The effect of teacher self-disclosure on student motivation and affect toward teacher in online education

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THE EFFECT OF TEACHER SELF-DISCLOSURE ON
STUDENT MOTIVATION AND AFFECT TOWARD TEACHER
IN ONLINE EDUCATION

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DEDICATION

I would like to dedicate this work to Claire Fialkov, Ph.D.
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ABSTRACT

Combined with advancements in technology, prior research investigating the teacher-student relationship has radically changed the way we teach and learn in online education. This study examined the way teacher self-disclosure (TSD) influenced student motivation to enroll in an online course and altered their affect, or feelings, toward the teacher when applied within a purely online learning setting. The experiment took place online and was built within a Boston University’s learning management system (LMS), Blackboard Learn. In the online environment, TSD was controlled to provide high levels of male and female TSD in two treatment groups and a complete absence of TSD in two control groups. Out of the 336 Master of Social Work (MSW) students that responded to the recruitment email, 84 students were placed in one of four online settings led by fictional male and female teachers. Students in the treatment groups were granted access to male or female TSD via a Meet the Professor tab within the online learning environment. This tab provided students with access to content collected from social media websites, such as LinkedIn, Pinterest, YouTube, and Twitter on a single web page. The social media content displayed personal and professional information about these
fictional instructors and were used to create TSD in the sample online course. The study participants were instructed to explore their assigned sample course not including (control) or including (treatment) TSD. Before and after exploring the sample course, participants completed pre- and post-surveys measuring their motivation to engage in the online course materials, their affect toward the teacher (ATT), and their perceptions of TSD within the online learning environment. Hypothesis testing using ANCOVA, correlation, t-test, and Chi-squared procedures revealed no statistical significance. Findings include recommendations for methodological requirement need to explore the complexities of the teacher-student relationship within a purely online learning environment.
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LIST OF ABBREVIATIONS

ATT................................................................................................................. Affect Toward Teacher
CMC.............................................................................................................. Computer-Mediated Communication
F2F....................................................................................................................... Face-to-Face
LMS..................................................................................................................... Learning Management System
MSW..................................................................................................................... Master of Social Work
TSD...................................................................................................................... Teacher Self-Disclosure
GLOSSARY

Affect Toward Teacher: The forming of an appreciation or interest toward the teacher (McCroskey, 1994).

State Motivation: An attitude toward a specific class (Christophel, 1990).

Teacher Self-Disclosure: Any message about the self that a teacher communicates to student (Cayanus, 2002).
CHAPTER ONE: INTRODUCTION

Most of us can recall a special teacher — someone who not only engaged us in learning but also inspired us, who made us feel good about learning and motivated us to excel. Parts of what we may remember about these special teachers are their personal stories, smiles, senses of humor, and even their unique mannerisms or dress. When students like and can relate to a teacher, learners engage more deeply in their learning. However, with the dramatic increase in overall “screen time” in education because the introduction of computers in the 1980s (Saettler, 1990; Rideout, Foehr, & Roberts, 2010), many wonder how these personal connections can survive. When learning becomes an exercise in logging into websites and viewing technology-based presentations, the teacher as a personal and affectively motivating influence is easily diminished. One of the most prominent areas where this concern arises is in online education.

The growth of online education in the 21st century has been nothing short of remarkable. Researchers Allen and Seaman of the Babson Survey Research Group (BSRG) collected data on the numbers of undergraduate students taking online courses from 2002 to 2013. Their data showed that in the decade from 2003 to 2013, the number of students taking at least one online course rose from 1.97 million in 2003 to 7.13 million in 2013, or an increase of 261.93%. Approximately 11% of all undergraduate higher education students took at least one online course in 2002. Comparatively, the percentage of all undergraduates taking an online course in 2013 was at an all-time high, measuring 33.5% (Allen & Seaman, 2014). The growth of online education was marked by Allen and Seaman’s 2002 online learning data collection, revealing that less than one-
half of all higher education institutions reported online education was critical to their long-term strategy. In 2013, 66% of the schools reported online learning was critical to their success (Allen & Seaman, 2014). However in their 2015 report, the data they collected showed a decrease in the expansion of online education within private for-profit, private non-profit and public colleges and universities as well as some other problems.

In 2015, three items from Allen and Seaman’s report diversify the picture of growth in online education. First, the growth of online education had leveled off. The average yearly growth rate was 18.55% from 2003 to 2010, 6.37% from 2011 to 2013, and only 3.7% for 2013. Second, there is a persistent finding among faculty who report they do not accept the “value and legitimacy of online education.” From 2002 to 2014, the average percentage of faculty who accepted this idea was approximately 30%, while the percentage of teachers that did not accept this idea increased, rising from 7.4% in 2002 to 13.8% in 2014. Third, and perhaps most pertinent to this dissertation research, the chief academic officers who responded to the BSRG survey showed a growing concern that it is more difficult to retain students in online courses than in face-to-face (f2f) courses. The number of respondents concerned about online retention rose from 27.2% in 2004 to 44.6% in 2014 (Allen & Seaman, 2015), although the authors admit that the numbers do not provide information about why retention is a growing concern. They also do not comment on the disciplines included in their research. Distance education providers typically explain that students drop out due to obligations, such as work, family, or other non-academic responsibilities. It is a premise of this research that
there is another possible explanation: the lack of personal connections between instructors and students in online education. This is the domain tested in this study. Can instances of building human bonds in education, such as teachers’ smiles and personal stories, be adapted to inspire online learners? Building human bonds in online education can take many different forms, raising the questions regarding which types of personal connections have the best effect on learning outcomes in online education. Allen and Seaman’s findings support the need for continued research in online learning and, more specifically, investigations into the relationship between the teacher and student in this environment.

In online education, students often cannot see their teachers’ facial expressions and personal mannerisms, hear their personal anecdotes, or experience their sense of humor. Moore and Kearsley (1996; 2005; 2011) state that the relationship between teacher and student can easily become impersonal and isolating for students unless faculty and instructional designers consciously make an effort to humanize the learning experience. Given the centrality and importance of relationship building in learning, it is important to investigate how teachers form beneficial personal connections with students in an online learning environment and convey their personal style, personality, and concern for students. From this perspective, online instructors and instructional designers need a clearer understanding of how communicating humor, warmth, and appropriate details of personal lives in the online medium can improve students’ engagement and motivation to learn. To clarify this perspective, it is important to introduce terms that describe how personal connections between instructors and students have affected
education and how those connections are defined.

**Teacher Immediacy to Self-Disclosure**

The domain of instructor and student interaction that is personal and non-academic but that builds academic performance began as an area of research known as teacher immediacy (Mehrabian, 1971). Teacher immediacy was adapted from research in social psychology to mean that the teacher is immediately, or presently, “available” to the students (Andersen, Andersen, & Jensen, 1979). Teacher immediacy is defined as the instructor behaviors that bring the teacher and the students closer together. In common terms, teacher immediacy is a learner’s feeling of connection to or relating to the teacher and preference toward him or her. Teacher verbal immediacy behaviors can include calling the students by their first names, infusing humor into the discussions, and repeating back what students say. Teacher nonverbal immediacy behaviors can include smiling, hand gestures, direct eye contact, and nodding their head when a student is speaking (Andersen et al., 1979). These verbal and nonverbal behaviors build a connection between the teacher and student. All of these descriptions of developing personal relations labeled as “immediacy” in education came from studies in f2f classrooms. In addition to these findings, the use of technology for computer-mediated communication (CMC) in education has also been investigated over the past three decades.

Computer-mediated communication emerged as an area of educational research in the 1980s before the present environment of highly visual, web-based communication. CMC focused mainly on people using computers for text-based communication over the
Internet and started before the invention and proliferation of the more visually oriented World Wide Web (WWW) in the 1990s. Research has demonstrated that through CMC, teachers and students began utilizing self-disclosing activities and question-asking behaviors to connect and build relationships (Tidwell & Walther, 2002; An & Frick, 2006). These researchers found that students used “direct and intimate” methods of interpersonal communication to reduce social anxiety and collect information through CMC.

Student behaviors in f2f interactions used conversational behaviors, such as impersonal statements of fact, statements about third parties, exclamations, imperatives, greetings, summary statements, and other fillers that were not direct questions to communicate with their peers or teacher. In contrast, CMC students used direct question-asking behaviors and messages that revealed personal information, providing more details about themselves to engage their peers and to get clarification from teachers on tasks. Tidwell and Walther also found that when instruction and communication was delivered through technology, people “alter or adapt their communication behaviors, methods of forming acquaintances, processes of forming attributions, and ways of relating to one another” (Tidwell & Walther, 2002, p. 338). These findings describe an evolution of interpersonal communication in education from f2f interactions of the classroom to those found in CMC. They show the emergence of revealing information about oneself in CMC, a trait not common in f2f classrooms, as a way to connect with others. In this discussion, it must be remembered that CMC emerged before Facebook and other web-based media that afforded visuals. CMC was initially a text-based form
and, as such, supported self-revelation, or self-disclosure, as a method of online attraction for building relationships online (Mantovani, 2002). Over time, revealing personal information online became labeled as “self-disclosure,” which captures a key difference from the earlier work on immediacy in f2f classrooms. Self-disclosure emerged in text-based communication but continued as a useful descriptor in the more visually oriented, web-based environment that was the norm for online education at the time of this dissertation.

As online education and social media has proliferated in the 1990s and early 21st century, use of the term “self-disclosure” stabilized as a way to describe how people constructed their personal information online to present themselves in their desired fashion. Self-disclosure was a more accurate label because many of the behaviors described in immediacy, such as smiling, hand gestures, and direct eye contact, do not readily migrate to the online environment. In the first decade of the 21st century, the concept of self-disclosure in online education evolved along with the capabilities for identity construction prevalent in social media. On Facebook, for example, university students spend many hours creating and burnishing their online identity with curated pictures and text. While self-disclosure has some of the same features of personal connection as immediacy, it has come to mean more of a constructed form rather than a spontaneous form. The constructed form of self-disclosure was found to have an impact on learning, just as immediacy did in f2f classrooms. For example, Cayanus (2004) found that f2f teacher self-disclosure (TSD) in the form of personal narratives and humor tended to improve clarity in understanding of course content and motivated students to
learn.

This brief history explains the transition from teacher immediacy to self-disclosure in online communication. This history can also explain why the adoption of “self-disclosure” has become the operative term for the present research into how personal connections between teachers and students affected their attitude toward their teacher and their motivation to excel. Furthermore, these findings illustrate the importance of self-disclosure in developing teacher-student relationships in online education. They also contributed to the formation of this dissertation, which investigated how personal connections may influence students’ affective perception of their instructor and motivation in a purely online environment.

Problem Statement

Researchers studying effective teaching practices have shown that teacher immediacy and self-disclosure can positively impact teacher-student relationships, as well as enhance student learning. As a result of the growth of online education a better understanding of how instructors can become more effective teachers online has become critically important. Adapting effective f2f instructional strategies and building on research of how learners developed relationships in web-enhanced environments offers promise for integrating the resulting methods into purely online learning environments and, consequently, yields the potential for increasing instructor effectiveness in online teaching. One of the methods for improving purely online learning experiences and positively impacting student learning would be to apply the research findings in self-disclosure and CMC. An example of this application would be the disclosure of personal
information by instructors. Appropriately applied, these activities are likely to enhance the relationship between the teacher and the student. The formation of better teacher-student relations in f2f classroom settings has been linked to positive outcomes in student learning. Many studies have positively linked TSD to student motivation to learn, as well as to students’ perception of affect toward the teacher (Cayanus, 2002, 2005; Cayanus & Martin, 2004; Mazer, Murphy, & Simonds, 2007; Aubry, 2009). The majority of previous research in post-secondary education has focused on TSD and the creation of teacher-student relationships within the f2f classroom. Despite this significant research, few studies have been specifically designed to increase our understanding of how students learn and interact affectively with teachers in a purely online environment. This dissertation study furthers the research on various ways that teachers and students interact in the online learning environment and their effect on student motivation to learn.

**Historical and Theoretical Frameworks**

To set this dissertation research in the over-arching context of education, this section presents the historical contexts and theoretical models for the current study. Two examples of the importance of developing teacher-student relationships in the history of education is followed by an exploration of these relationships within the context of technology and learning in the online classroom. Additionally, the theoretical support for understanding methods of building relationships in the online learning environment is explored through the model of instructional communication theory.
Teacher-Student Relationship in Learning

Good teachers have been establishing productive relationships with their students throughout the history of education. For example, Plato (1968) uses Socrates’ stories and parables to teach learners. In the Meno, Socrates questions his students. Socrates creates the perfect question, and in doing so, his learners "discover" that they possessed the answers to the questions. Plato recounts Socrates as a teacher who engages the students in a dialogue. Through this dialogue and relationship with his students, Socrates helps students build their beliefs, opinions, and perceptions of the world around them. For Socrates, the acquisition of the information is not what matters; instead, it is the path, or process, of learning that is important.

Similarly, Montessori (1964) discusses teaching relationships in her writings. Students are taught in a prepared environment, where the teacher guides students to investigate the world around them. Her disciples were taught to observe the students in the classroom and then take action to reinforce the activities that were of interest to them. For Montessori, teachers "are the guides of these travelers just entering the great world of human thought. We are the guide on the side, not losing him or herself in vain discourse, but illustrating briefly and concisely the work of art in which the traveler shows him or her self-interests" (Montessori, 1964, p. 238). Montessori thought that students who could be guided to work independently could reach new levels of autonomy and self-motivation. Her theories are particularly relevant to this study because she not only described a particular form of the teacher-student relationship but also because she nurtured the independent learner, which is very much a feature of online education.
Both Socrates and Montessori cultivated relationships that helped students learn and grow. In 2015, as educators move from face-to-face teaching to online teaching, where relationships are mediated through computer-based communications and online technologies, they are confronted with the same problems that Plato and Montessori addressed years ago. Online students can benefit from online instructors who not only can deliver content but also have methods and time for interacting with students and cultivating motivational relationships. For example, in a digital world where nearly every topic can be offered "online" in a self-paced tutorial, we have immediate access to information that is offered as a consumer good, such as Rosetta Stone and dozens of other courses offered through other computer-based training companies. In these online learning “factories,” education is offered through self-contained, pre-constructed learning environment, where the instructor has no online presence, and there is little or no possibility for personalized interactions.

History and research suggests that successful online learning needs to support the principles of active teaching and affective instruction. Given appropriate resources and training, instructors can create online learning environments that go beyond the basic "one-size-fits-all" of consumer-oriented, self-paced online products offered on the Internet. To overcome the challenges pointed out by Allen and Seaman (2015), educators need to go beyond what is currently available to students and create technological environments that are meaningful for both the instructor and the learner, while still meeting the requirements of quality education. A better understanding of online environments and the roles teachers and students take in them will help us to adapt an
online education where the teacher and the learner are at the center of an educational process. By constructing online classes that support the full range of building teacher-student relationships, academic parity between the f2f classroom and the online classroom can be achieved. However, developing teacher-student relationships online that support and encourage learners is a very different process than practicing immediacy behaviors in a f2f classroom. Learning more about how to do this is the problem this dissertation addresses.

*Teaching with Technology*

Historically, integrating technology into the f2f classroom setting has been problematic in a number of ways. One of these is that technology is often integrated without adequate teacher training and time to plan and experiment with how technology can help achieve instructional goals. This can lead to a lack of understanding of which learning activities and processes can be enhanced with the technology. With technological advancements, computers can be integrated into the learning environment to support immediate relationships and enhanced interpersonal relationships, which in turn can allow for more fulfilling online learning experience.

To create greater parity with f2f instruction, online teachers and learners need to have the skills to use online technology effectively. Applying these skills, teachers and learners can use learning management systems, in conjunction with social media and video conferencing, to build online classrooms that support relationship building and knowledge development in a personal context. As applied in f2f classroom teaching, good teaching online should focus on the content being taught and the best way to present
The history of immediacy and self-disclosure suggests that technology-based, online learning may easily become mere information transmission unless it also focuses on the relationship between the instructor and the student. While the proliferation of the Internet has vastly expanded educational opportunities, it is also based on technology and media that lays between the teacher and his or her students, further impacting the teacher-student connection. Intentionally leveraging this technology is pertinent to avoiding the obstacles and hindrances that may be imposed upon building effective online relationships.

It is challenging to design technology-based resources for learning that draw from knowledge about how people learn, how teachers act in the classroom, and how each learning experience fits into the overall curriculum. Instructional designers and teachers can now use technology to build scaffolding to support their educational goals similar to the way a frame for a home must be built before plumbing and electrical work can begin. Setting up technological scaffolding before beginning instruction enables teachers and learners to implement more advanced activities. For example, an instructional designer can work with the teacher to create course materials, such as lecture, assignments, and exams, in an online learning management system for basic information presentation and competency testing. Once this framework is created, the teacher and the designer can work together to use the interactive features of the learning management system, such as online discussions, video conferencing, and email, to engage the learner in the analysis, synthesis, and personalization of course content. Much of these higher-level activities are based on dialogues between and among instructors and students. When technology
functions properly, it can enhance the learning experience and student performance through dialogue (Bransford, Brown, & Cocking, 2000). Once the optimal online classroom structure is created, both teachers and learners must face the complexities of interacting online. Instructional communication theory provides a framework for understanding effective online interaction.

**Instructional Communication Theory**

Applying instructional communication theory to the growing issues of online education can aid in adapting teaching and learning relationships from the face-to-face classroom to those online. Instructional communication theory provides a framework for understanding how teachers and students communicate using technology. This theory focuses on the use of technology in the transmission of content and information, as well as affective communications between people, people and machines, or machines and machines (McCroskey, Valencic, & Richmond, 2004). McCroskey, Valencic, and Richmond (2004), researched this area and described six essential elements of the instructional communication model: 1) the instructional environment, 2) the student, 3) the teacher, 4) the teacher’s verbal and nonverbal behaviors, 5) the student’s perception of the teacher, and 6) the learning outcomes. This dissertation research addresses the challenge of adapting these elements to online education.

Teachers who understand these six elements are more capable of building successful online relationships with students. By applying this theoretical model to studies on self-disclosure, instructors can use technology to make self-disclosing statements online, as they would in face-to-face interactions, to connect with and
motivate students. In instructional communication research, learners and teachers conceptualize education as a process of cultivating knowledge where learning theories are applied and methods are employed to build knowledge (McCroskey, McCroskey, Mottet, & Richmond, 2006). In this model, communication is instrumental in facilitating a learning and teaching process that encompasses the personal connections teachers and students create.

To better understand technology’s influence on teaching and learning, instructional communication theorists have focused on specific aspects of teacher-student communication that occur within the context of CMC and web-enhanced classrooms. Instructional communication theory provides an explanation for how students learn affectively, behaviorally, and cognitively using technology. Researchers have investigated the teacher-student relationship and the specific skills and strategies teachers employ to build connections between themselves and learners. For example, the research focused on the individual traits and characteristics of the teacher, such as verbal and nonverbal behaviors, communication style, humor, clarity, immediacy, and self-disclosure. These individual teaching traits were then linked to other measurable outcomes, such as the students’ evaluation of the instructor’s teaching practices, the management of the classroom, and the students’ self-assessment of both their affective and cognitive knowledge gains. This research also found that specific teaching behaviors supported student motivation (Christophel, 1990). More recently, research in computer-mediated and/or web-enhanced classrooms has focused on the increased role social media plays in instructional communication by focusing on social networking sites (Tidwell &
Walther, 2002; Ellison, Heino, & Gibbs, 2006; Ellison, Steinfield, & Lampe, 2007; Frisby & Martin, 2010). This dissertation research builds on these early studies of social media and integrates them into an approach where they are more intentional in the context of an online learning environment.

While there is a body of research that has been conducted in f2f classrooms, more research is needed to further understand how teacher-student relationships are formed and maintained in the online environment. This is especially true when one considers that many studies have demonstrated a positive relationship between TSD and students' participation in class, motivation, and affective learning. Although current research shows that instructors who make self-disclosure statements using technology can establish relationships with their students to personalize the learning experience, more research is needed on the specific role that self-disclosure plays in this process. Yet, before deciding what information instructors want to share with their students and how it will impact them, instructional communication theory suggests that they need to think about the authenticity of their communications. The teachers need to have an idea of who they are as teachers and how they will use this identity as they create an online persona. Self-disclosure research helps to understand the processes of creating instructor identity in an online educational environment.

Additional research has found that online instructors who wish to develop productive relationships with their students can do so by self-disclosing. For instance, Mazer, Murphy, and Simonds (2007; 2009) linked TSD to student motivation and affective learning. They found that by manipulating TSD with web-enhanced technology,
they were able to positively increase students’ extrinsic motivation and increase students’ positive feelings toward the classroom environment and the teacher. They showed that small amounts of self-disclosure are perceived by their students to be effective in contributing to the explanation of course content in a f2f classroom. Self-disclosure research has found that learning outcomes are linked to teacher-student relationships and that they motivate students to engage in the content as well as the learning environment.

**Study Aims**

The aim of this study is to utilize research conducted in the fields of instructional communication theory, TSD, student motivation, and computer-mediated research to refine understanding of optimal teacher-student relationships online. The current literature does not specifically address the formation and support of teacher-student relationships for entirely online classes in post-secondary education institutions because the majority of the research and data is based on studies conducted in f2f classrooms or web-enhanced f2f classrooms. This study expands the research on TSD into the domain of online learning and identifies ways to enhance the teacher-student online relationship through the use of TSD to further students’ sense of connection with the teacher, and, in turn, increase students’ motivation to learn.

A literature review of relevant research methods and findings is presented in the Chapter 2 Literature Review.
CHAPTER TWO: LITERATURE REVIEW

Developing positive teacher-student relationships can be an essential element in improving learning outcomes for students. Research has shown that teachers who develop positive student relationships that are productive to learning effectively utilize verbal and nonverbal communications in both academic and personal areas, fostering these connections (Andersen et al., 1979; Mehrabian, 1967; 1971; Gorham, 1988; Downs, Javidi, & Nussbaum, 1988; Frymier, 1993; 1994; Christophel & Gorham, 1995; McCroskey & Richmond, 1996; Christensen & Menzel, 1998; Chory & McCroskey, 1999; Ellis, 2000; McCroskey et al., 2004; Chesebro & McCroskey, 2001; Cayanus, 2002; Cayanus & Martin, 2004; 2008; Frisby & Martin, 2010). Applying instructional communication theory to the analysis of teachers’ verbal and nonverbal interpersonal communication behaviors, which engage and motivate students both cognitively and emotionally, can help teachers become aware of communications that encourage the development of positive personal relationships. This can be especially beneficial in online teaching because online communications are generally more structured, intentional, and impersonal when compared to the spontaneous communications that occur in f2f teaching.

As a theory, instructional communication focuses on three areas: pedagogy, educational psychology, and communication in f2f classrooms. Researchers focus on the teacher, the student(s), and the communication styles and patterns used to exchange verbal and nonverbal messages between and among them. Research has shown that teacher behaviors, such as being humorous, speaking about him or herself, and telling
personal stories, influence students’ affect toward the teacher and student motivation to learn in f2f classroom environments. As more teaching and learning occurs online, instructional communication theory can aid in the adaptation of effective f2f teaching methods to purely online education, where the learning environment is highly structured.

**Instructional Communication Theory**

Instructional communication theory integrates research from the disciplines of pedagogy, educational psychology, and communication. Pedagogy focuses on the teacher and the methods that teachers use to instruct. Educational psychology focuses on the learner and the underlying psychological and intellectual processes that explain and predict student learning. Communication focuses on the meaning of messages, how the use of verbal and nonverbal communication stimulates meaning in the minds of others and how meaning is created through the use of verbal and nonverbal messages (Mottet, Richmond, & McCroskey, 2006). To better understand the teaching-learning process as communication, it is useful to identify communication patterns and characteristics, including the contexts in which they appear. Pedagogy describes the overall teaching process and methods for engaging student learning and, as such, is one of the most important contexts in which communication occurs.

Pedagogy emphasizes the systematic study of teaching and teaching methods, focusing on managing students in the classroom, enhancing student motivation, and applying various teaching techniques to engage students in learning the content being studied. Common teaching techniques include lecturing, creating experiential activities, and facilitating group discussions (Shulman, 1986; Freire, 1990; Bransford et al., 2000;
Eisner, 2002; McCroskey et al., 2006). Pedagogical research is primarily directed at teacher behaviors, self-perceptions of teacher efficacy, and the satisfaction in teaching that contributes to learning and in selecting methods that facilitate and encourage student understanding (Schwab, 1973; Csikszentmihalyi & McCormack, 1986; Mottet, Richmond, & McCroskey, 2006). Moreover, master teachers help make knowledge accessible to students by knowing their students’ backgrounds and abilities and using that knowledge to customize the educational experience.

