

STUDENT PERCEPTIONS OF TEACHER EMOTICON USAGE:  
THE EFFECT ON TEACHER CREDIBILITY AND LIKING

A Thesis

Presented to the faculty of the Department of Communication Studies  
California State University, Sacramento

Submitted in partial satisfaction of  
the requirements for the degree of

MASTER OF ARTS

in

Communication Studies

by

Aubrie Serena Adams

FALL  
2013

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by

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Abstract  
of  
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*Statement of Problem*

Prior research suggests that emoticons enhance text-based messages; yet, critics argue that emoticons negatively affect credibility. While research purports that teachers utilize emoticons, they feel uncomfortable doing so (Priddis, 2013). This study focused on better understanding how a user of emoticons is viewed by a recipient by studying the effect the number of emoticons in an email message has on perceptions of credibility and liking.

*Sources of Data*

A one way factorial experimental design was utilized in which the number of emoticons were manipulated in an e-mail to be none (zero emoticons), one (one emoticon), few (three emoticons), many (seven emoticons), or very many (twelve emoticons). This study was conducted in two phases: in phase one, an induction check was utilized to ensure that manipulated conditions had the desired effect on participants (N = 323). In phase two, main experiment participants (N = 534) completed measures to assess perceptions of credibility (competence, character, and caring) and liking.

*Conclusions Reached*

The hypotheses predicted an inverted u-shaped curvilinear relationship for each outcome variable. Results were largely inconsistent with the hypotheses. For competence, character, and liking, conditions with no, one, and few emoticons equally indicated the most positive perceptions. It made no difference whether emoticons were none, one, or few. Using many emoticons (seven or twelve) indicated equally negative perceptions. With respect to perceived caring as an outcome variable, results revealed an inverted u-shaped curvilinear relationship somewhat consistent with the hypothesis. The condition with no emoticons was rated as moderately positive, few emoticons was most positive, and many emoticons was moderately positive. Findings indicate that emoticons exerted, at best, a small effect on student perceptions.

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\_\_\_\_\_  
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## ACKNOWLEDGEMENTS

*Throughout our paths in life, we all encounter allies. These allies guide us in ways we are not even aware of until we look back and reflect on how their support and guidance contributed to our success. At this time, I would like to reflect on my collection of memories to thank and acknowledge some of those who aided my path in this way.*

To Dr. Kimo Ah Yun, I want to thank you for being my thesis chair and my current adviser. Even though you became head-honcho as Dean, you always made time for me. I appreciated your laid-back attitude and patience, especially when my thesis was taking me way-too long. Most of all, I want to thank you for just being you! Whether you were talking about being a dolphin in shark-infested thesis-waters, using statistics to get ahead in fantasy football, Pokémon evolutionary forms, or teaching me the most popular types of fist-bumps, I always enjoyed the way thesis meetings were not always about thesis work. You taught me that graduate school is not just about grades, papers, and journals, but building social relationships as well!

To Dr. Diego Bonilla, thank you for being so willing to be my first adviser. You taught me so much about Computer Mediated Communication. I enjoyed your online classes and the moments when we could all collectively geek-out over cool technology. Additionally, thanks for being a part of my social network on Facebook! I love seeing the adorable baby pictures, watching your family grow, and seeing you post technology news. You have shown me how to be professional yet personal in a computer mediated context.

To Dr. Gerri Smith, thank you for teaching me so much about being a teacher! You are a role model to me and I hope to be as good of an instructor. I am always impressed by your poise and ability to word insightful questions and phrases. Our small-group class was one of my favorites in the program. I submitted the D&D paper I wrote for that class to the Kaleidoscope journal and it turned out to be the first accepted journal article I have had in my academic career! The comments and feedback you gave when I was drafting that paper were monumentally helpful.

To Dr. Elaine Gale, thank you for serving as my guide on the side. Your spirit and energy are inspiring. I am so grateful that you pushed me and encouraged me in my teaching. I will never forget the time I had to break into your house by scaling your fence and crawling through your doggie door when you locked your keys in your office. Definitely one of my favorite memories from my master's program!

Lastly, to all the others who supported me inside and outside academia. To my friends, thank you for your patience when I had no time for a social life. To my family, thank you for cooking me all the delicious food and letting me grade all day. To my husband, thank you for supporting me and being there in every way possible. To my cats, Agamemnon and Zelda, thank you for being adorable and furry de-stressors. Without every one of you along with the numerous phenomenal teachers I have had the privilege of working with, it would not have been possible to get through this project with my sanity intact. THANK YOU :) !!!



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## CHAPTER 1

### INTRODUCTION

*“Although college instructors may experience discomfort with the use of emoticons, they must change with the times or find themselves disregarded as dinosaurs”*

*(Krohn, 2004, p. 326).*

The past few decades of technological advancement have demonstrated a dramatic shift regarding how individuals communicate. While face-to-face interaction once dominated the communication landscape, we now live in a time of accelerating change. Propelled by the ubiquity of portable electronic devices, modern interlocutors have the ability to share rapid and efficient computer mediated messages. As such, traditional interactions within institutional and academic settings have been forced to evolve; congruently contributing to an assortment of transformations within the characteristics of teacher-student interactions (Gutierrez, 2000). Consequently, as society becomes increasingly drenched in mediated options, scholars should examine how teachers and students interact with and perceive others when utilizing modern communicative resources.

Within the history of mediated communication, Computer Mediated Communication (CMC) is a relatively recent phenomenon. Although early electronic computers were produced in the 1940s (Chapman, 2010), communication via internet military channels debuted in the 1970s (Wood, 2011). Comparable to Guttenberg’s printing press with the written word, the internet has since revolutionized communication technology affordances (Gutierrez, 2000). Online activity has increased steadily

throughout the last forty years; with approximately 82% of the United States adult population and 97% of 18-29 year olds using the internet in 2012 (Zickuhr & Madden, 2012). The internet has clearly become a staple of modern communication.

CMC is used as an umbrella term to describe the different electronic communication devices that facilitate message exchange through the interconnectivity of two or more computers. Such tools are often categorized into two basic groupings according to media-richness theory (Daft & Lengel, 1986). One group is composed of electronic conferencing tools that offer a rich assortment of synchronous audio and visual components including tele-conferencing, video-conferencing, and virtual environments. In comparison, the second group is composed of text-based mechanisms lacking on the scale of media-richness (Kim, 2002). These tools rely on typed words such as emails, text-messages, status updates, and tweets.

Society has reached an electronic epoch in which individuals communicate utilizing increasingly sophisticated hardware and software. Numerous applications have enabled video and audio dialogues to take place remotely using tools such as Skype and Google hangout. In fact, professors at Stanford have utilized Google hangout to improve collaboration amongst students separated geographically in countries such as Iran and India (Stanford Report, 2012). As bandwidth capabilities continue to expand our ability to transmit data, greater opportunities to send and receive media-rich messages will progress.

However, such utilities cannot completely replace the assortment of text-based tools that offer their own unique advantages. For instance, email provides the ability to

send mass-messages that may better facilitate communication amongst individuals separated by space and time (Byron & Baldrige, 2007). Similarly, text-based CMC tools offer a variety of unique benefits such as speed, ease of message sending, and a release from the reliance of synchronicity. In sum, despite the availability of CMC tools that offer greater audio and visual enhancement, text-based media will likely persist.

Not limited to personal usage, text-based CMC tools have become popular amongst broad social and professional domains including politics, religion, and academics. For example, President Barack Obama employed numerous text-based social networking tools (such as Twitter and Facebook) in both the 2008 and 2012 presidential elections (Burrus, 2012). The recently appointed Pope, Francis, demonstrated the Vatican's commitment to communication technology as well; he sent his first tweet within one day of being elected (Eversley, 2013). Academic institutions have integrated text-based tools such as social networking websites, blogs, wikis, and emails into workplace procedures and online course management infrastructures. Indisputably, text-based CMC tools have found a chief position within the fabric of society.

Although numerous text-based tools have flourished, email has been one of the most prevalent. A PEW research report indicated that 92% of online adults sent or received email in 2011 (in comparison to 65% who used social networking websites) making email the most popular internet communication tool (Purcell, 2011). While the first networked email was sent in 1971, email usage has continued to expand dramatically: by 2003, over 77 million American workers reported that they used email (Fleishman, 2012). Similarly, 89 billion emails were sent each day in 2012 and this



number has been expected to go up by 13% each year leading to approximately 143 billion emails sent each day by 2016 (Radicati Group Inc., 2012). Email currently is, and will continue to be, one of the most widespread methods for online message exchange.

One domain in which email has become especially prevalent is the academic environment. To contact a professor only a few decades ago, a student needed to visit in-person during scheduled office hours or call via telephone; nowadays students need only send a simple email. Similarly, rather than constraining course announcements and information solely to the traditional classroom, instructors can now broadcast emails to students unrestrained by space and time, thus creating a virtual text-based environment for classroom content to continue. While many reasons exist to interact via email, one study reported that teacher-student emails were generally used for utilitarian or task-related purposes. Teachers initiated emails to make class announcements and set up appointments whereas students initiated emails to clarify, ask questions, and offer excuses for late assignments (Duran, Kelly, & Keaten, 2005). Despite the panoply of new and attractive mediated options, email has persisted as the standard electronic medium used within the academic environment to connect reliably with students (Kolowich, 2011; Mangan, 2012).

Many benefits have been associated with teacher-student emails. For example, email provides a channel for reticent students to communicate with teachers in a way that causes less communication anxiety than traditional face-to-face interaction (Kelly, Keaten, & Finch 2004). Furthermore, instructors have reported that email conversations likely lead to improved face-to-face communication and enable greater levels of learning

to occur (Duran, Kelly, & Keaten, 2005). In distance learning courses, students have reported greater feelings of support when receiving emails from teachers (Heiman, 2008). From a broad perspective, email generally contributes to more information sharing (Sproull & Kiesler, 1986). Given the popularity and benefits, email has thrived within higher education administrative and learning processes.

Although the benefits of email usage outnumber the disadvantages, there are some inherent limitations. Due to the ambiguous nature of words (Wood, 2011), a text-based message void of emotional cues may be misinterpreted (Byron & Baldrige, 2007) or perceived as rude (Newman, 2011). In fact, several mediated interaction theories have asserted that text-based messages lack necessary relational cues (Robbins, 2012). Because text messages can be void of essential verbal and nonverbal cues and indicators, text-based communication has historically been considered an inferior, cold, impersonal, and unfriendly communication medium (Daft & Lengel, 1984; Kiesler, Siegel, & McGuire, 1984; Short, Williams, & Christie, 1976; Sproull & Kiesler, 1986).

Subsequently, this deficiency in relational cues inherent within text has resulted in unsatisfactory email interactions. One notable study (Foral, Turner, Monaghan, Walters, Merkel, Lipshultz, & Lenz, 2010) identified an assortment of negative student perceptions related to teacher emails. First, students in this study believed that emails could create barriers between teachers and students. In addition, the students viewed short email responses from teachers negatively; a short message suggested that teachers did not take the time to read or respond adequately. Students also reported experiencing emails they perceived to be inappropriate, disrespectful, sarcastic, and rude. They

confused constructive criticism with a condescending tone. Considering the fact that email interaction lacks face-to-face nonverbal cues that normally assist in message interpretation, these negative student perceptions are not surprising.

Relatedly, teachers have faced a variety of obstacles in email composition and management. As universities have seen an increase in the amount of students receiving bachelor's degrees (PEW, 2012), instructors have congruently witnessed a clear rise in email correspondence. A frustrated teacher's comments highlight this point: "My email is killing me!...I can easily get 100 emails a day. Not only do they send me their original question but then they send me emails to confirm that I've received their original email!" (Conrad, 2006, para. 1). Simply, the number of students attending colleges and universities is on the rise along with an intensifying amount of emails.

Furthermore, students do not allow instructors much time to respond to the onslaught of inquiries; they expect responses within 5-12 hours and assume that faculty members are available during weekends and evenings. The continuous bombardment of emails has placed new demands on teachers (Foral et al., 2010). As a result, faculty members are often dissatisfied with the notion of being 'on-call' 24-hours a day with no separation between work and home life (Duran, Kelly, & Keaten, 2005). Due to the abundance of rising email usage and increasing student expectations, instructors lack time to respond to messages in robust ways. Therefore, this perfect storm of digital message overload, inherent ambiguity in text, and deficient cues within CMC has contributed to teachers sending emails that may be perceived as impersonal, short, and lacking in relational content.

However, one easily integrated text-based communication tool designed to enhance nonverbal mediated interaction is the emoticon (Lo, 2008; Rezabek & Cochenour, 1998; Rivera, Cooke, & Bauhs, 1996; Sutton, 1995). Emoticons are digital text icons that visually represent facial expressions and may indicate the self-reported mood or emotional state of a user within CMC (Antonijevic, 2005; Crystal, 2001; Walther & D'Addario, 2001). Five common emoticons include : ) for a smile, : ( for a frown, : D for a grin, :/ for frustration, and ; ) for a wink (Wood, 2001). While sideways emoticons typically represent a Western style (Appendix A), Eastern styles (Appendix B) can be represented as a straight-on facial depiction such as (^\_^) which is also a happy-face icon (Dresner & Herring, 2012). Both emoticon styles have enabled the demonstration of affective states in local and global CMC contexts.

While these nascent symbols appear as cartoon-like representations, they serve a variety of important functions: emoticons affect interactions positively, influence message meanings, manage impressions, and supplement nonverbals (Adams, 2013). Emoticons are also conventional (understood and shared by many), inventional (rhetorically creative), and work as punctuation enhancers (Garrison, Remley, Thomas, & Wierszewski, 2011). A growing body of research has found that they generally lead to improved online experiences (Byron & Baldrige, 2007; Derks, Bos, & Grumbkow, 2008; Kalyanaraman & Ivory, 2006; Kanayama, 2003; Rivera, Cooke, & Bauhs, 1996; Yoo, 2007).

Although emoticons have been criticized as an immature communication tool mainly popular amongst younger age groups (Buchanan, 2007), professionals have begun

to recognize the power of emoticons to enhance communication. One report advised therapists to use emoticons to improve online rapport with clients (Adlington, 2010). Another study advocated that emoticons should be used in workplace instant-messages: “we suggest that positive emoticons should always be employed in work coordination tasks, especially when there is a tendency for unpleasant emotions to be felt in the communication between senders and receivers” (Luor, Wu, Lu, & Tao, 2010, p. 894).

In sum, emoticons perform a role in online environments similar to the role that nonverbal facial expressions fulfill in ordinary face-to-face communication such as smiling or showing empathy. As such, they may be able to function as digital immediacy sources (Borycki, Greenberg, Knasel, Peterson, Valentine, Vear, Westrick, Zang, & Walther, 2008). Emoticons largely improve the relational level of text communication and are becoming more accepted across professional disciplines. Given that they can be short and easy to integrate into one’s communication, it can be proposed that instructors may benefit from utilizing them in email correspondence with students. Emoticons may provide the needed emotional context, digital immediacy, presence, and relational cues needed to improve email perceptions.

One theory that is useful in explaining how and why emoticons improve digital communication is Social Information Processing (SIP) theory. SIP theory (Walther, 1992) acknowledges that though CMC may limit the number of relational cues available, that internet users have been able to adapt to these limitations and find alternate ways to convey necessary emotional cues. Strategies include using symbols such as emoticons to convey emotion quickly. While users adapt to integrate these strategies, they may require

additional time and thoughtful management to use them appropriately. Given enough time, the relational level of communication within CMC may be just as strong as in face-to-face situations. Essentially, the SIP theory provides a foundation for understanding how emoticons function to improve the relational quality of CMC.

