What sunshine is to flowers:
A literature review on the use of emoticons to support online learning

Joanna C. Dunlap
University of Colorado Denver
joni.dunlap@ucdenver.edu

Devshikha Bose
Boise State University
devshikhabose@boisestate.edu

Patrick R. Lowenthal
Boise State University
patricklowenthal@boisestate.edu

Cindy S. York
Northern Illinois University
cindy.york@niu.edu

Michael Atkinson
Boise State University
michaelatkinson620@boisestate.edu

Jim Murtagh
Boise State University
murtaghj3@gmail.com

Abstract

The effective use of electronically-mediated communication (EMC) is fundamental to digital literacy and, therefore, a high-demand competency in professional communities of practice, business, society, and online education. However, the use of EMC can be challenging in educational contexts; given that EMC tends to rely heavily on text-based formats, meaning and intent may be lost in translation from thought to posted message. Thus, online educators value techniques that have the potential to improve the quality and effectiveness of text-based communication. One such technique is the use of emoticons to represent emotional and personality nuances present in face-to-face communication. In this chapter, we present a review of the literature on emoticons used in support of online learning—with the goal of improving future practice and research of online teaching and learning—and then provide some specific instructional recommendations for online educators.

Keywords: emoticon, emotion, online learning, computer-mediated communication, electronically-mediated communication, asynchronous discussion, online education

Introduction

"Finally, thank you for using emoticons. You are the first that I have seen using
them in the program. Others have discouraged and basically banned the use of
emoticons because they were considered 'unprofessional.' Though I understand to
some degree, I also believe emoticons save a lot of grief and help to establish
community. That's just my 2 bits. So, thank you!"
                    ~ Graduate student (personal communication, January 24, 2010)

"What sunshine is to flowers, smiles are to humanity. These are but trifles, to be
sure; but scattered along life's pathway, the good they do is inconceivable."
                    ~ Joseph Addison (1672-1719)

Learning happens, whether face-to-face or online, within a social context. But this social
context is very different in online courses. In online courses, communication (and thus the social
context) is largely dependent upon asynchronous and synchronous electronically-mediated
communication (EMC). And despite some of the affordances of synchronous EMC, text-based
EMC still remains the predominant way teachers and students communicate in online courses.
Text-based EMC is popular largely because it supports the anytime, anywhere "promise" of
online education. At the same time though, text-based EMC has received decades of criticism for
being too lean. In the 1980s and 1990s, researchers studying computer-mediated communication
(CMC)[1]—which at that time focused primarily on email—came to the conclusion that CMC was
inherently antisocial and impersonal (Walther, 1996; Walther & Parks, 2002; Walther, Anderson,
& Park, 1994). Many of these researchers used social presence theory, developed by Short,
Williams, and Christie (1976), to explain the limitations of CMC (Walther & Parks, 2002).
Short et al. argued in the 1970s that communication media differ in their degree of social
presence and that these differences influence how people interact, communicate, and perceive
others as being "there" and "real." However, as educators started using CMC for educational
purposes, they realized that even though non-verbal and relational cues were filtered out, CMC
could be very social and interpersonal (Gunawardena, 1995; Gunawardena & Zittle, 1997). This
observation led researchers of online education to reconceptualize social presence theory,
focusing less on communication media and its constraints and more on how people used
communication media. One way people make up for the lack of nonverbal behaviors and cues in
primarily text-based environments is by using paralanguage, specifically emoticons.

Emoticons is short for *emotion icons*; emoticons are ways to use text to represent
emotional and personality nuances present in face-to-face communication. For instance, people
use **:-)** to show that they are happy or smiling. When used in text-based EMC (e.g., email,
threaded discussion forums, texting, social networking), emoticons function as textual
representations of the nonverbal behaviors and cues prevalent in face-to-face communication,
designed to convey clarity of intent and emotion in efficient, direct, and transparent ways.

---

[1] Computer-mediated communication is a dated term. People now use a variety of different
devices to communicate with each other. Thus, it is perhaps more useful to think in terms of
electronically-mediated communication (EMC). However, the majority of EMC is still text-
based and therefore lacking nonverbal cues.

In late 1990s, researchers began arguing that emoticons are one way to establish social presence in online courses (Rourke, Anderson, Garrison, & Archer, 1999). Since that time, emoticons have become a conventional method of expressing emotion and establishing social presence in the online classroom. However, to date there has not been a comprehensive literature review on emoticons' role in the online classroom. Therefore, in this chapter, we present a review of the literature on emoticons used in support of online learning, with the goal of improving future practice in and research of online teaching and learning. We also provide instructional recommendations for online educators.

Method

There are multiple types of reviews of the literature (Jackson, 1980). For our literature review, we were specifically interested in summarizing the research on emoticons in an effort to inform the research and practice of online education. Therefore, we conducted an integrative review because "the goal of an integrative review is to summarize the accumulated state of knowledge concerning the relation(s) of interest and to highlight important issues that research has left unresolved" (Cooper, 1982, p. 292). We began by searching ProQuest and EBSCO using the keywords "emoticons," "online," and "learning" in an effort to identify literature on emoticons related to online learning and online education.

Initially, 58 articles were identified by searching ProQuest and EBSCO. All duplicate articles, as well as articles not reporting on empirical studies, were immediately removed from the list. This left 46 articles to be reviewed. Each article was randomly assigned to three different reviewers; the reviewers then independently reviewed each article, recording key findings specific to online education and EMC. The reviewers' notes were then analyzed for emerging themes. Some additional studies were identified through the process of reviewing the 46 articles. Finally, we integrated literature we knew from our previous work that addressed the value of emoticon use in online education. This resulted in a total of 67 articles reviewed for this study. Our aim was to synthesize the existing work in this field, as well as to offer new perspectives on the literature related to the use of emoticons in EMC. Observed gaps in the literature are noted and recommendations for further research and instructional application are discussed at the end of this review.

