adaptive student communication behaviors, including question-asking, help-seeking, and out-of-class communication with instructors.

Rationale: Student communication in the form of question-asking and help-seeking is hindered by self-image concerns, such as fear of embarrassment, concern with others perceptions of their capability as a student, as well as generally low feelings of self-worth (Cunconan, 2002; Karabenick, 2003; Shapiro, 1983). Because self-compassion generates positive feelings of self-

regard, not contingent on social comparison or approval, and lessens over-identification with the outcomes of one's actions, students with higher levels of self-compassion may be less fearful of asking questions in front of their classmates or seeking help when they need it (Crocker et al., 2010). Feelings of warmth directed towards the self may also allow students to perceive themselves more clearly, including areas in their comprehension or skillset that may need to be improved (Breines & Chen, 2012). Additionally, because self-compassion generates feelings of social connection, students with higher levels of self-compassion may be more likely to visit with their instructors outside the context of the classroom.

Hypothesis Two: Self-compassion will negatively predict general and classroom specific communication apprehension.

Rationale: Students with high levels of communication apprehension tend to be highly critical of their own communication skills and to fear negative responses from others when they do choose to communicate (Daly et al., 1997). It is likely that these expectations exacerbate, if not cause, communication apprehension. By contrast, self-compassion promotes a kind response towards the self, regardless of the outcome of one's actions. This internal, unfailing source of kindness may act as a physiological "soothing" mechanism, promoting feelings of affiliation (acceptance from others) and decreasing feelings of anxiety (Gilbert & Procter, 2006; Neff et al., 2005; MacBeth & Gumley, 2012). The mindful component of self-compassion may also help students not to ruminate on flaws in their communication attempts, a tendency that is associated with communication apprehension and likely increases levels of anxiety (Daly et al., 1997).

Hypothesis Three: Self-compassion will be more strongly associated with communication apprehension than student communication behavior.

Rationale: Communication researchers highlight the importance of distinguishing the cause of reduced communication (i.e. anxiety vs. low-skill or interest) from the manifestation of communication behaviors (McCroskey, 2012). Self-acceptance, which is infused in self-compassion as a construct, may be more strongly related to feelings of anxiety or fear associated with communicating (communication apprehension) than communication behavior, which can be motivated or hindered by a variety of sources (i.e., interest).

Hypothesis Four: Fear of negative evaluation will mediate the relationship between self-compassion and the communication variables of interest (question-asking, help-seeking, out-of-classroom communication, and general and classroom-specific communication apprehension).

Rationale: Fear of negative evaluation refers to a persistent concern with being perceived unfavorably by others. Because self-compassion fosters feelings of kindness directed towards the self, the self-compassionate may have less reason to believe others would evaluate them negatively. Additionally, mindfulness likely lessens the tendency to over-identify with other people's perceptions of oneself. Finally, the common humanity component of self-compassion strengthens feelings of social connection. Such a sense of affiliation may decrease concerns with potential signs of threat to one's self-image. Indeed, previous research has found self-compassion to be negatively associated with social comparison, public self-consciousness, (Neff & Vonk, 2009), and fear of negative evaluation (Werner et al., 2012).

Many researchers have pointed out that students' concern with their self-image is negatively related to their communication behavior—fear of teachers and students responding negatively limits student question-asking (Cunconan, 2002), perceptions of threat to one's image as an intelligent student limits help-seeking (Karabenick & Knapp, 1991). Additionally, it is likely that fearing a negative response from one's instructor would limit students' willingness to

communicate with their instructor outside of the classroom. Fear that others will judge one negatively is also centrally associated with both general and classroom specific communication apprehension (Daly et al., 1997; Neer & Kircher 1989).

In sum, it is hypothesized that the relationship between self-compassion and student communication behavior and apprehension is partly due to the reduced fear of negative evaluation engendered by the three dimensions of self-compassion (self-kindness, mindfulness, and common humanity). Increased self-compassion is expected to lead to decreased fear of negative evaluation, which in turn will lead to increased student communication behavior and decreased student communication apprehension.

Hypothesis Five: Academic self-efficacy will mediate the relationship between self-compassion and communication variables (question-asking, help-seeking, out-of-class communication, general and classroom-specific communication apprehension).

Rationale: Academic self-efficacy refers to students' beliefs that they can learn and perform well. Previous research has shown a positive relation between self-compassion and general self-efficacy, likely because a kind attitude towards the self does not undermine one's perceptions of their own ability (Iskender, 2009; Neff et al., 2005; Smeets et al. 2014). In regards to communication behavior, self-efficacy is associated with approaching and persisting in a task (Bandura, 1982). Students' beliefs that they can perform and learn well may motivate them to ask-questions, seek help, or speak with their instructors. Indeed, low-feelings of self-efficacy are negatively related to student communication behavior (Martin & Myers, 2006; Martin, Valencic, & Heisel, 2002).

Additionally, general and communication specific self-efficacy is negatively related to both general and classroom specific communication apprehension (Hopf & Colby 1992; Neer &

Kircher, 1989). Students who lack faith in their abilities to communicate are more likely to believe that they will fail in their communication attempts, a perception that is associated with communication apprehension (Richmon, 1997). While research has not yet examined the relation between communication apprehension and academic self-efficacy in the academic realm, lacking belief that one can learn and perform well will likely contribute to one's apprehension about communicating. Thus, it is hypothesized that the relationship between self-compassion and student communication behavior and apprehension will be influenced by the increased perception of competency in the academic domain self-compassion engenders through feelings of positive self regard. It is expected the increased self-compassion will lead to increased self-efficacy in the academic domain, which in turn will lead to increased student communication behavior and decreased student communication apprehension.

## Method

### Participants

Participants were recruited from an undergraduate educational psychology subject pool at a large, southwestern university. They received one hour of study participation credit in exchange for their time. 262 surveys were filled out; however, 28 were discarded due to missing responses to one or more questionnaires, leaving 234 surveys used in the final analysis. 204 participants provided information about their age, which ranged between 18 and 39 ( $M=21.27$ ,  $SD=2.65$ ). The majority of participants were undergraduates ( $n=226$ ), 3 were graduate students, and 5 were continuing education students. 233 participants provided information about their first generation college status: 12.4% of these were the first in their family to attend college ( $n=29$ ), while the rest ( $n=204$ ) were not. Finally, 55.6% of participants classified themselves as White or European American, 21.4% were Asian or Pacific Islander, 14.1% were Hispanic or Latino, 5.1% were Black or African American, and 1 (.4%) was Native American. 8 (3.5%) participants identified themselves as “other.”

