A Qualitative Case Study of Social Technology's Influence on Student Writing

Submitted by

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Abstract

The purpose of this qualitative case study research was to explore in-depth the research question, "How do texting and Textese influence students' learning of writing in Standard English in composition classes?" Yin's Five-Phase Cycle guided the research and aided in the determination of a qualitative case study research. The literature review identified that no single theory covered the phenomenon, so research was guided by five key theories: Technology Acceptance Model, Transactional Distance Theory, Media Richness Theory, Uses and Gratification Approach, and Threaded Cognition Theory. Participants included college English faculty from Illinois, 25 students enrolled in Composition I classes, and three consecutive semesters of former composition students' e-mails. Semi-structured, one-on-one interviews were held with faculty and member checked. A pilot study was conducted prior to inclusion of the 25 student volunteers completing the student questionnaires, and three consecutive semesters' e-mails from former students were analyzed for frequency data. All qualitative data were coded using MAXQDA+ software and analyzed. Results from data analysis revealed an evolving perception and usage of texting and mobile communication devices among faculty and students, a disconnect between faculty and students concerning use of texting and Textese, and frequency data revealing the influence did not permeate writing as much as previous studies implied. Results indicated most faculty and students had mixed attitudes, leading to implications that faculty needed to incorporate lessons involving texting, code switching, and detail richness into the course pedagogy.

Keywords: Texting, Textese, composition, social media, short message systems, formal/informal writing, Technology Acceptance Model, Media Richness Theory

Dedication

This dissertation is dedicated to several individuals who encouraged and supported me throughout this journey. My desire to attain my doctorate would never have come to fruition without the love and support of my husband, Gregory A. Wolven, or my children, Chris and Katie. They sacrificed my presence in their lives for many hours as I worked through this doctorate and then wrote my prospectus, proposal, and eventually, my dissertation. It was my family's encouragement to keep reaching for my dream even when the pressures of doctoral work and teaching full-time made me question whether or not I should continue working on my dissertation. In addition, my parents, Tom and Winnie Reed; my in-law's, Dan and Arlene Wolven; my sister, Laura Bivans; and my brother, Rex Reed, all supported my efforts to earn a doctorate, so it is to them that this dissertation is dedicated.

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As every doctoral learner understands, the guidance and support of the Dissertation Committee is extremely important. I would like to thank Dr. Erich Randall, Dr. Donna Graham, and Dr. David Cipra for all of the time, effort, and support you gave me. Thank you also for addressing all of my concerns and questions in the numerous e-mails I sent you over this journey. I would like to say thank you to Dr. Jason Ward for your guidance through the Academic Quality Review Board. A heartfelt thanks also goes out to Dr. Ann Claesson and Dr. Lori Wieters who gave me the encouragement and feedback through residencies and responded after residencies when I had questions.

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Chapter 1: Introduction to the Study

Introduction

Texts, e-mails, iPads, laptops, smartphones, and a plethora of social communication technology and its vernacular known as *Textese* became integrated into the lives of millions of people (Bromley, 2010; Corbett, 2011; DeSantis, 2012; Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). This qualitative case study explored how texting and Textese influenced writing in composition courses. Technological advancements led to individuals immersed in and surrounded by all types of instant communications (DeSantis, 2012). The Pew Research Center's *Teens and Technology 2013* report revealed, "95% of teens are online….Yet, the nature of teens' internet use has transformed dramatically…from stationary connections tied to desktops in the home to always-on connections that move with them throughout the day" (Madden et al., 2013, para. 1). Furthermore, in 2013, 74% of teens between 12-17 and adults under 50 were "mobile internet users", while the study revealed 78% of teens had cell phones, with 37% having a smartphone; only 45% of adults had smartphones (para. 2, 7). However, deficiencies in past studies left a gap in the literature concerning the influence of texting and Textese on writing in composition courses. While previous studies considered students' and faculties' perceptions of social media use in or out of the classroom, these studies did not deal with the influence of texting and Textese.

As this technology evolved its sublanguage known as Textese, such as "F2F" or "LOL", permeated not only discussions, but also the written works that individuals created (Park, 2010). At the same time that Textese was infused into Standard English (SE) and writing, it evolved into a vernacular of its own. Today, the means of

communication have changed. Instead of writing letters with a pen and paper many individuals now text, which meant they used Short Message Systems (SMS) to Tweet, Snap chat, Skype, and Instant Message each other through computers, cell phones, smartphones, and other mobile electronic devices (Bromley, 2010). Academic debate over the influence of texting and Textese on writing continued, as seen in Appendix B. Aziz, Shamim, Aziz, and Avais (2013) noted, "that text messaging has long been blamed for declining standards of spelling and grammar, particularly in paper and pencil writing" (p. 12884). As a linguist, McWhorter (2013) referenced the evolution texting spurred in writing,

> We always hear that texting is a scourge. The idea is that texting spells the decline and fall of any kind of serious literacy, or at least writing ability, among young people in the United States and now the whole world today. The fact of the matter is that is just isn't true, and it's easy to think that it is true, but in order to see it in another way, in order to see that actually texting is a miraculous thing, not just energetic, but a miraculous thing, a kind of emergent complexity that we're seeing happening right now…. What texting is, despite the fact that it involves the brute mechanics of something that we call writing, is fingered speech. That's what texting is. Now we can write the way we talk. And it's a very interesting thing, but nevertheless easy to think that still it represents some sort of decline.

While data from that study indicated the influence of texting on writing was exaggerated, other researchers disagreed.

This study explored the influence of texting and Textese on students' writing in composition courses. Organization of this study included the introduction to the study,

which noted the influence of texting and Textese on composition classes; the background of study focused on the history of this phenomena and its evolution; the problem statement delineated the issue and determined the necessity of the study; a research question for the qualitative case study; advancement of scientific knowledge through the identification of gaps in literature; and the significance of the study. Additionally, utilization of Yin's (2014) Five-Phase Cycle was noted, as well as the assumptions, limitations, and delimitations of the study. Chapter 2 included a literature review presenting a deep examination of the influence of texting and Textese on writing in composition classes. This literature review continued to evolve throughout the study. In Chapter 3, the methodology was explored. In Chapter 4, the data analysis methods were discussed and the results of the data analysis were presented in addition to the limitations of the study. In Chapter 5, discussion of the results and the implications of the study were noted, including future implications and gaps that will need to be explored in the future.

Background of the Study

Over the last two decades, technological advances impacted writing as much as Guttenberg's printing press did in the fifteenth century. Written missives became a couple of finger strokes away for most people in the form of text messages; these communications utilizing Textese could be disseminated instantaneously to people throughout the world (Bromley, 2010; Clemmitt, 2011). A person could post a written commentary and gain worldwide collaborative input by texting on a computer or mobile device (Corbett, 2011). Many teachers and composition faculty created a new pedagogy to utilize texting. But at what cost? In fact, research demarcated the essential need for students and faculty to incorporate technology into the classroom, including texting. The

New Media Consortium's 2013 Horizon Report stated teachers' roles were evolving (Johnson et al., 2013). Additionally, the Pew Research Center's National Writing Project determined 96% of teachers in its study believed digital technologies (including texting) "allow students to share their work with a wider and more varied audience" (as cited in Purcell, Buchanan, & Friedrich, 2013, p. 2). Positive utilization of technology, including texting, by students in class was identified. Taylor (2012) noted significant increases in student learning and engagement when handheld devices, such as smartphones, were incorporated into lessons.

Despite some positive results, many academicians believed texting and its vernacular, Textese, spurred negative consequences. Textese, emoticons, and other language were found globally in students' writings (Scherer, 2011) in addition to concerns over students' misuse of mobile communication devices (Herro, Kiger, & Owens, 2013), leading schools to ban the use of handheld mobile devices in the classroom (personal communication, Mitch Hannahs, January 6, 2011; Weimer, 2013). In fact, Clayson and Haley's (2013) research determined 56% of students had classes with texting bans in place, but 49% of the students said they continued texting despite the consequences. Opponents saw texting as detrimental to students' learning and writing in Standard English (McDonald, 2013; Mikkelson & Davidson, 2011). Purcell et al. (2013) determined 40% of teachers believed texting and digital technologies increased students' grammar and spelling errors; however, 38% of teachers disagreed. Some teachers alleged the students' over reliance on texting and Textese caused the writing guidelines students should learn, such as proper tones for addressing friends versus employers or professors, grammar rules and mechanics, etc., to become unemployed (DeJonge & Kemp, 2012; Gurd, 2009). The British Broadcasting Company

reported “text messaging has long been blamed for declining standards of spelling and grammar, particularly in paper and pencil writing” (Aziz et al., 2013, p. 12884).

While educators voiced concerns over students’ extreme usage of texting and Textese, Smith, and Parker (2012) indicated old-fashioned teaching methods, such as lecturing, inadequately prepared students for a technologically connected, globally interactive world accessed through mobile communication devices and texting. Fairlie’s (2011) research stressed the importance of equal access to technology, indicating lower income students with limited access to computers would be at a disadvantage when they attended college or university, or entered the work force. Despite the negative results of some research, Park and Son (2011) determined the use of texting and Textese in Social Network Sites (SNS) in classrooms allowed students to gain deeper reflective comprehension of the subject matter. Ahn (2011) and Aghaee (2010) identified positive outcomes when the instructor’s SNS online behaviors created environments where students reflected on the subject matter, learned proper behaviors, and were taught critical thinking skills. Wankel and Blessinger (2013) encouraged the use of mobile devices, including cell phones and smartphones, stating,

> These tools help to create a more open-ended teaching and learning environment that helps to overcome some of the traditional barriers and boundaries of space and time that result from the fixed space and time constraints of physical classrooms and fixed technologies like desktop computers….As such, technology-enriched instruction that uses mobile technologies can support instructors in creating more interactive participation and a wider array of more meaningful learning activities. (pp. 4-5)

Furthermore, Aziz et al. (2013) determined the blurring of lines by users between informal and formal writing often led to individuals using SMS, better known as Textese, in formal writings. However, Moran, Seaman, and Tinti-Kane (2012) reported 55.3% of faculty did not use social media, including texting, for professional use. The long-term influence texting had on students' writing in composition courses was unknown, but exploration in this field of knowledge was imperative, especially with the technologically oriented future predicted by Anderson and Rainie (2014).

Problem Statement

It was not known how texting and Textese influenced writing in composition courses. Teachers and scholars noted short-term consequences in the way texting and its sub-language, Textese, influenced composition writing and student engagement (Campbell, 2011). Turner (2009) noted a majority of students utilized a form of code switching between Textese and Standard English (SE) depending on the medium used and the person(s) addressed. This code switching allowed most students to recognize the differences between formal and informal writing dependent on the audience; however, students with low reading and writing literacy scores seemed unable to differentiate between when informal writing was appropriate and when it was not appropriate (Turner, 2009).

Students freely communicated using texting, so Sweeny (2010) determined it made sense to incorporate this writing further into the pedagogy, creating stronger student engagement and interaction. Research by Aziz et al. (2013) recognized:

> Students sometimes confuse the lines between formal English and the very informal SMS language. This is thought to be causing them to make a lot of spelling and grammatical errors in their assignments and tests, and makes it hard

> for teachers to distinguish what they are trying to say….Learners have a tendency to use it as an officially accepted and standard language and thus make different errors from incorrect spelling to even ungrammatical sentence constructions. (p. 12885)

Additionally, Stine (2010) determined students in a basic writing course were more engaged in learning in a hybrid classroom that mixed face-to-face and online learning experiences. As texting and its use evolved, teachers needed to reconsider its utilization in teaching and writing to prepare their students for a technologically-based society, as well as for teachers to be able to communicate with students who believed being technologically connected continuously to the Internet and others was a necessity (Bousquet et al., 2009; Bromley, 2010; Sweeny, 2010). This study aided faculty in understanding the positive and negative influences texting had on students' writing in composition classes. In addition, it built on the pedagogical knowledge base in English composition studies, facilitating the ability of faculty to engage and teach millennial students.

Purpose of the Study

The purpose of this qualitative case study was to explore how texting and Textese influenced writing in composition courses. With the rapid growth of texting and Textese over the past decade, instructors and students needed to understand its influence on students' writing. Data exploring how writing was influenced by texting and Textese were collected three ways. First, the researcher conducted individual interviews with approximately 10 college English instructors who previously attended the 49th Allerton English Articulation Initiative Conference held April 17-18, 2013, and the 50th Allerton English Articulation Initiative Conference held April 16-17, 2014, in Monticello, IL (see

Appendix F). Member checking by having participants review the transcripts of the interviews allowed the researcher to verify and validate the information given during the interviews (Carlson, 2010; Doyle, 2007). After approval of the Academic Quality Review Board (AQR) and the Institutional Review Board (IRB), the researcher utilized a voluntary contact list of English instructors who previously attended the 2013 and 2014 conferences to identify those to be included in the interviews. Following approval by the Academic Quality Review Board and the Institutional Review Board, the researcher also included documentation by analyzing former students' e-mails written between August 2012 and December 2013; the researcher randomly selected e-mails from students previously enrolled in Composition I classes by including e-mails from entire classes for three consecutive semesters. Students were kept anonymous; the Dean of the College approved the use of these e-mails (see Appendix C). Additional information was gathered after AQR and IRB approval through anonymous questionnaires completed by 25 volunteer college students who were enrolled in composition classes. These students were enrolled at the researcher's Midwestern community college, but were not enrolled in any classes with the researcher. The researcher conducted a pilot study of the questionnaire for validation purposes. Student volunteers were given signed copies of the Informed Consent Form as well (see Appendix C).