Emoticons and Electronically-mediated Communication

In face-to-face interactions, nonverbal behavior communicates quite a lot about intent. Those behaviors—such as facial expressions, the placement of head and shoulders, the use of hands—can deliver information, regulate the interaction, and express feelings and intimacy. In online communication, emoticons may be used to help achieve the same thing by serving as "nonverbal surrogates" (Derks, Bos, & Grumbkow, 2007, p. 843).

Emoticons are "graphic representations of facial expressions" (Walther & D'Addario, 2001, p. 324), which deliver emotional rather than task-oriented information (Ganster, Eimler, & Kramer, 2012) and index a user's affective stance (Park, 2007). Most emoticons are well known and commonly recognized symbols among users of EMC. They often act as substitutes or surrogates for nonverbal cues, which are usually absent in text-based EMC. Sometimes they are used as a compliment to a text message (Stapa & Shaari, 2012). Smiling is a common human reaction mostly used to indicate happiness, hence it is not surprising that it has found a symbolic representation in EMC in the form of emoticons and smileys. There are two types of smileys, the icon (or emoji), which pictorially represents a smiling human face and

keystroke-based, symbolic emoticons such as **:-)**. They have the same impact in terms of how a message is interpreted. However, some argue that the emoji smiley has a stronger impact on the personal mood of the viewer than a keystroke-based emoticon (see Wortham 2011); this may be due to the wide range of emoji icons now possible in EMC, or because emoji are a more realistic portrayal of human expressions. A study examining Facebook conversations of Malaysian college students, between the ages of 18 to 24, demonstrated that almost all sentences contained smileys or some other emoticon (Stapa & Shaari, 2012), thus showing how dominant a role these forms of nonverbal communication have begun to play in the social exchange of college students.

Emoticons and Group Differences

Since the emergence of emoticons, researchers have been interested in whether group differences exist in emoticon use (see Brunet & Schmidt, 2010; Locke & Daly, 2007; Wolf, 2000). Differences between men and women's use of emoticons remains the most popular groups to compare. However, in many ways the research remains inconclusive. In one early study, Wolf (2000) found that both men and women used more emoticons in mixed gender groups than within same gender groups. In another study, Brunet & Schmidt (2010) found that women, under certain conditions, may use emoticons more than men. They found women who were visible through a webcam used significantly more emoticons than those who had their webcams turned off (Brunet & Schmidt, 2010). But when the webcams were turned off, there was no significant difference in emoticon use between men and women. This is surprising because one would expect emoticons to be used more when the webcams were off than when they were on. Brunet and Schmidt suggested that this may have been due to the fact that women felt more "societal pressure" (p. 203) than men to appear friendly in an online conversation. Wolf's (2000) and other research, though, also suggests that it is not simply a matter of whether or not women use emoticons more than men because men and women actually might simply use emoticons in different ways. For instance, Wolf (2000) found women used emoticons more for humor, whereas men used them more for sarcasm and to tease. In another study, Huffaker and Calvert (2005) found men used more flirty emoticons than women.

Researchers have also investigated how emoticon use differs and/or manifests in different ethnic groups. For instance, Locke and Daly (2007) found that Chinese participants use emoticons more than non-Chinese participants. In another study, Kanayama (2003) focused on elderly people in Japan's participation in virtual communities. Kanayama found that elderly people enjoyed using emoticons and sharing stories with others as they connected and built supportive relationships online.

Researchers have also studied how age influences emoticon use (Fullwood et al., 2013; Kanayama, 2003; Krohn, 2004). For instance, Krohn (2004) argued that people of different ages use emoticons differently (if at all) and therefore emoticon use—at least in business settings—should be based on one's age or generation. In fact, Krohn recommended that emoticons be freely used with Millennials (those born after 1980 and coming of age after 2000), but used progressively conservative with Generation Xers (those born between 1964 and 1980), Baby Boomers (those born between 1946 and 1964), and Traditionalists (those born before 1946). Kanayama (2003) and Fullwood et al. (2013), on the other hand, did not find age influenced emoticon use. Fullwood even questioned whether a convergence of communication styles happens with age—with older people adapting a younger style of communication. At the

same time, research has shown that (regardless of age) some EMC may not contain any emoticon use (Pillai, 2009).

Emoticons and Social Contexts

  Overall the research as a whole suggests that the social context or environment (i.e., both the application as well as the context) possibly influences how people use emoticons more than any single variable such as gender, nationality, or even age (Derks et al., 2007; Fullwood, Orchard, & Floyd, 2013). For instance, depending on the nature of the interaction—e.g., whether or not the interaction is task-oriented or socio-emotional—people may or may not feel the need to textually express nonverbal behaviors. In an experimental study, Derks et al. (2007) put students in one of two groups: either in a socio-emotional tasked group or in a task-oriented group. Students responded to text messages significantly more often with an emoticon in the socio-emotional group than in the task-oriented group. Derks et al. (2007) speculated that these results were reflective of societal norms in which it is more appropriate to express emotions with friends and family in social contexts than with colleagues in professional contexts. They concluded that social context matters in online communications and that social context influences whether or not emoticons are used. They gathered additional support for this claim in a later study, where they found that participants used more emoticons while communicating with friends than with strangers and used more emoticons in positive contexts than in negative ones (Derks et al., 2008).

  All of this research suggests that even though emoticons are an effective way to make up for many of the cues absent in text-based EMC, people use emoticons in different ways, most of which appear to be dictated by one's personal preference, experience using emoticons, and immediate context.

<div align="center">Emoticons and Online Learning</div>

  Online education is a unique social context. The following sections are structured around emoticons use for (a) improving communication, (b) enhancing social presence, and (c) building community in an online education context.