Mottet and Beebe (2006) suggest that productive teacher-student relationships improve teacher self-efficacy and job satisfaction. Teacher self-efficacy is the extent to which the teacher believes he or she has the capacity to affect student performance. They believe or are convinced that they can influence how well students learn, even those who may be difficult to work with or unmotivated. Teacher job satisfaction is a construct that has been studied in relationship to teacher self-efficacy. Mottet and Beebe (2006) define job satisfaction as determined when an individual perceives that his or her job-related needs are being met. Teacher self-efficacy and job satisfaction work together to create a positive learning environment for the teacher and the student.

Educational psychology emphasizes the learner and investigates the underlying psychological and intellectual processes that explain and predict student learning (Krathwohl, Bloom, & Masia, 1964; Anderson, 1995; Krathwohl, 2002). Research in educational psychology focuses on the learner and explores such questions as: 1) what student personality characteristics or traits are most receptive to various approaches to learning; 2) how do students process and use information; 3) how can one address
cognitive, affective, and behavioral learning outcomes; and 4) how student variance, such as gender, ethnicity, religion, socio-economic status, intelligence, prior knowledge, home life, and temperament play a role in learning (McCroskey & Richmond, 1992; McCroskey, 1994; McCroskey, Morreale, & Brooks, 1994; Frymier, 1994). Much of the work in educational psychology is based on Bloom’s *Taxonomy of Educational Objectives*, originally published in 1956 (Mottet et al., 2006). Once learning outcomes are identified, teachers can then begin the instructional process by selecting appropriate pedagogical teaching methods.

Educational psychology has helped explore the relationship between cognitive and affective learning. According to Krathwohl et al., (1964) affective learning, unlike cognitive learning, emphasizes feelings, tone, motion, and/or degree of acceptance or rejection. Often the affective component of learning is overlooked or neglected in education because cognitive and behavioral outcomes are more visible and measurable for administrators, teachers, and parents. Affective learning often occurs more discreetly and slowly than cognitive learning (Andersen, 1979; McCroskey & Richmond, 1992).

Rather than relying exclusively on theories from educational psychology or pedagogy, instructional communication research employs rhetorical and relational communication styles to explain and predict the outcomes of teaching and learning. The rhetorical approach is more teacher-directed, while the relational approach is more collaborative.

In rhetorical communication, teachers use verbal and nonverbal messages with the intention of influencing or persuading students to learn and to be motivated to learn. They
craft messages designed to change or reinforce knowledge, attitudes, beliefs, values, and behaviors. Rhetorical communications are typically linear because they focus on information that flows from the teacher to the student. The model is one where the teacher is the source of knowledge and students are the recipients of information. Teachers help students to learn by using verbal and nonverbal messages, supported by evidence and reasoning that stimulate students’ cognitive and mental abilities (Mottet et al., 2006).

Rhetorical communication uses the traditional pedagogical delivery method of lecture, memorization, and testing to measure learning outcomes. In order to stimulate the selected meaning in the minds of students, teachers may use personal narratives and illustrations relevant to their students’ lives and experiences. Teachers create instructional messages so that they are relevant, clear, interesting, and appropriate. The messages may include personally relevant examples and humor to improve instructional clarity.

In contrast to rhetorical communication and the focus on message content, the relational perspective acknowledges and addresses the receiver’s emotional state. It also is typically more spontaneous and less strategic than the rhetorical perspective. Relational communication style takes place when both teachers and students mutually create and use verbal and nonverbal messages to develop their relationships with each other. The relational perspective draws upon contemporary models of communication, in which meaning is mutually created and shared between individuals. The relational approach examines communication patterns from a transactional or coordination perspective, where two or more people coordinate their communications to generate a shared
perspective (McCroskey & Richmond, 1996).

The hallmark of the relational communication style is an emphasis on both teacher and student feelings and emotions, specifically how the teacher and students perceive and affectively respond to one another (Ellis 2000). In a productive, affective relationship, teachers are motivated to teach, and students are motivated to learn. The relational perspective focuses on both verbal and nonverbal messages. Moreover, teacher and student nonverbal communications have been shown to stimulate the majority of the emotional or social meaning in messages (Mehrabian, 1969; 1971). Teachers who are nonverbally expressive and/or emotionally available in the classroom positively influence students’ partiality toward the teacher (Frymier 1994), which increases students’ motivation to learn (McCroskey & Richmond 1992). In instructional communication, rhetorical and relationship communication styles can follow three conversational patterns: actions, interactions, and transactions.

Action communication patterns focus on the message produced by a teacher, a text, a video, or any source attempting to convey information to the learner. The action model of communication depicts communication as a linear one-way process, where meaning is stimulated in the minds of others using verbal and nonverbal messages (Mottet & Beebe, 2006). This model is applicable to classroom contexts where instruction is teacher-centered. Action communication patterns often take the form of the traditional classroom lecture.

Interactive communications patterns are different than action communication patterns because they include the added concept of feedback (Mottet & Beebe, 2006). In
an interactive mode of communication, the message exchange process is one where the source message has a meaning that is verified, refined, and adapted based on the verbal and nonverbal responses that the sender obtains from the receiver. Applied to the classroom, communication as an interaction occurs when teachers remain receptive to the verbal and nonverbal feedback they receive from their students and then adapt their instructional messages after receiving the feedback (Bloom, 1976).

Lastly, meaning in the transactional communication patterns is co-created, or mutually stimulated, by the teacher and the student, both who send and receive verbal and nonverbal messages simultaneously (Mottet & Beebe, 2006). Communication as a transaction is a non-linear process. Transactional communication is evident when teachers respect student ideas and feelings, and students respect teacher ideas and feelings. Teachers and students openly debate ideas to clarify meanings and influence each other until meaning is shared. Transactional communication patterns not only address student compliance, learning, and motivation but also acknowledge teacher self-efficacy and satisfaction. In this context, all individuals involved in the learning process, not just teachers, have an impact upon learning. Transactional patterns are more inclusive of learners’ feelings and affective responses and occur as teachers change their communication patterns from the unidirectional action mode to a bidirectional mode. In transactional communication patterns, both teacher and student grant each other permission to influence one another.

Together, these three communications patterns function on a continuum where action communications, which are more rhetorical in nature, occur on one end of the
continuum and transactional communications, which are more relational in nature, are on
the other. Teachers and students use communication styles and patterns that are most
comfortable for them but that suggest the question of which styles and patterns are most
appropriate to achieve optimal learning outcomes? Figure 2.1 illustrates the inverse
relationship between rhetorical and relational communication styles in instruction. This
dissertation applied the relational style and transactional communication patterns.

Figure 2.1 Rhetorical and Relational Communication Styles Combined with Action,
Interaction, and Transaction Communication Patterns (Mottet et al., 2006)

To better understand the teaching-learning process as communication, it is useful
to identify fundamental communication characteristics and models that include both
verbal and nonverbal message systems. Each of the three communication patterns
described above is expressed both verbally and nonverbally. Understanding the
characteristics of verbal and nonverbal communication can aid in the diagnoses of any
instructional context and suggest the use of these behaviors in teacher-student
communications to enhance instructional effectiveness.

According to Mottet and Beebe (2006), the first function of communication is
how the message is said, and the second function of communication is the information
contained in the message. Verbal messages in instruction are typically content-rich and relationally lean. Verbal messages tend to be intentionally crafted and communicated, whereas nonverbal messages are more likely to be unintentionally expressed. A certain level of cognition or conscious awareness is required for people to transmit verbal messages, which therefore tend to be intentional. Teachers’ nonverbal messages, however, function to establish the nature of the relationship. They tend to stimulate meaning about the quality of the interaction that is taking place. Nonverbal messages are often expressed outside of one’s awareness, and many teachers fail in their attempts to hide how they feel about their teaching content or their students. In this dissertation, both verbal and nonverbal elements of the teacher communications were conscious and intentional.

Building on the elements of instructional communication, this dissertation applies four of McCroskey et al.’s (2004) elements for developing personal relationships in educational settings. These are: teachers’ gender, students' perceptions of teachers' verbal and nonverbal communication behaviors through self-disclosure, students' perceptions of the teachers' attractiveness, and the instructional outcome of students’ motivation. It also addresses the challenge of adapting these elements to online education. To understand the relational aspects of these four elements in the context of instructional communication, teacher immediacy and self-disclosure need to be further defined.

**Teacher Immediacy and Self-Disclosure**

As previously discussed, teacher immediacy is a set of instructor behaviors used to reduce the social and psychological space between instructor and students. Gorham
(1988) established a specific set of verbal variables describing immediacy-related behaviors. Behaviors that can enhance students’ perception of and connection with the teacher include: asking students for personal examples to encourage students to talk, addressing students by name, asking students to use the teacher’s first name, creating conversation before and after class, providing feedback, calling on students in class to give answers or give their opinion, asking students how they feel, soliciting students’ viewpoints or opinions, and holding discussions about things unrelated to lecture materials.

Frymier (1993) and Christen and Menzel (1998) showed that using present versus past verb tenses and inclusive statements for example: "we" versus “I" and "I want" versus "you should" in interactions with students has increased the teacher-student connection. Additionally, Downs, Javidi, and Nussbaum (1988) revealed that the use of humor, storytelling, and personal narratives were positively related to increased student motivation to learn. Their research also showed evidence that other nonverbal behaviors had a negative effect on student motivation to learn. These nonverbal behaviors included sitting or standing behind a desk or lectern, continually looking at the blackboard or in a book, or maintaining a tense body posture.

Teacher Immediacy

experience in f2f instruction. Furthermore, these researchers have linked positive teacher immediacy to increases in student motivation, cognition, teacher clarity, and positive feelings toward the teacher. For example, Frymier (1993) investigated the impact of teachers' use of immediacy behaviors on student-reported motivation to study by measuring students' state motivation, defined as “external motivation” and trait motivation defined as “internal motivation” to engage in f2f classroom learning. State and trait motivation were studied at three points during a semester. She found that the teacher's immediacy behaviors increased the students’ state motivation to study. She also noted that not all students responded similarly to a teacher with low-immediacy behaviors because students generally started the semester with either low or moderate state motivation and reported having increased levels of motivation later in the semester when exposed to a “highly immediate” teacher. Frymier’s (1993) research supplied evidence that students beginning the semester with high trait motivation maintained high state motivation levels, regardless of their perceived level of immediacy of their teacher. In her study, the state motivations of students with pre-existing heightened levels of trait motivation were less influenced by teacher immediacy behaviors.

Chesebro and McCroskey (2001) measured teacher immediacy and students’ apprehensions about learning, students’ motivation to learn, and their positive or negative feelings for the teacher at the beginning and end of an eight-week semester. Their research showed that student apprehension is negatively related to learning but that teacher immediacy enhances student motivation to learn and positively influences their feelings toward the teacher. Furthermore, teacher clarity increases student motivation to
learn and positively impacts their feelings toward the instructor.

In a later study measuring teacher immediacy and student affect toward teacher and learning outcomes, Christensen and Menzel (1998) found a positive relationship between teacher immediacy and student state motivation. They also showed that teacher immediacy enhanced students’ perceptions of their cognitive affective and behavioral learning outcomes. These learning outcomes were measured by the students’ perceptions of how much they had learned, the actions they were required to complete for the course, and their feelings toward the course content or the instructor. These researchers established that as levels of teacher verbal and nonverbal immediacy increased, so did student state motivation and learning outcomes.

In 2002, Cayanus linked teacher self-disclosure (TSD) and immediacy behaviors to student engagement in the course materials. These teacher behaviors included telling stories that disclosed personal information and sharing their personal beliefs. His research showed that TSD builds teacher immediacy and supports the teacher-student relationship (Cayanus, 2002). Cayanus’ research bridges the research between teacher immediacy and Sorensen’s 1989 research on teacher disclosure.

Teacher Self-Disclosure

Teacher disclosure refers to teacher statements in the classroom about oneself that may or may not be related to subject content but reveal information about the teacher that students are unlikely to learn from other sources (Sorensen, 1989). Additionally, teachers admit to talking about themselves in the classroom, while research supports that this behavior increases their effectiveness with students (Hurt, Scott, & McCroskey, 1978).
Because the teacher disclosure cannot be measured directly by how much a teacher talks about him or her self, it is often measured through student perceptions of teacher disclosure statements. As such, student perceptions of teacher disclosure in the classroom may be a critical variable in determining the relationship between teachers and students.

Sorensen (1989) attempted to provide increased prediction of learning outcomes by examining self-disclosure statements of teachers, their association with affective learning, and student perceptions of their interpersonal relationship with teachers. She found that TSD based on Andersen’s (1979) immediacy behaviors, such as facial expressions, tone of voice, vocal expressions, body movement, eye contact, and physical proximity, encourages students to engage in the classroom environment and creates teacher-student and student-student conversations before and after class. Sorensen (1989) revealed that these behaviors helped to engage students in the learning process.

Investigations into the concept of self-disclosure have detailed some of the elements within it that influence and impact the perceptions by the receiver of this personal information.

Interpersonal Self-Disclosure

Self-disclosure research is founded in social penetration theory, which is based on the premise that interpersonal relationships develop over time and move from relatively shallow, non-intimate connections to deeper and more intimate ones. Initially outlined by psychologists Irwin Altman and Dalmas Taylor in 1973, the theory provides an understanding into the way intimate relationships are formed. The theory consists of two
previously stated dimensions of self-disclosure, breadth and depth, both of which are crucial in developing a fully intimate relationship.

Research on the forms of interpersonal self-disclosure has found that self-disclosure and liking were moderated by a number of variables, including study paradigm, type of disclosure, gender of the discloser, and the breadth (how much) and depth (how intimate) of the disclosure (Jourard, 1959). Gender bias in personal self-disclosure was a factor, in that females tend to disclose more than males (Derlega & Chaikin, 1976). Archer and Burleson (1980) also found that the timing of disclosure and associated perceptions of the person disclosing were influential variables. Lastly, Won and Doornink (1985) studied the reciprocal and curvilinear relationship of intimate self-disclosure statements between individuals. These research findings indicate that self-disclosure, when applied in specific ways, can be used to build and enhance relationships. The first variables to consider are the breadth and depth of the information an individual chooses to disclose.

Self-Disclosure: Breadth and Depth

Breadth in self-disclosure is the amount or range of personal or private information shared. In its simplest form, it is the sharing of one’s daily life, such as occupation and preferences. Depth in self-disclosure is the degree to which private or personal information is revealed. Depth in self-disclosure consists of an individual’s inner experiences and includes painful memories and unusual traits that some might try to hide. These two dimensions are influenced by individuals in the process of self-disclosing aspects of the self to others. For example, Jourard (1958) found that the amount of
personal information that one person is willing to disclose to another depends on the relationship between two individuals. He found that content variety of self-disclosures was how much (breath) information they shared between classmates than between students and instructors. Students hesitated to disclose intimate details (depth) with either classmates or instructors; whatever disclosure they did make was moderated by social desirability. The depth aspect of self-disclosure can signify vulnerability, which may be viewed as undesirable (Jourard, 1958). Additionally, the amount of self-disclosure a person receives influences how they will respond.

*Self-Disclosure: Amount, Reciprocity, and Curvilinear Relationships*

Researchers have found that the amount of information one discloses is curvilinear: too little or too much information will not contribute to a relationship. For example, Won and Doornink (1985) studied three stages of a relationship in opposite gender pairs: the early stage (30 days into relationship), the middle stage (more than 3 months into a relationship but less than a year), and the advanced stage (more than a year, “best friends”).

*They found that “the reciprocity of non-intimate disclosures is at its highest level in the early stage of a relationship, with a steady decline thereafter, and that the reciprocity of intimate disclosures reaches a peak among those headed toward a close relationship and diminishes when the stage of the relationship becomes advanced” (Won & Doornink, 1985, p. 105).*

Reciprocal self-disclosure is minimal at the beginning, rises as the relationship moves forward, creates intimacy over time, and then declines as the intimate relations are more firmly established. Furthermore, in terms of reciprocity in self-disclosure, the most
important factors are the topics initiated by the first speaker (Won & Doornink, 1985).

Won and Doornink’s research supports the curvilinear association between the stage of a relationship and the output of intimate reciprocal self-disclosures. In a curvilinear relationship, two variables are measured. When one variable, such as self-disclosure, increases, the other variable, such as perceived likeableness by the receiver, also increases. However, this relationship occurs only up to a certain point. Won and Doornink found this curvilinear association in self-disclosure: after a certain point, further increases in self-disclosure led to decreases in perceived likeableness and diminishing returns. A graph of this type of curvilinear relationship would look like a horseshoe, or an inverted U. The other type of curvilinear relationship will look U-shaped. In this model, as one variable increases, the other decreases up to a certain point, after which both variables increase together.

Won and Doornink’s (1985) research illustrated the complex relationship between the ways in which personal information is given out and how it is received, pointing to the efficacy of a moderate level of self-disclosure and relative intimacy with diminishing returns for excessive sharing. These factors can strongly impact the way individuals’ select self-disclosure activities and the response yielded.

Christensen and Menzel’s (1998) findings also support a curvilinear relationship between teacher immediacy and student learning. In their study, the curvilinear relationship identified was that too little immediacy had no effect on the teacher-student relationship, and too much immediacy had a negative effect. Their research revealed that there was a peak effectiveness level of immediacy. These researchers showed that
moderate teacher immediacy has the greatest positive effect on the teacher-student relationship.

*Self-Disclosure: Gender and Content*

Researchers of self-disclosure have found that disclosure and liking were moderated by a number of variables, such as gender of the discloser and gender bias in personal self-disclosure. Derlega and Chaikin (1976) studied male and female undergraduate students who interacted with male and female actors, who used expressive and non-expressive behaviors. In this study, the actors were individuals who did or did not discuss personal information, such as a psychological phobia. This research study found that “expressive males and non-expressive females were seen as less adjusted than males who were silent and women who disclosed” (p. 379). In addition, expressive females were perceived as more likable than non-expressive females, whereas expressive and non-expressive males were perceived as similar to each other (Derlega & Chaikin, 1976).

This study indicates that gender biases influence the perceptions of males and females who disclose personal information and that gender affects the way disclosing statements are perceived. The patterns of self-disclosure between individuals are also found in f2f classrooms, as researchers have shown that TSD impacts how and what students self-disclose. Based on this research, both male and female instructors were operationalized in this dissertation study to test for gender differences in the purely online learning environment the study employed.
The act of liking someone can be used to build and shape interpersonal relationships. The link between this idea and self-disclosure is an essential aspect of positive personal connections between teachers and their students. Collins and Miller (1994) defined “liking” as the attraction for and/or toward another. The element of “liking” provides foundation for and shapes the development of interpersonal relationships, which is an essential aspect of positive personal connections between teachers and their students (Collins & Miller, 1994). In a meta-analysis of research on this topic, Collins and Miller (1994) found that if an individual trusts and likes someone, they will be more apt to disclose personal information. These researchers concluded that, “disclosure is viewed as a positive reward and that liking occurs when the recipient believes he or she has been personally singled out for intimate disclosure” (Collins and Miller, 1994, p. 465). Moreover, their results indicated: 1) people who engage in intimate disclosures tend to be liked by the recipients of these disclosures more than people who disclose at lower levels; 2) people disclose more to those whom they initially like; 3) people like others as a result of having disclosed to them; and 4) the impact of a person’s self-disclosure may vary depending on a number of variables, including the “sex of the discloser and recipient” (Collins & Miller, 1994, p. 466). Key elements of TSD studied in this dissertation were based on these and other research outcomes, such as the gender of the instructor and the timing of their self-disclosure.
Teacher Self-Disclosure in Face-to-Face Classrooms: Gender and Timing

Self-disclosure is comprised of everything a person chooses to tell another person about him or herself. The information can be descriptive or evaluative and can include thoughts, feelings, aspirations, goals, failures, successes, fears, and dreams, as well as one's likes and dislikes. In education, self-disclosure plays an influential role in the teacher-student relationship. The gender and timing of the teacher’s disclosing statement was a factor in the students’ perceptions of TSD.

Several studies have investigated TSD and its impact on students. Downs et al. (1988) examined TSD, humor, and the use of narratives in the classroom in a study of 57 college teachers in the United States. The researchers measured TSD by analyzing and coding audio recordings of the teachers in f2f classrooms. They found that clarification of material and increasing the relevance of the material were the most-cited reasons for using humor, self-disclosure, and narratives. In one 50-minute class, the participating teachers averaged five self-disclosure messages, concluding to the researchers that TSD behaviors helped students to collect their ideas, focus their thoughts, and sort out relevant and irrelevant course content. Over the course of the semester, they noticed the teachers’ self-disclosure started high, decreased in the middle, and then increased toward the end. The data additionally suggested that, in comparison to large amounts, students preferred moderate amounts of self-disclosure between themselves and fellow students (Downs et al., 1988).

Too much humor, self-disclosure, or personal narratives was observed by Downs et al. (1988) to be potentially inappropriate, while experienced teachers were significantly
able to differentiate moderate from excessive use of these verbal behaviors. Effective teachers started the semester with more humor and higher levels of self-disclosure and personal narratives and decreased their use of these types of statements as the semester progressed. However, toward the end of the semester, they increased their level of self-disclosure once again. Downs et al. noted that students’ perceptions of what level and content of TSD is appropriate varied based on the instructor’s gender.

Both Downs et al. (1988) and McCarthy and Schmeck (1981) showed that students had different perceptions on the content that male and female instructors disclosed. For example, male college-level instructors used humor more than female instructors did. In addition, female instructors who used too much humor were seen as less effective than males using the same amount. McCarthy and Schmeck (1981) also investigated the relationship between TSD and student recall of content. They found that male and female students responded differently to TSD, reporting an interaction between TSD and gender of the student. Male students attending lectures that included TSD activities had better recall of course content compared to a class without TSD. This finding contrasted to female students who had lower recall of course content with TSD. These same female students rated teachers who self-disclosed more favorably than their male counterparts.

Together, these research findings suggested that the instructor’s gender, in addition to breadth and depth of self-disclosing statements, influence the impact of TSD in forming, maintaining, and strengthening interpersonal relationships. They suggest that while moderate self-disclosure is an important factor in establishing credibility, trust, and
connection with students, the students’ personal motivational factors play a role in this relationship. These factors are examined in the next section on the dynamics of the teacher-student relationship in the context of affective learning.

**Teacher Self-Disclosure and Affective Learning**

The domain of affective learning consists of students’ attitudes, beliefs, values, and underlying emotions or feelings, as they relate to the knowledge and skills they are acquiring. Krathwohl et al. (1964) describe the five levels of affective responses as: receiving, responding, valuing, organizing, and complex value changes, such as a worldview change. The simplest forms of affective learning include students’ sense of wellbeing were required to receive and respond to classroom information, such as the students’ willingness to ask and answer questions while studying a difficult topic, such as the Holocaust under the Nazi regime. In contrast, higher levels of affective learning may be required to enable students to make larger scale changes in attitudes, beliefs, and values. Affective learning occurs when students take ownership of their learning and demonstrate respect, appreciation, and value toward the knowledge and skills they are acquiring. Another indication of affective learning is when students become self-motivated, rather than externally motivated (Mottet & Beebe, 2006; Goodboy & Myers, 2009).

Affective learning has been repeatedly operationalized as student evaluative perceptions of the teacher on a scale presenting choices, such as good/bad, fair/unfair, valuable/worthless, and positive/negative (Sorensen, 1989). Sorensen (1989) studied teacher profiles consisting of 105 teacher disclosure statements. The statements contained
in the profiles were divided into three dimensions: self-disclosure, immediacy, and solidarity. These dimensions facilitated teacher/students connections. The three dimensions were then correlated with student affect toward the teacher. Sorensen (1989) determined that there was a positive relationship between a teacher’s disclosive statements and the students’ perception of the teacher. A teacher’s positive statements could increase student affective learning because the student perceived the teacher as more immediate. Students who receive positive teacher statements were found to perceive more solidarity in their relationship with those teachers.

Affective learning is more likely to occur when students are receptive to information and respond positively to ideas being presented. Student responses to information depend on how teachers express nonverbal messages, which may also be characterized as their degree of “nonverbal immediacy” (McCroskey & Richmond 1992). Nonverbal immediacy represents a set of nonverbal communication behaviors that reduce physical and psychological distance between teachers and students (Andersen 1979; Mehrabian 1969).

Additionally, affective learning has been deconstructed into three general areas of student affect constructs and three belief constructs. The three affective, or feeling, constructs are: 1) the students’ affect toward the course content and subject matter; 2) the students’ affect toward the teacher; and 3) the students’ affect toward the behaviors required in the class. The three belief constructs are: 1) the students’ probability of taking another course in the subject matter; 2) the students’ probability of taking another course with the instructor; and 3) the students’ probability of using the behaviors taught in the
class. In this dissertation, only the students’ feelings toward the teacher were measured, therefore the affect toward teacher scale was used to evaluate the connection between the teacher and student based on TSD activities. This model of connection between self-disclosure and student emotional feeling toward the teacher was based on research known as “affect toward teacher.”

