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I'll See You On "Facebook": The Effects of Computer-Mediated Teacher Self-Disclosure on Student Motivation, Affective Learning, and Classroom Climate

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This experimental study examined the effects of teacher self-disclosure via Facebook on anticipated college student motivation, affective learning, and classroom climate. Participants who accessed the Facebook website of a teacher high in self-disclosure anticipated higher levels of motivation and affective learning and a more positive classroom climate. In their responses to open-ended items, participants emphasized possible negative associations between teacher use of Facebook and teacher credibility. Participants offered recommendations for teachers regarding the use of Facebook and other weblog services.

Keywords: Teacher Self-disclosure; College Student Motivation; Affective Learning; Classroom Climate

In the traditional classroom, teachers may spend more time talking than their students (McBride & Wahl, 2005). While teachers may spend a considerable amount of time covering course content, they are also likely to self-disclose by sharing information about themselves, telling personal stories, and conveying their personal beliefs (Nussbaum, Comadena, & Holladay, 1987). A multidimensional construct, self-disclosure is defined as "any message about the self that a person communicates to another" (Wheeless & Grotz, 1976, p. 47). The *amount* of teacher disclosure refers

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to how frequently an instructor self-discloses; *valence* references the positive and negative nature of the disclosures; and *relevance* refers to the relationship of the disclosure to course content (Cayanus & Martin, 2002). The present study examines the effects of teacher self-disclosure on various student and teacher characteristics via a computer-mediated social network used primarily by students.

Computer Mediated Communication via Virtual Social Networks

Over the past 30 years, computer mediated social networks have been developing at an increasing rate. While time constraints can often limit the amount of face-to-face student socialization, students who use forms of computer-mediated communication (CMC) (e.g., online meeting places or social networks) may experience more opportunities to develop personal relationships than their face-to-face counterparts (Walther, 1995). Scholars found that students who communicate via CMC with other students use more direct uncertainty reduction strategies (e.g., more intimate questions and self-disclosures) than students in face-to-face conversations (Tidwell & Walther, 2002). Thus, the use of CMC in the instructional context could ultimately have a positive effect on the student-teacher relationship, which can lead to more positive student outcomes. Additionally, these findings may offer an explanation with regard to communication between students and their teachers. O'Sullivan, Hunt, and Lippert (2004) extend this notion by discussing various methods that increase mediated immediacy—"the communicative cues in mediated channels that can shape perceptions of psychological closeness between interactants" (p. 471). Factors such as font use, language, and punctuation all affect student perceptions of teacher immediacy via computer-mediated channels. In fact, Waldeck, Kearney, and Plax (2001) found that students are more likely to communicate with teachers online who utilize immediacy behaviors (e.g., use students' first names, "emoticons" to convey emotion) in email messages.

O'Sullivan et al. (2004) found that students who viewed an instructor's website with high levels of mediated immediacy, including forms of self-disclosure, reported high levels of motivation and affective learning, indicating positive attitudes toward the course and the teacher. Therefore, teachers can increase mediated immediacy by including forms of self-disclosure on personal webpages; however, to date, research has not explored the effects of teacher self-disclosure on student outcomes or teacher characteristics via virtual social networks used primarily by students.

Web-based programs such as Friendster, MySpace, and Facebook offer users a medium to create a virtual identity and network with friends and family. Unlike Friendster and MySpace, Facebook operates exclusively for those in the academic community and has become increasingly popular on college campuses. As the seventh most trafficked website in the United States, approximately 8 million students from over 2,000 colleges and 22,000 high schools use Facebook to post personal information such as pictures, hobbies, and messages to communicate with fellow students and instructors as well as friends and family (Lashinsky, 2005). This social network is unique from others (e.g., Friendster and MySpace) in that it serves to

connect students and faculty within and across an academic community. To access the network, users must be affiliated with an academic community and have an email account with an "edu" extension. This network is increasingly being used not only by students but also by faculty. According to Facebook spokesperson Chris Hughes (personal communication, May 1, 2006), approximately 297,000 Facebook members identify themselves as faculty or staff. The question remains: What motivates a faculty member to use such a network as opposed to other forms of mediated communication?