Improving Communication

  Moore (2013) and others posited that there is a transactional distance in online education--that is, a psychological and communication distance between an instructor and students. This distance needs to be overcome if "effective, deliberate and planned learning is to occur" (Chen, 2001, p. 459). Overcoming this transactional distance can also help improve students' overall satisfaction with their educational experience (Stein, Wanstreet, & Calvin, 2005). One way to address this transactional distance is through improving EMC with the intentional use of emoticons. Emoticons can make communication more efficient, effective, clear, and fun (Huang, Yen, & Zhang, 2008; Kindred & Roper, 2004; Varnhagen et al., 2010).

  People use emoticons in three main ways to improve communication. First, people use emoticons to indicate emotion by reflecting facial expressions (Dresner & Herring, 2010). For example, **:-(** means sadness—which in this case is used to reflect an emotional state. A second way people use emoticons is to indicate non-emotional sentiments that are tied to facial expressions (Dresner & Herring, 2010). For instance, **;-)** indicates sarcasm. A third way that people use emoticons is to indicate illocutionary force (Dresner & Herring, 2010). For

instance, **What's wrong with you? :-||** sends a different message than **What's wrong with you? :-(** and makes the author's intent clearer (Dresner & Herring, 2010).

Emoticons, used in any of these ways, are very helpful at clarifying text-based messages (Derks, Bos, & Grumbkow, 2008). Emoticons can make the intention of a message clear (Lo, 2008) as well as strengthen the intensity of a message. A positive message, for instance, with a smiley-face emoticon can be perceived more positively than a positive message without a smiley-face emoticon (Derks et al., 2008). At the same time, however, an emoticon does not carry more communicative weight than the main (text-based) message. For instance, emoticons are not central or vital enough to change the valence of a message; that is, a positive message accompanied by a frown is still perceived as mostly positive, and a negative message accompanied by a smiley-face is still perceived as mostly negative; although, as part of a politeness strategy, emoticons can also used to soften a negative tone of criticism, disapproval, or sarcasm (Locke & Daly, 2007; Stapa & Shaari, 2012). Research suggests that these different uses of emoticons can counter the ill-effects of absent social context cues specifically in educational settings (Tu & McIsaac, 2002).

Researchers have found that emoticons are also helpful at improving communication for second language learners (AbuSa'aleek, 2013; Beatty, 2003; Crystal, 2001). But Halvorsen (2012) did find that although students in his study used emoticons pervasively in their writing, the patterns of usage varied by individual and was influenced by things such as the individual's previous experience with EMC.

Some researchers have also tried to analyze how or when people use emoticons within a given message to improve communication. Research has shown that emoticons are usually placed as closers, openers, or interjectors in written conversations. In fact, Provine, Spencer and Mandell (2007) found that emoticon placement aligned with the punctuation effect—that is, occurring at pauses, phrase boundaries, and the beginnings and ends of questions and statements.

It is important to note, though, that emoticons do not always improve communication. For instance, emoticons can lead to miscommunication and misunderstanding (Derks et al., 2008). This happens in part because of a lack of agreed-upon definitions of emoticons (Averianova, 2012; Chen, 2006; Loewen & Reissner, 2009). But emoticons can also be used to deceive or hide meaning. For instance, people can use emoticons in text-based EMC to hide how they are really feeling. In other words, a "participant might frown at the keyboard but strategically decide to type a strategic smile" (Marvin, 1995, para. 13). But despite possible drawbacks like these, the research reviewed in this chapter as a whole suggests that emoticons can improve communication even in educational settings.

Enhancing Social Presence

Social presence was originally defined as the sense that another person is "real" and "there" when using a communication medium (Short et al., 1976). Over the years, online educators have found that social presence is important in online education because it sets the climate for learning to take place (Caspi & Blau, 2008). Research also suggests that there is a positive correlation between students' perception of social presence and perceived learning and learner satisfaction (Richardson & Swan, 2003; So & Brush, 2008). The lack of nonverbal and relational cues in EMC, though, can make it difficult to establish one's own social presence or perceive another's social presence (Lowenthal, 2009).

Research suggests that emoticon use can enhance students' perceptions of social presence in online learning environments that rely predominantly on text-based EMC (Aragon, 2003; Lahaie, 2007; Tu, 2002). Gunawardena and Zittle (1997) were one of the first to research social presence in an online learning setting. They were interested in participants' use of emoticons in an online education conference. Gunawardena and Zittle found that students with higher levels of social presence "enhanced their socio-emotional experience by using emoticons to express missing nonverbal cues in written form" (p. 23). Garrison and his colleagues later identified emoticon use as an observable indicator of affective/emotional expression and therefore an indicator of social presence in their Community of Inquiry model (see Garrison, Anderson, & Archer, 2000; Rourke et al., 1999).

In one study of social presence across three different computer-mediated communication systems, Tu (2002) found that "students used emoticons and paralanguage to compensate for the lack of social context cues" (p. 15). Tu also noticed that students tended to use smiley- and frown-face emoticons the most in the communication systems. Early research on social presence and online education, though, suggests that some people are not used to using emoticons in EMC (Tu, 2002; Weiss, 2000). As a result, Weiss (2000) recommended explicitly encouraging the use of emoticons and possibly even including a list of various emoticons one could use in text-based communication. Similarly, Tu (2002) argued that instructors should model the effective use of emoticons in online courses. In fact, Tu and McIssac (2002) later found that most students respond positively to the use of emoticons (p. 143) thus supporting the need to help students effectively use emoticons in EMC.