**Student Affect Toward Teacher Research**

Cayanus and Myers (2004) researched the relationship of instructor self-disclosure activities to student relational, functional, and participation motives and to student feelings for the course instructor. They surveyed 140 women and 124 men undergraduates taking a f2f class. The survey was first given at the beginning of a term and was re-administered at the end of the eighth week of the course. Results showed that the relational motive was related to perceived instructor self-disclosure, and the student motives of excuse-making and self-serving flattery was related to instructor self-disclosure. That is, students’ uses of communication strategies in the classroom were related to the type and amount of self-disclosure a teacher uses (Cayanus & Martin, 2004).

The Cayanus and Martin (2004) study had some unexpected results. For example, male and female students perceived instructor self-disclosure differently with women perceiving more instructor self-disclosure than men from the same instructor in the same course. In addition, they found that in f2f classes, students’ perception of TSD was moderated by class size. When comparing a small class of fewer than 25 students, a medium class of 25–50 students, or a large-sized class of over 50 students, they found
that students in large classes perceived more instructor self-disclosure than students in small classes, who perceived the least amount (Cayanus & Martin, 2004).

To further this research, Cayanus and Martin (2008) investigated if “relevance,” as defined by the students’ connection to subject matter or course content, and “negative statements contained in teachers' self-disclosures” related to three variables: 1) students' feelings about the course; 2) student motivation; and 3) students’ perception of teacher clarity. They surveyed 229 undergraduate students, 104 males and 125 females. They found that students’ feelings toward the course content and teacher were affected by the amount, negativity, and relevance of TSD activities. Specifically, their findings showed increased amounts of positive self-disclosure influenced students’ state motivation to engage in course-related activities, and in that condition, students reported greater learning. They also reported that teachers who did not use negative statements improved students’ perception of teacher clarity.

In their 2008 study, Cayanus and Martin also found that students were greatly influenced by the type, amount, and content of TSD activities. For example, when teachers made self-disclosing statements that were low in negativity but relevant, “students reported that the course was more meaningful to them and also that they believed they had a greater capability of succeeding” (Cayanus & Martin 2008, p. 337). Their study indicates that students respond more favorably to teachers' self-disclosures when they are not negative, stating that “by hearing too much negative information from their teachers, students may have low affect [or dislike] for their teachers” (Cayanus & Martin 2008, p. 337). The next section reviews research on how self-disclosure affects
teacher credibility. Cayanus and Martin (2008) stated that as the teacher-student relationship develops, students’ ability to decode TSD messages as positive or negative often improves, resulting in an increase in the students’ ability to connect with their teacher and the course content.

Frisby and Martin (2010) examined teacher rapport and students’ reports on their perceptions of interpersonal relationships in the classroom and on their perceived participation and learning. They found that controlling the amount of teacher rapport with students contributed to creating a positive teacher-student relationship. Teacher rapport positively influenced the students’ overall perceptions of the classroom environment. Their research found that student perceptions of rapport with instructors and classmates are related to student perceptions of interconnectedness; more rapport yielded more connectedness, and more connectedness yielded increased student participation. However, only increased student rapport with the instructor consistently predicted increased levels of student participation, affect toward teacher, and cognitive learning (Frisby & Martin, 2010).

In summary, TSD, teacher immediacy, and student rapport were found to have an impact on the way students feel about their instructor. Research also found that these variables contribute to improving student perceptions of the course, the instructor, and their motivation to learn — but only to a point. Although the juncture at which continuing to increase the amounts of TSD, teacher immediacy, and student rapport begin to show diminishing returns to learning returns remains vague, the research does report that effective teachers intuitively know the threshold of how much is appropriate (Downs et
al., 1988). Understanding that the relationship between TSD and students’ feelings can influence the degree to which students are motivated to engage with the teacher and the course content being studied is important in all of education. The parameters of TSD are, however, particularly less well-known in online education. This dissertation research aimed to add to this knowledge by further describing the types and amounts of self-disclosure, as well as the technologies able to support those activities available at the time of this research.

**Teacher Self-Disclosure, Gender, and Student Motivation**

Several researchers have found relationships between TSD and various forms of student motivation. Cayanus and Martin (2004) found that students’ perceptions of TSD impacted their motivation to learn. Their results showed a positive relationship between TSD and students’ interest in communicating. The types of student communication patterns studied were relational, functional, and participatory. “When students learn about their instructors' personality (e.g., talking about troubles or concerns), they may view their instructors as more compassionate and easier to talk with about why an assignment was missed or turned in late” (Cayanus & Martin, 2004, p. 257). When instructors self-disclose information about themselves, students learn more about their instructors as people. This can lead to greater relational communication in and out of the classroom. Consequently, when students feel more connection with their teachers, their motivation to learn tends to increase. Cayanus and Martin (2004) also revealed that cognitive learning correlated to TSD. For instance, students’ ability to recall and apply the lessons learned in the classroom was related to the type and amount of personal information a teacher self-
disclosed. These results suggested a connection between TSD and the teacher/student communication patterns as well as its impact on students’ cognitive learning.

Additionally, Cayanus and Martin (2004) found that the participants’ gender made a difference in their perception of the teacher’s self-disclosure statements. These researchers noted that there was a significant difference between the degree to which men and women perceive TSD. In one class with the same instructor, women perceived more TSD than men did. There was, however, a gap in Cayanus and Martins’ study: the gender of the teacher was not reported. Thus, it was unclear if the students were responding solely to TSD or to TSD in correlation with the gender of the instructor (Cayanus & Martin, 2004). Although limited, other researchers have begun to investigate how TSD with a gender variable may impact student motivation and learning.

Mazer, Murphy, and Simonds (2007; 2009) similarly established a connection between TSD, student motivation, and affective learning. By manipulating TSD with web-enhanced technology, they were able to positively increase student extrinsic motivation and increase students’ positive feelings toward the classroom environment and the teacher. They showed that students’ perceived small amounts of female TSD as effectively contributing to the explanation of course content in a f2f classroom.

Aubry (2009) investigated the use of instructors’ public Facebook pages and the impact of the instructors’ self-disclosure statements on students’ motivation, attitudes, and performance in a course. The study participants were randomly divided into two groups: those who were given access to a male professor’s Facebook page containing self-disclosure information and those who were not. The study reported that participants
who had access to Facebook had more motivation to engage in the course than participants who did not have access, but their feelings about the course and the instructor did not change. Aubry’s open-ended survey questions revealed that students who had access to Facebook were more inclined to open up to the instructor, compared to participants who did not have access. Participants in the no-disclosure control group were not interested in learning more about their instructor via social media (Aubry, 2009). In Aubry’s study, the use of Facebook technology played an integral role in the connection between TSD and the teacher-student relationship. In his research, Aubry (2009) notes the gender gap between male and female student responses to online posts of a male instructor’s self-disclosure on Facebook. He cites Hewitt and Forte’s 2006 research, where male students rated an instructor’s Facebook profile more acceptable than female students did. Yet, his study results show no difference between student gender and TSD. This finding may be attributed to use of only male instructor self-disclosure. To investigate the bias reported by Hewitt and Forte, this dissertation’s research study applied both male and female instructor TSD.

Together, the work of Cayanus and Martin (2004), Mazer et al. (2007; 2009), and Aubrey (2009) suggest that online instructors who wish to develop productive relationships with their students that motivate them to learn may be able to do so by developing their online presence through self-disclosure. These studies also suggest that gender is a factor in TSD for both the teacher and students. While female students perceived more self-disclosure than male students, female students found male TSD less acceptable than male students did. Throughout Moore and Kearsley’s scholarship on
distance education in publications, television, video, and online, we see that effective online instructors have to overcome the teacher’s distance and lack of presence to engage, motivate, and retain students (Moore & Kearsley, 1996; 2005; 2011). Given that males have the tendency to self-disclose less than females (Collins & Miller, 1994), male instructors may be at a disadvantage in building productive relationships that motivate students to learn when teaching online. Meanwhile, female instructors may benefit from understanding these relationships in order to build and/or limit their self-disclosure online. Thus, instructors’ understanding of the importance of self-disclosure in enhancing online relationships appears to be a key factor in teaching online. Based on this research, the connection between gender-specific TSD and student motivation was a key element of this dissertation study.

**Student Motivation Research**

Motivation research is based upon educational psychology and self-determination theory. Self-determination theory (SDT) presents a personal developmental model of human nature, where individuals display positive features, effort, agency, and commitment as they mature and age (Deci & Ryan, 1985, 2008). According to this theory, people have innate psychological needs that, when satisfied, allow for optimal living and personal growth, and become the basis for self-motivation and personality integration. In SDT, motivation takes two forms: intrinsic and extrinsic. Intrinsic motivation is the natural, inherent drive to seek out challenges and new possibilities associated with cognitive and social development. Extrinsic motivation comes from external sources. Through extrinsic motivators, teachers influence students’ motivation to
learn. In creating a positive teacher-student relationship, teachers have an opportunity to provide students with external motivation that is productive to learning.

Brophy (1983, p. 205) defined student motivation to learn as the "tendency to find academic activities meaningful and worthwhile and to try to derive the intended academic benefits from them." Within this broad categorization, two constructs of student motivation have developed: trait motivation and state motivation. Trait motivation describes behaviors that individuals possess to a greater or lesser degree and bring with them to any learning experience. State motivation is brought on by a situation. State motivation has been linked to both cognitive and affective learning (Christophel, 1990; Anderson & Martin, 2002), and student state motivation is associated with instructional outcomes, such as one’s like or dislike for course content and the teacher (McCroskey, Richmond, & Bennett, 2006).

Christophel (1990) studied student motivation in various ways. Using the *Trait/State Motivation Scale*, she investigated the relationship between teacher immediacy, student state motivation, and the combined impact of these factors on learning. Her study measured the relationships between and among the variables of cognitive learning, teacher immediacy behaviors, and state motivation. She found that high levels of teacher immediacy positively affected state motivation, which led to increased motivation to learn (Christophel, 1990). She found that teacher immediacy behaviors within the classroom impact how much or how little a student wants to engage in learning or studying course materials.
Additionally, by measuring student responses to a survey, Gorham and Christophel (1992) found that students’ perceptions of negative teacher behaviors were demotivating, while positive teacher behaviors were motivating. Other common personal or internal motivating factors included the desire to understand the course material, receive a good grade, and achieve personal accomplishment. Interestingly, this study found that students perceive being negatively motivated as a student-owned, internal quality, while lack of motivation was perceived as a teacher-owned problem or an external problem.

Similar to Christophel’s (1990) findings, Mazer et al. (2007) found that TSD was positively related to student motivation and that self-disclosure modified state motivation more than it influenced student learning. There were also two additional findings in Mazer et al.’s study related to this dissertation research: 1) students who viewed high self-disclosure teacher profiles showed higher levels of motivation than students of teachers with lower self-disclosure profiles, and 2) students who viewed high self-disclosure profiles of their instructor reported higher levels of positive feelings toward the course and the instructor.

Mediated Instructional Communication

In the late 20th century and early 21st century, the role technology plays in the instructional environment focuses on forms, such as distance education, classroom digital technology, e-mail, social networking sites, and other forms of computer-mediated communication (Lane & Shelton 2001). At the time of this dissertation, scholars focused on interpersonal human communication, rather than media scholars, were largely
responsible for instructional communication research. However, recent research has begun to focus on the effect of contemporary technological advances, such as Twitter, Facebook, and YouTube, on teacher-student communications and relationships. These social media tools can mediate communications and may be employed to meaningfully enhance student learning. Research has already shown that generating positive affect for the subject matter is part of what makes for a highly effective teacher (Krathwohl et al., 1964; Brophy, 1987; Downs et al., 1988; Goldstein & Benassi, 1994; 1997; Krathwohl, 2002; Bransford et al., 2000; Mazer et al., 2007; 2009; McCroskey et al., 2006; Witt & Schrodt, 2006; Frisby & Martin, 2010). The examination of social media communications and how they may be used in building the teacher-student relationship are particularly relevant to this dissertation research and are presented next.

**Computer-Mediated Communication Research**

Tidwell and Walther (2002) studied the communication patterns between matched-gender pairs applied in either a f2f classroom setting or a computer-based, online setting. They found that in computer-mediated communication (CMC) between matched-gender pairs applied online, text-based communications employed more direct and intimate interactions to reduce uncertainty by asking specific questions. In contrast, matched-gender pairs in f2f settings used more indirect conversational methods, such as impersonal statements of fact, statements about third parties, exclamations, imperatives, greetings, and summary statements, as well as other conversation fillers that were not direct questions or self-disclosure statements.
An and Frick (2006) also studied personal interactions in CMC and f2f educational environments. They surveyed 105 graduate and undergraduate students and found that, in general, the majority preferred f2f discussion to CMC because f2f is faster, easier, and allowed them to get immediate clarification to questions from the teacher on tasks. In contrast, students reported that CMC was more convenient than f2f discussion because it allowed them to work in convenient places with flexible schedules. In this study, students used CMC for brainstorming and simple tasks because it supported “students who prefer speaking in a more thoughtful way after exploring their own ideas, rather than devising quick responses or questions” (An & Frick, 2006, p. 496).

Similar to Tidwell and Walther’s 2002 research, An and Frick (2006) revealed that students preferred online, text-based CMC but only when students have the appropriate technology skills. Furthermore, the students preferred CMC if they were more self-directed or felt shy in speaking in front of groups. Their findings support the need for teachers to create instructional approaches that engage online students and promote interpersonal relations between and among teachers and students. These studies show that teacher and student communication behaviors changed to reduce uncertainty when expressed primarily through and with online, text-based technology, in comparison with traditional f2f interactions.

Additionally, they revealed that f2f classroom teachers need to notice that students believe CMC is more effective when teachers use the technology themselves to communicate with others and when they use it for a specific reason, such as to reinforce and support classroom content (An & Frick, 2006). Their research supports the
integration of communication technology when it has a practical use in supporting specific learning activities. Several of An and Frick’s (2006) findings show that students preferred f2f over CMC communication. These limited findings contradict Tidwell and Walther’s 2002 results, which indicated further research is needed to determine the preferred models of communication in purely online learning environments.

Teacher Self-Disclosure and Social Media Research

The pervasiveness of social media, such as Facebook and Twitter, in the 21st century has caused many teachers and students to apply these computer-based tools to their f2f classrooms experiences. McArthur and Bostedo-Conway (2012) and Johnson (2011) provide evidence that teachers might benefit through creating opportunities to disclose information about themselves on social networking sites to increase students’ perception of their credibility.

Johnson’s (2011) results revealed differences between students who viewed only instructor’s tweets with social content in comparison with students who viewed only instructor’s tweets with scholarly content. Furthermore, the students who only viewed social tweets ranked their college teacher more “credible” than students who only viewed scholarly tweets. Johnson’s findings support earlier research by Downs et al. (1988), Mazer et al. (2007), and Aubry (2009), pointing out that personal information can increase a teacher’s perceived credibility because it makes them appear more human and down to earth (Johnson, 2011).

Similarly, McArthur and Bostedo-Conway (2012) found that student perception of teacher credibility, which was a combination of teacher competence, trustworthiness,
and caring for the student, was positively related to students’ own use of Twitter. This finding is consistent with Frymier and Shulmans (1995) finding that students’ feelings of shared experience help them to identify with the instructor. Students’ perceptions of teacher immediacy, defined as the perceived intensity and interaction between the teacher and student, was positively related to student perceptions of the appropriateness of Twitter use as a classroom-learning tool.

McArthur and Bostedo-Conway (2012) maintain that teacher immediacy was positively related to increased amounts of Twitter use for both teacher and student. Students’ perceptions of the relevance of the content they were studying, which was defined as the link between course material and student interests, positively related to students’ perceptions of the appropriateness of Twitter as a classroom communication tool and the amount of teacher-student, Twitter-based interaction (McArthur & Bostedo-Conway, 2012).

These researchers found that the skills and tactics used in employing social media was useful in enabling TSD, creating immediacy, perceiving credibility, and enhancing teacher-student interpersonal relationships. These findings were the basis for many of the methods employed in this dissertation research presented in Chapter Three.

**Current Issues in Teaching Online**

In purely online education, the teachers and students interact and teach/learn through technology, similar to the mail correspondence courses that were popular before the Internet and continue to be offered in learning institutions in and outside the United States (Moore & Kearsley, 1996; 2005; 2011). Moore and Kearsley (1996; 2005; 2011)
have theorized that because teachers and learners are physically separate from each other in distance education, teachers need to plan their courses by selecting technologies that engage students. Teachers that do this activity overcome the potential misunderstandings that occur while communicating through technology. Identifying evidence of the greater potential for misunderstanding in mediated communication is an area of research relevant to this dissertation.

Long (2011) researched undergraduate and graduate online learners enrolled in 50 distance education courses in China to investigate student learning difficulties. His research showed that some online students had difficulties with time constraints, meeting deadlines, and using the online technology successfully. He also stated that online students felt lost, isolated, and emotionally distant from the instructor. Long’s study suggests that to overcome or address these difficulties, online instructors should actively engage students, insert humor into their course content, and provide non-academic support. Long suggested that teachers need to structure their online course with discussions and create opportunities to disclose information about themselves on social networking sites in order to reduce the sense of isolation online students can feel (Long, 2011).

As described in Chapter 1, Allen and Seaman’s 2013, 2014, and 2015 reports reveal changes in the growth, effectiveness, and problems with online education. Their 2015 report revealed: 1) the number of students taking at least one online course had risen from 2003 to 2013, but has been leveling off; 2) the number of schools that have incorporated online education as a critical long-term strategy continues to rise; 3) the
number of faculty who do not accept the “value and legitimacy” of online education has risen; and 4) there was a growing concern that it is more difficult to retain students in online courses as compared to f2f courses (Allen & Seaman, 2015). Allen and Seaman’s (2015) report provides some additional support for how social and interactive media may be used to improve communications and relationships between and among teachers and students.

These findings on the challenges of online education, considered with the research on the value of building personal connections in online and f2f education provide rationale for the present research.

**Research Area of this Study**

The research in this dissertation was conducted using the theoretical model of instructional communication theory combined with research on TSD, student motivation, and computer-mediated communication. The research in these three areas shows how instructors may use technology to interact and connect with students. Numerous studies on instructor self-disclosure and immediacy are focused on the f2f classroom context and enhanced with computer-mediated communication or Internet technologies. For example, researchers have shown that TSD and immediacy behaviors delivered via computer-mediated communication can increase student motivation in f2f coursework (Chesebro & McCroskey, 2001; Christensen & Menzel, 1998; Christophel & Gorham, 1995; Frymier, 1993). Research has also found that TSD and immediacy behaviors can increase their affective learning (McCroskey et al., 2004; Cayanus, 2002; 2005; Banfield, Richmond, & McCroskey, 2006; McCroskey et al., 2006; Mazer et al., 2007; 2009). At present, no
empirical study could be located that has examined TSD in a purely online learning environment. This conclusion has led to the formulation of the research questions presented in Chapter 3.
CHAPTER THREE: METHODS

Introduction

Teacher self-disclosure (TSD) plays an influential role in developing teacher-student relationships. Different teachers find different ways to develop a productive, affective rapport that fuels learning in f2f instruction. However, there is no particular formula for success. In online learning, technology makes the process more structured and typically provides far fewer opportunities for spontaneity. These conditions do not easily facilitate the subtle and highly contextualized personal communications within the affective realm (Whittier, 2011). Because of these limitations in online learning, teachers can benefit from planning and choosing technologies; and constructing their online courses with attention to developing positive teacher-student relationships.

Developing positive teacher-student relationships can lead to improving learning outcomes for students. As introduced in Chapter 2, research has shown that when teachers develop positive personal relationships with their students, these affective affiliations may motivate teachers to teach and students to learn. Teacher-student connections are fostered through the effective utilization of verbal and nonverbal behaviors. When these types of behaviors reflect personal content, which may or may not be related to academic content, they are referred to as TSD. Researchers of self-disclosure have found that the connection between disclosure and “liking” was moderated by a number of variables, such as the amount of TSD and the gender of the involved

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1 Because the words “instructor” and “professor” are common in higher education, and the word “teacher” is common in previous research on which this study is based, all three words are used interchangeably to refer to the same role.
parties. These studies indicate that gender biases filter the perceptions of male and female personal disclosures. Consequently, gender has an effect on students’ perception of TSD.

Research has begun to focus on the effect of TSD on teacher-student interactions and relationships when communicated through online social forums, such as Twitter and Facebook, within the context of f2f instruction. In these web enhanced f2f classrooms, male instructors may be at a disadvantage when teaching online, as they tend to disclose less TSD in online education is dependent on more structured disclosure than the spontaneous nature of f2f education. The study of this dissertation suggests that instructors who understand the importance of self-disclosure for building productive relationships would likely have more success in the online classroom. At present, no empirical study could be found that has examined the effect of male and female TSD using social media tools in a purely online learning environment.

**Study Rationale**

Grounded in the literature on instructional communication theory, interpersonal self-disclosure, student motivation, and computer-mediated communication, this research addressed the problem of determining how TSD, combined with the instructor’s gender, impacts student learning in a purely online educational environment. Specifically, this study investigated the relationship between TSD statements, their impact on students’ motivation to learn the course materials and how students felt about the teacher. The gender of the instructor was included as a variable because not only do male and female instructors tend to self-disclose differently, but the male and female receivers of personal
information also tend to perceive male and female disclosure statements differently from one another.

**Research Questions and Hypotheses**

From a review of the literature examining TSD and gender on student motivation and affect toward the teacher, four research questions and hypotheses were created.

**Research Question and Hypothesis 1**

Research Question 1 (RQ1) asked: “What effects do teacher self-disclosure and instructor gender have on student motivation in an online course?” This led to the formulation of one major hypothesis and two sub-hypotheses. Hypothesis 1 (H1) focused on the effect of TSD, as measured by student motivation in a combined total of two separate courses that were identical in content and varying only by the gender of the instructor. It predicted that the presence of TSD would improve student motivation to learn by the end of the research treatment. Hypothesis 1a (H1a) predicted that the effect of female TSD would yield more positive outcomes than male TSD. Hypothesis 1b (H1b) further triangulated this aspect of the investigation by predicting that the absence of TSD would mean that the gender of the instructor would have no impact on student motivation. These hypotheses were stated as follows:

Hypothesis 1 (H1): *Controlling for expectancy*, participants exposed to TSD will have significantly higher positive ratings on the State Motivation Scale than participants not exposed to TSD.

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Expectancy measured participants’ level of interest in taking the experimental pilot course based on its title and was used to establish participants’ baseline interest in the course content.
Hypothesis 1a (H1a): Participants exposed to female TSD will have significantly higher ratings on the State Motivation Scale compared to male TSD.

Hypothesis 1b (H1b): In the condition of No TSD, the gender of the instructor will have no significant effect on participants’ rating on the State Motivation Scale.

Research Question and Hypothesis 2

Research Question 2 (RQ2) asked: “What effect does teacher self-disclosure have on student pre- and post-motivation in an online course?” This question added the analysis of student motivation data at the standard time interval of pre- and post-treatment and was built upon data on the presence/absence of TSD and the gender variable addressed in H1. Based on previous research, it predicted that post-motivation would be higher for those receiving the TSD treatment. It was addressed by the following hypothesis.

Hypothesis 2 (H2): Controlling for expectancy, participants exposed to TSD will have significantly higher positive ratings on the Post-State Motivation Scale in comparison to the Pre-State Motivation Scale.

Research Question and Hypothesis 3

Research Question 3 (RQ3) asked: “Do teacher self-disclosure and instructor gender have an effect on students’ affect toward the teacher in an online course?” Research Question 3 triangulated RQs 1 and 2 by directly measuring the variable of affect toward the teacher. Given that H1 and H2 predicted that TSD would improve motivation, H3 predicted that TSD would increase students’ affective feelings for their
teacher and further validate the findings in H1 and H2. Following the structure of H1, this was addressed by the main hypothesis and two sub-hypotheses. These predicted that the presence of TSD would increase student affect toward the teacher. Hypothesis 3a (H3a) addressed the gender variable by discussing that student affect toward teacher would measure greater toward the female teacher than the male teacher. Hypothesis 3b (H3b) deepened the inquiry in predicting that in the absence of TSD, gender would make no difference to students’ affect toward the teacher. These hypotheses were stated as follows:

Hypothesis 3 (H3): Controlling for expectancy, participants exposed to TSD will have significantly higher positive ratings on the Affect Toward Teacher Scale than participants not exposed to TSD.

Hypothesis 3a (H3a): Participants exposed to female TSD will have significantly higher positive ratings on the Affect Toward Teacher Scale compared to male TSD.

Hypothesis 3b (H3b): In the condition of No TSD, the gender of the instructor will have no significant effect on participants’ rating on the Affect Toward Teacher Scale.