In essence, the Facebook experience is quite different than simply accessing an instructor's university-housed website as students and teachers can easily connect with one another based on their school affiliation through this virtual social network. First, Facebook is a highly interactive virtual social network. While it may be simple to query a teacher's website on a standard search engine, any Facebook user can easily search and view any user's Facebook page through the Facebook network. On a teacher's typical website, interaction may be limited as the webpage can be somewhat static. Students expect a more professional website and may not view that website as a highly interactive experience. Thus, while teachers may post information on Facebook as an attempt to make interpersonal or academic connections with students, there is a potential hazard. Facebook friends can post messages on a user's "Wall," a discussion-board like device that allows users to communicate through the network. While teachers may have control over the content they disclose on their university-housed webpages, friends, strangers, or other students can post discrediting or defamatory messages on users' Facebook websites.

Second, while a teacher's personal website (which is typically housed on the university's server) may offer a sense of academic credibility (i.e., the.edu link), the professional location of the website might limit the instructor to the types of information that can be disclosed on the webpage. Because administrators often monitor webpage content to protect the university's reputation, student and administrative expectations typically control the type of content a teacher would disclose on a university-housed website. Therefore, while teachers typically restrict their university websites to classroom-related discussions and activities, Facebook offers an alternative site designed to enhance their relational exchanges with students.

Teacher use of Facebook provides a unique perspective to the current CMC literature. With large numbers of students and teachers using this virtual social network as a medium of communication (Lashinsky, 2005), it is important to understand how students use and make sense of specific social networks. This understanding can provide useful information for teachers who use virtual social networks to communicate with students. Students may perceive a teacher's use of Facebook as an attempt to foster positive relationships with his or her students, which may have positive effects on important student outcomes. Teachers may violate student expectations of proper behaviors and run the risk of harming their credibility if they utilize Facebook. Despite this potential consequence, teachers may enhance

their credibility among students by signifying an understanding of the contemporary student culture.

Student perceptions of a teacher's credibility and their reports of motivation and affective learning may also be affected by *what* the teacher discloses on Facebook. The number of photographs and the amount of information provided on the virtual social network may positively or negatively alter student perceptions. Much like when a teacher self-discloses face to face in the classroom, the comments made by the teacher's Facebook friends, the special interest groups the teacher is affiliated with on Facebook, and the personal information the teacher discloses in his or her Facebook biography all may affect students' perceptions of the teacher. However, the face-to-face classroom is a controlled communication event, that is, teachers and students are required to be in the classroom at the same time. A teacher's use of Facebook is an attempt to communicate with students outside of that controlled environment where teachers can meet students in their territory. All teachers will enter the face-to-face classroom and talk to their students, but only some teachers may choose to enter a virtual social network. Once teachers enter the network, they must make decisions about how much information to disclose.

Communication Privacy Management Theory

The basic tenets of Petronio's (2002) privacy management theory guide the examination of teacher self-disclosure in the present study. First, she centers the concept of self-disclosure around private information. Second, she uses the metaphor of boundaries to distinguish between public relationships and private information. In the classroom context, teachers will establish public relationships with their students and manage their disclosure of private information. Petronio (2002) argues that the decision whether and when to disclose private information is rule-based and determined by a variety of criteria including culture, motivation, individual differences, situations, and gender. Teachers may intentionally or unintentionally utilize these criteria to decide whether or not to disclose in the classroom. Guided by new technology in this student-dominated virtual social network, teachers can purposefully limit the amount of personal information they disclose on their Facebook website (much like face-to-face interaction in the classroom) to be seen in a positive light among their students (Meyrowitz, 1985).

In terms of teacher privacy management, McBride and Wahl (2005) argue that teachers represent social actors in the educational context (Baxter & Sahlstein, 2000). They contend that, as social actors, instructors must balance their private information to guide the boundary management process. Teachers decide what information they want to reveal to their students in an effort to create a comfortable classroom environment that fosters student learning. At the same time, teachers must also determine what information to conceal from their students in order to avoid the negative ramifications of such communication and to protect their credibility in the classroom.