Yamada and Akihori (2007) found in a later study that students' use of emoticons heightened their sense of social presence. In their study, a student's use of emoticons often led to more responses from other students to their posts. Then in another study, Cobb (2009) found that 70% of students in an online nursing program used emoticons. Using the same instrument as Gunawardena and Zittle (1997), Cobb found students in an online nursing program (with high use of emoticons) actually had a higher overall social presence score than participants in Gunawardena and Zittle's foundational study. Cogg suggested that this difference could be due to users increased use of EMC over the past decade. It is reasonable to expect as students use EMC more for personal as well as educational purposes that they become more adept at using paralanguage and emoticons to establish social presence and make up for the cues filtered out of EMC. However, this does not discount the need of instructors and instructional designers to intentionally find ways to design for social presence in online courses (Aargon, 2003; Dunlap & Lowenthal, 2014; Greyling & Wentzel, 2007).

Building Community

Online students may feel isolated and alone in online courses (McInnerney & Roberts, 2004); online students report missing the social presence—specifically the sense of being perceived as real and perceiving others as real—that they more easily establish in face-to-face courses (Stodel, Thompson, & McDonald, 2006). Students often perceive the lack of a community as an impediment to their success in online courses (Song, Singleton, Hill, & Koh, 2004). Research has shown a relationship between students' sense of community and their actual success in online courses (Conrad, 2005; Sadera, Robertson, Song, & Midon, 2009; Swan, 2002). In addition, various learning theories stress the importance of social context, collaboration, and discourse in the construction of knowledge (see Lave & Wenger, 1991;

Lowenthal & Muth, 2008). For reasons like these, online educators strive to build community in online courses.

There are various types of learning communities (Zhao & Kuh, 2004). The online learning communities that educators try to build in online courses have been described as "bounded learning communities" (Wilson, Ludwig-Hardman, Thornam, & Dunlap, 2004). A bounded learning community is a learning community formed within a formal course. In bounded learning communities, students often do not choose their instructor or fellow students. These communities take place over a fixed period of time (e.g., a semester); and participation in these communities is often required in some way. A bounded learning community though rarely simply forms on its own (Wilson et al., 2004). It takes careful upfront planning on how best to engage students with the course content, their peers, and their instructor as well as how best to use EMC (Swan, 2002).

Building community in an online course begins and ends with learner interaction. In other words, learners must first login to their online courses and interact with each other, their instructor, and the course content for a community to even possibly form. Research suggests that frequent interaction alone is not enough. Instead, it is the quality of the interaction that matters (Goertzen & Kristjansson, 2007). The cues filtered out of EMC, however, can make it challenging for learners to effectively interact and communicate with each other online. The Community of Inquiry model suggests that affective, interactive, and cohesive communication are needed to build social presence and a community of learners (Rourke et al., 1999). More specifically, paralanguage in general and emoticons in particular can help facilitate community building by clarifying EMC, establishing social presence, and building cohesion (Huang et al., 2008; Rourke et al., 1999). Goertzen and Krisjansson (2007) found, in one study, that paralanguage and emoticons enables people "to project a sense of personality, familiarity, and closeness, along with various degrees of solidarity and alignment…" (p. 220) and that "social presence is essential to increasing a sense of belonging and social cohesion in the community as well as facilitating collaboration" (p. 213).

Members of a learning community must be able to disagree with others, though, when needed. Goertzen and Kristjansson (2007) pointed out, "reviewing and potentially critiquing the work of peers is risky business" (p. 223). As a result, learners often engage in a lot of face-saving acts. For instance, Goertzen and Kristjansson found that learners surround requests for help, clarification, and change with positive comments to improve group cohesion. Paralanguage and emoticons are also often used to avoid potential conflicts in a conversation that has a chance of getting acrimonious or merely to soften the serious nature of a conversation (Stapa & Shaari, 2012). For instance, in a study of college classroom discussions, Vandergriff (2013) found emoticons, non-standard/multiple punctuation, and lexical surrogates were often used as an avoidance strategy when a participant did not want to disagree openly. Emoticons can also be used in a humorous way to politely disagree as well as to convey complex meaning like sarcasm and frivolousness.

Communities are constructed and maintained in part with language (Street, 1984). Participation in a community—even an online bounded learning community—requires knowing the specific language and literacy skills of the community (Gee, 1990, 1998, 2000; White & Lowenthal, 2011). Thus acceptance within a community requires one knows and employs the language of that community. In one study, Tu (2001) found that once students became comfortable with their classmates and learned any commonly used Netspeak or emoticons, they reported feelings of belongingness and a sense of themselves as full-fledged

members of the learning community (Tu, 2001). In another study of a gaming community, Peña and Hancock (2006) found that more experienced gamers used more emoticons and other Netspeak conventions in their communications than less experienced gamers. Their usage was tied to their existing membership in the gaming community and the established shared understanding of the Netspeak conventions used by the community. Along the same lines, while research on emoticons suggests that people use emoticons more with friends than with people they do not know (Huang, Yen, & Zhang, 2008), as people become more comfortable with each other, research suggests that they often feel less of a need to clarify every comment with positioning (Goertzen & Kristjansson, 2007).

People also have to become comfortable using various types of EMC media to feel a part of any given learning community. Meyer (2003) suggested that one's comfort level with text-based EMC will likely depend on one's ability to "to create a realistic 'self' in written responses" (p. 57). The constraints of text-based EMC has led some to argue that synchronous EMC is more effective in improving communication and interaction than asynchronous EMC (Fadde & Vu, 2014; Wang & Newlin, 2001); consequently, synchronous EMC may be better at helping participants develop social presence and possibly lead to a greater sense of community (McInnerney & Roberts, 2004, p. 75). Learning communities, though, are complicated (Zhao & Kuh, 2004). Therefore, emoticons alone are not enough to help a learning community form and persist. Further, it is possible that only certain types of courses and learning audiences benefit from bounded learning communities.