### Instruments

**Academic Self-Efficacy.** The Self-Efficacy in Learning and Performance subscale of the Motivated Strategies for Learning Questionnaire (ASE: Pintrich et. al, 1991) was used to assess self-efficacy in the academic environment. Participants respond to 7-items using a 7-point likert scale (1=not at all true of me, 4=somewhat true of me, 7=very true of me). The scale was revised slightly to assess participants’ perceptions of their ability to learn and perform during the semester they responded to the survey, rather than in the context of a particular class. For example, “I believe I will receive an excellent grade in this class,” became, “I believe I will receive excellent grades this semester.” Other item examples include, “I’m confident I can

understand the most complex material presented by my instructors this semester” “I'm certain I can master the skills being taught in my classes this semester.” Internal reliability for this subscale was  $\alpha=.93$ .

**Communication Apprehension.** The Personal Report of Communication Apprehension (PRCA: McCroskey, 1997) measures one's general tendency to experience communication apprehension in a variety of contexts including group discussions, meetings, in dyads, and when giving a speech. 6 items for each of the 4 subscales result in a 24-item questionnaire. Participants respond to items using a 5-point likert scale (1=strongly agree, 3=neutral, 5=strongly disagree), and higher total scores indicate higher levels of traitlike communication apprehension. Examples of items include, “I am tense and nervous while participating in group discussions,” “I am afraid to express myself at meetings,” “I have no fear of speaking up in conversations” and “My thoughts become confused and jumbled when I am giving a speech.” Subscale scores are obtained by adding or subtracting items to a baseline score of 18 (depending on their wording); a total score is obtained by adding the subscale scores together. For this study, internal reliability was  $\alpha=.95$ .

**Communication Apprehension in the Classroom.** The Classroom Apprehension about Participation Scale (CAPS: Neer, 1987) measures communication apprehension in classroom environments. Although the CAPS is highly correlated with the PRCA, the dimensions it measures are somewhat different. CAPS items garner information about individuals' tendency to avoid communication, their apprehension about being evaluated in the classroom (by other students and teachers), and perceptions of their own communication competence and communication confidence in the context of the classroom. Neer and Kircher (1989) describe the CAPS as measuring “a perceived skills deficit rather than nervous discomfort as measured by the

PRCA” (p. 74). Examples of items include, “I avoid enrolling in classes that I think require class participation,” “I don’t like speaking in class even when I think I know an answer to a question asked by an instructor,” “I am often afraid that the instructor or the class may not understand what I am trying to say during discussion,” and “I like speaking during class discussion because most students listen to what I say” (reverse scored). Responses are given on the same 5 point likert scale used to measure the PRCA. While typically the scale is composed of 20 items, one item in this study was dropped from analysis in order to increase the internal reliability of the scale (to  $\alpha=.8$ ). Item responses are summed for a total score. Higher scores indicate higher levels of classroom communication apprehension.

**Fear of Negative Evaluation.** The Brief Fear of Negative Evaluation scale (FNE: Leary, 1983) contains 12 items that assess the degree to which respondents worry about how others perceive them. Each item is responded to on a 5-point likert scale (1=not at all characteristic of me, 3=moderately characteristic of me, 5=extremely characteristic of me), and examples include, “When I am talking to someone, I worry about what they may be thinking about me” and “I often worry that I will say or do the wrong things.” For this study, internal reliability was  $\alpha=.92$ . Item responses were averaged for a total score.

**Help-Seeking.** The Help-Seeking subscale of the Motivated Strategies for Learning Questionnaire (HS: Pintrich et. al, 1991)—assesses help-seeking behavior using 4-items, including, “When I can't understand the material in my courses, I ask another student for help” and “I ask the instructor to clarify concepts I don't understand well.” After analyzing internal reliability of the scale, the first item was dropped from the total score to increase scale reliability from  $\alpha=.3$  to  $.67$ .

**Out-of-Classroom Communication.** The Out-of-Classroom Communication Scale (OCC: Knapp & Martin, 2002) scale is composed of 9-items that assess the tendency of respondents' to speak with their instructors outside of the classroom (during office hours, in public, off campus) (Knapp & Martin, 2002; Martin & Myers, 2006). Respondents indicate their level of agreement with statements using a 5-pt likert scale (1=strongly disagree, 5=strongly agree). After reverse scoring negatively worded items, responses are averaged, and higher scores indicate a higher tendency to speak with instructors outside of the classroom environment. Internal reliability was  $\alpha=.86$  in this study.

**Question Asking.** Student Propensity to Ask Questions (SPAQ: Cunconan, 2002) is measured with 12 items. Respondents indicate their agreement with item statements using a 5-point likert scale (1=strongly disagree, 5=strongly agree). The scale assesses both behavior and affective components of asking questions in class such as, "I usually don't voluntarily ask questions in class" and "I have a fear of asking questions in class." Negatively worded items are reverse coded (5=strongly disagree) and item scores are averaged to create a total score. Higher scores indicate a higher tendency to ask questions in class. Internal reliability was  $\alpha=.88$  in this study.

**Self-Compassion.** The Self-Compassion Scale (SCS: Neff, 2003) analyzes 6 dimensions that compose the construct (or 3 opposing dimensional pairs): self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification. Participants are asked to respond to each of the 26 items on a 5 point likert scale (1=Almost Never, 3>About Half the Time, 5=Almost Always). Item examples include, "When I'm feeling down I try to approach my feelings with curiosity and openness" (mindfulness), "When I'm feeling down I tend to obsess and fixate on everything that's wrong" (over-identification),

“When things are going badly for me, I see the difficulties as part of life that everyone goes through” (common humanity), “When I’m feeling down, I tend to feel like most other people are probably happier than I am” (isolation), “I try to be loving towards myself when I’m feeling emotional pain” (self-kindness), and “When times are really difficult, I tend to be tough on myself” (self-judgment). For a total score, negative items are reverse scored and sub-scales are averaged to obtain a total score for the scale in question. Internal reliability for this study was  $\alpha=.92$ .

## **Procedures**

The Institutional Review Board for the Protection of Human Subjects (IRB) approved the study. Educational psychology human subject pool participants signed up for the study through the online SONA system. A URL link took participants to an online description of the study and a consent form administered through Qualtrics. After agreeing to participate, subjects were asked for demographic information, including their age, status in school, GPA, ethnicity, and socio-economic background. They then responded to the instruments outlined above.

## **Data Analysis**

The research questions were analyzed using correlation and sequential regression analyses. P-values of significance were predetermined at  $\leq .05$ . Preliminary analysis of the data was conducted to assess whether the necessary assumptions associated with correlation and regression were met, such as linearity, normality, and the lack of multicollinearity (Miles & Shevlin, 2001). First, surveys were analyzed for missing data to ensure the accuracy of individual composite scores on each instrument. After removing participant data that were missing responses to at least one entire survey, the remaining missing items were analyzed to determine if they were missing completely at random (MCAR). The MCAR test portrayed there

was no particular reason items were missing (for example, participant characteristics). Following Roth, Switzer, and Switzer's (1999) suggestion for multi-item missing data, missing items in measures that were summed for a total score were replaced with the average of the subscale (for multidimensional scales) or the total scale (for unidimensional scales). Missing items were not replaced in total scores that were averaged, so long as no more than 2 items were missing. Additionally, all total scores were normally distributed (skewness and kurtosis levels were less than +/-1). Scatterplots portrayed linear relationships between the variables of interest.

