FACE-TO-FACE VERUS ONLINE GENDER ROLES: THE EFFECT OF PSYCHOLOGICAL IDENTITY ON THE CHARACTERISTICS AND CIRCUMSTANCES OF ONLINE DISINHIBITION

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Human behaviors and social norms are transferred to the Internet in complex and divergent ways. The term online disinhibition has been coined to describe situations when Internet users seem to behave more openly and unrestrained online, often acting in ways they would not dare to act in the face-to-face world. According to Suler, there is a need for future research to “focus on which people, under what circumstances, are more predisposed to the various elements of online disinhibition.” With this in mind, this descriptive study sought to determine whether or not people are more true to their authentic psychological identities (i.e., genders) during online interaction or create completely new identities because of the more permissive social norms created by cyberspace. Through video recorded face-to-face discussions, reflective online discussions, open-ended online surveys, and semi-structured interviews, qualitative data was collected for analysis. The results and findings demonstrated that some personality traits are magnified during online interaction, but individuals ultimately stay true to their established gender roles.
ACKNOWLEDGMENTS

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I am forever grateful to my wonderful parents for their boundless love and support. My dad taught me to question everything and my mom taught me to stay true to myself. They have continually demonstrated that anything is possible with hard work and a positive attitude. My parents have always been and will always be my source of inspiration.

Thank you to my knight in shining armor, Rodney. You came into my life and taught me to just breathe. I closed my eyes and trusted, just trusted. You have helped me see the beauty in everything. I love you :-p

“For all that has been, Thanks. To all that shall be, Yes.” ~Dag Hammarskjöld
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CHAPTER 1
INTRODUCTION

1.1 Introduction of the Problem and Context

According to the Pew Internet and American Life Project (2009) 73% of American adults use the Internet on a daily basis for everything from business to socializing. Online communication is perceived to be less filtered and more direct than face-to-face interaction, with many online forums (e.g., online social networks) revealing an abundant number of users willing to freely share a wide assortment of personal details about their lives (Whitelaw, 2009). Although socializing has often been viewed as a behavior valued by women more than men, behaviors associated with gender are an example of social norms that may be virtually contextualized. To support this claim, gaming research has shown that many online game players place a high value on the social aspects of the game, and taking into consideration that 81% of online game players are male, online game interactions seem to be fostering new virtually-based gender roles (Griffiths, Davies, & Chappell, 2004). But how does a person’s online behavior compare to his/her face-to-face behavior? This is an area that has yet to be researched by scholars. Studies in the “real” world have found that sex stereotypes significantly affect perceptions and behavior (Diekman & Eagly, 2000). Women are often typecast into nurturing, relationship-oriented roles that require intuition and creativity rather than rationality or logic. But what happens on the Internet when a person’s biological sex is not directly verifiable? Virtual gaming seems to “allow players to express themselves in ways they may not feel comfortable doing in their real life because of their appearance, gender, sexuality, and/or age” (Cole & Griffiths, 2007, p. 575). Does this claim hold true when evaluating the Internet as a whole? It has been predicted that by 2020, “mobile phones will be the predominant way to access the
Internet, many corporate meeting spaces will be virtual” and “work and leisure time will have become so intertwined that we won't give a second thought to working when we're playing or handling personal matters when we're working” (Goodman, 2008, par. 1). Identifying factors that influence and may improve the effectiveness of online communication is going to become increasingly critical to Americans as more and more aspects of their lives require Internet fluency.

In accordance with the degree of national Internet immersion, there has been a dramatic shift toward online learning over the past decade. Prior to March, 2006 colleges were required to offer at least half their courses face to face in order to receive federal student aid (Romano, 2006). With the elimination of this requirement by Congress, online course offerings have ballooned. In fact, online enrollment increased 19% from 2002 to 2009, compared to a less than 2% growth in the total higher education population during this same time frame (Allen & Seaman, 2010). Community colleges and proprietary schools are leading this growth by attracting non-traditional types of students who benefit from the work-family-school flexibility of online learning (Stumpf, McCrimon, & Davis, 2005).

1.2 Statement of the Problem

A major challenge in technology-based learning environment research is the fact that technology usage is evolving and changing “faster than guidelines for innovations can be established,” and “relatively few thorough studies have evaluated the efficacy of new technologies” (Holum & Gahala, 2001, p. 5). It seems to be a universal understanding that there is a need to identify and address key variables that impact the success of students in higher education classrooms, yet this need becomes even more complex when evaluating technology-based learning environments. Scholars have examined such variables as learning style, classroom
climate, communication, ethnicity, and age in relation to learning outcomes. One variable that needs improved examination is gender. Previous research has focused on the variable of sex, disregarding the differences between sex and gender. Scholars seem to measure either sex or gender, but in reality both pools of data need to be evaluated more comprehensively before either is disregarded in research. The hypotheses of many researchers are based on prior sex research that focuses on and exploits the differences between men and women. Gender research on the other hand considers the independent characteristics of masculinity, femininity, and androgyny. In other words, gender studies appreciate that sex-roles and biological sex function simultaneously to create multiple levels of gender (e.g. masculine females, feminine males, androgynous females, etc.). Thus, the gender paradigm attempts to overcome the limitations created by the rigid dichotomies of male versus female in research. Although gender research has drawn both the support and criticism of scholars, limited empirical data has actually been collected. With this reality in mind, there is not enough clear information upon which to base predictions, thus future research must be performed regarding gender and the internet.

1.3 Purpose of the Study

The purpose of this study is to identify the impact that the Internet has on the communication strategies associated with social norms and more specifically gender roles. There is no question that people communicate differently online than they do face-to-face, but what is not clear is why some people deviate in small degrees from their authentic (i.e., offline) personality while others make dramatic changes. This study seeks to determine who is more predisposed to the various elements of online disinhibition and what causes these circumstances.
1.4 Research Questions

1. Do people stay true to their 'authentic' gender roles during online interaction?
2. Are people’s ‘authentic’ gender roles magnified during online interaction?
3. Does online interaction somehow change a person’s ‘authentic’ gender roles, and if so, how?

1.5 Definition of Terms

Social norms - socially established rules for behavior that are learned in a culture. Norms provide key regulators to communication because they influence the expectations of acceptable and unacceptable behaviors and opinions.

Sex roles – social norms that govern the position of men and women in a culture.

Gender – a person’s psychological identity based on both the masculine and feminine traits that they possess. Whereas sex is determined by biological factors, gender is learned and demonstrated through behavior.

Masculine personality – someone who demonstrates a high number of masculine traits (e.g., assertiveness, competitiveness, and independent) and a low number of feminine traits.

Feminine personality – someone who demonstrates a high number of feminine traits (e.g., sensitive, understanding, and sympathetic) and a low number of masculine traits.

Androgynous personality – someone who demonstrates a high number of both masculine and feminine traits.

Distance learning - “simply an instruction and learning practice, utilizing technology and involving students and teachers who are separated by time and space” (Burke, 2002, p. 4, as cited in Stumpf, McCrimon, & Davis, 2005). Distance learning can be classified as
Online disinhibition – the idea that Internet users seem to behave more openly and unrestrained online, often acting in ways they would not dare to act in the face-to-face world. Suler (2004) identifies six important factors that contribute to this online disinhibition effect: dissociative anonymity, invisibility, asychronicity, solipsistic introjections, dissociative imagination, and minimization of status and authority.

1.6 Limitations

There are two important limitations of this study. First is the fact that communication between participants will take place within the context of a college course. This means that the findings of the study may not be generalizable to the general population of Internet users. Second, although participation in the study is voluntary, the discussions themselves were required within the parameters of the course. This may influence, in one way or another, the quality of the communication from the participants and may not reflect how they would normally act on the Internet.

It’s also important to note that as the researcher and author of this dissertation study, I am a self-proclaimed technology junkie, teach online higher education courses, and am an early adopter of many web 2.0 applications, including social media. Experience with the massively multi-player online role playing game, World of Warcraft (WOW), provided me with an initial awareness of the important differences between online and face-to-face interaction. Personal experience has a significant influence on my perception of social media and the Internet; specifically I believed that both are extremely positive, however there is an understanding of the potential problems associated with both. I do not view social media or online gaming as a waste
of time, and while I strongly believe that there is disparity between face-to-face and online communication, I don’t believe that online communication is “dumbing down” society or that online communication is of lesser quality than face-to-face communication. My experience with computer-mediated communication both on a social and educational level will impact my perception of how students interact both face-to-face and online. With this in mind, two additional coders were chosen with different online experience than me to minimize subjectivity.

1.7 Summary

In summary, the purpose of this study is to identify the impact that the Internet has on the communication strategies associated with social norms and more specifically gender roles. Although the study took place primarily in the context of a community college classroom with grades tied to the discussions, it is believed that important observations about face-to-face versus online interaction can be made about the participants.

Chapter 2 reviews the literature that provides the foundation for this study.
2.1 Online Behavior and Norms

Human beings develop social norms to regulate interactions within a given context and these rules for engagement have taken centuries to develop. Given the relative novelty of cyberspace, it doesn’t seem that farfetched to conclude that online social norms are far behind in development compared to face-to-face norms (Allen, 1999). Social norms provide key regulators to communication, whereas “current Internet contexts largely fail to signal to users the social and technical responsibilities and consequences of participation” (Allen, 1999, p. 146). In many cases, Internet users attempt to apply real-life norms to online contexts, yet virtual space is complex and unique and therefore demands unique norms (Wellman, Salaff, Dimitrova, Garton, Gulia, & Haythornthwaite, 1996). The effects of losing key interaction cues, such as vocal regulators (e.g., tone of voice and volume), nonverbal prompts (e.g., nodding, facial expressions, and posture), physical environment (e.g., location and context), and observable personal characteristics (e.g., age, sex, and race) are both critical and profound (Wellman et al., 1996).

Research regarding sex roles on the Internet as a whole, seem to be limited to usage variables (i.e., frequency of use and media use), however several researchers in the niche domain of online gaming have evaluated the dynamics of online socializing through the lens of massively multiplayer online role playing games (MMORPGs). Although virtual in nature, many scholars argue that MMORPGs provide a space for advanced social interaction and relationship development beyond home and work (Martin & Steinkuehler, 2010; Steinkuehler & Williams, 2006; Cole & Griffiths, 2007; Smyth, 2007). In a study by Hussain and Griffiths (2008) one in five gamers polled claimed a preference for online socializing over offline interaction. The
highly social, relationship rich atmosphere of MMORPGs provides players the freedom for low risk self expression (Cole & Griffiths, 2007). While the “real” world provides a variety of demographic-based constraints (i.e., stereotypes, gender-norms, etc.), the virtual world encourages a limitless ideology of imagination and fantasy. Moreover, “the game world allows players the freedom to create successful virtual selves regardless of the constraints of their actual situation” (Bessiere, Seay, & Kiesler, 2007, p. 533).

A fundamental study by Yee (2006) empirically tested Bartle’s player types, an established taxonomy of multi-player computer game users, to develop a pragmatic model of player motivations in online games. The model developed by Yee established a connection between player motivations (based on Bartle) and several important player demographics (i.e., age, gender, usage patterns, and in-game behaviors). Following a principle component analysis, 10 key motivation variables were identified and grouped into three main motivation components. First, the achievement component comprised of advancement, mechanics, and competition, encompasses a player’s need for power, order, and opposition. Second, the social component, comprised of socializing, relationship, and teamwork, encompasses a player’s need for friendship, self-disclosure, and collaboration. Third, the immersion component, comprised of discovery, role-playing, customization, and escapism, encompasses a player’s need for exploration, story line, personalization, and escape from reality. In additional to categorizing player behavior, Yee’s study established two significant observations. Inconsistent with predictions made by Bartle, player motivations actually operate concurrently rather than suppressing each other. Furthermore, male players scored significantly higher on all components of achievement than did females. Even more intriguing, females scored significantly higher on the relationship aspect of the social component, yet there was no sex difference in the social
component as a whole. Yee concluded that male and female players socialize to the same degree in online games; however they seek different things from their relationships. Based on the differences described by Yee’s three main motivation components, it seems clear that the gender of the players is more of an influence on behavior than sex.

2.2 Sex versus Gender

With the abundance of seemingly contradictory findings about Internet use, what is the next step for those scholars interested in discovering the truth about virtual behavior? An underlying glitch in the study of Internet use is the fact that scholars use the terms sex and gender interchangeably. For example, several scholars have found that there is no “gender” difference in overall use of the Internet, rather that men and women use the Internet equally but for different reasons (Jackson, Ervin, Gardner, & Schmitt, 2001; Fallows, 2005; Jackson, Kolenic III, Fitzgerald, Harold, & VonEye, 2008), but what they actually found were no “sex” differences. These scholars focus on the independent variable of sex (i.e., male versus female), however it has been found that gender is a better determinant of behavior than sex (Bem, 1994; Spence, Hemlrich, & Stapp, as cited in Pearson & Davilla, 2001). For example, Kirtley & Weaver (1999) found evidence to support the idea that gender role differences “provide a better explanation for variations in communication styles than sex differences” (p. 203). Whether it’s because the term sex seems to be taboo in the American culture or because it has become culturally acceptable to use the term gender when referring to the study of sex-roles, the concepts of sex and gender are very different and should be studied concurrently rather than in substitution for one another.

During the 1970s psychologists influenced a reconceptualization of gender (e.g., Bem as cited in Pearson & Davilla, 2001). In contrast to many gender theorists, Sandra Bem preferred to categorize individuals based on their internalized societal standards for masculine and feminine
behaviors rather than a product of their sex (as cited in Pearson & Davilla, 2001). She looked at masculinity and femininity as 2 independent dimensions rather than as opposite ends of a spectrum. Gender is what one does rather than what a person is (Canary & Dindia, 1998; Pearson & Davilla, 2001). Individuals can exhibit a high or low degree of both the masculine and feminine dimensions leading to that person’s demonstration of either a masculine, feminine or androgynous personality (see Table 1).

Table 1

<table>
<thead>
<tr>
<th>Gender Personality According to Bem</th>
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<tbody>
<tr>
<td>High Masculine + Low Feminine → Masculine Personality</td>
</tr>
<tr>
<td>High Feminine + Low Masculine → Feminine Personality</td>
</tr>
<tr>
<td>High Masculine + High Feminine → Androgynous Personality</td>
</tr>
<tr>
<td>Low Masculine + Low Feminine → Undifferentiated Personality</td>
</tr>
</tbody>
</table>

According to Canary and Dindia (1998), "sex differences have little effect on personality and social behavior" (p. 23). Thus, because Internet usage is a specific human behavior, research suggests that gender should play a more essential role than sex in predicting that behavior. Unfortunately, when studying technology, specifically the Internet most scholars have evaluated the variable of sex in regard to how an individual interacts on the Internet.