Limitations and Gaps

Our review of the literature is limited in scope in part due to the keywords selected. After initially testing a few different keywords as search terms, we settled on using "emoticon," "online," and "learning." Additional keywords (e.g., e-learning or education) could possibly result in additional articles that we missed. However, our initial search was used simply as a starting point; many of the articles we read pointed us to additional studies. A bigger limitation, though, is due to the research itself. First and foremost, there are very few studies that primarily focus on emoticons and online learning or online education. Therefore, the majority of the studies we reviewed did not research emoticon use in educational settings. Educational settings have their own norms and ways of communicating and being. Further, learning management systems, and specifically threaded discussions, differ in important ways from other communication platforms like chat rooms or instant messaging applications. Fullwood et al. (2013) questioned to what degree communication platforms like chat rooms are a unique "genre" that influence how people communicate; they continued to argue that "there are recognized conventions or etiquette that guides our online behaviors in specific environments, encourage a particular style of communication" (Fullwood et al., 2013, p. 658). Another shortcoming of general research on emoticons is that it tends to focus predominantly on issues like gender (Fullwood et al., 2013) and not on other important questions (e.g., its use in education).

There is still so much we do not know about emoticon use. For instance, it is very possible that emoticons are not always used to convey emotion; people could simply be influenced by the way others use emoticons. Others could just be habitual emoticon users (Lowenthal, 2012) much like the way some people simply use their hands obsessively when they speak. Emoticon use may sometimes be more of a generative rather than a communicative act, in the sense that it serves the writer more than the reader (Walther & D'Addario, 2001, p.

343). Also, the writer may simply be feeling too lazy to use words—opting instead on the use emoticons. Hence the overuse of emoticons due to the lack of effort on the writer's part may wane its effectiveness such that readers start to ignore its presence (Walther & D'Addario, 2001, p. 342). Hence, the question arises: How, and in what context, can emoticons be used most effectively to bring about maximum learning and optimal information exchange?

Research on emoticons also does not adequately acknowledge how emoticon use might be changing over time. Emoticon use, or more generally the effective use of EMC, can be viewed as a type of literacy. It is likely that peoples emoticon use is influenced by a host of factors, one of which being their prior experience using different types of EMC (see Fullwood et al., 2013). Emoticon use is likely changing as people become more literate with EMC; in other words, it is likely that emoticon use is changing as people change (Huffaker & Calvert, 2005). However, some people are still turned off by the use of emoticons (Provine et al., 2007), which often can cause problems studying emoticon use in educational settings where faculty prohibit the use of emoticons or Netspeak of any kind (Pratt, 2010).

Future Research

Our review of the literature on the use of emoticons to support online learning has revealed new lines of possible inquiry. First and foremost, researchers need to examine how emoticons can be used to maximize student engagement and achievement in online courses. For instance:

- Does emoticon use in instructor feedback reduce transactional distance between the students and the instructor in an online class?
- How can paralinguistics enhance the online learning experience for students?
- Do emoticons have a more positive effect on improving communication in online courses when combined with other strategies? If so, what other strategies, and why?
- Is there a relationship between emoticon use and student persistence in online courses?
- How does the overuse of emoticons limit their usefulness in the online classroom?

Researchers also need to focus more specifically on how emoticons are used to establish and maintain social presence. For instance:

- Are emoticons more effective for enhancing social presence for some learners than others?
- How can the intentional use of emoticons reduce the transactional distance and increase sociability between students in online courses?
- Do emoticons have a more positive effect on enhancing social presence in online courses when combined with other strategies? If so, what other strategies, and why?
- Is developing an effective use of emoticons in online courses a good use of an instructor's time, or are there other strategies (e.g., the use of video) that have a more consistent positive effect on social presence in online courses?

Last but not least, many questions remain on how emoticons can help build and maintain effective learning communities. For instance:

- How does the background (culture, language proficiency, Internet/IM use experience) of students affect their use and reception of emoticons in online courses?
- Why do some people respond positively and others respond negatively to emoticon use?
- How are emoticons used in courses with a strong sense of community?
- How does an instructor's use, modeling, and encouragement influence students use and perceptions of emoticons?

- How does emoticon use change over time in online courses and online programs?

As people's use of EMC increases, the platforms people use become more sophisticated, and people's own comfort level with EMC as a vehicle for communication, collaboration, and expression increases, people's use of emoticons in online education is likely to change. As such, research on emoticons should continue to be conducted. At the same time, though, online educators should keep in mind that emoticons are just one of many ways to express emotion and intent in the online classroom and that emoticons cannot magically solve all of the problems of distance and isolation in online courses.

Instructional Recommendations

Given the ubiquitous use of EMC in business as well as professional communities of practice, helping students learn to communicate and collaborate well using EMC technologies (i.e., becoming literate with EMC) is an important instructional goal. Helping students understand the role of emoticons, and Netspeak in general, is an appropriate element of professional preparation. The following are some instructional recommendations that emerged from our review of the literature on emoticons:

1. **Enhance teaching presence**. Online educators should use emoticons when communicating with students to increase teaching presence. Emoticons are one way instructors can express emotion as well as clarify the expression of emotion or intent. This may help students better understand their instructor's approach to the course and the content (i.e., teaching presence) while at the same time getting a better sense that their instructor is "real" and "there" (i.e., instructor's social presence).

2. **Provide personalized feedback**. Personal, individualized feedback can help establish social presence in online courses (Dunlap & Lowenthal, 2014). Instructors should strive to use paralanguage and emoticons to help personalize and humanize feedback.

3. **Soften critical feedback**. Emoticons may be used to soften the tone of critical feedback so that students are more open to receiving and processing critical feedback; emoticons can essentially have a similar effect as audio feedback, which has been shown to help students hear the nuances in an instructor's voice (Ice, Curtis, Phillips, & Wells, 2007; Wilson, 2009).

