INTRODUCTION
Learning is a social process (Harasim, 2002; Swan & Shea, 2005; Tu, 2000). Discourse plays a key role in the social process of learning (Harasim, 2002). Therefore, it is extremely important that we understand how students and teachers socially interact in online courses where asynchronous computer-mediated communication (CMC) is the major form of discourse. Theories of social presence help explain how students and teachers interact and learn online.

BACKGROUND
Short, Williams, and Christie (1976) are credited with developing the initial theory of social presence. Short et al. developed their theory of social presence to explain the effects a communication medium can have on the way people communicate. Working from previous research in psychology and communication (i.e., Argyle and Dean’s concept of intimacy and Wiener and Mehrabian’s concept of immediacy), Short et al. defined social presence as the degree of salience (i.e., quality or state of being there) between two communicators using a communication medium. They conceptualized social presence as a critical attribute of a communication medium that can determine the way people interact and communicate. Further, they posited that people perceive some communication media as having a higher degree of social presence (e.g., video) than other communication media (e.g., audio).

In the late 1980s and early 1990s, as the popularity of CMC grew, communication researchers began to apply the theory of social presence developed by Short et al. to CMC. Many of these early researchers came to the conclusion that CMC was antisocial and impersonal because social context cues were filtered out (see Walther, 1992).

In the mid 1990s, researchers with experience using CMC for educational purposes began to question whether the attributes of a communication medium determined its social presence (Garrison, Anderson, & Archer, 2000; Gunawardena, 1995; Gunawardena & Zittle, 1997; Swan, 2003b; Walther, 1996). They argued that a user’s personal perceptions of presence mattered more than the medium’s capabilities. They also illustrated that contrary to previous research, CMC can be very social and personal (Gunawardena, 1995; Gunawardena & Zittle, 1997) and even hyperpersonal (Walther, 1996).

MAIN FOCUS: SOCIAL PRESENCE

Definitions of Social Presence
There is not a clear, agreed upon, definition of social presence (Rettie, 2003; Tu, 2002). Instead, researchers continue to redefine it (Picciano, 2002). For instance, Gunawardena (1995) defined social presence as the degree to which people are perceived as “real” in CMC. Garrison et al. (2000), on the other hand, defined social presence as the ability of students “to project themselves socially and emotionally, as ‘real’ people” (p. 94). Tu and McIsaac (2002) defined social presence as “the degree of feeling, perception, and reaction of being connected by CMC” to another person (p. 140). Finally, Picciano (2002) defined social presence as student’s perceptions of being in and belonging in an online course. Nearly everyone who writes about social presence continues to define it just a little differently; therefore making it very difficult for both researchers and practitioners to come to any firm conclusions about the nature of social presence.

Measuring Social Presence
Just as social presence is difficult to define, it is even harder to measure. There is little agreement on how to measure social presence (Hughes, Ventura, & Dando, 2007; Lin, 2004; Stein & Wanstreet, 2003). In fact, very few researchers have operationalized social presence into observable and measurable parts. The surveys and
coding schemes developed by Gunawardena (1995; Gunawardena & Zittle, 1997), Rourke et al. (2001), and Tu (2002b) have influenced the majority of research on social presence (e.g., Baskin & Henderson, 2005; Hostetter & Busch, 2006; Hughes, Ventura, & Dando, 2007; Lin, 2004; Lomicka & Lord, 2007; Na Ubon & Kimble, 2004; Richardson & Swan, 2003; So, 2005; So & Brush, 2007; Stacey, 2002; Swan, 2002, 2003a; Swan & Shih, 2005; Wise, Chang, Duffy, & Del Valle, 2004).

Gunawardena (1995; Gunawardena & Zittle, 1997) and Tu (2002) created surveys to measure social presence based on past literature in the field. Whereas Gunawardena (1995; Gunawardena & Zittle, 1997) and Tu (2002) focused primarily on surveying and interviewing students about their perceptions of CMC and social presence, Rourke et al. (2001) focused on identifying observable behaviors used by students to project themselves as “real” people. More specifically, Rourke et al. identified three categories and twelve indicators of social presence from their previous work, other literature in the field, and experience reading online transcripts (see Anderson, Rourke, Garrison, & Archer, 2001; Garrison, Anderson, & Archer, 2001; Rourke, Anderson, Garrison, & Archer, 2001); the categories and indicators of social presence are listed in Table 1.

Tu and McIsaac (2002) later argued though—as the result of a mixed methods study they conducted—that social presence is more complicated than previously thought. As a result, they identified additional dimensions and variables of social presence (see Table 2).