Numerous scholars have studied the parallels between real and virtual worlds, especially in online gaming. Findings support the idea that the anonymity of cyberspace adds a new dimension to interaction (Wang & Wang, 2008), yet research has focused on sex differences in online behavior rather than gender differences. Research by Bem (1981) suggests that evaluating masculinity and femininity as two independent dimensions better predicts behavior than
evaluating gender as opposite ends of a spectrum. More conclusively, since Internet use is a specific human behavior, gender should play a more essential role than sex in predicting gender roles (i.e., behavior) and the communication styles associated with those roles online. Some empirical evidence has shown that online socializing is valued by both men and women (Griffiths, Davies, & Chappell, 2004) while other evidences indicates that “online communication is male-oriented and dominated by the use of assertive language and confrontational approaches” (Flanagan, 1999, p. 308). Due to the fact that anyone can be anyone or say anything on the Internet, it seems logical that the psychological identity (i.e., gender) of a person would have a greater influence on their online communication and behavior than sex.

Future research, according to Bem (1994), should challenge the conventional cultural standards that men are innately masculine and women are innately feminine. Has the Internet already marginalized gender roles? Further research needs to be done into personality factors that influence Internet use because sex is no longer a reliable predictor. As one scholar put it, “these issues can only be fully examined by researching how identities are created online and how they compare to real–world relationships” (Schrock, 2009, p. 8). Future research, according to Kuhlen and Michels (2006) needs to seek an answer to whether or not we accept gender differences knowing that they “are (widely) socially and culturally constructed and that they can be changed if the environment changes” (p. 2599).

2.3 Sex Differences and the Internet

Surprisingly, although the Internet is rapidly growing in popularity at an extremely fast pace, the majority of the research done regarding the Internet has been concerned with advances in technology instead of usage. In one of the few studies that examines internet usage, Jackson et al. (2001) predicted and found that females use email more than males and males use the Web
more than females. In addition, the findings reported that women associate more negative effects with computer technology, women are less familiar with technology, and that women have less favorable attitudes and lower self-efficacy toward the Internet. These findings are particularly intriguing in light of the progressive trend toward gender based scholarship. Still more recent research has also shown that men and women value information gathering and online socializing equally (Trombley, 2011). Scholars, including Jackson et al., focus on the independent variable of sex to study Internet usage, however it has been found that gender is a better determinant of behavior than sex (Trombley, 2011; Bem, Spence, Hemlrich, & Stapp, as cited in Pearson & Davilla, 2001). More importantly, using sex rather than gender does not take into account individuals who have a personality that is the opposite of their sex. For example, in an exploratory study, Trombley (2011) found that 30% of participants were misrepresented by their sex (e.g., were male with feminine personalities or were female with masculine personalities).

The rapid growth of online video and computer games in recent years has drawn the attention of both business and academia. Massively multiplayer online role playing games (MMORPGs) are socially complex virtual environments that not only allow players to create dynamic characters (Bessiere, Seay, & Kiesler, 2007) but more importantly to use those characters to interact with others to develop complex in-game group dynamics (Chen, Sun, Hsieh, 2008). The sense of boundlessness generated by the virtual nature of MMORPGs encourages players to develop an endless number of virtual selves that can either exemplify or challenge the player’s ideals (Bessiere et al., 2007). Research has shown that players often create their main character as a projection of their perfect self rather than as a replica of their actual self (Bessiere et al., 2007). Online socializing has often been viewed as a behavior valued by women more than men (Jackson, Ervin, Gardner, & Schmitt, 2001), yet gaming research has shown that
many online game players place a high value on the social aspects of the game (Griffiths, Davies, & Chappell, 2004). Taking into consideration that 81% of online game players are male, online game interactions may foster new virtually-based gender roles (Griffiths, Davies, & Chappell, 2004). Sixty percent of online gamers admit to swapping gender (although they are actually referring to sex) with a character (Griffiths, Davies, & Chappell, 2004). Although “gender swapping” is likely influenced by the quality and appearance of the type of character that can be created rather than prescribed behavior of the character’s sex, it seems logical that “gender swapping” would have a significant influence on virtual gender norms. This idea brings to light the importance of the fact that anyone can be anyone or say anything on the Internet, thus it seems logical that the psychological identity (i.e., gender) of a person would have a greater influence on their online communication and behavior than sex.

The Internet has traditionally been characterized as a male-dominated forum, yet current studies show that the gender-gap is closing rapidly (Weiser, 2000). By the end of 2000, women actually outnumbered men in the United States online population (Gorski, 2001). Social networking sites and online network TV shows are leading this growth (eMarketer, 2008) which supports data that claims women primarily use the Internet for interpersonal communication and academic support (Weiser, 2000). Although many believe that these statistics show that the sex digital divide is disappearing, others argue that equity in access does not equate to equity in opportunity (Gorski, 2001). During the same year that women became the majority in the online population, only 20% of all information technology professionals were women (Gorski, 2001).

2.4 Sex Differences in the Classroom

Sex differences in education, especially higher education are far reaching. Topics of study vary as greatly in breadth as they do depth. For example, male students are likely to credit
external sources (i.e., teaching style) to their success, whereas women more often credit internal sources (i.e., effort) (Velayo, 1996). Differences in perceptions about what is most important to student learning can be seen between male and female students as well. Women rank self-confidence and socialization with classmates higher than men rank these same variables (Brassard, 2005). In the classroom, men prefer logical appeals and rational evaluation, yet women prefer to connect course concepts with life experience to establish personal relevance (Lim Yuen Lie & Cheong, 2004). Educational objectives differ between male and female students too. Male students often evaluate themselves in terms of achievement, whereas female students are more performance oriented (Chang, 2004).

Women currently make up a majority of the United States undergraduate population and projections estimate that women will account for 57% of the undergraduate population by 2013 (Gerald & Hussar, 2003). According to Belenky, Clinchy, Goldberger, and Tarule (1986), a masculine bias exists in most traditional pedagogy because it was developed by a “male-dominated majority culture” (p. 5).

2.5 Implications for Distance Learning

In order to ensure increased access to higher education, many institutions of higher learning have been encouraged to diversify their methods of delivery (Soker, 2005). To achieve this goal, colleges and universities have implemented a mixture of multi-media technologies and web-based instruction (Soker, 2005). Although these technologies are intended to equalize access to higher education, many scholars argue that access is not the same as opportunity. During the process of facilitating learning, the digital divide actually creates new barriers for non-traditional students (Attewell, 2001).
Women account for the majority of online students, but are faced with both internal and external challenges to a greater extent than men. Internal challenges, such as unfamiliar technology and lack of community intensify the stress of an unfamiliar online environment. External challenges, such as work and family add to the complexity of online learning for women (Harrell & McClinton, 2008). These challenges are better understood when you consider the fact that 60% of all students older than 29 are women (Peter, Horn & Carroll, 2005). In reality, the same factors that entice female students to enroll in online courses lead to their ultimate demise.

Research has shown that men are not without problems in technology-based learning environments. According to Young and McSporran (2001), young male students tend “to be over-confident of their abilities, and lack the basic skills of time-management and self-regulation necessary for successful online study” (p. 3). In addition, online classes often encourage “dialogue and connectedness,” which tend to be geared toward female preferences rather than male preferences for learning (Anderson & Haddad, 2005).

2.6 Distance Learning Defined

A popular definition of distance learning is “simply an instruction and learning practice, utilizing technology and involving students and teachers who are separated by time and space” (Burke, 2002, p. 4, as cited in Stumpf, McCrimon, & Davis, 2005). Thus, the term distance learning is often used to describe any course that includes an online component. While this definition creates clear parameters, it does not include identifiable characteristics to discriminate course classifications. With this in mind, the Babson Survey Research Group, with support from the Sloan Foundation, and in partnership with the College Board, started generating an “annual report on the state of online learning in U.S. higher education” (Allen & Seaman, 2010, p. 2) in
an effort to answer “some of the fundamental questions about the nature and extent of online education (p. 2). One outcome of this report was a clear clarification of what constitutes online learning (see Table 2).

Table 2

*Prototypical Course Classifications*

<table>
<thead>
<tr>
<th>Proportion of Content Delivered Online</th>
<th>Type of Course</th>
<th>Typical Description</th>
</tr>
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<tbody>
<tr>
<td>0%</td>
<td>Traditional</td>
<td>Course with no online technology used — content is delivered in writing or orally.</td>
</tr>
<tr>
<td>1 to 29%</td>
<td>Web Facilitated</td>
<td>Course that uses web-based technology to facilitate what is essentially a face-to-face course. May use a course management system (CMS) or web pages to post the syllabus and assignments.</td>
</tr>
<tr>
<td>30 to 79%</td>
<td>Blended/Hybrid</td>
<td>Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings.</td>
</tr>
<tr>
<td>80+%</td>
<td>Online</td>
<td>A course where most or all of the content is delivered online. Typically have no face-to-face meetings.</td>
</tr>
</tbody>
</table>

*Note. Adapted from Allen & Seaman, p. 5.*

In addition to being defined by teaching mode, distance education is also described in terms of context. Distance education includes colleges and universities (including public, private, two-year, and for-profit), corporate-university joint ventures, virtual universities, and corporate or training institutions (Olson, 2001). Each distance education institution designs programs based on the needs of the target student population within their context, therefore the mission of the institution often has a significant influence on their online pedagogy. These differences in pedagogy, in combination with advancements in multimedia tools and the emergence of a global educational marketplace, have lead to divergent approaches to instruction and learning (Stumpf, McErimon, & Davis, 2005).
The pervasiveness of distance education in higher education is undeniable. As of fall 2009, 5.6 million students, which translates to 39% of the total number of students in higher education, were taking at least one of their courses in an online format (Allen & Seaman, 2007). Additionally, two-year colleges showed the most significant interest in expanding their online course and program offerings, with two-year institutions accounting for over 54% of all online enrollment from 2002 to 2007 (Allen & Seaman, 2007). To compensate for these increasing numbers and to streamline the process of accreditation, many distance learning programs are forgoing regional accreditation and gaining certification through the Distance Education Training Council (Olson, 2001). According to Stumpf, McCrimon, and Davis (2005), “the sheer expansion of access to learning through technology makes education accessible and affordable anywhere and anytime in the 21st century global marketplace” (p. 358).

2.7 Strengths and Concerns of Distance Education

Distance learning courses offer tremendous flexibility for students with already saturated lifestyles. According to Eduventures, an American education market research firm, “over 80 percent of potential students over 25 years of age reported they would consider an on-line program, compared to 48 percent of respondents 18 to 25 years old” (Eduventures, 2005). This means that distance education has the potential to provide two-year institutions with access to a whole new group of non-traditional students. Furthermore, distance education offers community colleges the ability to quickly adapt to the needs of both community (e.g., just-in-time training) and national (e.g., the green-collar job market) initiatives. In addition to greater flexibility for both the student and the institution, distance learning provides an opportunity for a greater amount of class time for students than in traditional learning environments (Harasim, 1989).
Students have virtually unrestricted and unlimited access to course content and are often not tied to a real-time schedule.

In order to ensure increased access to higher education, many institutions of higher learning, including community colleges, have been encouraged to diversify their methods of delivery (Soker, 2005). To achieve this goal, colleges and universities have implemented a mixture of multi-media technologies and web-based instruction (Soker, 2005). Although these technologies are intended to equalize access to higher education, many scholars argue that access is not the same as opportunity. During the process of facilitating learning, the digital divide actually creates new barriers for non-traditional students (Attewell, 2001).

Women account for the majority of online students, but are faced with both internal and external challenges to a greater extent than men. Internal challenges, such as unfamiliar technology and lack of community intensify the stress of an unfamiliar online environment. External challenges, such as work and family add to the complexity of online learning for women (Harrell & McClinton, 2008). These challenges are better understood when you consider the fact that 60% of all students older than 29 are women (Peter, Horn, & Carroll, 2005). In reality, the same factors that entice female students to enroll in online courses lead to their ultimate demise. Alternatively, research has shown that men are not without problems in technology-based learning environments. According to Young and McSporran (2001), young male students tend “to be over-confident of their abilities, and lack the basic skills of time-management and self-regulation necessary for successful online study” (p. 3). In addition, online classes often encourage “dialogue and connectedness,” which tend to be geared toward female preferences rather than male preferences for learning (Anderson & Haddad, 2005).
Adding another dimension to the challenges of distance learning, institutions have their own unique obstacles related to online instruction. The reputation of distance learning courses is tarnished with an extremely high drop rate. For example, in one study, 70% of adult online learners between the ages of 20 and 40, did not complete their courses (Breaden, 2008). According to the 2007 Sloan Consortium annual report on online learning in the United States, institutions reported the top three barriers to online education as the higher costs associated with technology (compared to face-to-face courses), negative faculty perceptions of the value and legitimacy of online education, and online degrees earning less respect than face-to-face degrees (Allen & Seaman, 2007). Moreover, faculty’s negative perceptions of knowledge “commodification” and resistance to developing the new technological skills required to be an effective distance learning instructor create the type of negativity that can sabotage even the more well-founded distance learning programs (Stumpf, McCrimon, & Davis, 2005). Partner this with a lack of institutional support for faculty and students and it is easy to understand why many institutions struggle with faculty buy-in.

Another important challenge addressed in technology-based learning environment research is the fact that technology usage is changing faster than researchers can collect data. While scholars have examined online variables such as learning style, classroom climate, and communication, results are often published too late to have a direct impact on quickly evolving online program design. Adding to this problem, institutions often design their distance learning curriculum based on the immediate needs of the institution rather than scholarly evidence. For example, research shows that high quality online education requires smaller student-teacher ratios (Olson, 2001), yet online class caps are often much higher than face-to-face courses because virtual classrooms are not limited in size like physical classroom. While freedom from
enrollment limitations might not seem like a challenge, issues such as student identification verification, lack of campus-based experience for students, and a substantially increased workload for both faculty and students all seem to be the product of the virtual environments required by distance learning (Olson, 2001).