Research Question and Hypothesis 4

Research Question 4 (RQ4) further assessed the main point of this dissertation research. However, instead of querying student reactions to TSD in motivation (H1 and H2) and affective feelings toward the teacher (H3), it asked directly about the participant’s assessment of the self-disclosure statements by the teacher. This question asked: “Does teacher self-disclosure and instructor gender have an effect on students’ perception of teacher self-disclosure in an online course?” To collect data for this
question, participants rated their level of agreement with statements contained within the TSD scale. Research Question 4 was addressed by formulating the following hypotheses, which followed the structure of H1 and H3. Hypothesis 4 (H4) continued the pattern of predictions by hypothesizing that students exposed to TSD web page would observe the information presented in it as TSD, and report a perception of it in the TSD survey. This hypothesis was stated as follows:

Hypothesis 4 (H4): Controlling for expectancy, participants exposed to TSD will have significantly higher positive ratings on the TSD Scale than participants not exposed to TSD.

Hypothesis 4a (H4a) expected that participants would observe more TSD from a female instructor than from a male instructor, even though the content was equal. It was stated as:

Hypothesis 4a (H4a): Participants exposed to female TSD will have significantly higher ratings on the TSD Scale compared to participants exposed to male TSD.

Hypothesis 4b (H4b) followed the structure established in H1 and H3 by stating that in the absence of any TSD, the instructor’s gender would have no effect on the ratings of teacher self-disclosure. It was articulated as:

Hypothesis 4b (H4b): In the condition of No TSD, the gender of the instructor will have no significant effect on participants’ rating on the TSD Scale.

Data used to evaluate these hypotheses and sub-hypotheses were collected through validated instruments and were tested for statistical significance. The survey instruments used, along with data analyses tests and methods, are described later in this
chapter.

Despite the emphasis on validated surveys and statistical analysis, this dissertation added an additional qualitative assessment to further support the data. Due to the subject quality of affective personal relationships, the qualitative component was necessary to achieve a comprehensive assessment. To implement this aspect of the data collection, student participants were asked four open-ended questions about their experience of the learning environment and about the technology used in this study. The questions are stated below in the section entitled Open-Ended Questions.

**Online Environment Overview**

This study was conducted within a self-paced online learning environment. This environment was created by the researcher and deployed within the Learning Management System (LMS), Blackboard Learn at Boston University. The environment was composed of five sequential steps for participants to follow in order to complete the research. These steps outlined the methods employed in this research and began from the moment participants logged into the study environment within the LMS. Participants in the self-paced learning environment were directed to a screen that listed the five steps required to participate in the study: 1) Consent Agreement; 2) Pre-Study Surveys; 3) Clinical Theory: Learning Modules; 4) Post-Study Surveys; and 5) Disclosure Statement. Figure 3.1 illustrates this environment with labels for steps, control, and treatment groups organized by gender.
Figure 3.1 The Self-Paced Online Learning Environment
Exposure to each sequential step was contingent upon completing the prior step. After reading the brief outline of the five steps, participants were given a statement about how the environment used an automatic release feature, which read, “After completing a step, the next step will appear.” The steps and the release feature were used to help participants move through the online study setting, while completing the research methods. As each step appeared, it contained a description of its content. The online course aspect of this study was accessed by the participants in Step 3 and was especially important because it provided the context for investigating the variables.

Step 3 was composed of instructional lessons, titled “Clinical Theory: Learning Modules.” All participants could access two modules derived from an existing seven-module course in *Clinical Theory and Practice in Social Work*. These modules had identical instructional content. They are referred to in the singular as the “Experimental Pilot Course” (EPC), because part of the recruitment language asked participants to explore a potential, or “pilot,” online course. Embedded within the self-paced online learning environment, the online course is distinguished from the research environment as a whole because the online course contained the TSD research variable. To present the study variables, the EPC was created in four versions to allow testing of the two variables of TSD or No TSD and the two variables of male or female instructors. The male and female instructors were fictitious and created for the purposes of this research. The fully online nature of the study and the participant recruitment procedures, described below in the “Study Participants” section, ensured there would be no confusion with existing faculty in the academic program.
The participants in the treatment groups received access to a version of the EPC that included an additional Meet the Professor tab, containing personal information about either the fictitious male or female teacher. The control groups’ version of the EPC did not include the Meet the Professor tab, but as with the treatment groups, it also had two versions: one with a male instructor and one with a female instructor. This design created four groups of participants.

*Online Control and Treatment Groups*

Participants meeting the study criteria were recruited and enrolled into the self-paced online learning environment. The resulting 336 participants were randomly assigned to one of four groups, with 84 students in each. The four groups consisted of: 1) an EPC with a fictitious male instructor, 2) an EPC with a fictitious female instructor, 3) an EPC with a fictitious male instructor with a Meet the Professor tab, and 4) an EPC with a fictitious female instructor with a Meet the Professor tab. These groups provided the data for measuring the relationships between the variables of instructor gender; TSD; participants’ state of motivation, which refers to the participants’ motivation at a specific moment in time; and participants’ affect toward teacher. Table 3.1 illustrates the four groups sorted by gender and TSD.

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<th>Table 3.1 Study Groups by Gender and TSD</th>
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<td>Control (No TSD)</td>
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<td>Treatment (TSD)</td>
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Study Procedures

Pilot Testing the Self-Paced Online Learning Environment

Prior to running the study, a pilot study was conducted to determine the usability of the online research environment. The pilot study consisted of six on-campus students recruited from the Master of Social Work program (MSW). These six participants were observed taking the online study to assess where online participants would have problems navigating or moving through the online learning environment. During the pilot, the researcher observed participant behaviors in a lab setting, where they were monitored while navigating through the online study, exploring the course, and viewing the fictitious professor’s online profile. From the observations, the following adjustments and elaborations were made to the learning environment. First, step-by-step instructions were added to aid the participants in navigating though the self-paced, online learning environment (Appendix C). Second, participants were instructed to explore the sample online course, rather than review it. The re-wording encouraged participants to move through the self-paced online environment within the allotted time period of one hour. Additionally, the Meet the Professor tab was linked to the Home Page for quicker participant access in the treatment groups.

Study Participants

This study was conducted within the School of Social Work at Boston University located in Boston, Massachusetts. Enrollments within the school of social work at the time of the study included 174 full-time and 61 part-time on-campus graduate students,
121 off-campus students, and 325 online students from 29 U.S. states, including the District of Columbia. The research study involved Master of Social Work students over the age of 18 enrolled in the online and the on-campus programs. The participants included students enrolled in the spring, summer, and fall 2014 semesters. Only students who had taken less than three semesters of coursework were recruited to participate. This criterion was added to ensure the credibility of the fictitious professor; students with more than two semesters in the MSW program were likely to know the majority of the teachers in the program. Furthermore, participation was limited to students who had not taken SSW CP 770 - Clinical Practice with Individuals, Couples and Families course. This step was taken because the sample online course contained similar content. In total, 336 MSW participants were selected to participate in the self-paced online study and were sent a recruitment email (Appendix A).

Of the 54 participants who data was included in the study results, 46 (83.3%) were female, 3 (5.6%) were male, and 6 (11.1%) did not indicate their gender. The participants’ ages ranged from 22 to 52 years old (30 years), with a median age of 29.5 years, a mean of 31.8 years, and a standard deviation of 8.1. An analysis of student demographic data revealed that over one-third of the participants 19 (35.2%) were single and never married, and 21 were currently married 19 (35.2%) or had been married 2 (3.7%). The remaining students were unmarried living with a partner 8 (14.8%) or failed to answer the question 6 (11.1%). The sample’s race/ethnic composition was 37 (68.5%) White/Caucasian, 6 (11.1%) Black/African American, 3 (5.6%) Hispanic, 3 (5.6%) Asian or Asian American, and 5 (9.2%) Unknown.
Participant Recruitment, Enrollment, and LMS Access

All participants meeting the recruitment criteria were sent the recruitment email, enrolled in the sample course, and granted access to the LMS before being asked to complete the online study. Contained within the recruitment email was a hyperlink for participants to access the LMS. Seven days later, participants who had not yet logged into the LMS were sent another recruitment email, once more inviting them to participate in the study. Concurrently, a follow-up “thank you, however…” email (Appendix B) was sent to participants who had logged into the LMS but had failed to complete all five steps of the study. The follow-up email was used to encourage completion of the study; only participants who completed all of the five steps were included in the study results. This procedure was repeated for each of the three study sessions.

Timeline of Research Study Sessions

Three self-paced research study sessions ran during the summer and fall academic semesters of 2014. The first research study session ran for from July 13 to July 27, 2014 with 88 participants. The second study session ran from July 27 to August 10, 2014 with 58 participants. The third session ran from September 7 to September 21, 2014 with 190 participants. Due to low participation during the first two sessions, this third session was offered during the regular academic fall semester to recruit additional participants.

Instructor Gender in Control and Treatment Groups

In the male control and treatment groups, participants explored an EPC taught by a fictitious male professor. In the treatment group with male TSD, participants were able
to view the online professional profile of the “professor,” including his Twitter postings and other social media. Similarly, in the female control and treatment group, participants explored an EPC taught by a fictitious female professor. In the treatment group with female TSD, participants were able to view the online professional profile of the “professor,” including her Twitter postings and other social media.

Teacher Self-Disclosure – Treatment and Rationale

The treatment condition of TSD was accomplished by creating fictitious male and female online professor profiles. There was no live professor interaction within the EPCs, which ensured control of the self-disclosure elements across all groups. In the Blackboard Learn system, the teacher’s online profile was located under a tab named Meet the Professor (Appendix L). The Meet the Professor tabs displayed a male or a female instructor’s “Academic Profile,” containing biographical, research, and publication information, a LinkedIn profile, a Pinterest content area (a collection of photos taken by the instructor), a YouTube video feed, and Twitter posts. For example, the Pinterest page showed pictures of academic presentations, campus activities, professional dinners, travel with family and friends, and outdoors activities (Appendix N). The YouTube video playlist contained content relevant to the lesson topics covered in the online course. The Twitter posts included weekend activities with family, religious and social interests, opinions about news events, and re-tweeted posts about campus events, holiday activities, and sporting events (Appendix M). Symmetry between the male and female instructors was maintained for all social media content. The content displayed in the fictional
profiles corresponded with question items in Cayanus and Martins’ 2002 *Teacher Self-Disclosure Scale* and were applied to create the construct of TSD (Appendix I).

The rationale for constructing the experimental pilot course and the **Meet the Professor** tab was based upon research of f2f classroom training augmented by CMC (Mazer et al., 2007; 2009; Aubry, 2009). Relevant CMC research focused primarily on the use of social media, such as Facebook and Twitter, which was used to enhance teacher-student communication in classroom-based courses creating a web-enhanced learning environment. For example, Mazer et al., (2009) used Facebook to create a web-enhanced f2f classroom, while two other researchers (Johnson, 2011; McArthur & Bostedo-Conway, 2012) used Twitter to enhance students’ perceptions of teacher competency, trustworthiness, and caring. The methods and findings of these researchers guided the construction of the TSD elements in this dissertation research.

In the present study, the interactive web page echoed Mazer et al.’s 2009 research, where Facebook was used to display the teacher’s circle of friends, post-interpersonal messages, and use the discussion board to communicate with their circle of friends, family, and colleagues. In Mazer et al.’s study, “high” and “low” levels of TSD were manipulated in photographs and biographical information to display female TSD in control and treatment groups. In a “high-level” control condition, TSD consisted of photographs showing the teacher in various social situations with friends and family in public locations and included personal information about favorite books, movie quotes, and relationship status. Pictures of the female instructor were shown at social gatherings, such as dancing and weekend get-togethers, and at home with family. In a “low-level”
control condition of TSD, only a headshot photograph of the instructor and a listing of her position at the university were shown to participants. Participants were also given a pseudonym for the instructor’s name and then told to access the fictitious instructor’s web page. Mazer et al.’s (2009) study showed that online TSD could be manipulated through the use of a web page. As a result, the current study employed several of these features to create the instructional profiles for TSD.

Teacher Self-Disclosure and Social Media – Use and Rationale

Social media is often used to enhance and extend the f2f classroom. Two of the most commonly used are Twitter or Facebook. Twitter was chosen to support the TSD content in this dissertation research. Studies by Johnson (2011) and McArthur and Bostedo-Conway (2012) provided guidance for this selection and for creating the content of the tweets that were presented to participants. Because the Twitter feed was constructed to appear more conversational than the other self-disclosure information elements, such as the instructor’s CV, LinkedIn page, Pinterest page, and YouTube video playlist, a brief review of this research is presented to describe how the Twitter component for the treatment group was selected and organized (Appendix L).

The elements used in the present study also emulated Johnson’s (2011) research and her use of social tweets and scholarly tweets. Fictional accounts were created on Twitter.com with fictional female and male names and profile pictures. Parity was maintained between all tweets posted. A "several tweets per day" model was deployed in both the female and male Meet the Professor tabs, based on the work of McArthur and Bostedo-Conway (2012), for a total of 64 tweets. The content of the tweets used in this
study also was modeled their 2012 study, as the tweets contained information about the instructor’s professional life and personal anecdotes.

Based on the methods of Johnson (2011), and McArthur and Bostedo-Conway (2012), this dissertation research applied a parallel set of 64 pre-constructed Twitter posts for the female and male instructors. The Twitter posts were only accessible to the TSD group via the Meet the Professor tab. The tweets were delivered once or twice a day to the student participants in the treatment courses with instructor self-disclosure information. The content of the tweets reflected the nine dimensions of self-disclosure, as measured by the Teacher Self-Disclosure Scale (Appendix I), and each tweet was distilled into 140 characters or less to meet Twitter parameters for posting length. For example, Professor Jones posted on July 13, 2014, 10:25am, “Reading Orphan Train this summer, what a moving book,” and on July 13, 2014, 9:58am, he posted, “Feel great today, got a run in this morning and now putting around outside taking care of my plants. Love days like today, sunny and warm.” The tweets addressed the following content areas from the Teacher Self-Disclosure Scale: 1) expresses his or her beliefs, 2) gives examples of personal life, 3) shares what they do on the weekends, 4) uses family and friends as examples, 5) expresses opinions about current events, 6) shares likes and dislikes, 7) expresses attitudes toward events on campus, 8) shares feelings, and 9) talks about him or herself (Cayanus & Martin, 2002). The tweets were constructed to reflect the TSD construct (Appendix M). Illustration 3.1 shows a screenshot of the Hootsuite software application that was used to create parallel tweets for both instructors, with the female in the left column and the male in the right column.
Online Surveys and Measures

Participants in all four groups logged into the self-paced online learning environment and agreed to the consent question built into the LMS. They were then instructed to complete four online surveys in sequential order, selectively released to the participants after completing the corresponding steps. The surveys were an *Expectancy Rating Scale*, a *State Motivation Scale*, an *Affect Toward Teacher Scale*, and a *Teacher Self-Disclosure Scale*. These scales were used to measure the participants’ level of interest in the course, external motivation to complete the coursework, feelings of
like/dislike toward the teacher, and the participants’ perception of TSD. These four scales were Likert type surveys, containing multiple items rated on various point scales and validated using studies on undergraduate and graduate populations. Reliability scores for these surveys ranged from .90 to .96. Prior to taking any of the survey measures, the participants read an instruction page that stated the parameters for taking each survey, such as how much time they had to complete the survey (Appendix E).

**Participant Expectancy Construct**

The first survey participants completed was the *Expectancy Rating Scale* (Devilly & Borkovec, 2000). This survey has been useful in measuring the role of personal expectations in the treatment of a therapeutic intervention. An individual’s expectations can often have a positive effect, with or without an intervention. This three-item scale was used as a control variable to assess participants’ pre-existing bias and level of interest in taking an online course without any information about the course other than its name (Appendix F).

The first question used in the survey was: “At this point, how would you rate your interest in learning this topic area?” This item was rated on a 1–9 point scale, where 1 equaled “Not at all interested” and 9 equaled “Very interested.” The second and third items in the scale measured an individual’s anticipated percentage of knowledge gain and amount of learning about the topic area. The second question used in the survey was: “By the end of the course, how much knowledge will you gain on this topic area?” This particular item was rated in percentage from 0 to 100 in 10-point intervals. The Devilly and Borkovec (2000) study had a Cronbach alpha of 0.90 for these three items.
This survey was administered in Step 2 after students completed the Consent Form in Step 1. The survey was deployed prior to any exposure to an online course with or without TSD. A high baseline interest indicated that participants had a pre-existing interest in the course they were exploring. This scale measured the participants’ level of interest in taking the experimental pilot course (EPC) based solely on its title: *Clinical Theory in Social Work Practice*.

*State Motivation Construct*

The second survey participants completed was the *State Motivation Scale* (Christophel, 1990). This scale examined participants’ extrinsic level of motivation in taking an online course in clinical theory (Appendix G). Earlier studies (Christensen & Menzel, 1998; Christophel, 1990) have shown that TSD in the form of verbal and nonverbal behaviors positively increases students’ motivation to participate, leading to increased learning in students who received TSD.

The 12-item bipolar scale was developed for use in measuring participants’ state of interest and motivation to engage in learning within a specific class. This scale measured participants’ motivation by having them answer questions pertaining to how they feel about taking a specific class. For example, the first item in the survey was: “How do you feel in general about taking classes at the university?” This item was rated on a 1–7 point scale, where 1 equaled “Motivated” and 7 equaled “Unmotivated.” The other 11 questions focused on the participants’ level of motivation, such as interested/uninterested, involved/uninvolved, excited/not excited, challenged/unchallenged, enthused/unenthused, and inspired/uninspired. This survey had
a Cronbach alpha ranged from 0.91 to 0.96 (Christophel, 1990).

In this study, the *State Motivation Scale* was used to measured participants’ interest in the experimental pilot course, which was administered twice. It was given in Step 2 as a pre-test before exploring the EPC. After participant’s exploration of the EPC, it was administered again in Step 4 as a post-test.

*Affect Toward Teacher Construct*

The third survey participants completed was the *Affect Toward Teacher Scale* (McCroskey, 1994). This scale assessed participants’ feelings for the teacher in f2f instruction (Appendix H). It was chosen because student emotions are a critical factor in student achievement and can impact students’ learning outcomes.

The 8-item bipolar scale was developed to assess participants’ feelings for the teacher in f2f instruction. For example, the first four questions were assessed through different possible responses to the same question: “My attitude about the instructor in this class is _________?” The possible responses to this question were on a 1–7 point scale, consisting of four bipolar items of: Good (1) to Bad (7), Worthless (1) to Valuable (7), Fair (1) to Unfair (7), and Negative (1) to Positive (7). Questions five through eight assessed participants’ degree of interest in taking another class with the same instructor, which all began with the same prompt: “The likelihood of my taking another course with this teacher, if I had a choice, is ________.” The possible responses to these questions were on a 1–7 point scale of varying items: Question five had a scale from Likely (1) to Unlikely (7), question six from Impossible (1) to Possible (7), question seven from Probable (1) to Improbable (7), and question eight from Would Not (1) to Would (7).
McCroskey’s study in 1994, determined the Cronbach alpha for this scale was 0.90.

This survey was administered in Step 4 after exposure to the EPC with or without TSD. In this research study, participants’ feelings toward the teacher were measured because previous research (McCroskey, 1994; McCroskey, Morreale, & Brooks, 1994; Mazer et al., 2007; 2009) has shown that students exposed to TSD have heightened positive affect toward the course and the instructor and value the content they have studied.

Teacher Self-Disclosure Construct

The fourth survey participants completed was the Teacher Self-Disclosure Scale (Cayanus & Martin, 2002). This scale measured participants’ perceptions of TSD within the online learning environment (Appendix I). The scale has been used to measure TSD in both verbal and nonverbal forms.

The 18-item scale assesses students’ perceptions of TSD. The scale measured their perception by having them answer statements about the teacher, such as: “The teacher often gives personal examples in class,” “The teacher expresses his/her beliefs,” and “The teacher discusses his/her feelings.” The possible responses to the 18 statements were on a 1–7 point scale, ranging from Completely Disagree (1) to Completely Agree (7). Cayanus and Martin (2002) determined the Cronbach alpha for this scale was 0.92.

The Teacher Self-Disclosure Scale was administered in Step 4 after participants had completed the EPC with or without TSD. For this study, the survey was selected because it could measure the online elements of TSD, which consisted of male and
female teacher statements, images, and video. These TSD components were displayed within the *Meet the Professor* tab.

**Open-Ended Questions**

In addition to investigating the main research questions through the surveys, participants were asked to answer four open-ended questions upon completing their exploration of the online learning environment. These questions pertained to their experience of the learning environment and the technology used. The first two questions were: 1) “I would/would not take another course with this instructor, please explain,” and 2) “I would/would not consider changing the following items in this course, please explain.” The following two fill-in-the-blank questions were: 3) “The technology used in this course is ______,” and 4) “How do I feel about taking this course with this instructor________?” These questions were asked to allow the participants an opportunity to comment on features of the study that were not contained within the surveys. The participants were presented with these questions after completing the post-motivation, the affect toward teacher, and the TSD surveys but prior to reading the disclosure statement.

**Online Navigation: Moving through Steps 1–5**

The participants had already been granted access to the Blackboard Learn LMS system before receiving the recruitment email. Contained within this email was a hyperlink to the LMS. Participants who clicked on this hyperlink were taken to the login page. Here, participants entered their User IDs and secure “Kerberos” passwords. Upon
signing into the LMS, participants gained access to the Explore the Course tab with or without the Meet the Professor tab, as shown in Illustration 3.2 shown below.

Illustration 3.2 LMS - Explore the Course Tab Displaying Both Female and Male Online Courses

On this LMS web page, participants would see the Explore the Course tab, which contained three content areas: My Announcements, Course List, and My Messages. The only area of these three sections that had content was the Course List, which linked to the online learning environment titled, Clinical Theory in Social Work Practice, taught by Professor K. F. Jones, a fictional female instructor, or Professor K. M. Jones, a fictional male instructor. Within the online learning environment, each participant only had access to one of these two experimental pilot courses, both of which were identical in content. Participants entered their designated online course by clicking on the blue hyperlink of the course name. The opening page provided a list of five required steps to participate in the study: 1) Consent Agreement, 2) Pre-Study Surveys, 3) Clinical Theory: Learning Modules, 4) Post-Study Surveys, and 5) Disclosure Statement.
Steps 1 & 2: Informed Consent and Pre-Study Surveys

Selecting the first step prompted participants to read the Consent Form (Appendix D) and agree to participate in the study. By clicking “Yes” on the online consent agreement form in Step 1, the next step appeared automatically. In Step 2, participants were asked to complete two pre-study surveys by clicking on the heading, the first was the Expectancy Rating Scale (Appendix F) and the second was the Pre-Test State Motivation Scale (Appendix G). Upon completing both online surveys in Step 2, participants would see Step 3 below Step 2 upon returning to the Home Page, as shown in Illustration 3.3. Below the clickable link to Step 1, participants read the list of the five steps to be completed and a statement about the automatic release feature.

Illustration 3.3 LMS - Explore the Course Tab – Home Page Showing Steps 1 and 2
Steps 3: Experimental Pilot Course Exploration – Control and Treatment

In Step 3, participants began the EPC exploration by clicking into the Clinical Theory: Learning Module. If participants were in the control group, they only saw the EPC; the Meet the Professor tab was hidden from their view. These participants would move on to Step 4 without any additional knowledge about the professor of the course.

If participants were in the treatment group, they had access to the Meet the Professor tab upon signing into the self-paced online experimental environment. They also had the option to access the Meet the Professor tab via a hyperlink on the Home Page. Participants could explore the course while viewing content on the professor’s web page. To maintain parity between control and treatment groups, participants were not explicitly instructed to explore the Meet the Professor section of the course website.

Activity logs were kept for the participants in both control and treatment groups. The logs recorded who had access to the Meet the Professor tab and how many times it was accessed. Illustration 3.4 shows Step 3 with access to the Meet the Professor link shown below.
Once inside the course, only the syllabus and Module 1 had content for the participants to explore. Participants used the **Table of Contents** on the left side of the screen to navigate through the content pages. In Illustration 3.5, the syllabus folder is open, showing the web pages that participants could explore: Course Description, Instructor, Weekly Readings, Resources, Grading Structure, Discussion Information, Discussion Grading Rubrics, Assignments, Assignment Grading Rubric, and Technology Support. Participants self-selected those aspects of the course materials that were of interest to them. The only directions provided were the steps and content descriptions on the **Home Page** of the course.
Illustration 3.5 LMS - Course Table of Contents Showing Syllabus Content Topics

In Module 1 of the online course, participants could read narrative text, sample assignments and discussion topics, watch teacher videos, and view animated slide presentations. Illustration 3.6 shows the content topics covered within this module.

Illustration 3.6 LMS - Course Table of Contents Showing Module 1 Content Topics
In addition to using the Table of Contents to review the online content, participants could use the Next Page arrow in the top right corner of each web page to move through the course contents. Illustrations 3.7 and 3.8 show the female and male instructor web pages and welcome videos located within the online course syllabus. The instructor welcome video, manually played by the participants, tells about theoretical models covered in the course. Subsequently, the participants are provided with a few examples of how these models are used in research. The instructor spells out how these models are applied by practitioners and participants in their field placements. The instructor video ends with the welcome statement, “I hope you enjoy it.”