Teacher Self-disclosure

Fusani (1994) contends that teacher self-disclosure is a "rich personal source of student-faculty communication" (p. 249). Cayanus (2004) argued for the use of teacher self-disclosure as an effective instructional tool to foster student learning. Research has suggested that teachers who personalize teaching through the use of humor, stories, enthusiasm, and self-disclosure are perceived by their students to be effective in explaining course content (Andersen, Norton, & Nussbaum, 1981; Bryant, Comiskey, Crane, & Zillman, 1980; Bryant, Comiskey, & Zillman, 1979; Civikly, 1986; Norton & Nussbaum, 1981).

Scholars have noted that teachers who self-disclosed using narratives and humor while presenting course content improved the clarity of the information (Downs, Javidi, & Nussbaum, 1988). Sorensen (1989) reported a positive relationship between teacher self-disclosure and student perceptions of affective learning. Researchers also found that teacher self-disclosure leads students to perceive instructors as clear (Wamback & Brothen, 1997) and creates an environment that encourages student participation inside (Goldstein & Benassi, 1994) and outside of the classroom (Fusani, 1994).

McBride and Wahl (2005) contend that self-disclosure is one strategy that teachers can use to create an immediate classroom environment. Since Mehrabian (1971) first conceptualized immediacy as communication behavior that enhances psychological and physical closeness between people, scholars have widely explored its impact on students in the classroom (e.g., Frymier, 1993; Menzel & Carrell, 1999; Rocca & McCroskey, 1999). Gorham (1988) found that teacher verbal behaviors, such as the use of personal examples, addressing students by their first names, and use of humor created a more immediate classroom environment. These immediate behaviors were also found to be positive related to affective and cognitive learning (Christophel, 1990; Christensen & Menzel, 1998; Frymier & Houser, 2000; Gorham, 1988; Sanders & Wiseman, 1990).

Christophel (1990) found teacher immediacy to be positively associated with student motivation and concluded that immediacy first modified state motivation and then affected student learning. If teacher self-disclosure serves as an immediacy behavior that leads students to higher levels of affective learning (i.e., students perceive the instructor and class positively), students should likewise perceive the classroom climate positively. Guided by Christophel's (1990) findings and the theory and research presented here, we advanced the following research hypotheses to explore teacher self-disclosure via Facebook:

H1: Participants who view the Facebook website of a teacher high in self-disclosure will anticipate higher levels of student state motivation than participants who view the Facebook website of a teacher low in self-disclosure.

H2: Participants who view the Facebook website of a teacher high in self-disclosure will anticipate higher levels of affective learning than participants who view the Facebook website of a teacher low in self-disclosure.

> H3:   Participants who view the Facebook website of a teacher high in self-disclosure will anticipate a more positive classroom climate than participants who view the Facebook website of a teacher low in self-disclosure.

Finally, we were interested in how participants perceived the appropriateness of a teacher's use of Facebook and if their perceptions varied according to the amount of self-disclosure on the Facebook website. To explore this issue, we posed the following research question:

> RQ: How appropriate do participants perceive teachers' use of Facebook?

Method

Participants

The participants were 133 undergraduate students (125 first-year students, 5 sophomores, 3 juniors) enrolled in sections of the basic communication course at a large Midwestern university. The participants represented various academic disciplines, as the course is required of all students at the university. The sample consisted of 39 males and 94 females, with an average age of 18.76 years (ranging from 18 to 23 years). The racial/ethnic distribution of the sample consisted of 44.4% Caucasians, 3.1% African Americans, 2.3% Hispanics, and 1.2% Asian Pacific Islanders.

Manipulation

Teacher self-disclosure on Facebook was manipulated in photographs, biographical information, and posts on "The Wall" across three experimental groups (high, medium, and low self-disclosures). While most of our manipulation centered on the amount of self-disclosure, we also considered the relevance and valence of the messages (Cayanus & Martin, 2002). Specifically, we included positive and negative quotes from the teacher and messages (unrelated to teaching) from friends on "The Wall." We describe our manipulations in more detail here. The teacher on the Facebook website was a female graduate teaching assistant who taught sections of the basic communication course (participants were not enrolled in her classes). She voluntarily provided all photographs for the Facebook websites. The photographs in the high self-disclosure page featured a graduate teaching assistant in various social situations. She was seen with friends and family in public locations. Photographs in the medium disclosure condition were limited to the graduate teaching assistant with family at her home. The low self-disclosure page featured only a face-shot of the graduate teaching assistant. For the high self-disclosure condition, communication graduate teaching assistants were asked to post fictitious comments on the "The Wall" that highlighted social gatherings (e.g., dancing, weekend get-togethers) the confederate attended. In order to provide a large amount of self-disclosure in the high condition, no comments were made in either the medium or low

