The effect of emoticons in simplex and complex task-oriented communication: An empirical study of instant messaging

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ABSTRACT

Many studies have shed light on general computer-mediated communication, instant messaging (IM), and emotion or emoticons, but little is known specifically about the impacts of emoticons in task-oriented IM communication in the workplace. Therefore, the current study addresses this issue by conducting an exploratory experiment to (1) categorize workplace IM messages into coherent groups, (2) identify the most commonly used emoticons (emblems) for expressing positive, negative, and neutral emotions in the case company, (3) test the differences in the emotional effects of the received text messages with and without emoticons on the reader/s, and (4) examine the intention to use emoticons in IM in the workplace. The results showed that (1) negative emoticons could cause a negative effect in both simplex and complex task-oriented communication, (2) positive emoticons only created a positive effect in complex communication and for female employees in simplex communication, and (3) there is no significant difference between task-oriented messages with or without neutral emoticon. Furthermore, the intention of using emoticons was not statistically significant in terms of gender, but it has a higher tendency on female employees. The corresponding suggestions provided by this research may help increase our understanding on the effect of emoticon use in IM in the workplace.

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1. Introduction

Since the introduction and consequent booming of the Internet as well as the emergence of different electronic communication channels, we have witnessed an enormous increase in computer-mediated communication (CMC) such as asynchronous (e.g., e-mail) and synchronous CMC (e.g., instant messaging (IM)). More and more interactions are taking place via the chat tool; for example, many people use IM to chat privately as well as professionally. Furthermore, IM services also help maintain relationships among friends and colleagues in different locations.

CMC has become so common in people's daily lives that it raises a major question on how different online communication is from face-to-face (F2F) communication. For example, do people chat in IM in the same manner they would in live/actual interactions? Are conversations presented in different ways, and do they trigger different emotions or effects in CMC? Some studies argued that CMC is a cold and unfriendly medium where the emotions are very

difficult to express (Sproull & Kiesler, 1986), while other studies declared that the differences between CMC and F2F are not that major (Walther, Anderson, & Park, 1994). For instance, Sannomiya and Kawaguchi (1999) investigated the cognitive characteristics of CMC and F2F communication, and suggested that F2F communication might support productive discussion for the creation of ideas, while CMC supports in-depth discussion for the examination of ideas.

When discussing the task-related function of IM, it is interesting to know whether the emotions involved in CMC and F2F are any different. It has been argued that the communication of emotions is more difficult in CMC than in F2F. Burgoon, Buller, and Woodall (1996) specifically concluded that non-verbal behavior pre-dominates the effects of language content in most conditions. What may then appear in IM other than pure text? Let us assume the following scenario: "One day, when Ted was concentrating on his morning work, his IM windows prompted an instant message from Monica. '... what do you mean?', Ted was very angry at that time because of Monica's rude act. However, he tried to figure out her true intention and calmed down himself first by returning her a message together with a happy emoticon – ☺. Instantly, Monica returned a text message together with a happy emoticon too. Thus, Ted had a different emotion and a better mood as compared to

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earlier." This scenario tells us that emoticons indeed change somehow the emotion effect between IM users in the workplace. However, researchers have rarely studied the effect of the emoticons of IM in the workplace, which is a concern since emoticons have been widely used in the workplace nowadays.

Emoticons are defined as a means to express emotion, hence its name "emotional icon". Their actual function hinges on the definition of the word emotion. Emoticons can be considered a creative and visually salient way to add expression to an otherwise strictly text-based form. Some studies also showed that females used more frequent non-verbal cues in CMC. Therefore, two primary research questions related to emoticons are presented as follows: First, What are the effects of emoticons on task-oriented messages in IM in the workplace? Second, Is there any gender difference in emoticon use in IM in the workplace? To conduct a case-study experiment in this study, two additional research questions are examined: What types of IM messages exist in the case company? How do the employees in the case company perceive the use of IM in the workplace? The research design will address these four research questions following the literature review.

2. Background literature

2.1. CMC in the workplace and IM

Sproull and Kiesler (1986) argued that e-mail in the workplace does not simply speed up the exchange of information but also leads to the exchange of new information. In a field study in a Fortune 500 company, e-mail communication was examined at all levels of the organization, and it was found that much of the information conveyed through e-mail was data that would not have been conveyed through another medium.