## Results

Means, standard deviations, and ranges for all measures are presented in Table 1.

Intercorrelations between all measures are presented in Table 2.

Table 1

*Scale Statistics: Range, Mean, and Standard Deviation*

<u>Scale</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>
SCS	1.15-4.8	2.98	.68
PRCA	24-120	70.32	17.54
CAPS	31-80	57.95	9.7
SPAQ	1-4.2	2.71	.7
HS	1-7	4.52	1.21
OCC	1-4.3	2.62	.72
ASE	1.38-7	5.35	1.04
FNE	1-5	3.16	.84

SCS: Self-Compassion Scale; PRCA: Personal Report of Communication Apprehension; CAPS: Classroom Apprehension about Participation Scale; SPAQ: Student Propensity to Ask Questions; OCC: Out-of-Class Communication; HS: Help-Seeking; ASE: Academic Self-Efficacy; FNE: Fear of Negative Evaluation

Table 2

*Scale Intercorrelations*

	1. SCS	2. PRCA	3. CAPS	4. SPAQ	5. OCC	6. HS	6. ASE	7. FNE
1. SCS	1							
2. PRCA	-.26***	1						
3. CAPS	-.19**	.70***	1					
4. SPAQ	.16*	-.70***	-.74***	1				
5. OCC	.23***	-.37***	-.34***	.38***	1			
6. HS	.16*	-.31***	-.26***	.36***	.42***	1		
6. ASE	.16*	-.28***	-.3***	.22***	.07	.21***	1	
7. FNE	-.48***	.47***	.38***	-.37***	-.23***	-.16*	-.15*	1

$N=234$ ; \*\*\*= $p<.001$ , \*\*= $p<.01$ , \*= $p<.05$

SCS: Self-Compassion Scale; PRCA: Personal Report of Communication Apprehension; CAPS: Classroom Apprehension about Participation Scale; SPAQ: Student Propensity to Ask Questions; OCC: Out-of-Class Communication; HS: Help-Seeking; ASE: Academic Self-Efficacy; FNE: Fear of Negative Evaluation

In regards to hypotheses one and two, as shown in Table 2, self-compassion was significantly correlated with all the communication variables of interest (general and classroom communication apprehension, question-asking, help-seeking, and out-of-class communication) ( $p < .05$ ). All effect sizes were small, however, according to Cohen's criteria (Cohen, 1988).

Hypothesis three, that self-compassion was significantly more correlated to measures of communication apprehension than measures of communication behavior, was examined using Lee and Preacher's (2013) method for testing significant differences in the strength of correlations from the same sample. First, data were transformed into z-scores, then contrasts compared the strength of correlations between self-compassion and the two types of communication apprehension (general and classroom specific communication apprehension) versus the three types of behaviors (question-asking, help-seeking, and out-of-classroom communication). Of these 6 comparisons, self-compassion was significantly more strongly correlated to general communication apprehension than student question-asking ( $p < .05$ ), but no other comparisons were significant.

Hypotheses four and five examined whether fear of negative evaluation and academic self-efficacy would mediate the relationship between self-compassion and the communication variables described above. Baron & Kenny (1986) write that mediation occurs when (a) the predictors and outcome variables are significantly related; (b) the predictors and mediating variables are significantly related; and (c) the mediating variables are significantly related to the outcome variables and also significantly reduce the relation between the predictor and outcome variables when all variables of interest are included in the same model. Full mediation occurs when the mediator reduces the relation of the predictor and the outcome variable to non-significance; partial mediation occurs when the strength of the relation between the predictor and

the outcome variable is reduced with the mediator included in the model. The strength of the indirect effect (the predictor's effect on the outcome variable through the mediator) was examined using Sobel's test (1982).

For hypothesis four, the correlation matrix indicated a significant relationship between fear of negative evaluation, self-compassion, and all of the communication variables of interest. Self-compassion was entered as a predictor in step 1, and fear of negative evaluation was added as a predictor in step 2. Table 3 shows the results of the sequential regression analyses. Including fear of negative evaluation in the regression model reduced the relation between self-compassion and general and classroom communication apprehension, question-asking, and out-of-class communication. The indirect effect of self-compassion, through fear of negative evaluation, on general communication apprehension was  $z=-5.28$ ,  $p<.001$ ; on classroom communication apprehension,  $z=-4.51$ ,  $p<.001$ ; on student question-asking,  $z=4.54$ ,  $p<.001$ ; on out-of-class communication,  $z=2.09$ ,  $p<.05$ . Fear of negative evaluation was not a mediator of the relation between self-compassion and help-seeking behavior ( $z=1.46$ ,  $p=.14$ ). Self-compassion remained a significant predictor of out-of-classroom communication, even with the inclusion of fear of negative evaluation. In sum, fear of negative evaluation fully mediated the relation between self-compassion and general communication apprehension, classroom communication apprehension, and question-asking. Fear of negative evaluation partially mediated the relation between self-compassion and out-of-class communication.

Table 3

<i>Standardized Regression Coefficients for Self-Compassion, Mediating Variable (Fear of Negative Evaluation)</i>										
<i>Predictor</i>	<i>PRCA</i>		<i>CAPS</i>		<i>SPAQ</i>		<i>OCC</i>		<i>HS</i>	
	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>
Self-Compassion	-.26***	-.04	-.19**	-.01	.16*	-.02	.23***	.16*	.16*	.11
Fear of Negative Evaluation	—	.45***	—	.37***	—	-.38***	—	-.16*	—	-.11
$\Delta R^2$	—	.16	—	.11	—	.11	—	.02	—	.01
$\Delta F$	—	47.43***	—	29.14***	—	30.01***	—	4.7*	—	2.21
Total Adjusted $R^2$	.06	.22	.03	.14	.02	.13	.05	.06	.02	.03

*Note:*  $N=234$ . Model 1 included self-compassion only; Model 2 included self-compassion and the hypothesized mediator fear of negative evaluation

PRCA: Personal Report of Communication Apprehension; CAPS: Classroom Apprehension about Participation Scale; SPAQ: Student Propensity to Ask Questions; OCC: Out-of-Class Communication; HS: Help-Seeking

For hypothesis five, the correlation matrix indicated a significant relationship between academic self-efficacy, self-compassion, and all but one of the communication variables of interest (out-of-class communication). Therefore, sequential regression analysis was carried out on general and classroom communication apprehension, question-asking, and help-seeking, with self-compassion as the predictor (Judd & Kenny, 1981). Self-compassion was entered as a predictor in step 1, and academic self-efficacy was added as a predictor in step 2. Table 4 shows the results of the regression analyses. Sobel's test indicated a significant indirect effect of self-compassion on general and classroom communication apprehension through academic self-efficacy ( $z=-2.03$ ,  $p<.05$  and  $z=-2.09$ ,  $p<.05$ , respectively). The indirect effect of self-compassion on student question-asking and help-seeking through academic self-efficacy did not meet the pre-established criteria of  $p\leq.05$  ( $z=1.9$ ,  $p=.06$  and  $z=1.84$ ,  $p=.07$  respectively). Because self-compassion remained a significant predictor of general and classroom communication apprehension after including academic self-efficacy in the regression model, it was concluded

that academic self-efficacy partially mediated the relation between self-compassion and these communication variables.