self-disclosure webpages. On the high self-disclosure page, the confederate offered personal information about favorite books, movie quotes, and relationship status. She also indicated that she was a member of several campus groups such as "Cubs Fans" and "Will Farrell Lovers." In the medium self-disclosure page, the confederate only disclosed favorite movies, books, and quotes. In the low self-disclosure condition, she only disclosed information about her position at the university.

Procedures

Participants were recruited in sections of the basic communication course. The instructors of record offered extra credit for participation in the study. Participants were instructed to come to a campus computer lab during set times on weekday evenings. Upon entering, they were randomly assigned to one of the three experimental conditions. Each participant sat at a computer station and was instructed to log into their Facebook account (all participants had Facebook accounts). After reading an informed consent passage, the participants were then told that they would be viewing a Facebook site of an instructor at the university. The researchers provided each participant with the pseudonym of an instructor and asked each participant to locate the teacher's Facebook website. The researchers then instructed each participant to browse the Facebook site and develop an impression of what it would be like to be a student in a class with the teacher. Participants were then instructed to complete the research questionnaire.

Measurement

Motivation. Student motivation was operationalized using Christophel's (1990) measure of student motivation. This measure is composed of 16 bipolar items with seven response options, with higher numbers indicating greater motivation. Sample items include: motivated/unmotivated, interested/uninterested; involved/uninvolved, not stimulated/stimulated, inspired/uninspired, unchallenged/challenged, excited/not excited. Alpha reliability was estimated at .91 ($M = 77.05$, $SD = 13.67$).

Affective learning. Affective learning was operationalized using two dimensions of McCroskey's (1994) measure of affective learning. Participants were asked to complete two 7-point, 4-item bipolar scales reflecting overall thoughts on the course instructor and the likelihood of taking future courses with the instructor, with higher numbers indicating a higher level of affective learning. Coefficient alphas for the two affective learning subscales were: attitude about instructor, .86 ($M = 21.53$, $SD = 4.06$); likelihood of enrolling in future courses with the teacher, .94 ($M = 21.01$, $SD = 5.73$). The overall coefficient alpha was .93 ($M = 42.53$, $SD = 9.02$).

Classroom climate. Classroom climate was operationalized using a scale adapted from Gokcora (1989). Unlike other classroom climate measures that assess how classmate communication affects climate (Dwyer, Bingham, Carlson, Prisbell, Cruz, & Fus,

2004), or how a teacher's oral presentation style affects classroom climate (Hays, 1970), Gokcora's (1989) condensed scale is designed to assess better student perceptions of teacher behavior via computer-mediated communication. In other words, it offers an abbreviated alternative for this initial examination of student perceptions of classroom climate via Facebook. The 10-item bipolar measure assessed student perceptions of the teacher's approachability (uncomfortable vs. comfortable), approach to teaching (lecture vs. discussion), sense of humor (serious vs. humorous), control of the classroom (loose vs. tight), willingness to provide encouragement (encouraged vs. discouraged), class atmosphere (relaxed vs. tense), approach to discussion (judgmental vs. open-minded), individual student treatment (unequal vs. equal), empathy toward students' problems (indifferent vs. sympathetic), and evaluation of the instructor's teaching method (exciting vs. dull), with higher numbers indicating a more positive classroom climate. Alpha reliability was estimated at .75 ($M = 32.96$, $SD = 4.00$).

Manipulation check. To determine the effectiveness of the independent variable manipulation, participants responded to two items on the research questionnaire: "The instructor described on the Facebook website provided photographs" (high: $M = 4.60$, $SD = .81$; medium: $M = 3.39$, $SD = 1.28$; low: $M = 2.73$, $SD = 1.40$); and "The instructor described on the Facebook website reveals personal information about her personal life" (high: $M = 4.51$, $SD = .51$; medium: $M = 3.75$, $SD = .81$; low: $M = 1.77$, $SD = .99$). Participants responded on a 5-point Likert scale with items ranging from *strongly disagree* to *strongly agree*.