Traditionally, both instructors and students of distance learning have adopted an on-campus classroom pedagogy. Students view their role as a learner through the same lens of passivity that worked (at least in the loosest sense of the word) for them in the classroom. Instructors view their role as a teacher through the same lens of content distribution that worked (again in the loosest sense of the word) for them in the classroom. There is a great divide between functionality and productivity that needs to be addressed when creating distance learning environments. It is relatively easy to create a course that is functional, yet creating a course that is productive is much more complex. One factor that seems to be inherent (in varying degrees) to campus classrooms is inactive learning. If a student attends class, it requires little effort to become connected to course concepts. Students learn the material through basic absorption of the information presented. Yet many scholars would argue that this absorption is not really learning. Research has shown that face-to-face classes provide a higher degree of motivation for students to stay connected. In one particular study, this motivation influenced assignment submission, which in turn produced higher final grades when compared with the same course offered online (Mentzer, Cryan, & Tcchaimanot, 2007). Congruently, a meta-analysis performed in 2010 by the U.S. Department of Education concluded that students in a K-12 setting doing some or all of a course online ranked higher in tested performance than classroom students.
2.8 Online Disinhibition

Are people more true to their authentic personalities in virtual worlds because of the more permissive social norms created by virtual reality? Human behaviors and social norms are transferred to the Internet in complex and divergent ways. Internet users seem to behave more openly and unrestrained online, often acting in ways they would not dare to act in the face-to-face world. Suler (2004) identified six important factors that contribute to this online disinhibition effect:

- The first factor, and probably the most obvious, is the idea of “dissociative anonymity” (p. 322). The Internet implies a sense of disconnect lulling users into a false sense of security through dissociation. What happens online stays online without the vulnerability or accountability of real world norms to regulate behavior.

- The second factor is “invisibility” (p. 322). Similar to anonymity, the Internet removes the visible interaction cues that instinctually regulate human interactions. According to Suler, “people don’t have to worry about how they look or sound when they type a message” and “this invisibility gives people the courage to go places and do things that they otherwise wouldn’t (sic)” (p. 322). Facial expressions and eye contact serve as regulators in face-to-face interaction, yet online interactions are free from the inhibitions stimulated by the physical reactions of others.

- Not only are interactions often expressed through text, they also don’t often take place in real time, thus the third factor that influences online disinhibition is “asychronicity” (p. 322). When people are detached from an immediate emotional (both positive and negative) response, online social interactions are significantly impacted by the effect that disinhibition has on the shape and flow of disclosure and expression.
• The influence of the above three factors can lead to an altered manifestation of a person’s virtual identity (including self-disclosure related to that identity and self-boundaries). Thus a unique manifestation of the relationships forged in an online context with that identity lead to the fourth factor, “solipsistic introjections” (p. 323). According to Suler, “the online companion…becomes a character within one’s intrapsychic world, a character shaped partly by how the person actually presents him or herself via text communication, but also by one’s internal representational system based on personal expectations, wishes, and needs” (p. 323).

• The virtual nature of virtual reality leads to the fifth factor, “dissociative imagination” (p. 322). Internet users “split or dissociate online fiction from offline fact” and view the reality that occurs online as game-like in nature with associated norms and behaviors that do not carry over into the realities of daily life. Online persona’s are compartmentalized, exclusive to computer-mediated interaction, and can be turned off when not online.

• The final factor that influences online disinhibition stems from the impact of nonverbal expressions of power in the face-to-face world. People carefully communication power through appearance, body language, and physical context during a variety of interactions, yet “the absence of those cues in the text environments of cyberspace reduces the impact of their authority” (p. 324). This “minimization of status and authority” (p. 324) leads to a perception of online relationships being “peer” in nature and thus people are “much more willing to speak out and misbehave” (p. 324).

Each factor seems to inspire a spectrum of complex behaviors ranging from “benign disinhibition” to “toxic disinhibition” (p. 321), yet is it unclear why some people deviate in small degrees from their authentic (i.e., offline) personality while others make dramatic changes.
Though the six factors outlined by Suler form an important foundation for the study of the online disinhibition effect, the conclusions drawn in the article provide the most powerful support (and inspiration) for future research in this area. Specifically, Suler explains that “personality styles” are the key to truly identifying the “strength of defense mechanisms and tendencies toward inhibition or expression” (p. 324) and future research must determine who are more predisposed to the various elements and what causes these circumstances.

2.9 Summary

This chapter appraised literature regarding the dimensions of online behavior and norms that are critical to identifying whether or not people are more true to their authentic personalities online because of the more permissive social norms created by virtual reality. Yee (2006) found that female gamers scored significantly higher on the relationship aspect of the social component of online games, which seems to indicate that female gamers follow the same relationship-oriented gender roles as they do in the real world. Yet Yee also found no sex difference in the social component as a whole. Previous scholars have focused on sex differences in online behavior rather than gender differences. Research by Bem (1981) suggests that evaluating masculinity and femininity as two independent dimensions better predicts behavior than evaluating gender as opposite ends of a spectrum. More conclusively, since Internet use is a specific human behavior, gender should play a more essential role than sex in predicting online interaction. The next chapter explores the design methodology for this study.
CHAPTER 3
DESIGN METHODOLOGY

3.1 Introduction

Courses in Communication Studies, including the courses connected with this research, are often designed around activity-based learning to maximize communication competence. Throughout the 16-week semester, students participated in a variety of tasks that were created to help them connect class concepts to their daily lives. These tasks ranged from in-class professor-lead activities and discussions to out-of-class reflection assignments that required students to write personal journal entries, critique pieces of media, and participate in online discussions with classmates. Some form of participation activity was associated with each class meeting.

3.2 Face-to-Face Discussion Activity

The first face-to-face discussion asked students to engage in thoughtful dialogue with their peers regarding the topic of interpersonal communication. During the weeks leading up to the discussion, students learned about concepts related to relationships through the presentation of class lectures, required reading materials, and other related activities. Immediately before the start of the discussion, ground rules for effective interaction were established by the students. Once the students were satisfied with how the discussion would be mediated, the professor posed the first question aimed at stimulating discussion. Subsequent questions were based on the dialogue between the students, but were based on the following script:

1. What makes a relationship interpersonal, compared to other relationships?
2. Give me some examples of interpersonal relationships.
3. If you consider family, and friends, co-workers, and classmates all interpersonal, give some characteristics or qualities that those four types of relationships have in common that constitute interpersonal.

4. Somebody tell me, what do you think the definition of a compliment is? Do compliments always have to be truthful? Are compliments a necessity in interpersonal relationships?

5. Is flattering important?

6. When we’re interacting with each other and we’re doing research with each other, how do we know if someone’s telling us the truth?

7. How has social media, in general, changed relationships? Let’s start with the strengths. What has social media done for relationships, or done for interaction that’s been positive. What are the negative implications of social media in regards to relationships?

8. How many of you have ever posted something on Facebook that you thought was kinda cool, like your status update, and then the longer it takes for someone to like it, the more annoyed you get?

9. So how does Facebook and getting that reinforcement affect our self-esteem and our self-concepts?

10. So it might be superficial communication, but what’s important is to know the difference between superficial and non-superficial. So, is superficial necessarily a bad thing?

11. So what else do you think is sort of the future of the business world? How does all of this technology, and all of these relationships, and all of these communication things, like you said, it changes, technology has changed the way we communicate with each other, right? So, how does that impact the business world? How about our social lives?
The second face-to-face discussion asked students to engage in thoughtful dialogue with their peers regarding the topic of public speaking. As with the first discussion, students learned about concepts related to public speaking through the presentation of class lectures, required reading materials, other related activities, and students re-established ground rules for interaction prior to the start of the discussion. The professor then posed the first question aimed at stimulating discussion, and subsequent questions were based on the dialogue between the students, but were based on the following script:

1. What qualities or characteristics do you perceive to be effective with public speakers?
   So, if you think a public speaker is a good public speaker, or an effective public speaker, what makes that person good or effective? What quality?
2. Give me some examples of good public speakers. Your personal opinion. It can be someone famous, it can be someone not so famous.
3. What qualities or characteristics do you perceive to be ineffective with public speakers?
4. What are the similarities between the qualities you look for in someone who you’re talking to one-on-one and someone you perceive to be a good public speaker?
5. What are things that you as a public speaker can do before your presentation to try to improve your effectiveness. Now that we’ve talked about the things that people do well and the things that people don’t do very well, what do you do as a public speaker to improve your effectiveness?
6. Why is it important for your audience to be interested in your speech? I know that sounds like a dumb question, but a lot of times people don’t really think about it. Why is it important that an audience is interested?
7. What is it about public speaking that you find intimidating?
8. How do you think technology has changed public speaking?

3.3 Online Discussion Activity

Following each face-to-face discussion, participants took part in an online activity using the discussion forum of the course management system (Blackboard). The activity gave them the opportunity to demonstrate a variety of gender-linked traits from the Bem Sex Role Inventory (e.g., yielding, assertive, sensitive, independent, loyal, and analytical). A transcript of the online exchange was recorded for analysis. Participants were instructed to continue the face-to-face discussion from class through Blackboard, and the following two prompts were posted for response:

Interpersonal discussion: Discuss with your group members the following questions.

Make sure that this discussion is an interaction (don't just say "I agree" or "I disagree") and that you respond to what others have to say about your ideas. Your goal is to make as many comments back and forth with your group members as possible before the start of class on Wednesday. You will receive 10 points of participation for this discussion!

Questions:

1. Do you think you are effective or ineffective during conflict? Why?
2. Which conflict style do you think best represents your style?
3. What strategies do you think you use most often during conflict?
4. Reflect back on the video you watched a couple weeks ago, which of David's Rules did you find most interesting (or most relevant)?
5. Have you ever violated one of David's Rules? If so, what was the outcome?
6. What are your biggest pet peeves when it comes to conflict?
7. Is conflict always negative? Can you think of a time when conflict turned into something positive?

Public speaking discussion: Use this forum to continue discussing the topic of public speaking with your classmates (respond to anyone you want this time...not just your group). Address the following questions in your posts:

1. Did you find public speaking intimidating before starting this course? Do you still find it intimidating (why or why not)?
2. Describe how you feel when giving a speech (the good and the bad)
3. Is there anything you can do to help you enjoy speaking more?
4. Is there anything the audience can do to help you enjoy speaking more?
5. How do you think your perception influences your experience of public speaking (i.e., whether you like or dislike it)?
6. Is plagiarism in public speaking the same as plagiarism in writing? Should speakers be held to the same accountability for ethics when speaking as they do writing? Why or why not?

3.4 Online Survey

Following the conclusion of the course, participants were contacted to participate in a voluntary online survey posted on surveymonkey.com to gauge participant perceptions of online versus face-to-face. The survey consisted of three parts: the Bem Sex Role Inventory, open-ended questions, and demographic questions.

3.4.1 Bem Sex Role Inventory

Participants were given the Bem Sex Role Inventory as part of both the online survey and follow-up interview. The Bem Sex Role Inventory (BSRI) was generated to provide a measure of
the degrees of masculinity, femininity, and androgyny according to Sandra Bem’s gender schema theory (Bem, 1981). According to Bem, humans exhibit a comprehensive predisposition to comprehend and manage behaviors based on sex-linked associations that construct gender schema. Thus sex-typing is an outcome of social influences that set standards for gender-related behaviors (Bem, 1981). Although the BSRI has drawn some criticism because research regarding the measure has focused on its reliability rather than its theoretical framework (Hoffman & Borders, 2001), there have been an equal number of studies that show the categories prescribed by the instrument are solid measures of the psychological identities of men and women (Oswald, 2004).

Gender for the participants of this study was measured through a short form version of the Bem Sex Role Inventory (BSRI) adapted from previous studies (Trombley, 2011; Choi, Fuqua, & Newman, 2009). This version of the BSRI was chosen because of its length and subsequent ease-of-use, and consistent construct validity. The original BSRI is a survey that is comprised of 60 personality traits (20 masculine, 20 feminine, and 20 neutral) and is self-assessed. Those who wish to measure their degrees of gender rate themselves on a scale of 1 to 7 depending on the level they believe they exhibit for each trait. The BSRI is scored by adding together all 20 masculine scores and all 20 feminine scores, and then divides each of these totals by 20. The shortened form of the BSRI asks 10 questions for each category rated on a scale of 1 to 4.

3.4.2 Open-Ended Survey Questions

Reflecting on the concept of online disinhibition, the survey posed the following open-ended questions designed to highlight and gauge characteristics related to the six contributing factors outlined by Suler (2004):
1. Do you think that you communicate the same way online as you do face-to-face? Explain.

2. Do you feel like social norms (unspoken rules for behavior that govern a society) are the same online as they are face-to-face? Explain.

3. Do you believe that the absence of nonverbal cues (such as facial expressions and eye contact) change online communication/interaction? Explain.

4. Are you more or less likely to communicate aggressively online? Explain.

5. Do you think the asynchronous (not in real time) nature of online interaction helps or hurts communication? Explain.

6. Is there a sense of empowerment when communicating online because people have the ability to hide your true identities (appearance, age, sex, etc.)? Explain.

7. Do you think the abundance of online interaction in today's society is having a positive or negative effect on human interactions and/or relationships? Explain.

8. Do you think the amount of time that someone spends online effects their view of the world around them when they are not online? Explain.

9. What do you think are the strengths and weaknesses of face-to-face interaction/communication?

10. What do you think are the strengths and weaknesses of online interaction/communication?

11. Do you have any other thoughts or comments about online or face-to-face interaction/communication that was not covered by one of the other questions in this survey?
3.5 Follow-up Interviews

Once all three parts of the study (face-to-face discussion, online discussion, and online survey) had been analyzed, participants were contacted to complete a follow-up interview to confirm meaning of proposed themes generated by the data. This follow-up interview took place approximately three months after participants completed the online survey. Participants met with the researcher in a private academic office. At the start of the interview, participants were given the Bem Sex Role Inventory short-form for a second time. The goal of this was to evaluate consistency of the participant’s answers from time one (survey) to time two (interview).

Following the inventory, participants were asked the following follow-up questions:

1. What is your primary type of computer-mediated communication (texting, social media, gaming, etc.)?
2. Approximately how much time during a week do you spend on this activity?
3. Do you consider yourself a novice, average, or advanced Internet user?
4. Thinking back to the face-to-face discussions we had during class and the online discussions you had using Blackboard, how would you compare your strategies for communication during both types of discussions (same/different)?
5. Show participant the three themes. Do you think these themes represent key concepts related to face-to-face versus online behavior?
6. Can you think of any factors related to face-to-face versus online discussions that aren’t represented by one of the 3 themes?
7. In your opinion, what is the single largest factor that contributes to the differences between face-to-face and online behavior?
At the conclusion of the interview, participants were asked to take the Bem Sex Role Inventory short-form again, but this time they were instructed to complete the survey based on how they represent themselves online. The goal of this was to identify if there was a difference in how they perceive their face-to-face personality versus their online personality.