However, though emoticons may function strategically to convey emotion, the over-use of emoticons may create a curvilinear effect. Two studies have investigated this phenomenon (Borycki et. al., 2008; Yoo, 2007). The first tested the relationship between emoticon quantities and the effect on liking (amongst other variables). When a sender did not use an emoticon, liking was lowest; when a sender used two emoticons, liking was highest; when a sender used four emoticons, liking diminished. Thus, an inverted u-shaped curvilinear relationship related to liking was reported when emoticons were overused in task-related emails (Yoo, 2007). The second study examined the effect of emoticons on credibility and attractiveness in socially-related messages. This study used conditions with no emoticons, one emoticon every three statements, two emoticons every three statements, and three emoticons every three statements. Conditions with three emoticons present were perceived as the most unexpected. No gross effects were reported for credibility and attractiveness unless taking the expectancy violation into account. When emoticons were perceived as unexpected, perceptions were altered depending on interlocutor emoticon usage similarities (Borycki et. al., 2008). In sum, when emoticons were perceived to be unexpected, perceptions regarding emoticon senders were affected.

Therefore, emoticons may not only be understood in terms of SIP theory, but perceptions may be mediated by Expectancy Violation theory (EV; Burgoon & Jones, 1976). EV theory seeks to explain reactions caused by unexpected behaviors. When expectations are violated, the behavior may be perceived as either positive or negative depending on whether the message receiver liked the violation or not. In the case of unexpected overuses of emoticons, the previous study (Borycki et. al., 2008) showed support that unexpected emoticons within socially-related messages may impact credibility; such that, chat partners who use emoticons in similar ways will regard one another more positively than chat partners who use emoticons dissimilarly. Additionally, the overuse of emoticons may be moderated by message-type and perceptions may be affected negatively when emoticons are featured in task-related as opposed to socially-related messages (Derks, Bos, & Grumbkow, 2007; Yigit, 2005).

Though researchers have begun to study emoticon usage within broad domains, a scant amount of research has examined perceptions of emoticons within a teacher-student context. One report indicated that teachers are already mirroring emoticon usage as reflected by their students; however, teachers do not feel comfortable doing so (Priddis, 2013). Clearly, teachers have begun contemplating how and when to best integrate emoticons into email communication. Yet, an important question remains: specifically, does teacher emoticon usage affect students' perceived credibility and liking of teachers? Using SIP theory as a theoretical foundation mediated by EV theory, this study will explore this question.

## **CHAPTER 2**

### **LITERATURE REVIEW AND HYPOTHESES**

#### **Emoticons**

Though emoticons may have been present as early as the 1880's in the form of typographical art (HuffPost, 2013; Lee, 2009), one of the first accounts of modern emoticon usage was documented on a 1982 Carnegie Mellon University online bulletin system. It was suggested that the sideways smiley-face could be used to demonstrate humor and prevent arguments (Fahlman, 2012). Emoticons have since grown in popularity: Yahoo surveyed 40,000 instant-messenger users and found that 82% used emoticons (Yahoo, 2007). Research on emoticons has investigated a variety of topics including comparative studies that examined emoticon usage patterns between males and females (Witmer & Katzman, 1997), reports on brain activity associated with emoticon visualization (Yuasa, Saito, & Mukawa, 2011), and studies that examined analysis detection systems that automatically predicted the feelings expressed by emoticons (Ptaszynski, Maciejewski, Dybala, Rzepka, & Araki, 2010). Although emoticons have functioned within CMC for only thirty years, much inquiry has begun to explore these communicative devices. In fact, simply typing the word "emoticon" in the Google Scholar search (filtering out patents and citations) reveals more than 5,000 distinct results.

Nonetheless, examining the emoticon literature within the context of the communication studies discipline significantly reduces results. A search for the word "emoticon" in the Communication & Mass Media Complete (EBSCO) database reveals



only 33 articles. Within the conference papers and panels between 2005 and 2012 at the National Communication Association (NCA) and International Communication Association (ICA), only eight included the word “emoticon” in the title. Emoticon communication research is plainly at a developing stage of inquiry. Though this research has begun to explore a variety of communication issues, many of these studies have illuminated the functions of emoticons within CMC.

### **Emoticon Functions**

In order to understand how emoticons impact teacher emails and general text-based interaction, it is necessary to explain how emoticons function. This review outlines the social and utilitarian purposes of emoticons according to four complementary themes present within the literature: emoticons (a) affect interactions positively; (b) influence message meanings; (c) manage impressions; and lastly (d) supplement nonverbals (Adams, 2013). Each of these four categories is elaborated on to highlight the important role emoticons play in creating meaningful text-based dialogues.

First, a variety of studies have identified the ways in which emoticons (a) affect interactions positively. For example, emails featuring emoticons have been associated with more favorable sender impressions (Byron & Baldrige, 2007). Participants have indicated that they like senders more, believe senders like them more, and perceive significantly more immediacy, affection, similarity, and depth when messages feature emoticons (Yoo, 2007). Within chat settings, partners utilizing emoticons were perceived to be more extroverted, friendly, and agreeable (Fullwood & Martino, 2007).

Although composed of neutral punctuation marks, emoticons clearly play an affirmative role in mediated interactions: they help express ideas, share understandings, demonstrate feelings (Yigit, 2005), strengthen messages, provide humor (Derks, Bos, & Grumbkow, 2008), add personality and clarity (Priddis, 2013), express playfulness, demonstrate group belonging, and show creativity (Boldea & Norley, 2008). The presence of emoticons may also positively affect cognition; one study indicated that participant memory scores were higher during conditions with emoticons present (Kalyanaraman & Ivory, 2006). In addition, emoticons add informal and unique visual components to text-based communication (Kanayama, 2003).

Though numerous emoticon studies focused on message recipient perceptions, reports also examined the perspectives of message senders. From this view, it was found that senders of emoticons experienced interactions more positively. Case in point, users of emoticons have reported feeling higher levels of enjoyment, personal interaction, perceived information richness, and perceived usefulness in chat interactions (Huang, Yen, & Zhang, 2008). In fact, when users were given the option to use emoticons, more often than not, they did choose to do so and were subsequently more satisfied (Rivera, Cooke & Bauhs, 1996). Within a social networking context, reports have demonstrated that using emoticons may increase Facebook comments and shares by as much as 33% (Melsted, 2012) and that posts containing emoticons typically receive 52% higher interaction rates (Hindman, 2012). Utilizing emoticons can also improve the “like” rate of Facebook posts by 57% (Stringfellow, 2012). Ultimately, emoticons perform positive roles for both message senders and receivers.

In sum, many investigations have shown that emoticons largely function to enhance mediated text interactions. Therefore, those who regularly communicate via CMC may consider integrating emoticons into their regular dialogue patterns. For instance, if teachers were to embrace emoticons in emails with students, both individuals may experience an enhanced interaction climate.

At the same time, research has also explored the ways emoticons (b) influence message meanings. First, because emoticons are graphic representations of the human face, they may often stand alone and act as a complete utterance (Garrison, Remley, Thomas, & Wierszewski, 2011). Within this type of utterance, the meaning can be easily understood: a sad-face emoticon such as :( can signify crying and function as a representation of sadness without accompanying text. Therefore, emoticons can carry cross-culturally understood meanings without congruent or associated words.

Nonetheless, emoticons frequently accompany and influence the meaning of text to augment interpretation (Rezabek & Cochenour, 1998). One study paired positive text-based messages with congruently positive happy-faced emoticons. It was reported that this led to an enhancement making the overall message more effective and more positively interpreted than just the text alone (Walther & D'Addario, 2001). A similar study replicated this research utilizing the graphic smiley-face icon instead (☺). Yet, this report did not observe the same enhancement effect (Dindia & Huber, 2009). Graphic-emoticons may affect message meanings differently than basic typed-emoticons. Even so, another report indicated that when negative emoticons were combined with simple and complex text-based messages, increased feelings of negative emotions occurred

(Luor, Wu, Lu, & Tao, 2010). This study again supported the notion that text-based emoticons could enhance and influence meanings.

Not only can emoticons augment interpretation, but they may also change the meaning of a text-message completely. In Walther and D'Addario's (2001) study, when a happy phrase was paired with a contradictory un-happy emoticon, this consistently resulted in a negative perception of the whole message. Participants believed the sad feeling from the negative emoticon more so than the happy meaning of the literal words. Yet, this was not the case when a negative phrase was paired with a contradictory happy-face emoticon. Participants believed the sad feeling from the negative words rather than the happy emoticon. The authors concluded that regardless of the message, where there was a negatively valenced component, either text or emoticon, the message was perceived negatively. Clearly, the ways emoticons influence interpretation are complex.

Still, emoticons influence message meanings in further ways; they can mitigate messages that feature tense undertones. For example, messages categorized as "flames" are typically defined as angry and hostile messages. Yet, one study reported that flames were interpreted as less hostile when they included emoticons. Results suggested that emoticons had the ability to modify the perception of flames to prevent unintentional disagreements (Thompson & Foulger, 1996). Because, emoticons work to soften otherwise serious statements (Stapa & Shaari, 2012), it is not surprising that one of the earliest accounts of emoticon usage suggested that they could be used to prevent arguments (Fahlman, 2012).

Emoticons may play a crucial role in facilitating message interpretation. As already discussed, the lack of cues in online environments poses a challenge for students to interpret emotion, attitude, or intent within teacher emails. However, when an emoticon is added to the same words and context, the message receiver's perception and interpretation can be altered in meaningful ways (Lo, 2008). Emoticons can enhance, support, change, clarify, and contradict the meaning of words. Therefore, teachers should consider the ways that emoticons impact student message interpretation.

In the same vein, studies have also reported the ways in which online users have chosen emoticons to more carefully (c) manage their online impressions and social identities. Given the absence of posture, gesture, expression, and other behaviors that manage impressions, CMC users must rely on strategic uses of emoticons, abbreviations, and action-simulators (Fullwood & Martino, 2007). As an example, CMC users in Malay were able to convey a pleasant disposition through happy-face emoticon usages (Attan, Bolong, & Hasan, 2010).

Impression management strategies may vary by gender. For example, research has shown that women utilize emoticons more often than man (Bordbar 2010; Witmer & Katzman, 1997) and that men tend to utilize a wider variety of emoticon-types (Tossell, Kortum, Shepard, Barg-Walkow, Rahmati, & Zhong, 2012). Men and women have also used emoticons for different purposes: men use them to tease or be sarcastic and women use them to provide humor (Wolf, 2000). However, other studies have purported alternate results: one indicated that teenage boys used emoticons more than teenage girls (Huffaker & Calvert, 2005) and another did not find any significant differences in

emoticon usages between women and men (Attan, Bolong, & Hasan, 2010). While this research disagrees somewhat, men and women may utilize emoticons to manage their online identities in different ways.

Emoticons can also be effective in causing impressions of politeness, especially when typed-messages may be otherwise perceived as rude. Darics (2010) reported that in an office environment it is necessary to offer advice, use directives, send requests, criticize, and disagree on a routine basis. Therefore, such messages carry the strong potential to imply a rude or condescending tone. This study found that emoticons could mediate these interactions and contribute to polite perceptions, defusing the potential for tense exchanges. Similarly, another report showed that face-threatening emails that ordinarily risk damaging a person's self-image could also be perceived as more polite when emoticons were present (Shin, 2011). In essence, emoticons enabled potentially offensive text-based messages to be perceived in more polite ways.

Another important impression to manage is credibility. Though some have argued that emoticon usage within a business context may lower one's credibility (Munter, Rogers, & Rymer, 2003), research has not fully supported this assertion. For example, one study found that the credibility of task-related messages (such as a message sent for the purpose of setting up an interview) that contained emoticons was, indeed, lowered; however, the credibility of the message sender was not affected (Yoo, 2007). This study suggested that perhaps one's personal credibility might not be entirely at risk when sending an emoticon in task-related messages. In contrast, another study indicated that credibility was not affected unless emoticons were perceived to be unexpected and

used dissimilarly (Borycki, et. al., 2008). However, this study examined only socially-related messages with chat partners engaged in informal dialogues; instead, work or task-related messages featuring unexpected emoticons may be perceived differently. Based on these reports, more research on the topic of credibility and emoticon usage is needed.

Nonetheless, emoticons play a role in allowing users to strategically manage their online impressions. Given that people may intentionally choose when to employ one, they may enable greater levels of careful impression management compared to face-to-face interaction. Emoticons may make messages more polite and portray pleasant dispositions. Therefore, teachers may be able to add emoticons to emails to communicate their social identities. On the other hand, given the unclear ways emoticons interact with credibility during task-related messages, teachers may be hesitant to adopt them.

Finally, much research has examined the ways emoticons function to (d) supplement nonverbals. While they work as mood indicators (Riva, 2002), they also add appropriate cues to text-communication in otherwise cue-less interactions (Boldea & Norley, 2008; Crystal, 2001; Kindred & Roper, 2004; Lo, 2008; McCalman, 2008; Silva, 2011; Thompson & Foulger, 1996). Although emoticons are presented as verbal (text) cues, they supply a variety of communication aspects that would normally be discernible during instances of face-to-face interaction in the form of nonverbal behavior. They work as “an attempt to overcome the lack of facial expressions, gestures, and other conventions of body posture which are so critical in expressing personal opinions and attitudes and in moderating social relationships” (Boldea & Norley, 2008, p. 44).

Similarly, emoticons may be utilized as indicators to display nonverbal tones such as surprise, disappointment, astonishment, and sadness (Stapa & Shaari, 2012).

Emoticons not only work to supplement nonverbals, but researchers also contend that they should be classified as a type of nonverbal behavior in themselves. One reason that supports this position is that emoticons follow the same placement pattern of nonverbals in face-to-face interaction. In a traditional conversation, an individual would likely speak and then show an emotive expression. Emoticons work in the same way: people utilize them either before or after a statement. This study claimed that because the online conversations and the ensuing relationships were real, that the emoticons used were also real forms of nonverbal interaction and not just substitutes (McCalman, 2008). Additionally, emoticons may function as illocutionary forces; a winking emoticon may convey joking, yet joking is not a type of emotion. Therefore, emoticons are not only nonverbal emotional representations, but they work as other types of communicative devices (Dresner & Herring, 2010).

Besides the numerous communication studies that purport that emoticons function as a type of nonverbal, physiological data has further supported this assertion. By utilizing fMRI (functional Magnetic Resonance Imaging) equipment, researchers have been able to detect variations of MRI signals caused by changes in cerebral blood flow when participants read emoticon-enriched sentences. It was found that compared to sentences without emoticons, that the emoticon-enriched sentences activated a part of the brain called the right inferior frontal gyrus; this part of the brain is normally associated with responding to nonverbal behavior. These researchers claimed that “we confirmed



by brain measurement that emoticons are a kind of nonverbal information, and that the other party's emotions are perceived in communications using emoticons" (Yuasa, Saito, & Mukawa, 2011, p. 22).

Ultimately, many studies have categorized emoticons as a type of nonverbal behavior. They fulfill similar purposes as face-to-face nonverbals, but they do so within cyberspace. Emoticons demonstrate emotion, display attitudes, and invoke physiological responses akin to traditional nonverbal behaviors. Therefore, teachers should consider using emoticons in emails to provide a nonverbal, social, and relational level to CMC.

In summary, the extant emoticon literature has demonstrated that they function to (a) affect interactions positively; (b) influence message meanings; (c) manage impressions; and (d) supplement nonverbals. Though CMC may be perceived as a medium lacking in context cues, emoticons enable users to cope with the restrictions and improve communication (Derks, 2007). Consequently, professionals across multiple disciplines may benefit from utilizing emoticons to strategically improve the interpersonal quality of emails. Amongst those professionals, it is reasonable to suggest that teachers specifically may be able to improve email dialogues and add a sense of closeness within digital messages sent to students.