Appropriateness of Facebook for a teacher. Participants also responded to the following question: "How appropriate do you perceive the use of Facebook for a teacher?" Participants responded on a 5-point Likert scale with items ranging from *very inappropriate* to *very appropriate*.

Supplementary qualitative data. Participants responded to three open-ended questions that supported quantitative data and allowed the researchers to gauge more fully participants' perceptions of teacher self-disclosure on Facebook (Denzin, 1989). The following questions were asked and analyzed: "What perceptions did you form of this teacher based upon the information you viewed on the Facebook website?," "Have you ever accessed a Facebook or MySpace website of one of your teachers? If so, what expectations or opinions did you have of that teacher?," and "What suggestions do you have for a teacher who uses Facebook, MySpace, or another weblog service?"

Results

Manipulation Check

A one-way ANOVA performed on the manipulation check items revealed a statistically significant difference between the three groups on the photograph item

$(F(2, 130) = 28.43, p = .000, \eta^2 = .27)$ and personal information item $(F(2, 130) = 141.79, p = .004, \eta^2 = .63)$. Participants who viewed the teacher's Facebook site with high self-disclosure reported higher mean scores than participants who viewed the teacher's Facebook page containing low self-disclosure. The findings reveal that the manipulation of teacher self-disclosure via Facebook was successful. Table 1 provides the cell means and standard deviations.

Primary Quantitative Analysis

H1 predicted that participants who viewed the Facebook of a teacher high in self-disclosure would anticipate higher levels of motivation than participants who viewed the Facebook website of a teacher low in self-disclosure. This hypothesis was supported. A one-way ANOVA revealed a significant difference between the high self-disclosure and low self-disclosure conditions, $F(2, 127) = 8.05$, $p = .001$, $\eta^2 = .11$. Participants in the high self-disclosure condition ($M = 81.09$, $SD = 12.12$) reported significantly higher levels of anticipated motivation than participants in the low self-disclosure group ($M = 70.62$, $SD = 11.88$). Table 2 provides the cell means and standard deviations.

H2 stated that participants who viewed the Facebook of a teacher high in self-disclosure would anticipate higher levels of affective learning than participants who viewed the Facebook website of a teacher low in self-disclosure. This hypothesis was supported. A one-way ANOVA revealed a significant difference between high self-disclosure and low self-disclosure conditions and the medium self-disclosure and low self-disclosure groups, $F(2, 130) = 6.35$, $p = .004$, $\eta^2 = .07$. Participants in the high self-disclosure condition ($M = 45.09$, $SD = 6.70$) reported higher levels of anticipated affective learning than participants in the low self-disclosure condition ($M = 38.82$, $SD = 8.54$) and those in the medium self-disclosure condition ($M = 43.64$, $SD = 10.41$) reported higher affective learning scores than those in the low self-disclosure condition ($M = 38.82$, $SD = 8.54$). Table 3 provides the cell means and standard deviations for each dimension of affective learning.

Table 1 Descriptive Statistics for Manipulation Check by Experimental Condition

	High self-disclosure	Medium self-disclosure	Low self-disclosure
Instructor provided photographs	$M = 4.60_a$ $SD = .81$ $n = 45$	$M = 3.39_a$ $SD = 1.28$ $n = 44$	$M = 2.73_a$ $SD = 1.40$ $n = 44$
Instructor reveals personal information	$M = 4.51_b$ $SD = .51$ $n = 45$	$M = 3.75_b$ $SD = .81$ $n = 44$	$M = 1.77_b$ $SD = .99$ $n = 55$

Note: Means with a common subscript are significantly different at the .05 level.