Baxter and Jack (2008) determined that the qualitative case study approach "facilitates exploration of a phenomenon within its context using a variety of data sources….[allowing the researcher to study the phenomena through] a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood" (p. 544). This study allowed the researcher to explore further the influence of texting and

Textese on writing in composition classes, whether the influence was deemed beneficial to writing, or detrimental to writing. The results of this study expanded the field of knowledge on the influence of texting on students' writing in composition courses by exploring how it influenced students' writing, and how texting effected teaching in composition classes. In addition, this study benefited teachers in understanding the positive and negative influence texting and Textese had on students' writing in an educational setting.

Research Question

Yin (2014) stated that "'how' and 'why' questions are more *explanatory* and likely to lead to the use of a case study" (p. 9). Furthermore, Baxter and Jack (2008) pointed out the importance of allowing the individuals interviewed in the case study to express their experiences with the phenomenon in their own words. Utilization of open-ended qualitative research questions allowed the researcher to gain a deeper understanding of this phenomenon (Yin, 2014).

The qualitative case study research was guided by the following research question:

R1: How do texting and Textese influence student learning of writing in SE in college composition classes?

By utilizing multiple data collection devices – individual interviews (see Appendix E), member checking, student questionnaires (see Appendix D), and documentation of students' e-mails (see Appendix G) – the study was able to answer this research question and advance the scientific knowledge through a thorough data analysis.

This research question aided the researcher in identifying how texting and Textese influenced students' writing in composition classes, as well as how instructors

perceived that influence and the utilization of texting. Yin (2014) determined that research questions that were framed precisely aided the researcher in staying on track through the varying stages of the study. By carefully designing this research question and using it to guide the study through the documentation, questionnaires, and interviews, the researcher was able to stay within the boundaries of the study and answer the question.

Advancing Scientific Knowledge

This exploratory case study research advanced current scientific knowledge on the use of texting in composition classrooms by focusing specifically on its influence on writing. The importance of this qualitative case study was to explore how texting influenced writing in composition classes, which assisted teachers in utilizing texting to improve writing. Previous studies on the use of texting left limitations and gaps in knowledge of how texting use integrated into a class impacted the faculty and students' writing. At the start of the study, it was not known how texting influenced students' writing in composition classes. In addition, the perceptions of instructors and students on the use of texting and Textese to enhance the academic experience needed to be evaluated. This study added to the existing knowledge by delineating specifically how texting and Textese influenced students' ability to communicate in SE writing in composition classes from both the students' and the instructors' perspectives. This research contributed to filling in gaps in scientific knowledge concerning the influence of texting and Textese on college students' writing in composition classes by gathering insights and perspectives from both students and English faculty through questionnaires, e-mail analysis, and interviews.

Gaps and limitations in current studies and knowledge indicated a need for further research into the abovementioned research question, so that instructors could improve students' learning experiences and writing in SE by understanding the influence of texting on writing. In addition, most of the existing research focused on either the students or the faculty, but not both types of participants at the same time. Knowledge gained from this study benefited stakeholders by:

1. Enhancing students' learning and knowledge of subject matter covered in class through advanced reflective assignments and activities (Park & Son, 2011);
2. Improving educational programs, classes, and pedagogies to educate a technologically-oriented workforce (Dobbin, Dahlstrom, Arroway, & Sheehan, 2011; Husbye & Elsener, 2013);
3. Exploring with students the effect of texting language on composition classes and how to incorporate that language into the class curriculum.

Addressing gaps in the current knowledge of the use and impact of texting in composition classrooms, this study aided instructors in the best use of this technology to enhance the learning experience, increase reflection and dialogue, and prepare students for an occupational future where employers will demand 21st-century job skills. Additionally, this research nurtured exploration of the phenomenon as well as assisted faculty and administrators in identifying positive and negative components of the use of texting in the classroom and best practices in integrating students' use of texting and Textese into the classroom. If the technologically oriented future predicted by Anderson and Rainie (2014) comes to pass, faculty and students must be prepared for:

1. Information sharing over the Internet will be so effortlessly interwoven into daily life that it will become invisible, flowing like electricity, often through machine intermediaries;
2. The spread of the Internet will enhance global connectivity that fosters more planetary relationships and less ignorance;
3. The Internet of Things, artificial intelligence, and big data will make people more aware of their world and their own behavior;
4. Augmented reality and wearable devices will be implemented to monitor and give quick feedback on daily life, especially tied to personal health;
5. Political awareness and action will be facilitated and more peaceful change and public uprisings like the Arab Spring will emerge;
6. The spread of the "Ubernet" will diminish the meaning of borders, and new 'nations' of those with shared interests may emerge and exist beyond the capacity of current nation-states to control;
7. Internet will become 'the Internets' as access, systems, and principles are renegotiated;
8. An Internet-enabled revolution in education will spread more opportunities, with less money spent on real estate and teachers;
9. Dangerous divides between haves and have-nots may expand, resulting in resentment and possible violence;
10. Abuses and abusers will 'evolve and scale.' Human nature isn't changing; there's laziness, bullying, stalking, stupidity, pornography, dirty tricks, crime, and those who practice them have a new capacity to make life miserable for others;

11. Pressured by these changes, governments and corporations will try to assert power – and at times succeed – as they invoke security and cultural norms;
12. People will continue – sometimes grudgingly – to make tradeoffs favoring convenience and perceived immediate gains over privacy; and privacy will be something only the upscale will enjoy;
13. Humans and their current organizations may not respond quickly enough to challenges presented by complex networks;
14. Most people are not yet noticing the profound changes today's communications [sic] networks are already bringing about; these networks will be even more disruptive in the future;
15. Foresight and accurate predictions can make a difference; 'The best way to predict the future is to invent it.' (pp. 6-12)

These 15 theses presented by Anderson and Rainie (2014) identified the specific need for faculty to accept and incorporate technology, including texting, in lessons and course pedagogy.

Multiple communication theories, including the Technology Acceptance Model (TAM) (Venkatesh & Davis, 2000), the Transactional Distance Theory (Ng'ambi, 2011), the Threaded Cognition Theory (Salvucci & Taatgen, 2008), the Media Richness Theory, and the Uses and Gratification Approach (Park, Chung, & Lee, 2012), were applicable to the utilization and influence of texting on students' writing. Since no one theory was identified by the researcher as being completely applicable to studying the influence of texting on students' writing in composition classes, this study facilitated further connections between these theories and the phenomenon. Yin (2014) noted the

importance of key theories in research, such as the aforementioned theories, that allowed researchers to analytically generalize the determinations from the case study.

Significance of the Study

This research was necessary to add knowledge to the utilization, integration, and influence of texting on students' writing; the way instructors' and students' attitudes and perceptions impacted the technology's usage; and in educating faculty and administration on the utilization of technology to enhance students' learning. Teens communicated utilizing mobile devices, and it was the most writing they did (Creighton, Foster, Klingsmith, & Withey, 2013; Khalid, Chin, & Nuhfer-Halten, 2013; Reich, 2008). In fact, a Pew Research Center report predicted in the future that "Information sharing over the Internet will be so effortlessly interwoven into daily life that it will become invisible, flowing like electricity, often through machine intermediaries" and "An Internet-enabled revolution in education will spread more opportunities, with less money spent on real estate and teachers" (Anderson & Rainie, 2014, p. 6, 9). Additional predictions included, "The Internet trumps all previous technological breakthroughs in its capabilities for connectivity" (Anderson & Rainie, 2014, p. 26). If these predictions for the future proved accurate, then faculty must prepare students for a technologically interconnected world. Current gaps and conflicting results in empirical research indicated a need for further research into the influence of Textese, texting, and Short Message Services (SMS) on students' writing.

Through the use of multiple data sources, the research question was answered and added to the current field of knowledge concerning the influence of texting and Textese on students' writing in composition classes. Pedagogical implications as well as the perceptions of teachers and students were analyzed yielding results that benefited

instructors in how they approached teaching composition in the technological age. To prepare students for a continuously evolving technological future, it was necessary for instructors to understand the SMS utilized by today's students and to integrate said technology into the classroom. Instructors needed to understand how texting could improve students' learning experiences and writing in SE. While faculty held mixed perceptions on the influence and usefulness of texting and other SMS, almost all agreed that its use impacted students' writing (Aziz et al., 2013; Purcell et al., 2013; Sweeny, 2010). With the use of texting, Textese, and SMS continuing to evolve, understanding the positive and negative influences of it on writing aided faculty in teaching composition classes, by either incorporating texting into the course pedagogy, or by educating the faculty on the negative influences and identifying ways to overcome those negativities on writing.

Knowledge gained from this study benefited stakeholders by:

1. Enhancing students' learning and knowledge of subject matter covered in class through advanced reflective assignments and activities (Park & Son, 2011);
2. Improving educational programs, classes, and pedagogies to educate a technologically-oriented workforce (Dobbin et al., 2011; Husbye & Elsener, 2013);
3. Exploring with students the effect of texting language on composition classes and how to incorporate that language into the class curriculum.

Whether individuals were new to the use of mobile communication technology, or if they were raised utilizing it, the knowledge gained through this study facilitated the

teaching of composition, the interaction between instructors and students, and student engagement within a classroom.

Rationale for Methodology

This qualitative case study research was guided by the following open-ended qualitative research question:

> R1: How do texting and Textese influence student learning of writing in SE in college composition classes?

The rationale for this research's methodology was premised on Yin's (2014) specification of case study research "to contribute to our knowledge of individual, group, organizational, social, political, and related phenomena" (p. 4). Additionally, Yin (2014) stressed the importance of utilizing varying data collection methods, including (but not limited to): observations, interviews, documents, and audio-vision materials. This case study included documentation, questionnaires, and interviews. Case study research was preferential for researchers exploring current events, because the approach itself was dependent upon historical research techniques, "but it adds two sources of evidence not usually available as part of the historian's repertoire: direct observation of events being studied and interview of the persons involved in the events" (Yin, 2014, p. 12). While technology continued evolving rapidly, knowledge of how the usage of varying types of technology in and out of the classroom were influencing how students wrote in SE in composition courses needed to be explored.

It was not known how texting influenced writing in composition courses. In addition, the impact of this technology on students' writing needed to be identified. Previous research delineated positive and negative attitudes towards the use of texting in composition classrooms (see Appendix B). Short term consequences were noted by

teachers and scholars in prior research on the way technology was used in teaching writing, and the influence of texting on SE and student engagement (Campbell, 2011). Research noted most students utilized a form of code switching between Textese and SE depending on the medium used and the person(s) addressed (Aziz et al., 2013; Turner, 2009). The Pew Research Center's National Writing Project (2013) revealed that in 2012, digital technologies, including the use of texting, contributed positively and negatively to students writing skills and habits: 68% of teachers believed students were more likely to "take shortcuts and not put effort into their writing", 46% of teachers believed students "write too fast or be careless," and 40% believed it aided in "poor spelling and grammar" (Purcell et al., 2013, p. 33). For teen respondents in the study, they believed that 49% were more likely to "take shortcuts and not put effort into their writing", 41% were more likely to "write too fast or be careless", and 42% used "poor spelling and grammar" due to the use of technology (p. 33). Students unreservedly communicated using texting, so research showed the necessity of incorporating evolving communication mediums further into the pedagogy, creating stronger student engagement and interaction (Aziz et al., 2013; Purcell et al., 2013; Sweeny, 2010). Additionally, Stine (2010) determined students in a basic writing course increased engagement in learning in a hybrid classroom that mixed face-to-face and online learning experiences.

Moreover, as a qualitative single case study design this research incorporated varying data collection methods by the researcher's usage of student questionnaires, audiovisual materials, faculty interviews, and documents of former students' e-mails. Yin (2014) defined case study research as being needed when "A 'how' or 'why' question is being asked about a contemporary set of events over which a researcher has

little or no control" (p. 14). This framework enabled the researcher to gain an in-depth understanding of the topic. Data for this qualitative case study were collected through various methods. After AQR and IRB approval, the researcher utilized documentation in the form of three semesters of former students' e-mails, 25 questionnaires completed by students, and in-depth interviews that were held with 10 volunteer participants who previously attended the 49th and 50th Illinois Allerton English Initiative Conferences in Monticello, IL; all participants were English instructors at 2- and 4-year higher education institutions (see Appendix F). These semi-structured, one-on-one interviews were the main qualitative focus of the research to identify how texting influenced writing in composition classes, instructors' and students' attitudes towards the use of texting and its influence on writing, as well as how often this medium was used by the instructor and the students (see Appendix E). Member checking was used to validate the data gathered through the interviews by e-mailing interview transcripts to participants. Doyle (2007) identified member checking as a framework that "encouraged negotiation of meaning between the participant and the researcher" (p. 890). Carlson (2010) noted that through member checking, "participants may be asked to edit, clarify, elaborate, and at times, delete their own words from the narratives" (p. 1105). Furthermore, through the use of member checking the researcher was able to enhance internal validity.