### **Emoticon Criticism**

Though it is important to understand how emoticons function, it is also necessary to consider the potential for emoticons to play a negative role in interaction. The criticisms are worth considering because emoticons may negatively affect perceptions of credibility (Munter, Rogers, & Rymer, 2003) and are often unexpected in task-related

messages (Derks, Bos, & Grumbkow, 2007). Therefore, in order to shine light on this phenomenon and better understand how emoticons influence perceptions of teacher credibility and liking; this review additionally outlines an assortment of common emoticon criticisms and objections.

Despite the potential for emoticons to affect online interactions in positive ways, some professionals are opposed to using them. For example, one report indicated that emoticons might hold only a limited ability to substitute nonverbals and that they do not offer significant improvements to CMC (Antonijevic, 2005). Opponents have also claimed that emoticons can be perceived as slang (Angell & Heslop, 1994), are not a dignified form of discourse (Buchanan, 2007), and are poor substitutes for empathy (Manos, 2012). One common critique is that adults ought to have sufficient communication skills in order to avoid the use of crude visual symbols (Boldea & Norley, 2008). In short, some may view an emoticon as “an unnecessary and unwelcome intrusion into a well-crafted text” (Provine, Spencer, & Mandell, 2007, p. 305). Therefore, the credibility and liking of a message sender may be influenced by these perceptions.

Another legitimate criticism acknowledges that though emoticons may fulfill nonverbal functions, they should not be considered equal to face-to-face nonverbals. This is because emoticon usages are deliberate and voluntary while traditional nonverbal behaviors are often unplanned and difficult to manage (Derks, Bos, & Grumbkow, 2007; Walther & D’Addario, 2001). To illustrate, a nervous speaker during a face-to-face interaction may show physiological signs such as sweating or shaking. Such symptoms

of anxiety may be difficult to self-monitor. Yet, this is not so in an online environment; nervous feelings experienced during mediated interactions can be easily masked.

Although an individual could utilize an emoticon to convey anxiety (such as ^\_^);, one may choose not to do so in CMC. Therefore, since emoticons rely on personal and strategic choices, they are not exactly the same as nonverbal behaviors and should not be considered equivalent replacements.

Another critique is that emoticons are not regarded well within business contexts. One argument claimed that this is because emoticons deviate from organizational normative behaviors (Byron & Baldrige, 2007). Given that emoticons have become popular only recently within the scheme of human communication, it is not surprising that their usages have yet to be normalized within business contexts. As such, emoticons may imply a social stigma; their use, or misuse, can accrue judgment on a submitter (McCalman, 2008). Relatedly, research has shown that individuals are more likely to engage in emoticon usage during socially-related conversations rather than task-related situations (Derks, Bos, & Grumbkow, 2007). This may be due to the stigma attached to potentially misusing an emoticon in a business or task-related context in which emoticon normative behaviors have not been established.

To account for a range of opinions toward emoticons, Krohn (2004) advised that message senders should consider the generational differences of message-recipients before deciding to include an emoticon or not. For Traditionalists (born before 1946) and Baby-Boomers (1946-1964), it was advised not to include emoticons at all. For those within Generation-X (1964-1980) and Millennials (1980-2000 and after), it was

recommended to be generous with emoticons. Whether a generational divide is justified, this advice recognizes that perceptions regarding emoticon appropriateness varies.

Given these points, emoticons are undeniably complex. While they function in numerous positive ways, critics of emoticons would caution their usage. However, this conflict may be partly due to personal preference. Just as some people prefer to smile more in face-to-face interaction, emoticons may be used disproportionately. Still, traditional face-to-face nonverbal behaviors communicate in multifarious ways as well. Though smiling may be typically considered a polite gesture, smiling in a heated debate may be interpreted as rude (Shin, 2011). No doubt, nonverbal behavior in both face-to-face as well as mediated interaction is not a simple or straightforward process. Due to the inherent important role that communication plays within learning processes, this research is especially needed within a teacher-student context. Yet, perceptions regarding teachers who use emoticons are unclear. Is it appropriate for a teacher to use an emoticon in a task-related email? Do emoticons affect student perceptions of teacher credibility and liking? In review of what is known about the functions and criticisms of emoticons, CMC theorists have sought to provide a foundation to further explain how emoticons interact with and affect perceptions.

### **Social Information Processing Theory**

In contrast to earlier CMC theories that asserted that mediated channels were inherently impersonal and unsociable (Daft & Lengel, 1984; Kiesler, Siegel, & McGuire, 1984; Short, Williams, & Christie, 1976), Social Information Processing (SIP) theory is useful in explaining how and why emoticons improve text-based communication. This

theory acknowledges that though CMC may suffer from reduced cues, other strategies can be used to provide supplemental indicators (Walther, 1992). In particular, online users have designed and implemented creative text-based strategies such as action-simulators, emoticons, strategic exclamation points, and abbreviations to function as emotive and descriptive devices. Though these strategies may require additional time and consideration to implement, when sufficient time is given, mediated messages can be just as meaningful as face-to-face interactions.

Support for the SIP theoretical framework has been demonstrated by several studies. This area of research posits that regardless of missing cues, substantial mediated relationships can develop (Tidwell & Walther, 2002; Walther, 1993). In one study, researchers compared impressions developed by strangers during face-to-face and CMC interaction. Initially, the strangers in the face-to-face environment perceived each other more strongly (either positive or negative) while those in the CMC environment had neutral impressions. Over time, those in the CMC group also developed impressions that were just as strong as those in the face-to-face condition (Walther, 1993). This study showed that if enough time was available, CMC could be equally as effective as face-to-face communication.

Other research was conducted utilizing similar comparative methods. One study found that the mediated environment enabled strangers to ask each other more direct questions that resulted in greater amounts of self-disclosure. As such, participants reported stronger levels of confidence regarding how well they were able to get to know each other in comparison to the face-to-face participants (Tidwell & Walther, 2002). In a

different study, participants were instructed to behave in ways designed to encourage chat partners to either like or dislike one another during both mediated and face-to-face conditions. However, participants were not instructed how to accomplish this. Nonetheless, it was found that participants in both conditions were able to effectively portray behaviors related to liking or disliking and that no differences were reported between the face-to-face and CMC environments. Interestingly, participants who were told to act cold or distant during mediated interactions were able to use a number of strategies to portray this social behavior online. Despite reduced cues and without instruction, interlocutors were able to transfer emotional content to mediated messages just as SIP theory has purported (Walther, Loh, & Granka, 2005).

Further studies have examined how emoticons specifically contribute to the SIP theoretical framework. One report examined relationships developed during online gaming interactions. This study showed that participants who utilized emoticons in virtual worlds developed stronger friendships over time (Utz, 2000). Relatedly, another study found that participants who asked for favors through email interactions were able to use emoticons to effectively convey politeness (Shin, 2011). Both of these studies showed support for the SIP theory; they demonstrated how internet users adapted to online environments and imbued messages with social meanings through emoticons. SIP theory explains that text-based emoticons can increase the level of social presence within a CMC environment to project more of an interpersonal identity within verbal messages and make CMC more like face-to-face communication (Yoo, 2007).

SIP theory purports that because people are fundamentally social, they will find creative ways to construct meaningful online interactions (Walther, 1992). Internet users are motivated to form relationships just as face-to-face communicators are. However, given the reduced cues, they must necessarily approach this process in a different way (Robbins, 2012). Therefore, teachers must recognize that relational elements can be challenging to portray during email interactions. This does not mean that emotive responses are impossible; rather, they simply require additional levels of thought and consideration. As such, teachers may seek to utilize the available emotive strategies to construct more meaningful email interactions. Emoticons can fulfill this role because they function as short and easily integrated interpersonal emotive devices (Scissors, Gill, Geraghty, & Gergle, 2009).

### **Expectancy Violation Theory**

Emoticons cannot simply be explained in terms of SIP theory. There may be additional processes at work that affect perceptions toward their usages. While SIP theory provides a foundation to explain how emoticons work as creative and strategic mediated interaction tools, the extant research suggests that emoticons are more complicated. As an example, though emoticons are generally accepted during socially-related interactions, they are not as often utilized or expected during task-related messages (Derks, Bos, & Grumbkow 2007). As a result, perceptions toward emoticons may be mediated by Expectancy Violation (EV) theory.

According to EV theory, behaviors are enacted in ways that typically conform to social norms. As such, communication often adheres to standard and expected behavioral

guidelines. Yet, not all interactions proceed within expected parameters and EV theory seeks to explain reactions caused by expectancy violations (Burgoon & Jones, 1976). To illustrate, it may be expected for a student to see an emoticon in an email from a peer, but it may be unexpected for a student to see an emoticon in an email from a teacher. This may be due in part to generational differences. When expectations are violated, the behavior can be perceived as either positive or negative depending on whether the message receiver likes the violation or not. Expectancy violations can also contribute to feelings of confusion and uncertainty. Given the potential for emoticons to appear as unexpected additions to task-related messages, it is crucial to consider how the EV theory may interact with perceptions of emoticon usages.

There are two relevant features of EV theory that demonstrate how the theory functions to predict behavior. First, a violated expectation is not always perceived to be necessarily negative or positive. Instead, it depends on the degree that the behavior was perceived to be unexpected (moderately unexpected as opposed to greatly unexpected) and to what degree the recipient liked the interaction or not. These two points will predict how strong the reaction is and whether it will be positive or negative (Burgoon & Jones, 1976). Second, when an expectation is violated, the recipient becomes more aware and distracted by the violation. As such, the violation becomes the focus of the interaction. As an additional consideration, this theory predicts that if the recipient is familiar or intimate with the violator, that the reaction may be perceived more positively than if the violator is a stranger or regarded poorly (Burgoon & Walther, 1990). On the same note, if the violator can offer a reward (such as friendship or a course grade), the



violation may be received positively, but if the violator poses a threat of some sort, the recipient may perceive the violation negatively. Like emoticons, EV theory also functions in complex ways. Nonetheless, norm violations often contribute to negative perceptions toward message senders because they deviate from normally expected behaviors (Levine et. al, 2000).

Early research on EV theory examined the phenomenon in face-to-face interactions and manipulated nonverbal expectations regarding personal space. For example, within United States cultural norms it is standard to keep a respectable amount of distance between communicators. Instead, this study examined perceptions towards dyadic communication when face-to-face chat partners were closer in proximity than expected (Burgoon & Jones, 1976). It was found that expectancy violations of personal space resulted in negative perceptions toward space violators. Much research has examined EV theory within similar face-to-face contexts. To illustrate, EV theory has been used as a lens to study and interpret deception (Burgoon, Blair, & Strom, 2008), communication in higher education (Houser, 2005; 2006; Lannutti, Laliker, & Hale, 2001; McPherson, & Liang, 2007), and romantic relationship communication (Bachman & Guerrero, 2006; Lannutti & Camero, 2007).

Few studies have applied EV theory to an emoticon context. As discussed previously, one report used varying amounts of emoticons per statement (none, one, two, and three) to examine unexpected uses of emoticons. It was hypothesized that excessive amounts would lower the attraction and credibility of message senders. However, emoticon usage had no gross effect on attractiveness or credibility unless emoticons were

perceived to be unexpected and were used dissimilarly (Borycki et. al., 2008). However, this study only examined emoticons during socially-related messages. From the extant research, it is known that perceptions of emoticons within social and task-related messages vary (Derks, Bos, & Grumbkow, 2007). Emoticons featured within social messages are typically more acceptable and expected compared to task-related messages. Therefore, the extent to which expectancy violations mediate perceptions of credibility and attractiveness may be stronger during task-related message rather than socially-related messages.

In summary, it is known that emoticons are generally accepted within socially-related emails as opposed to task-related emails (Derks, Bos, & Grumbkow, 2007; Yigit, 2005; Yoo, 2007). It is also known that a general overuse of emoticons can contribute to perceptions of expectancy violation and may have some effect on perceptions (Borycki et. al., 2008). It is reasonable to predict that perceptions toward emoticons may be mediated by EV theory, but also moderated by message type. Therefore, what remains unclear is how an abundance of emoticons may affect perceptions during task-related emails. In particular, what is not known is how teacher emoticon usage affects student perceptions of a teacher's credibility and liking.

### **Teacher Credibility**

Communication academics have considered the impact and measurement of credibility for centuries. While Aristotle believed that credibility, or ethos, contributed to a speaker's persuasive power (Wood, 2011), scholars today would agree on the inherent importance of credibility within communication and instructional contexts (Finn,

Schrodt, Witt, Elledge, Jernberg, & Larson, 2009). Because credibility is a crucial characteristic to portray, much research has examined, tested, and hypothesized the effect of credibility on audience perceptions. While this research has traditionally focused on persuasive discourse (Applbaum & Anatol, 1973), teacher credibility in particular has emerged as a distinct area of inquiry.

Teacher credibility is a multidimensional concept that has been researched throughout the last forty years. One of the first measures used to assess teacher credibility was comprised of five factors: competence, character, sociability, composure, and extraversion (McCroskey, Holdridge, & Toomb, 1974). This scale was used to measure teacher credibility for approximately two decades. After a variety of modifications, this measurement was eventually simplified to include only three subcategories: competence, character, and caring (McCroskey & Teven, 1999). These three factors have since been utilized as the most consistent and reliable dimensions available to measure teacher credibility.

Early reports on teacher credibility identified numerous positive outcomes. For example, students were more likely to sign up for courses with the same professor, recommend professors to peers, and experience greater levels of course recall when teachers were more credible (McCroskey, Holdridge, Toomb, 1974). Over time, research amassed data that further identified the benefits linked to teacher credibility. It has been reported that students experience higher levels of motivation to learn (Frymier & Thompson, 1992), greater affective learning (Beatty & Zahn, 1990), increased cognitive learning (McCroskey, Valencic, & Richmond, 2004), greater levels of communication

with the instructor both inside and outside of the classroom (Myers, 2004), perceive more justice in the classroom (Chory, 2007), feel better understood by the instructor (Schrodt, 2003), and experience greater feelings of respect for teachers (Martinez-Egger & Powers, 2007) when they are perceived to be more credible.

Because research on teacher credibility has been expansive, a meta-analysis was conducted by Finn, Schrodt, Witt, Elledge, Jernberg, and Larson (2009). These researchers reviewed and synthesized data from fifty-one teacher credibility studies to examine the relationship between teacher behaviors and student outcomes. They examined the overall effect size of teacher credibility in the classroom through a variance centered statistical analysis. Results indicated that on average, teacher credibility had a moderate and meaningful association with many teacher behaviors and student outcomes. This was a significant find given the varying scales, behaviors, and outcomes used to study teacher credibility over the last forty years.

Three theoretical implications were discussed in this meta-analysis. First, the overall effect size for teacher credibility accounted for 20% of the variance on average across the different instructional outcomes. Given the wide scope of outcomes previously linked to teacher credibility (including age, ethnicity, nonverbal cues, humor, and sexual orientation), this finding was substantial. It was also shown that teacher credibility functioned as both a product of teacher behaviors and an antecedent that contributed to learning outcomes. Second, results revealed a larger effect size for studies using the updated three-dimensional credibility measure over earlier scale versions. This shows support for the three-dimensional scale that measures competence, character, and

caring. Lastly, results highlighted the importance of the caring construct as a key dimension of teacher-credibility. This was because the effect sizes for perceived caring were generally higher than those generated for competence and character. This supports the notion that “the more that students perceive their teacher cares about them, the more the students will care about the class, and the more likely they will pay attention in class and consequently learn more course material” (Teven & McCroskey, 1997, p. 1).