4. **Establish clear expectations for emoticon use**. Students are often unsure how best to communicate in online courses. Even when students are well-versed in EMC for social purposes, they are often unsure of the appropriate way to communicate for an academic/professional context. Therefore, instructors should establish clear expectations about the use of emoticons, as well as other paralanguage, in their online courses. When establishing expectations for emoticon use, instructors should keep in mind that students from different countries, from diverse cultural contexts, and with different levels of experience with EMC (i.e., with different levels of digital literacy) might need additional support (Vrasidasa & McIsaac, 1999). Instructors should also reinforce these expectations through modeling the appropriate and effective use of emoticons (Vrasidasa & McIsaac, 1999; Woo & Reeves, 2008) and possibly even holding students accountable for their appropriate and effective use of emoticons.

5. **Go beyond emoticons.** Emoticon use does not always address the instructional goals of improving communication, enhancing social presence, and building effective learning communities in online courses. Emoticons are one strategy that should be used in conjunction with others to achieve these goals.

Conclusion

The effective use of emoticons to improve communication, enhance social presence, and build community is a digital competency, one aspect of a person's digital literacy. As such, effective emoticon use has the potential to enhance a person's ability to accurately and appropriately use EMC. As the literature reviewed in this chapter demonstrates, the interpretation of emoticon use may not be universal. We identified a tension between the usefulness of emoticons and some people's perceptions of emoticons as unprofessional, in both the literature as well as our own personal experiences. Loewen and Reissner (2009) described an exasperated teacher who expressed disapproval over students' use of emoticons by chastising them with comments "such as *What do you mean?* and *What language are you speaking!*" (p. 111). In our introduction, we quoted a student who had similar prior experiences with instructors who disapproved or even prohibited emoticon use; this student expressed relief in finding an instructor who permitted the use of emoticons because the student believed they could effectively "save a lot of grief and help to establish community." Reaching a universally compatible understanding of or standard for how emoticons may be used in educational and professional contexts is a task that may be useful to undertake if educators are to prepare students to meet the interaction needs of the social and professional world in which they will participate. We identified some instructional recommendations that might help online educators accomplish just this (e.g., modeling best practices, establishing clear expectations regarding emoticon use). However, educators should keep in mind that emoticon use is just one strategy to improve communication, establish social presence, and build learning communities. Emoticons may be one of the rays of sunshine that helps online educators grow healthy, hearty, and vibrant flowers.

References

AbuSa'aleek, A. O. (2013). Linguistic dimensions of initialisms used in electronic communication. *Studies in Literature and Language*, *6*(3), 7-13.

Aragon, S. R. (2003). Creating social presence in online environments. *New directions for adult and continuing education*, *100*, 57-68.

Averianova, I. (2012). The language of electronic communication and its implications for TEFL. *Procedia - Social and Behavioral Sciences*, *34*, 14-19.

Beatty, K. (2003). *Teaching and researching computer-assisted language learning*. Harlow, Essex: Pearson Education.

Brunet, P. M., & Schmidt, L. A. (2010). Sex differences in the expression and use of computer-mediated affective language. *Social Science Computer Review, 28*(2), 194-205.

Caspi, A., & Blau, I. (2008). Social presence in online discussion groups: Testing three conceptions and their relations to perceived learning. *Social Psychology of Education, 11*(3), 323-346.

Chen, E. (2006). The development of e-mail literacy: From writing to peers to writing to authority figures. *Language Learning and Technology*, *10*(2), 33-55.

Chen, Y. (2001). Dimensions of transactional distance in the world wide web learning environment: A factor analysis. *British Journal of Educational Technology, 32*(4), 459-470.

Cobb, S. C. (2009). Social presence and online learning: A current view from a research perspective. *Journal of Interactive Online Learning, 8*(3), 241-254. Retrieved from http://www.ncolr.org/jiol/issues/pdf/8.3.4.pdf

Conrad, D. (2005). Building and maintaining community in cohort-based online learning. *Journal of Distance Education, 20*(1), 1-20.

Cooper, H. M. (1982). Scientific guidelines for conducting integrative research reviews. *Review of Educational Research*, *52*(2), 291-302.

Crystal, D. (2001). *Language and the Internet*. New York, NY: Cambridge University Press.

Derks, D., Bos, A. E. R., & Grumbkow, J. V. (2007). Emoticons and social interaction on the Internet: The importance of social context. *Computers in Human Behavior, 23*, 842-849.

Derks, D., Bos, A. E. R., & Grumbkow, J. V. (2008). Emoticons in computer-mediated communication: Social motives and social context. *CyberPsychology & Behavior, 11*(1), 99-101.

Dresner, E., & Herring, S. (2010). Functions of the non-verbal in CMC: Emoticons and illocutionary force. *Communication Theory*, *20*(3), 249-268.

Dunlap, J. C., & Lowenthal, P. R. (2014). The power of presence: Our quest for the right mix of social presence in online courses. In A. A. Piña & A. P. Mizell (Eds.) *Real life distance education: Case studies in practice* (pp. 41-66). Greenwich, CT: Information Age Publishers.

Fadde, P. J., & Vu, P. (2014). Blended online learning: Benefits, challenges, and misconceptions. In P. R. Lowenthal, C. S. York, & J. C. Richardson (Eds.), *Online learning: Common misconceptions, benefits and challenges* (pp. 33-48). Hauppauge, NY: Nova Science Publishers.

Fullwood, C., Orchard, L. J., & Floyd, S. A. (2013). Emoticon convergence in Internet chat rooms. *Social Semiotics*, *23*(5), 648-662.

Ganster, T., Eimler, S. C., & Kramer, N.C. (2012). Same same but different!? The differential influence of smileys and emoticons on person perception. *Cyberpsychology, Behavior, and Social Networking, 15*(4), 226-230.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105.