Additionally, the student questionnaires gained information on students' perceptions and use of texting and Textese. The validity and reliability of the questions utilized in these questionnaires was authenticated by their use in several other previously published studies (Baker, Lusk, & Neuhauser, 2011; Lenhart, 2010; Plester, Bell, & Wood, 2008; Purcell et al., 2013; Purcell et al., 2012) as well as the fact that they were common sense questions that would be utilized in a study of this topic. After AQR and

IRB approval, the researcher also conducted a pilot study of the questionnaires with students who were not participants in the actual study to validate the questionnaire. The research question investigated a "real-life phenomenon that has some concrete manifestation" (Yin, 2014, p. 34). By incorporating a research question focused on the "how" of this phenomenon, the researcher was able to explore this contemporary educational phenomenon through analytic generalization based on Yin's (2014) two conditions. Analytic generalization was "based on either (a) corroborating, modifying, rejecting, or otherwise advancing theoretical concepts that you referenced in designing your case study or (b) new concepts that arose on completion of [the study]" (Yin, 2014, p. 41).

The qualitative research in the study provided a more in-depth look at the usage and impact of texting on composition classes and students' writing ability in SE. Yin (2014) identified the importance of the "technical characteristics" in defining case studies:

> Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as a note a result benefits from prior development of theoretical propositions to guide data collection and analysis. (p. 17)

It was important to identify the influence of texting on writing as perceived by instructors who had taught composition courses since texting became commonplace to delineate the influence of it on writing. The qualitative research included member checking with those individuals participating in the interviews prior to writing Chapter 4 of this study for validation and accuracy. By triangulating multiple data sources in this

study, as well as utilizing a pilot study for the student questionnaire, the researcher was able to insure validity. Yin (2009) specified, "[Triangulation] pertains to the goal of seeking at least three ways of verifying or corroborating a particular event, description, or fact being reported by a study" (p. 81). The rationale for choosing a qualitative case study approach was it would give a much deeper insight into how texting was directly and indirectly influencing students' writing by utilizing the Technology Acceptance Model (TAM) as well as themes brought to light through data analysis from the literature review, the one-on-one semi-structured faculty interviews, member checking, the student questionnaire, and the documented e-mails from former students.

Nature of the Research Design for the Study

The researcher determined a qualitative case study would be the best methodology, based on Yin's (2014) determination that this Five-Cycle approach and the five components of case study research design would be more relevant in gaining an in-depth understanding of the topic. Yin (2014) delineated that research design incorporated five important components including: "1) a study's questions; 2) it's propositions, if any; 3) its unit(s) of analysis; 4) the logic linking the data to the propositions; and 5) the criteria for interpreting the findings" (p. 29). To meet Yin's (2014) criteria, this study utilized a research question and propositions based on the "how" and "why" of the phenomenon, so that the researcher was able to explore relevant universe units of analysis to logically link data to the propositions. This allowed the researcher to determine the best criteria for understanding and deducing the study results.

Data for this qualitative case study were collected through various methods after AQR and IRB approval, including: documentation of former students' e-mails, student

questionnaires, one-on-one, semi-structured faculty interviews, and member checking. The researcher utilized the comprehensive, qualitative, semi-structured, one-on-one faculty interviews and student questionnaires (see Appendix D) to identify how texting was incorporated into the composition classes, instructors' and students' attitudes towards the use of texting, as well as how often texting and Textese was used by the instructor and the students in composition courses. Qualitative information gathered during the interviews and student questionnaires were coded in MAXQDA+ software and then thematically analyzed; in addition, frequency data were gathered in the student questionnaire to explore the frequencies students' used Textese in writing. The documentation explored e-mails to the researcher from former students to evaluate the influence of texting and Textese on students' written communication; by incorporating students who were enrolled in Composition I classes during different semesters, the researcher avoided bias and built internal validity. The semi-structured interview approach allowed the researcher to build a relationship with the interviewees through a conversational approach (see Appendix E). Yin (2014) specified that researchers utilizing case study interviews had two roles during the interview: "(a) to follow your own line of inquiry, as reflected by your case study protocol, and (b) to ask your actual (conversational) questions in an unbiased manner that also serves the needs of your line of inquiry" (p. 110).

The qualitative research in the study provided a more comprehensive research into the usage and influence of texting and Textese on students' writing in composition classes. It was important to note the influence of texting on students' writing as perceived by instructors who had taught with the current technology as well as prior to the widespread use of texting in composition courses to delineate the influence of

texting. Data collection methods after AQR and IRB approval included the student questionnaires, documentation of students' e-mails, faculty interviews, and member checking. The research included member checking with those individuals who were interviewed prior to the writing of Chapter 4 for validation and accuracy. The rationale for choosing a qualitative case study approach was it would give a much deeper insight into the contemporary issue of how texting and its by-product, Textese, were directly and indirectly influencing students' writing in composition classes. Yin's (2014) four principles of data collection including: "1) use multiple sources of evidence, 2) create a case study database, 3) maintain a chain of evidence, and 4) exercise care when using data from electronic sources" (p. 118-129) aided the researcher by focusing on the information gathered, triangulating sources of information and data, and guiding coding and data analysis through the MAXQDA+ software. The researcher utilized descriptive and pattern coding to analyze the interview transcripts and answers to the qualitative questions in the student questionnaires with MAXQDA+ software; this data were then thematically analyzed. The researcher needed to adhere to Yin's (2014) principles in building a comprehensive case study library in the study's literature review, ensuring accuracy, utilizing analytic generalization, and meeting the requirements of the Academic Quality Review and Institutional Review boards.

Definition of Terms

The following terms were used operationally in this study.

Code switching. "The ability to make transitions between different means of communication based on situational needs" (Thomas & McGee, 2012, p. 20).

Emoticons. "Graphic devices … where the meaning is entirely a function of the shape of the symbols (when read sideways, with the head to the left)... (or read straight ahead, as in Japanese and some other East Asian systems" (Crystal, 2008, p. 38).

Logograms. "The use of single letters, numerals, and typographic symbols to represent words, parts of words or even – as in the case of x and z – noises" (Crystal, 2008, p. 37).

Short message systems. "A term for the abbreviations and rebus-like slang most commonly used due to the essential pithiness of mobile phone test messaging etiquette" (Aziz et al., 2013, p. 12884).

Social network sites. "Cyberspace where people share information and stories and network each other, and where various human-to-human interactions take place" (Park & Son, 2011, p. 172).

Standard English. "Applied to that variety of a spoken or written language of a country or other linguistic area which is generally considered the most correct and acceptable form" (Standard English, 2014).

Texting. Sending short messages using Short Message Systems on a cellular or mobile communication device (Aziz et al., 2013).

Textese. "An abbreviated vocabulary that includes initialisms (e.g. *lol* for laughing out loud), letter/number homophones (e.g. *gr8* for great), contractions or shortenings (e.g. *cuz* for because), emoticons (symbols representing emotions (e.g.: (for sad), and the deletion of unnecessary words, vowels, punctuation, and capitalization" (Drouin, 2011, p. 67).

Textisms. "Also known as text language; it is space-bound, repeatedly revisable, again a departure from IM, visually decontextualised, except with image-enable phones,

and it can be factually communicative …. some features are becoming codified as the medium matures, such as the use of smileys and symbols, e.g. @" (Plester et al., 2008, p. 138).

Assumptions, Limitations, Delimitations

Assumptions. In research, the assumptions, limitations, and delimitations of the study must be acknowledged and guarded against, or they could damage or make null the data and results. Assumptions made in this research included the theoretical belief that the Technology Acceptance Model (TAM) theorized by Davis in 1989, and the TAM2 model by Venkatesh and Davis (2000) accurately determined instructors' attitudes towards the use of technology, including texting, in the classroom. Additional assumptions by the researcher included:

1. The information provided by the participants was accurate, truthful, and not deceptive;
2. Participants answered questions to the best of their ability and knowledge;
3. Texting and Textese use would continue to expand and evolve as technology evolved.

Limitations. Limitations to the study included the uncertainty of the number of final participants in the study, especially English instructors who were willing to participate in one-on-one interviews. Other limitations included:

1. The study was limited to the state of Illinois, which meant that the results may not parallel the impact of this technology on college students and instructors in other states;
2. The study was limited to 2-year and 4-year colleges and universities.

3. The faculty included in the study were selected from participants who previously attended the 49th and 50th Allerton English Initiative Conferences, which was an English conference including varying 2- and 4-year higher education institutions in the State of Illinois.
4. A limitation was the researcher's ability to schedule the interviews within the existing time frame of the doctoral program at Grand Canyon University as well as within the schedules of the study's participants;
5. The researcher was not experienced in using MAXQDA+ and coding.
6. The possibility of bias existed on the part of the researcher or response bias of the interviewee.
7. Possible bias existed due to poorly worded questions and possible reflexivity where the interviewee gave the researcher the answer he or she wanted to hear (Yin, 2014).

To overcome these limitations, the researcher carefully crafted questions to remove bias and reflexivity during the interviews. In addition, after AQR and IRB approval the researcher diligently included faculty from diverse demographics as part of the participants. The researcher traveled throughout the state in an effort to make the one-on-one interviews with the participants as convenient as possible for the contributors. In addition, member checking was utilized for validation and verification purposes with the interview participants.

Delimitations. The delimiting factors to this study included:

1. The focus on the influence of texting, rather than other forms of technology usage;
2. The exclusion of other forms of SMS, such as Instant Messaging, Skyping, etc.;

3. The choice of the researcher to utilize member checking to build validation and verification of the data collected through the interviews.
4. The selection of the faculty participants being from the State of Illinois, which the researcher chose due to proximity, time, and the variety of educational demographics within higher education institutions throughout the state;
5. The selection of the faculty being instructors who have taught composition both before the prolific use of texting as well as after it;
6. The selection of the students involved in answering the questionnaire being limited to those students enrolled at a rural community college;
7. The selection of students whose e-mails were analyzed were limited to those who attended a rural community college;
8. The selection of only Composition I students during different consecutive semesters to prevent bias and to identify usage of Textese over time.

The delimitations helped to explain the choices of the researcher, setting up the boundaries of the study (Yin, 2009, 2014). By excluding factors not relevant to the study, the researcher was able to focus more clearly on the topic.

Summary and Organization of the Remainder of the Study

This dissertation was structured into five chapters, including Chapter 1 that introduced the study and topic, Chapter 2 that included the literature review, Chapter 3 covering the methodology, Chapter 4 explaining the actual research, and Chapter 5 identifying the results and future topics that needed to be explored. This study was arranged to identify the necessity of the study of how texting influences writing in composition classes, identifying the history of the phenomena, significance of the study, and proposed methodology. Chapter 1 began with the Introduction to the study, which

explained Johnson et al. (2013) delineated the impact of this technology on instructors' pedagogy and teaching approaches, while DeSantis (2012) and Madden et al. (2013) determined how deeply this type of technology permeated individuals' lives. Furthermore, Baker et al. (2012) recognized the difference between technological use and acceptance of *digital natives* versus *digital immigrants*. After the introduction, the background of the study explained the history of this phenomena and how it evolved as technology improved. The problem statement explained the issue being researched, as well as why it was necessary to explore how technology and its use were influencing students and instructors.

The research question was geared towards a qualitative case study research, which provided a deeper understanding of the phenomena. The purpose of the study was to determine what, if any, influence was made on students' writing due to the use of texting. Additionally, Chapter 1 included information showing how this research advanced scientific knowledge due to gaps in existing research and the continuous evolution of the technology. This was further noted in the significance of the study, which explained how stakeholders benefited through information gleaned from data collected during the study. Included in Chapter 1 was the justification for utilizing a qualitative case study in the rationale for methodology and the nature of the research design, which was based on Yin's (2009) Five-Cycle approaches.

The rationale for the qualitative case study was to gain a deeper in-depth knowledge of the influence of texting on composition to fill in gaps in existing literature, as well as to add to the knowledge base in this field. In addition, Yin's (2014) five components for research design focused the research question and propositions based on the "how" and "why" of the phenomenon, so that the researcher was able to explore

relevant units of analysis to logically link data to the propositions. This allowed the researcher to determine the best criteria for "interpreting the findings" (Yin, 2014, p. 36). The definition of terms clarified the vernacular utilized in this dissertation. Also covered in Chapter 1 were the assumptions, limitations, and delimitations of the researcher and the study, which identified factors that influenced this study.

In Chapter 2, a detailed literature review presented a comprehensive examination of the impact of texting on individuals, classroom engagement, how texting and Textese was used both in and outside of the classroom by instructors and students, and the perceptions of students and instructors concerning the use of texting for academic purposes. Key theories were identified in this section, including the TAM, Transactional Distance Theory, Threaded Cognition Theory, Media Richness Theory, and the Uses and Gratification Approach. Research noted the importance of key theories in research that allowed researchers to systematically analyze and generalize the results from the case study research (Yin, 2014). This literature review continued to evolve throughout the study.

The methodology was explored in Chapter 3. This section included the design of the study and methodology, as well as the participant selection, data collection procedures, analysis tools (including data coding), reliability of the methodology, ethical considerations, and limitations. This chapter included discussion of the convergence of evidence for a single study (Yin, 2014), as well as the utilization of faculty interviews, student questionnaires, documentation in the form of e-mails from former students, member checking, and other sources. Furthermore, this section dealt with the validities: construct, internal, external, and reliability (Yin, 2014). Key to completing this study was the approval by the Institutional Review Board, Academic Quality Review board

prior to data collection, and the completion of all research by October 31, 2014. Analysis, thematic coding, and writing of the study were completed by October 31, 2014.