Though research has shown that credibility plays an important role in learning outcomes, the following behaviors impact perceived credibility as an antecedent: positive vocal cues, (Beatty & Behnke, 1980), affinity seeking behaviors (Frymier & Thompson, 1992), appropriate utilization of classroom technology (Schrodt & Witt, 2006), assertiveness and responsiveness (Martin, Chesebro, & Mottet, 1997), out-of-class communication (Myers, 2004), and both verbal and nonverbal immediacy behaviors (Johnson & Miller, 2002; Teven & Hanson, 2004). Inversely, the following activities negatively affect credibility: verbal aggression (Myers, 2001; Schrodt, 2003), slow speech rates (Simonds, Meyer, Quinlan, & Hunt, 2006), and classroom misbehaviors (Banfield, Richmond, & McCroskey, 2006; Thweatt & McCroskey, 1998). In sum, numerous behaviors play a role in enhancing or inhibiting perceived teacher credibility.

Ultimately, credibility persists as one of the most important attributes needed by teachers (Brann, Edwards, & Myers 2005). If learning is to occur, students must perceive teachers as reliable sources of information. Given that credibility is a complex and multidimensional concept (McCroskey & Teven, 1999), predicting the factors that influence perceptions of credibility may pose a challenge. In particular, it is not known

how emoticons impact perceived credibility in a teacher-student context. Yet, it is possible to predict the impact by reviewing what is known about emoticon usage in connection with the three dimensions of teacher credibility: competence, character, and caring.

### **Emoticons and Competence**

The first component of teacher credibility is competence. Though researchers have used three different scale iterations to operationalize teacher credibility since the 1970's, all three versions featured competence as a component (McCroskey, Holdridge, & Toomb, 1974; McCroskey & Young 1981; McCroskey & Teven 1999). Competency refers to one's extent of qualification, expertness, intelligence, and authoritativeness (McCroskey & Teven, 1999). This dimension is the degree to which a teacher is perceived as knowledgeable and professional.

One notable study identified numerous teacher behaviors that impacted student perceptions of competence. Myers and Bryant (2004) explain that competent teachers are perceived as being intelligent, trained, expert, informed, and bright. Teachers exemplify these traits through (1) content expertise; (2) affect for students; (3) and verbal fluency. To portray content expertise teachers provide examples, have a command of the material, have legitimate experience with the material, answer questions, encourage questions, demonstrate knowledge beyond the course textbook, provide real world examples, and use PowerPoint. Teachers convey affect by expressing feelings toward problems, caring for students, being personable, showing respect, and being available for assistance. Lastly, teachers convey verbal fluency through tone, paralinguistic behavior, eye-contact,

appropriate body position, not stuttering, using a strong tone, speaking clearly, and speaking with flow (Myers & Bryant, 2004). All of these behaviors contribute to perceptions of teacher competence.

Similar reports echo these themes: it was found that appropriate classroom behavior (Thweatt & McCroskey, 1998), communicating caring (Teven, 2007), assertiveness, nonverbal immediacy, responsiveness, and extroverted tendencies (McCroskey, Valencic, Richmond, 2004) contribute to greater perceptions of competence. While competency can be affected by teacher behaviors, portraying competence can affect student outcomes. For example, students demonstrate better immediate recall of content from courses that featured competency portraying teachers (Wheeless, 1975).

Regarding emoticons, few reports have examined how these symbols impact perceptions of competence. Critics would purport that emoticons are unprofessional and immature communicative devices used by younger age groups (Buchanan, 2007). However, one study conducted an experiment to test this assertion. It was hypothesized that competence would be affected by emoticons in certain situations, but not in others. Therefore, the researchers examined competence and friendliness in chat conversations. They compared results between serious (health oriented) and non-serious (entertainment oriented) discussions lead by experts; conditions featured either no emoticons or ten emoticons throughout the entire dialogue. Results showed that perceived competence and friendliness were higher when emoticons were present during both the serious and

the non-serious discussion topics (Kalyanaraman & Ivory, 2006). Given the criticism, this is a notable result; competence was improved by the use of emoticons.

There are many factors that contribute to perceptions of competence. Though critics assert that emoticons are crude symbols (Boldea & Norley, 2008), preliminary research shows support that expert competence can be improved by emoticons (Kalyanaraman & Ivory, 2006). Nonetheless, it is unclear whether results will hold true within a teacher-student context. Additionally, it is not known how varying amounts of emoticons may influence perceptions. How is competence perceived when a teacher uses many emoticons in an email to a student? Based on the literature, the following hypothesis is proposed:

H<sub>1a</sub>: Teacher emoticon usage is related to perceived competence, such that, in an e-mail message to a student; no emoticons will be perceived as moderately competent; one emoticon will be perceived as most competent; few emoticons will be perceived as moderately competent; and many emoticons will be perceived as least competent.

### **Emoticons and Character**

Another dimension of teacher credibility is character. Just as competence is an important feature across all three credibility scale iterations, character is congruently an essential component. However, the term “character” has been substituted for the term “trustworthiness.” Both have been operationally defined as the same concept within teacher credibility and have been frequently interchanged for one another. Character



refers to a teacher's degree of trustworthiness, sagacity, safety, and honesty (McCroskey & Teven 1999). It is the level of confidence students can reliably associate with the nature of specific teachers.

Several behaviors may contribute to student perceptions of teacher character. Myers and Bryant (2004) claim that teachers who demonstrate character are honest, trustworthy, honorable, moral, ethical, and genuine. After gathering accounts from students, it was reported that teachers convey character through: (1) immediacy; (2) flexibility; (3) promoting understanding of course materials; and (4) trustworthiness. First, teachers convey immediacy when they are expressive, use appropriate nonverbal cues, show humor, and are enthusiastic. Teachers show flexibility when they are available to students, fair, and want to help students succeed. They promote understanding when they are knowledgeable about material, provide examples, and express their expectations. Lastly, teachers are trustworthy when they keep promises to students, behave appropriately, and are respectful (Myers & Bryant, 2004). In sum, teachers who demonstrate these behaviors are perceived to have higher levels of character.

Research has found complementary results from other studies. Teachers who demonstrate appropriate classroom behaviors, communicate caring (Teven, 2007), are responsive, utilize nonverbal immediacy behaviors (McCroskey, Valencic, Richmond, 2004), and do not engage in teacher misbehaviors enable greater feelings of trust (Thweatt & McCroskey, 1998). In essence, a teacher who conducts herself or himself in a moral and ethical manner is more likely to be trusted by students.

Few studies have examined trust within the context of emoticon usage. One report on CMC environments compared text-based linguistic similarities to perceptions of trust between chat partners (Scissors, Gill, Geraghty, & Gergle, 2009). It was found that when partners demonstrate similarity in text (according to content, structure, and style) that higher levels of trust develop. As one of several components that contribute to style, using emoticons in similar ways enables trust. Although the emoticon result in this study was significant, the amount of emoticons actually featured was low. Nonetheless, when chat partners both similarly use emoticons as stylistic devices, higher levels of interpersonal trust occur. It was reported that this was because emoticons are easily produced and provide a simple and effective way of indicating similarity. While this report indicated that emoticons contribute to trust, this was enabled in a context in which emoticons are mimicked to produce feelings of similarity (and subsequent trust). Instead, if emoticons are used in a one-sided or dissimilar manner, perceptions may not be as favorable.

Though the literature on character has not focused on emoticons, research exploring trust within CMC has begun to develop. One report suggested that trustworthiness in virtual groups could be enhanced by emoticons because they help transmit emotional and nonverbal messages (Kasper-Fuehrera & Ashkanasy, 2001). Based on this proposition and the literature that has already demonstrated an assortment of emoticon positive effects, it is reasonable to predict that emoticons may contribute to character and trust within a mediated context. However, it is not known how character and trust are affected when emoticons are overused in a teacher-student email. The

overuse of emoticons in a task-related message may contribute to a curvilinear relationship. Therefore, the following hypothesis is proposed:

H<sub>1b</sub>: Teacher emoticon usage is related to perceived character/trust, such that, in an e-mail message to a student; no emoticons will be perceived as moderately trustworthy; one emoticon will be perceived as most trustworthy; few emoticons will be perceived as moderately trustworthy; and many emoticons will be perceived as least trustworthy.

### **Emoticons and Caring**

The final dimension of teacher credibility is caring. While, studies between the 1960s and 1980's utilized credibility measures that featured competence and character, the caring dimension was largely ignored (Applbaum & Anatol, 1973; Berlo, Lemert, & Mertz, 1971; McCroskey, 1966; McCroskey & Young, 1981). However, McCroskey and Teven (1999) eventually demonstrated support for the important role caring plays in perceptions of credibility. They argued that message recipients were more likely to be attentive when they believed speakers had their best interests at heart (Teven & McCroskey, 1997). Essentially, caring refers to the concept of goodwill or intent toward the receiver (McCroskey & Teven, 1999). Three primary factors contribute to perceptions of caring: understanding, empathy, and responsiveness (Teven & McCroskey, 1997). Understanding refers to getting to know another person's feelings and ideas; empathy is accepting another person's view as valid; and lastly, responsiveness refers to acknowledging another person's communication quickly and attentively.

Teacher caring can be conveyed in a variety of ways. According to Myers and Bryant (2004), caring teachers are sensitive and not self-centered. Students report that teachers portray caring through (1) responsiveness; (2) being accommodating; (3) and being accessible. Teachers are responsive when they answer questions, are willing to help, display immediacy behaviors (such as knowing a student's name), provide real life applications of course material, have patience, provide encouragement, and use humor. Teachers are accommodating when they do not penalize late work, provide study guides, adjust exams, and provide extra credit. Lastly, teachers are accessible when they hold office hours, send and respond to emails, and provide multiple methods for contact (Myers & Bryant, 2004).

Teacher caring largely contributes to positive student outcomes. Exposure to caring teachers has been found to improve student retention rates (McArthur, 2005), improve learning environments (Teven & Hanson, 2004), raise teacher evaluations, and contribute to higher levels of affective and cognitive learning (Teven & McCroskey, 1997). Inversely, antisocial teaching behaviors contribute to students perceiving their teachers as uncaring (Teven & McCroskey, 1997). Essentially, when teachers are perceived as demonstrating greater levels of caring, students congruently care about the course.

Inadequate amounts of studies have examined emoticons in association with caring. Yet, one study found that users of emoticons reported feeling higher levels of enjoyment, personal interaction, perceived information richness, and perceived usefulness in chat interactions. Subsequently, the researchers predicted that sending

instant messages richly enhanced by emoticons could foster a more caring and cooperative work environment (Huang, Yen, & Zhang, 2008). Based on this analysis, the extant literature on caring, and the positive associations linked to emoticon usage, it is reasonable to predict that emoticons may contribute to greater perceptions of caring. However, again it is not known how perceptions may be affected by the overuse of emoticons in teacher-student contexts. The overuse of emoticons in a task-related teacher email message may affect caring curvilinearly. As such, the following hypothesis is proposed.

H<sub>1c</sub>: Teacher emoticon usage is related to perceived caring, such that, in an e-mail message to a student; no emoticons will be perceived as moderately caring; one emoticon will be perceived as most caring; few emoticons will be perceived as moderately caring; and many emoticons will be perceived as least caring.

### **Emoticons and Liking**

Liking is a relational component that refers to the degree of affect or interpersonal attraction a person feels toward another. People tend to like others who display positive character traits such as honesty, truthfulness, reliability, and caring (Anderson, 1968; Hampson, Goldberg, & John, 1987). There are many factors that play a role in interpersonal attraction including age, height, ethnicity, educational background, nonverbal behaviors, and physical attractiveness (Byrne, 1997). As such, researchers have sought to conceptualize, predict, and measure the factors that contribute to liking across disciplines. Psychologist Byrne (1961) predicted that people would feel the greatest amount of interpersonal attraction toward similar others. This was because

interactions with those who were similar confirmed one's worldview and resulted in more rewarding communication. This prediction eventually contributed to one of the earliest scales used to measure liking: the Interpersonal Judgment Scale (IJS). The IJS examined the effect of attitude similarity on attraction; it was theorized that similar attitudes enforced greater levels of interpersonal attraction and liking (Byrne, 1997).

Though attitude similarity plays an important role in interpersonal attraction, the IJS measurement may be an un-generalizable scale with little validity. For instance, the IJS uses an attitudinal survey that essentially compares similar and dissimilar attitudes. The expectation is that liking will generally be higher amongst individuals who have similar perspectives. An overall measure of liking is calculated by summing items that ask how much one person would like another and how much one person would like to work with another. One criticism of this scale is that "intuition suggests that there are situations in which liking and desiring to work with another may not be indicative of the same factor" (Nesler, Storr, Tedeschi, 1993, p. 238). For example, one person might want to work with another because he or she is skilled, not due to attitude similarity. Another criticism of this scale is that while similarity may contribute to liking, similarity and liking are not equal constructs. Common sense dictates that it may be possible to like someone even when viewpoints are disparate. For instance, the axiom "opposites attract" provides a reasonable counter-point worth consideration. As such, the IJS scale probably measures correlates of liking rather than the direct concept of liking itself. This scale may be effective at measuring and predicting attitude similarity, yet it may be a mistake to assume that attitude similarity and wanting to work with someone equates to liking.

Nonetheless, additional measures have been developed to conceptualize liking. Within the field of communication, McCroskey and McCain (1974) asserted that Interpersonal Attraction was a multidimensional concept composed of three dimensions of attractiveness: social, physical, and task. They measured these components using an eighteen-item scale that could be summed to find the total degree of liking. Throughout the last few decades, the Interpersonal Attraction scale has been used to measure liking in a variety of studies. For example, reports have featured modified versions of this scale to assess liking in contexts related to supervisor-employee mediated interactions (Adams, 2011), self-disclosure and mediated communication (Antheunis, Valkenburg, & Peter, 2007), and perceptions relating to emoticon usage and liking (Yoo, 2007).

Yet, this scale may also hold little validity. For instance, the three dimensions (social, physical, and task attractiveness) cannot play an equal role during all instances of attraction formation. Three criticisms outline this view: first, the social dimension of the Interpersonal Attraction scale measures attraction utilizing items such as, “I think he/she could be a friend of mine” and “I would like to have a friendly chat with him/her.” However, these items may not effectively tap into the concept of liking. It is certainly possible to like someone without wanting to embark on a personal friendship or chat. In addition, concerning the physical dimension, the importance of physical attractiveness may be diminished during CMC interaction compared to face-to-face interaction. Therefore, physical attractiveness may not always be an effective predictor of liking. Lastly, regarding task attractiveness, it is reasonable to expect that one person can like another who does not perform tasks well or would not be an effective worker. Therefore,

while social, physical, and task attractiveness may correlate with the concept of liking, these dimensions cannot predict liking in all situations.

A third scale was constructed to operationalize liking: the Instructor Evaluation measure (McCroskey, 1994). This scale examined liking within a teacher-student context. It used two components that were hypothesized to contribute to teacher liking: the affect toward the instructor and the affect toward taking classes with the instructor. Not surprisingly, this scale again has limited content validity and at face value, it may measure the wrong concept. In explanation: this measurement is composed of a semantic differential scale that evaluates an instructor according to dimensions such as bad/good, valuable/worthless, unfair/fair, and positive/negative. While these dimensions probably correlate with instructor liking, they do not in themselves measure liking. In addition, this scale examines whether a student would take future classes with a particular teacher. Yet, this component may contribute little to the measure; if a student is graduating and not planning to take future classes, the point may be moot. Therefore, this scale might provide valuable information regarding the evaluation of an instructor, but it does not assess liking effectively. In sum, none of these three scales function as particularly valid measurements of liking.