Gee, J. (1990). *Social linguistics and literacies: Ideology in discourses*. Brighton, England: Falmer Press.

Gee, J. (1998). What is literacy? In V. Zamel & R. Spack (Eds.), *Negotiating academic literacies: Teaching and learning across languages and cultures* (pp. 52-59). Mahwah, NJ: Lawrence Erlbaum Associates.

Gee, J. (2000). The new literacy studies: From 'socially situated' to the work of the social. In D. Barton, M. Hamilton & R. Ivanic (Eds.), *Situated literacies: Reading and writing in context* (pp. 180-196). New York, NY: Routledge.

Goertzen, P., & Kristjansson, C. (2007). Interpersonal dimensions of community in graduate online learning: Exploring social presence through the lens of Systemic Functional Linguistics. *Internet and Higher Education, 10*, 212-230.

Greyling, F. C., & Wentzel, A. (2007). Humanising education through technology: Creating social presence in large classes. *South African Journal of Higher Education*, *21*(4), 654-667.

Gunawardena, C. N. (1995). Social presence theory and implications for interaction and collaborative learning in computer conferences. *International Journal of Educational Telecommunications, 1*(2/3), 147-166.

Gunawardena, C. N., & Zittle, F. J. (1997). Social presence as a predictor of satisfaction within a

computer-mediated conferencing environment. *The American Journal of Distance Education, 11*(3), 8-26.

Halvorsen, A. (2012). Patterns in emoticon usage in ESL students' discussion forum writing. *CALICO Journal, 29*(4), 694-717.

Huang, A. H., Yen, D. C., & Zhang, X. (2008). Exploring the potential effects of emoticons. *Information & Management, 45*, 466-473.

Huffaker, D. A., & Calvert, S. L. (2005). Gender, identity, and language use in teenage blogs. *Journal of Computer-Mediated Communication, 10*(2). Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.2005.tb00238.x/full

Ice, P., Curtis, R., Phillips, P., & Wells, J. (2007). Using asynchronous audio feedback to enhance teaching presence and student sense of community. *Journal of Asynchronous Learning Networks, 11*(2), 3-25.

Jackson, G. B. (1980). Methods for integrative reviews. *Review of Educational Research, 50*(3), 438-460.

Kanayama, T. (2003). Ethnographic research on the experience of Japanese elderly people online. *New Media & Society*, *5*(2), 267-288.

Kindred, J., & Roper, S.L. (2004). Making connections via Instant Messenger (IM): Student use of IM to maintain personal relationships. *Qualitative Research Reports in Communication, 5*, 48-54.

Krohn, F. B. (2004). A generational approach to using emoticons as nonverbal communication. *Journal of Technical Writing and Communication, 34*(4), 321-328.

Lahaie, U. (2007). Strategies for creating social presence online. *Nurse Educator, 32*(3), 100-101.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York, NY: Cambridge University Press.

Lin, G., & Laffey, J. (2004). Effects of different activity types and time on online social presence. In G. Richards (Ed.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2004* (pp. 1996-2000). Chesapeake, VA: AACE.

Lo, S. (2008). The non-verbal communication functions of emoticons in computer-mediated communication. *CyberPsychology & Behavior, 11*(5), 595-597.

Locke, T., & Daly, N. (2007). Towards congeniality. The place of politeness in asynchronous online discussion. *International Journal of Learning, 13*(12), 121-134.

Loewen, S., & Reissner, S. (2009). A comparison of incidental focus on form in the second language classroom and chatroom. *Computer Assisted Language Learning*, *22*(2), 101-114.

Lowenthal, P. R. (2009). The evolution and influence of social presence theory on online learning. In T. T. Kidd (Ed.), *Online education and adult learning: New frontiers for teaching practices* (pp. 124-139). Hershey, PA: IGI Global.

Lowenthal, P. R. (2012). *Social presence: What is it? How do we measure it?* (Doctoral dissertation). University of Colorado Denver, Denver, Colorado.

Lowenthal, P., & Muth, R. (2008). Constructivism. In E. F. Provenzo, Jr. (Ed.), *Encyclopedia of the social and cultural foundations of education* (pp. 177- 179). Thousand Oaks, CA: Sage.

Marvin, L. (1995). Spoof, spam, lurk, and lag: The aesthetics of text-based virtual realities.

Journal of Computer-Mediated Communication, 1(2). Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.1995.tb00324.x/full

McInnerney, J. M., & Roberts, T. S. (2004). Online learning: Social interaction and the creation of a sense of community. *Educational Technology & Society, 7*(3), 73-81.

Medina, J. (2008). *Brain Rules: 12 principles for surviving and thriving at work, home, and school*. Seattle, WA: Pear Press.

Meyer, K. A. (2003). Face-to-face versus threaded discussions: The role of time and higher-order thinking. *Journal of Asynchronous Learning Networks*, *7*(3), 55-65.

Moore, M. G. (2013). The theory of transactional distance. In M. G. Moore (Ed.). *Handbook of Distance Education* (pp. 66-85). New York, NY: Routledge.

Park, J. (2007). Interpersonal and affective communication in synchronous online discourse. *The Library Quarterly, 77*(2), 133-155.

Peña, J., & Hancock, J. T. (2006). An analysis of socioemotional and task communication in online multiplayer video games. *Communication Research, 33*(1), 92-109.

Pillai, A. D. (2009). Computer-mediated communication in a bilingual chatroom. *Language in India: Strength for Today and Bright Hope for Tomorrow, 9*(11), 20-29.

Pratt, E. L. (2010). Communicating by computer. In T. A. M. Brosche & M. Feavel (Eds.), *Successful online learning: Managing the online learning environment efficiently and effectively* (pp. 113-126). Sudbury, MA: Jones and Barlett Publishers.