3.6 Summary

In summary, a combination of face-to-face and online discussions, supported with a follow-up online survey and personal interview were used to collect responses from participants regarding their strategies for communication. The Bem Sex Role Inventory was used to measure the gender of the participants during three assessments during two points in time. The goal of this data collection was to evaluate what effect participant’s psychological identity had on their strategies for interaction, especially within the context of online dialogue.
CHAPTER 4
RESEARCH METHODS

4.1 Introduction

There are an abundant number of studies that propose and attempt to explain the unique dynamics of online interaction and communication. All of these studies evaluate various dimensions of virtual behavior but none take into consideration the personality of the Internet-user and how this might influence their behavior. In accordance with the suggestion by Suler (2004), the methods of this study seek to “focus on which people, under what circumstances, are more predisposed to the various elements of online disinhibition” (p. 324).

4.2 Research Design

To interpret both the dialog exchanged during the social activities (both online and face-to-face) and the data collected from participant interviews, a constant-comparison method of analysis was employed (Glaser & Strauss, 1967; Strauss & Corbin, 1998). A team of three researchers started by identifying codes in the texts and then compared their findings with the codes identified by the other researchers. Following Strauss & Corbin’s phases of coding, this initial coding (called open coding) was followed by a more narrowed evaluation of the text to identify whether the initial codes depicted the real meaning (i.e., axis) of the data and to identify potential new and subcategories of codes. The third and final phase of coding (called selective coding) involved pinpointing the primary themes within the categories and extracting samples from the text to illustrate the themes.

The methods of this study employed a comparative analysis of online versus face-to-face interactions to evaluate the consistency of participant behaviors associated with their identified gender personality. The face-to-face and online discussion transcripts were supplemented with a
follow-up online survey to gauge participant perceptions of online versus face-to-face behavior and a follow-up interview to confirm meaning of proposed themes. The purpose of the study was to determine:

1. Do people stay true to their 'authentic' gender roles during online interaction?
2. Are people’s ‘authentic’ gender roles magnified during online interaction?
3. Does online interaction somehow change a person’s ‘authentic’ gender roles, and if so, how?

4.3 Setting and Participants

The principal setting for this study was a community college classroom, which included the online course management system of Blackboard. Participants were a sample of convenience. They were college students enrolled in one of two speech communication courses (Fundamentals of Speech Communication or Business and Professional Speaking) at a medium sized campus of a large community college district in Texas. Students voluntarily enrolled in their course of choice during the spring semester of the school year as part of their core curriculum or as an elective course for their major. The Fundamentals of Speech Communication (FSC) course was offered in a traditional face-to-face format and the Business and Professional Speaking (BPS) course was offered in a hybrid (combination of online and face-to-face instruction) format. The format for each course was posted in the course catalog to make students aware of requirements prior to enrollment; however students do not often read the catalog and register for classes without knowledge of the design. The traditional face-to-face course (FSC) met for two 75-minute classes, twice a week, over the 16-week semester. The hybrid course (BPS) was also scheduled for two 75-minute classes, twice a week, over the 16-week semester, however 25% of the total time requirement was dedicated to online course work and another 25% was reserved
for work on a large group project. Both the online and group components of the class required students to spend the scheduled class meeting time completing tasks outside of the classroom and the syllabus provided those out-of-class dates to students at the beginning of the semester.

Participants ranged in age from 18-46 and came from a variety of cultural and socioeconomic backgrounds. Initially, 23 students (14 from the Fundamentals of Speech Communication course and nine from the Business and Professional Speaking course) volunteered to participate in the study. The students included 11 males and 12 females. Of the 23 students, seven were chosen as representative of the group both because of characteristics identified during the coding process (see Table 3) and because they completed all four parts of the data collection process (face-to-face discussion, online discussion, online survey, and follow-up interview). Each student was given a pseudonym.

Table 3

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Sex</th>
<th>Gender</th>
<th>Class</th>
<th>Type/Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brian</td>
<td>23</td>
<td>Male</td>
<td>Masculine</td>
<td>BPS</td>
<td>Gaming Advanced</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>E-mail/Texting Average</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>46</td>
<td>Female</td>
<td>Androgynous</td>
<td>BPS</td>
<td>Texting Advanced</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social Media Advanced</td>
</tr>
<tr>
<td>Jake</td>
<td>18</td>
<td>Male</td>
<td>Androgynous</td>
<td>FSC</td>
<td></td>
</tr>
<tr>
<td>Kayla</td>
<td>19</td>
<td>Female</td>
<td>Androgynous</td>
<td>BPS</td>
<td>Social Media Advanced</td>
</tr>
<tr>
<td>Sara</td>
<td>19</td>
<td>Female</td>
<td>Androgynous</td>
<td>BPS</td>
<td>Social Media Advanced</td>
</tr>
<tr>
<td>Susan</td>
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<td>Female</td>
<td>Androgynous/Feminine</td>
<td>BPS</td>
<td>Social Media Advanced</td>
</tr>
<tr>
<td>Walter</td>
<td>28</td>
<td>Male</td>
<td>Androgynous/Feminine</td>
<td>FSC</td>
<td>Texting Average</td>
</tr>
</tbody>
</table>

Brian was a non-traditional student that worked full-time as a bartender at a restaurant in the local historic downtown. He was a self-described “gamer” and claimed to do a majority of
his communicating online. He had a very worldly scope of experience and often expressed his love of concerts, listening to music, and collecting vinyl records. Although he had a very relaxed demeanor, Brian often impressed his classmates with his gift for connecting life examples with class concepts. He thought it was ironic that the things he got in trouble for in high school (his sense of humor and ability to think outside the box) seemed to be the things that his college professors most valued. His major was computer science, 3D modeling, and animation. Brian was selected to represent non-traditional students with a gaming background, who spent an advanced amount of time online.

Elizabeth was a non-traditional student with a light-hearted and youthful disposition. Although she was the oldest student in her class, she emerged as a mentor and validated the philosophy that it’s never too late to follow your dreams. She treated her classmates as peers, but often joked about being “middle-aged.” Elizabeth was a world traveler and avid golfer. She was always in a good mood and used her experience to contribute to class discussions. Elizabeth was selected to represent non-traditional students who primarily use technology for e-mail and texting and have limited experience with social networks.

Jake, being the youngest student in his class at 17 years old, was a traditional college student who had been homeschooled. He often talked about growing up in the country, riding horses, hosting large bonfires with his friends, and how much he enjoyed weightlifting. Although Jake sat in the very back of the classroom, he was an active participant in daily activities and discussions. Jake had a kind temperament with a modest, yet jovial smile that radiated his genuine innocence. Still, Jake’s opinions and attitudes were mature beyond his age. He hoped to graduate and become an entrepreneur or a firefighter, but realized that his aspirations may
change as he gained experience. Jake was selected to represent young students with limited college experience and who are advanced Internet users, but valued texting over social networks.

Kayla was a traditional college student who grew up in a small, rural town and was attending community college to take care of her basics with hopes of transferring to a university. Kayla often talked about her “huge, ginormous family” and her twin sister Sara was also in the class. Throughout the semester, Kayla and Sara sat in the front row next to each other and often finished each other’s thoughts and stories, much to the enjoyment of the rest of the class. Kayla’s major was creative writing; she often talked about her dreams of becoming a famous screenwriter, and prided herself on being a diehard fan of the television show Grey’s Anatomy and a “Potter head.” She was full of enthusiasm and a refreshing zest for life. Kayla was selected to represent young students with limited college experience, who spent an advanced amount of time online, and valued the social aspects of online interaction.

Sara was a traditional college student who, like her twin sister Kayla, grew up in a small, rural town, and was attending community college as a stepping stone to a four-year school. Identical in almost every way, Sara and Kayla were great friends in addition to being sisters. The only noticeable difference between the two girls was that Sara came across as a little more reserved (or at least in comparison to Kayla), but their positive energy was contagious to the whole class. Sara was unsure about her major, but seemed composed rather than phased by being undecided. Sara was selected to represent young students with limited college experience, who spent an advanced amount of time online, and valued the social aspects of online interaction.

Susan was a non-traditional college student and single mother of three children (ages 8, 11, and 19). During the second week of class, she lost her mother due to a sudden illness, but stayed committed to her academic goals despite her grief. She had returned to school after an
extended break and earned her associate of arts degree the previous May, but was working on a certificate in music business to augment her marketability. Susan had a unique perspective about social media because she frequently used it professionally to promote local bands. She was never afraid to express her opinions and even played devil’s advocate when it helped stimulate a discussion, but she was always calm and collected in her approach to dialogue. Susan was selected to represent non-traditional students, who spent an advanced amount of time online, and valued both the professional and social aspects of social media.

Walter was a non-traditional college student who grew up in Long Island, New York. He often expressed messages of love and admiration for his uncle, who raised him after he lost his parents when he was three years old. He talked about meeting his “soul mate” while working at Starbucks, and was married with an eight month old son. Walter was an honor student with a proactive attitude. He was always cheerful, placed a high value on education, and demonstrated the utmost respect for his classmates and professors. Walter always found the positive in every situation, and although he was quiet during class, he would often stay after to talk about assignments and class concepts with the professor. Walter was graduating at the end of the semester and was applying to nursing programs with plans of becoming an emergency room nurse. Walter was selected to represent non-traditional students who primarily use technology for texting and have limited experience with social networks.

4.4 Data Collection

Data collection started with face-to-face discussions that were video recorded and transcribed. Every discussion occurred during a regularly scheduled class meeting and involved a course topic that students were familiar with and was a topic incorporated into both the Fundamentals and Business course. The first discussion topic was interpersonal communication.
and the discussion lasted for approximately one hour. The second discussion topic was public speaking and lasted for approximately 45 minutes. The second discussion took place three weeks after the first discussion and was also during a regularly scheduled class meeting time. Students guided the focus of the dialogue during both discussions based on their interests and comments, but the professor made sure the students stayed on topic by using pre-constructed prompts. During the week following each discussion, students were directed to continue discussing the topic with their classmates using the discussion forum tool of Blackboard (an online course management system). Seven open-ended questions regarding interpersonal communication and six regarding public speaking were posed, both requiring a reflective and interactive response from participants. The course ended two weeks after the last discussion and during the final week of class, students were sent an e-mail inviting them to complete a follow-up survey through surveymonkey.com. The survey was generated to identify the student’s perceptions of online versus face-to-face behavior. Questions were designed in reflection of the six factors contributing to online disinhibition proposed by Suler (2004) and to calculate each participant’s gender using the Bem Sex Role Inventory short-form. The discussion and survey responses encompassed the primary data sources in this study. Interviews with participants following data analysis provided supplementary information to clarify codes, categories, and themes. The Bem Sex Role Inventory short-form was also given to participants during the interview to evaluate the consistency of the results both over time and compared to their online behavior.

4.5 Data Analysis

Transcripts generated through video recordings of face-to-face class discussions, online discussion forum posts, and open-ended survey responses were evaluated based on constant-comparison analysis supported by Strauss and Corbin (1998). The researcher and two other
coders, who were not involved in the study, examined the transcripts and triangulated their findings. The analysis included identifying and assigning codes to the discussion and survey responses, grouping codes with associated meaning together to generate categories, and distinguishing comprehensive emerging themes. Themes were then corroborated by participants through follow-up interviews to verify meaning and ensure accuracy.

4.6 Summary

Tracking participant behavior throughout the framework on a college course proved to be a challenging feat. The researcher concluded a descriptive case study evaluated through the lens of constant-comparative analysis would provide the most valuable data, given the challenges associated with the complexity of the framework (online versus face-to-face interaction) and the need for chronological access to participants. The qualitative methods used were the most conducive to answering the research questions identified for this study.

Chapter 5 introduces the results of the study and provides explanation for the codes and categories identified.
CHAPTER 5

RESULTS

5.1 Introduction

This chapter presents the findings of this descriptive case study, including the methods used for coding the data, organizing the codes into categories based on common characteristics, and the emergence of substantiated themes. The process and rationale for codes and categories is discussed along with a demonstration of the rigor of the coding.

5.2 Process for Analysis

Researchers started coding by evaluating the content of the discussion and survey transcripts line by line, allowing the content itself to generate codes based on connotation. The researchers agreed upon all codes as data was coded, re-evaluated, and refined until the coders reached 100% agreement on all codes, categories, and themes. The discussion and survey transcripts generated 359 notable excerpts and 57 unique codes. These codes were then organized into 8 categories and ultimately translated into 3 themes. The remainder of this chapter concentrates on defining, explaining, and illustrating these codes and then explains how these codes were organized into categories. Figure 1 illustrates the number of codes by resource document for each participant.
Figure 1. Participants and their code applications.

5.3 Description of Codes and Categories

The codes identified by the researchers were completely driven by the text generated by the participants. These codes represented a variety of attitudes, values and behaviors related to course topics, strategies for communication, and online behavior. The researchers recognized two different levels of codes. Parent codes represented umbrella concepts that were generalizable to a variety of different situations. Child codes represented subcategories of the parent codes that
were directly related to the major concepts, but connected to specific instances or elements of the context. In the transcripts, all seven participants, mentioned one or more of the listed child codes (see Table 4).

Table 4

*Codes Mentioned by All Seven Participants*

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total Number of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reflection</td>
<td>Introspection and the willingness to learn about yourself. The depth and breadth of understanding about yourself (who you are and why).</td>
<td>65</td>
</tr>
<tr>
<td>Value statement</td>
<td>A statement that reflects the person's sense of right or wrong. Their perception of how the world should be (rather than how it actually is).</td>
<td>62</td>
</tr>
<tr>
<td>Positive attitude statement</td>
<td>A claim about something a person thinks is good or favorable.</td>
<td>55</td>
</tr>
<tr>
<td>Negative attitude statement</td>
<td>A claim about something a person thinks is bad or unfavorable.</td>
<td>48</td>
</tr>
<tr>
<td>Invisibility</td>
<td>Online interactions are free from the inhibitions stimulated by the physical reactions of others.</td>
<td>31</td>
</tr>
<tr>
<td>Lifeworld sharing</td>
<td>Authentic learning demonstrated by connecting class concepts to real life examples or scenarios. These connections establish rapport, help participants develop empathy and understanding for one another in the context of their daily lives and struggles (Nodding, 2003).</td>
<td>31</td>
</tr>
<tr>
<td>Emotional ambiguity</td>
<td>Without hearing a person's voice or seeing body language and facial expressions online messages lack important relationship cues.</td>
<td>20</td>
</tr>
<tr>
<td>Asynchronous versus synchronous</td>
<td>Communication that takes place in real time versus that which occurs with a delay or lag.</td>
<td></td>
</tr>
<tr>
<td>Deterioration of face-to-face social skills</td>
<td>The negative impact that reliance on technology has on the quality and quantity of our face-to-face interactions and relationships.</td>
<td>17</td>
</tr>
<tr>
<td>Dissociative anonymity</td>
<td>What happens online stays online without the vulnerability or accountability of real world norms to regulate behavior.</td>
<td>12</td>
</tr>
<tr>
<td>Behavioral norms*</td>
<td>The perception of a person about what is appropriate in a given context.</td>
<td>40</td>
</tr>
</tbody>
</table>

*Mentioned by six of the seven participants*
After careful examination and evaluation of the codes, it was determined that many of the parent codes could be linked together to create categories based on common characteristics and frequency of code co-occurrence. A total of eight categories were identified.