Illustration 3.7 LMS – Explore the Course Tab – Instructor Syllabus HTML Page Displaying Female Instructor Welcome Video
Upon completing Step 3 with or without the **Meet the Professor** link and tab, participants had to answer the following question before gaining access to Step 4: “Is your exploration of the course site complete?” If the participant answered, “Yes” to this question, the next step would appear on the screen. If their review was not complete, they were prompted with instructions to exit the survey and return to Step 3 for completion.

**Steps 4: Post-Study Surveys**

In Step 4, participants were asked to complete the State Motivation, Affect Toward Teacher, and TSD online surveys and the open-ended qualitative questions on the online course. The three surveys were: 1) *Post-test State Motivation Scale* (Appendix G), 2) *Affect Toward Teacher Scale* (Appendix H), and 3) *Teacher Self-Disclosure Scale* (Appendix F). Additionally, they were asked to complete a feedback questionnaire of
four open-ended questions about the EPC (Appendix J), as well as five optional demographic questions, including age, gender, marital status, ethnicity, and race. Upon completing the surveys in Step 4, participants could access Step 5, as shown in Illustration 3.9.

Illustration 3.9 LMS – Explore the Course Tab – Home Page Showing Steps 3, 4, and 5

Steps 5: Disclosure Statement

In Step 5, the Disclosure Statement presented the rationale for the study and the manipulation of TSD. In Step 5, participants read the Disclosure Statement (Appendix K) and were given the option to have their data excluded from the study results. After reading the disclosure statement, the participants could opt out of the study by answering, “Yes” to the question, “Do not include my survey answers in the study results”.

Data Analysis Procedures

All surveys and question items were built within the assessment feature of the university’s LMS. The assessment feature was set to allow participants two hours to take each survey, and all questions displayed at once on a single web page. The surveys, however, were designed to only take five to ten minutes to complete. Each survey created its own data set, which was exported from the LMS as a Microsoft Excel format. These data sets were then imported into the software application IBM SPSS (Statistical Package for the Social Sciences) for data analysis. The statistical processes applied to analyze the data were analyses of covariance, correlation, and t-tests.

Univariate analyses were used to summarize demographic data and characterize the research sample, as well as determine patterns in the data. Participant characteristics that were examined using univariate analyses included gender, race/ethnicity, age, and marital status. Race/ethnicity, marital/partner status, and age were not included in the research hypotheses but were included as control variables because these characteristics could have an effect on interaction with TSD.

Data Coding and Normalization

Before beginning the data analyses, question items that were negatively coded were re-coded to score positively. For example, several items of the State Motivation, Affect Toward Teacher, and Teacher Self-Disclosure Scales were reverse-scored to make all the items reflect the same direction of magnitude. All the items on the State Motivation Scale were coded, so that 7 equaled higher motivation, higher interest, and higher involvement, and 1 equaled the lowest level of these attributes. In addition, the
Expectancy Rating Scale required modification for analysis because it consisted of two types of measures: one item was measured on a 7-point Likert scale (1–7) and two items were on a 0 to 100 percentage scale. Because the latter two items contained only 11 response options, they were converted from a percentage scale to a 0–10 rating scale. This made it possible for the ratings of the three items to be summed to form a total score for analysis. Because the expectancy scale was highly skewed, a square root transformation was performed to normalize it. Lastly, missing data were addressed by replacing the missing values with the means for the items. Once the data were recoded and normalized, as necessary, Cronbach’s alpha, ANCOVA, t-tests, and correlational analyses were performed. Given that multiple statistical tests were conducted, results at the p < .05 level were considered significant.

Cronbach Alpha

Cronbach’s alpha (α) was used to test the internal reliability or internal consistency of each of the scales used in this study. Cronbach's alpha is used to verify that the items in a scale measure a single construct. In this study, the α’s for the Expectancy Rating Scale (α = .924), the State Motivation Scale (α = .932), the Affect Toward Teacher Scale (α = .895), and the Teacher Self-Disclosure Scale (α = .930) were very good, and their reliability was comparable with the reliability reported by Christophel (1990), McCroskey (1994), and Cayanus and Martin (2004). After testing for internal consistency and reliability, SPSS was used to test the study’s hypotheses for significance.
Analysis of Covariance (ANCOVA)

Analysis of covariance (ANCOVA) was used to test for significant differences between experimental conditions in the data collected from the three survey instruments (the State Motivation, Affect Toward Teacher, and TSD scales). ANCOVA was used in the statistical analyses of both instructor gender and TSD to evaluate whether the sample means of the State Motivation Scale and Affect Toward Teacher Scale were equal across the instructor gender conditions (Male and Female) and the treatment conditions (TSD and No TSD), controlling for the effects of participant expectancy.

Hypothesis 1 Data Analysis

Hypothesis 1 was tested by a one-way ANCOVA with TSD as the independent variable and Post-test Motivation as the dependent variable. Expectancy and Pre-Test Motivation scores were used as covariates. This analysis tested participants’ level of motivation after being exposed to TSD through the Meet the Professor tab. Hypotheses H1a and H1b tested the effects of instructor gender on Post-test Motivation within treatment levels (H1a = TSD; H1b = No TSD), using one-way ANCOVAs, in which instructor gender was the independent variable and Post-test Motivation Score was the dependent variable. Expectancy and Pre-Test Motivation scores were also used as covariates in these analyses. These tests were conducted to investigate the level of participants’ motivation to take an online course after being exposed (or not being exposed) to self-disclosure by male or female instructors. Table 3.2 below lists the independent, dependent, and control variables.
Table 3.2 Hypotheses 1 Testing

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Condition</td>
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<td>Post-Motivation</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>Male</td>
<td>Survey Scores</td>
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</table>

Data Analysis

Hypothesis 2 tested the effect of TSD on the change in motivation from the pre-test to the post-test, i.e., the pre/post-change score: Post-test Motivation minus Pre-Test Motivation scores. The analysis of Hypothesis 2 was conducted using two statistical designs; the first analysis controlled for instructor gender and the second analysis ignored the effect of instructor gender. The first design was a 2 (Treatment Condition) x 2 (Instructor Gender) ANCOVA, with motivation change score as the dependent variable.
and expectancy as the covariate. The second design was a one-way ANCOVA, in which TSD was used as the independent variable. Once again, motivation change scores were the dependent variable and expectancy was the covariate. This test was used to measure the participants’ change in their motivation to take the online course after being exposed to TSD. Table 3.3 below shows the dependent and independent variables.

<table>
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<tr>
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<tr>
<td>TSD</td>
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<td>Expectancy Rating</td>
</tr>
<tr>
<td>No TSD</td>
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<table>
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</tr>
<tr>
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<td>Post minus Pre-Motivation Survey Scores</td>
<td>Expectancy Rating</td>
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</tbody>
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Hypothesis 3 Data Analysis

Hypothesis 3 was tested using the same analysis applied to H1, but Affect Toward Teacher was used as the dependent variable. The analysis was a one-way (Instructor Gender) ANCOVA, with participant expectancy rating scores as a covariate. This test
was used to compare the feelings toward the instructor among participants who were or were not exposed to TSD. Hypotheses 3a and 3b were tested using the same designs used to test H1a and H1b. Hypothesis 3a employed a one-way ANCOVA to compare the effects of instructor gender within the TSD treatment condition. This test was conducted to compare the feelings towards the instructor of participants who were exposed to self-disclosure by female and male instructors. Hypothesis 3b employed a one-way ANCOVA to compare the effects of instructor gender within the No TSD treatment condition. This analysis compared the feelings towards the instructor of participants who were not exposed to self-disclosure. Table 3.4 below illustrates the dependent, independent, and control variables.

<table>
<thead>
<tr>
<th>Hypothesis 3</th>
<th>Treatment Condition</th>
<th>Instructor Gender</th>
<th>Dependent Variable</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TSD</td>
<td>Both (Male &amp; Female)</td>
<td>ATT Survey Scores</td>
<td>Expectancy Rating</td>
</tr>
<tr>
<td></td>
<td>No TSD</td>
<td>Both (Male &amp; Female)</td>
<td>ATT Survey Scores</td>
<td>Expectancy Rating</td>
</tr>
<tr>
<td>Hypothesis 3a</td>
<td>TSD</td>
<td>Female</td>
<td>ATT Survey Scores</td>
<td>Expectancy Rating</td>
</tr>
<tr>
<td></td>
<td>TSD</td>
<td>Male</td>
<td>ATT Survey Scores</td>
<td>Expectancy Rating</td>
</tr>
<tr>
<td>Hypothesis 3b</td>
<td>No TSD</td>
<td>Female</td>
<td>ATT Survey Scores</td>
<td>Expectancy Rating</td>
</tr>
<tr>
<td></td>
<td>No TSD</td>
<td>Male</td>
<td>ATT Survey Scores</td>
<td>Expectancy Rating</td>
</tr>
</tbody>
</table>
Hypothesis 4 Data Analysis

As in H1 and H3, Hypothesis 4 was tested by an ANCOVA. The analyses used a one-way ANCOVA design (TSD versus No TSD) with participant expectancy score as a covariate. This test was used to measure the participants’ perception of teacher self-disclosure on the TSD scale after being exposed to it through the Meet the Professor tab. Table 3.5 below illustrates the dependent and independent variables. Hypothesis 4a used a one-way ANCOVA to compare the effects of instructor gender within the TSD treatment condition. This test was conducted to compare perceptions of TSD of participants who were exposed to self-disclosure by female and male instructors. Hypothesis 4b used a one-way ANCOVA to compare the effects of instructor gender within the No TSD condition on the perceptions of TSD by participants who were not exposed to self-disclosure.

Table 3.5 Hypotheses 4 Testing

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatment Condition</strong></td>
<td><strong>Instructor Gender</strong></td>
<td>Teacher Self-Disclosure (TSD)</td>
</tr>
<tr>
<td><strong>Hypotheses 4</strong></td>
<td>Both (Male &amp; Female)</td>
<td>TSD Survey Scores</td>
</tr>
<tr>
<td><strong>TSD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No TSD</strong></td>
<td>Both (Male &amp; Female)</td>
<td>TSD Survey Scores</td>
</tr>
<tr>
<td><strong>Hypothesis 4a</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TSD</strong></td>
<td>Female</td>
<td>TSD Survey Scores</td>
</tr>
<tr>
<td><strong>TSD</strong></td>
<td>Male</td>
<td>TSD Survey Scores</td>
</tr>
<tr>
<td><strong>Hypothesis 4b</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No TSD</strong></td>
<td>Female</td>
<td>TSD Survey Scores</td>
</tr>
<tr>
<td><strong>No TSD</strong></td>
<td>Male</td>
<td>TSD Survey Scores</td>
</tr>
</tbody>
</table>
Independent t-tests were used to analyze the data collected from participants that did and did not access the Meet the Professor tab. These analyses were conducted because six participants who were assigned to the TSD condition did not access the Meet the Professor tab; this means that they did not experience the intervention. Although these six participants were deleted from the ANCOVAs described in the preceding section, it was decided to examine the degree to which their scores on the three scales differed from other participants. Participant access was divided into three groups: 1) Those that did not have access to the Meet the Professor tab, 2) Those that did have access but did not visit the Meet the Professor tab, and 3) Those that had access and did visit the Meet the Professor tab. The data gathered from these three groups was compared with mean scores on the Post-State Motivation Scale, Affect Toward Teacher Scale, and the Teacher Self-Disclosure Scale to test for statistical differences between groups. These analyses assessed whether exposure to the Meet the Professor tab had an effect on participants’ perception of TSD. Table 3.6 shows the analysis conducted.

Table 3.6 Independent T-Tests

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Treatment Condition</th>
<th>Dependent Variables</th>
<th>ATT</th>
<th>TSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSD Exposure</td>
<td>(No/No View)</td>
<td>Post-Motivation</td>
<td>ATT</td>
<td>TSD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Survey Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSD Exposure</td>
<td>(Yes/Did Not View)</td>
<td>Post-Motivation</td>
<td>ATT</td>
<td>TSD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Survey Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSD Exposure</td>
<td>(Yes/Yes)</td>
<td>Post-Motivation</td>
<td>ATT</td>
<td>TSD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Survey Scores</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

One-Sample and Independent T-Test

Independent t-tests were used to analyze the data collected from participants that
Pearson’s Correlations

Lastly, Pearson’s correlations were used to measure the relationships among the key variables using SPSS. Correlations examined the relationship between Expectancy scores and the Pre- and Post-test State Motivation, and the motivation change scores.

Qualitative Data Collection

To measure qualitative aspects of participants’ experience of the online course and TSD, participants responded to four open-ended questions (Appendix J). These items were created to gather participant narrative statements about the online course, the technology used in it, and the participants’ impressions of the male and female instructors. The participants’ responses to the open-ended questions were reviewed for similar comments. Data analysis of the open-ended questions consisted of importing participants’ responses into qualitative data analysis software, coding their statements, sorting them by code, and analyzing the codes for themes. The proportion of participants in the TSD and No TSD groups who provided comments in response to each question was analyzed by the Chi-square test. The nature of the comments, which were grouped into categories were also analyzed by the Chi-square test. The findings are reported in Chapter 4.
CHAPTER FOUR: RESULTS

Chapter 4 presents the findings of the data collected in this dissertation research, including participant demographic data, statistical test results, and qualitative analysis. The statistical results of the three surveys used in the study report on motivation, affect toward teacher, and self-disclosure, all of which are applied to their respective hypotheses. These are followed by analysis of the qualitative data collected in the open-ended questions. A third supplemental data analysis section comparing student access of the Meet the Professor tab to students’ online behaviors in this study presents additional analyses not addressed in the original hypotheses. The final section reports analysis of qualitative responses to open-ended questions presented to participants at the conclusion of their engagement with the sample online course. Demographic data of the student participants is presented first.

Participant Demographic Data

Of the 336 students who were solicited to be in the study, 87 agreed to participate. Twenty-seven of these participants (8% of all students solicited to participate in the study) only partially completed the study; their data was excluded from the study. The remaining 60 participants (17.9 %) completed all five surveys, therefore qualifying their data to be included in the study. Six students in the treatment group did not view the Meet the Professor tab, so they did not experience the experimental treatment and were thus deleted from the analyses of the quantitative data, leaving a total of 54 participants in the study.
Table 4.1 shows the data for the participants who had access to male and female instructors with or without exposure to teacher self-disclosure. There were no statistically significant differences between the four groups for any of the demographic variables. Additionally, the minimum (22 years) and maximum (52 years) age of these four groups were identical, and therefore, and ranges of the ages in the two groups were identical (30 years).

Table 4.1 Participant Demographic Data No TSD or TSD

<table>
<thead>
<tr>
<th></th>
<th>No TSD n=28</th>
<th>TSD n=26</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female Instructor</strong></td>
<td>14 (50.0%)</td>
<td>12 (53.8%)</td>
</tr>
<tr>
<td><strong>Male Instructor</strong></td>
<td>14 (50.0%)</td>
<td>14 (46.2%)</td>
</tr>
<tr>
<td><strong>Participant Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means</td>
<td>31.5 (SD = 8.8)</td>
<td>32.2 (SD = 7.3)</td>
</tr>
<tr>
<td>Range = 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Participant Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Student</td>
<td>24 (85.7%)</td>
<td>21 (80.8%)</td>
</tr>
<tr>
<td>Male Student</td>
<td>2 (7.1%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>Unknown</td>
<td>2 (7.1%)</td>
<td>4 (15.4%)</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>20 (71.4%)</td>
<td>17 (65.4%)</td>
</tr>
<tr>
<td>Black</td>
<td>3 (10.7%)</td>
<td>3 (11.5%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2 (7.1%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>Asian</td>
<td>1 (3.6%)</td>
<td>2 (7.7%)</td>
</tr>
<tr>
<td>Unknown</td>
<td>2 (7.1%)</td>
<td>3 (11.5%)</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>12 (42.9%)</td>
<td>7 (26.9%)</td>
</tr>
<tr>
<td>Ever Married</td>
<td>11 (39.3%)</td>
<td>10 (38.4%)</td>
</tr>
<tr>
<td>Cohabitating</td>
<td>3 (10.7%)</td>
<td>5 (19.2%)</td>
</tr>
<tr>
<td>Unknown</td>
<td>2 (7.1%)</td>
<td>4 (15.4%)</td>
</tr>
</tbody>
</table>
TSD and Post State Motivation Results

Hypothesis 1

Research Question 1 (RQ1) asked: “What effects do teacher self-disclosure and instructor gender have on student motivation in an online course?” This question was addressed by the following hypotheses.

Hypothesis 1 (H1): Controlling for course expectancy, participants exposed to TSD will have higher positive ratings on the Post-test State Motivation Scale than participants not exposed to TSD.

Hypothesis 1 was tested by a one-way analysis of covariance (ANCOVA), with the treatment condition of TSD as a between factor and expectancy and pre-test motivation as covariates. The means of the untransformed measure of expectancy were 19.00 (SD = 6.09) for the TSD group and 18.52 (SD = 6.77) for the No TSD group. Neither the transformed measure of expectancy, t(52) = 1.57, p = .88, nor the untransformed measure of expectancy, t(52) = 0.27, p = .78, differed significantly between the TSD and No TSD groups. Neither were the transformed expectancy scores – pre: r(52) = .17, p = .23; post: r(52) = -.21, p = .13 – or the untransformed expectancy scores – pre: r(52) = -.16, p = .26; post: r(52) = .21, p = .14 – correlated with the pre-test or post-test motivation scores. The mean pre-test motivation score of the TSD group (M = 5.11, SD = 1.19) was somewhat higher than the pre-test mean of the No TSD (M = 4.74, SD =1.04); however, this difference was not statistically significant, t(52) = 1.21, p = .23.

The results of the ANCOVA did not support Hypothesis 1. The post-test motivation scores of the TSD group (M = 5.35, SD = 1.07) and the No TSD group (M =
5.46, \( SD = 0.96 \) were similar, and the ANCOVA showed no significant group difference in the post-test motivation scores, \( F(1, 50) = 0.20, p = .60 \). Thus, H1 was rejected.

Hypothesis 1 contained sub-hypotheses 1a and 1b. One hypothesis was about the motivation of the participants in the TSD condition, and the other was about the motivation of the participants in the No TSD condition. Both hypotheses used a one-way (Instructor Gender) ANCOVA with course expectation and pre-test motivation scores as covariates.

\textit{Hypothesis 1a}

Hypothesis 1a (H1a) stated: \textit{Participants exposed to female TSD will have higher ratings on the State Motivation Scale compared with male TSD.} The results provide no support for H1a because no significant effect of instructor gender was found, \( F(1, 22) = 0.08, p = .78 \), H1a was rejected. The mean and standard deviations scores are shown below in Table 4.2.

\textbf{Table 4.2 TSD Group: Pre/Post-test Motivation Mean Scores}

<table>
<thead>
<tr>
<th>TSD Group</th>
<th>Pre-Test Motivation Scores</th>
<th>Post-test Motivation Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Instructors</td>
<td>( M = 5.31 (SD = 1.07) )</td>
<td>( M = 5.44 (SD = 0.91) )</td>
</tr>
<tr>
<td>Male Instructors</td>
<td>( M = 4.94 (SD = 1.30) )</td>
<td>( M = 5.28 (SD = 1.03) )</td>
</tr>
</tbody>
</table>

\textit{Hypothesis 1b}

Hypothesis 1b (H1b) stated: \textit{In the condition of No TSD, the gender of the instructor will have no significant effect on participants’ rating on the State Motivation Scale.} The
results are consistent with this statement. The ANCOVA showed no significant
difference in the post-test motivation scores, $F(1, 24) = 0.01, p = .93$, of participants with
the male and female instructor in the No TSD groups. The mean post-test scores of the
male instructor ($M = 5.45, SD = 1.13$) and the female instructor groups ($M = 5.47, SD = 1.03$) were also virtually identical. H1b was also rejected.

**TSD and Pre/Post-State Motivation Results**

_Hypothesis 2_

Research Question 2 (RQ2) asked: “What effect does teacher self-disclosure have
on student pre versus post-motivation in an online course?” This was addressed by the
following hypothesis.

Hypothesis 2 (H2): *Controlling for course expectancy, participants exposed to
TSD will have significantly higher positive ratings on the Post-State Motivation Scale
compared to the Pre-State Motivation Scale.* The analyses described below did not
support the hypothesis that TSD enhances student motivation within the online course.
Thus, Hypothesis 2 was rejected.

Hypothesis 2 was tested in two ways. The first analysis included the effects of
instructor gender and TSD to permit an analysis of their potential interaction. The second
analysis only examined the main effect of TSD and ignored the effects instructor gender.
The two analyses were conducted to see if the interaction effect of gender and TSD
reduced the main effect of TSD. Both analyses used changes in motivation as the
dependent variable. The change score is the post-test motivation score minus pre-test
motivation score. Specifically, the first analysis was a two-way, 2 (TSD) x 2 (Gender), ANCOVA, and the second analysis was a one-way ANCOVA with TSD as the between factor. Expectancy was included as a covariate in both analyses.

The motivation scores of the No TSD group increased more from the pre-test ($M = 4.74, SD = 1.04$) to the post-test ($M = 5.46, SD = 0.96$) than the motivation scores of the TSD group from the pre-test ($M = 5.11, SD = 1.19$) to the post-test ($M = 5.36, SD = 1.07$). This pattern produced a change score of $M = 0.24 (SD = 1.47)$ for the TSD condition and $M = 0.72 (SD = 1.45)$ for the No TSD condition, which is contrary to the prediction of H2. The somewhat larger mean change in motivation in the No TSD group may reflect the fact that the mean pre-test motivation score was somewhat lower in this group.

Neither the two-way ANCOVA, $F(1, 49) = 1.77, p = .19$, used in the first analysis, nor the one-way ANCOVA, $F(1, 49) = 1.62, p = .21$, used in the second analysis, found that TSD had a significant effect on student motivation, controlling for expectancy and pre-test motivation scores. Thus, contrary to H2, TSD did not increase motivation.

However, both ANCOVAs found a statistically significant effect of expectancy on motivation changes scores: two-way, $F(1, 49) = 4.31, p < .05$; one-way ANCOVA, $F(1, 51) = 4.31, p < .05$. A Pearson correlation found that expectancy was positively associated with change in motivation, $r(50) = .26, p = .06$. It is possible that course expectancy may have enhanced motivation.
The analyses did not use a covariate of pre-test motivation scores as done in the analyses of H1, H1a, and H1b, and expectancy was not correlated with either pre-test scores in those analyses. As expectancy was correlated with change scores in the current analyses, it was decided to examine if pre-test scores were also correlated with the motivation changes scores. Indeed, a Pearson correlation indicated that pre-test scores had a significant negative association with change in motivation, $r(50) = -0.73, p = .001$. This suggests the possibility that the pre-test scores contributed to a ceiling effect on positive changes in motivation. The mean pre-test motivation score of the TSD group was 5.11 out of a possible maximum score of 7, and nearly one-quarter of the students in the TSD groups had a mean score of 6 or higher on the pre-test.

*Time (Post-Test minus Pre-Test) and Expectancy Result*

As stated above, the analysis of H2 found that course expectancy had a marginally significant correlation with change in motivation between the pre-test and post-test, $r(52) = .26, p = .06$. The correlation analyses reported above found no significant correlation between expectancy and the pre- or post-test motivation scores. The finding that correlations between expectation and motivation were only related to changes across time, suggests the need to examine changes in motivation over time more closely. The effect of time suggests that a high level of participant expectancy prior to exposure to TSD contributes to an increased motivation score. Further analysis, found that the relationship between participants’ expectancy rating scores and the motivation change scores was statistically significant for the No TSD groups of both male and female instructors, $r(26) = 0.384, p < .05$, but not for the TSD groups of both male and female
instructors, \( r(24) = 0.135, p = 0.512 \). Because the TSD treatment group had higher pre-test motivation scores, it is possible that the lower correlation between the participant expectancy rating scores and the change in participant motivation scores in the TSD group reflects the limited range of the *State Motivation Scale*, which does not go above a rating of seven.

**TSD and Affect Toward Teacher Results**

*Hypothesis 3*

Research Question 3 (RQ3) asked: “Do teacher self-disclosure and instructor gender have an effect on students’ affect toward the teacher in an online course?” and was addressed by the following hypotheses.

Hypothesis 3 (H3): *Controlling for course expectancy, participants exposed to TSD will have significantly higher positive ratings on the Affect Toward Teacher Scale than participants not exposed to TSD.*

Hypothesis 3 was tested by a one-way ANCOVA with the treatment condition versus control (TSD versus No TSD) as a between factor and participant expectancy ratings as a covariate. The results of the analysis of the effect of TSD on participant’s affect toward the teacher (ATT), ignoring instructor gender, yielded a mean score of 5.84 (\( SD = 0.99 \)) for the TSD condition and means score of 5.72 (\( SD = 0.94 \)) for the No TSD. Although the results are in the predicted direction, the between-group difference was very small and not statistically significant, \( F(1, 51) = 0.20, p = .65 \); therefore, H3 was rejected.
Hypothesis 3 contained sub-hypotheses 3a and 3b. Both were tested using a one-way ANCOVA with instructor gender as the between factor and participant expectancy ratings as a covariate. Hypothesis 3a was tested with participants in the TSD condition and Hypothesis 3b was tested with participants in the No TSD condition.