Nevertheless, liking is an important relational construct with numerous factors playing a role as an antecedent. For example, the following behaviors can contribute to greater perceptions of liking: asking direct questions in CMC, self-disclosing in CMC (Antheunis, Valkenburg, & Peter, 2007), displaying observable similarities in zero-interaction scenarios such as similar clothing preferences (Back, Schmukle, Egloff,



2011), and taking the time to chat with dissimilar others (Ah Yun, 1999; Sunnafrank & Miller, 1981). Likewise, numerous other behaviors play a role in attraction formation.

Liking is an important concept within the college classroom. When students like a teacher, they experience greater levels of motivation and achievement benefits (Montalvo, Mansfield, & Miller, 2007). In order to improve liking, research has shown that teachers can utilize an assortment of affinity seeking strategies such as increasing positive self-disclosure (Hill, Ah Yun, & Lindsey, 2008), controlling physical appearance, stressing areas of positive similarity, providing positive reinforcement, expressing cooperation, complying with others' wishes, and fulfilling others' needs. When teachers utilize affinity seeking strategies, they are generally perceived as more likeable, socially successful, satisfied with their lives (Bell & Daly, 1984), display higher levels of competence, display higher levels of character (Frymier & Thompson, 1992), and create a more positive classroom climate (Myers, 1995). Inversely, teacher misbehaviors have a negative effect on perceptions of liking (Wanzer & McCroskey, 1998).

Several studies have examined liking within the context of emoticons. Generally, the presence of a smiley-face emoticon in an email has been shown to increase perceived liking (Byron & Baldrige, 2007). Relatedly, Yoo (2007) examined perceptions of liking associated with the usage of emoticons during task-related (setting up an interview) and socially-related (online dating) messages. To measure liking of the message sender, she utilized a modified version of McCroskey and McCain's (1974) Interpersonal Attraction scale. The three items on this scale read as follows: (1) I like this sender; (2) I have a

favorable feeling about this sender; (3) I think this person could be a good friend of mine. As reported previously, it was found that liking toward the sender had an inverted u-shaped curvilinear relationship in task-related email conditions (no emoticons resulted in the lowest liking; two emoticons resulted in the highest liking; and four emoticons resulted in a moderate amount of liking). However, as an unexpected result, emoticon usage within the socially-related email conditions had a negative relationship to liking (no emoticons resulted in the highest liking; two emoticons resulted a moderate amount of liking; and four emoticons resulted in the lowest amount of liking). While this may be a result of the ineffectiveness of items taken from the Interpersonal Attraction scale, clearly more research is needed to explore emoticons in relation to liking to better understand this dynamic.

Essentially, liking is a form of judgment in which one person feels an enhanced affinity or positive attitude for another. Teacher liking refers to the degree that a student likes the teacher of a given course (Hill, Ah Yun, & Lindsey, 2008). It is known that liking is an important concept within the college classroom. However, given the difficulty in displaying nonverbal emotional cues over email, affinity-seeking strategies are more difficult to enact in CMC. Yet, previous research has shown that both liking and disliking can be portrayed through the utilization of strategies including emoticons (Walther, Loh, & Granka, 2005). However, it is not known how varying amounts of emoticons may affect perceptions of teacher liking. The overuse of emoticons in a task-related teacher email may affect liking curvilinearly. Based on the extant literature, the following hypothesis is proposed:

H<sub>2</sub>: Teacher emoticon usage is related to liking, such that, in an e-mail message to a student; no emoticons will be perceived as moderately likeable; one emoticon will be perceived as most likeable; few emoticons will be perceived as moderately likeable; and many emoticons will be perceived as least likeable.

### **Emoticon Research Methods**

Emoticon research within communication studies has been conducted utilizing a wide variety of methodologies. For example, Walther and D'Addario (2001) conducted a laboratory experiment utilizing manipulated hypothetical messages. These messages were constructed to be positive or negative and either included an emoticon or did not. After reading the message, participants filled out a questionnaire to assess their impressions. This type of methodology was recurrent throughout the emoticon literature. Participants were frequently exposed to a manipulated or hypothetical dialogue, received questionnaires to measure a dependent variable, and then self-reported using either recollections of actual or imagined scenarios (Attan, Bolong, & Hasan, 2010; Braumann, Preveden, Saleem, Xu, & Koeszegi, 2010; Byron & Baldrige, 2007; Cole & Fleuriet, 2011; Derks, Bos, & Grumbkow, 2008; Dindia and Huber, 2009; Kalyanaraman & Ivory, 2006; Ling & Baron, 2007; Lo, 2008; Rivera, Cooke and Bauhs, 1996; Walther & D'Addario, 2001; Yoo 2007).

Researchers have also examined naturally occurring conversations within assorted CMC environments. Darics (2010) utilized an interactionally grounded approach and analyzed the naturally occurring text-based interactions of a virtual team. She reviewed the instant messenger chat transcripts recorded from actual conversations. As such, she

was able to explore how emoticons were utilized in workplace-talk. Other studies utilized similar processes and gathered data from mediated conversations. These dialogues were often found online via blogs, chat rooms, newsgroups, message boards, and instant messages (Bordbar, 2010; Darics, 2010; Provine, Spencer, & Mandell, 2007; Rezabek & Cochenour, 1998; Silva, 2011). Similarly, research was conducted using qualitative methods such as ethnography, interviews, and participant observations (Kanayama, 2003; Kindred & Roper, 2004; McCalman, 2008). Lastly, some reports relied on interpretative methods and drew from literature inferences and researcher observations (Adams, 2013; Antonijevic, 2005; Dresner & Herring, 2010).

## **CHAPTER 3**

### **METHODOLOGY**

#### **Method**

This study examined how the number of emoticons used in a task-related e-mail message affects student perceptions of teacher credibility and liking. To test the hypotheses, a one way factorial experimental design was utilized in which the number of emoticons were manipulated in an e-mail to be none (zero emoticons), one (one emoticon), few (three emoticons), or many (seven emoticons). This study was conducted in two phases: in phase one, an induction check was performed to ensure that the manipulated emoticon conditions had the desired effect. That is, for example, participants presented with an e-mail message with seven emoticons should report a greater presence of emoticons than those presented with an e-mail message with three emoticons. Following the induction check, the main experiment examined how emoticon frequencies affected perceptions of credibility and liking within a teacher-student email context.

#### **Induction Check**

##### **Participants**

Three hundred and twenty-three participants not used in the main experiment were recruited for the induction check from a large Western university. Participants included the following demographics: 121 males (37.5%), 201 females (62.2%), and 1 individual did not indicate a sex (.3%) with a mean age of 19.05 years ( $SD = 2.32$ ). 244 of the participants were first-year (75.5%), 51 were second-year (15.8%), 12 were third-

year (3.7%), 8 were fourth-year (2.5%), 4 reported year in school as “other” (1.2%), 2 were M.A. (.6%), and 2 were Ph.D. students (.6%). With respect to race, 2 were American Indian or Alaskan Natives (.6%), 108 were Asian or Pacific Islanders (33.4%), 23 were Black or African American (7.1%), 108 were Hispanic or Latino (33.4%), 72 were White or Caucasian (22.3%), 9 reported ethnicity as “other” (2.8%), and 1 did not indicate ethnicity (.3%).

### **Procedures**

Participants from lower level general education courses were solicited by email to complete an online survey. The survey included a consent form (Appendix C) that informed students that participation was voluntary and anonymous, questions concerning basic demographic information (age, sex, year in college, and ethnicity; Appendix D), and one of four hypothetical task-related email conditions (Appendix E). After reading the email, participants completed a brief induction check measure (Appendix F) to assess their perception of the number of emoticons present in the email. As an incentive, participants had the option to complete a Google form to receive extra credit upon survey completion. The online survey data and Google form data were not linked.

### **Induction of Independent Variables**

Participants were randomly assigned to one of four emoticon conditions: none, one, few (three), and many (seven). Previous research has employed similar inductions: for example, Yoo’s (2007) study included conditions with none, two, and four emoticons. Similarly, Borycki et. al. (2008) utilized conditions with no emotions, one every three statements, two every three statements, and three every three statements.

### **Type of Emoticon**

The traditional smiley-face icon, : ), was used for this study. Although a variety of emoticon types exist (see Appendix A & B), the smiley icon is the most frequently used (Garrison, Remley, Thomas, & Wierszewski, 2011; Stapa & Shaari, 2012; Tossell, Kortum, Shepard, Barg-Walkow, Rahmati, & Zhong, 2012). The exclusion of other emoticon types enabled greater control over the manipulation of the independent variable and minimized potential confounding factors from entering into the study.

### **Type of Email Message**

Teacher emails are most often categorized as utilitarian (Duran, Kelly, & Keaten, 2005). Utilitarian emails are practical and useful; they are constructed for task-related purposes as opposed to socially-related purposes. For example, task-related emails are composed to provide information, describe work, schedule meetings, and assign duties. Teachers specifically send task-related emails to make class announcements, discuss textbooks, and communicate expectations. As such, the hypothetical email in this study referred to task-related content such as course details and announcements (Appendix E).

The email was constructed to appear as an actual email. To control for other variables, measures were taken to avoid the unintentional manipulation of unexpected factors. Students were informed that university policy required teachers to email students before classes started; this was so participants did not consider the initiative of the teacher to contact the students as a positive or negative trait. In addition, the email did not specify the teacher's age, sex, or class content. The email imitated a zero-encounter situation in which teachers and students were meeting for the first time as strangers

within a text-based environment. This was to insure that students only had the hypothetical email scenario to assess perceptions.

### **Measures**

An induction check measure (Appendix F) was constructed to identify the perceived quantity of emoticon usage. The measure was a five-item seven-point Likert scale that asked participants to indicate how many emoticons were perceived as present in the email. The scale ranged from “strongly disagree” to “strongly agree.” Example questions included “emoticons were absent from this email” and “there were many emoticons present in this email.”

A Confirmatory factor analysis (CFA) for the induction check measure was conducted with Hunter and Hamilton’s (1992) CFA program. This analysis tested for internal consistency among items measured to confirm uni-dimensionality. A CFA of the five items indicated that the items were consistent with a uni-dimensional model and all errors for internal consistency were below the .10 exclusion level. Additionally, the reliability was high ( $\alpha = .90$ ,  $M = 4.14$ ,  $SD = 1.97$ ). Given the findings from the CFA and reliability check, the five items were summed to form the induction measure.

### **Data Analysis**

The statistical software SPSS version 20.0 was used to analyze all data in this report. A preliminary analysis of variance (ANOVA) was performed utilizing data gathered from the first two hundred and fourteen participants to complete the survey. An analysis of means was also performed to calculate the effect size. Preliminary results of the induction check measure indicate the predicted pattern (see Table 1 for means and



confidence intervals). The differences were in the expected direction, significant, and had a moderate effect size,  $F(3, 208) = 58.16, p < .001, \eta^2 = .46$ .

Table 1

*Descriptive Statistics for Preliminary Induction Check*

Emoticons	<i>n</i>	<i>M (SD)</i>	95% CI
0	42	2.14 (1.12)	[1.79, 2.49]
1	64	2.71 (1.09)	[2.44, 2.99]
3	51	4.19 (1.57)	[3.75, 4.63]
7	55	5.25 (1.47)	[4.85, 5.66]

Though the conditions indicate the appropriate pattern, many (seven) emoticons was not perceived high enough to indicate a sufficient amount of emoticon use as desired for this study ( $M = 5.25$ ). Instead, a mean between 6.0 and 7.0 would have been preferred, as it would indicate a higher perceived amount of emoticon usage. Because this investigation sought to examine perceptions when emoticons were excessive, a fifth condition was subsequently added to include very many (twelve) emoticons (Appendix E).

With the addition of the final condition, an ANOVA was performed and indicated the predicted pattern (see Table 2 for means and confidence intervals). An analysis of means was also performed to calculate the effect size. The differences were in the expected direction, significant, and had a moderate effect size,  $F(4, 318) = 94.62, p < .001, \eta^2 = .54$ . Most important, the fifth condition indicated a greater amount of

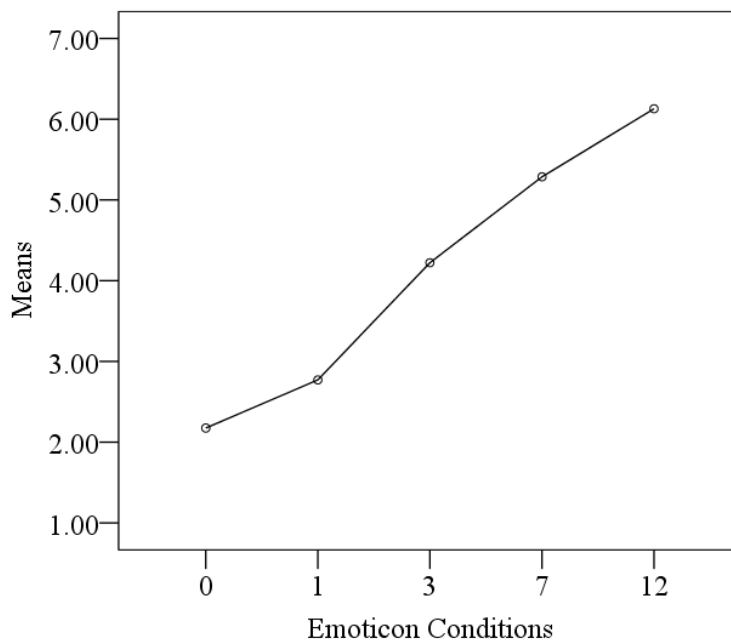
emoticons was perceived with a mean score greater than six. Taken as a whole, these results confirm that the added condition resulted in a more complete and successful manipulation than the preliminary analysis (see Figure 1 for a graph of the means).

Table 2

*Descriptive Statistics for Induction Check*

Emoticons	<i>n</i>	<i>M</i> ( <i>SD</i> )	95% CI
0	48	2.17 (1.09)	[1.86, 2.49]
1	83	2.77 (1.17)	[2.51, 3.03]
3	62	4.22 (1.55)	[3.83, 4.61]
7	65	5.28 (1.48)	[4.92, 5.65]
12	65	6.12 (1.37)	[5.79, 6.47]

Figure 1. Means of Induction Check



## **Main Experiment**

### **Participants**

Five-hundred and thirty-four college students from a variety of disciplines across the United States were recruited for the main experiment. Participants included the following demographics: 193 males (36.1%), 333 females (62.4%), and 8 individuals did not indicate a sex (1.5%) with a mean age of 22.01 years ( $SD = 1.39$ ). 150 of the participants were first-year (28.1%), 91 were second-year (17%), 80 were third-year (15%), 127 were fourth-year students (28.8%), 19 were master's (3.6%), 17 were Ph.D. students (3.2%), and 50 did not indicate year in school (9.4%). With respect to race, 7 were American Indian or Alaskan Natives (1.3%), 152 were Asian or Pacific Islanders (28.5%), 57 were Black or African American (10.7%), 97 were Hispanic or Latino (18.2%), 196 were White or Caucasian (36.7%), and 25 reported ethnicity as "other" (4.7%).