Data analysis and results were discussed in Chapter 4. This section included the descriptive data, data analysis procedures, results, and a summary of the chapter. In the descriptive data, demographic information was included for the participants, including the faculty interviews, students who participated in the student questionnaires, and the e-mail information. Since all identifying information was removed from the e-mails of former students, gender, age, and other demographic information was not tallied. The results section in Chapter 4 discussed the results of the three main sources of data gathering and analysis, as well as the 11 major themes found in the results through pattern matching, description, and thematic matching. The final chapter of the study, Chapter 5, summarized the study, summarized the findings and conclusion, explored the implications, and included recommendations for future research. This included exploring the theoretical, practical, future, and recommendations.

Chapter 2: Literature Review

Introduction to the Chapter and Background to the Problem

The influence of texting on writing in composition classes was a field that evolved as the technology expanded and increased in capabilities. This literature review was separated into the following sections: Introduction and background to the problem; the theoretical foundations with subthemes of key theories including the Technology Acceptance Model, the Transactional Distance Theory, the Threaded Cognition Theory, the Media Richness Theory, and the Uses and Gratification Approach; then was the Review of Literature. This section included: Theme 1 – Instructors' Incorporation of Technology with subthemes of the Technology Acceptance Model study, faculty perceptions and apprehensions, texting and SMS enhanced learning, faculty perceptions of texting and SMS, students' perceptions of texting and SMS, and SMS and texting use in coursework; Theme 2 – Faculty and Students' Disconnect Over Lectures and Technology with subthemes of texting and SMS in the classroom, and faculty/students' disconnect over texting and SMS; Theme 3 – SMS's Impact on Critical Thinking, Learning, and Writing with subthemes of texting and SMS in traditional classrooms, texting and class performance, textisms and writing, translating Textese to SE, and texting and literacy; and the Summary contained concerns and benefits of the influence of texting on writing in composition classes. In creating this literature review, the researcher searched for information using the Grand Canyon University library, the Illinois Eastern Community Colleges' library, Google Scholar, Amazon, and the Internet. For this literature review, the researcher read and analyzed numerous empirical articles, books, dissertations, *You Tube* videos, presentations, and conference papers.

Background to the Problem

Research determined that texting "decreased [written] text length, given input challenges. Multi-taps on a phone pad are not conducive to writing lengthy text. Virtual keypads are only somewhat better, since they generally lack the full layout of computer keyboards" (Baron, 2013, p. 137). Rideout, Saphir, Rudd, Pai, and Bozdech (2012) indicated that 68% of teenagers' texted daily between the ages of 13 and 17, and 33% considered texting to be their favorite way of communicating with friends (49% preferred face to face conversations). This study also showed that 87% of teens texted while using social and/or digital communications, 63% Instant Messaged (which utilized Textese), and 45% chatted in an online game through texting. In addition, 68% of teens aged 13-17 texted daily, while 19% Instant Messaged, 12% chatted in online games using texting, and 11% used Twitter, which utilized Textese. Teens preferred texting because it was fast (30%), easy (23%), allowed time to consider response (16%), was more private (11%), fun (7%), increased comfort of personal issues (7%), less awkward (5%), allowed for more serious discussions (1%), and was more easily understood (1%) (Rideout et al., 2012). Technological communication, whether it was through texting, Instant Messaging (IM), tweeting, etc., became a daily occurrence in the lives of many people. As this literature review continued to develop, research delineated three main attitudes of instructors concerning the influence of texting on writing in composition classes and how texting was influencing students' writing in those classes (see Appendix B). The instructors' attitudes ranged from avoiding texting as much as possible (Gurd, 2009), to progressively utilizing it in class to stimulate students' writing abilities (*Instructional Innovation,* 2012). Dansieh (2011) identified six main points in support of texting improving literacy based on Crystal's (2008) book *Txtng: The gr8 db8*:

1)In a typical text message, less than 10% of the words are abbreviated;

2)Abbreviating has been in use for decades, and thus is not a new language;

3)Children and adults alike use text language, the latter being more likely to do so;

4)Students do not habitually use abbreviations in their homework and examinations;

5)Before people can text, they must first know how to spell. Texting can therefore not be a cause of bad spelling;

6)Since texting provides people with the opportunity of engaging with the language through reading and writing, it improves people's literacy. (p. 223)

However, not all faculty or educators agreed with Dansieh (2011) or Crystal (2008).

Newer studies have shown students can choose to ignore responding to text messages until after they have covered material they deemed pertinent in class (Rosen, Lim, Carrier, & Cheever, 2011). Research denoted students who were encouraged to utilize texting in the class structure to ask questions or discuss the material were more engaged, and the Transactional Distance Theory recognized the importance texting and SMS had in diffusing potential misunderstanding between the instructor and students (Ng'ambi, 2011). Additional key theories in evaluating the influence of texting on writing in composition classes comprised of the Transactional Distance Theory, the Threaded Cognition Theory, the Media Richness Theory, and the Uses and Gratification Approach theory, which all partially covered the topic, but none of these theories dealt solely with how texting influenced students' writing in composition classes. Trends, important subjects, and key theories found in literature on this topic included:

1. Instructors' incorporation of texting inside and outside of the classroom to educate students and to give them access to resources for writing in SE (Kolowich, 2011);
2. Most faculty members were raised in the traditional lecture/note taking classroom, but Millennial students were multi-modal and perceived lectures as a barrier to learning and expected instructors to facilitate cooperative learning (Baker et al., 2012);
3. Some instructors perceived students improved critical thinking skills, understanding, and increased engagement when separated into groups of three and were required to IM discussions about a literary work; IM includes texting (Reich, 2008);
4. The transactional distance theory linked the usage of texting and SMS in class to clarify, comment, and question subject matter increased engagement and understanding between students and the instructor (Ng'ambi, 2011).

Numerous studies have shown the usage of technology by students and faculty expanded over the last two decades. Whether this usage was beneficial or detrimental to students' learning to write in SE may be determined by the individual's age, literacy, exposure to and use of technology, and attitudes towards technology and writing. Additionally, research determined that parts of multiple theories supported the study of the influence of texting, Textese, and SMS on students' writing in composition classes, as well as the utilization and perceptions of texting in composition classes. These theories included the TAM (Venkatesh & Davis, 2000), the Transactional Distance Theory (Ng'ambi, 2011), the Threaded Cognition Theory (Salvucci & Taatgen, 2008),

the Media Richness Theory, and the Uses and Gratification Approach theory (Park et al., 2012).

This literature review focused on the theoretical foundations and key theories relevant to evaluating the influence of texting on students' writing in composition classes. Delving further into the subject, the main themes (each with its own subthemes) found were: how instructors perceived incorporating texting inside and outside of the classroom to educate and engage students by giving them access to writing resources; the gulf between Millennial students who were multi-modal and faculty raised in the traditional lecture/note taking classroom; and whether or not students improved critical thinking skills, understanding, and engagement when encouraged to incorporate texting into class.

Information for the review was collected from articles and dissertations found in the Grand Canyon University library, the Illinois Eastern Community College library, books purchased online, and Internet searches. The diversity of these sources allowed the researcher to gain a comprehensive understanding of existing literature, as well as to identify gaps in the literature. Furthermore, the literature review was guided by the research question in this study:

> R1: How do texting and Textese influence student learning of writing in SE in college composition classes?

Conceptual Framework

Positive and negative impacts have been found through studies on the impact of texting on students' writing. With no overwhelming proof of whether utilization of texting improved or detracted from students' writing literacy, spelling, and grammar, this subject needed additional research. Conflicting studies gave varying results in

determining the impact of students' use of texting and SMS and social communication mediums on the individuals' ability to write in SE in composition classes. More controversy surrounded the influence texting, Textese, and social media have on individuals' writing in SE. These varying results and studies left gaps in knowledge of the influence of texting on composition writing, as well as its pedagogical implications. The importance of understanding the influence of the use of texting on writing directly related to the research question raised in this study.

Key theories. Communication and technology measurement theories were utilized to evaluate the impact of texting on students' writing in composition classes. While there was not just one theory that was specific to texting and writing in composition classes, there were several theories that touched on the influence of texting and other SMS on students' learning, engagement, and writing. These theories included the Technology Acceptance Model (Venkatesh & Davis, 2000), Transactional Distance Theory (Ng'ambi, 2011), the Threaded Cognition Theory (Salvucci & Taatgen, 2008), the Media Richness Theory, and the Uses and Gratification Approach (Park et al., 2012). Yin (2014) noted the importance of key theories in research, such as the aforementioned theories, that allowed researchers to analytically generalize the determinations from the case study.

Technology acceptance model. Venkatesh and Davis (2000) identified that individuals were more likely to accept and utilize new technology in the classroom if they were trained on the equipment and perceived a benefit from using the technology. The researchers ascertained that individuals were more prone to incorporate and utilize technology, as well as texting, if the choice was: voluntary, socially accepted, perceived positively, demonstrated results, relevant to the job, demonstrated quality, and perceived

as easy to use. Therefore, if the faculty was comfortable with using the technology outside of the classroom, the instructors were more likely to incorporate the use of technology, specifically texting, within the classroom to enhance student engagement and learning.

Transactional distance theory. Ng'ambi (2011) delineated that this theory combined the behaviorist and humanistic pedagogical approaches. This theory incorporated the belief that "The transactional distance is the psychological and communication space of potential misunderstanding in a dialogue between an instructor and a learner…. Each individual learner had his/her own transactional distance that need to be narrowed … to minimize possible misunderstanding" (Ng'ambi, 2011, p. 251-252). According to the study students who utilized texting or SMS benefited by being able to ask anonymous questions, student empowerment whereby more vocal students did not marginalize quieter students, and students were empowered to take control over their own learning through dialogue between the students, their peers, and instructors.

Threaded cognition theory. Salvucci and Taatgen (2008) identified this theory, "provides a theoretical and computational framework for understanding, modeling, and predicting performance during the concurrent execution of arbitrary tasks" (p. 101). Researchers noted that the ability to "manage and execute multiple concurrent tasks" successfully depended on different situations, some of which made the successful completion of these simultaneous tasks extremely difficult (Salvucci & Taatgen, 2008, p. 101). This theory allowed researchers to determine how individuals computed informing diverse tasks concurrently. In addition, this theory permitted researchers to identify the concurrent actions of an individual to complete simultaneous tasks, while determining the possibility of successful multi-tasking behavior and where "bottlenecks

in perceptual and motor resources in addition to bottlenecks in two more central cognitive resources (procedural and declarative memory) account for a wide range of multitasking interference phenomena" (Borst, Taatgen, & van Rijn, 2010, p. 365). In short, the Threaded Cognition Theory allowed researchers to determine if students were able to utilize texting at the same time as learning, or if it created a cognitive bottleneck where it diminished learning.

Media richness theory. Park et al. (2012) explored text-based communication through three media use theories, "(a) the social presence model and media richness theory; (b) the uses and gratification approach; and (c) theory of network affects" (p. 357). The study concluded that the Media Richness Theory and the Uses and Gratification Approach applied to why individuals chose to utilize texting over e- mail and posting on Facebook. Young cell phone users, according to research, preferred "texting over voice calling" (Park et al., 2012, p. 357) because of the variety of uses and applications found in cell phones. The Media Richness Theory delineated that technology users sought to use technology that gave them better usage and a wider variety of applications, rather than technology that limited the user's access. In fact, research revealed,

> Respondents considered cell-phone texting to be superior than the other two due to its richness and abilities to satisfy the needs to communicate with both strong and weak tie networks…. In the case of cell-phone texting and Facebook Wall, media richness of the technologies played an essential role, indicating that technological characteristics drive the use of these technologies. (Park et al., 2012, p. 361)

***Uses and gratification approach*.** Park et al. (2012) determined the Uses and Gratification Approach also impacted an individual's choice on whether to text or not. Researchers noted,

> Individuals' motivations may play a stronger role for a certain medium compared to others in that the use of easy-to-access and spontaneous medium (such as texting) can be less constrained by situational and technical factors and more directly affected by individuals' needs for communication. (Park et al., 2012, p. 358)

Students and instructors who could easily use texting and Textese were more likely to imbed it into the respective studies and lesson plans, according to this approach. Furthermore, the more useful applications the technology – whether a smartphone, cell phone, iPad, etc. – was perceived to have by the user, the more likely the individual was to incorporate it into their daily activities (Park et al., 2012).

Review of the Literature

The influence of texting on students' writing in SE in composition classes was a field that evolved as the technology expanded and increased in capabilities. As this literature review developed, research delineated three main attitudes of instructors for the use of texting in the classroom and how texting was impacting students' ability to write in SE. The instructors' attitudes ranged from avoiding technology as much as possible (Gurd, 2009), to progressively utilizing it in class to stimulate students' writing abilities (Aziz et al., 2013; *Instructional Innovation,* 2012), and some instructors utilized classroom computers for students, but the faculty were more reserved in their use of the texting (Kesler, 2011; Pearson, 2011). Proponents of the use of texting, Textese, and other mobile devices in class identified texting as,

> An excellent example of a new literacy, in that a new tool – namely, the cell phone, combined with its ability to send short, text-based messages, has allowed us to create a new form of communication that many of us now depend on in communicating with the people in our lives. (Wilber, 2010, p. 23)

Research delineated the trends, important subjects, and key theories found in literature on this topic included four main theories. The first theory was instructors' incorporation of texting inside and outside of the classroom to educate students and to give them access to resources for writing in SE was viewed positively and negatively by instructors dependent on the study (Aziz et al., 2013; Bronowicki, 2014; Kolowich, 2011). The second theory was that most faculty members were raised in the traditional lecture/note taking classroom, but millennial students were multi-modal and viewed lectures as a barrier to learning. Millennial students expected instructors to facilitate cooperative learning in and out of the classroom (Baker et al., 2012).