**Hypothesis 3a**

Hypothesis 3a (H3a) stated: *Participants exposed to female TSD will have significantly higher positive ratings on the Affect Toward Teacher Scale compared with male TSD*. The data analysis results provided no support for H3a in that they showed the mean score for female TSD ($M = 5.81, SD = 1.01$) on the Affect Toward Teacher Scale was not significantly higher, $F(1, 23) = 0.002, p = .96$, than the mean score for male TSD ($M = 5.86, SD = 1.01$). As a result, H3a was also rejected.

**Hypothesis 3b**

Hypothesis 3b (H3b) stated: *In the condition of No TSD, the gender of the instructor will have no significant effect on participants’ rating on the Affect Toward Teacher Scale*. Consistent with Hypothesis 3b, no significant difference was found between females in the No TSD condition ($M = 5.50, SD = 0.940$) and males in the No TSD condition ($M = 5.94, SD = 0.92$), with respect to their affect toward teacher scores, $F(1, 25) = 1.44, p = .24$. Because there was no instructor gender effect in the analysis of H3a, there is no reason to give substantial meaning to the absence of an effect in H3b.
TSD on Participant Perception of TSD Results

Hypothesis 4

Research Question 4 (RQ4) asked: “Do teacher self-disclosure and instructor gender have an effect on students’ perception of teacher self-disclosure in an online course?” This was addressed by the following hypotheses.

Hypothesis 4 (H4): Controlling for course expectancy, participants exposed to TSD will have significantly higher positive ratings on the TSD Scale than participants not exposed to TSD.

Hypothesis 4 was tested by a one-way ANCOVA with the treatment condition versus control (TSD versus No TSD) as the between factor and participant expectancy scores as the covariate. The results for H4 showed that the perception of TSD of participants in the TSD condition ($M = 3.41, SD = 1.11$) were not higher than those of participants in the No TSD condition ($M = 3.47, SD = 1.10$). Therefore, the analysis did not support the hypothesis and no significant between-group difference was found, $F(1, 51) = 0.05, p = .83$.

Hypothesis 4 contained sub-hypotheses H4a and H4b. Both hypotheses were tested using one-way ANCOVAs with participants’ expectancy scores as the covariate.

Hypothesis 4a

Hypothesis 4a (H4a) stated: Participants exposed to female TSD will have significantly higher ratings on the TSD Scale compared to participants exposed to male TSD. The results did not support Hypothesis 4a, as the TSD scores of participants
exposed to the female TSD ($M = 3.08, SD = 1.17$) were not significantly higher than those who were exposed to the male TSD ($M = 3.68, SD = 1.03$), $F(1, 23) = 0.77, p = .39$.

**Hypothesis 4b**

Hypothesis 4b (H4b) stated: *In the condition of No TSD, the gender of the instructor will have no significant effect on participants’ ratings on the TSD Scale.* The results of No TSD female instructors ($M = 3.22, SD = 1.26$) and male instructors ($M = 3.71, SD = 0.91$) were consistent with Hypothesis 4b, in that no significant difference was found in ratings of TSD by gender of the instructor among participants in the No TSD condition, $F(1, 25) = 1.53, p = .23$. Because there was no instructor gender effect in the analysis of H4a, there is no reason to give substantial meaning to the absence of an effect in H4b.

**Qualitative Themes from Responses to Open-Ended Questions**

Responses to the four open-ended questions presented in Appendix J were sorted into dichotomous categories, such as yes, no, positive, and negative, and then analyzed using Chi-square tests. Open-ended comments were assessed for common themes and then sorted into thematic categories. Analysis of the responses to all four open-ended questions and the specific tendencies observed for each of the four questions are presented below.

The first question asked participants to choose an option from this sentence: “I would/would not take another course with this instructor.” This question yielded 41 (68%) comments from the total pool of respondents (n=60). Out of the 41 students who
said they would take another course with the same instructor, 12 (57%) were from the No TSD group and 11 (55%) from the TSD group. There was no significant difference between these groups, $\chi^2 (1, N = 41) = .02, p > .80$. Additionally, there were more comments about the gender of the female instructor in comparison to comments made about the male instructor in both the No TSD and TSD conditions. Within this question, female gender was mentioned 14 times (34%); whereas male gender was mentioned only 5 times (12%), which was significant $\chi^2 (1, N = 41) = 4.26, p < .05$. This finding indicates that the students noticed the gender of the instructor.

The second question asked respondents to choose an option from the following: “I would/would not consider changing the following items in this course.” This question yielded 33 (55%) comments from the total pool of respondents (n = 60). Out of the 33 students who recommended changes to the course, 5 (31.2%) from the No TSD group posted comments, and 8 (47.6%) from the TSD group posted comments. There was no significant difference between these groups, $\chi^2 (1, N = 33) = 0.86, p > .50$. A comparison of the number of comments made in the female and male instructor led courses by the No TSD and TSD groups found no significant group difference, $\chi^2 (1, N = 33) = 0.04, p > .90$.

The recommended changes to the course could be coded into two categories encompassing course workload and course organization. Some examples of the changes recommended were, “The time frames should be changed to have a more manageable workload in the entire course.” Another comment made was, “I like the options of the assignments to best fit the needs of the participants’ learning, and it does look like a lot of
work for one course, particularly because many individuals work full-time, have families, are in this part-time, and also have internships.” In comparison, there were an equal number of comments made that stated not to change the course. Some of these comment were, “I thought the course sounded thorough, challenging, and engaging as is.” Another comment stated that, “I would not consider changing anything I noticed in the course, felt it was organized very clearly.”

The third question asked participants to respond the following sentence by filling in the blank: “The technology used in this course is ______.” Similar to questions 1–3, Question 4 yielded 40 (67%) comments from the total pool of respondents (n = 60). Out of the 40 students that responded positively to the technology used in the course, 12 students from the No TSD group (60%) and 14 from the TSD group (70%) liked the technology used. There was no significant difference between these groups, $\chi^2 (1, N = 40) = 0.44, p > .50$. On the whole, the ratio of negative 7 (18%) to positive 28 (70%) comments, $\chi^2 (1, N = 40) = 12.6, p < .05$, indicated that the technology was highly functional and not a deterrent to participation in the research. There was no significant difference between the No TSD and TSD groups. Additionally, analysis of the number of comments made in the female and male instructor led courses by the No TSD and TSD groups revealed no significant difference between the groups, $\chi^2 (1, N = 40) = 0.90, p > .10$

Positive examples of participant statements included, “Good and even between videos and explaining in text,” and “This course appears to use more of the features of Blackboard Learn than other online courses I have taken at the university. I think this
increased use of feature adds to the quality of the course.” Negative examples of participants’ comments include, “The amount of videos to watch are difficult to maintain attention,” and “The discussion posting is tedious and should be more accessible for participants to collaborate.”

The fourth and final question asked participants, “How do I feel about taking this course with this instructor?” This final question yielded 38 (63%) comments from the total pool of respondents (n = 60). Out of the 38 students who had positive feeling about the instructor, 13 from the No TSD group (68%) made comments, and 17 from the TSD group (89.5%) made comments in the TSD group. More participants in the TSD condition (89%) were also interested in taking this course with this instructor compared to participants in the No TSD condition (68%). Again, the difference was not significant \( \chi^2 (1, N = 38) = 2.53, p > .10 \). Moreover, an analysis of the number of comments made in the female and male instructor led courses by the No TSD and TSD groups revealed no significant difference between these groups, \( \chi^2 (1, N = 38) = 0.42, p > .50 \).

The participants’ comments in the TSD group consisted of statements, such as, “I would be interested in taking this course with this instructor. It appears to be a great topic and broadens our understanding of different theories and how it relates to the work that social work performs,” and “The instructor's bio and camera presence makes me inclined to take a course with her, as does the composition of the course and the thoughtfulness in how the syllabus and modules were put together.” These were compared to those in the No TSD group, which expressed sentiments, such as, “I feel the instructor is knowledgeable and fair,” and “I feel confident that I will be engaged and that the material
will be challenging enough to hold my interest.” The potential of these comments to better understanding the value of TSD in online education are discussed further in Chapter 5.

**Supplemental Data Analysis**

The Blackboard Learn LMS, on which the sample online course was constructed, included a tracking feature that showed the sections of the course the participants did and did not visit. These logs showed whether or not the participants who had access to the TSD information actually viewed it. The logs reported that 6 out of 32 (19%) participants with access to the **Meet the Professor** tab did not access it. Further exploration of the activities of these six participants revealed that each of them respectively spent 0.22, 0.23, 0.25, 0.45, 2.30, and 2.22 hours online to explore the online course and answer the surveys questions. Because these six participants who were assigned to the TSD group did not experience view the **Meet the Professor** tab, they were excluded from the statistical analyses of the **Motivation**, **Affect Toward Teacher**, and **TSD** scales.

Several analyses and other assessments were conducted to compare these six participants to the other study participants, specifically the other participants in the treatment condition who did experience the TSD intervention (**Meet the Professor**). For example, a review of the LMS activity logs revealed that these six participants spent their time online in a similar manner. In this study, time spent online ranged between 13 minutes and 8.59 hours, with an average of 2.09 hours. However, an inspection of their responses on the **Affect Toward Teacher Scale** found that 5 of the 6 participants only entered the anchored scores at either end of the scale range (1 or 7) as their responses to
the questions. That is, these participants answered all ones or all sevens, indicating that they did not deliberate about their choices of responses.

The post-test motivation scores of the six participants assigned to the TSD condition who did not view the Meet the Professor tab were also compared to those of the other participants in the TSD condition using independent t-tests. Because these were simple two-group comparisons that did not involve covariates, an independent t-test was the most appropriate statistical test to use. This test found that motivation mean of these six participants ($M = 4.85, SD = 0.29$) was significantly lower, $t(30) = 2.29, p < .05$, than the mean scores of the participants in the TSD condition who did view the Meet the Professor tab ($M = 5.36, SD = 0.96$). Their motivation scores were also significantly lower than the participants in the No TSD condition who did not have access to (and therefore did not view) the Meet the Professor tab, $t(30) = 2.62, p < .05$. Subsequent t-tests found no significant differences on the Affect Toward Teacher Scale or the TSD Scale between the participants who did view the tab and the six participants who did not view it.

The implications of this dissertation research are discussed in Chapter 5. Three areas are highlighted: 1) the potential of this research to influence practices in teaching and learning online, 2) the usefulness of the methods employed in this study to enhance the teacher-student relationships in online education, and 3) the need for further research on the impact of TSD in online learning.
CHAPTER FIVE: DISCUSSION

This study investigated the effects of teacher self-disclosure (TSD) on participant responses to questions about three dependent variables: motivation, affect toward their teacher, and ratings of TSD. Through the utilization of a Meet the Professor feature in a sample online course, the research setting delivered a multi-layered design of social media resources to create TSD for the purpose of personalizing the teacher-student relationships in a purely online environment. Surveys and open-ended questions were used to measure the influence of the TSD intervention on these three dependent variables. A description of the data analyses and findings is provided in Chapter 4. This chapter presents interpretations of the results for each research question, discusses theoretical and pedagogical implications, provides suggestions for the practical implications of the study, and describes its limitations. It also offers final conclusions and recommendations for further research.

Discussion

Using the processes of analyses described in Chapter 3, the results of this study revealed no statistically significant effects of TSD on the four main research hypotheses. Therefore, the Hypotheses 1, 1a, 1b, 2, 3, 3a, 4, and 4a were all rejected. Nonetheless, the literature supporting the study design suggests that TSD, gender, and motivation are capable of influencing teacher-student relationships online. This discussion begins by considering the findings and interactions among the aforementioned variables: student motivation, instructor and student gender, and teacher self-disclosure (TSD).
**The Impact of TSD and Gender on Student Motivation**

The results of this study were statistically inconsistent with previous studies that investigated the relationship between state motivation, gender, and TSD. Cayanus and Martin (2002) found an association between TSD and student responsiveness through observations of the reactions and effects generated by TSD verbal and nonverbal behaviors. Sorensen (1989), Cayanus (2002), and Mazer et al. (2007) identified that exposure to TSD encouraged students to engage in the classroom environment, with the course content, and in teacher-student conversations. These outcomes were attributed to increases in student state motivation. Similarly, Aubry (2009) and Mazer et al. (2009) found that manipulating TSD with web-enhanced technology could change student state motivation. That is, appropriate TSD resulted in more motivation and vice versa. Based partially on these outcomes, Hypothesis 2 (H2) predicted that TSD would be associated with higher levels of student motivation. Although the lack of statistically significant outcomes led to the rejection of H2, the current findings do not necessarily undermine the results of previous studies; the lack of statistical significance means the current results are inconclusive.

**Measuring Perceptions of TSD and Student Motivation**

Research Question 1 (RQ1) addressed the measurement of student motivation, regardless of instructor gender. Research Question 2 (RQ2) measured motivation for comparison between a female instructor and a male instructor with exactly the same amount and type of TSD; variations in the intervention only occurred with the occasional use of gender specific pronouns. As presented in Chapter 4, no statistically significant
effects were found for either RQ1 or RQ2. Motivation of students participating in this research was measured as change scores (the difference between the post-test scores minus the pre-test scores) on the motivation scale and was, therefore, a measurement over time. The concept of motivation changing over time found in this research was compared to previous research measuring similar changes in motivation scores. Cayanus and Martin (2004) conducted an experiment where participants were surveyed at the beginning of a term and again at the end of the eighth week of the course. They found that participants’ perceptions of TSD and motivation develop over a period of time. Similarly, Cayanus, Martin, and Myers (2008) collected students’ perception of TSD during the ninth week of the semester, whereas Aubry measured the effect of TSD on student motivation over two semesters with the same instructor. This dissertation research was based on student perceptions of an online course accessed over two weeks. Consequently, the time period between the pre-test and post-test may not have been enough exposure to TSD to have a significant effect on student state motivation. Future online research measuring the effect of TSD on student motivation may choose to study it over a longer period of time. As this study measured TSD and motivation accessed over a two-week period, this duration of time may not have been long enough to create a positive change in student state motivation. In addition, an interactive study design may be necessary to create a more intense teacher-student interaction. In this study, TSD was a relatively static element. In an online classroom that is more dynamically interactive, TSD and student motivation can unfold as the teacher interacts with the student during the course of the semester. An
interactive study design is discussed below in the sections on limitations and recommendations for further research.

The study’s data initially showed an elevated interest in the course offered before it began through comparing the mean scores of student expectancy to their pre-test state motivation score. The data showed that the TSD condition pre-test motivation scores were elevated at the outset of the study. This suggests the possibility of an interaction effect between student expectancy and pre-test motivation scores, creating a ceiling effect for state motivation. Student state motivation could not be measured beyond the spectrum on the State Motivation Scale, which suggests a heightened pre-state motivation score in relation to the scale used to measure it. As a result, the tool used to measure student state motivation on the post-test may not have been broad enough to encompass the full extent of change in student state motivation. There may be a need to develop a more sensitive or adjustable scale for measuring student motivation in environments where students have a heightened expectancy.

A significant outcome of this research was that the analyses of the effects of instructor gender and TSD on motivation indicated that the gender of the instructor did not have the expected effect. H1a predicted that student state motivation would be higher in a course with a female instructor than it would be in a course with a male instructor. In this dissertation research, the results of the data analysis found no significant difference between the motivation results for the female and the male instructor. Upon reflection, the lack of a difference may be explained by the fact that the male and female instructors shared exactly the same amount and content of TSD. The TSD content was not
customized to reflect how student gender has been found to interact with faculty gender. Researchers (McCarthy & Schmeck, 1981) have observed that male and female students tend to perceive male and female TSD differently and that male and female students respond differently to TSD, implying an interaction between TSD and the gender of the students. Of the student participants in this research, 95% of those reporting their gender (55 of 60) were female (n = 52), which indicates a potential gender bias in the data. These findings suggest that further research into the effects of TSD in online education may benefit from customizing TSD to the expectations of how male and female instructors express personal information to develop productive relationships with students.

Additionally, Cayanus and Martin (2004) showed that men and women perceive TSD differently, \( t(262) = 2.36, p < .05 \), with women (M = 76.77) perceiving more TSD than men (M = 70.44). In this study, the gender of the student was not factored into the design because the number of male participants was very small. Consequently, the gender of the teacher may not have had the expected effect. Further research may benefit from provisions for measuring TSD based on both student and instructor genders.

**The Relationship between TSD and Gender on Students' Affect the Toward Teacher**

With respect to Research Question 3 (RQ3), this section discusses the data analyses that investigated the relationship between TSD, instructor gender, and the students’ feelings toward the teacher in an online course. Results of this study were inconsistent with those found in previous studies that investigated the relationship between affect toward the teacher and TSD. As presented in Chapter 2, Frisby and Martin (2010), Cayanus and Martin (2004), and Mazer et al. (2007) all reported that various
forms of TSD led to improved relationships between teachers and students. These studies showed that improved teacher-student relationships led to increased teacher-student rapport. High levels of TSD led to increased student motivation (Cayanus & Martin, 2004; Mazer et al., 2009), affect toward the teacher and the course content (Mazer et al., 2007), and improved student participation and cognitive learning (Frisby & Martin, 2010). These findings contributed to the decision to include affect toward the teacher as a variable in the current research. Like this study, however, some research has not found a relationship between TSD and teacher-student affect, and Cayanus and Martin (2004) failed to find an interaction between TSD and affect toward the teacher. They suggest that TSD may be composed of other variables that are not measured by either the TSD or Affect Toward Teacher scales, which influence the teacher-student relationship within the contexts of online or f2f classroom. Further research may discover what factors influence the connection between students’ perception of TSD and student affect toward the teacher, thus explaining the conflicting results of past research.

Measuring Perceptions of TSD and Student Affect Toward Teacher

The Affect Toward Teacher Scale provided a score for the students’ feelings toward the instructor. The data analysis reported in Hypothesis 3 (H3) indicates that the participants in any of the four study groups did not differ significantly in their affect toward the instructor. Teacher self-disclosure did not have a significant effect on the students’ feelings toward the teacher. The results reported in this study are in contrast to another study (Mazer et al., 2007) using the same instrument. Mazer et al.’s (2007) operational definition or construct of TSD consisted of a female instructor’s Facebook
page. Students viewed the Facebook page in a lab and then attended her f2f classroom. In the present study, which was conducted completely online, male and female TSD was controlled through access to the Meet the Professor tab. This comparison suggests two explanations that may be useful in further research on TSD in online education.

First, Mazer et al. (2007) had a f2f element, which was not present in this dissertation research. Instead, this study employed a Meet the Professor tab to provide personal information about the instructor. The information distributed was personal but not interactive. Interactivity may be an essential component to increase students’ affect toward their teacher. More research is needed on the nature of online relationships and how to develop them for educational purposes.

The Effects of TSD and Gender on Student Perception of TSD

The data analysis revealed no connection between TSD and instructor gender as Hypotheses 1a (H1a) and 3a (H3a) predicted. As a result, these hypotheses were rejected. Both the timing of the TSD and the size of the class of participating students may explain these results. Archer and Burleson (1980) found that the timing of disclosure and associated perceptions of the person making the disclosure were influential variables. Similar to motivation, self-disclosure in the context of the teacher-student relationship is typically revealed over a period of time. Although the delivery of the self-disclosing tweets in this dissertation research was paced to appear to the participants in the treatment courses twice a day, the overall timespan of the research may have been too short, similar to the findings on motivation and affect toward the teacher. The accumulation of findings for all three dependent variables suggests that relationships need time to develop, even if
the elements supporting its development are present from the beginning of the experience. Additionally, Cayanus and Martin (2004) concluded that students’ perceptions of TSD were moderated by class size. Students in larger classes (greater than 25) perceived more TSD, while students in smaller classes (less than 25) perceived the least amount. Although this finding is counter-intuitive to the expectation that smaller class sizes would facilitate personal relationships more than larger class sizes, the findings of the present research are consistent with Cayanus and Martin (2004). Due to low survey completion rates, all sample class sizes were less than 25 in this study.

*Exploring Perceptions of TSD and Instructor Gender*

Research Question 4 (RQ4) asked if TSD and instructor gender have an effect on student perceptions of TSD in an online course. Hypotheses 4 predicted that the TSD used in the research environment would lead to higher scores on students’ measures of TSD than those who were not exposed to TSD. Hypothesis 4a predicted that the scores would be higher for the female instructor than the male instructor. The data did not support either hypothesis, and they were rejected. Inconsistent with earlier findings, the TSD scores of study participants were higher in the male instructor condition than in the female instructor condition. Cayanus and Martin (2004) found that the gender of the student mattered in their research design because male and female students viewed TSD differently. Female students perceived greater TSD than males with the same instructor in the same course. In this study, the students’ experience of TSD was controlled, and the fact that 95% of the participating students were female may account for the lack of a significant difference.
Additionally, the type of tweets used in this study may have negatively impacted the results on the TSD scale. Johnson (2011) reported that students who saw only the social tweets rated the instructor as more credible than the group of students that saw only the scholarly tweets. Similarly, McArthur and Bostedo-Conway (2012) found that students’ perceptions of teacher credibility were described as a combination of teacher competence, trustworthiness, and caring for the student, which were positively related to students’ own use of Twitter. The more those students used Twitter, the higher they rated the instructor’s credibility. These outcomes are consistent with Frymier and Shulman’s (1995) research, which showed that students’ feelings of shared experiences help them to identify with the instructor. The study design used in the online learning environment measured TSD and students’ perceptions of TSD based upon one or two tweets a day about personal information. Because these tweets consisted mostly of personal information, they may not have been as effective as tweets consisting of both personal and academic information. Furthermore, earlier research (Frymier & Shulman, 1995; McArthur & Bostedo-Conway, 2012) on the use of social media in f2f instruction has shown the effect of Twitter when used across the duration of the semester. Together, the duration, type, and amount of tweets, may have not been enough TSD to stimulate a response in the students viewing the Meet the Professor tab. Online educators would benefit from further research on the effects of delivering the same TSD content over different periods of time.
Qualitative Findings

Chi-square tests conducted on the categorization of this study’s qualitative data align with the rejection of the hypotheses testing on the effects of TSD based on the ANCOVAs. In all, the chi-square tests found no significant differences on the participants’ responses to the qualitative questions by TSD. Before coding the qualitative data in categorical variables, the comments to four qualitative questions were reviewed for thematic elements. The first question asked: “How do I feel about taking this course with this instructor?” The comments indicated that participants in the TSD condition were somewhat more interested than those in the No TSD condition in taking another course with the instructor presented in the online research setting. These findings are generally consistent with H1, H3, and H4, which all predicted that TSD would stimulate more motivation, affect toward the teacher, and higher ratings of the teachers’ self-disclosure than having No TSD would. However, the chi-square test found no significant differences between conditions (TSD versus No TSD) when the qualitative data were classified into categorical variables, such as interest versus not interested. Hence, the chi-squared analyses of the categorical data found no relationship between TSD and other variables measured in this study.

Study Limitations

Although 360 students were recruited, a response rate of 17% resulted in data being collected from 54 students. This was the total number of students who completed all five surveys. Those students were then divided into two control groups (male or female instructor with No TSD) and two treatment groups, (male or female instructor
with TSD), resulting in less than 15 students per group. Cayanus and Martin (2004) reported that small group size limits the development of TSD in f2f classrooms.

Additionally, given the failure to find TSD effects in the short time frame of this study, further research would benefit from using longer time frames to allow for higher levels of teacher-student connections. These connections could yield results that exhibit greater group differences in attitude and performance. The “laboratory approach” of the present research, using previously prepared messages of TSD and a lack of interactivity between instructor and students, may be insufficient to stimulate personal relationships that might increase student motivation. Research comparing prepared versus spontaneous TSD interactions over the same time frame could enhance our understanding of the effects of these variables.

An additional concern was that the survey tools used to measure the effect of TSD on motivation and student affect toward the teacher are potential limitations of the present study. For example, because of the interaction between expectancy and pre-test motivation, students’ scores on the post-test State Motivation Scale may not be able to capture the change in the students’ motivation. The scale may not be sensitive enough to measure the increase in participant motivation if the participants in the study were already highly motivated and interested in the materials presented in the online course. Future research may benefit from sorting students into groups based on their pre-course expectancy scores. Similarly, the surveys used to measure student state motivation and affect toward the teacher were designed to collect data from f2f classrooms. These instruments may need to be adapted for measuring purely online relationships.
Finally, the *Teacher Self-Disclosure Scale* applied in this study was created to measure a single construct developed by Cayanus (2002). Stating in 2002, other studies investigating TSD have applied a multi-dimensional scale (Cayanus, Martin, & Goodboy, 2009) based on the research of Cayanus and Martin (2008) who measured negative, positive, and relational TSD statements. More investigation into motivation, student affect toward the teacher, and TSD in online learning could determine if there is a need to revise these scales to measure online student behaviors in comparison to its f2f counterpart.