IM, another popular CMC tool next to e-mail, appears to be progressively used in the office. To facilitate convenience in communication and the advantage of efficiency, employees use IM to arrange meetings, discuss projects, and greet people. For example, heavy IM users and frequent IM partners mainly use it to work together to discuss a broad range of topics via many fast-paced interactions everyday, each with many short turns and much threading and multitasking. Light users and occasional pairs generally use IM to coordinate scheduling via fewer discussions everyday. In a study on IM usage in the workplace, Nardi, Whittaker, and Bradner (2000) concluded that IM is used primarily for four functions: (1) quick questions and clarifications, (2) coordination and scheduling of work tasks, (3) coordination of impromptu social meetings, and (4) keeping in touch with friends and family. Variations of these functions are frequently mentioned in other studies (Connell, Mendelsohn, Robins, & Canny, 2001; Grinter & Palen, 2002; Mahowald & Levitt, 2000; Milewski & Smith, 2000; Rhinelander, 2000).

The features of IM include the following: (1) IM conversations are brief, (2) media switching is prevalent, and (3) multitasking is common while conversing in IM (Connell et al., 2001; Grinter & Palen, 2002; Mahowald & Levitt, 2000; Milewski & Smith, 2000; Nardi et al., 2000; Rhinelander, 2000). Robb (2001) also argued that IM seems to be steadily advancing into the office environment whether the financial industry is ready for it or not. IM allows its users to chat online, thus offering real-time access to multiple associates. Wang's (2005) studies showed that colleagues and superiors are the main objects when IM is used within organizations. The presence of IM will likely increase its acceptance as a business communication tool. In the workplace, one of CMC's characteristics is task-oriented interactions (Connolly, Jessup, & Valacich, 1990). Friendship development and personalized communication are more important for IM as a socialization tool, and they are the factors that make IM useful as a socialization tool

(Huang & Yen, 2003). However, they also argued that IM could be for both social and task-related interactions. The social aspect of IM is extensive, so the maintenance of social relationships has been found to be indeed an essential function of online communication networks. However, unlike F2F social groups in which one can passively participate just by being present, online communication networks somehow require active participation if one is to receive social benefits (Wellman, 2001).

2.2. Emotion and emoticons – the visible cue

Derks, Fischer, and Bos (2008) argued that there is no indication showing that CMC is a less emotional or less personally involving medium than F2F. On the contrary, they concluded that both online and offline communication are surprisingly similar, and if their differences are to be identified, CMC showed more frequent and explicit emotion communication than F2F. This is indirectly supported by Kato, Sugimura, and Akahori's (2001) conclusion that affective traits influence affective states in e-mail communication in their exploration of the affective aspect of CMC prior to the comparison between CMC and F2F.

Kato, Kato, and Akahori (2007) also showed that there is a tendency for unpleasant emotions, such as negative emoticons of anger and anxiety, to increase when the emotional cues transmitted are low, which has been proven to cause some misunderstanding in the e-mail communication between senders and receivers. Spears and Lea (1992) also proposed that the norms and values associated with being online may promote uninhibited behaviors such as flaming. This idea was tested by Orenga Castella, Zornoza, Prieto Alonso, and Peiro' Silla (2000), and they found that negative emotion expression appeared more often in CMC than in F2F, suggesting that it is the lack of visible cues that may reinforce an experience of anonymity and explain the results.

Similar to non-verbal cues in F2F, emoticons also help accentuate or emphasize a tone or meaning during message creation and interpretation (Crystal, 2001; Rezabek & Cochenour, 1998). Furthermore, they help communicate more clearly a current mood or mental state of the author (Constantin, Kalyanaraman, Stavrositu, & Wagoner, 2002), thereby also providing additional social cues about this person (Thompson & Foulger, 1996). Thus, emoticons serve the function of clarifying textual messages which is similar to non-verbal displays in F2F (Derks, Bos, & von Grumbkow, 2008; Walther & D'Addario, 2001). Some studies (Hwang, 2007; Kato et al., 2007; Lewis & Fabos, 2005) found that the use of emoticons in IM is popular via analyzing message logs or observing prompting windows. Especially, facial expressions have even greater effects than vocal and spatial non-verbal cues, which are important in judging positivity because receivers connect a smile with positivity, a connection that has no analogue in the body and the voice.

In particular, Huffaker and Calvert's (2005) study implied that individuals at least feel the need to express some of their emotions with short symbols rather than text in weblogs and other chat devices such as MSN. This is supported by Rivera, Cooke, and Bauhs (1996), who said that subjects who used emoticons are more satisfied with the system than those subjects who had no access to emoticons. Therefore, it is obvious that emoticons have become commonplace in CMC, and they have clearly found their way into the vocabulary and tools of the computer-using world.

2.3. Gender difference

With regard to gender difference in CMC, various authors have suggested that women's more frequent non-verbal displays, especially smiling, could be reflected in the more frequent use of emoticons (Lee, 2003; Witmer & Katzman, 1997). However, Walther and