Table 4

Standardized Regression Coefficients for Self-Compassion, Mediating Variable (Academic Self-Efficacy)								
<i>Predictors</i>	<i>PRCA</i>		<i>CAPS</i>		<i>SPAQ</i>		<i>HS</i>	
	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>	<i>1</i>	<i>2</i>
Self-Compassion	-.26***	-.22***	-.19**	-.14*	.16*	.13*	.16*	.13*
Academic Self-Efficacy	—	-.24***	—	-.28***	—	.21**	—	.19**
$\Delta R^2$	—	.06	—	.08	—	.04	—	.03
$\Delta F$	—	15.26***	—	14.32***	—	10.1**	—	8.34**
Total Adjusted $R^2$	.06	.12	.04	.10	.02	.06	.02	.05

*Note:*  $N=234$ . Model 1 included self-compassion only; Model 2 included self-compassion and the hypothesized mediator academic self-efficacy

\*\*\* $p \leq .001$ ; \*\* $p \leq .01$ ; \* $p \leq .05$

PRCA: Personal Report of Communication Apprehension; CAPS: Classroom Apprehension about Participation Scale; SPAQ: Student Propensity to Ask Questions; HS: Help-Seeking

## Discussion

This study is one of the first to provide empirical evidence of a positive relationship between self-compassion and adaptive student communication behaviors, such as question-asking, help-seeking, and out-of-class communication with instructors. These forms of student-initiated communication, all of which are associated with positive learning indicators such as student interest, comprehension, and GPA (Daly et al., 1992; Martin & Myers, 2006; Pedrosa-de-Jesus & Watts, 2012), are hindered when students fear negative responses from others, or perceive asking for help as threatening to their self-image (Karabenick, 2003; Frymier, 2005). Because the components of self-compassion (self-kindness, common humanity, and mindful awareness) foster feelings of acceptance and social connection (Barnard & Curry, 2011), realistic self-perceptions (Breines & Chen, 2012), and a reduced concern with maintaining a particular self-image (Neff, 2003b, Neff, 2005), self-compassionate individuals may be more likely to reach out to instructors and peers both within and outside the classroom. In turn, more communicative students are likely to learn more and feel more connected in academic settings (Frymier, 2005; McCroskey & Sheahan, 1978).

This study also adds to decades of research on communication apprehension by demonstrating that self-compassion is negatively associated with general and classroom specific communication apprehension levels among college students. Students who are highly apprehensive about communicating tend to ruminate on the negative aspects of their communication, negatively evaluate themselves in comparison to others, and expect negative evaluations from others (Ayres, 1986; Crozier, 1979; Daly, Vangelisti, & Lawrence, 1989; Smith & Sarason, 1975). These negative cognitive appraisals and expectations about one's communicative actions likely contribute to the physiological experiences of anxiety,

nervousness, and fear that describe communication apprehension (McCroskey, 1978). In contrast, self-compassion promotes a consistently kind orientation towards the self, feelings of social connection, and mindful awareness, rather than avoidance or over-identification with one's experiences (Neff, 2003). These components of self-compassion may mitigate the self-criticism, fear of failure, and feelings of isolation associated with communication apprehension (Daly et al., 1997).

In addition, this study revealed some of the processes through which self-compassion and the communication variables outlined above are related. First, fear of negative evaluation was found to fully mediate the relationship between self-compassion and general and classroom communication apprehension, as well as the relationship between self-compassion and student question-asking. A self-compassionate stance is associated with reductions in students' concern with being perceived negatively by others. Because self-compassion provides acceptance and kindness when faced with personal mistakes or failure, students' sense of self-worth is not as contingent on the evaluations of others. In turn, the reduced concern with being negatively judged by others leads to decreased levels of general and classroom communication apprehension and increased student question-asking. It makes sense that students would feel less apprehensive about communicating when they do not fear negative responses from others (for a review, see: Daly et al., 1997). Being self-compassionate during or before potentially anxiety-provoking situations, such as communicating in academic contexts, may down-regulate anxiety and apprehension through the process of self-soothing. Additionally, students may be more willing to take the risk of asking questions when they are less afraid of negative responses from either teachers or their peers, a concern reduced by a self-compassionate stance. Fear of negative evaluation also partially mediated the relation between self-compassion and out-of-class

communication. Self-compassionate students may be less fearful of negative evaluations from their instructors and therefore be more likely to visit office hours or initiate conversation outside the context of the classroom.

However, the relationship between self-compassion and help-seeking was not mediated by fear of negative evaluation. This was somewhat surprising, given that previous research has found a negative relation between help-seeking and perception of threat to one's self-image (Karabenick, 2003). Perhaps the positive association between self-compassion and help-seeking has more to do with the self-support and self-care that self-compassion provides. It is also possible that the more realistic self-appraisals self-compassion engenders (Breines & Chen, 2012) facilitates students' understanding of where their comprehension and skillset needs to improve, and therefore enhances help-seeking. In this case, the relationship between self-compassion and help-seeking has less to do with students' expectations for other's evaluations, and more to do with self-awareness. Obviously, more research will need to be conducted in order to test these hypotheses. In sum, there is evidence that the strong, negative association between self-compassion and fear of negative evaluation positively contributes to student emotions and behaviors related to communicating.

Academic self-efficacy was a partial mediator of the relationship between self-compassion and measures of communication apprehension. Because students who are self-compassionate are less harsh on themselves, they are less likely to undermine their self-confidence and more likely to feel competent in many domains (Neff et al, 2005), including academic ones. Additionally, low perception of one's competencies, both in general and specific to communication, is associated with communication apprehension (Hopf & Colby, 1992; Rubin et al., 1997). If students feel less capable of learning and performing well in their courses, it is

understandable that they would feel more apprehensive about communicating in classroom contexts. The boost in self-efficacy associated with self-compassion then, significantly accounts for some of the reduced apprehension among students who are higher in self-compassion.