### **Procedures**

Participants were solicited to participate by email and directed to complete an online survey hosted by Survey Gizmo. Using a snowball sampling approach, invitations to participate were given via social networking websites and listservs such as Facebook and CrtNet. The survey included a consent form (Appendix C) that informed students that their participation was voluntary and anonymous, questions concerning basic demographic information (age, sex, year in college, and ethnicity; Appendix D), and one of five hypothetical task-related email conditions (Appendix E). After reading the email, participants reported their perceptions regarding teacher credibility and liking by filling

out the appropriate measures (Appendix G, H, I, & J) and completed a brief induction check measure (Appendix F) to assess their perception of the number of emoticons present in the email. As participation incentive, participants had the option to complete a Google form to receive extra credit and/or enter a raffle for a Starbucks gift card upon survey completion. The Survey Gizmo data and Google form data were not linked.

### **Independent Variables**

Participants were randomly assigned to one of five conditions that featured the varied emoticon quantities: none, one, few (three), many (seven), or very many (twelve). Consistent with the induction, the type of emoticon utilized was a smiley-face and the email was a task-related teacher-student message (Appendix E).

### **Measures**

**Credibility.** To assess perceived teacher credibility, participants completed a modified version of McCroskey & Teven's (1999) Measure of Source Credibility scale. This 18-item instrument typically measures each of the three dimensions of credibility (competence, character, and caring) separately along a semantic differential scale. Items include six bipolar sets of adjectives such as intelligent/unintelligent; cares about me/doesn't care about me; and honest/dishonest. However, this study adapted the semantic differential scale into a modified seven-point Likert scale to promote greater consistency between each measure. Each measure rated perceptions from "strongly disagree" to "strongly agree" (Appendix G, H, & I). The reliability for the three scales was high ( $\alpha = .88$  for competence,  $M = 4.91$ ,  $SD = 1.22$ ;  $\alpha = .87$  for character,  $M = 5.00$ ,  $SD = 1.02$ ;  $\alpha = .88$  for caring,  $M = 4.80$ ,  $SD = 1.12$ ). A CFA of the six items for each of

the three scales indicated that the items were consistent with a uni-dimensional model and all errors for internal consistency were below the .10 exclusion level. Given the findings from the CFA and reliability, each scale was summed to form a separate measure for competence, character, and caring.

**Liking.** As mentioned, previous liking measures likely indicated correlates of liking rather than the concept of liking itself. Therefore, a liking measure was specifically adapted for this study. The goal was to tap into the concept of liking without measuring correlates. Similar to the credibility scale, the liking measure constructed was a seven-point five-item Likert scale that ranged from “strongly disagree” to “strongly agree.” Examples included “this teacher is likeable” and “I have a favorable impression about this teacher” (Appendix J). The reliability for the liking scale was high ( $\alpha = .89$ ,  $M = 4.85$ ,  $SD = 1.20$ ). A CFA of the five items indicated that the items were consistent with a uni-dimensional model and all errors for internal consistency were below the .10 exclusion level. Given the findings from the CFA and reliability, the items were summed to form the liking measure.

**Induction check for main experiment.** Following the dependent variable measures, an induction check was utilized to verify that the manipulation was successful. This measure was the same scale utilized in phase one (Appendix F). A Confirmatory factor analysis (CFA) for the induction check measure was conducted with Hunter and Hamilton’s (1992) CFA program. This analysis tested for internal consistency among items measured to confirm uni-dimensionality. A CFA of the five items indicated that the items were consistent with a uni-dimensional model and all errors for internal

consistency were below the .10 exclusion level. Additionally, the reliability was high ( $\alpha = .92$ ,  $M = 4.30$ ,  $SD = 1.98$ ). Given the findings from the CFA and reliability check, the five items were summed to form the induction measure.

To check that the emoticon amounts were perceived appropriately, an ANOVA was performed and indicated the predicted pattern (see Table 3 for means and confidence intervals). An analysis of means was also performed to calculate the effect size. The differences were in the expected direction, significant, and had a moderate effect size,  $F(4, 529) = 116.54$ ,  $p < .001$ ,  $\eta^2 = .47$  (see Figure 2 for a graph of the means).

Table 3

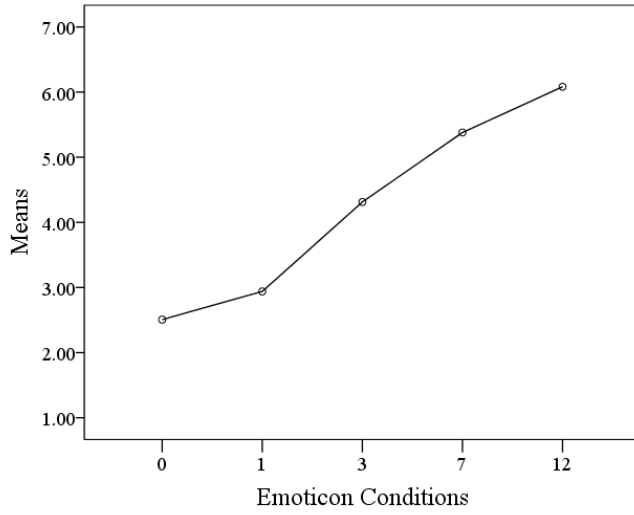
*Descriptive Statistics for Main Experiment Induction*

Emoticons	<i>n</i>	<i>M (SD)</i>	95% CI
0	105	2.51 (1.32)	[2.25, 2.76]
1	92	2.94 (1.03)	[2.72, 3.15]
3	115	4.31 (1.52)	[4.03, 4.59]
7	117	5.38 (1.69)	[5.07, 5.69]
12	105	6.08 (1.50)	[4.13, 6.37]

### **Data Analysis**

SPSS version 20.0 was utilized to analyze the main experiment data. Given the proposed hypotheses, a one-way ANOVA was conducted to examine perceptions regarding credibility and liking when teachers used varying emoticon amounts. The results and subsequent conclusion will be discussed in the following chapters.

Figure 2. Means of Main Experiment Induction

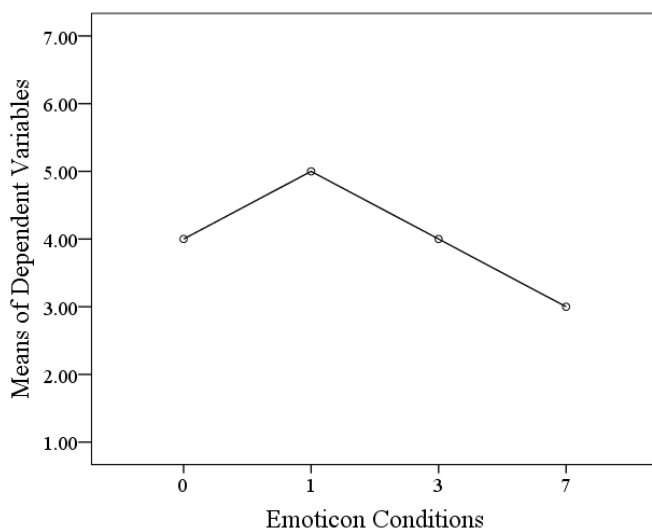


## CHAPTER 4

### RESULTS

The hypotheses predicted that teacher emoticon usage would have an inverted u-shaped curvilinear relationship on perceived competence, character, caring, and liking. It was expected that in a task-related e-mail from a teacher to a student: no emoticons would be perceived as moderately positive; one emoticon would be perceived as most positive; few emoticons would be perceived as moderately positive; and many emoticons would be perceived as least positive (see Figure 3 for predicted means of all variables).

Figure 3. Means of Dependent Variables



Hypothesis 1<sub>a</sub> predicted that teacher emoticon usage would have a curvilinear relationship on perceived competence. To test whether these data were consistent with the hypothesis, an analysis of variance (ANOVA) was performed. Though these data indicate a significant trend,  $F(4, 529) = 22.74, p < .001, \eta^2 = .15$ , an analysis of the means shows a pattern that is inconsistent with the hypothesis (see Table 4 for means).



Table 4

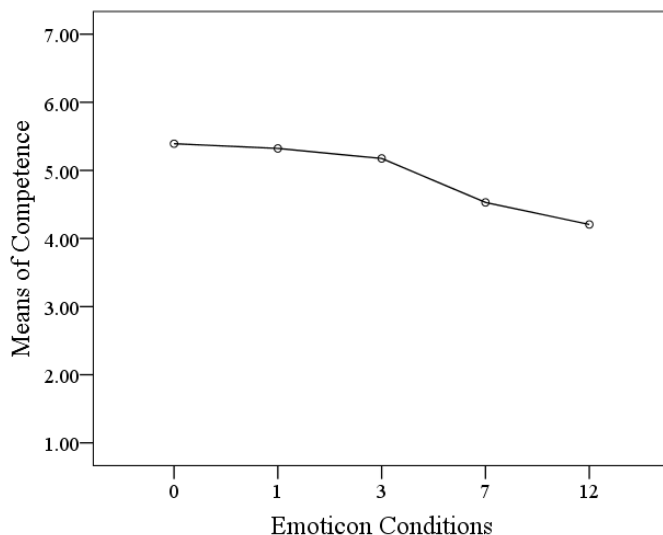
*Descriptive Statistics for Competence*

Emoticons	<i>n</i>	<i>M (SD)</i>	95% CI
0	105	5.39 (1.11)	[5.18, 5.61]
1	92	5.32 (1.07)	[5.10, 5.54]
3	115	5.17 (1.14)	[4.96, 5.39]
7	117	4.53 (1.08)	[4.33, 4.72]
12	105	4.21 (1.25)	[3.96, 4.45]

A review of these data indicates a negative relationship between the use of emoticons and perceived competence (see Figure 4). An inspection of the confidence intervals reveals that the conditions with the least amount of emoticons (0, 1, and 3) were not different. Therefore, these conditions were combined and re-coded into a new category entitled the none-or-few emoticon condition which obtained the most positive score for perceived competence ( $M = 5.29$ ,  $SD = 1.11$ ).

The confidence intervals between conditions with greater numbers of emoticons (7, 12) were also similar. As such, these two conditions were combined and re-coded into a new category entitled the many emoticon condition which obtained a moderately positive score for perceived competence ( $M = 4.37$ ,  $SD = 1.17$ ). A one-way ANOVA was conducted for these two re-coded conditions and the means were significantly different,  $F(1, 532) = 83.79$ ,  $p < .001$ ,  $\eta^2 = .14$ .

Figure 4. Means of Competence (for all conditions)



Hypothesis 1<sub>b</sub> predicted that teacher emoticon usage would have a curvilinear relationship on perceived character. To test whether these data were consistent with the proposed hypothesis, an analysis of variance (ANOVA) was performed. Though these data indicate a significant trend,  $F(4, 529) = 8.04, p < .001, \eta^2 = .06$ , an analysis of the means shows a pattern that is inconsistent with the hypothesis (see Table 5 for means)

Table 5

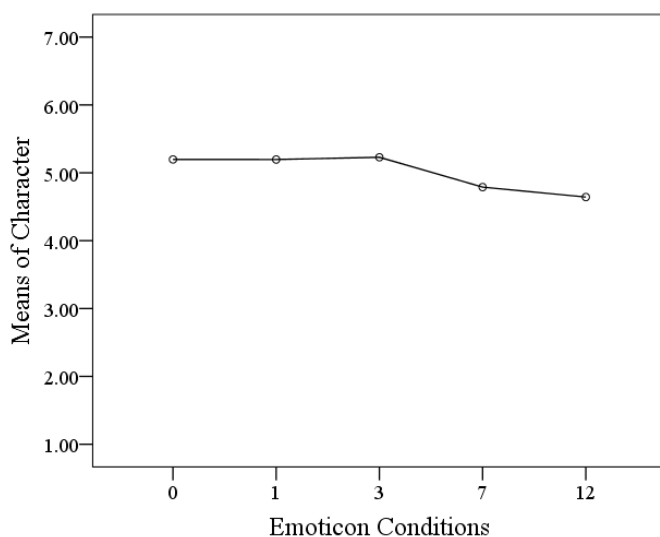
*Descriptive Statistics for Character*

Emoticons	<i>n</i>	<i>M (SD)</i>	95% CI
0	105	5.20 (1.00)	[5.00, 5.39]
1	92	5.19 (0.93)	[5.00, 5.39]
3	115	5.23 (1.00)	[5.04, 5.41]
7	117	4.79 (1.01)	[4.60, 4.97]
12	105	4.64 (1.05)	[4.44, 4.85]

A review of these data indicates a negative relationship between the use of emoticons and perceived character (see Figure 5). An inspection of the confidence intervals reveals that conditions with the least amount of emoticons (0, 1, and 3) were not different. Therefore, these three conditions were combined and re-coded into a new category entitled the none-or-few emoticon condition which obtained the most positive score for perceived character ( $M = 5.20, SD = .97$ ).

The confidence intervals between conditions with greater numbers of emoticons (7, 12) were also similar. As such, these two conditions were combined and re-coded into a new category entitled the many emoticon condition which obtained a moderately positive score for perceived character ( $M = 4.7, SD = 1.03$ ). A one-way ANOVA was conducted for these two re-coded conditions and the means were significantly different,  $F(1, 532) = 30.99, p < .001, \eta^2 = .06$ .

Figure 5. Means of Character (for all conditions)



Hypothesis 1<sub>c</sub> predicted that teacher emoticon usage would have a curvilinear relationship on perceived caring. To test whether these data were consistent with the proposed hypothesis, an analysis of variance (ANOVA) was performed. These data indicate a significant trend somewhat consistent with the proposed hypothesis,  $F(4, 529) = 3.79, p < .01, \eta^2 = .03$  (see Table 6 for means).

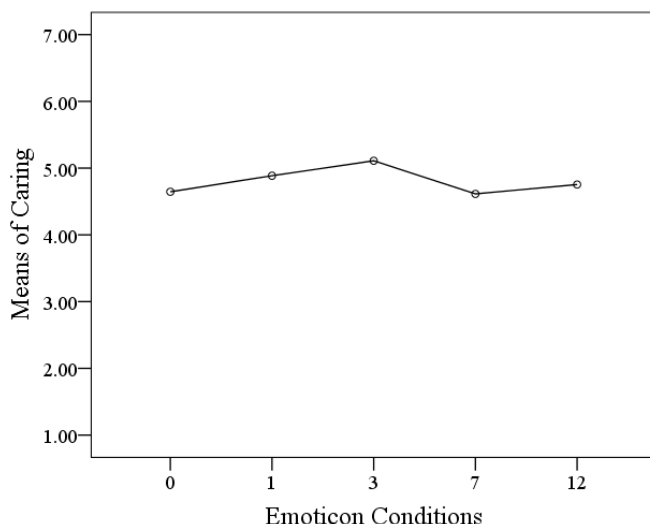
Table 6

*Descriptive Statistics for Caring*

Emoticons	n	M (SD)	95% CI
0	105	4.65 (1.18)	[4.41, 4.87]
1	92	4.88 (1.05)	[4.67, 5.10]
3	115	5.11 (1.08)	[4.91, 5.31]
7	117	4.61 (1.09)	[4.41, 4.81]
12	105	4.75 (1.10)	[4.54, 4.97]

An initial review of these data suggests that caring is the most positive when the amount of emoticons is few (three) and least positive when the amount of emoticons is many. An analysis of the means and standard deviation suggests a general pattern consistent with the hypothesis (see Figure 6). Additionally, a significant difference is present between conditions with no and few emoticons ( $p < .01$ ) and between conditions with many and few emoticons ( $p < .01$ ). However, the effect size was trivial and an examination of the confidence intervals indicates overlap between conditions with none, one, and few emoticons.