The third theory was that students improved critical thinking skills, understanding, and increased engagement when separated into groups of three and students were required to text discussions about a literary work (Ng'ambi, 2011; Reich, 2008). The fourth theory was that students were empowered to increase engagement, ask more questions, and build a stronger classroom community through texting, SMS, and the use of mobile communication devices (Ng'ambi, 2011). These four main theories were focused on in numerous studies.

Instructors' incorporation of technology. The incorporation of texting inside and outside of the classroom through instructors' and students' use was proven to improve the educational experience of students, giving them access to utilize in writing in SE (Anderson, Franklin, Yinger, Sun, & Geist, 2013). Research identified that

students often preferred text messages from instructors rather than e-mails reminding them of assignments, meetings, clarifying instructions, and tutoring (Jones, Edwards, and Reid, 2009). Teachers noted short term consequences in the way technology was utilized in teaching writing, and the impact of this technology on improving students' writing in SE (Ng'ambi, 2011). However, not all instructors perceived the technology as negatively impacting learning. The influence of SMS, including texting, on students' writing in composition classes became an academic debate as SMS technology increased in capabilities and affordability (Aziz et al., 2013). While people utilized texting daily, the acceptance of integrating technology in the classroom met with resistance. Thomas and McGee (2012) identified schools and instructors were reluctant to use texting and SMS in classrooms because of: funding and time for teacher training with the technology; a lack of understanding of the positive attributes SMS brought to class subject matter and interaction; unequal access for students and improper use of cell phones (such as cyber bullying, sexting, cheating, etc.); and faculty concern over the impact of using texting and Textese on students' writing in SE. Bronowicki (2014) stated,

> The overall use of the English language is either being forgotten, or simply not being taken into consideration…. students are currently using abbreviations of words, misspellings, run-on sentences, and combinations of symbols, numbers, and letters in professional papers and assignments. (p. 8)

In the study, Bronowicki (2014) determined that Textese and the writing found in texting and SMS lead to an acceptance of students to utilize this informal writing in situations that required formal writing in SE. McDonald (2013) noted "a negative correlation in the relationship between in-class texting and final grade score. The more a

student engaged in in-class texting behavior, the lower their final grade" (para. 23). In fact, many teachers feared the negative impact that emoticons (using symbols to create a shape), logograms (shortening words to a single letter, number, or typographic symbol), and pictograms (letters, logograms, and typographic symbols were used to represent a word or concept) combined with Textese on students' writing (Crystal, 2008). However, linguists pointed out that the evolution of Textese with its incorporation of logograms, emoticons, and pictograms was a communication evolution that did not necessarily negatively impact communication. The use of 'code switching' was identified as an ability of students to switch back and forth from informal writing to formal writing dependent upon the purpose of the written work and the individual who would receive the written work (Thomas & McGee, 2012).

Pew Research Center's *National Writing Project* recognized in its results that there were mixed views of the usefulness of digital technology, such as smartphones, cell phones, other mobile communications devices, and texting, within classrooms:

> Despite some challenges, 50% of these teachers (across all subjects) say the Internet and digital tools make it easier for them to teach writing, while just 18% say digital technologies make teaching writing more difficult. The remaining 31% see no real impact. (Purcell et al., 2013 p. 5)

In a different study, Park et al. (2012) noted the importance of gaining buy-in from instructors, students, and administrators on the use of technology, including texting, in the classroom. According to research, 92% of faculty considered formal writing assignments to be necessary as opposed to informal writing assignments (Purcell et al., 2013). However, Baron (2013) documented that students wrote more informally on a daily basis in the form of texting and SMS. Proponents of the use of texting in

composition classes saw increased student engagement, learning, and writing through the use of cell phones and smartphones. Anderson et al. (2013) recognized that "mobile learning holds great promise for higher education" (p. 69). Those in favor of the utilization of texting and Textese viewed it as an evolving language that did not necessarily negatively impact a student's ability to write in SE (Dansieh, 2011). Additionally, Ng'ambi (2011) determined in the Transactional Distance Theory that by using texting with cell phones or smartphones, "students took control of their learning, dialogue between student and student, student and educators increased, and artifacts of interaction became a teaching and learning resource" (p. 251).

Technology acceptance model study. Gibson, Harris, and Colaric (2008) determined additional obstacles to texting and SMS use in universities included instructors' concerns over the reorganization of school's infrastructure; how this reorganization impacted classroom instruction and academic freedom; and the instructors' perception of the usefulness and ease of incorporating the technology. The researchers applied the TAM theorized by Davis in 1989 to determine the instructors' attitudes towards the use of technology in the classroom. The seminal work by Venkatesh and Davis (2000) upgraded Davis' earlier work on TAM by utilizing four longitude studies to create a TAM2. The researchers determined that individuals were more likely to utilize technology, as well as texting, if the choice was: voluntary, socially accepted, perceived positively, demonstrated results, relevant to the job, demonstrated quality, and perceived easy to use. What this meant to educators and students was that if the faculty was more comfortable with the use of technology outside of the classroom, they would be more likely to imbed the use of technology, specifically texting, within the classroom to enhance student engagement and learning. This study

was further supported by the research findings of Park et al. (2012) regarding the Media Richness Theory. Guardia, Waggoner, and Vinaja (2013) noted, "Team formation and development is facilitated by a variety of methods: a) face-to-face meetings, b) video and audio teleconferencing methods, c) texting, d) email, and f) virtual workspaces" (p. 145). The study supported the concept that in the classroom, students and faculty preferred the utilization of texting for notifications and e-mailing for exchanging content. This meant that engagement and communication between students and students, and students and faculty benefitted from the use of texting and Textese.

Faculty who imbedded the TAM into course pedagogy and class interaction built a more engaged classroom community. Creighton et al. (2013) distinguished that students and some faculty embraced the use of mobile communication devices and social media in class, including texting, for the following: "group project completion (77%), individual study (70%), group project discussion (67%), individual assignment completion (65%), contacting the instructor (54%), and note sharing (53%)" (p. 34). In addition, the more comfortable an individual was utilizing the technology, the more likely the teacher was to integrate it into the classroom as the Uses and Gratification Approach delineated.

Faculty perceptions, apprehensions, and use. The faculty's perception of the usefulness of the technology, including texting, influenced whether an individual faculty member would be more open to utilizing the technology. Gibson et al. (2008) determined that despite the faculty's concern about students' ability to use technology, the instructors' perception of how easy the technology was to use did not significantly influence whether or not an individual teacher would use the tools. Additionally, the "perceived ease of use" tied in with the "perceived usefulness" of the technology

(Gibson et al., 2008, p. 356). The Uses and Gratification Approach suggested by Park et al. (2012) eliminated most of the faculties' concerns through increased training and usage through in service activities. Stewart, Bachman, and Johnson (2010) determined many instructors were apprehensive utilizing online teaching and e-tools, which would include usage of technology such as texting. Age was one factor impacting an instructor's choice in implementing the technology in class. While instructors utilized texting in adult education programs, including language and writing education (Taylor, 2011, 2012), the ways in which instructors and students communicated were impacted with SMS, texting, and other technology. Faculty who recognized positive results from imbedding the technology in class (TAM), including texting, noted that it increased student engagement and interaction with each other, the instructor, and the subject matter rather than replacing direct interactive teaching methods.

Furthermore, many educators worried texting was "damaging the use of language in speaking and writing and will affect the standard forms in the long run" (Aziz et al., 2013, p. 12884). While some instructors utilized mobile communication devices, be they smartphones, cell phones, iPads, or other technology, heavily outside of class many of these same faculty members believed the use of these devices prevented themselves and the students from focusing on the subject matter and assignments within the classroom environment (Khalid et al., 2013). These instructors identified student writing samples where students blurred the lines between informal and formal writing:

> Texters tend to write the spelling of some words as they are spoken and omit punctuation and overuse it in their tests, assignments and reports, which sometimes hampers comprehension of the sense they want to convey. They are thus unable to differentiate the context and situation for the use of SMS

> language. They don't only mix these with Standard English but are blamed to consider them as correct since they are surrounded by this language in the form of text messages, television, billboards, comics, books, newspapers and sometimes circulars from their institutions. (Aziz et al., 2013, p. 12885)

Bronowicki (2014) noted that students who were raised utilizing digital technology have become so accustomed to the Textese and informal structure of the vernacular that they were at a disadvantage when it came to formal writing skills. Specifically, it would put the texting generation at a strong disadvantage when it came to college applications and job opportunities due to their lack of learning formal writing in SE. Ng'ambi (2012) determined that learning activities needed to be pedagogically planned to incorporate two-way interaction between instructors and students, and to incorporate the usage of technology, especially cell phones or smartphones. In this study it was resolved that by utilizing this technology in class a teacher facilitated student learning because the cell phone or smartphone application would:

1. Provide students with a learning environment were [sic] questions and/or comments during a live lecture are posted without fear of ridicule just in case the posting is considered 'silly' by others;
2. Foster critical engagement with academic literature (content), peers, and facilitators;
3. Provide the educator access to the students' internal conversations through solicitation of anonymous comments about a lecture or module;
4. Facilitate an all-inclusive knowledge production environment where there are no dominant or suppressed voices;

5.Reduce the time gap between having an idea/comment/question, and sharing it with peers/educator. (Ng'ambi, 2012, p. 251)

However, while students and instructors often communicated in person, through an online platform, or texting, just under 60% of the faculty who utilized social media professionally were aged under 35, and just over 50% of faculty aged 35 – 44 utilized social media professionally. Furthermore, less than 40% of faculty 55 and older used social media professionally (Moran et al., 2012).

While this intimidation concerning utilization of the technology and texting prevented some instructors from incorporating the tools in the classroom, other instructors actively integrated texting and SMS to stimulate students' writing abilities (Aziz et al., 2013; Bruff, 2011; *Instructional Innovation,* 2012). Bousquet et al. (2009) determined future faculty would be more marketable if those instructors were technologically informed and experienced. Research by Herro, Kiger, and Owens (2013) and Husbye and Elsener (2013) delineated the importance of incorporating mobile communications technology into educational pedagogy. In addition, DeVoss, Eidman-Aadahl, and Hicks (2010) noted faculty reluctance was sometimes due to a lack of training and use of the technology in teacher training. Other instructors were more conservative in the integration of technology in the classroom, utilizing only computers and power points (Corbett, 2011; Kesler, 2011; Pearson, 2011).

Rosen (2010) identified seven arguments for educational systems to evolve to include more technology. First, these arguments noted that students today were connected to the Internet and each other 24/7, and the students adopted and adapted to new technology quickly. Second, these students were also multitaskers who got bored if asked to focus on only one task, which tied in with Salvucci and Taatgen's (2008)

Threaded Cognition theory and Grinols and Rajesh (2014). Third, since these students were socializing continuously via mobile devices (cell phones, smartphones, tablets, laptops, etc.), even the most reticent student was comfortable putting forth views and opinions online or via text messages. Fourth, students had issues with the ban on cell phones and mobile devices at many schools, since the members of this generation were continuously connected at home or work the students often ignored the ban. Fifth, the cost of uploading quality course materials to a learning management system, a website, in an e-mail, or via text messages was minimal, if not free. Sixth, students were proven to cultivate critical thinking and analysis skills utilizing course materials that were adapted to a learning management system or website. Seventh, today's generation of students were more motivated, more adept, more versatile, more in tune with utilizing technology, including texting, mobile learning, virtual learning, and social networking, than any previous generation (Rosen, 2010). It was for these reasons that Rosen (2010) stated,

> The bottom line is that the educational system must develop new, technologically based models to replace the old textbook-based classroom. If we are going to prepare our students for Alvin Toffler's future in which waves of technology innovation keep coming faster and faster – with iGeners as the early adopters – then it is time to *rewire* education. (p. 200)

In order to meet the needs of students in educational settings and future employment, many educators believed that technology must be imbedded in the pedagogy and the classroom.

Texting and SMS enhanced learning. Aghaee (2010) explored how undergraduate and graduate students utilized social media to enhance learning. In this

study, the researcher defined social media as "a utility tool to integrate online technologies and educational learning to support and develop academia" (Aghaee, 2010, p. 8). The researcher wanted to qualitatively explore how resident students utilized social media through exploratory interviews and focused "on three phases: learner-content interaction, learner-instructor interaction, and learner-learner interaction" (p. 24).

Aghaee's (2010) research noted that 25% of the students used social media regularly to enhance their academic learning; however, students strongly favored the ability to use social media to ask questions of classmates, or to exchange files with peers as opposed to doing these activities face-to-face. The students often used the tools they were most comfortable with in the learner-learner communications, including texting. While students were often comfortable working collaboratively in class, the data indicated less collaboration between students when participants used social media to collaborate. Interestingly enough, students tended to reserve e-mail communication for learner-instructor interaction (Aghaee, 2010). However, proponents of utilization of texting, Textese, and other technology in class specified texting could be used to educate students on language evolution "from Shakespearean English to Internet English….text messaging is not just writing anything …before students send out text messages, they do some editing in order to format the messages into a limited but precise number of words" (Dansieh, 2011, p. 225). Despite the shortness of a text message (160 characters or less), students were still able to engage with material and interacted with each other in a learning community. This supported the Media Richness Theory, in which students preferred to use technology that was easy to use, gave a wider variety of applications, and gave them mobile access wherever they were.