Table 1. Categories and Indicators of Social Presence

<table>
<thead>
<tr>
<th>Categories</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective</td>
<td>Expression of emotions</td>
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<tr>
<td></td>
<td>Use of humor</td>
</tr>
<tr>
<td></td>
<td>Self-Disclosure</td>
</tr>
<tr>
<td>Interactive</td>
<td>Continuing a thread</td>
</tr>
<tr>
<td></td>
<td>Quoting from other messages</td>
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<tr>
<td></td>
<td>Referring explicitly to other messages</td>
</tr>
<tr>
<td></td>
<td>Asking questions</td>
</tr>
<tr>
<td></td>
<td>Complimenting, expressing appreciation, expressing agreement</td>
</tr>
<tr>
<td>Cohesive</td>
<td>Vocatives</td>
</tr>
<tr>
<td></td>
<td>Addresses or refers to the group using inclusive pronouns</td>
</tr>
<tr>
<td></td>
<td>Phatics / Salutations</td>
</tr>
</tbody>
</table>

Note. Adapted from Rourke et al. (2001).

Because of differences like these, Russo and Benson (2005) argue that there is a need for a multi-method approach and instrument to measure social presence. However, most researchers seem content to use (or adapt) the instruments and coding schemes created by Gunawardena and Zittle (1997), Rourke et al. (2001), or Tu (2002).

Effects of Social Presence

Despite the differences in definitions and methodology, researchers of social presence have come to similar conclusions about the nature of social presence in online learning environments. The following section highlights a few of the main findings.

Researchers have found a relationship between social presence and student satisfaction in online learning environments (Gunawardena, 1995; Gunawardena & Zittle, 1997; Hostetter & Busch, 2006; Richardson & Swan, 2003; Russo & Benson, 2005; Swan & Shih, 2005).

For instance, Richardson and Swan (2003) found that students who were identified as having high social presence online were highly satisfied with their instructor; further, Richardson and Swan found a link between student satisfaction with their instructor and perceived learning. While Russo and Benson (2005), like Richardson and Swan, found a relationship between student satisfaction with learning and instructor presence, they interestingly found a stronger relationship between student satisfaction and the perceived presence.
of other students. Therefore, suggesting that it is just as important for instructors and students to establish and maintain social presence in online learning environments.

Social presence has also been found to influence online interaction. Learner-to-learner interaction is motivating and stimulating for students (Moore & Kearsley, 2005) as well critical in learning (Richardson & Swan, 2003). Social presence is directly related to learner-to-learner interaction (Tu, 2000). That is, students need to interact with their peers to be perceived as being “there” and being “real.” Tu & McIsaac (2002) conducted a mixed methods study in which they found that social presence influences online interaction. However, they also found out that the quantity or frequency of participation online did not necessarily result in high social presence; rather, it is the quality of interactions online that make the difference.

Finally, researchers have investigated the relationship between social presence and student learning. Picciano (2002) found a strong relationship between “students’ perceptions of their interaction … and their perceptions of the quality and quantity of their learning” (p.28). Focusing more on perceived learning, Richardson and Swan (2003) found a relationship between student satisfaction with their instructor and perceived learning. Finally, Russo and Benson (2005) found a statistically significant relationship between student perceptions of their own presence and the points they earned in a class. Research on social presence and online learning, though, is based on an assumption that social presence enhances learning. Therefore, despite these positive results, there is a need for additional research on the relationship between social presence and student learning (Swan & Shea, 2005).

### Establishing and Maintaining Social Presence

Every member of an online learning community is responsible for establishing and maintaining social presence. However, an online instructor has some

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### Table 2. Dimensions and Variables of Social Presence

<table>
<thead>
<tr>
<th>I. Social Context</th>
<th>II. Online Communication</th>
<th>III. Interactivity</th>
<th>IV. Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarity with recipients</td>
<td>Keyboarding and accuracy skills</td>
<td>Timely Response</td>
<td>Formats of CMC</td>
</tr>
<tr>
<td>Assertive / acquiescent</td>
<td>Use of emoticons and paralanguage</td>
<td>Communication Styles</td>
<td>Access and Location</td>
</tr>
<tr>
<td>Informal/formal relationship</td>
<td>Characteristics of real-time discussion</td>
<td>Length of Messages</td>
<td>Patterns of CMC</td>
</tr>
<tr>
<td>Trust relationships</td>
<td>Characteristics of discussion boards</td>
<td></td>
<td>Formal/Informal</td>
</tr>
<tr>
<td>Social relationships (love and information)</td>
<td>Language skills (reading, writing)</td>
<td>Type of tasks (planning, creativity, social tasks)</td>
<td></td>
</tr>
<tr>
<td>Psychological attitude toward technology</td>
<td></td>
<td>Size of Groups</td>
<td></td>
</tr>
<tr>
<td>Access and location</td>
<td></td>
<td>Communication strategies</td>
<td></td>
</tr>
<tr>
<td>User’s characteristics</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

*Note. From Tu and McIsaac (2002).*
additional responsibility to help establish and maintain social presence in a course (Anderson, Rourke, Garrison, & Archer, 2001; Gunawardena, 1995); this added responsibility is often understood as teaching presence.