Figure 6. Means of Caring (for all conditions)



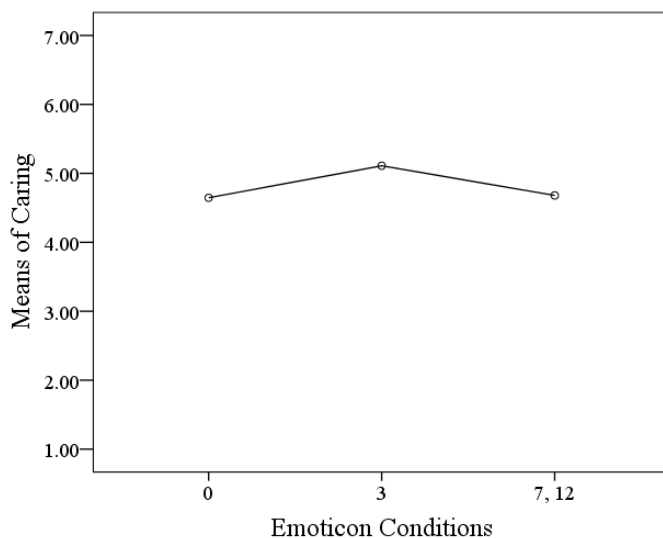
Given the statistical difference between none and few emoticons, data from conditions with one emoticon were removed to conduct further analysis. Conditions with many and very many emoticons also overlap. As such, these two conditions were combined and recoded to become the many emoticon condition. To test whether these data were consistent with the proposed hypothesis, an analysis of variance (ANOVA) was performed. The newly recoded data indicate a significant trend generally consistent with the hypothesis,  $F(2, 439) = 6.69, p < .01., \eta^2 = .03$  (see Table 6; see Figure 6).

Table 7

*Descriptive Statistics for Caring Recoded*

Emoticons	<i>n</i>	<i>M (SD)</i>	95% CI
0	105	4.65 (1.18)	[4.42, 4.87]
3	115	5.11 (1.08)	[4.91, 5.31]
7 & 12	222	4.68 (1.09)	[4.53, 4.82]

Figure 7. Means of Caring Recoded



Hypothesis 2 predicted that teacher emoticon usage would have a curvilinear effect on perceived liking. To test whether the data was consistent with the proposed hypothesis, an analysis of variance (ANOVA) was performed. Though these data indicate a significant trend,  $F(4, 529) = 2.88, p = .02, \eta^2 = .02$ , an analysis of the means shows a pattern that is inconsistent with the proposed hypothesis (see Table 8 for means).

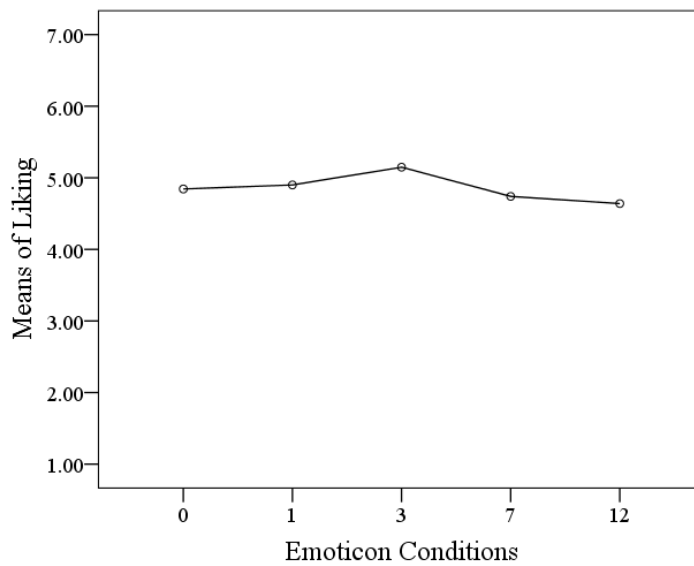
Though a cursory review of the means and standard deviations appears consistent with the hypothesis (see Figure 8), the effect size is trivial and confidence intervals overlap. The only two conditions with confidence intervals that do not overlap are conditions with few (3) and very many (12) emoticons ( $p < .01$ ). Therefore, conditions with none, one, few, and many emoticons indicate the most positive liking while conditions with very many emoticons indicate the least positive liking.

Table 8

*Descriptive Statistics for Liking*

Emoticons	n	M (SD)	95% CI
0	105	4.84 (1.27)	[4.60, 5.09]
1	92	4.90 (1.14)	[4.66, 5.14]
3	115	5.15 (1.19)	[4.92, 5.37]
7	117	4.74 (1.18)	[4.52, 4.96]
12	105	4.64 (1.18)	[4.41, 4.87]

Figure 8. Means of Liking (for all conditions)



## CHAPTER 5

### DISCUSSION

This study tested the impact of emoticon usage on student perceptions of teacher credibility and liking. After reading a task-related email composed of varied emoticon quantities, students rated perceptions of teacher competence, character, caring, and liking. The hypotheses predicted an inverted u-shaped curvilinear relationship for each variable, such that a message without emoticons would be perceived as moderately positive; one emoticon would be perceived as most positive; few emoticons would be perceived as moderately positive; and many emoticons would be perceived as least positive. Results showed findings largely inconsistent with the hypotheses.

For competence, character, and liking, conditions with none, one, and few emoticons equally indicated the most positive perceptions. It made no difference whether emoticons were none, one, or few. However, using many emoticons (seven or twelve) indicated equally negative perceptions. While post-hoc tests revealed significant trends in these data, the effect sizes were relatively small. Competence, character, and liking showed a moderately positive perception, even when utilizing many emoticons. According to the hypotheses, many emoticons should have indicated a steep decline in perceptions. Inconsistent with this prediction, many emoticons (seven or more) was viewed to be slightly more negative than the conditions that included fewer than three emoticons.

With respect to perceived caring as an outcome variable, results revealed a curvilinear relationship somewhat consistent with the hypothesis. The condition with no



emoticons was rated as moderately positive, few emoticons was most positive, and many emoticons was moderately positive. If this trend had continued as predicted, the many emoticons condition would have revealed a steep decline in perceptions. Instead, using many emoticons indicated similar results to using no emoticons. Therefore, findings indicated a pattern only somewhat consistent with the predicted curvilinear relationship.

Essentially, emoticons exerted the greatest influence to improve perceptions of the caring variable when few emoticons were used. This finding is of interest because prior research suggests the importance of caring as a dimension of teacher credibility. As mentioned previously, a meta-analysis that examined the components of teacher credibility (Finn, Schrodtt, Witt, Elledge, Jernberg, & Larson, 2009) found that the effect sizes for the caring dimension from other studies were typically higher than the effect sizes generated for competence and character. In essence, caring plays a large role in the conceptualization of credibility because if students believe a teacher cares about them, they will care more about the class, pay more attention in class, and perform better in the course (Teven & McCroskey, 1997). In this study, the caring dimension also stood out. This may be because the caring dimension is the most emotionally laden. As such, emoticons, designed to provide an emotional aspect, are likely more suitable to play a stronger role in impressions of caring rather than competence or character.

In general, this study found that the number of emoticons used in a task-related email weakly impacted student perceptions of credibility and liking. Conditions using few emoticons enhanced perceptions to a minimal degree for the caring variable. Conditions using many emoticons negatively affected perceptions to a minimal degree

for all variables. Though results indicated significant differences, the effect sizes were small. To make sense of the results in this study, the following discussion outlines theoretical implications, recognizes limitations, and provides directions for future research.

### **Theoretical Implications**

Three implications of this study inform communication theory and knowledge. The first adds to the understanding of Social Information Processing (SIP) theory. As discussed previously, relational cues within CMC are limited; however, SIP theory (Walther, 1992) purports that internet users adapt to these limitations by utilizing alternative text cues to convey meaning and emotion. In accordance with SIP theory, this study hypothesized that emoticons function to impact email perceptions in robust ways. However, SIP theory does not suggest that one tool utilized alone influences online interaction sufficiently. Instead, the theory maintains that internet users utilize a variety of creative tools to enhance text-based messages such as action-simulators, strategic exclamation points, and abbreviations. As such, it is not surprising that the use of varying numbers of emoticons exert a weak ability to enhance perceptions of credibility and liking when used in a task-related teacher-student email. This effect likely demonstrates the fact that emoticons by themselves are insufficient tools to improve interaction. Rather, a combination of text-based strategies used in collaboration with emoticons might need to exist to improve the relational quality of CMC in this context.

Relatedly, SIP theory also indicates that internet users need more time to develop impressions in CMC (Walther, 1993). The task-related email in this study provided

respondents with a one-time message prior to requesting responses; thus, respondents were unable to evaluate messages over time. This may have contributed to the weak effect that various emoticon amounts had to inform perceptions in teacher-student emails. One instance of text-based email interaction is unlikely to contribute a suitable amount of information to inform perceptions. Rather, a pattern of emoticon usage perceived over-time might affect perceptions more strongly. In brief, SIP theory maintains that a variety of text-based tools used over time contribute to informing perceptions in the absence of face-to-face interaction (Tidwell & Walther, 2002). Therefore, it makes sense that emoticon usage, as one tool present during a single email interaction, is unlikely to affect perceptions strongly.

The second implication adds to the understanding of the Expectancy Violation (EV) theory. As demonstrated, EV theory (Burgoon & Jones, 1976) predicts that when actions are unexpected, participants react more negatively or more positively depending on the degree that participants like the unexpected behavior. However, perceptions in this study indicate that emoticons used in varying amounts during a teacher-student email are not polarizing and invoke moderate responses. This finding is consistent with research that purports that emoticons function as peripheral cues. For example, Walther & D'Addario (2001) claim that emoticons are perfunctory additions to communication. Similar to the ritualized expression, "how are you?" emoticons likely appear as systematic and expected components of online interaction. As such, they have a limited potential to impact messages.

Echoing support for this claim, Yoo (2007) found that participants did not universally recognize emoticons in manipulations using conditions with two and four. Instead, fourteen participants in the control indicated that they saw an emoticon when none was present and eighty-six underestimated or overestimated the number of emoticons. This finding suggests that participants do not always notice the presence of emoticons in a message. Still, the induction check in this report indicates that participants were aware of the emoticons: results showed that participants perceived emoticon amounts as significantly different and in the expected direction. Despite the fact that participants indicated an awareness of the presence of the emoticons, it remains that participants did not react strongly to their presence or absence, even when many were present. Therefore, it is reasonable to suggest that emoticons appear as an expected component of text-based interaction; hence, they invoke only a mild reaction.

The fact that few or many emoticons used by a teacher did not elicit polarizing perceptions from students is an unexpected finding of this study. Research shows that emoticons most often function in social messages as opposed to task-related messages (Derks, Bos, & Grumbkow 2007) and this study utilized a task-related message only. As such, participants should have perceived emoticons as unexpected, and thus, reacted more strongly. However, findings may be due to the evolving nature of the communication landscape. Propelled by increasing internet usage and ubiquitous technologies, society is currently witnessing a blurring of conventional boundaries between work and socialization (Woodward, 2012). On the same note, a recent Forbes report claims “Work

is no longer a place, but a state of mind. There are no boundaries between work and leisure. It's now just life" (Becker, 2012, p. 3).

Because of this transformation, the ways in which people communicate socially and professionally have begun to blend. In fact, research indicates that 64% of 18-29 year-olds friend an average of sixteen co-workers on Facebook. As a result, this age group's communication on social-networking websites inadvertently function to extend their professional personalities (Schawbel, 2012). Though emoticon usage within a task-related professional context may have appeared unconventional at one time, this trend is likely transforming. Emoticons may now function to some extent as expected and every day components of text-based interaction. This is likely especially true amongst younger adults (Krohn, 2004).

Finally, a third implication adds to the understanding of emoticons within the context of communication research. Though much research purports that emoticons improve text-based communication (Byron & Baldrige, 2007; Derks, Bos, & Grumbkow, 2008; Kalyanaraman & Ivory, 2006; Kanayama, 2003; Rivera, Cooke, & Bauhs, 1996; Yoo, 2007), this investigation found that emoticons did little to improve perceptions of a teacher's credibility or liking in an email context. Compared to the control condition, emoticons do not provide statistical enhancement in the categories of competence, character, or liking. Only the caring measure indicates a significant change with the usage of few emoticons. Therefore, emoticons provide minimal affordances to improve text-based communication.

Inversely, critics claim that emoticons negatively affect perceptions (Munter, Rogers, & Rymer, 2003) and should be avoided (Angell & Heslop, 1994; Buchanan, 2007). Findings from this study do not support these assertions. In fact, compared to control conditions, participants exposed to one and few emoticons scored similarly on the outcome variables. Adding occasional emoticons did not harm credibility or liking. However, a negative perception formed when many emoticons were used. Though this trend was significant, the degree to which emoticons negatively affect credibility and liking was surprisingly low. Conditions using many and very many emoticons indicate moderate impacts on the outcome variables. Therefore, even the use of many emoticons did little to harm the source's credibility and liking.

The goal of this study was to test perceptions related to teacher emoticon usage. Prior research indicates that teachers utilize emoticons as reflected by their students, yet they do not feel comfortable doing so (Priddis, 2013). This study finds that teachers need not be weary of emoticon utilizations. Though few emoticons improve perceptions only moderately, many emoticons provide little negative impact on student perceptions. As a point of useful advice for teachers, this study advocates the usage of no more than three emoticons per email. This is because few emoticons indicate the highest report of perceived caring. Although few emoticons do not differ statistically from control groups on measures of competence, character, or liking, the improvements to the caring dimension positively enhance the relational quality of teacher-student emails to some degree. As such, teachers may utilize three emoticons to improve perceptions of caring with little chance to harm credibility and liking.

### **Limitations**

This study had several limitations. First, this experiment is designed utilizing manipulated hypothetical scenarios. However, much debate criticizes positivist experimental research induced through artificial means. Instead, critics advocate the use of naturalistic research through participant observation conducted in natural environments. Research conducted in natural environments is more likely to produce results indicative of how participants respond in ordinary life (Bormann, 1970; Dollar & Merrigan, 2002). As such, the nature of the methodology in this report as it manipulates and controls scenarios demonstrates an inherent threat to ecological validity. Ecological validity refers to the degree that findings are likely to be consistent with real-life behaviors and interactions (Frey, Botan, & Kreps, 2000). Because this study manipulates hypothetical messages, it is unclear how students may actually perceive teachers who utilize emoticons in real-life.

Furthermore, several threats to internal validity are also present in this study. Internal validity refers to the accuracy of conclusions drawn based on the way the study is conducted (Frey, Botan, & Kreps, 2000). This research measures participant perceptions by asking questions through an internet survey tool. As such, it was not possible to control for environmental influences that may have affected participant responses. Students may have completed surveys in a variety of contextual environments such as at work, school, home, or in public. Any of these environments may have distracted or influenced student responses to some extent. Additionally, a variety of other

potential problems exist within web-surveys such as the potential for missing data, unacceptable responses, duplicate submissions, and internet-abuse (Schmidt, 1997).

Lastly, threats to external validity are also present in this study. External validity refers to the degree that findings are generalizable to other people, places, and times (Frey, Botan, & Kreps, 2000). Typically, generalizability refers to participant demographics. Though, demographics in this study are relatively diverse, out of five-hundred and thirty-four college students, the majority of participants indicated their sex as female (62.4%) and the majority of participant reported their races as White or Caucasian (36.7%). These two demographics are largely consistent with research that shows that more women (Goldin, Katz, & Kuziemko, 2006) and more white students (Kim, 2011) attend college compared to men and minorities. Nonetheless, gender differences potentially affect study results. This is because reports on emoticons indicate that men and women may utilize and perceive emoticons differently (Bordbar 2010; Huffaker & Calvert, 2005; Tossell et al., 2012; Witmer & Katzman, 1997; Wolf, 2000).