5.3.1 Perceptual Framework

Many factors guide the process through which a person evaluates things they consider to be good and bad or right and wrong. These factors develop through experience and are the primary influence on thought and action (Moore & Asay, 2012). Attitudes and values are fundamental facets that distinguish what a person pays attention to in the world and how that person evaluates those stimuli. More specifically, “attitudes are values couched within social situations” (Moore & Asay, 2012, p. 110), therefore they have a clear and direct impact on what a person believes, what a person does, and how they evaluate the beliefs and actions of others. These observations motivated the rationale for the category of perceptual framework, which included the codes of positive attitude statements, negative attitude statements, and value statements and had the highest number of occurrences of all the categories. As shown in Table 5, all seven of the participants mentioned each of the codes within the perceptual framework category, and the value statements code had the highest number of occurrences in the section.
Table 5

*Category – Perceptual Framework*

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Attitude Statements</td>
<td>A claim about something a person thinks is good or favorable.</td>
<td>55</td>
<td>7</td>
</tr>
<tr>
<td>Negative Attitude Statements</td>
<td>A claim about something a person thinks is bad or unfavorable.</td>
<td>48</td>
<td>7</td>
</tr>
<tr>
<td>Value Statements</td>
<td>A statement that reflects the person's sense of right or wrong. Their perception of how the world should be (rather than how it actually is).</td>
<td>62</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>165</td>
<td></td>
</tr>
</tbody>
</table>

Participants made claims about what they considered positive when reflecting on class concepts during both the face-to-face and online discussions. For example, Elizabeth expressed her approval of choosing a topic you enjoy when giving a speech. She wrote, “I think my perception absolutely affects my public speaking experience. When I like something, I’m more excited and animated about it. It’s easier to talk to others about and there always seems to be more to say about it. I also enjoy talking about the subject more than if I don’t like what’s being discussed.” On the other hand, Brian talked about his constructive view of conflict, saying that, “conflict can be positive. The example that comes to mind is that of a couple that perhaps have problems of some sort with each other that, without conflict, would never come to light, and could never be fixed. The result if done properly could bring the couple closer together.” Participants also identified things that they perceived as bad or destructive in relationships. Walter reflected on the importance of resolving relationship conflicts in a timely manner. He shared through the discussion forum that a “number of times I had gone to bed very upset
without resolving the conflict. There is no solution and again I get up with the same problem with what I slept. No solution and outcome is negative and not productive.” These statements demonstrate how a positive or negative attitude is connected to a person’s mindfulness of their exposure. It’s important to note that attitude statements were tagged 55 times during face-to-face discussions compared to 14 times during online discussions.

In addition to reflecting on class concepts, participants made claims about what they considered positive and negative when evaluating the differences between face-to-face and online communication. Several of the participants talked about the benefits and conveniences of technology for bridging the physical distance between friends and family members. Sara expressed her appreciation for being able to “keep long distance relationships.” She said, “I have a friend who goes to college in Kentucky so I hardly get to see him, but we keep up to date with each other via Skype, twitter, Facebook, texting, anyway that helps us check in on each other.” Sara also said, “I have a sister who lives in Ohio, and I know that she, I mean we can talk on the phone, but like on Facebook I can see what she’s up to without actually having to have a conversation with her.” Kayla supported this positive perception of technology convenience by saying that face-to-face interaction “takes up time to meet up, can be time-consuming.” Still Jake counters this sentiment by saying that “online interactions are not as meaningful or personal” and gives the example that,

Being able to talk more one on one with somebody is more beneficial than sending them a text. If it’s something out of concern, if you’re telling like somebody how you feel about them, like if it’s some sort of romantic relationship. It’s better something said face-to-face than over a text because It’s not as meaningful over a text.
Finally, students demonstrated their ideologies for right and wrong by connecting class concepts with their attitudes to make value statements. For example, Walter talked about the importance of choosing the right time to be honest in relationships. He said,

Even if they are doing something negative, you cannot just go and say oh you did awesome. Yeah you can say, but that’s not the right time. Maybe a later time. Like when the time is good, then you go and say what you did was wrong, but still you need to be honest in what they are doing so they get the right thing at a later time.

Jake expressed his frustration with the influence of the media on expectations for relationships, saying,

It gives a false sense of relationships and a false feeling of what a relationship should be. Because most of them, like on TV, it’s like we’re going to go on this one date, and then we hook up, and then we’re going to be together forever. And it’s one of those things, like that’s not how you start a good strong relationship. You fall in love with your best friend, not with some one night stand thing.

In addition to verbally contemplating the impact of their values on relationships, participants internalized the concepts and expressed values about personal responsibility. For example, Susan discussed her perception about the importance of learning difficult lessons regarding the integrity of verbal messages.

You better have track of them. You better have a written record of who said what and when, because I’ve been in trouble for changes of things that I didn’t keep track of. I didn’t have a piece of paper to go back and say, Tuesday you said this, Wednesday we did that, and you know, you have to keep track of it.
Congruent with this idea, Brian discussed the integrity of good leadership by explaining that he valued the fact that his boss would not let him work one night because Brian was not punctual. He said, “the fact that he punished me and he hated doing that, but he still had to be, you know, a good leader.” Again, these statements occurred mostly during face-to-face discussions (40 compared to 24), however Elizabeth and Susan accounted for 33 of the 40 instances face-to-face.

5.3.2 Disparity between Face-to-Face and Online Communication

The next category was called disparity between face-to-face and online communication shown in Table 6. The codes for this category were primarily derived from the six factors that influence online disinhibition outlined by psychologist John Suler (2004). Open-ended questions in the online survey were geared toward evaluating the practicality of the factors, however a combination of Suler’s terminology and participant responses drove the codes. For example, the idea of emotional ambiguity had a rudimentary connection with Suler’s invisibility factor, however all seven participants mentioned emotional disconnect as a primary hindrance in online communication (especially compared to face-to-face interaction). With that in mind, the researchers decided to create a distinct code for emotional ambiguity rather than include it within the concept of invisibility. It’s important to note that emotional ambiguity did have a co-occurrence with invisibility eleven times out of the 20 total occurrences.
Table 6

*Category – Disparity between Face-to-Face and Online Communication*

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invisibility</td>
<td>Online interactions are free from the inhibitions stimulated by the physical reactions of others.</td>
<td>31</td>
<td>7</td>
</tr>
<tr>
<td>Emotional ambiguity</td>
<td>Without hearing a person's voice or seeing body language and facial expressions online messages lack important relationship cues.</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Dissociative anonymity</td>
<td>What happens online stays online without the vulnerability or accountability of real world norms to regulate behavior.</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Behavioral (social) norms</td>
<td>The perception of a person about what is appropriate in a given context.</td>
<td>40</td>
<td>6</td>
</tr>
<tr>
<td>Minimization of status and authority</td>
<td>Perception of online relationships being “peer” in nature thus people are much more willing to speak out and misbehave and ultimately reduce the impact of authority.</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Technology revolution</td>
<td>Technologies with the property of perpetual acceleration create conditions that are unstable, unpredictable and unreliable.</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Solipsistic introjections</td>
<td>Altered manifestation of a person’s virtual identity, including self-disclosure related to that identity and self-boundaries. People may feel that their mind has merged with the mind of the online companion.</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>130</strong></td>
<td></td>
</tr>
</tbody>
</table>

The concept of invisibility stems from the idea that the Internet creates a virtual barrier of protection that provides users with a psychological boost of confidence. Sara supported the
concept of invisibility by saying this confidence occurs “because they can say what they want without witnessing the damage they cause (if any) so therefore they may do things they wouldn't do in person.” Jake provided a first-hand account of invisibility by saying “I don’t have to suffer any of the consequences right then if I’m online, but it’s more cowardly way to be hiding behind a computer screen while acting this way.” Kayla expanded on the ability to avoid discord by explaining that, “When you communicate online you have the power to hide behind your words. Face-to-face you see each other's facial expressions and use those while you continuing your discussion to gauge the other person's mood/reactions.”

Expressing emotion, or more importantly, the lack of the ability to accurately convey emotion, was deemed by participants as one of the most significant factors that impeded online communication. Susan explained that during face-to-face interactions, “If you are hurting someone's feelings or upsetting them you can tell by the look on their face or body language, online it's only after the fact and then it's too late.” Walter agreed that facial expressions were key to effective interaction, saying

Since we cannot see the person face to face even someone tries to say something or express their feeling it is difficult to understand through words when it is expressed through online. If the same issue said through face-to-face one can see their emotions, feelings and get lot of information not only from their words and also from facial expressions.

Elizabeth projected that this emotional deficiency was in part due to the lack of non-verbal cues, but admitted that the issue was a bit more complex and that there was some merit to the confidence gained through online interaction. She said, “Face-to-face communication adds in the reactions and non-verbal aspects of interaction, which I believe make people more honest but
also less forthright. I think it takes more strength of character to communicate face-to-face, but there are things that will remain unsaid that may have come out in an online discussion.” Brian supported the intricate challenges of interaction through his critique of face-to-face interaction, saying,

The main weakness would be that due to the compassion shown, someone may be more hesitant to share hard truths with someone because they have to first hand witness the effect it has on the other person. Another being that I believe that people are more likely to lie about trivial things more for the same reason, or to escape uncomfortable situations.

Thus, it is clear that the issues of invisibility and emotion create distinct trials for online interaction; however according the participants, the results can be subjectively interpreted.

Social norms are used in society to regulate behavior. They tell members of a culture what is appropriate versus inappropriate and normal versus abnormal. Online interactions seem to loosely follow face-to-face norms, but acceptable behavior is more unrestrained. Suler labels this liberation of norms as “dissociative anonymity” and participants of the study corroborate the idea that a lack in culpability changes interaction. For example, Sara acknowledged that she was “more likely to communicate aggressively online. Not necessarily in a bad way, I just have that little boost of confidence that allows me to say what I want online, that I wouldn't normally say in front of people or like my parents/family.” However, Elizabeth perceived the lack of regulation differently and asserted “I, myself, am less likely to communicate aggressively online because I believe it has a completely different impact when written than when said face-to-face. If there is something wrong, it needs to be dealt with in a real and honest manner.” This implies that the lack of scripts for appropriate behavior incite insincerity. Jake reinforced this sentiment by saying “people expect everyone to act normally except for themselves. There’s no
accountability on the Internet for what people say.” Brian goes one step further by declaring “In fact it seems most of the social norms tend to go out the window online. People whether or not they realize it believe they are protected behind a monitor so they tend to be more crude, inappropriate, or just downright mean”

In accordance with this change in norms, Suler foretells of a compromised awareness of power that he calls a “minimization of status and authority”. Sara confirms this idea by saying, I do believe there is a sense of empowerment exactly because people have the ability to hide themselves. For example, with Twitter and Instagram, when people have x number of followers, they kinda’ (sic) get their “15 minutes of fame” and start thinking that they deserve something or should be given something because so many people follow them, making them “famous.”

Brian examined power through the lens of gaming and proclaimed, “a 12 year old kid can become a 40 year old man, a 28 year old warrior, or a 16 year old witch, or whatever else he is into... In this particular example this also causes a normally normal kid to become the most foul-mouthed, racist human being on the planet.”

Kayla connected this sense of power with the anonymity of the previous variables by explain that “Online, you can be whoever you are or the person that you want people to see. You could be the creeper who acts likes the young teenager to try and get women but then you could be a fan of a TV show and have a profile devoted to sharing the love you have for that TV with other fans. You feel the power to control your own ‘destiny’ in the online world.”

The last two codes of the category were less common than the others, but both demonstrate the unstable nature of the Internet in different ways. First, the broader concept of technology revolution is not one of the factors included by Suler, however it was mentioned by
both Elizabeth and Sara, and encompasses the disparity created by the seemingly endless evolution of technology. During a discussion about the challenges of technology-mediated communication, Elizabeth expressed concerns about our “doomed society” and the fact that “we just have to learn as we go along, but the fact is we’re moving so fast, we really have to learn…that the rules keep changing.” Sara confirmed that what’s important today is a very relevant concept because “in like 20 years this is going to matter anymore.” In addition to the constantly changing rules, both Elizabeth and Sara introduced the idea of fictitious relationships influenced by virtual identities. Sara observed the Internet can create a false sense a relationship, almost a façade. When you communicate completely online and then “when you are face-to-face, you’re near that person, you’re not as close as you thought you were.” Elizabeth talked about the illusion of online relationships saying “they have those dating sites, that I mean, you know, people will give their entire life history to this other person and you know, think that they are so close to this person they’ve never seen, they’ve never met.” As technology continues to evolve and the Internet continues to be a forum for relationships, understanding of the changes and personal regulation of relationships will be become more and more significant.

5.3.3 Critical Thinking

Participants demonstrated critical thinking through self-reflection, exploration of their self-concept, and expression of cognitive complexity (see Table 7). The researchers deemed these codes significant to the category of critical thinking because of the level of analysis, contemplation, and higher thinking required. Self-reflection was not only the most prominent code in the category, but it was also the most prominent code in the study, with all seven participants exercising rumination throughout their discussions, but most blatantly online. In fact,
all seven participants had at least double the number of self-reflective statements in their online discussions compared to their face-to-face discussions.

Table 7

*Category – Critical Thinking*

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reflection</td>
<td>Introspection and the willingness to learn about yourself that results in the depth and breadth of understanding.</td>
<td>65</td>
<td>7</td>
</tr>
<tr>
<td>Self-concept</td>
<td>Personal observations about the qualities and attributes that make you unique.</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>Cognitive complexity</td>
<td>Demonstrating the ability to evaluate something from multiple perspectives.</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>96</strong></td>
<td></td>
</tr>
</tbody>
</table>

Sara identified components of her self-concept and used those traits to gauge her approach to conflict by sharing,

I don't know if I already stated this, but I like to deal with it fast and move on. I've always been a multitasker (*sic*), if I'm not doing multiple things, I'm at least thinking of multiple things. I'm at a point in my life, I’ve realized, that I like things to go fast that I have to deal with. When conflict comes, I like to deal with it or break away. Just move on cause I see it as another thing I have to point my attention to. But that right there is my pet peeve. How I don't address it as it should be addressed, and then move on. I do a quick fix to the problem, which isn't always right.