Table 2 Descriptive Statistics for Dependent Variables by Experimental Condition

	High self-disclosure	Medium self-disclosure	Low self-disclosure
Motivation	$M = 81.09_a$ $SD = 12.12$ $n = 43$	$M = 79.36$ $SD = 14.70$ $n = 44$	$M = 70.62_a$ $SD = 11.88$ $n = 43$
Affective learning	$M = 45.09_b$ $SD = 6.70$ $n = 45$	$M = 43.64_c$ $SD = 10.41$ $n = 44$	$M = 38.82_{bc}$ $SD = 8.54$ $n = 44$
Classroom climate	$M = 34.36_d$ $SD = 3.31$ $n = 45$	$M = 33.70_e$ $SD = 3.56$ $n = 44$	$M = 30.74_{de}$ $SD = 4.22$ $n = 43$

Note: Means with a common subscript are significantly different at the .05 level.

H3 predicted that participants who viewed the Facebook of a teacher high in self-disclosure would perceive the classroom climate more positively than participants who viewed the Facebook website of a teacher low in self-disclosure. This hypothesis was supported. A one-way ANOVA revealed a significant difference between high self-disclosure and low self-disclosure conditions and the medium self-disclosure and low self-disclosure groups, $F(2, 129) = 11.74$, $p = .000$, $\eta^2 = .13$. Participants in the high self-disclosure condition ($M = 34.36$, $SD = 3.31$) reported higher anticipated classroom climate scores than participants in the low self-disclosure condition ($M = 30.74$, $SD = 4.22$) and those in the medium self-disclosure condition ($M = 33.70$, $SD = 3.56$) reported higher anticipated classroom climate scores than those in the low self-disclosure condition ($M = 30.74$, $SD = 4.22$).

The research question asked how appropriate participants would perceive a teacher's use of Facebook. Simple frequency distributions revealed that a majority of the participants (33%) reported the teacher use of Facebook was *somewhat inappropriate* and 35% reported *somewhat appropriate*. In addition, 4% agreed that teacher use of Facebook was *very inappropriate* and 6% reported *very appropriate*, while 22% were undecided. Frequency distributions by each experimental condition revealed results similar to the overall distribution of scores on this item. In other

Table 3 Descriptive Statistics for Affective Learning Subscales by Experimental Condition

	High self-disclosure	Medium self-disclosure	Low self-disclosure
Instructor subscale	$M = 22.73_a$ $SD = 3.34$ $n = 45$	$M = 22.09_b$ $SD = 4.25$ $n = 44$	$M = 19.73_{ab}$ $SD = 3.99$ $n = 44$
Enroll in future courses with instructor subscale	$M = 22.36_c$ $SD = 3.98$ $n = 45$	$M = 21.55$ $SD = 7.03$ $n = 44$	$M = 19.09_c$ $SD = 5.40$ $n = 44$

Note: Means with a common subscript are significantly different at the .05 level.

words, the amount of self-disclosure on the Facebook website did not appear to affect how participants perceived the appropriateness of the teacher's use of Facebook.

Supplementary Qualitative Analysis

To analyze the data, we followed Glaser and Strauss's (1968) interpretive, three-step comparison approach to working with the data: discovery, coding, and discounting. During initial analysis, the researchers worked together to identify emergent themes, concepts, and patterns inherent to the data after carefully reading through participants' answers several times. As we read through the answers, we focused on coding and sorting the data into appropriate coding categories through a constant comparison method. Each unit was compared to the other units in the category to ensure the cohesion of the categories. When all units were placed into categories, the researchers conducted a cursory glance at the units placed under the categories and clarified any disagreements through discussion. The final phase of data analysis dealt with inferring meaning from the coded categories and understanding the data in the context of the classroom environment and participants' meaning. For the purpose of this study, positive comments are evaluative remarks that highlight the perceived strengths of the teacher and the benefits of using Facebook; whereas, negative comments highlight the faults or weaknesses of the teacher and her use of Facebook (Russ, Simonds, & Hunt, 2002).

Perceptions of the teacher. As expected from the quantitative findings, participants in the high and medium self-disclosure conditions provided significantly more positive comments of the teacher. For instance, 84% of participants ($n = 38$) who viewed the high self-disclosure Facebook page and 80% of participants ($n = 35$) in the medium self-disclosure condition provided comments that emphasized the teacher's strengths through her use of Facebook. For example: "She seemed like she would relate well to her students and make the classroom atmosphere enjoyable;" "I feel she is genuine and honest;" and "I think that as a teacher I would get along with her because of our common characteristics." Those participants in the high and medium conditions that provided negative comments specifically referenced the teacher's lack of professionalism through her use of Facebook. For example: "The teacher loses her professional image with the Facebook profile;" and "Her website is not professional enough for a college-level professor." In the low self-disclosure, 61% of the participants ($n = 27$) concluded that they were unable to accurately develop a perception of the teacher based upon the small amount of information provided. In addition, the remainder of the participants ($n = 13$) evaluated the teacher's use of Facebook positively, while only 9% of the students ($n = 4$) reacted negatively.