### **Directions for Future Research**

Research over the past few decades indicates substantial growth in studies related to mediated-interactions. Specifically, a bevy of reports explores the affects and uses of emoticons within CMC. This study adds to that growing body of research and focuses on emoticons within a teacher student context. Though findings indicate that various emoticon amounts exert a mild effect on student perceptions of teacher credibility and liking, the extant literature suggests that emoticons are complex. As it stands, emoticon



research is lacking in key ways and continued research in this area will better inform decisions regarding the future uses and implications of emoticons.

Many studies have examined the ways emoticons influence perceptions of message recipients. However, little research explores how emoticons affect message senders. Though emoticons may not enhance messages in robust ways, those who chose to include them may receive some type of fulfillment through utilization. For example, one study found that users of emoticons report higher levels of enjoyment, personal interaction, perceived information richness, and perceived usefulness in chat interactions (Huang, Yen, & Zhang, 2008). Additionally, participants given the option to use emoticons more often choose to do so and report more satisfied online interactions (Rivera, Cooke & Bauhs, 1996). Therefore, it is reasonable to expect that those who utilize them may do so for self-fulfilling purposes. Walther & D'Addario (2001) predict, "perhaps the generation of an emoticon acts as a self-signaling cue, prompting the writer to write in such a way that is as expressive as he or she intends" (Walther & D'Addario, 2001, p. 343). We may expect that emoticons help to manage impressions related to politeness and friendliness. However, more research needs to examine the motivations and self-fulfilling purposes of emoticon usages.

Additionally, an assortment of moderating factors plays a role during emoticon interpretation. However, research exploring moderating variables is currently lacking. Speculation suggests that personal attitudes moderate emoticon usage and interpretation. Though some are highly motivated to utilize and enjoy emoticons, others protest and criticize their uses (Bryant, 2013; Tracy, 2011). Relatedly, generational differences

(Krohn, 2004) and expectancy violations (Borycki et. al., 2008) may function as moderating factors that affect perceptions of both message senders and receivers. Because few studies have investigated this area, empirical research needs to better explore the factors that moderate emoticon perceptions.

Finally, many emoticon types exist beyond the typical smiley-face icon (Appendix A & B). Yet, few studies examine alternate emoticon types or experiment with different contexts. Findings from one report indicate that negative emoticons potentially exert an affect to change the meaning of messages (Walther and D'Addario, 2001). Additional reports show that smiley-face emoticons mitigate flaming messages (Thompson & Foulger, 1996) and soften otherwise serious statements (Stapa & Shaari, 2012). Nonetheless, it is unknown how negative or aggressive emoticons function in similar situations. Likely, different types of emoticons fulfill alternate purposes when used within varying contexts. For example, one would likely interpret a smiley-face or laughing-icon negatively during the context of somber news. As such, research must also examine different types of emoticons in more varied message situations.

### **Concluding Remarks**

Rapidly evolving technology creates waves of societal change. These changes influence the human experience in various ways. Though teacher-student communication once primarily took place via traditional face-to-face methods, increasingly teachers and students meet, collaborate, and network within virtual space. Research indicates that text-based communication lacks relational cues necessary to convey emotion and build relationships. However, “teachers and students are people who are emotionally laden and

unable to detach those emotions when it comes to the educational process” (Dobrasky & Frymier, 2004, p. 221). Clearly, relational and social meanings remain important components of effective teaching and learning processes.

Though interpersonal cues become more difficult to convey in mediated environments, this does not mean that teachers should ignore them. Rather, they must use new strategies to convey meaning and emotion in text-based environments. Krohn (2004) purports that teachers should use emoticons to change with the times or else risk being disregarded as dinosaurs. As this study indicates, perhaps this claim is not so dire. It is unlikely that teachers will face repercussions simply because they do not use emoticons. However, since using few emoticons has the potential to improve perceptions of caring with no risk to damage credibility or liking, it remains that emoticons can improve text-based teacher-student emails when used from time to time. As one tool amongst many, teachers can integrate emoticons into text-based messages with students to better infuse text with social meanings and improve the teacher-student relationship.

## APPENDIX A

## Western Emoticon Examples (Wikipedia, 2012)

Emoticon	Meaning
>:] :-) :) :o) :] :3 :c) :> =] 8) =) :} :^)	Smiley or happy face
>:D :-D :D 8-D 8D x-D xD X-D XD	Laughing, big grin
:~))	Very happy
>:[ :-( :( :-c :c :-< :< :-[ :[ :{ >.><.<>.<	Frown, sad
:-	Angry
D:< D: D8 D; D= DX v.v D-':	Horror, disgust, sadness, dismay
>:] ;) ;) *-) *) ;~] ;] ;D ;^)	Wink, smirk
>:P :-P :P X-P x-p xp XP :-p :p =p	Tongue sticking out, playful
>:o >:O :-O :O °o° °O° :O o_O o_0	Surprise, shock
>:\ >:/ :-/ :-.\ :/\ =/\ =\ :S	Skeptical, annoyed, undecided, uneasy
:  :-	Straight face, no expression
>:X :-X :X :# :# :\$	Sealed lips, embarrassed, blush
O:-) 0:-3 0:3 O:-) O:) 0;^)	Angel, innocent
>:) >:) >:-)	Evil
o^o ^5 >_>^ ^<_<	High five
;-)  -O	Cool, bored/yawning
}:-) }:)	Devilish
:-###.. :###..	Being sick
:'-( :'(-) :')	Crying, tears of happiness

## APPENDIX B

## Eastern Emoticons Examples (Wikipedia, 2012)

Emoticon	Meaning
(>_<) (>_<)>	Troubled
(^^ > (^^^;) (-_-;) (~_~;)	Nervous, embarrassed, troubled, shy
<コ:彡	Squid
(¯ □ ¯;)	Surprised
(-_-)zzz	Sleeping
(^_-) (^_-)-☆	Wink
((+_+)) (+o+) (° ° ) (° -° )	Confused
(° o° ) (^_^)/ (^O^)/ (^o^)/	Joyful
(_) _(.*)_ _(^*)_ <(_)> <m(_)_m>	Kowtow (respect), or dogeza (apology)
(_0_) (*^_^*;) )	Sorry
( ^^ )_U~~ ( ^^ )_H~~	Cup of tea
('_') (/_;) (T_T) (;_;) (;_:_;) (ToT)	Sad, crying
(-_-)!! (-.-) (-_-) (一一)	Shame
(=_=)	Tired
(=^ . ^=) =^_^=	Cat
( . . ? (?_?)	Confusion
\(~o~)/ \ (^o^)/ \ (-o-)/	Excited
v (^_^)v ( ^ ▽ ^ ) ( ㄨ ▽ ㄨ )	Laughing, normal laugh
(^0_0^)	Eyeglasses

## APPENDIX C

### Participant Consent Form

---

Thank you for your participation. This survey should take less than 10 minutes of your time. At the conclusion of this survey, you will have the option to participate in a raffle to win a Starbucks gift card. This survey is for students only. You are considered a student if you have taken at least one class within the last three months.

Please note, your participation guarantees you the following rights:

1. Your name will not be reported with the survey data you provide.
2. Your participation in this study is completely voluntary.
3. You may withdraw from this study at any time without any penalty.
4. You may decline to answer any question you wish.

In this study you will be asked to read an email and then complete a series of questions. Some demographic information is collected. If you have questions or concerns about this study, please contact Aubrie Adams in the Communication Studies department at [asa73@csus.edu](mailto:asa73@csus.edu).

Your responses will be kept confidential to the degree permitted by the technology used. However, no absolute guarantees can be given for the confidentiality of electronic data. You will not be able to anonymously remove data if you chose to withdraw after you submit your survey. By completing this survey, you are agreeing to participate in the research. If you consent to participate, please click the button below.

---

**APPENDIX D****Participant Demographics Form**

---

Sex:

- Female
- Male
- Prefer not to say

Age: \_\_\_\_\_

Ethnicity:

- American Indian or Alaskan Native
- Asian or Pacific Islander
- Black/African American
- Hispanic/Latino
- White/Caucasian
- Other (Please Specify) \_\_\_\_\_

Indicate below if you are a college student:

- I am a college student (taken at least 1 college-level class within the last 3 months).
- I am not a college student.

Indicate your year in school:

- First year
  - Second year
  - Third year
  - Fourth year
  - Other
  - Master's
  - Ph.D.
-

**APPENDIX E1****Manipulated Email – No (Zero) Emoticons**

---

*Imagine it is the start of the new academic year and you are taking a class with a teacher you do not know. All teachers this term are required to send out an announcement email before the first day of class. The purpose is to provide general task-related classroom details. As a result, you received the following email from your teacher before classes started. Read the email below carefully, and then respond to the following assessment.*

---

From: Professor JK <jk@umail.edu>  
Subject: Task-related class details  
Date: Today, 3:23 PM

---

Hello Students,

You have signed up to take my class during the upcoming academic session. Please pay attention to the following course announcements.

Double check your records to make certain you have completed the pre-requisite course prior to the first day of school. If you have not completed this course, our administrative office will cancel your enrollment.

The course textbook is now available at the book store and there should be the appropriate number of copies. Purchase the book promptly to avoid any stocking issues; the newest edition of the textbook is required. You are responsible for reading chapter 1 before we meet.

Arrive to class on time and be ready to learn. Remember to exhibit professional and appropriate behavior toward your peers and your teacher. Contact me with questions or comments.

Best Regards,  
Professor JK

---



**APPENDIX E2****Manipulated Email – One**

---

*Imagine it is the start of the new academic year and you are taking a class with a teacher you do not know. All teachers this term are required to send out an announcement email before the first day of class. The purpose is to provide general task-related classroom details. As a result, you received the following email from your teacher before classes started. Read the email below carefully, and then respond to the following assessment.*

---

From: Professor JK <jk@umail.edu>  
Subject: Task-related class details  
Date: Today, 3:23 PM

---

Hello Students,

You have signed up to take my class during the upcoming academic session. Please pay attention to the following course announcements.

Double check your records to make certain you have completed the pre-requisite course prior to the first day of school. If you have not completed this course, our administrative office will cancel your enrollment.

The course textbook is now available at the book store and there should be the appropriate number of copies. Purchase the book promptly to avoid any stocking issues; the newest edition of the textbook is required. You are responsible for reading chapter 1 before we meet.

Arrive to class on time and be ready to learn. Remember to exhibit professional and appropriate behavior toward your peers and your teacher. Contact me with questions or comments.

Best Regards : ),  
Professor JK

---

**APPENDIX E3****Manipulated Email – Few (Three)**

---

*Imagine it is the start of the new academic year and you are taking a class with a teacher you do not know. All teachers this term are required to send out an announcement email before the first day of class. The purpose is to provide general task-related classroom details. As a result, you received the following email from your teacher before classes started. Read the email below carefully, and then respond to the following assessment.*

---

From: Professor JK <jk@umail.edu>  
Subject: Task-related class details  
Date: Today, 3:23 PM

---

Hello Students :),

You have signed up to take my class during the upcoming academic session. Please pay attention to the following course announcements.

Double check your records to make certain you have completed the pre-requisite course prior to the first day of school. If you have not completed this course, our administrative office will cancel your enrollment.

The course textbook is now available at the book store and there should be the appropriate number of copies. Purchase the book promptly to avoid any stocking issues; the newest edition of the textbook is required. You are responsible for reading chapter 1 before we meet : ).

Arrive to class on time and be ready to learn. Remember to exhibit professional and appropriate behavior toward your peers and your teacher. Contact me with questions or comments.

Best Regards : ),  
Professor JK

---

**APPENDIX E4****Manipulated Email – Many (Seven)**

---

*Imagine it is the start of the new academic year and you are taking a class with a teacher you do not know. All teachers this term are required to send out an announcement email before the first day of class. The purpose is to provide general task-related classroom details. As a result, you received the following email from your teacher before classes started. Read the email below carefully, and then respond to the following assessment.*

---

From: Professor JK <jk@umail.edu>  
Subject: Task-related class details  
Date: Today, 3:23 PM

---

Hello Students :),

You have signed up to take my class during the upcoming academic session. Please pay attention to the following course announcements :).

Double check your records to make certain you have completed the pre-requisite course prior to the first day of school :). If you have not completed this course, our administrative office will cancel your enrollment.

The course textbook is now available at the book store and there should be the appropriate number of copies :). Purchase the book promptly to avoid any stocking issues; the newest edition of the textbook is required. You are responsible for reading chapter 1 before we meet :).

Arrive to class on time and be ready to learn :). Remember to exhibit professional and appropriate behavior toward your peers and your teacher. Contact me with questions or comments.

Best Regards :),  
Professor JK

---

**APPENDIX E5****Manipulated Email – Very Many (Twelve)**

---

*Imagine it is the start of the new academic year and you are taking a class with a teacher you do not know. All teachers this term are required to send out an announcement email before the first day of class. The purpose is to provide general task-related classroom details. As a result, you received the following email from your teacher before classes started. Read the email below carefully, and then respond to the following assessment.*

---

From: Professor JK <jk@umail.edu>  
Subject: Task-related class details  
Date: Today, 3:23 PM

---

Hello Students :),

You have signed up to take my class during the upcoming academic session : ). Please pay attention to the following course announcements : ).

Double check your records to make certain you have completed the pre-requisite course prior to the first day of school : ). If you have not completed this course, our administrative office will cancel your enrollment : ).

The course textbook is now available at the book store and there should be the appropriate number of copies : ). Purchase the book promptly to avoid any stocking issues; the newest edition of the textbook is required : ). You are responsible for reading chapter 1 before we meet : ).

Arrive to class on time and be ready to learn : ). Remember to exhibit professional and appropriate behavior toward your peers and your teacher : ). Contact me with questions or comments : ).

Best Regards : ),  
Professor JK

---

**APPENDIX F**  
**Induction Check**

---

Please indicate your response to the following question:

1) I do not recall seeing any emoticons in the email.\*

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

2) There were many emoticons in the email.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

3) I saw a lot of emoticons in the email.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

4) The amount of emoticons in the email was very few, if any.\*

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

5) There were an abundant amount of emoticons in the email.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

---

\* item reverse coded

## APPENDIX G

### Outcome Measure, Competence

Please indicate the degree to which you agree with the following statements:

1) This teacher seems intelligent.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

2) This teacher seems untrained.\*

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

3) This teacher seems to be an expert.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

4) This teacher seems to be informed.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

5) This teacher seems to be incompetent.\*

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

6) This teacher seems to be stupid.\*

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

\* item reverse coded

## APPENDIX H

### Outcome Measure, Character

---

Please indicate the degree to which you agree with the following statements:

1) This teacher seems to be honest.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

2) This teacher seems to be untrustworthy.\*

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

3) This teacher seems to be honorable.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

4) This teacher seems to be moral.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

5) This teacher seems to be unethical.\*

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

6) This teacher seems to be phony.\*

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

---

\* item reverse coded

## APPENDIX I

### Outcome Measure, Caring

Please indicate the degree to which you agree with the following statements:

1) This teacher seems to care about me.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

2) This teacher has my best interests at heart.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

3) This teacher seems to be self-centered.\*

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

4) This teacher seems to be concerned with me.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

5) This teacher seems to be insensitive.\*

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

6) This teacher seems to be understanding.

Strongly Disagree      1      2      3      4      5      6      7      Strongly Agree

\* item reverse coded



## APPENDIX J

### Outcome Measure, Liking

Please indicate the degree to which you agree with the following statements:

1) This teacher is likeable.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

2) I have a favorable impression about this teacher.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

3) I do not like this teacher. \*

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

4) I would judge this teacher positively.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

5) I have a negative attitude toward this teacher.\*

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
-------------------	---	---	---	---	---	---	---	----------------

\* item reverse coded

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