The hypothesis that academic self-efficacy would mediate the link between self-compassion and communication behaviors was not supported. This was unexpected, as it is reasonable to imagine increased self-efficacy associated with self-compassion positively influencing students' question-asking, help-seeking, and out-of-class communication. However, the relationship between self-compassion and communication behaviors may be accounted for by other factors. One possible mediator is the personality trait of extroversion, which is moderately associated with self-compassion (Neff et al., 2007). Students with more gregarious personalities may be more comfortable approaching their instructors and peers for help or to engage in small talk.

#### Limitations and Future Directions

This study is limited in its ability to examine the link between self-compassion, communication apprehension and communication behavior due to its cross-sectional, correlational design, and also by relying on self-report questionnaires. As Neff notes of the self-compassion scale, "many people may not be aware enough of their own emotional experiences to realize the extent to which they lack self-compassion" (Neff, 2003b, p. 244). Similar issues regarding the accuracy of students' perceptions of their levels of communication apprehension and behavior are inherent to self-reporting methodology. Triangulating self-report data with teacher and researcher observations would increase the reliability of the results. Future studies might also fruitfully utilize experimental designs to better understand the causal connection between self-compassion and communication variables. For instance, would it be found that

experimentally enhancing self-compassion levels lead to less student communication apprehension and increased in student-initiated communication behavior?

The generalizability of these findings is also limited by the characteristics of the sample size. Participants were interested in educational psychology and come from a large, public 4-year university. Students from other courses and other college settings (such as community colleges, or private schools) may portray different relationships between self-compassion and the communication variables that were examined in this study.

An important avenue of future research would be to explore whether it is beneficial for students with communication troubles to partake in interventions designed to increase self-compassion. Learning how to adopt a more accepting stance with regards to the self and one's connection to others through self-compassion may help people who are over-attendant to signs of social threat and negative evaluation. Fortunately, a number of intervention programs designed to increase levels of self-compassion have been developed (Gilbert & Procter, 2006; Neff & Germer, 2013; Smeets, Neff, Alberts and Peters, 2014). Smeets et al. (2014) developed a three-week self-compassion intervention on female college students, for instance. Compared to a control group, who learned about better managing their time, participants who were trained in exercises designed to increase their self-kindness, feelings of common humanity, and mindfulness, saw significant gains in their self-compassion and mindfulness levels, feelings of optimism, and marginally significant gains in self-efficacy related to dealing with difficult situations compared to the control group. Additionally, the self-compassion group was significantly less likely to ruminate on difficult experiences after the period of three weeks. Thus, future research should examine whether self-compassion interventions help students manage difficult emotional experiences, resulting in decreased communication apprehension, and

increased adaptive communication behavior. In summary, the potential impact of self-compassion on student communication is an exciting possibility for educators seeking to improve student learning and performance outcomes, as well as retention rates (Ericson & Gardner, 1992).

## Appendices

### Appendix A *Self-report measures*

#### **Brief Fear of Negative Evaluation Scale**

Read each of the following statements carefully and indicate how characteristic it is of you according to the following scale:

- 1 = Not at all characteristic of me
- 2 = Slightly characteristic of me
- 3 = Moderately characteristic of me
- 4 = Very characteristic of me
- 5 = Extremely characteristic of me

- \_\_\_\_\_ 1. I worry about what other people will think of me even when I know it doesn't make any difference.
- \_\_\_\_\_ 2. I am unconcerned even if I know people are forming an unfavorable impression of me.
- \_\_\_\_\_ 3. I am frequently afraid of other people noticing my shortcomings.
- \_\_\_\_\_ 4. I rarely worry about what kind of impression I am making on someone.
- \_\_\_\_\_ 5. I am afraid others will not approve of me.
- \_\_\_\_\_ 6. I am afraid that people will find fault with me.
- \_\_\_\_\_ 7. Other people's opinions of me do not bother me.
- \_\_\_\_\_ 8. When I am talking to someone, I worry about what they may be thinking about me.
- \_\_\_\_\_ 9. I am usually worried about what kind of impression I make.
- \_\_\_\_\_ 10. If I know someone is judging me, it has little effect on me.
- \_\_\_\_\_ 11. Sometimes I think I am too concerned with what other people think of me.
- \_\_\_\_\_ 12. I often worry that I will say or do the wrong things.

#### **The Class Apprehension about Participation Scale (CAPS)**

**Directions:** Please indicate the degree to which each statement applies to you by marking whether you (1) strongly agree, (2) agree, (3) are undecided, (4) disagree, or (5) strongly disagree. Work quickly; record your first impression.

- \_\_\_ 1. I worry that the instructor will call on me during class.
- \_\_\_ 2. If I have a question I want answered, I usually wait for someone else to ask it in class.
- \_\_\_ 3. I don't like speaking in class because I feel that I do not have as much to say as most other students.
- \_\_\_ 4. I usually do not speak in class unless called on by the instructor.
- \_\_\_ 5. I have difficulty organizing my thoughts when I want to say something in class.
- \_\_\_ 6. I enjoy assuming the role of leader during a class discussion.



### Out-of-Class Communication Scale

**Directions:** Please indicate the degree to which each statement applies to you by marking whether you (1) strongly disagree, (2) disagree, (3) are undecided, (4) agree, or (5) strongly agree. Work quickly; record your first impression.

- \_\_\_ 1. I often talk to my instructor during his/her office hours.
- \_\_\_ 2. If I see my instructor on campus, I often talk to him/ her.
- \_\_\_ 3. I rarely talk to my instructor outside of the classroom.
- \_\_\_ 4. If I see my instructor in the hallway, I often stop to talk to her/him.
- \_\_\_ 5. I only talk to my instructor outside of the classroom once in a while.
- \_\_\_ 6. I frequently talk to my instructor outside of the classroom.
- \_\_\_ 7. When I see my instructor off campus, I usually spend some time talking to him/her.
- \_\_\_ 8. When I see my instructor in public, I avoid talking to him/her.
- \_\_\_ 9. I never talk to my instructor outside of the classroom.

### The Personal Report of Communication Apprehension

**Directions:** This instrument is composed of 24 statements concerning feelings about communicating with other people. Please indicate the degree to which each statement applies to you by marking whether you (1) strongly agree, (2) agree, (3) are undecided, (4) disagree, or (5) strongly disagree. Work quickly; record your first impression.