While many students were comfortable working collaboratively in class, the exercise of "flipping the classroom" to put the responsibility of learning into the students' hands through the use of mobile technology, including texting, was seen as beneficial for student engagement and learning (Thoms, 2012). Flipping the classroom required "lectures are delivered outside of class time with multi-media presentations delivered online", while students engaged in "problem solving exercises in class" (Anderson et al., 2013, p. 65). Although some instructors were comfortable with students utilizing mobile wireless devices in the classroom as a learning tool when the classroom was flipped (Anderson et al., 2013), other instructors were not as comfortable with the technology use in class.

This research showed the impact of the Uses and Gratification Approach; if an instructor perceived the technology as beneficial and easy to use, then they were more likely to imbed it into the classroom pedagogy. Rellinger's (2014) research determined, "Faculty members are faced with the difficult decision of adopting technology and incorporating new teaching methods, or preventing these technologies in order to maintain attention and focus on the instructor and materials presented" (p. 1). The study further noted the evolution and increasingly large number of applications built into smartphones had led to tools utilized in enhancing the educational usage of the technology. This research identified a concern among faculty over whether or not mobile devices and their utilization positively or negatively impacted students' engagement and learning (Rellinger, 2014). With the Uses and Gratification Approach focusing on the ease of use of the technology, this research increased understanding of why certain faculty and students were apprehensive about the use of texting and Textese in the classroom.

The attitudes and perceptions of students and faculty concerning the use of SMS and social communication mediums in an academic environment continued to evolve. This theme directly related to this study's research question. Studies evaluating the impact and perception of the individuals utilizing SMS and social media to enhance learning were ongoing, but some research demonstrated conflicting perceptions and uses between faculty and students. Most faculty members were raised in the traditional lecture/note taking classroom, but millennial students were multi-modal and viewed lectures as a barrier to learning; instead, they expected instructors to facilitate cooperative learning utilizing mobile digital devices that allowed the students to surf the web or text each other to engender students' learning (Baker et al., 2012). This difference between millennial students and faculty expectations over classroom pedagogies and practices led to the lack of understanding, communication, engagement, and learning in the classroom.

Millennial students were raised during the technological explosion of the 1990s and 2000's. These students anticipated continuous access to information through the Internet and technology even while in a classroom. Texts, smartphones, and a plethora of social communication technology were integrated into the lives of millions of people (Armstrong, 2011; Drouin, 2011). In fact, Rideout et al. (2012) noted that 82% of teenagers between 13 and 17 owned a cell phone, while 41% had a smartphone and 43% had an iPod Touch or comparable device. Researchers determined, "Millennials believe that all learning should be inundated with technology" (Baker et al., 2012, p. 277). In addition, millennials believed that they excelled at multi-tasking, including texting while listening to lectures or participating in classroom activities. This belief followed the researchers' findings in the Threaded Cognition Theory (Salvucci & Taatgen, 2008).

SMS and texting use in coursework. While students used varying types of social media for non-educational purposes, including but not limited to Facebook, wikis, blogs, texting, e-mail, etc., the technology was used in relation to coursework. Texting increased dramatically among teens: 50% send 50 plus text messages per day, which translated into 1,500 texts per month; 33% send more than 100 text messages per day, which translated into 3,000 texts per month; and 15% of teens sent 200 plus texts per day, which translated into over 6,000 texts per month (Lenhart, Ling, Campbell, & Purcell, 2010). Data determined students utilized the following social media to support their academic studies: e-mail (85%), IM (which incorporates texting) (80%), sharing documents (70%), connecting (25%), student-teacher communication (15 %), Wiki reading (10%), video watching (10 %), and project collaboration (10 %). Students incorporated e-mails into ways to communicate with faculty; the participants also noted e-mail was used for submitting work to instructors, managing class-oriented tasks, and sharing information and ideas with classmates. However, only 15% of the infrequent and medium users identified the use of social media for corresponding with instructors, while none of the frequent users mentioned this use (Hrastinski & Aghaee, 2011). Digital writing permeated the lives and interactions of today's students, and while opinions diverged on the effectiveness of allowing the technological tools to be used in education the use by students of texting and Textese was seen as widespread.

While Hrastinski and Aghaee (2011) revealed the use of texting in IM was primarily for social purposes, texting did have educational benefits, such as allowing students to get quick answers from instructors or other students or to arrange meetings. Hrastinski and Aghaee (2011) noted that only five students identified that they used social media frequently for educational reasons, while most of the study's participants

utilized social media for personal correspondence. The researchers indicated that students preferred face-to-face interactions with instructors and classmates to online or social media, and participants perceived face-to-face interactions as more beneficial to them. Furthermore, multiple studies identified valuable utilization of mobile devices and communications in higher education and public education institutions (Brown et al., 2014; Grinols & Rajesh, 2014; Husbye & Elsener, 2013; Kim, Ilon, & Altmann, 2013). Woodill (2012) identified that learning through mobile devices allowed students to learn, communicate, engage in educational activities, and access information whenever and wherever necessary. These studies revealed that students preferred the use of texting and IM concerning classwork, because the Transactional Distance Theory allowed them to be more engaged in the class and subject matter.

Despite some faculty and administrative concerns, many instructors utilized texting in the classroom and incorporated it into the course pedagogy, which directly related to the research question raised in this study. In addition, students often noted the utilization of technology enhanced learning both in and out of the classroom. Anderson et al. (2013) determined "mobile learning holds significant potential to increase student motivation and learning" (p. 69).

Faculty and student disconnect over lectures and technology.

***Texting and SMS in the classroom*.** Baker et al. (2012) resolved that the attitudes and tolerance of the use of texting, SMS, and technology in the classroom were very different between faculty and students. Results determined there was a disconnection between students and other students, and students and faculty over the use of mobile devices in class. Baker et al. (2012) noted approximately 80% of the students and faculty found cell phones ringing in class were disturbing and negatively impacted

the learning process. A majority of the population (61%) believed that cell phone use in class was inappropriate, and 46% of the participants determined that checking e-mail and sending text messages was unacceptable. However, only 29% of the respondents believed that texting or e-mailing in class was inappropriate if the cell phone was silent and if the student was looking up information that was germane to the class (Baker et al., 2012). The Threaded Cognition Theory promoted by Salvucci and Taatgen (2008) identified individuals who multi-tasked in the classroom between texting and listening to a lecture or completing other assignments often failed to successfully pay attention to all activities. Kuznekoff and Titsworth (2013) stipulated that students who were texting or posting on mobile devices diminished their ability to take notes as well as process information.

A study by Grinols and Rajesh (2014) indicated that students were able to multitask, but their abilities to complete all activities diminished while multitasking. Research delineated that students who did not text "recorded 93% more outstanding answers in their notes than … students who were frequently using their mobile phones …. [Non-texting students] recalled 87% more minimally sufficient answers … and in general did sufficiently better at recalling information" (Kuznekoff & Titsworth, 2013, p. 251). Students who texted or posted to mobile devices during a lecture wrote 38% fewer notes, scored 51% lower on "free-recall tests", and scored 20% less on tests with multiple choice questions (Kuznekoff & Titsworth, 2013, p. 248). The results of this study showed that students who texted or posted to their mobile devices during lectures were less able to recall the lecture information in short-term and long-term memory. These results were contrary to what many students believed – that they could not only listen to a lecture, but also participate in a texting dialogue at the same time without

lessening their intake and processing of any of the information. Gingerich and Lineweaver's (2014) study supported the previous study in determining most students who texted in class recognized that it would be detrimental to their grade in the class and understanding of the material; however, these same students who texted despite this knowledge anticipated learning less in the class.

Another concern was that students who were not as affluent would be limited or left out of the texting activities resulting in instructional inequity (Khalid et al., 2013). Herro, Kiger, and Owens (2013) noted teachers' concern with issues of equity and impact on learning. Despite these concerns, research called for faculty and administrators to incorporate the use of mobile devices, including texting, into the school's pedagogy so that students were prepared for the technologically driven world. Thomas and Orthober (2011) determined that 75% of students had their own cell phones if the family income was higher than $75,000 per year, but with students from households earning less than $30,000 annually, the number of students owning cell phones dropped to 59%; therefore, a concern over equal access was identified by faculty (Czerniewicz & Brown, 2013). On the other hand, Purcell et al. (2012) acknowledged that teachers who embraced digital technology usage in the classroom found it to foster increased student engagement and excitement about learning. Students embracing the technology they grew up with often led to a disconnection between students and instructors in communication and learning when a teacher failed to share that enthusiasm (Aziz et al., 2013).

Faculty/student disconnect over texting and SMS. Research by Baker et al., (2012) indicated faculty perceptions were very different than student views on the use of electronic technology in class. The study revealed that more than 90% of instructors

believed that the use of cell phones to check e-mails and text messages, or to make phone calls during class was not acceptable, while only 58% of students strongly agreed or agreed had views similar to the instructors'. While 48% of students believed it was acceptable to utilize a cell phone in class if it was silent, only 13% of faculty viewed this as acceptable. This proved a gulf of acceptance between faculty and students in the use of electronic technology in the classroom (Baker et al., 2012). Clayson and Haley (2013) noted "42% [of students] believed texting should be banned in classes, compared with 36% who thought it ought not to be banned" (p. 35).

Ng'ambi's (2011) study of Transactional Distance Theory concluded that even if the faculty required students to turn off the cell phones or smartphones, the students were still aware of their proximity and would lose focus on the lesson while thoughts strayed to whether or not they had received a text message, Facebook post, Snapchat, etc. Additionally, Anderson et al. (2013) and Rellinger (2014) noted that students viewed instructors who were not technologically savvy as less credible. Numerous studies determined that students were more engaged with their peers, their instructor, and the coursework when allowed to use mobile technology, including texting, in the classroom (Armstrong, 2011; Baker et al., 2012; Drouin, 2011; Global Digital Communication, 2011; Johnson et al., 2013; Madden et al., 2013; Roberts, 2012).

Faculty perceptions of texting and SMS. Faculty perceptions and attitudes towards the use of technology, specifically texting and its impact on students' writing, learning, and engagement, determined whether or not students used texting or technology in the classroom. Doering, Lewis, Veletsianos, and Nichols-Besel (2008) explored the impact of beginning teachers' views of contacting other instructors and students with utilization of texting through Instant Messaging (IM) platforms. The

researchers determined students' utilized texting with IM to socialize with the teachers, rather than for academic dialogue. Furthermore, the use of texting with IM improved the teacher's community relationships with the other instructors. In addition, students and faculty who texted each other felt proximity to the other person(s) even if they were geographically separated, because the medium allowed individuals to think out what they wanted to type, review it if necessary, respond to the other person(s) as needed, and save the conversation for further review. However, some teachers expressed concern that the technology's use broke down the teacher-student societal barriers, producing stress for some instructors (Doering et al., 2008). The use of texting in class also was seen as a deterrent to learning and final grades (Gingerich & Lineweaver, 2014; Kuznekoff & Titsworth, 2013; McDonald, 2013). This concern was echoed in a study by Aziz et al. (2013), where faculty expressed concern that students' use of texting and Textese. Faculty expressed the concern that texting and Textese negatively impacted students' writing in SE. Since Textese ignored the syntactic and grammatical rules of Standard English,

> Educators penalize the learners for nonstandard spelling which causes loss to the students if this language is used in academic writing….The SMS language affects to aspects of the learners' language proficiency i.e. skills to express oneself eloquently through writing in skills and ability to use words appropriately in context. (Aziz et al., 2013, p. 12885)

The TAM identified that individuals who perceived ease of use and benefits of the technology were more accepting of its use in the classroom and saw its use as a plus for student engagement. Students and younger faculty were raised utilizing state-of-the-art technology both inside and outside of the classroom, and considered it necessary for

learning (Anderson et al., 2013; Tomos et al., 2013). Research by Guardia et al. (2013) specified that the efficiency and ability of e-mailing and texting were beneficial to building an engaged group, which would translate into a more interactive classroom.

Students' perception of texting and SMS. Research on how college students utilized texting in connection with the students' studies focused on the function of social media in educational classrooms. Hrastinski and Aghaee (2011) identified that most individuals utilized social media and texting for socializing significantly more than using it for school-related communications or work. In the Pew Research Center's *National Writing Project,* researchers noted that 77% of teachers believed that digital technology positively impacted students' ability to access information and conduct research; however, 86% of teachers in the study's participants saw today's students as too connected to mobile devices, instant Internet and communication access, and anticipation of utilizing cell phones and smartphones. In fact, despite the fact that approximately half of the teachers in the study stated students were not allowed to use cell phones and smartphones in class, the other half identified positive usage of the technology in class, including 11% who used it to text the instructor or other students in the class concerning the subject matter and assignments (Purcell et al., 2012).