Susan also connected components of her self-concept when she reflected on her approach to conflict by saying,
Now as any good conflict avoid-er will peeve, I hate it when someone avoids me when I'm ready to argue and I hate it even more when they throw the past in my face. Now this is all in my personal life. In my business dealings, I have always communicated on point. I am fully aware that when emotion is involved, I tend to flip a switch that is unhealthy.

Both Elizabeth and Brian were able to integrate self-concept, self-reflection, and cognitive complexity in a way that promoted a deeper understanding of class concepts. For example, Elizabeth illustrated a profound moment when, after watching an online video about rules for fighting fair, she acknowledged, “When my husband and I fight, sometimes we end up yelling at each other. I've noticed that yelling has no positive effect whatsoever. When he yells, I shut down. When I yell, he argues harder. Yelling only makes people feel attacked, and that's never a good thing.”

On the other hand, Brian connected the complication of online versus face-to-face emotional involvement when he conceded

The downside is that if you were to have the conversation face to face in real time, something said may strike a nerve and evoke a very passionate, truthful, and meaningful response. Online, you are able to leave the conversation, and the initial emotional response is lost. This is either for the better (lets someone cool down before they say something they regret) or the worse, (someone may have said something profound earlier, however have now lost the drive).
5.3.4 Computer-Mediated Communication

Traditionally, computer-mediated communication was the term used to reference any communicative transaction that occurred through the use of two or more networked computers, however now it is more frequently used to describe messages transmitted and received through any medium of technology. The most frequent code in the computer-mediated communication category was deterioration of F2F social skills, which was mentioned by all seven participants (see Table 8).

The most prominent code in the computer-mediated communication category was the idea that online interaction is having a significant negative impact on face-to-face interaction. All seven participants mentioned this caveat. Sara went as far as to say that humans are forgetting how to interact with someone face-to-face. They would rather text down the hall then walk over to them and have an actual conversation. I’m not saying that we as humans have completely forgotten how to talk to one another, but face-to-face communication is definitely not how it was back before cell phones and the internet.

Elizabeth expressed her concerns for the future and added that “We, as a society, are losing the ability to interact with each other on a personal level and our children are being ‘socialized’ in an entirely different way that may not be beneficial to them or society as a whole in the long run.” Furthermore, Kayla observed that “the negative reactions of online interaction are that people are forgetting how to act appropriately when surrounded by others and that they are just skipping the simple actions of just talking face-to-face- to get to know one another.” Although most of the participants had a polarizing view of how the Internet was affecting interaction, Brian was not as unnerved. He explained
<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deterioration of F2F social skills</td>
<td>The negative impact that reliance on technology has on the quality and quantity of our face-to-face interactions and relationships.</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>Impersonal interaction</td>
<td>The idea that as social presence declines, messages are more impersonal</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Increased access to the masses</td>
<td>The ability that technology creates to reach and connect with a broader number of people in a broader number of places.</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Faulty assumptions</td>
<td>Taking information received through digital sources out of context, filling in the missing pieces, and drawing inaccurate conclusions from that information.</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Digital distraction</td>
<td>The lure of the constant stream of stimuli provided by digital devices.</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Too much information</td>
<td>The tendency for people to post too many details about their life online that are not relevant to the mass number of people who have access to the information. The quantity of information does not equal quality information.</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Credibility of information</td>
<td>Due to the fact that anyone can post anything online, the quality and credibility of information is inconsistent.</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Personal accountability</td>
<td>The consequences of online actions effects the personal accountability of those actions. Once something is posted online it is instantly viewable by the public.</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Time efficiency</td>
<td>The perception that through technology people can do multiple things at the same time (multi-tasking).</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Alleviates social anxiety</td>
<td>Online interaction can be less threatening and cause less communication apprehension than face-to-face interaction.</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Security issues</td>
<td>Concerns about unauthorized access to personal and professional information online and/or the potential for a system to get hacked.</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Privacy issues</td>
<td>Concerns regarding keeping personally-identifiable information private, including the idea that once something is posted on the Internet it is permanently online.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cyberspace addiction</td>
<td>An addiction to virtual realms of experience created through computer engineering (Suler, 2004).</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>85</td>
<td></td>
</tr>
</tbody>
</table>
The downside being in rare cases without enough live interaction with other people face to face, some people may grow to lack basic social skills required in society. However I find that it is a relatively rare occurrence that online communication hinders social skills to that extent.

In addition to face-to-face interactions being altered, most participants felt there was an important impersonal element to online interaction that serves as a significant disadvantage to computer-mediated communication.

Participants also observed the need for balance between the numbers of people that are accessible online versus the amount of potentially irrelevant information that a user is bombarded with. For example, Elizabeth says, “Online interaction allows us to broaden our communication possibilities, and that is a definite plus. I think the ability to have an abundance of interaction is a positive thing.” However, Susan recognized that the Internet may “broaden your relationship base as far as quantity but quality suffers” and that ultimately “Some people hold back in a face to face situation where they are more open online. But that can have its drawbacks as well. I believe there is such thing as too much openness.” Kayla supported this conclusion by giving the example of an online friend “You know all her business, but you don’t really know her.”

Taking information received through digital sources out of context, filling in the missing pieces, and drawing inaccurate conclusions from that information was observed as the faulty assumptions disadvantage of computer-mediated communication. Kayla explains “It’s like whenever people are mad because they’re like, oh you have time to update your status in Facebook, but you can’t text me back.” Sara connected this to the concept of emotional ambiguity by saying that online you “Don't get the face time, the emotions, the body language so
things could be taken wrong or out of proportion and then you spend the next part of the
conversation confused or doing damage control.” In addition to taking things out of context, the
credibility of information is also a challenge online. Due to the fact that anyone can post
anything online, participants expressed the potential dangers in taking things at face value. For
example, Elizabeth claimed that “with the social media, the way it is now, if you go out there and
try to research the issues or whatever they’re saying [referring to political figures], there’s so
much crap out there that you don’t really know what to believe and what not to believe and what
to look at…”. Brian also raised the idea that the Internet “can be a little deceptive” and Susan
backed this claim by giving the example that when it comes to videos posted online “You really
only have to do it once. You can re-do it, piece it together, do it in front of a green screen and
have the beach behind them, put the mountains behind them.”

Digital distractions, personal accountability, and time efficiency were also intertwined in
the computer-mediated communication category. More than half of the participants mentioned
Internet diversion as a disadvantage. As Kayla explained, “When you're online you can easily
waste time and forget what's going on around you.” Still, participants also mentioned the
improved accountability and multi-tasking advantages of the Internet as personal benefits. Susan
said, “the good side of it is that it makes people more accountable for their actions and the have
to step up,” and Sara supported this assertion by saying that even if you do not “have a very good
filter and say things you don't mean, which you then can't take back, you may accidentally hurt
someone's feelings in the heat of the moment.” She explained that once something is posted
online it cannot be removed, so this makes people less able to cover things up. Finally, both Sara
and Kayla expressed the factor of convenience introduced by technology. Kayla explained “if
I’m like busy, I’m multi-tasking because we’re like the generation of multi-tasking because I can
text and do my homework at the same time. Which I can’t talk to someone because then I’ll be focused on the phone.”

5.3.5 Disclosure

Disclosure is the outcome of revealing pertinent information regarding identity, experience, ideas, beliefs, or concepts with the goal of making a personal connection. Disclosure plays an important role in communication and is often used as a way for students to connect with and learn from each other during discussions. For this study, disclosure included the codes of lifeworld sharing, self-disclosure, and humor (see Table 9).

Table 9

Category – Disclosure

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifeworld sharing</td>
<td>Authentic learning demonstrated by connecting class concepts to real life examples or scenarios. These connections establish rapport, help participants develop empathy and understanding for one another in the context of their daily lives and struggles (Nodding, 2003).</td>
<td>31</td>
<td>7</td>
</tr>
<tr>
<td>Self-disclosure</td>
<td>Revealing personal information yourself.</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Humor</td>
<td>Messages that are designed to be funny.</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>52</td>
<td></td>
</tr>
</tbody>
</table>

Walter used lifeworld sharing and disclosure to clarify the topic of conflict. He said,

I use positive aspects of conflict. Initially I used to have lot conflict with my partner. I always use to think why this happened, how it can be avoided to have healthy relationship. For example, when my partner needs more attention when she comes back
from work and also while she leaves for work. I understood this very clearly and I ensured all things are met even before my partner expects them. Gradually the conflicts reduced. It’s a win-win.

Jake shared his experience and perception with the inconsistency between how he was raised and how his parents are raising his younger brothers. Jake asserted that it’s important to maintain,

Limits for media because I was home schooled and grew up, so not that much to do. I lived out in the country, so I’d play outside a lot. Parents would give us 20 minutes on TV, computer, Nintendo and I didn’t get a phone until I was fifteen, but that helped me develop like skills to just be more creative and have fun, just to find other things to do, it just helps you be more creative.

Jake appreciated the skills that he learned be raised in an environment that fostered his independence. He valued the fact that he was not tied to technology for entertainment and that he was self-sufficient because of his upbringing. He compared that experience with what he observed from his younger brothers,

they’re always connected to media. Like when I get home, I see them on the computer, they’re playing with their iPod or something. Like she said [referring to a classmate], it’s just a different time, and they’re like in a different period from me, so it’s weird, I’m like, why don’t you go and play outside and be more creative, and if they don’t their iPod or they’re not on their computer, they’re at a loss of what to do.

In fact, Jake seemed concerned about the aggressive behavior of his brothers that he thought stemmed from an addiction to technology.
Like my little brother, he has an iPod and he didn’t have a phone because my parents still have the same rule, you’ve gotta get a job before you get a phone, and it got run over and he used that to text his little girlfriends or whatever (laughter), so he was like so mad and frustrated. And then I was like dude, it’s OK, you don’t have to text somebody all the time. Then he freaked out and yelled at me, he’s like well you have a phone and car, so you don’t understand, and I’m like yes I grew up (laughter) the same as, you. It’s gonna be ok.

These stories of personal experience are very memorable and promote a more complex understanding of topics. Participants in the study used disclosure equally during their face-to-face discussions and online discussions.

5.3.6 Types of Online Communication

Important distinctions between face-to-face and online interaction revolve around fundamental differences in design. In other words, there are a variety of types of communication that take place through the Internet yet the characteristics that discriminate these modes are the key to their understanding. Codes within the category of online communication include topics related to timing, purpose, and vernacular (see Table 10).
Table 10

*Category – Types of Online Communication*

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asynchronous versus synchronous</td>
<td>Communication that takes place in real time versus that which occurs with a delay or lag.</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Supportive conversation strategies</td>
<td>Expressing appreciation, posing questions, and considering the perspective of others.</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Antagonistic</td>
<td>Communicating in an aggressive manner.</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Appeal to approval</td>
<td>Messages designed and shared online with the primary goal of gaining approval from others.</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Internet slang</td>
<td>Acronyms, keyboard symbols and abbreviations used in online communication.</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>41</strong></td>
<td></td>
</tr>
</tbody>
</table>

All seven participants valued the asynchronous nature of online communication despite the challenges it creates. Sara said, “I think it helps communication. It allows you to connect with people across the globe, while all fitting the conversation into their daily lives. Like if you sent an email, it’s always there and allows the receiver to respond to it when needed.” Sara even claimed that the asychronicity of the Internet helps promote the old think before you speak adage. “You can rethink what you are going to say, change out words to make you seem smarter, and wait before you actually press send.” Jake added, “I have more time to think of a response online unlike face-to-face,” and “more time to process what you’re going to say and you feel without any consequences right at that time.” Elizabeth confirmed this, “I think I'm more thorough online than I am when a person is face-to-face with me and adding their own contributions to the discussion. I think I'm also more detailed and clear online, since I can re-read what I've written and alter it before sending it.” Finally, Brian surmised,
Another beneficial aspect that I personally practice in online communication is that in an argument, or debate, I am able to stop, and find resources, or evidence that back up my views or opinion. This is not generally a socially acceptable thing to do in a real time conversation. So overall, I believe an online conversation being asynchronous is a beneficial trait.

In addition to stimulating more thoughtful content because of the lagged response time, participants also recognized the allure of peer approval especially through social media and demonstrated patterns of communication that simulated a sense of community. Sara shared a humorous example that demonstrated the appeal to approval, saying

Me and Kayla became aunts yesterday for the first time and ah, so we posted and we have like a bet to see who can get the most likes on our status and…[Kayla interjects] and so there’s a quote in Alf when he goes “I’m in love, I’m in love, and I don’t care who knows it” so I put, I’m an aunt, I’m an aunt, and I don’t care who knows it, and then…[Sara continues] and mine was just like ah, hey I’m aunt Sara now, and so we were gonna’ (sic) see who would like hers, and she’s got like 50 and I’ve got like 30. So, she won, but I mean, it was just like no one’s liking it, hello, come on. That’s hilarious.

Elizabeth added, “That’s when you really start spending a lot of time figuring out what you’re gonna’ (sic) put, so then people will like it.”

5.3.7 Virtual Community

Virtual communities were identified as web-based networks through which users communicated, focusing around a particular interest or just to interact. Although they were mentioned on a limited basis, more than half of the participants verbalized an appreciation of
being able to connect with others through either social media networks or online gaming (see Table 11).

Table 11

Category – Virtual Community

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social relations network</td>
<td>A social network designed to connect with friends (usually with self-description pages), and a recommendation system linked to trust.</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Social collaboration network</td>
<td>A social network designed around a theme to bring people with similar interests together.</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Gaming</td>
<td>Online games played over some form of computer network, typically on the Internet, and player interaction is mediated by the game or technology.</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Participants explained that there are different groups for different interests that users can get together and exchange information both on a professional and personal level. Brian expressed his appreciation for the Internet providing “a medium for people with similar interests to gather and exchange ideas, art, and information, when in your physical life, such an opportunity may not exist in the community a person lives in.” Kayla said that she really valued being able to talk “to anyone all around the world” and “having direct connect to celebrities.” She also identified how social media networks have had an impact on important social issues. She said,

I know like on Twitter, a lot of celebrities use Twitter because it’s so easy to contact your fans that a lot of them were telling them to vote, and a lot of them were like, tweet me your picture with your ‘I voted’ sticker and I’ll re-tweet it. So they wanted to get Tweeted by a celebrity so they’d go vote and then they’d send it to them and they’d re-tweet it.
Susan reiterated the value of social networks saying that she enjoyed “connecting with old friends, making new ones, learning more about family you don't see very often or live far away from.”

5.3.8 Conflict Communication Style

Conflict communication style was recognized as the pattern of behavior that a person uses when interacting with others during a disagreement, and includes the codes of assertive, passive, passive-aggressive, and aggressive communication (see Table 12). Although this was the weakest of all the categories with only three of the participants mentioning a fitting characteristic and only seven total tags, the researchers believed it was important to include because the personality traits were frequently mentioned by participants in regards to online communication rather than demonstrated during their actual communication.