Provine, R. R., Spencer, R. J., & Mandell, D. L. (2007). Emotional expression online: Emoticons punctuate website text messages. *Journal of Language and Social Psychology, 26*(3), 299-308.

Richardson, J. C., & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous Learning Networks, 7*(1), 68-88.

Rourke, L., Anderson, T., Garrison, D. R., & Archer, W. (1999). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education, 14*(2), 50-71.

Runions, K., Shapka, J. D., Dooley, J., & Modecki, K. (2012). Cyber-aggression and victimization and social information processing: Integrating the medium and the message. *Psychology of Violence, 3*(1), 9-26.

Sadera, W. A., Robertson, J., Song, L., & Midon, M. N. (2009). The role of community in online learning success. *Journal of Online Learning and Teaching, 5*(2), 277-284.

Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London: John Wiley & Sons.

So, H., & Brush, T. A. (2008). Student perceptions of collaborative learning, social presence, and satisfaction in a blended learning environment: Relationships and critical factors. *Computers & Education, 51*(1), 318-336.

Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The Internet and Higher Education, 7*(1), 59-70.

Stapa, S. H., & Shaari, A. H. (2012). Understanding online communicative language features in social networking environment. *GEMA Online Journal of Language Studies, 12*(3), 817-830.

Stein, D. S., Wanstreet, C. E., & Calvin, J. (2005). Bridging the transactional distance gap in online learning environments. *American Journal of Distance Education, 19*(2), 105-118.

Stodel, E., Thompson, T., & MacDonald, C. (2006). Learners' perspectives on what is missing from online learning: Interpretations through the Community of Inquiry Framework. *The International Review of Research In Open and Distance Learning, 7*(3). Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/325

Street, B. (1984). *Literacy in theory and practice.* Cambridge: Cambridge University Press.

Swan, K. (2002). Building learning communities in online courses: The importance of interaction. *Education, Communication, and Information, 2*(1), 23-49.

Tu, C. (2001). How Chinese perceive social presence: An examination of interaction in online learning environment. *Educational Media International, 38*(1), 45-60.

Tu, C.-H. (2002). The impacts of text-based CMC on online social presence. *The Journal of Interactive Online Learning, 1*(2). Retrieved from http://www.ncolr.org/jiol/issues/pdf/1.2.6.pdf

Tu, C. H., & McIsaac, M. (2002). The relationship of social presence and interaction in online classes. *The American Journal of Distance Education, 16*(3), 131-150.

Vandergriff, I. (2013). Emotive communication online: A contextual analysis of computer-mediated communication (CMC) cues. *Journal of Pragmatics, 51*, 1-12.

Varnhagen, C. K., McFall, G. P., Pugh, N., Routledge, L., Sumida-MacDonald, H., Kwong, T. E. (2009). Lol: New language and spelling in instant messaging. *Reading and Writing, 23*(6), 719-733.

Visser, N., Alant, E., & Harty, M. (2008). Which graphic symbols do 4-year old children choose to represent each of the four basic emotions. *Augmentative and Alternative Communication, 24*(4), 302-312.

Vrasidas, C., & McIsaac, M. S. (1999). Factors influencing interaction in an online course. *American Journal of Distance Education*, *13*(3), 22-36.

Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research, 23*(1), 3-43.

Walther, J. B., Anderson, J. F., & Park, D. W. (1994). Interpersonal effects in computer-mediated interaction: A meta-analysis of social and antisocial communication. *Communication Research, 21*(4), 460-487.

Walther, J. B., & D'Addario, K. P. (2001). The impacts of emoticons on message interpretation in computer-mediated communication. *Social Science Computer Review, 19*(3), 324-347.

Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in. In M. L. Knapp & J. A. Daly (Eds.), *Handbook of interpersonal communication* (pp. 529-563). Thousand Oaks, CA: Sage.

Wang, A. Y., & Newlin, M. H. (2001). Online lectures: Benefits for the virtual classroom. *T.H.E. Journal, 29*(1), 17-24.

Weiss, R. E. (2000). Humanizing the online classroom. *New Directions for teaching and Learning, 2000*(84), 47-51.

White, J. W., & Lowenthal, P. R. (2011). Minority college students and tacit "Codes of Power": Developing academic discourses and identities. *The Review of Higher Education, 34*(2), 283-318.

Wilson, B. G. (2009). Using audio for giving feedback to project teams: A useful complement to track changes. In P. R. Lowenthal, D. Thomas, A. Thai, & B. Yuhnke, B. (Eds.), *The CU Online handbook. Teach differently: Create and collaborate* (pp. 51-53). Raleigh, NC: Lulu.

Wilson, B. G., Ludwig-Hardman, S., Thornam, C. L., & Dunlap, J. C. (2004). Bounded community: Designing and facilitating learning communities in formal courses. *The International Review of Research in Open and Distance Learning*, *5*(3). Retreived from http://www.irrodl.org/index.php/irrodl/article/viewArticle/204

Wolf, A. (2000). Emotional expression online: Gender differences in emoticon use. *CyberPsychology & Behavior*, *3*(5), 827-833.

Woo, Y., & Reeves, T. C. (2008). Interaction in asynchronous web-based learning environments. *Journal of Asynchronous Learning Networks*, *12*, 179-194.

Wortham, J. (2011, December). Whimsical texting icons get a shot at success. *The New York Times*. Retrieved from http://www.nytimes.com/2011/12/07/technology/emoji-in-iphones-signals-a-shot-at-mainstream-success.html?_r=0

Yamada, M., & Akihori, K. (2007). Social presence in synchronous CMC-based language learning: How does it affect the productive performance and consciousness of learning objectives? *Computer Assisted Language Learning*, *20*(1), 37-65.

Zhao, C-M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education, 45*(2), 115-138.