**Contributions to Online Learning**

This study was designed to quantitatively and qualitatively assess the effect of behaviors that are often viewed as intangibles, such as verbal and nonverbal TSD and student affect toward the teacher in an online environment. The aim of the study was to investigate the development of online teacher-student relationships and how they impact student-learning outcomes. One way to accomplish this goal is to apply successful f2f classroom teaching techniques that support the teacher-student relationship. This methodology requires focusing on aspects of teacher-student relationships grounded in instructional communication theory. Instructional communication researchers view the processes of teaching and learning as an inherently communicative process; teaching and learning could not occur without communication. The experimental design of the current study focused on the affective elements within instructional communication theory that can occur in online learning but are often ignored or neglected in current online programs. It was based on the premise that applying instructional communication theory
to online education can assist in the development of the teacher-student relationship online. Teachers can learn more about how the relationships created online can affect student learning, teacher self-efficacy, and overall job satisfaction.

The founders of instructional communication research were mostly interpersonal (human) communication scholars, not media scholars. As a result, comparatively little of the instructional communication research to date has been directed toward computer-mediated instruction. Yet, communication facilitated by technology has expanded enormously over recent decades. Technology has become pervasive appearing in many aspects of daily life. This has led to the need to find new and productive ways of incorporating it into learning environments. This research is dedicated to helping educators leverage learning technologies to connect personally with their students and improve online education.

**Current Trends in Online Learning**

This study can help to address two issues in online education, which Allen and Seaman identify in their 2015 report: 1) student retention, and 2) the rise in the number of faculty members who do not accept the “value and legitimacy” of online education. Student retention and faculty acceptance are important issues in online education. Researchers have shown that TSD and immediacy behaviors delivered via computer-mediated communication (CMC) can increase student motivation in f2f coursework (Chesebro & McCroskey, 2001; Christensen & Menzel, 1998; Christophel & Gorham, 1995; Frymier, 1993). This study investigated a method of adapting teaching practices, known to be effective in f2f education, to the context of the purely online learning
environment. As such, it focused on techniques for improving affective elements of teaching and learning through TSD. Affective learning is an element of learning that contributes to course completion, student motivation, continuing education, increased value of the knowledge gained, and the development of lifelong learning. It also contributes to teacher job satisfaction, which could improve faculty’s online experience and their ratings of the value and legitimacy of online education.

Learning situations that foster student acquisition of knowledge can be generated through the use of TSD. Sorensen (1989) studied TSD statements that connected the teacher with the students, finding that there was a positive relationship between TSD statements and the students’ perception of the teacher. A teacher’s positive statements can increase student interest and motivation to learn because the student perceives the teacher as being more immediate and more personal, thus more worthy of receiving their attention. Cayanus and Martin (2008) also concluded that increased amounts of positive TSD influenced students’ state motivation to engage in course-related activities and those students reported increased learning when TSD was present in the f2f classroom. As online education has grown in the 21st century, many have adopted a mass production approach to course development in order to quickly move course and other educational experiences online. When this occurs, there is often a tendency to offer little or no instructor interaction, and the benefits of affective learning to both students and teachers may be lost or degraded.

This dissertation research probed into how teachers can adapt their online communication with students to improve productive personal relationships. It supports
improved teacher efficacy in online education. Teacher self-efficacy is the extent to which the teacher believes that they have the capacity to affect student performance. Teachers who possess self-efficacy believe that they can influence how well students learn, even those who may be difficult or unmotivated. They often believe they can find ways to motivate students by making learning relevant to them. Research has shown this behavioral trajectory can be facilitated through developing personal connections between teachers and students. When teachers are capable of cultivating these types of productive relationships, they tend to be more satisfied and rewarded by their teaching efforts.

Teaching becomes not only about helping students to learn but also about developing successful human beings. Teacher job satisfaction is a construct that has been studied in relation with teacher self-efficacy. Teachers and students working together create self-efficacy and job satisfaction for the teacher, reinforcing the value and legitimacy of the work in the minds of teachers. Teachers’ self-efficacy is enhanced in such a way that they are confident in their ability, knowledge, and skill to facilitate student learning. For teachers, their relationships with students are an indicator of job satisfaction.

Teachers are becoming increasingly aware of how to use communication in the classroom, and the advanced study of instructional communication theory provides research for enhancing their instructional effectiveness (Richmond, McCroskey, Plax, & Kearney, 1986). Cayanus and Martin (2008) stated that as the teacher-student relationship develops, students’ ability to decode TSD messages as positive or negative often improves, resulting in an increase in the students’ ability to connect with their teacher and the course content.
Conclusions

This study, which emerged from the literature in instructional communication and self-disclosure, illustrates the complexity of the teacher-student relationship. It attempted to understand factors that affect the teacher-student relationship in online education through the use of known approaches in f2f instruction. The teacher-student relationship was seen as the connection between the teacher and the student, which is created through verbal and nonverbal communication. This communication allows for both student motivation and affect toward the teacher to influence learning outcomes and teacher job satisfaction. In the online environment, however, teacher and student interactions are mediated through technology. Building technology-based resources that reflect current knowledge and are clear and logical requires significant effort. This effort can lead to focusing solely on the content of a course and ignoring the personal relationships and affective elements of education that inspire learners and reward teachers. Given the centrality and importance of relationship building in learning, teachers will benefit from learning how to leverage their online personas to convey their personal style, personality, and concern for students.

In online environments, students often cannot see their teachers’ facial expressions and personal mannerisms, experience their sense of humor, or hear their personal anecdotes. Moore and Kearsley (1996; 2005; 2011) have tracked that relationships between teachers and students can easily become impersonal and isolating for students in technology-mediated or distance education. As scholars, they have identified the need to develop intentional online communications that are designed to
replicate the spontaneity that occurs in f2f settings. This research contributes to understanding more about how to design online courses to achieve these goals.

Although this research did not show significant improvements in student motivation resulting from liking and knowing their teacher, it does show that mindful online course design is needed to support affective activities present in f2f instruction. It also reinforces the importance of the teacher-student relationship in online and f2f instruction. In addition, it defined methods of utilizing social media that can contribute to research on TSD and building teacher-student relationships. Online instructors and instructional designers need a clearer understanding of how communicating humor, warmth, and appropriate details of personal lives through various online media can improve students’ engagement and motivation to learn. To clarify this perspective, it is important to introduce terms that describe how personal connections between instructors and students contribute to the learning environment and how those connections are defined and developed.

Allen and Seaman’s (2015) report advocates the need for continued research in online learning and, more specifically, investigations into the relationship between teachers and students within the online environment. Further research can build on this effort to identify variables that can help online instructors to build elements of personal connection that improve teaching and learning into their online courses. Given appropriate resources and training, instructors can purposefully control the amount and type of personal information disclosed to learners that will improve learning and teacher satisfaction.
Further Research

Moore and Kearsley (1996; 2005; 2011) argued that certain technologies affect how people behave in different interactions. Some outcomes of this research suggest that researchers should pay close attention to their timelines when investigating the effects of personal relationships in online education. Online relationships need time to develop into a motivating resource; therefore other research might replicate this study’s use of the TSD, such as the Meet the Professor tab, within the context of an online and f2f classroom to examine the effect it has on students. The nature of computer-mediated communication allows teachers to determine how they appear on a Meet the Professor tab. Educators can benefit from investigations into how certain forms of TSD that are typically in social media, such as photographs, personal beliefs, and relationship status, stimulate and change students’ perceptions of teacher credibility. Educators can benefit from more research into the curvilinear relationship between TSD and educational outcomes (Cayanus & Martin, 2004). Research should investigate the excessive use of online TSD to see if it has a negative effect on the teacher-student relationship. The use of a Meet the Professor tab with guidelines detailing the amount and timing of sharing may be an important tool to foster productive relationships in the online learning environment.

Throughout the development of online education, researchers have primarily focused on the student within the online course. Comparatively little research has focused on the role of the instructor’s personality within the online learning environment and what role it plays in the online the learning experience. Results from the current study
contribute to our understanding of the importance of student outcomes that are affected by the relationship between the teacher and the student, as well as the research methods needed to investigate them. Content-based online courses can be constructed with relative ease. One improvement to humanize these content-based online environments are to enhance them using the teacher-student relationships. This could be achieved through appropriate use of TSD. Additional research is needed to better understand the complexities of migrating and adapting effective self-disclosure behaviors from f2f classroom instruction to online learning. Research needs to provide insight into how to create a framework for generating productive teacher-student relationships, as opposed to an exclusive focus on technological solutions in education. Both the literature review and the actual research in this study contribute to enhancing our understanding of the nuanced intricacies of teacher-student relationships in an online environment and can help improve how online courses are constructed, delivered, and experienced.
BU SSW Research Study - Seeking Participants

Dear BU MSW Student,

I would like to take this opportunity to invite you to participate in an online research study. All students who participate in this study will receive a 15-dollar Amazon gift card for the time you spend completing the study, which should take no longer than 1 hour.

In addition, all student participants will be enrolled in a lottery, where five students will be selected to receive one of four 50-dollar Amazon gift cards or one Apple iPad. To become eligible for the lottery prizes (iPad and Amazon gift cards), you will need to complete all five steps of the study.

The research study is open for 14 days. It will close on (Day, Month, Date). During this period, please use the following URL link https://lms-test.bu.edu/ to access the research study. All responses in this study are anonymous and confidential.

If you encounter any technology issues preventing you from participating in the study, please contact Eldon Strickland at ems363@bu.edu and I will assist you with any issues you may be experiencing.

Thank you for your participation in this research study.

Sincerely,
Eldon Strickland
Doctoral Candidate

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APPENDIX B: 7-DAY FOLLOW-UP EMAIL

7-Day Follow-up on BU SSW Study

Dear BU SSW Student,

Thank you for participating in the BU SSW research study. You are receiving this email because you have access to the online research study but not completed the five steps required to become eligible for the lottery prizes (iPad and Amazon gift cards). Please return to the study to complete the surveys so you can receive the lottery prizes.

The study is open for another 7 days and will close on (Day, Month, Date). During this period, please return to the study to complete the remaining steps. Use the following URL link https://lms-test.bu.edu/ to access the research study. The remaining items will not take longer than 10-15 minutes to complete.

If you encounter any technology issues preventing you from participating in the study, please contact me at ems363@bu.edu and I will assist you with any issues you may be experiencing.

Again, thank you for your participation in this research study.

Sincerely,
Eldon Strickland
Doctoral Candidate

Boston University
School of Education
2 Silber Way
Boston, MA 02215
m: +16174475519
email: ems363@bu.edu
APPENDIX C: STEP-BY-STEP STUDY INSTRUCTIONS

Step 1: Consent Agreement (click here to access this step)
This study consists of five steps. The five steps are:
- Step 1: Consent Agreement
- Step 2: Pre Study Surveys
- Step 3: Clinical Theory: Learning Modules
- Step 4: Post Study Surveys
- Step 5: Disclosure Statement
After completing a step, the next step will appear.

Step 2: Pre Study Surveys (click here to access this step)

Step 3: Clinical Theory: Learning Modules (click here to access this step)
As you explore the course use the Mark Review icon to track your progress.
There are Three sections that you must review: Syllabus, Module 1, & Module 2.
Please explore any other elements of the learning environment you think may be interesting.
When you have finished, Click the My Exploration is Complete Question.

Meet the Professor
Click "Meet the Professor" to view information about Professor Jones.

Is Your Exploration of the Course Site Completed? (Answer this Question to Access Steps 4 and 5)
After you have completed Step 3: Clinical Theory: Learning Modules, please answer "YES" to the following question.

Step 4: Post Study Surveys (click here to access this step)

Step 5: Disclosure Statement (click here to access this step)
APPENDIX D: CONSENT FORM

Consent Form

Introduction

Please read this form carefully. The purpose of this form is to provide you with important information about taking part in a research study. If any of the statements or words in this form are unclear, please let us know. We would be happy to answer any questions.

The persons in charge of this study is Eldon Strickland and Professor Jordana Muroff. Eldon Strickland can be reached at 617 447 5519 or Professor Jordana Muroff at 617 358 4661. We will refer to this person as the “researcher” throughout this form.

Why is this study being done?

The purpose of the research study is to assess your interest in an online course taught by Professor Jones. You will be asked to explore the course Clinical Theory in Social Work Practice and indicate your level of interest in taking the course with this particular instructor. This study is also part of dissertation research on teaching and curriculum design within in the School of Education that is investigating ways to improve online course offerings at Boston University.

How long will I take part in this research study?

We expect that it will take you about 1 hour to complete all the activities. However, you will have total of 14 days to accomplish the tasks assigned. During this time, you will have two days to review online course materials and one day to complete the five surveys.

What will happen if I take part in this research study?

You must be 18 years of age or older to participate in this survey. If you agree to take part in this study, we will ask you to answer "yes" or "no" to the question at the end of online consent form before we do any study procedures.

How is the Study Design e.g., Randomization?

We will assign you by chance (like a coin toss) to one of four class groups. Each group will get access to a course containing various media elements about the course content, narrative text, interactive assignments, and discussion topics.

How Will You Keep My Study Records Confidential?

We will keep the records of this study confidential by not using any personal or identifying information about
participants. The study data will be stored kept within the university's learning management only for the duration of the study. The learning management system is protected by the university's firewall and Kerberos authentication protocols and will be retained for 7 years. After this time period the data will be deleted.

The following people or groups may review your study records for purposes such as quality control or safety:

- The Researcher and any member of his research team.
- The Institutional Review Board at Boston University. The Institutional Review Board is a group of people who review human research studies for safety and protection of people who take part in the studies.

The results of this research study may be published and presented for used in teaching. We will not put identifiable information on data that are used for these purposes. All data would be presented in aggregate form.

Can Participants Leave The Study?

Student Participation and Early Withdrawal: Taking part in this study is your choice. You are free not to take part or to withdraw at any time for any reason. No matter what you decide, there will be no penalty or loss of benefit to which you are entitled. If you decide to withdraw from this study, the information that you have already provided will be kept confidential. At the end of the study, you can also choose not to include your data as part of the study.

The Researcher Can Withdraw Subjects: After the 14 days study window, anyone who did or did not participate will be automatically removed from the LMS database.

What are the risks of taking part in this research study?

Questionnaire/Survey Risks: You may be uncomfortable with some of the questions and topics we will ask about. You do not have to answer any questions that make you feel uncomfortable.

Are there any benefits from being in this research study?

Future benefit: Others may benefit in the future from the information that is learned in this study will be that online courses or computer-mediated course/programs are built in ways than enhance student learning.

Will I get paid for taking part in this research study?

After completing the study, you will have the option of entering your email address to be included in a lottery drawing for one of four 50-dollar Amazon Gift Cards and a grand prize of an Apple iPad. With 200 students taking part in the study, your chances of winning are 1 in 40. I will conduct the drawing after all subjects have completed the study, which will be on or about, August 31, 2014. The study staff will contact you if you won this lottery.
What will it cost me to take part in this research study?

There are no costs to you for taking part in this research study.

If I have any questions or concerns about this research study, whom can I talk to?

You can call us with any concerns or questions. Our telephone numbers are 617 447 5519 or 617 358 4661. You can also email us at ems363@bu.edu (mailto:ems363@bu.edu) or mrufff@bu.edu (mailto:mrufff@bu.edu). You can also contact use within the course itself using the message feature.

If you have questions about your rights as a research subject or want to speak with someone independent of the research team, you may contact the Boston University IRB directly at 617-358-6115 or email them at irb@bu.edu (mailto:irb@bu.edu)

Statement of Consent

I have read the information in this consent form including risks and possible benefits. I have been given the chance to ask questions. My questions have been answered to my satisfaction, and I agree to participate in the study.

Agreement to Participate

Selecting "Yes" to the Agreement to Participate Question indicates that you understand the nature of the study and agree to participate in it. You will be given an opportunity to ask questions about the study and have your questions answered to your satisfaction before you agree to participate. You understand that the completion of this course you will take 3 surveys that take about 30 minutes each to complete and that have 24 hours to complete these surveys. You agree that by selecting "yes" all information you have submitted and will submit within the learning management system (Blackboard Learn). The online surveys in this course are confidential and will be kept for research purposes only.

Agreement to Participate Questions

1. Click on Agreement to Participation Questions and answer "Yes" to the following:
   a. I agree to participate.
   b. I am age 18 or older.
2. You have 30 minutes to answer two questions.
3. Both questions need to be completed in one sitting.
4. Do not leave the question before clicking **Save and Submit**.
5. Click **Begin** to start: **Agreement to Participate Questions**. Click **Cancel** to go back.
6. You can preview the question after you have answered it.

The assessment should take **approximately 5 minutes to complete**. The question item will be saved and submitted automatically, when the **30 minutes** expires.

**Boston University** School of Social Work
APPENDIX E: INSTRUCTIONS READ PRIOR TO TAKING A SURVEY

Survey Instructions

Before completing the exploration of this course taught by this instructor, please complete two brief surveys.

Opening the Survey and Answering Questions

Click on the name of the survey to open it. Read the instructions for each survey before completing it.

Each survey consists of multiple questions. Questions are ranked on a rating scale. You can submit the evaluation only once.

1. Select your answer by clicking on the radio button next to the rating number of your choice.
2. You may revisit questions after you’ve answered them. You can change your answers as many times as you want before submitting the evaluation.
3. When you have completed the entire evaluation and are satisfied with all of your answers click **Save and Submit**. A confirmation page will appear. Click OK in the lower right-hand corner to review your submission.
4. Once you have viewed your submission, click OK in the lower right-hand corner to return to the online course.

Each survey should take **approximately 5-10 minutes to complete**. If it is not submitted after 2 hours, the evaluation will be automatically submitted.

Survey Support

Please contact us with any questions or concerns about these surveys or research study by phone or email.

- By phone: 617 447 5519 or 617 358 4661.
- By email: ems363@bu.edu (mailto:ems363@bu.edu) or jmuroff@bu.edu (mailto:jmuroff@bu.edu).

Note: You can also contact use within the course itself using the message feature.
## APPENDIX F: EXPECTANCY RATING SCALE

**Preview Survey: Survey 1**

**Description**
We would like you to indicate below how much you believe, right now, that the course you are enrolled in would help your education. Belief usually has two aspects to it: (1) what one thinks will happen and (2) what one feels will happen. Sometimes these are similar and sometimes they are different. Please answer the following questions in terms of what you think and terms of what you really and truly feel.

**Timed Test**
This Survey has the time limit of 2 hour. This Test will save and submit automatically when the time expires. Warnings appear when half the time, 5 minutes, 1 minute, and 30 seconds.

**Question Completion Status:**

**Force Completion** Once started, this Survey must be completed in one sitting.

### Question 1
At this point, how much do you really feel that this course would help your education on a 1–9 scale, where 1 = Not at All and 9 = Very Much?

- [ ] 1 = Not at All
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5
- [ ] 6
- [ ] 7
- [ ] 8
- [ ] 9 = Very Much

### Question 2
If you were to take this course, how much improvement in your education do you think will occur on a 0–100 percent scale?

- [ ] 0%
- [ ] 10%
- [ ] 20%
- [ ] 30%
- [ ] 40%
- [ ] 50%
- [ ] 60%
- [ ] 70%
- [ ] 80%
- [ ] 90%
- [ ] 100%

### Question 3
If you were to take this course, how much improvement in your education do you really feel will occur on a 0–100 percent scale?

- [ ] 0%
- [ ] 10%
- [ ] 20%
- [ ] 30%
- [ ] 40%
- [ ] 50%
- [ ] 60%
- [ ] 70%
- [ ] 80%
- [ ] 90%
- [ ] 100%

**Save All Answers**  **Save and Submit**

---

Click Save and Submit to save and submit. Click Save All Answers to save all answers.
APPENDIX G: PRE/POST-STATE MOTIVATION SCALE

Preview Survey: Survey 2

Description

Instructions
These question items are concerned with how you feel about this specific class. Please select the number toward either word that best represents your feelings. Note that in some cases the most positive score is "1" while in other cases it is "7."

Timed Test
This Survey has the time limit of 2 hour. This Test will save and submit automatically when the time expires. Warnings appear when half the time, 5 minutes, 1 minute, and 30 seconds remain. [The timer does not appear when previewing this Survey]

Multiple Attempts
Not allowed. This Survey can only be taken once.

Force Completion
Once started, this Survey must be completed in one sitting.

Save All Answers  Save and Submit

Question 1

How do you feel about this specific class on a 1–7 scale, where 1 = Motivated and 7 = Unmotivated.

☐ 1 = Motivated  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Unmotivated.

Question 2

How do you feel about this specific class on a 1–7 scale, where 1 = Interested and 7 = Uninterested?

☐ 1 = Interested  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Uninterested

Question 3

How do you feel about this specific class on a 1–7 scale, where 1 = Involved and 7 = Uninvolved?

☐ 1 = Involved  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Uninvolved

Question 4

How do you feel about this specific class on a 1–7 scale, where 1 = Not Stimulated and 7 =
= Stimulated?
- 1 = Not Stimulated  2  3  4  5  6  7 = Stimulated

Question Completion Status:  

How do you feel about this specific class on a 1-7 scale, where 1 = Don't Want to Study and 7 = Want to Study?
- 1 = Don't Want to Study  2  3  4  5  6  7 = Want to Study

Question 6  

How do you feel about this specific class on a 1-7 scale, where 1 = Inspired and 7 = Uninspired?
- 1 = Inspired  2  3  4  5  6  7 = Uninspired

Question 7  

How do you feel about this specific class on a 1-7 scale, where 1 = Unchallenged and 7 = Challenged?
- 1 = Unchallenged  2  3  4  5  6  7 = Challenged

Question 8  

How do you feel about this specific class on a 1-7 scale, where 1 = Uninvigorated and 7 = Invigorated?
- 1 = Uninvigorated  2  3  4  5  6  7 = Invigorated

Question 9  

How do you feel about this specific class on a 1-7 scale, where 1 = Unenthused and 7 = Enthused?
- 1 = Unenthused  2  3  4  5  6  7 = Enthused

Question 10  

How do you feel about this specific class on a 1-7 scale, where 1 = Excited and 7 = Not Excited?
- 1 = Excited  2  3  4  5  6  7 = Not Excited

Question 11  

Save Answer
How do you feel about this specific class on a 1–7 scale, where 1 = Aroused and 7 = Not Aroused?

☐ 1 = Aroused  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Not Aroused

Question 12

How do you feel about this specific class on a 1–7 scale, where 1 = Not Fascinated and 7 = Fascinated?

☐ 1 = Not Fascinated  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Fascinated

Save and Submit

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers  Save and Submit
APPENDIX H: AFFECT TOWARD TEACHER SCALE

Preview Survey: Survey 4

Description

Instructions: Please select the number that best represents your feelings. The closer a number is to the item/adjective, the more you feel that way.

Timed Test: This Survey has the time limit of 2 hour. This Test will save and submit automatically when the time expires. Warnings appear when half the time, 5 minutes, 1 minute, and 30 seconds remain. [The timer does not appear when previewing this Survey]

Multiple Attempts: Not allowed. This Survey can only be taken once.

Question Completion Status: 

Save All Answers  Save and Submit

Question 1
My attitude about the instructor in this class is _____ on a 1–7 scale, where 1 = Good and 7 = Bad.

☐ 1 = Good  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Bad

Question 2
My attitude about the instructor in this class is _____ on a 1–7 scale, where 1 = Worthless and 7 = Valuable.

☐ 1 = Worthless  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Valuable

Question 3
My attitude about the instructor in this class is _____ on a 1–7 scale, where 1 = Fair and 7 = Unfair.

☐ 1 = Fair  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Unfair

Question 4
My attitude about the instructor in this class is _____ on a 1–7 scale, where 1 = Negative and 7 = Positive.

☐ 1 = Negative  ☐ 2  ☐ 3  ☐ 4  ☐ 5  ☐ 6  ☐ 7 = Positive

https://lms-test.bu.edu/webapps/assessment/lake/lunch.jsp?course_assessment_id=623_1&course_id=372_1&content_id=27067_1&step=null
Question 5

The likelihood of my taking another course with this teacher, if I had a choice, is ______
on a 1–7 scale, where 1 = Likely and 7 = Unlikely.

1 = Likely  2  3  4  5  6  7 = Unlikely

Question 6

The likelihood of my taking another course with this teacher, if I had a choice, is ______
on a 1–7 scale, where 1 = Impossible and 7 = Possible.

1 = Impossible  2  3  4  5  6  7 = Possible

Question 7

The likelihood of my taking another course with this teacher, if I had a choice, is ______
on a 1–7 scale, where 1 = Probable and 7 = Improbable.

1 = Probable  2  3  4  5  6  7 = Improbable

Question 8

The likelihood of my taking another course with this teacher, if I had a choice, is ______
on a 1–7 scale, where 1 = Would Not and 7 = Would.