- \_\_\_ 1. I dislike participating in group discussions.
- \_\_\_ 2. Generally, I am comfortable while participating in group discussions.
- \_\_\_ 3. I am tense and nervous while participating in group discussions.
- \_\_\_ 4. I like to get involved in group discussions.
- \_\_\_ 5. Engaging in a group discussion with new people makes me tense and nervous.
- \_\_\_ 6. I am calm and relaxed while participating in group discussions.
- \_\_\_ 7. Generally, I am nervous when I have to participate in a meeting.
- \_\_\_ 8. Usually I am calm and relaxed while participating in meetings.
- \_\_\_ 9. I am very calm and relaxed when I am called upon to express an opinion at a meeting.
- \_\_\_ 10. I am afraid to express myself at meetings.
- \_\_\_ 11. Communicating at meetings usually makes me uncomfortable.
- \_\_\_ 12. I am very relaxed when answering questions at a meeting.
- \_\_\_ 13. While participating in a conversation with a new acquaintance, I feel very nervous.
- \_\_\_ 14. I have no fear of speaking up in conversations.
- \_\_\_ 15. Ordinarily I am very tense and nervous in conversations.
- \_\_\_ 16. While conversing, with a new acquaintance, I feel very relaxed.
- \_\_\_ 17. Ordinarily I am very calm and relaxed in conversations.
- \_\_\_ 18. I'm afraid to speak up in conversations.
- \_\_\_ 19. I have no fear of giving a speech.
- \_\_\_ 20. Certain parts of my body feel very tense and rigid while I am giving a speech.
- \_\_\_ 21. I feel relaxed while giving a speech.
- \_\_\_ 22. My thoughts become confused and jumbled when I am giving a speech.
- \_\_\_ 23. I face the prospect of giving a speech with confidence.
- \_\_\_ 24. While giving a speech, I get so nervous I forget facts I already know.

## Self-Compassion Scale

### How I Typically Act Towards Myself in Difficult Times

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

**Almost  
Never**  
**1**

**2**

**3**

**4**

**Almost  
Always**  
**5**

- \_\_\_\_\_ 1. I'm disapproving and judgmental about my own flaws and inadequacies.
- \_\_\_\_\_ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
- \_\_\_\_\_ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
- \_\_\_\_\_ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
- \_\_\_\_\_ 5. I try to be loving towards myself when I'm feeling emotional pain.
- \_\_\_\_\_ 6. When I fail at something important to me I become consumed by feelings of inadequacy.
- \_\_\_\_\_ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
- \_\_\_\_\_ 8. When times are really difficult, I tend to be tough on myself.
- \_\_\_\_\_ 9. When something upsets me I try to keep my emotions in balance.
- \_\_\_\_\_ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
- \_\_\_\_\_ 11. I'm intolerant and impatient towards those aspects of my personality I don't like.
- \_\_\_\_\_ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
- \_\_\_\_\_ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
- \_\_\_\_\_ 14. When something painful happens I try to take a balanced view of the situation.
- \_\_\_\_\_ 15. I try to see my failings as part of the human condition.
- \_\_\_\_\_ 16. When I see aspects of myself that I don't like, I get down on myself.
- \_\_\_\_\_ 17. When I fail at something important to me I try to keep things in perspective.
- \_\_\_\_\_ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
- \_\_\_\_\_ 19. I'm kind to myself when I'm experiencing suffering.
- \_\_\_\_\_ 20. When something upsets me I get carried away with my feelings.
- \_\_\_\_\_ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
- \_\_\_\_\_ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.
- \_\_\_\_\_ 23. I'm tolerant of my own flaws and inadequacies.
- \_\_\_\_\_ 24. When something painful happens I tend to blow the incident out of proportion.
- \_\_\_\_\_ 25. When I fail at something that's important to me, I tend to feel alone in my failure.
- \_\_\_\_\_ 26. I try to be understanding and patient towards those aspects of my personality I don't like.



- \_\_\_ 4. I usually don't voluntarily ask questions in class.
- \_\_\_ 5. I would rather listen than ask a question in class.
- \_\_\_ 6. I always ask questions in class if possible.
- \_\_\_ 7. I am usually motivated to ask questions in class.
- \_\_\_ 8. I generally ask questions in class.
- \_\_\_ 9. I don't like asking questions in class.
- \_\_\_ 10. I sometimes feel awkward in asking questions in class.
- \_\_\_ 11. I have a fear of asking questions in class.
- \_\_\_ 12. I am generally satisfied with the number of questions I ask in class.

## References

- Aitken, J. E., & Neer, M. R. (1993). College student question-asking: The relationship of classroom communication apprehension and motivation. *Southern Communication Journal*, 59(1), 73–81.
- Alexitch, L. R. (1997). Students' educational orientation and preferences for advising from university professors. *Journal of College Student Development*, 38, 333–343.
- Allen, M., & Bourhis, J. (1996). The relationship of communication apprehension to communication behavior: A meta-analysis. *Communication Quarterly*, 44(2), 214–226.  
doi:10.1080/01463379609370011
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84, 261–271.
- Ayres, J. (1986). Perceptions of speaking ability: An explanation for stage-fright. *Communication Education*, 35, 275-287.
- Baldwin, K. M., Baldwin, J. R., & Ewald, T. (2006). The relationship among shame, guilt, and self- efficacy. *American Journal of Psychotherapy*, 60(1), 1-21.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122-147.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, & interventions. *Review of General Psychology*, 15(4), 289–303. doi:10.1037/a0025754
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology*, 51, 1173-1182.

- Beatty, M. J. (1987). Communication apprehension as a determinant of avoidance, withdrawal and performance anxiety. *Communication Quarterly*, 35(2), 202–217.  
doi:10.1080/01463378709369681
- Beatty, M. J., Dobos, J. A., Balfantz, G. L., & Kuwabara, A. Y. (1991). Communication apprehension, state anxiety and behavioral disruption: A causal analysis. *Communication Quarterly*, 39(1), 48–57.
- Beatty, M. J., McCroskey, J. C., & Heisel, A. D. (1998). Communication apprehension as temperamental expression: A Communibiological paradigm. *Communication Monographs*, 65(3), 197–219. doi:10.1080/03637759809376448
- Blume, B. D., Baldwin, T. T., & Ryan, K. C. (2013). Communication apprehension: A barrier to students' leadership, adaptability, and multicultural appreciation. *Academy of Management Learning and Education*, 12(2), 158–172.
- Breines, J. G., & Chen, S. (2013). Activating the inner caregiver: The role of support-giving schemas in increasing state self-compassion. *Journal of Experimental Social Psychology*, 49(1), 58–64. doi:10.1016/j.jesp.2012.07.015
- Chickering, A.W., Gamson, Z.F., & Barsi, L.M. (1987). *Principles of good practice in undergraduate education*. Milwaukee: American Association for Higher Education, the Education Commission of the State, and the Johnson Foundation.
- Claxton, G. (1991). *Educating the inquiring mind: The challenge for school science*. London: Harvester Wheatsheaf.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