Table 12

*Category – Conflict Communication Style*

<table>
<thead>
<tr>
<th>Code</th>
<th>Defined by peer coders</th>
<th>Total number of occurrences</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertive</td>
<td>Individuals clearly state their opinions and feelings, and firmly advocate for their rights and needs without violating the rights of others.</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Passive</td>
<td>Individuals avoid expressing their opinions or feelings, protecting their rights, and identifying and meeting their own needs.</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Passive-aggressive</td>
<td>Individuals appear passive on the surface but are really acting out anger in a subtle, indirect, or behind-the-scenes way.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Aggressive</td>
<td>Individuals express their feelings and opinions and advocate for their needs in a way that violates the rights of others.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
In reflection of his experience during disagreement, Walter expressed an assertive approach by stating, “most of the time I am effective during conflict. Sometimes it happens other way around. I try to find the solution for the conflict so that the problem does not arise again.”

Comparatively, Susan confessed a more passive-aggressive style,

I'm gonna’ (sic) be honest, I've never been good at conflict. I either avoid it or do the same thing your brother was doing [referring to a classmate’s post] which is bringing up the past. I think unnecessary stress. I spend a lot of time saying, "what if?" When I probably should have just confronted it and got it over with. Then things pile up and I wind up getting into a bigger argument than original problem.

Kayla touched on the idea that sometimes it is hard to follow through with your intentions, which can result in a passive approach.

Taking the high road is the way that most people should go but sometimes you just can't take the high road. Sometimes the high road isn't enough. In those moments I like to just remove a problem from the problem so I'll just remove myself. I'll make things easier for everyone and just back off.

5.4 Summary

Researchers evaluated the content generated by seven participants during two face-to-face discussions, two online discussions, one follow-up survey, and one follow-up personal interview. The discussion and survey transcripts generated 359 notable excerpts and 57 unique codes, which were completely driven by participant utterances. These codes were then organized into eight categories and ultimately translated into three themes. Participant excerpts provided insight into attitudes, perceptions, and behaviors. Codes and categories were cross-referenced to identify overlapping concepts and these intersections were supported by participant inferences.
and observations. Chapter 6 substantiates the themes of the study, provides a discussion of central conclusions and suggestions for future research.
CHAPTER 6
FINDINGS AND DISCUSSION

6.1 Introduction

This chapter will report three comprehensive themes derived from the codes and categories to illustrate how these patterns of data connect with the gender identity of the participants and how both ultimately address the research questions of the study. In addition, this chapter includes the major findings of the study, conclusions that can be drawn from those findings, and discussion of future research based on suppositions of the data.

6.2 Themes

6.2.1 Theme One – Perceptual Framework for Online Norms

“I think that when someone spends so much time online that they start to lose sight of the simple beauties of life. They are so concentrated on seeing what their friends or celebrities are doing that they don't take in the little things that are happening around them every day”

Sara

The theme of perceptual framework for online norms includes the categories of perceptual framework and disparities between face-to-face and online behavior (see Table 13). The thread that ties this theme together is the fact that attitudes, values, and behaviors are so intertwined that they shape every facet of a person’s existence. Ultimately, individual values are reflected in attitudes and serve as a guide for behavior. Attitudes and values develop over time, and “individuals operating within social or cultural systems learn the important values of that group” (Moore & Asay, 2012, p. 120). Attitudes and values create a perceptual framework for evaluating standards of behavior both on and offline; however this becomes even more relevant given the fact that the Internet has a specialized set of acceptable norms that stem from unique interactions that are virtually confined.
Table 13  
*Theme – Perceptual Framework for Online Norms*

<table>
<thead>
<tr>
<th>Category</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptual Framework (165)</td>
<td>Disparity between F2F and Online Behavior (130)</td>
</tr>
<tr>
<td>Attitudes Statements (103)</td>
<td>Behavioral (social) norms (40)+</td>
</tr>
<tr>
<td>Positive Attitude Statements (55)*</td>
<td>Invisibility (31)*</td>
</tr>
<tr>
<td>Negative Attitude Statements (48)*</td>
<td>Emotional ambiguity (20)*</td>
</tr>
<tr>
<td>Value Statements (62)*</td>
<td>Dissociative anonymity (12)*</td>
</tr>
<tr>
<td></td>
<td>Dissociative imagination (9)</td>
</tr>
<tr>
<td></td>
<td>Minimization of status and authority (7)</td>
</tr>
<tr>
<td></td>
<td>Technology revolution (6)</td>
</tr>
<tr>
<td></td>
<td>Solipsistic introjections (3)</td>
</tr>
</tbody>
</table>

* Mentioned by all 7 participants. + Mentioned by 6 of 7 participants

During follow-up interviews to confirm meaning with participants, Walter discussed his appreciation for face-to-face communication, saying that there are so many cues for interaction that are missing during online discussion. This “input from people around you” serves as a primary motivator for Walter’s interaction style and he believes that expression equates meaning; therefore he believes meaning that is derived online is trivial. Still, Walter was much more restrained during face-to-face discussions, generating only nine codes compared to 28 during his online interaction. When asked about his participation, Walter said online posting is very static, so it’s a matter of quality versus quantity. He said students may contribute more posts online, but they always seem to be duplicates of previous posts with little original thought. During class discussion, it is easier to speak up when another student or the professor says something stimulating, however in online discussions it’s just a matter of responding to questions.

Elizabeth expressed a similar perception of the differences between online and face-to-face interaction during her follow-up interview, but also reiterated the potential for deceit online. A benefit to face-to-face interaction is that it directly involves the other person in the
conversation. The other person equally generates content and meaning and directs the conversation. Online, “it’s all about me” because even though you might be interacting with other people, it is easier to ignore or even eliminate opposing viewpoints. It’s a “whole different socialization” and users have to be careful because it’s not all true, real, or positive. Elizabeth supported her opinions by sharing a story about a former friend who had eight different online personalities and she expressed her disappointment in that kind of fraud. Because of this, Elizabeth said that she primarily used e-mail or text when communicating online and avoided social media sites.

In contrast, Kayla and Sara not only valued social media immersion, they truly thrived by living vicariously through their online personas. During their follow-up interview, both girls expressed their love for Twitter, calling it “such a magical world” and enthusiastically shared stories of their interactions with celebrities from their favorite shows. They jokingly referred to the stars as their “BFF’s” and gushed about receiving personal responses based on creative tweets. They both proclaimed that Facebook was too involved and that getting short blips of information through Twitter was a much-preferred method of keeping up with people. They confessed that moods tend to spoil face-to-face interaction, whereas the character limits of Twitter restrict what can be posted to an extent. Both girls expressed frustration with individuals who did not recognize “the line between real and pretend” and shared their preferences for Twitter etiquette.

Each participant expressed their attitudes and values through their discussions and these virtues had a clear impact on their perceptions of online behavior. For many of the participants, how they felt was so intertwined with their opinions about online environments that they could
not make objective observations. On the other hand, participants provided a significant amount of important information through the recollection of their experiences.

6.2.2 Theme Two – Communication Context for Online Behavior

“People will write things they are unwilling to say out loud and face-to-face. Sometimes, and with some people, online communication is more beneficial. Unfortunately, online interaction also allows people to be less sympathetic and empathetic. Less human, if you will. Even antisocial, at times, which is not good for society as a whole.”

Elizabeth

The theme of communication context for online behavior includes the categories of computer-mediated communication, types of online communication, virtual community, and conflict communication style (see Table 14). These specific categories collapsed into this theme based on the fact that they are all components of the scaffolding of online interaction.
Table 14

*Theme – Communication Context for Online Behavior*

<table>
<thead>
<tr>
<th>Category</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer-Mediated Communication (85)</td>
<td>Types of Online Communication (41)</td>
</tr>
<tr>
<td>Advantages of CMC (30)</td>
<td>Asynchronous versus synchronous (20)*</td>
</tr>
<tr>
<td>Increased access to the masses (9)</td>
<td>Supportive conversation strategies (10)</td>
</tr>
<tr>
<td>Time efficiency (6)</td>
<td>Antagonistic (4)</td>
</tr>
<tr>
<td>Personal accountability (5)</td>
<td>Appeal to approval (4)</td>
</tr>
<tr>
<td>Alleviates social anxiety (4)</td>
<td>Internet slang (3)</td>
</tr>
<tr>
<td>Disadvantages of CMC (55)</td>
<td></td>
</tr>
<tr>
<td>Deterioration of F2F social skills (17)*</td>
<td></td>
</tr>
<tr>
<td>Impersonal interaction (9)</td>
<td></td>
</tr>
<tr>
<td>Too much information (7)</td>
<td></td>
</tr>
<tr>
<td>Credibility of information (5)</td>
<td></td>
</tr>
<tr>
<td>Faulty assumptions (6)</td>
<td></td>
</tr>
<tr>
<td>Digital distraction (4)</td>
<td></td>
</tr>
<tr>
<td>Security issues (4)</td>
<td></td>
</tr>
<tr>
<td>Privacy issues (1)</td>
<td></td>
</tr>
<tr>
<td>Cyberspace addiction (1)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Community (19)</td>
<td>Conflict Communication Style (7)</td>
</tr>
<tr>
<td>Social Media (16)</td>
<td>Assertive (3)</td>
</tr>
<tr>
<td>Social relations network (10)</td>
<td>Passive (3)</td>
</tr>
<tr>
<td>Social collaboration network (5)</td>
<td>Passive-aggressive (1)</td>
</tr>
<tr>
<td>Gaming (3)</td>
<td>Aggressive (0)</td>
</tr>
</tbody>
</table>

* Mentioned by all 7 participants

Participants discussed both the benefits and drawbacks of communicating through technology. During the follow-up interview, Susan vented her frustration with how “lazy and distracted” people seem to be online. She gave the example of posting a message about an upcoming show for a band she was promoting that was met with questions from potential fans regarding the time, date, and location of the event, which was information that was included in her original post. Although Susan was visibly frustrated by the apparent lack in attention to
detail, however she then balanced her complaint with an observation about how efficient the Internet can make communication. She said she was able to plan an entire family reunion in ten minutes compared to the ten days of phone calls it used to take her.

6.2.3 Theme Three – Cognitive Complexity for Integration of Online Elements

“I was raised in a very conservative household. Due to online communication, I was able to learn about the views of others around me, as well as strengths and weaknesses of each side of the argument, allowing me to form my own, more educated opinions.”

Brian

The theme of cognitive complexity for integration of online elements includes the categories of critical thinking and disclosure (see Table 15). Although the code for cognitive complexity was included within the category of critical thinking it had a co-occurrence with almost every other code in both categories within the theme.

Table 15

<table>
<thead>
<tr>
<th>Category</th>
<th>Critical Thinking (96)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-reflection (65)*</td>
</tr>
<tr>
<td></td>
<td>Self-concept (22)</td>
</tr>
<tr>
<td></td>
<td>Cognitive complexity (9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disclosure (52)</th>
<th>Lifeworld sharing (31)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-disclosure (16)</td>
</tr>
<tr>
<td></td>
<td>Humor (5)</td>
</tr>
</tbody>
</table>

* Mentioned by all 7 participants

The most insightful observations from participants came in the form of self-reflection and lifeworld sharing. Brian expressed his thirst for knowledge and the liberation of the infinite world at his fingertips that served as an escape from the confines of his conservative upbringing. During his follow-up interview, Brian shared his enthusiasm for debating, especially online. He said, “I have two monitors hooked up to my computer at home, so I can use one monitor for dialogue and the other to fact check.” Brian said that he felt like he stayed true to his personality
and communication style online, but he was able to more thoroughly prove his points. Jake also expressed his appreciation for the buffer created by the Internet. He said “online communication is more simple and easy, because you don’t have to think as quick on your feet and you have time to figure out what you want to say and how to say it.” He was quick to follow this statement with his opinion that “personal interaction is more beneficial” and that “even though the right words are sometimes hard to verbalize, nothing can replace having another person physically involved in the conversation.”

6.3 Description of Gender

Although the term gender is now more freely used to describe the physical sex of a person, the true meaning of gender is rooted in psychological identity that is derived from culture rather than the presence or absence of reproductive organs. Although gender research has just as many critics as it has supporters, most researchers will agree that masculinity and femininity are orthogonal dimensions; however it’s important to note that some researchers still treat gender as a single, bipolar dimension because research aimed at supporting the orthogonal nature of gender is inconsistent (Egan & Perry, 2001). Nonetheless, gender was chosen for this study because the traits identified by the Bem Sex Role Inventory had identifiable connections with both face-to-face and online behavior, it was easy to assess and track, and previous research found gender was a better predictor of Internet behavior than sex.

During the study, participants were given the Bem Sex Role Inventory three times (see Table 16). The first two measures were separated by approximately three months and evaluated the consistency of participant answers. Given the fact that gender is identity, it should be a relatively stable construct. The third measure was given during the same meeting as the follow-up, but was given after a 30-45 minute discussion about the study themes and participants were
directed to answer the survey in light of their online persona. All seven participants were visibly intrigued by the instruction to answer the survey from an online perspective. In fact, Kayla exclaimed, “Oh, it’s like switching to my other account!” After inquiring about what that meant, she clarified that she uses multiple accounts for social media based on her audience. She has an account connected with friends and family that she uses to filter her expression, but she also has an account that she uses for an “unrestricted representation of the real me.” Elizabeth and Susan also expressed fascination in the significance of evaluating their own online personality. Elizabeth said, “Wow, I’m not online very much, but I just realized that there is a difference in how I act online.” Susan went so far as to say “I’d like to think that I’m the same online as I am face-to-face, but the fact of the matter is that’s just not true.”