Anderson et al. (2013) identified that students believed they studied, worked, and collaborated with higher effectiveness when incorporating applications that were available on the mobile phones, tablet computers, and laptops. This interchangeability allowed students to switch between Internet searches, texting each other, accessing the class' online platform, and move from one mobile device to another easily. The knowledge and use of faculty with texting, Tweeting, other social media, and the use of mobile devices was considered extremely important to students: "The instructor who

does not have LinkedIn and Facebook accounts or regularly use Twitter and YouTube and mobile technologies has a credibility problem with today's students" (Anderson et al, 2013, p. 66). Utilizing the transactional distance theory, Ng'ambi (2011) noted that faculty who allowed the use of texting in class empowered students to take control over their learning, encouraged more reticent students to ask questions anonymously, and prevented quieter students from being marginalized by more vocal classmates.

SMS impact on critical thinking, learning, and writing. Students improved critical thinking skills, understanding, and increased engagement when separated into groups and required to text discussions about a literary work (Ng'ambi, 2011; Reich, 2008). Proponents of the use of texting and mobile communication technology in a classroom environment believed it not only improved the students thinking about the subject matter, but also amplified their engagement in the class. Despite the reluctance of some schools and faculty to incorporate SMS and texting into the classroom, studies revealed that the positive implications outweighed any minor negative impacts. Concerns that all students had equal access to the technology were expressed (Czerniewicz & Brown, 2013; Khalid et al., 2013). Faculty trepidations over the impact of texting and SMS on SE were proven to be significantly inaccurate. Research showed use of texting and SMS encouraged students to increase participation in class assignments and discussions (Rosen et al., 2011). However, research noted that students must be informed of established guidelines for use of the technology (Khalid et al., 2013), and faculty must be assured of the Uses and Gratification Approach benefit of texting. Additionally, faculty and students needed training in appropriate use of texting and mobile communication technology within the classroom environment. The impact

on student learning and distraction needed to be stressed by the faculty concerning the use of the technology or texting while in class (Kuznekoff & Titsworth, 2013). Furthermore, Hrastinski and Aghaee (2011) identified that the power structure in the classroom shifted from a centralized instructor to students responsible for their own learning with the use of technology and the Internet, creating "decentralization of authority in knowledge creation and technology ownership….[enabling] new forms of collaboration and knowledge sharing for learners" (p. 453). This shift in power structure was also identified in the study by Anderson et al. (2013) on flipping the classroom. Kim, Ilon, and Altmann (2013) noted the transitioning definition of learning,

> The generation of smartphone users is clearly defining learning much more broadly than a narrow definition of what they do within a classroom. Their ease of use of smartphones and ease of defining the use of smartphones as a learning tool is a good example of this broadening definition. (p. 14)

Additionally, the study recognized the benefits of the incorporation of smartphones into course pedagogy and lessons, including "Smartphone programs [that] allow users to experience technologies such as voice recognition, synthesized speech and text-to-speech. Furthermore, intelligent tutoring systems allow learners to tailor each application to their own need" (Kim et al., 2013, p. 7). Thomas and Orthober (2011) specified an increase in student engagement when texting was allowed within the classroom. Instructors became facilitators of learning, utilizing texting and mobile communication technology as aids to learning, rather than centering learning on utilization of the tools. Research by Guardia et al. (2013) supported determinations by Khalid et al. (2013) that the use of mobile communication devices enhanced learning

only when the technology was utilized as an aid to learning, rather than becoming the main instructor of learning.

Texting and SMS in traditional classrooms. Jones et al. (2009) explored the students' use of texting and SMS in the traditional classroom and the technology's impact on learning. The researchers determined the benefits of utilizing texting in classes prevailed over the negatives of using the technology, especially when transitioning from a traditional class to a hybrid or online class. Researchers noted the use of texting in traditional classrooms increased students' studying together and students' more deeply reflecting on the subject matter. In addition, the study recognized text messaging was an important catalyst in encouraging the learning process and communication between students and instructors (Jones et al., 2009). Thomas and Orthober (2011) determined students felt more connected and built a learning community faster when texting was incorporated into the classroom. The study showed that 61% of students texted their friends concerning homework or assignments (Thomas & Orthober, 2011). Embedding the use of texting within a class pedagogy led to increased interaction (student to student, student to content, and student to instructor), additional reflection on the subject matter through the archiving capabilities of texting features, and allowed instructors additional means of assessing student learning through open-ended questions and short-answer questions. Teachers found texting in class allowed students to be assessed through "pop quizzes, spelling and math tests, and polling student responses" (Thomas & Orthober, 2011, p. 57).

Additionally, in a study on the evolution from e-learning to students' mobile learning (m-learning), Roberts (2012) stated:

> With each new generation of tablets and smart phones offering more power and features, these devices are quickly replacing personal computers, including laptops and notebooks, for many computing chores. It is only natural that there will be increased demand for learning activities on mobile devices. (p. 62)

Numerous research determined that teens and young adults not only owned cell phones, smartphones, and other mobile devices, but that they anticipated being able to employ these devices whenever they desired (Armstrong, 2011; Baker et al., 2012; Drouin, 2011; Global Digital Communication, 2011; Johnson et al., 2013; Madden et al., 2013). DeVoss et al. (2010) specified that teachers needed to align literacies in the classroom with technology usage, and to utilize the technology as a complement to teaching writing skills. Classrooms and teaching methods constantly evolved, "Classrooms are and have always been complicated spaces. Technology adds a new layer to these complications as students bring with them remarkably different technology backgrounds and digital literacy skills" (DeVoss et al., 2010, p. 33). To meet the digital literacy needs and demands of the millennial generation and workplace, teachers needed to incorporate texting and other mobile technology into the classroom (Roberts, 2012).

However, concerns over the lack of access to computers, mobile technology, texting, and SMS needed consideration prior to utilization of the technology in classes. Czerniewicz and Brown (2013) identified a group of students who, for various reasons, had little or no access to personal computers, mobile technology, texting, and SMS. These students were recognized as having a distinct disadvantage in succeeding at universities where technology utilization was high. Despite the large numbers of individuals with access to the Internet and whose mobile devices permeated their lives (Madden et al., 2013), there are students with "limited exposure" to technology

(Czerniewicz & Brown, 2013, p. 45). Research indicated a strong divide between students who were frequent users of computers, mobile technology, texting, and SMS versus those students who were infrequent users:

> We concluded that it is only the digital elite who meet the criteria of a "digital native": a person from "the millennial generation"; one who has grown up with digital technology, one who comes to university familiar with computers; and one who is purported to learn to use computers informally – either teaching themselves or through social networks….While this group (of digital "strangers") may be small (comprising 22% of a sample of 2743 reported previously, ibid.), it is significant because redress and disadvantage remain burning issues. (Czerniewicz & Brown, 2013, p. 46)

This digital divide between students indicated the need for additional training and computer or mobile technology access to allow the students with limited technological experience to succeed.

Texting and class performance. Aziz et al. (2013) delineated that instructors utilized social communication mediums to develop and expand the students' knowledge of and engagement in the writing process by incorporating various new technologies into the process, including texting. Wardyga's (2012) research indicated no significant correlation of a student's texting volume and the participant's writing grade (Wardyga, 2012); however, later studies by Clayson and Haley (2013) and McDonald (2013) drew negative connections between a student's texting in class and the final grade. Gingerich and Lineweaver's (2014) research noted that while students recognized that their grades and learning would be negatively impacted by utilizing texting in class, the students often chose to text anyways despite the grade impact. Additionally, Dansieh (2011)

identified those individuals who viewed texting and the use of Textese negatively believed "that for the sake of brevity, concision, and economy, the simple message system … of text messaging throws the essential mechanics of writing such as grammar, syntax, punctuation and capitalization to the wind" (p. 222). The study further noted that 73% of participants believed that poor writing was due to a weak foundation in the primary grades, and 98% of the contributors believed they needed to improve communication skills (Dansieh, 2011). Despite the studies showing the negative impact of texting on students' class performance, as well as the banning of cell phones in classrooms and school, Lenhart et al. (2010) determined that 65% of teens owning cell phones brought them to school daily, 43% stated they texted during class a minimum of once a day, and 64% admitted to texting in class despite the cell phone bans.

Textisms and writing. If, as Dansieh (2011) identified, 98% of the study's participants believed their communication skills needed improvement, then can texting be blamed for poor writing? Rosen, Chang, Erwin, Carrier, and Cheever (2010) focused on the use of textisms and SMS on students' writing. The researchers indicated students' writing was influenced differently by the usage of textisms and SMS dependent upon the individual's education and gender, as well as whether the writing was informal or formal. Rideout et al. (2012) recognized that 77% of girls texted daily, while 60% of boys texted daily; however, 39% of girls chose texting as a favorite communications format, while only 38% of boys did. Textisms and SMS were determined as having a positive impact on informal writing, but a negative impact on formal essays. Those participants with no college education tended to employ textisms more in formal writing. Moreover, women utilized text more often than males, especially women with a college degree (Rosen et al., 2010). Bronowicki (2014) identified the negative impact of

students' utilization of texting and other mobile communications on their ability to differentiate between formal and informal writing and audiences: "With the constant exposure to shortened forms of words and program that essentially do the work for them, students are now having difficulty distinguishing between informal and formal writing" (p. 5) where speed was identified as more important to students than development or depth of a topic. The study revealed that 81% of instructors identified an increase in Textese in students' writing over the past few years.

The Pew Research Center's National Writing Project found that instructors viewed the usage of texting and digital tools to be negative, even if guidelines for use were established. In the study, 68% of teachers believed that digital tools (including texting) encouraged students to not exert effort in their writing and to utilize shortcuts; 46% of faculty believed digital tools spurred students into carelessly complete assignments in as little amount of time as possible; and 40% of faculty believed digital tools encouraged students to utilize poor grammar and spelling (38% of faculty said digital tools made students less likely to utilize poor grammar and spelling) (Purcell et al., 2013). Bronowicki (2014) identified that digital vernacular, such as Textese, increased in students' writing, "causing a drastic decline in students' writing overall" (p. 6). Dansieh (2011) specified that text messaging was significantly altering the way students wrote, with 84.4% of study participants utilizing Textese in course work. The study further indicated texting impacted sentence structure (25.5%) and/or spelling (41.4%), which indicated a significantly negative impact of texting on students' writing. Instructors in the study stated texting was "harmful" (82.4%) to writing, or "may be harmful" (15.8%) to writing (Dansieh, 2011, p. 227). Another concern expressed by

faculty was the shortened form of language utilized in texting, better known as Textese. According to Cabatbat and Tapang (2013),

> SMS is a distinctive mode of communication. First, SMS has very limited information capacity. One SMS message can contain at most 140 bytes of data. If 7-bit character encoding is used, one SMS message can contain up to 160 characters. Another feature unique to SMS is the use of constrained keypad designs for text entry on mobile phones….Texters aim to use the least number of characters and fewest keystrokes, sufficient to convey a comprehensible message. Punctuation and grammar are also usually omitted. (p. 1350002-2)

Faculty were concerned over the impact Textese would have on students trying to switch between the digital language and Standard English. Bronowicki (2014) noted, "The nature of text messaging creates a sense of laziness in students, inhibiting their ability to work through a challenge and stay focused on a task" (p. 6).

Translating Textese to SE. A British study on children indicated a positive link between translating Textese to SE and the spelling ability of the child (Plester et al., 2008). Another positive parallel was drawn between the child's errors in interpretation from Textese to SE and the individual's spelling ability. Researchers noted the most powerful correlations were between the children's reading and writing skills and the students' phonological knowledge when paired with the Textese. Most notably, researchers delineated no negative influence from a child's knowledge and use of Textese on the students' writing competency. Additionally, the study distinguished that children did not use a rigid form of Textese; instead, students utilized fluid textisms (Plester et al., 2008). In a different study, employers and teachers noted "an appreciable number of students struggle with grammar, lexis and structure, text messaging which

encourages abbreviating and non-conformity with grammatical rules" (Dansieh, 2011, p. 227).

Cabatbat and Tapang (2013) determined that Textese fluctuated worldwide, dependent on language and culture,

> Features of SMS language vary for different languages. In English, for example, three common modes, which shorten the message, were observed – rebus style, consonant skeleton style and phonetic style. Rebus style employs the use of a single letter or digit as a substitute for a whole syllable or word. An example is the word *tonight, which* is *2nyt* in Textese. Consonant skeleton style omits most of the vowels of a word, leaving only the consonants. The word *together* which is texted as *tgthr* is an example. Phonetic style keeps the transformed text to have nearly the same pronunciation as the original one like the translation of the word *see* to *c.* (p. 1350002-2)

These modifications to SE caused alarm in digital writing opponents. Bronowicki (2014) identified students failed to learn the difference between informal writing (texts to friends) versus formal writing (academic and work-related), better known as a failure by the students to differentiate when code switching was necessary. For example, instructors noted students used "the abbreviations, run-on sentences, alphanumeric combinations, and misspelling utilized in text lingo are often transferred to formal written tasks in the classroom" (Bronowicki, 2014, p. 26). Students' immersion into Textese prevented them from writing in detail with sophisticated vernacular and critically thinking and writing about a subject (Bronowicki, 2014).