- Crocker, J., Canevello, A., Breines, J. G., & Flynn, H. (2010). Interpersonal goals and change in anxiety and dysphoria in first-semester college students. *Journal of Personality and Social Psychology, 98*(6), 1009–24. doi:10.1037/a0019400
- Crozier, W.R. (1979). Shyness as a dimension of personality. *British Journal of Social and Clinical Psychology, 18*, 121-128.
- Cunconan, T. M. (2002). The communicative role of a student: Conceptualizing, measuring, and validating a student's propensity to ask questions in the college classroom. *Speech and Theatre Association of Missouri Journal, 32*, 1–22.
- Daly, J.A., Caughlin, J.P., & Stafford, L. (1997). Correlates and consequences of social-communicative anxiety. In J.A. Daly, J.C. McCroskey, J. Ayres, T. Hopf, & D.M. Ayres, (Eds.). *Avoiding Communication: Shyness, Reticence & Communication Apprehension* (pp. 4-21). Cresskill, NJ: Hampton Press.
- Daly, J. A., Kreiser, P. O., & Roghaar, L. A. (1994). Question-asking comfort: Explorations of the demography of communication in the eighth grade classroom. *Communication Education, 43*(1), 27–41.
- Daly, J.A., Vangelisti, A.L., & Lawrence, S.G. (1989). Self-focused attention and public speaking anxiety. *Personality and Individual Difference, 10*, 903-913.
- Dillon, J. T. (1990). *The practice of questioning*. New York: Routledge.
- Dobransky, N. D. & Frymier, A. B. (2004). Developing teacher-student relationships through out of class communication. *Communication Quarterly, 52*, 211–223.
- Doyle, W. (1986). Classroom organization and management. In M. Wittrock (Ed.), *Handbook of research on teaching* (3<sup>rd</sup> ed.) (pp. 392-431). New York: Macmillan.

- Duronto, P. M., Nishida, T., & Nakayama, S. I. (2005). Uncertainty, anxiety, and avoidance in communication with strangers. *International Journal of Intercultural Relations*, 29(5), 549–560. doi:10.1016/j.ijintrel.2005.08.003
- Ericson, P. M., & Gardner, J. W. (1992). Two longitudinal studies of communication apprehension and its effects on college students' success. *Communication Quarterly*, 40(2), 127–137. doi:10.1080/01463379209369828
- Fordham, D. R., & Gabbin, A. L. (1996). Skills vs. apprehension: Empirical evidence on oral communication. *Business Communication Quarterly*, 59(3), 88–97.
- Friedrich, G., Goss, B., Cunconana, T., & Lane, D. (1997). Systematic desensitization. In J.A. Daly, J.C. McCroskey, J. Ayres, T. Hopf, & D.M. Ayres, (Eds.). *Avoiding Communication: Shyness, Reticence & Communication Apprehension* (pp. 305-330). Cresskill, NJ: Hampton Press.
- Frymier, A. B. (2005). Students' Classroom Communication Effectiveness. *Communication Quarterly*, 53, 197–212. doi:10.1080/01463370500089896
- Gall, M. (1970). The use of questions in teaching. *Review of Educational Research*, 40, 707-721.
- Gearhart, C. C., & Bodie, G. D. (2012). Sensory-processing sensitivity and communication apprehension: Dual influences on self-reported stress in a college student sample. *Communication Reports*, 25(1), 27–39. doi:10.1080/08934215.2012.672216
- Gecas, V. (1971). Parental behavior and dimensions of adolescent self-evaluation. *Sociometry*, 34, 466-482.
- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, 15(3), 199–208. doi:10.1192/apt.bp.107.005264

- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy, 13*, 353–379.
- Gilkinson, H. (1943). A questionnaire study of the causes of social fears among college speech students. *Speech Monographs, 9*, 141-160.
- Gray, J. A. (1991). The neuropsychology of temperament. In J. Strelau & A. Angleitner (Eds.), *Explorations in temperament: International perspectives on theory and measurement* (pp. 105–128). New York, NY: Plenum
- Heiser, N. A., Turner, S. M., Beidel, D. C., & Roberson-Nay, R. (2009). Differentiating social phobia from shyness. *Journal of Anxiety Disorders, 23*(4), 469–76.  
doi:10.1016/j.janxdis.2008.10.002
- Hopf, T., & Colby, N. (1992). The relationship between interpersonal communication apprehension and self-efficacy. *Communication Research Reports, 9*(2), 131–135.  
doi:10.1080/08824099209359905
- Hurt, H.T., Preiss, R., & Davis, B. (1976, May). *The effects of communication apprehension of middle school children on sociometric choice, affective, and cognitive learning*. Paper presented at the annual conference of the International Communication Association, Portland.
- Iskender, M. (2009). The relationship between self-compassion, self-efficacy, and control belief about learning in Turkish university students. *Social Behavior and Personality: An International Journal, 37*(5), 711–720. doi:10.2224/sbp.2009.37.5.711

- Jaasma, M. A. & Koper, R. J. (1999). The relationship of student-faculty out-of-class communication to instructor immediacy and trust and to student motivation. *Communication Education, 48*, 41–47.
- Johnson, E. A., & O'Brien, K. A. (2013). Self-compassion soothes the savage ego-threat system: Effects on negative affect, shame, rumination, and depressive symptoms. *Journal of Social and Clinical Psychology, 32*(9), 939–963.
- Jones, D. B. (1994). Sources of communication apprehension in classroom experiential exercises. *Marketing Education Review, 4*, 22–28.
- Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in evaluation research. *Evaluation Research, 5*, 602 – 619.
- Kagan, J. (1992). Temperamental contributions to emotion and social behavior. In M.S. Clark (Ed.), *Emotion and social behavior* (pp. 99-118). Newbury Park, NJ: Sage
- Karabenick, S. A. (Ed.). (1998). *Strategic help seeking: Implications for learning and teaching*. Mahwah, NJ: Erlbaum.
- Karabenick, S. A. (2003). Seeking help in large college classes: A person-centered approach. *Contemporary Educational Psychology, 28*, 37–58.
- Karabenick, S. A., & Knapp, J. R. (1991). Relationship of academic help seeking to the use of learning strategies and other instrumental achievement behavior in college students. *Journal of Educational Psychology, 83*, 221–230.
- Karabenick, S. A., & Sharma, R. (1994). Seeking academic assistance as a strategic learning resource. In P. Pintrich, D. Brown, & C. E. Weinstein (Eds.), *Student motivation, cognition, and learning: Essays in honor of Wilbert J. McKeachie* (pp. 189–211). Hillsdale, NJ: Erlbaum.

- Knapp, J. L. & Martin, M. M. (2002). Out-of-class communication: The development and testing of a measure. Paper presented at the National Communication Association Convention, New York City, New York, USA.
- Leary, M. R. (1983). A Brief Version of the Fear of Negative Evaluation Scale. *Personality and Social Psychology Bulletin*. doi:10.1177/0146167283093007
- Lee, I. A., & Preacher, K. J. (2013, September). Calculation for the test of the difference between two dependent correlations with one variable in common [Computer software]. Available from <http://quantpsy.org>.
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: a meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review*, 32(6), 545–52. doi:10.1016/j.cpr.2012.06.003
- Martin, M. M., & Myers, S. A. (2006). Students' communication traits and their out-of-class communication with their instructors. *Communication Research Reports*, 23(4), 283–289. doi:10.1080/08824090600962599
- Martin, M. M., Valencic, K. M., & Heisel, A. D. (2002). The relationship between students' communication apprehension and their motives for communicating with their instructors. *Communication Research Reports*, 19(1), 1–7. doi:10.1080/08824090209384826
- McCroskey, J. C. (1977). Classroom consequences of communication apprehension. *Communication Education*, 26, 27–33.
- McCroskey, J. C. (1978). Validity of the PRCA as an index of oral communication apprehension. *Communication Monographs*, 45(3), 192–203.