Teacher use of Facebook. In response to this question, 15% of the participants ($n = 20$) in the study reported that they had accessed a teacher's Facebook or MySpace website. A majority of those participants ($n = 13$) also expressed positive opinions of the website and cited the benefits of the virtual social network. For example: "His profile

was simple ... mainly it is helpful for asking questions or read [*sic*] other questions students have asked that I might have wanted to ask about;" and "It made me respect them that they would try to connect with the students." Those who had negative reactions to a teacher's Facebook page remarked: "I think it is weird for a teacher to have one;" and "It should not be a 'common bond' between students and teachers because it opens a whole new line of teacher/student relationships." Eighty-five percent of the participants in this study ($n = 113$) reported that they had not viewed a teacher's Facebook page.

Suggestions for teachers who use Facebook. Three themes emerged from the response to this question: professionalism, desire to learn more about the teacher, and fear of potential negative treatment from teachers. First, participants reported that teachers should consider professionalism when using Facebook. This theme included two subcategories: Facebook as a teaching tool ($n = 11$), and the appropriateness of the material on the teacher's Facebook website ($n = 60$). Some comments within the teaching tool sub-theme included: "This should be used as another way for students to get a hold of you," "Provide class examples and teaching styles," and "I think they should use Facebook as a way of communicating to their students." Participants also referenced the appropriateness of the content teachers provide. Typical responses included: "Don't put anything about politics," "I wouldn't give out too much personal information or stuff you think students might make fun of you about," and "Be cautious of what people say on your wall. Know that your students can see it and be careful what perceptions you are giving." The second theme that emerged from the participants ($n = 41$) responses referred to students' desire to learn more about the instructor: "Be yourself," "We want to know you as a person and how good and fun of a teacher [*sic*] you'll be," and "Give information about your interests so students can get a better feel for your personality." In the final major theme, participants ($n = 22$) were concerned that teachers might allow a student's Facebook website to influence their perceptions: "They should respect their student's privacy," "Don't use it to get gossip or as a way to spy on students," and "Don't lecture the students about things you may come across on their profile."

Discussion

The primary purpose of this study was to explore the impact of teacher self-disclosure on Facebook on student motivation, affective learning, and classroom climate. The findings suggest that high teacher self-disclosure as operationalized in the present study may lead students to higher levels of anticipated motivation and affective learning and lend to a more comfortable classroom climate. The results have important implications for teachers and communication scholars; however, the small effect sizes reported here temper our findings and do not allow us to cast broad generalizations with regard to teacher use of Facebook.

The results of this study contribute to prior research that suggests teacher self-disclosure has a positive influence on important variables such as teacher clarity

(Wamback & Brothen, 1997), student participation (Fusani, 1994; Goldstein & Benassi, 1994), and affective learning (Sorensen, 1989). Guided by the basic tenets of Petronio's (2002) communication privacy management theory, teachers can present themselves through Facebook as individuals who function outside of the classroom in relaxed, social situations unlike the traditional classroom environment. The present study suggests that when a teacher self-discloses certain information, such as personal pictures, messages from friends and family, and opinions on certain topics, students may perceive similarities between themselves and the instructor. This finding has implications for teachers who frequently work with students who are apprehensive about the prospect of communicating with their instructors. Perhaps, those students who access their teacher's Facebook page may feel more comfortable communicating in the classroom and will approach the teacher with course questions and concerns, which may have a positive influence on important learning outcomes. This invites a rich area of future research in terms of the relationship between mediated self-disclosure and other important student perceptions such as immediacy and homophily.