1 = Would Not  2  3  4  5  6  7 = Would

Save and Submit

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers  Save and Submit
APPENDIX I: TEACHER SELF-DISCLOSURE SCALE

Preview Survey: Survey 5

Description

Instructions
Think of the course that you have just reviewed. Answer the following questions based on your opinions and thoughts about that instructor. Please indicate your level of agreement with the following statements as they relate to YOUR INSTRUCTOR on a 1 to 7 scale with 1 = Completely Disagree and 7 = Completely Agree.

Timed Test
This Survey has the time limit of 2 hour. This Test will save and submit automatically when the time expires. Warnings appear when half the time, 5 minutes, 1 minute, and 30 seconds remain. [The timer does not appear when previewing this Survey]

Question Completion Status:

Save All Answers  Save and Submit

Question 1

My instructor expresses his/her beliefs on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

○ 1 = Completely Disagree  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7 = Completely Agree

Question 2

My instructor reveals information about his/her personal life on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

○ 1 = Completely Disagree  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7 = Completely Agree

Question 3

My instructor often talks about what he/she does on weekends on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

○ 1 = Completely Disagree  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7 = Completely Agree

Question 4

My instructor seldom talks about him/herself on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.
Question 5

My instructor uses his/her family or friends as classroom examples on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

Question 6

My instructor often gives his/her opinions about current events on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

Question 7

My instructor shares his/her dislikes and likes on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

Question 8

My instructor presents his/her attitudes toward events occurring on campus on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

Question 9

My instructor discusses his/her feelings on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

Question 10

My instructor often talks about him/herself on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

Question 11

My instructor often gives personal examples in class on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.
<table>
<thead>
<tr>
<th>Question 12</th>
<th>Save Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>My instructor seldom discusses family or friends on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.</td>
<td></td>
</tr>
<tr>
<td>○ 1 = Completely Disagree</td>
<td>○ 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 13</th>
<th>Save Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>My instructor only discusses class related material on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.</td>
<td></td>
</tr>
<tr>
<td>○ 1 = Completely Disagree</td>
<td>○ 2</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Question 14</th>
<th>Save Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>My instructor rarely discusses his/her personal life on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.</td>
<td></td>
</tr>
<tr>
<td>○ 1 = Completely Disagree</td>
<td>○ 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 15</th>
<th>Save Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>My instructor gives his/her opinion about events in the community on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.</td>
<td></td>
</tr>
<tr>
<td>○ 1 = Completely Disagree</td>
<td>○ 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 16</th>
<th>Save Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>My instructor is open with the class about his/her feelings on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.</td>
<td></td>
</tr>
<tr>
<td>○ 1 = Completely Disagree</td>
<td>○ 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 17</th>
<th>Save Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>My instructor often talks about his/her family and friends on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.</td>
<td></td>
</tr>
<tr>
<td>○ 1 = Completely Disagree</td>
<td>○ 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 18</th>
<th>Save Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>My instructor often talks about his/her family and friends on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.</td>
<td></td>
</tr>
<tr>
<td>○ 1 = Completely Disagree</td>
<td>○ 2</td>
</tr>
</tbody>
</table>
My instructor seldom expresses his/her beliefs on a 1 to 7 scale, where 1 = Completely Disagree and 7 = Completely Agree.

1 = Completely Disagree  2  3  4  5  6  7 = Completely Agree

Save and Submit
Click Save and Submit to save and submit. Click Save All Answers to save all answers.
APPENDIX J: OPEN-ENDED QUESTIONS

Preview Survey: Study Feedback

Description

Instructions Please respond to these short answer questions about this study. Your feedback will be helpful in designing other studies.

Timed Test This Survey has the time limit of 4 hour. This Test will save and submit automatically when the time expires. Warnings appear when half time, 5 minutes, 1 minute, and 30 seconds remain. [The timer does not appear when previewing this Survey]

Multiple Attempts Not allowed. This Survey can only be taken once.

Question Completion Status:

Save All Answers Save and Submit

Question 1

I would/would not take another course with this instructor (please elaborate).

Paragraph Arial 3 (12pt)

Path: p Words: 0

Question 2

I would/would not consider changing the following items in this course (please elaborate).

Paragraph Arial 3 (12pt)

https://lms-test.bu.edu/rebapp/assessment/take/launch.jsp?course_assessment_id=639_1&course_id=332_1&content_id=27189_1&step=null
Question 3

The technology used in this course is ___________ (please elaborate).

Path: p
Words: 0

Question 4

How do I feel about taking this course with this instructor (please elaborate)?

Path: p
Words: 0

Save and Submit

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

https://lms.test.bu.edu/webapps/assessment/launch.jsp?course_assessment_id=639_1&course_id=372_1&content_id=27192_1&step=null
APPENDIX K: DISCLOSURE FORM

Disclosure Form

Thank you for participating in this study.

This research project explores the extent to which the growth of computer-mediated communication in online learning has affected the relationship between the instructor and his or her students. Specifically, it is measuring how the amount of instructor self-disclosure affects student's motivation and affective learning (the positive attitude you have toward the content or subject matter). In this project, instructor self-disclosure was manipulated using faculty profile pages within the learning management system. Two faculty online profiles were created (one male and one female). These profiles were created so that you would have access personal and professional information to enhance the online course. In this study two groups of students had access to the faculty online profile and the sample online course (with male and female instructor self-disclosure) while another two groups of students only had access to the sample course (without male or female instructor self-disclosure). The study results, if significant, will be used in the design and teaching of future computer-mediated or online course offerings.

You can call us with any concerns or questions. Our telephone numbers are: 617-447-5519 or 617-358-4661.

You can also email us at ems363@bu.edu (mailto:ems363@bu.edu) or jmuroff@bu.edu (mailto:jmuroff@bu.edu).

At this time, if you do not want your survey responses included then in this study go on to the Opt Out Question. Skip this test if you do not want to opt out.

Opt Out Question (Skip this test if you do not want to opt out)

1. Click on Opt Out Question and answer "Yes" to the following:
   a. Do not use my survey answers in this study results.
2. You have 30 minutes to answer two questions.
3. Both questions need to be completed in one sitting.
4. Do not leave the question before clicking Save and Submit.
5. Click Begin to start: Opt Out Question. Click Cancel to go back.
6. You can preview the question after you have answered it.

The assessment should take approximately 5 minutes to complete. The question item will be saved and submitted automatically, when the 30 minutes expires.
APPENDIX L: FEMALE AND MALE MEET THE PROFESSOR TABS

Illustration 3.10 LMS – Meet the Professor (Self-Disclosure) Tab – Displaying Female Instructor Academic Profile, LinkedIn Profile, YouTube Video, Pinterest Page, and Twitter Posts

Illustration 3.11 LMS – Meet the Professor (Self-Disclosure) Tab – Displaying Male Instructor Academic Profile, LinkedIn Profile, YouTube Video, Pinterest Page, and Twitter Posts
## APPENDIX M: FEMALE AND MALE DAILY TWITTER POSTS

<table>
<thead>
<tr>
<th>Sent Tweets</th>
<th>KellyJones484</th>
<th>Sent Tweets</th>
<th>KellyMJones2</th>
</tr>
</thead>
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<td><strong>KellyJones484</strong></td>
<td>Sep 21, 2014, 8:30 am via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 21, 2014, 8:30 am via Hootsuite</td>
</tr>
<tr>
<td>Eleanor is speaking this weekend at Old North Church. It's nice to have her back from vacation.</td>
<td>Eleanor is speaking this weekend at Old North Church. It's nice to have her back from vacation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KellyJones484</strong></td>
<td>Sep 20, 2014, 7:30 am via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 20, 2014, 7:30 am via Hootsuite</td>
</tr>
<tr>
<td>Taking the kids out for breakfast at the Town Dinner. Hope they have room for all of us. It's usually packed.</td>
<td>Taking the kids out for breakfast at the Town Dinner. Hope they have room for all of us. It's usually packed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KellyJones484</strong></td>
<td>Sep 19, 2014, 7:02 am via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 19, 2014, 7:02 am via Hootsuite</td>
</tr>
<tr>
<td>My cousin passed away this week. He was too young. Sorry to see him go. He will be missed.</td>
<td>My cousin passed away this week. He was too young. Sorry to see him go. He will be missed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KellyJones484</strong></td>
<td>Sep 18, 2014, 2:31 pm via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 18, 2014, 2:31 pm via Hootsuite</td>
</tr>
<tr>
<td>Soccer game tonight against the Belmont Panthers. It should be an exciting game!</td>
<td>Soccer game tonight against the Belmont Panthers. It should be an exciting game!</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KellyJones484</strong></td>
<td>Sep 17, 2014, 3:31 pm via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 17, 2014, 3:31 pm via Hootsuite</td>
</tr>
<tr>
<td>Just go my summer trip to Europe photo album back from the online printer. Wow the pictures look great! I'll have upload them on Pinterest</td>
<td>Just go my summer trip to Europe photo album back from the online printer. Wow the pictures look great! I'll have upload them on Pinterest</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KellyJones484</strong></td>
<td>Sep 16, 2014, 7:05 am via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 16, 2014, 7:05 am via Hootsuite</td>
</tr>
<tr>
<td>Interested shorty about using technology in teaching by Prof Jeff Sachs. ow.ly/Bc23Z</td>
<td>Interested shorty about using technology in teaching by Prof Jeff Sachs. ow.ly/Bc278</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KellyJones484</strong></td>
<td>Sep 15, 2014, 10:01 am via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 15, 2014, 10:01 am via Hootsuite</td>
</tr>
<tr>
<td>Having friends over for the last BBQ of the summer. I will be fun but also a bit sad to see summer end.</td>
<td>Having friends over for the last BBQ of the summer. I will be fun but also a bit sad to see summer end.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KellyJones484</strong></td>
<td>Sep 14, 2014, 2:35 pm via Hootsuite</td>
<td><strong>KellyMJones2</strong></td>
<td>Sep 14, 2014, 2:35 pm via Hootsuite</td>
</tr>
<tr>
<td>Here is an interesting post on &quot;Happiness: &quot;As Seen on TV&quot;&quot; by @PhilipCorbett on @LinkedIn ow.ly/BbYul</td>
<td>Here is an interesting post on &quot;Happiness: &quot;As Seen on TV&quot;&quot; by @PhilipCorbett on @LinkedIn ow.ly/BbYH2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Date and Time</td>
<td>Text</td>
<td>Name</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Sep 13, 2014, 8:50 am</td>
<td>Going apple picking this week, looking to get some Macintosh apples.</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sep 12, 2014, 3:35 pm</td>
<td>Going apple picking this week, looking to get some Macintosh apples.</td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Sep 11, 2014, 8:02 am</td>
<td>Looking for something to do on campus? Check out this calendar of events ow.ly/BbXmg</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Sep 10, 2014, 10:20 am</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sep 09, 2014, 1:10 pm</td>
<td>Longy school of music is holding it September Fest. to watch online go here ow.ly/BbWml</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sep 08, 2014, 11:10 am</td>
<td>Here is the APA Style Guide online reference toolow.ly/BbW01</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sep 08, 2014, 10:10 am</td>
<td>If you need to get to the &quot;official&quot; BU bookstore here's the link ow.ly/BbV1p</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Sep 07, 2014, 8:37 am</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sep 07, 2014, 8:37 am</td>
<td>Have 3 soccer games with my girls this weekend. Hope the weather holds out.</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Sep 07, 2014, 8:37 am</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aug 10, 2014, 4:30 am</td>
<td>It’s never too early to start planning for the fall 2014 semester. Here are fall calendars ow.ly/A9QpG andow.ly/A9QzG</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td>User</td>
<td>Date and Time</td>
<td>Text</td>
<td>User</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Aug 09, 2014, 3:43 am</td>
<td>If you're traveling to Boston this summer or fall, here are 25 landmarks you should check out. ow.ly/A8yYR</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Aug 08, 2014, 10:21 am</td>
<td>Having the extended family over for dinner this evening and having my favorite pasta dish. Yum.</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Aug 06, 2014, 2:54 am</td>
<td>When to the ocean last weekend and today my son said how much he enjoyed it. It’s really nice when your kids express their appreciation.</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Aug 01, 2014, 10:44 am</td>
<td>I read this article on &quot;Graduate Mentoring&quot; and thought I would share it. ow.ly/zQhIy</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 31, 2014, 12:26 pm</td>
<td>Fond a great new cookie recipe today and am baking cookies with my son and daughter this afternoon. Can’t wait to try it out!</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 29, 2014, 2:35 pm</td>
<td>The exhibit is titled the language of color. Here is the link to see the exhibit ow.ly/zIKyl</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 29, 2014, 2:29 pm</td>
<td>or click here ow.ly/zIJMp</td>
<td>KellyMJones2</td>
</tr>
<tr>
<td></td>
<td>via Hootsuite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 29, 2014, 2:20 pm</td>
<td></td>
<td>KellyMJones2</td>
</tr>
</tbody>
</table>
I was reading in BU today about the Harvard exhibit exploring the role of color and the role it plays in the animal kingdom. The exhibit...

<table>
<thead>
<tr>
<th>KellyJones484</th>
<th>Jul 29, 2014, 9:45 am via Hootsuite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check out the preview for the new Hunger Games Move ow.ly/zFydL Hope it is as good as the book and the last installment.</td>
<td>Check out the preview for the new Hunger Games Move ow.ly/zFyqY Hope it is as good as the book and the last installment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KellyJones484</th>
<th>Jul 28, 2014, 3:05 pm via Hootsuite</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wonder what other sanctions the US and Europe can impose on Russia to keep them out of the conflict in the Ukraine? I hope the...</td>
<td>I wonder what other sanctions the US and Europe can impose on Russia to keep them out of the conflict in the Ukraine? I hope the...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KellyJones484</th>
<th>Jul 28, 2014, 1:40 pm via Hootsuite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saw the new movie &quot;Lucy&quot; this weekend. It's a bit of a let down. It will be interesting to read the reviews.</td>
<td>Saw the new movie &quot;Lucy&quot; this weekend. It's a bit of a let down. It will be interesting to read the reviews.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KellyJones484</th>
<th>Jul 28, 2014, 11:28 am via Hootsuite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having dinner with some old college friends this evening. It will be great to catch up and see their children.</td>
<td>Having dinner with some old college friends this evening. It will be great to catch up and see their children.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KellyJones484</th>
<th>Jul 28, 2014, 9:01 am via Hootsuite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saw Boston Midsummer Opera &quot;The Bartered Bride&quot; at BU this weekend. Great performance. The dancers in this production where very talented.</td>
<td>Saw Boston Midsummer Opera &quot;The Bartered Bride&quot; at BU this weekend. Great performance. The dancers in this production where very talented.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KellyJones484</th>
<th>Jul 23, 2014, 10:35 am via Hootsuite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Sox's game this weekend. Hope to score some tickets.</td>
<td>Red Sox's game this weekend. Hope to score some tickets.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KellyJones484</th>
<th>Jul 22, 2014, 3:20 pm via Hootsuite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funny video for you who take part in online conference calls. I promise our video consults would not be this bad! LOL ow.ly/yRz2J</td>
<td>Funny video for you who take part in online conference calls. I promise our video consults would not be this bad! LOL ow.ly/yRz2J</td>
</tr>
<tr>
<td>Username</td>
<td>Date and Time</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 22, 2014, 8:02 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 22, 2014, 8:02 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 20, 2014, 10:35 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 20, 2014, 10:35 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 18, 2014, 1:40 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 18, 2014, 1:40 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 16, 2014, 10:35 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 16, 2014, 10:35 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 14, 2014, 7:30 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 14, 2014, 7:30 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 14, 2014, 2:31 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 14, 2014, 2:30 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 14, 2014, 9:55 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 14, 2014, 9:55 am via Hootsuite</td>
</tr>
<tr>
<td>Username</td>
<td>Date &amp; Time</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 13, 2014, 2:00 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 13, 2014, 2:00 pm via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 13, 2014, 10:40 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 13, 2014, 10:40 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 13, 2014, 10:25 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 13, 2014, 10:25 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 13, 2014, 9:58 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 13, 2014, 9:58 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jul 13, 2014, 9:45 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jul 13, 2014, 9:45 am via Hootsuite</td>
</tr>
<tr>
<td>marketingedge</td>
<td>Jun 18, 2014, 8:59 am via Constant Contact</td>
</tr>
<tr>
<td>marketingedge</td>
<td>Jun 18, 2014, 8:59 am via Constant Contact</td>
</tr>
<tr>
<td>Retweeted by KellyJones484 and 1 others</td>
<td></td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jun 22, 2014, 10:14 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jun 22, 2014, 10:14 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jun 22, 2014, 10:10 am via Hootsuite</td>
</tr>
<tr>
<td>KellyMJones2</td>
<td>Jun 22, 2014, 10:10 am via Hootsuite</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jun 13, 2014, 1:02 pm via Hootsuite</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Rev. Eleanor Terry is speaking this weekend at Old North Church. If you get a chance to go, check her out.</td>
<td>Rev. Eleanor Terry is speaking this weekend at Old North Church. If you get a chance to go, check her out.</td>
</tr>
<tr>
<td>I hope the weather hold out today; I like to get a run later this afternoon.</td>
<td>I hope the weather hold out today; I like to get a run later this afternoon.</td>
</tr>
<tr>
<td>Rev. Eleanor Terry is speaking this weekend at Old North Church. If you get a chance to go, check her out.</td>
<td>Rev. Eleanor Terry is speaking this weekend at Old North Church. If you get a chance to go, check her out.</td>
</tr>
<tr>
<td>Red Sox are playing this week and would really love to go. Does any have tickets?</td>
<td>Red Sox are playing this week and would really love to go. Does any have tickets?</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jun 11, 2014, 8:10 am via Hootsuite</td>
</tr>
<tr>
<td>Getting together with family and friends for July 4th weekend. It will be fun seeing everyone</td>
<td>Getting together with family and friends for July 4th weekend. It will be fun seeing everyone</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jun 10, 2014, 7:01 pm via Hootsuite</td>
</tr>
<tr>
<td>Today is a good day for a run</td>
<td>Today is a good day for a run</td>
</tr>
<tr>
<td>Red Sox are playing this week and would really love to go. Does any have tickets?</td>
<td>Red Sox are playing this week and would really love to go. Does any have tickets?</td>
</tr>
<tr>
<td>KellyJones484</td>
<td>Jun 10, 2014, 8:10 am via Hootsuite</td>
</tr>
<tr>
<td>Getting together with family and friends for July 4th weekend. It will be fun seeing everyone</td>
<td>Getting together with family and friends for July 4th weekend. It will be fun seeing everyone</td>
</tr>
<tr>
<td>Has anyone seen the new Maleficent? Going to see it today and have high expectations</td>
<td>Has anyone seen the new Maleficent? Going to see it today and have high expectations</td>
</tr>
<tr>
<td>Summer 2 textbooks are now available at BU's bookstore. Use this link to order your books <a href="http://bu.bncollege.com">bu.bncollege.com</a></td>
<td>Summer 2 textbooks are now available at BU's bookstore. Use this link to order your books <a href="http://bu.bncollege.com">bu.bncollege.com</a></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>If you haven't signed up for the federal affordable care plan the deadline has been extended</td>
<td>If you haven't signed up for the federal affordable care plan the deadline has been extended</td>
</tr>
<tr>
<td><strong>KellyJones484</strong> May 30, 2014, 12:19 pm via Hootsuite</td>
<td><strong>KellyMJones2</strong> May 30, 2014, 12:19 pm via Hootsuite</td>
</tr>
<tr>
<td>Going to watch my daughter play against Belmont this weekend. I hope the weather holds out.</td>
<td>Going to watch my daughter play against Belmont this weekend. I hope the weather holds out.</td>
</tr>
<tr>
<td>Red Sox play Tampa Bay Rays today hope the sweep the game. Given their current record I'm not that sure it will happen</td>
<td>Red Sox play Tampa Bay Rays today hope the sweep the game. Given their current record I'm not that sure it will happen</td>
</tr>
<tr>
<td><strong>KellyJones484</strong> May 30, 2014, 12:09 pm via Hootsuite</td>
<td><strong>KellyMJones2</strong> May 30, 2014, 12:09 pm via Hootsuite</td>
</tr>
<tr>
<td>Looking forward to going to old north this weekend there is a special music program</td>
<td>Looking forward to going to old north this weekend there is a special music program</td>
</tr>
<tr>
<td><strong>KellyJones484</strong> May 29, 2014, 7:57 pm via Hootsuite</td>
<td><strong>KellyMJones2</strong> May 29, 2014, 7:57 pm via Hootsuite</td>
</tr>
<tr>
<td>Had a great day today. Learned about a new teaching tool</td>
<td>Had a great day today. Learned about a new teaching tool</td>
</tr>
</tbody>
</table>
APPENDIX N: FEMALE AND MALE INSTRUCTOR PINTEREST IMAGES


Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2007). I'll see you on “Facebook”: The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom Climate. This project was funded in part by a teaching-learning development grant from the center. *Communication Education, 56*(1), 1–17. doi:10.1080/03634520601009710


Whittier, D. (2011). The Teacher as Designer of Instructional Technology: Summarizing over 10 years of teacher education to use technology. In Society for Information

CURRICULUM VITAE

Eldon M. Strickland
4 Cozy Street, Watertown, MA 02472
Phone: 617.447.5519; Email: ems363@bu.edu

I have a passion for visioning and creating online and blended learning curriculum and teaching solutions. I also have a keen ability to apply technologies in novel ways to complex learning solutions. Additionally, I seek out leadership, research, and teaching roles within learning organizations with an entrepreneurial spirit.

Education

Doctoral Candidate in Curriculum and Teaching, School of Education
Boston University, Boston, MA. 05/16

Dissertation: The effect of teacher self-disclosure on student motivation and affect toward teacher in online education

Master of Arts in Industrial Psychology, College of Art and Sciences
New York University, New York, NY. 05/96

Bachelor of Arts in Psychology, College of Art and Sciences
Boston University, Boston, MA. 05/86

Grants & Awards

Graduate Research and Scholarship Award (GRASA)
Boston University, Boston, MA. 07/14

Graduate Assistantship for NYU Graduate Housing
New York University, New York, NY. 08/94 -08/96

Skills Summary

Management Skills

- Establish distance-learning programs for graduate, undergraduate, and non-credit students using a variety of pedagogies and technologies.
- Oversee the design and development of 9 full-time course developers working on 11 online programs, 11 certificates and non-credit courses.
- Monitor program adherence to academic goals and/or an educational mission requiring on going support and engagement of faculty and developers in the design and delivery process.
- Created a strategic vision and leadership for the department in instructional design theory and course development.

Design Competencies

- Built online course and training tools for faculty and support staff.
- Review course content suggesting multimedia strategies tied to quality matrix.
- Train and develop Instructional Designers and work with faculty to conduct one-on-one faculty training.
- Implement procedures to release course materials, monitor version control, and reduce production timelines.

Technical Abilities

- Proficient in MS Project and MS Office Suite.
- Able to use both MAC and PC computers
- Competent in Adobe Product Suite, HyperSnap, and several learning management systems
- Knowledge of database designs and content management systems
Work Experience

Manager – Operations Learning & Development 07/14–Present
Tufts Health Plan, Watertown, MA

• Oversees a staff of 6 trainers and 6 instructional designers that support the learning needs of 500 employees within the Commercial and Senior Product lines.
• Responsible for the planning, organization, and supervision of instructor-led and multimedia training programs for business partners.
• Ensures the successful design, development, and delivery of all training materials used to prepare new staff to meet organizational performance objectives.
• Establishes ongoing training curriculum based on quality assurance reviews, job requirements, and learner needs.
• Works with senior management to allocate resources and measure quarterly and yearly goals linked to the strategic mission.

LMS Consultant/Instructional Designer 04/12–7/14
Boston University, Boston, MA

• Consultant to colleges and academic departments in blended and online learning solutions leveraging centralized resources and technologies (Blackboard Learn).

Associate Director – Office of Distance Education 09/02–4/12
Boston University, Boston, MA

• Supervised the activities of Designers, Media, and Student Services staff in daily duties.
• Designed and lead hands-on workshops, teaching staff and faculty how to use various online learning tool and course management systems.
• Assisted staff and faculty in identifying online learning strategies, pedagogies and technologies and provided educational learning opportunities for staff interested in developing online programs and courses.
• Developed and coordinated course and program evaluations and student evaluations and worked with departments to revise courseware based on feedback.
• Created and communicated university policies and standards for online course development.
• Worked with college deans, department chairs, programs coordinators and department administrators to develop, deliver, and measure learning goals for online programs and courses.
• Assisted with strategic vision and leadership for Boston University’s Office of Distance Education.
• Showcased and won awards for best practices in instructional design and course development.

Senior Instructional Designer 09/01–08/02
IBM - MRO Software, Burlington, MA

• Developed distance learning courses using SyberWorks to train global sales staff on new product release.
• Created MAXIMO and related software all-in-one install guide for customers.
• Supported customers in building classroom computer image for end user training.
• Worked with subject matter experts (SMEs) to develop a course on best practices in asset management.
REFERENCES

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