- McCroskey, J.C. (1997). Self-report measurements. In J.A. Daly, J.C. McCroskey, J. Ayres, T. Hopf, & D.M. Ayres (Eds.). *Avoiding Communication: Shyness, Reticence & Communication Apprehension* (pp. 191-216). Cresskill, NJ: Hampton Press.
- McCroskey, J. C. (2012). Oral communication apprehension: A reconceptualization. *Communication Yearbook, 6*, 136–170.
- McCroskey, J. C., & Richmond, V. P. (1982). Communication apprehension and shyness: Conceptual and operational distinctions. *Central States Speech Journal, 33*(3), 458–468.
- McCroskey, J. C., Richmond, V., Daly, J. A., & Falcione, R. L. (1977). Studies of the relationship between communication apprehension and self-esteem. *Human Communication Research, 3*(3), 269–277.
- McCroskey, J.C., & Sheahan, M.E. (1976). Communication apprehension social behavior in a college environment. *Communication Quarterly, 26*, 41-50.
- Miles, J., & Shevlin, M. (2001). *Applying Regression & Correlation: A Guide for Students and Researchers*. Los Angeles: Sage.
- Miller, M.D. (1987). The relationship of communication reticence and negative expectations. *Communication Education, 36*, 228-235.
- Neer, M. R. (1987). The development of an instrument to measure classroom apprehension. *Communication Education, 36*, 154–166.
- Neer, M. R., & Kircher, W. F. (1989). Apprehensives perception of classroom factors influencing their class participation. *Communication Research Reports, 6*, 71–77.
- Neff, K. (2003a). Self-Compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85–101. doi:10.1080/15298860390129863

- Neff, K. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223–250. doi:10.1080/15298860390209035
- Neff, K. D., Hsieh, Y.P., & Dejitterat, K. (2005). Self-compassion, achievement Goals, and coping with academic failure. *Self and Identity*, 4(3), 263–287.  
doi:10.1080/13576500444000317
- Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, 41(1), 139–154.  
doi:10.1016/j.jrp.2006.03.004
- Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: two different ways of relating to oneself. *Journal of Personality*, 77(1), 23–50. doi:10.1111/j.1467-6494.2008.00537.x
- Newcastle, H. (1970). A study of teachers' classroom questioning and responding technique. (ERIC Document Reproduction Service No. ED 079 260).
- Newman, R. S. (2000). Social influences on the development of children's adaptive help seeking: The role of parents, teachers, and peers. *Developmental Review*, 20, 350–404.
- Pedrosa-de-Jesus, H., & Watts, M. (2012). Managing affect in learners' questions in undergraduate science. *Studies in Higher Education*, 39(1), 102–116.  
doi:10.1080/03075079.2011.646983
- Pekrun, R., Elliot, A. J., & Maier, M. (2006). Achievement goals and discrete achievement emotions: A theoretical model and prospective test. *Journal of Educational Psychology*, 98(3), 583–597. doi:10.1037/0022-0663.98.3.583

- Perry, B.D., Pollard, R.A., Blakley, T.L., Baker, W.L., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation and 'use-dependent' development of the brain: How 'states' become 'traits.' *Infant Mental Health Journal, 16*, 271–291
- Pintrich, P., Smith, D., Garcia, T., & McKeachie, W. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ)*. National Center for Research to Improve Post secondary Teaching and Learning. Ann Arbor. Michigan (Vol. 48109). Retrieved from <http://www.ilo.uva.nl/projecten/Gert/Teaching/VietnamCourseDec2006ResearchMethodology/Pintrich.pdf>
- Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behavior Research and Therapy, 35*, 741–756.
- Richmond, V. P. (1997). Quietness in contemporary society: Conclusions and generalizations of the research. In J.A. Daly, McCroskey, J.C., Ayres, J., Hopf, T., & Ayres, D.M. (Eds.). *Avoiding Communication: Shyness, Reticence & Communication Apprehension*, (pp. 257-268). Cresskill, NJ: Hampton Press.
- Roth PL, Switzer III FS, Switzer D. (1999). Missing data in multi-item scales: A Monte Carlo Analysis of missing data techniques. *Organizational Research Methods, 2*, 211–232.
- Rubin, R. B., Rubin, A. M., & Jordan, F. F. (1997). Effects of instruction on communication apprehension and communication competence. *Communication Education, 46*(2), 104–114. doi:10.1080/03634529709379080
- Scheff, T. J. (1981). The distancing of emotion in psychotherapy. *Psychotherapy: Theory, Research & Practice, 18*, 46–53.

- Schwalb, D., & Sukemuni, S. (1998). Help seeking in the Japanese college classroom: Cultural, developmental, and social-psychological influences. In S. A. Karabenick (Ed.), *Strategic help seeking: Implications for learning and teaching* (pp. 141–170). Mahwah, NJ: Erlbaum.
- Shapiro, E. G. (1983). Embarrassment and help seeking. In B. M. DePaulo, A. Nadler, & J. D. Fisher (Eds.), *New directions in helping: Vol. 2. Help seeking* (pp. 143–163). New York: Academic Press.
- Smeets, E., Neff, K., Alberts, H., & Peters, M. (2014). Meeting suffering with kindness: Effects of a brief self-compassion intervention for female college students. *Journal of Clinical Psychology, 70*(9), 794–807. doi:10.1002/jclp.22076
- Smith, R.E., & Sarason, I.G. (1975). Social anxiety and the evaluation of negative interpersonal feedback. *Journal of Consulting and Clinical Psychology, 44*, 1276-1283.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290-312). San Francisco: Jossey-Bass.
- Terry, M., Leary, M.R., & Mehta, S. (2012). Self-compassion as a buffer against homesickness, depression, and dissatisfaction in the transition to college. *Self and Identity, 12*, 278–290.
- Turner, J. E., Husman, J., & Schallert, D. L. (2002). The importance of students' goals in their emotional experience of academic failure: Investigating the precursors and consequences of shame. *Educational Psychologist, 37*, 79 – 89.
- Vygotsky, L.S. (1978). *Mind in Society*. Cambridge: Harvard University Press.
- Werner, K. H., Jazaieri, H., Goldin, P. R., Ziv, M., Heimberg, R. G., & Gross, J. J. (2012). Self-compassion and social anxiety disorder. *Anxiety, Stress, and Coping, 25*(5), 543–58. doi:10.1080/10615806.2011.608842