The qualitative data supports the quantitative findings in that a majority of the participants in each condition perceived the teacher's use of Facebook positively. While our findings reveal a positive association between teacher self-disclosure and important student outcomes, teachers should be consistent with their self-disclosure on Facebook and their teaching style in the classroom. In other words, teachers who exhibit a relaxed personality on Facebook with informal photographs and entertaining messages, but show themselves to be strict in the classroom, may create violated student expectations that may result in negative effects on students. In their open-ended responses, students encouraged teachers to use Facebook so that they could have the opportunity to become acquainted before meeting in the classroom. However, students recommended that teachers "be themselves" on Facebook so they can "get a better feel for their personality." Future research might address the relationship between the teacher's self-disclosure on Facebook and their teaching style in the classroom to examine if inconsistencies have a negative effect on students.

Certain forms of face-to-face self-disclosure can have disastrous effects on teacher credibility; however, the nature of computer-mediated communication allows teachers to determine how they appear on Facebook. In other words, teachers can strategically reveal pictures, quotes, and personal information that present them as competent and trustworthy instructors who have the students' best interests in mind. Scholars should explore how certain forms of mediated self-disclosure, such as photographs, personal beliefs, and relationship status, affects student perceptions of teacher credibility. Future research must also explore if a curvilinear relationship exists in terms of teacher self-disclosure on Facebook. In other words, can teacher self-disclosure reach an exceedingly high level and result in negative student perceptions? Research here would address students' reactions to the amount of teacher self-disclosure and how it affects students (Cayanus & Martin, 2004). In addition, scholars should examine how students' perceptions differ if teachers self-disclose on their university-housed personal websites or Facebook websites.

Teachers may consider the use of Facebook as an important tool to foster the student-teacher relationship; however, they should proceed with caution. Our qualitative data reveals that students were highly concerned with how the teacher would be perceived as a professional. In addition, students reported that teachers should self-disclose appropriate information. Scholars should explore forms of self-disclosure that students may deem appropriate or inappropriate via this virtual social network. As such, the nature of Facebook presents a unique set of criteria for teacher self-disclosure. Future research might explore if certain forms of self-disclosure are more appropriate for Facebook as opposed to the traditional classroom.

This study is not without limitations. First, this study explored participants' reactions to a female teacher's use of Facebook. Scholars must also examine how the sex of the teacher affects student perceptions and learning outcomes. This will allow scholars to draw upon literature that explores communicative differences among males and females who may take a more masculine and/or feminine approach to communication (Beck, 1988; Fishman, 1978; Johnson, 1996; Lewis & McCarthy, 1988; Saurer & Eisler, 1990). In addition, future research should explore the age and status of the teacher who uses Facebook. In this study, the confederate was a young, female graduate teaching assistant. Scholars might examine if students' perceptions differ if the teacher is a graduate teaching assistant or a tenured professor.

Our use of an unpublished classroom climate scale is an important limitation to the study. Unlike other classroom climate measures that offer comprehensive assessments (more specific to classmate and teacher communication) of the construct (Dwyer et al., 2004; Hays, 1970), Gokcora's (1989) measure is a general, yet abbreviated, scale more appropriate for exploring teacher use of Facebook as an underrepresented area of communication education scholarship. Future research with this condensed scale may offer scholars a reliable and valid instrument to explore the effects of teacher behaviors on an important classroom communication construct.

Facebook was created as a form of communication among students (Lashinsky, 2005); however, if teachers invade this student-based territory, their participation may have negative effects on students because of the connotations already associated with Facebook (e.g., Facebook contains defamatory student websites). A teacher's participation may be more acceptable in other virtual social networks such as Friendster and MySpace, which allow "outsiders" to view disclosed information on a website that is not restricted to members of an academic community. Therefore, our findings may not be generalized to other services such as Friendster and MySpace because of the nature of the Facebook network. However, Meyrowitz (1985) argues that certain technologies can affect how people behave in different interactions. Future research might explore the socially accepted standards and rules for each network and how those criteria guide participation in the virtual network (Meyrowitz, 1985).

Self-disclosure is one approach that teachers may take to develop relationships with their students. However, as communication technology develops at an increasing

rate, it is important for teachers to recognize how certain technologies, even those used largely by students, can positively affect student-teacher relationships. Facebook is a contemporary technological tool that can offer teachers and students a unique method to nurture the student-teacher relationship, which can ultimately create a positive learning experience for both parties.

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