The observation made by participants that their face-to-face behavior was different than their online behavior was supported by their Bem Sex Role Inventory results. All seven participants identified multiple gender traits that were exhibited more frequently face-to-face or more frequently online (see Table 17).
Table 16

Bem Sex Role Inventory Participant Results

<table>
<thead>
<tr>
<th></th>
<th><strong>Time 1</strong></th>
<th><strong>Time 2</strong></th>
<th><strong>Time 2 (Online)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Masculine</strong></td>
<td><strong>Masculine</strong></td>
<td><strong>Masculine</strong></td>
</tr>
<tr>
<td>Brian</td>
<td>Masculine = 32 (/10) = 3.2</td>
<td>Masculine = 33 (/10) = 3.3</td>
<td>↑Masculine = 39 (/10) = 3.9</td>
</tr>
<tr>
<td></td>
<td>Feminine = 21 (/10) = 2.1</td>
<td>↓Feminine = 16 (/10) = 1.6</td>
<td>↓Feminine = 10 (/10) = 1.0</td>
</tr>
<tr>
<td>Elizabeth</td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
</tr>
<tr>
<td></td>
<td>Masculine = 32 (/10) = 3.2</td>
<td>Masculine = 29 (/10) = 2.9</td>
<td>↑Masculine = 34 (/10) = 3.4</td>
</tr>
<tr>
<td></td>
<td>Feminine = 37 (/10) = 3.7</td>
<td>Feminine = 34 (/10) = 3.4</td>
<td>Feminine = 28 (/10) = 2.8</td>
</tr>
<tr>
<td>Jake</td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
</tr>
<tr>
<td></td>
<td>Masculine = 27 (/10) = 2.7</td>
<td>Masculine = 29 (/10) = 2.9</td>
<td>↑Masculine = 34 (/10) = 3.4</td>
</tr>
<tr>
<td></td>
<td>Feminine = 27 (/10) = 2.7</td>
<td>Feminine = 28 (/10) = 2.8</td>
<td>Feminine = 28 (/10) = 2.8</td>
</tr>
<tr>
<td>Kayla</td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
</tr>
<tr>
<td></td>
<td>Masculine = 30 (/10) = 3.0</td>
<td>Masculine = 34 (/10) = 3.4</td>
<td>↓Masculine = 27 (/10) = 2.7</td>
</tr>
<tr>
<td></td>
<td>Feminine = 27 (/10) = 2.7</td>
<td>Feminine = 28 (/10) = 2.8</td>
<td>Feminine = 24 (/10) = 2.4</td>
</tr>
<tr>
<td>Sara</td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
<td><strong>Androgynous</strong></td>
</tr>
<tr>
<td></td>
<td>Masculine = 27 (/10) = 2.7</td>
<td>Masculine = 28 (/10) = 2.8</td>
<td>↓Masculine = 26 (/10) = 2.6</td>
</tr>
<tr>
<td></td>
<td>Feminine = 31 (/10) = 3.1</td>
<td>Feminine = 32 (/10) = 3.2</td>
<td>Feminine = 26 (/10) = 2.6</td>
</tr>
<tr>
<td>Susan</td>
<td><strong>Androgynous</strong></td>
<td><strong>Feminine</strong></td>
<td><strong>Feminine</strong></td>
</tr>
<tr>
<td></td>
<td>Masculine = 28 (/10) = 2.8</td>
<td>Masculine = 24 (/10) = 2.4</td>
<td>Masculine = 20 (/10) = 2.0</td>
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<tr>
<td></td>
<td>Feminine = 35 (/10) = 3.5</td>
<td>↓Feminine = 30 (/10) = 3.0</td>
<td>Feminine = 32 (/10) = 3.2</td>
</tr>
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<td>Walter</td>
<td><strong>Androgynous</strong></td>
<td><strong>Feminine</strong></td>
<td><strong>Feminine</strong></td>
</tr>
<tr>
<td></td>
<td>Masculine = 26 (/10) = 2.6</td>
<td>Masculine = 22 (/10) = 2.2</td>
<td>Masculine = 26 (/10) = 2.6</td>
</tr>
<tr>
<td></td>
<td>Feminine = 38 (/10) = 3.8</td>
<td>Feminine = 35 (/10) = 3.5</td>
<td>Feminine = 33 (/10) = 3.3</td>
</tr>
</tbody>
</table>

Indicate a change of 0.5 or greater
### Participant Bem Gender Trait Frequency

<table>
<thead>
<tr>
<th>Participant</th>
<th>More Frequent F2F</th>
<th>More Frequent Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brian</td>
<td>- NONE -</td>
<td>Dominant (M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aggressive (M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assertive (M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Forceful (M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Willing to take risks (M)</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>Warm (F)</td>
<td>- NONE -</td>
</tr>
<tr>
<td></td>
<td>Compassionate (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tender (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Affectionate (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Soothes hurt feelings (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gentle (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sympathetic (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sensitive to others (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Independent (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aggressive (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acts as a leader (M)</td>
<td></td>
</tr>
<tr>
<td>Jake</td>
<td>Warm (F)</td>
<td>Affectionate (F)</td>
</tr>
<tr>
<td></td>
<td>Soothes hurt feelings (F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gentle (F)</td>
<td>Gentle (F)</td>
</tr>
<tr>
<td></td>
<td>Acts as a leader (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Defends own beliefs (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aggressive (M)</td>
<td>Forceful (M)</td>
</tr>
<tr>
<td></td>
<td>Willing to take a stand (M)</td>
<td></td>
</tr>
<tr>
<td>Kayla</td>
<td>Sympathetic (F)</td>
<td>Warm (F)</td>
</tr>
<tr>
<td></td>
<td>Understanding (F)</td>
<td>Dominant (M)</td>
</tr>
<tr>
<td></td>
<td>Independent (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aggressive (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forceful (M)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acts as Leader (M)</td>
<td></td>
</tr>
<tr>
<td>Sara</td>
<td>Warm (F)</td>
<td>Dominant (M)</td>
</tr>
<tr>
<td></td>
<td>Affectionate (F)</td>
<td>Defends own beliefs (M)</td>
</tr>
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<td>Soothes Hurt Feelings (F)</td>
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<td></td>
<td>Gentle (F)</td>
<td>Independent (M)</td>
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<tr>
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<td></td>
<td>Understanding (F)</td>
<td>Compassionate (F)</td>
</tr>
<tr>
<td></td>
<td>Acts as Leader (M)</td>
<td></td>
</tr>
<tr>
<td>Susan</td>
<td>Defends own beliefs (M)</td>
<td>Sympathetic (F)</td>
</tr>
<tr>
<td></td>
<td>Assertive (M)</td>
<td>Understanding (F)</td>
</tr>
<tr>
<td></td>
<td>Acts as Leader (M)</td>
<td></td>
</tr>
<tr>
<td>Walter</td>
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<td>Sensitive to the needs of others (F)</td>
</tr>
<tr>
<td></td>
<td>Tender (F)</td>
<td>Defends own beliefs (M)</td>
</tr>
<tr>
<td></td>
<td>Gentle (F)</td>
<td>Independent (M)</td>
</tr>
<tr>
<td></td>
<td>Understanding (F)</td>
<td>Aggressive (M)</td>
</tr>
</tbody>
</table>
6.4 Conclusion

6.4.1 Introduction

Several conclusions were extracted from the findings of this study in connection with the research questions. All of the themes of the study address different aspects of each question, yet the results of the Bem Sex Role Inventory provide the most tangible support for discernible conclusions.

6.4.2 Research Question 1

Do people stay true to their “authentic” gender roles during online interaction? Each participant in this study did in fact stay true to their identified gender during online interactions. A majority of the participants (five of seven) maintained the same gender category across all three times of measurement. Although their scores for each trait did vary a little, it was not enough to change their identified gender (see Figure 1). The two participants who had inconsistent gender identification did not exhibit major changes identity; rather they were simply teetering on the cusp between androgynous and feminine.

6.4.3 Research Question 2

Are people’s “authentic” gender roles magnified during online interaction? The data from this study indicates that, although participants did stay true to their authentic gender roles while communicating online, the key factor that influenced online behavior was the magnification of gender traits rather than the gender role itself.

6.4.4 Research Question 3

Does online interaction somehow change a person’s “authentic” gender roles, and if so, how? Participants provided a detailed description of their perception of the significant differences between face-to-face and online interaction. Findings support a majority of Suler’s
(2004) factors that influence online disinhibition. With that in mind, it might seem logical that the divergent behavior described by participants is the result of a change in personality brought about by the anonymity of online interaction; however examination of participant behavior does not support this theory of incredible transformation. In reality, participants stayed true to their own personalities, yet the Internet did amplify certain traits that the participants deemed individually valuable for online interaction.

Although these findings about gender are interesting, they have even more value when evaluated through the lens of the themes. Walter views the Internet and computer-mediated technology as a means to quick bits of information. Due to the fact that his feminine personality seeks value in relationships, it affects his perception of the Internet and therefore his behavior online. He views online interaction as less valuable because he perceives it as having significantly less relationship components. In fact, Walter rated the traits of defends own beliefs, independent, and aggressive as more frequent online, which are all masculine characteristics, and show that he perceives the Internet as a more masculine domain. Conversely, Brian’s masculine traits are more polarized online because he perceives the Internet as a way to engage in debate and problem solving. Brian does not use online resources geared toward the social aspects of interaction, rather he uses social tools as mediums for information and instruction (especially in games). Brian said that he is more frequently dominant, aggressive, assertive, forceful, and willing to take risks online, which are all masculine traits. The rest of the participants were identified as having androgynous personalities, therefore the traits that they recognized as being more frequently used online varied based on their perception of the Internet.
6.5 Implications

The findings of this study have several implications for teaching and learning online. First, it was observed that participants provided different kinds of content during face-to-face discussions compared to their online discussions. Face-to-face discussions were much more interactive and included more expression of value statements. Conversely, most participants seemed to simply respond to questions posed during online discussions rather than engage in an interactive dialogue with their classmates; however they were much more self-reflective in their responses. Participants equally utilized lifeworld sharing in both discussion formats, and the verbal illustration of these examples added noteworthy connotation to the learning process. As instructional designers, it is important for educators to take these findings into consideration when developing both face-to-face and online courses. Providing students with assignments and activities in multiple formats that allow for various outlets of expression will give students more opportunity to gain cognitive complexity. Face-to-face discussion is not better or worse than online discussion; rather the different constructs involved in each forum promote different levels of engagement, resulting in different types of insight. Face-to-face interaction provides a compass for online interaction, however online interaction provides valuable flexibility, convenience, and forethought that is often missing during face-to-face exchange.

Furthermore, findings of this study demonstrate that some personality traits (i.e., those related to gender) are magnified during online interaction, but individuals ultimately stay true to their established gender roles. The most valuable lesson for instruction that educators can take from this study is the importance of how individual personality impacts the learning process, especially online. Designing curriculum that allows students to identify and reflect on their own variations in personality will give them the opportunity to better understand the dynamics of how
and why they apply course material (no matter what the subject) differently face-to-face versus online.

6.6 Recommendations and Future Research

The findings of this study are limited to the constraints of the study context. Although participants of the study were asked to reflect on their typical online behavior, the demonstration of that behavior could only be observed and noted within the confines of the course for which they were enrolled. Participants self-reported their interaction styles based on questions that were designed to guide them to realistic conclusions, however future research should evaluate participants in a variety of authentic online environments. Utilizing samples from social media, text, e-mail and face-to-face messages would provide researchers with a more accurate cross-section of communication strategies for each participant. Additionally, future studies should evaluate gaming environments to identify whether or not different types of online games affect player personalities in different ways. The one participant of this study who was a self-proclaimed gamer had the most extreme polarization of his personality traits. Those extremes weren’t enough to change his gender, but that is likely because the traits he magnified were part of his dominant gender.

Although the research is satisfied with the outcome of using gender as a measurement of personality, future research should use additional measures of personality to evaluate whether generalizations can be made about magnification of personality traits online. One area of personality not included in gender that would be beneficial to evaluate is the concept of introversion versus extroversion.
6.7 Summary

The basis of this study was originally designed around factors that influence online disinhibition proposed by Suler (2004), however support for these dimensions ended up being only part of the thought-provoking conclusions drawn from the data. The significance of the study was visible during the follow-up personal interviews with all seven participants by their reaction to the codes, categories, and themes. They were truly surprised by how accurately the data represented the multifaceted dimensions of face-to-face versus online interaction. The initial objective was to compare and contrast the strategies for communication used by the participants while simultaneously taking into consideration their gender identities. However, inspired by the scope of the study, participants were introduced to a more profound awareness of how their perceptions influenced their own behavior. In the words of Elizabeth, “Online interaction is an amazing thing, but I think it needs to be IN ADDITION TO face-to-face interaction, not in place of it. There has to be a social responsibility there.” Ultimately, we learn who we are through our interactions with other people. There is value in all forms of communication; however identifying which people, under what circumstances, are more predisposed to the many varying elements that instigate disturbances in the meaningful patterns of human nature is the key to truly understanding interaction and the resulting behavioral norms.
APPENDIX

UNT INSTITUTIONAL REVIEW BOARD APPROVAL AND
INFORMED CONSENT FORM
University of North Texas Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Face-to-Face Versus Online Gender Roles: The Effect of Psychological Identity on the Characteristics and Circumstances of Online Disinhibition

Investigator: Dr. Scott Warren, University of North Texas (UNT) Department of Learning Technologies

Student Investigator: Amy Trounley, UNT, Department of Learning Technologies

Purpose of the Study: You are being asked to participate in a research study which involves participating in face-to-face (classroom) and online (Schoology) discussions.

Study Procedures: You will be asked to participate in face-to-face discussions during required class meetings, participate in online discussions through the course management system of Schoology, and participate in interviews regarding your discussions. The classroom discussions will take approximately 1 hour during each of the required 5 class meetings, the online discussions will take approximately 1 hour per week of the course, and the interviews will take place during 2 (1 hour each) designated time slots. These sessions will be audio-recorded for accuracy.

Foreseeable Risks: There are no foreseeable risks involved in this study.

Benefits to the Subjects or Others: Although this study is not expected to be of any direct benefit to you, we hope to learn more about the core dimensions of face-to-face and online behavior as discriminated by factors such as gender and age demographics.

Compensation for Participants: No compensation will be given for participation in this study.

Procedures for Maintaining Confidentiality of Research Records: Your answers will remain confidential and will be protected by the fact that no personally identifiable information will be asked in the interviews. We will also hold signed consent forms and survey results in separate locations to ensure anonymity. The confidentiality of individual information will be maintained in any publications or presentations regarding this study. Digital research records will be kept on a secure server in Dr. Warren's office. Paper data will be locked in Dr. Warren's file cabinet in G187. Participant identification numbers will be assigned for survey participants. Results of the survey will be reported only on a group basis.

Office of Research Services
University of North Texas
Last Updated: August 9, 2007

Page 1 of 2
Questions about the Study: If you have any questions regarding this study, please contact Amy Trombley at anytrombley@my.unt.edu, (972) 548-6699 or Dr. Scott Warren, UNT Department of Learning Technologies, (940) 565-7489.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights:

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Dr. Scott Warren, Dr. Lin, Dr. Whitson, or Amy Trombley has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Printed Name of Participant: ____________________________

Signature of Participant: ____________________________ Date: __________

For the Principal Investigator or Designee: I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

Signature of Principal Investigator or Designee: ____________________________ Date: __________

Office of Research Services
University of North Texas
Last Updated: August 5, 2007
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