Garrison, Anderson, and Archer (2000) were the first to coin the term teaching presence as one of the three elements of their community of inquiry framework. They defined teaching presence as “the design, facilitation, and direction of cognitive and social process for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson, Rourke, Garrison, & Archer, 2001, p. 5).

Regardless of whether researchers of social presence fully adopt the community of inquiry framework (Garrison et al.) or the concept of teaching presence, most researchers seem to agree that it is the instructor’s responsibility to create a space for social interaction and an opportunity for a learning community to form (Gunawardena, 1995; Stacey, 2002). Given the important role that both students and instructors play in developing and maintaining social presence, Aragon (2003) identified a number of strategies used to establish and maintain social presence (see Table 3). Aragon (2003) differentiated between course design strategies (e.g., limiting class size), instructor strategies (e.g., providing frequent feedback), and participant strategies (e.g., sharing personal stories). A number of the strategies identified for instructors and participants (i.e., online learners) are the same (e.g., contributing to the discussion boards, using humor, using emoticons). Therefore, instructors can model for student’s effective ways to establish and maintain social presence in online learning environments—which can ultimately increase student satisfaction, learner-to-learner interaction, and possibly even student learning.

**FUTURE TRENDS**

The Internet is a social medium (Baym, Zhang, & Lin, 2004; Walther & Parks, 2002); it can bring people together but at the same time separate them (Morahan-Martin & Schumacher, 2003). Education is a social practice (Lafey, Lin, & Lin, 2006; Shea, Frederickson, Pickett, Pelz, & Swan, 2001); therefore, online learning environments must be able to support the social practice and process of learning (Shea et al., 2001). The construct of social presence, and research on social presence, help explain how the social practice and process of learning takes place online. Therefore, as enrollments in online learning continue to grow each year, the construct of social presence will become even more important. As CMC continues to change and evolve with the development of new ways to communicate online (e.g., Twitter), practitioners will continue to find new ways to adapt how they communicate in order to project themselves as being “real” and to connect emotionally and socially with others.

**CONCLUSION**

Social presence is a complex construct initially developed to explain the effect a communication medium can

### Table 3. Strategies to Establish and Maintain Social Presence

<table>
<thead>
<tr>
<th>Course Design:</th>
<th>Instructors:</th>
<th>Participants:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Develop welcome messages</td>
<td>- Contribute to discussion boards</td>
<td>- Contribute to discussion boards</td>
</tr>
<tr>
<td>- Include student profiles</td>
<td>- Promptly answer e-mail</td>
<td>- Promptly answer e-mail</td>
</tr>
<tr>
<td>- Incorporate audio</td>
<td>- Provide frequent feedback</td>
<td>- Strike up a conversation</td>
</tr>
<tr>
<td>- Limit class size</td>
<td>- Strike up a conversation</td>
<td>- Share personal stories and experiences</td>
</tr>
<tr>
<td>- Structure collaborative learning activities</td>
<td>- Share personal stories and experiences</td>
<td>- Use humor</td>
</tr>
<tr>
<td>- Use emoticons</td>
<td>- Use humor</td>
<td>- Use emoticons</td>
</tr>
<tr>
<td>- Address students by name</td>
<td>- Use appropriate titles</td>
<td>- Use appropriate titles</td>
</tr>
</tbody>
</table>

*Note. Adapted from Aragon (2003)*
have on how people communicate. Over time, though, research on social presence and CMC has shown that personal perceptions of social presence and adaptations people make with how they communicate matter more than the objective qualities of a communication medium. Further, research has shown that learner’s perceptions of social presence are related to their satisfaction with the course, the instructor, and at times their learning.

REFERENCES


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Wise, A., Chang, J., Duffy, T., & Del Valle, R. (2004). The effects of teacher social presence on student sat-

**KEY TERMS**

**Computer-Mediated Communication:** Asynchronous (e.g., email or threaded discussions) or synchronous communication (e.g., chatting) conducted via a computer.

**Immediacy:** Psychological distance between communicators.

**Interaction:** The combined or reciprocal action of two or more people or objects that have an effect on each other; in online learning environments, interaction is often understood as learner to content, learner to instructor (and instructor to learner), learner to learner, and learner to interface interactions.

**Intimacy:** A communication concept that explains how people will adjust their behavior—whether online or face-to-face—to maintain a sense of equilibrium.

**Online Learning Community:** Broadly defined as a group of people with shared interests who come together online to collaboratively learn together.

**Social Presence:** The degree to which a person is perceived as being real and being there in mediated communication.

**Teaching Presence:** The design, facilitation, and direction of cognitive and social process for educational purposes.