Texting and literacy. Building on the research by Plester et al. (2008), Drouin (2011) focused on the relationship between literacy and text messaging volume, and

whether or not there was a negative correlation between literacy and Textese use in varying situations. Results determined the text messaging volume positively impacted spelling and reading fluency; the volume of texting was related to the use of Textese in texting and social network sites (SNS); the use of SNS influenced integration of Textese in SMS to instructors and friends, but there was no strong correlation to reading or spelling fluency, or reading accuracy; the volume of Textese use in e-mails to instructors and on SNS correlated strongly with literacy (Drouin, 2011). In addition, Husbye and Elsener (2013) identified the positive utilization of mobile technology on students' literacy:

> We must raise awareness of our students' reading and writing processes; teach those skills and strategies that encourage, facilitate, and accelerate reading achievement in elementary and middle school contexts; and mediate the reading process as print travels from paper to digital and back again. (p. 46).

The study further identified the need of literacy educators to behaviorally model a flexible attitude towards "changing technological ecosystems and taking our pedagogical approaches forward" (Husbye & Elsener, 2013, p. 51).

However, Relles, and Tierney (2013) specified that students who were underprepared academically and in technological skills would face a literacy double jeopardy educationally and in the work world. The ease of use of some technology led students to rely on it more heavily rather than taking the time to properly write an essay or report. In one study, researchers noted, "Students are not writing with grammatical precision and correct sentence structure, and are *certainly* not challenging themselves to write in a more sophisticated manner …. due to an increased reliance on technology to do the work for them" (Bronowicki, 2014, p. 20). Teachers were strongly encouraged to

require students to complete summative and formal assessments to stress writing skills and critical thinking about writing (Bronowicki, 2014). By not learning to write formally, or critically think and analyze information, students displayed the negative influence technology had on their writing in SE as well as their ability to be lifelong learners.

However, Hogan, Gilbert, Leckington, and Morris (2012) specified the majority of people believed texting negatively impacted students' ability to write (56%), 18% believed that texting did not negatively impact students' ability to write, and 26% believed it may negatively impact students' writing abilities. When students were asked if texting or Textese impacted their academic writing, 79% said no, while 21% said yes; 55% utilized Textese instead of Standard English, compared to 45% who said they used SE. While the usage of texting and Textese became common and often a daily occurrence among individuals worldwide, 68% of the students in the study believed it negatively impacted their writing skills, while only 32% said texting and Textese did not impact their writing skills (Hogan et al., 2012). Purcell et al. (2013) delineated that the influence of digital communication devices, including the use of texting and Textese, were framing how SE and writing was taught in classes. One study indicated that texting and Textese were preventing students from writing in SE, further stating that improving literacy and critical thinking skills were incompatible with texting and Textese (Bronowicki, 2014). While the study by Purcell et al. (2013) noted there were differences in the types of writing assigned by teachers due to the subject matter, all forms of writing were impacted by texting and SMS; whether that impact was negative or positive depended on the instructor's perception of texting and Textese which directly drew from the TAM.

Summary

Conflicting viewpoints supported by empirical studies and data were presented by supporters of the use of texting, Textese, and SMS in the classroom, as well as by individuals opposed to its use in the classroom. This qualitative research was to evaluate how texting and Textese influence writing in composition classes. In addition, the reasons why individuals either supported or opposed the usage of texting were often based on a person's attitudes and perceptions concerning the use of texting and SMS, as seen in the Media Richness Theory and the Uses and Gratification Approach theory. Evaluating this subject matter required deeper consideration of how instructors perceived the impact of texting, Textese, and SMS on students' writing, the attitudes and perceptions of faculty and students over the use of texting in class, and the attitudes of instructors on the utilization and integration of texting in writing and SE pedagogy. While texting and Textese were found to positively impact the amount of writing students did, instructors needed to also stress the differing situations where informal and formal writing were used, as well as the importance of writing in SE.

Research showed that while students and faculty understood some of the benefits of texting use between faculty and students, many of the learners and instructors were resistant to integrating it into the classroom. A large majority of students and instructors believed that face-to-face interaction was superior to texting or other social media (Gingerich & Lineweaver, 2014; Khalid et al., 2013). One drawback was that not all students had equal access to a cell phone or smartphone, and some students had only limited access either through user plans or lack of connectivity off of campus due to rural locations or economic factors (Thomas & Orthober, 2011), which tied in with the TAM theory. Another theme identified was the perceptions of students and instructors

over the use of texting, specifically any use of a cell phone or smartphone, in class were vastly different.

Tying in with the Use and Gratification Approach and the Transactional Distance Theory, many instructors were overwhelmingly opposed to students utilizing cell phones, smartphones, or the various applications associated with this technology in class, even if the use was relevant to the class discussion. Many of these faculty believed that the students would be distracted from the lessons at hand if mobile technology was used at the same time, which tied in with the Threaded Cognition Theory. Students, on the other hand, disliked cell phones or smartphones ringing in class, but if a peer's phone was silent and the student was using it for class purposes, few students perceived its use in class as objectionable. Of note was the determination that most students utilized texting more frequently for personal communications rather than for enhancing educational learning, as shown with the Transactional Distance Theory, the TAM, and the Media Richness Theory. Faculty and some students viewed this use of texting for personal communications during class negatively, following the determination of the Threaded Cognition Theory where an individual could not complete and give 100% attention to multiple tasks at the same time, leading to a lessening of knowledge of all tasks. Clearly, more study needed to be done on these differing perceptions.

Concerns over texting and SMS in classrooms. Valid concerns over the use of texting and SMS in academic environments included not only the usage of texting and SMS in students' written communications, but concerns also included faculty. One issue with utilization of texting and SMS in classrooms concerned the ability of all students having equal access to the technology was not evident, leading to educational inequity if it was used in class (Anderson et al., 2013; Relles & Teirney, 2013). The ability of

students to have equal access to the technology was hampered by affordability and the lack of access (Liebenberg, Chetty, & Prinsloo, 2012). Buchholz, Müller, and Ferm (2013) identified that "persons with cognitive and communicative disabilities do not use mobile phones the same way the general population does….due to costs and lack of accessibility but also because their needs are not seen and prioritized" (p. 88). Equal access meant access for all students, including those with physical and/or learning disabilities. While cost may have been a limiting factor for some students, Liebenberg, Chetty, and Prinsloo (2012) determined that although most students had access to mobile phones with Internet capabilities, many of the students were unwilling or unable to afford access for classwork or studying. In fact, most studies did not include students with physical or learning disabilities, which limited knowledge and research into how these students would be impacted by the incorporation of texting, SMS, and mobile devices in the classroom. In addition to equal access, many higher education institutions did not have any services mobile accessible for students to use due to a lack of funding (Gibson et al., 2008).

Another issue with utilization of texting and SMS in class was the improper use of the technology by students while in class led to decreased student learning (Anderson et al., 2013; Khalid et al., 2013). Distractions caused by other students' texting, or the student answering or sending a text message in class raised concern by students and faculty alike (Anderson et al., 2013). The improper utilization and distraction of the mobile technology could be countered, however, by students receiving increased education about the usage of technology. Students needed to be educated as to when and where it was appropriate to utilize their cell phones or smartphones (Anderson et al., 2013; Guardia et al., 2013).

Furthermore, faculty required training with the technology prior to using the technology in the classroom (DeVoss et al., 2010). While many instructors were apprehensive about utilizing texting in class (Gingerich & Lineweaver, 2014; Stewart et al., 2010), this uneasiness could be overcome with increased faculty education in utilization of mobile technology and software. Professional development provided by the institution would benefit instructors; however, many colleges have cited a lack of funding to train teachers with the technology (Gibson et al., 2008). This situation caused issues with students, since students expected instructors to know how to utilize the technology (Baker et al., 2012).

An additional concern over utilization of mobile devices, texting, and SMS in class was the apparent negative impact of utilizing texting and SMS on the literacy of students with low literacy test scores (Plester et al., 2008). Numerous studies reported negative correlations between students' use of texting and the students' literacy scores (Plester et al., 2008; Wardyga, 2012). However, Husbye and Elsener (2013) identified the usage of mobile technology as beneficial to literacy educators. Differing perceptions between faculty and students also influenced how the use of texting, SMS, and mobile technology was accepted in the classroom. Multiple studies identified a gap between faculty and student perceptions of whether or not texting and mobile devices were useful or distracting in the classroom (Baker et al., 2012; Dansieh, 2011).

Another concern over the incorporation of texting, SMS, and mobile devices in the classroom was how beneficial the technology would be in increasing communication within the classroom environment, as well as what impact the usage had on the student-instructor relationship. While some faculty willingly utilized texting, SMS, and mobile devices with students for classroom purposes, the perception of the communications

between faculty and students in an informal venue sometimes caused confusion in the instructor-student relationship. Students tended to consider communications with instructors utilizing texting as social communications rather than academic dialogue (Aghaee, 2010; Doering et al., 2008; Hrastinski & Aghaee, 2011).

Benefits of SMS in class. Even with these concerns and obstacles, instructors have exploited texting to develop and expand the students' knowledge of the writing process by incorporating various new technologies into the writing and publishing process (Park & Son, 2011; Sweeny, 2010; Yuan, 2011). Compelling research for the integration of texting included benefits for faculty and students. One benefit noted was the widespread permeation of mobile communication technology worldwide. The increasing numbers of individuals utilizing texting, Textese, and SMS worldwide continuously expanded (CDW Government, 2010; Global Digital Communication, 2011; Lenhart, 2010; The Neilson Company, 2010; and the U.S. Census Bureau, 2010), exposing the need of colleges and universities to integrate the technology to better prepare students for the future (Creighton et al., 2013; Guardia et al., 2013; Khalid et al., 2013). Students' utilization of technology in higher education prepared them for the workforce and its demands of multitasking (Grinols & Rajesh, 2014). However, the study by Grinols and Rajesh (2014) identified concerns involved with students receiving or sending texts, tweets, SMS, and using technology for informal communications with individuals outside of the classroom, which caused a decrease in student engagement, learning, and productivity.

Despite widespread research indicating most individuals have access to mobile technology and computers, a small percentage of students have very limited access to or experience with technology; these individuals were identified as "digital strangers"

(Czerniewicz & Brown, 2013). However, most of today's college students were raised in the digital age, where individuals were raised using texting, so inclusion of this technology in an academic environment enhanced the students' learning (DeJonge & Kemp, 2012; Thomas & Orthober, 2011). In addition, research revealed the use of texting encouraged students to participate more in class assignments, allowed input from more reticent students, and aided deeper reflection on the subject matter (Jones et al., 2009; Park & Son, 2011; Thomas & Orthober, 2011).

Another benefit of the use of texting, SMS, and mobile technology within a class was instructors could help students learn when it was appropriate to utilize the technology, and when it was inappropriate. Although most students were raised utilizing texting, teachers needed to educate students on how to gain credible information through research and how to sift through information on the Internet to determine credibility (Clemmitt, 2011; Creighton et al., 2013; Khalid et al., 2013). Lessons incorporated into the classroom would give students hands-on experiences in the proper utilization and understanding of the power of mobile technology, including texting. Grinols and Rajesh (2014) determined that students benefitted by instructors "developing opportunities where smartphones are tools to encourage learning" (p. 89). If instructors facilitated students' learning when it was appropriate to utilize the technology, the students profited. This knowledge of the appropriateness of employing smartphones and mobile technology led to a lesson that benefits the students when they enter the work world. Research into the incorporation of mobile technology and communication in higher education revealed:

> Smartphones are increasingly becoming ever-present, penetrating and transforming everyday social practices and space. Smartphones are no longer

> only a tool for communication, but in many cases have become an instrument of people's social and work life. (Vázquez-Cano, 2014, p. 1506)

By incorporating lessons on the proper application of mobile technology and devices, identification of credible information accessed through the Internet, and appropriate times to utilize mobile devices, instructors would prepare students for the occupational world.

An additional benefit from the incorporation of texting, SMS, and mobile technology was that by the inclusion of texting, students' writing was increased, even if the Textese utilized logograms, pictograms, emoticons, and unusual sentence structures (Crystal, 2008; Rideout et al., 2012). Research by Buchholz et al. (2013) specified the importance of individuals with physical, communicative, and cognitive disabilities learning how to communicate with mobile technology. The usage of mobile devices "may facilitate social contacts, independence and security in relation to the fulfilment of goals in daily life. They can have an impact on the feeling of participation and quality of life" (Buchholz et al., 2013, p. 87-88).

Furthermore, studies revealed positive correlations between the use of texting and individuals' literacy, spelling, and writing ability (Drouin, 2011; Hogan et al., 2012; Rosen et al., 2010). While not all studies identified positive correlations, the increase in writing, usage of spell check or auto correct functions, and ability of students to critically analyze what they wanted to say prior to writing it was viewed as a benefit (Rosen et al., 2010). One behavior research identified was the ability of students to code switch between formal and informal writing, audiences, and situations. Most students comprehended the necessity of varying the usage of Textese and other technological sub-languages dependent on the circumstances (ie. - e-mailing a supervisor or professor

as opposed to e-mailing a friend) (Rosen et al., 2010). Notwithstanding, for most students, the use of texting positively impacted informal writing, and participants indicated a delineation of informal and formal SE writing standards. In addition, a large majority of students utilized texting daily, or at least every other day, predominantly for personal communications, but also occasionally to enhance their academic studies.

Research demonstrated the integration of texting, Textese, and SMS into college composition classrooms would not only boost student participation, but it would build the students' learning experience in a multimodal world. Stakeholders benefited from college graduates who were better trained and experienced in the proper usage of this technology, as well as with individuals who could differentiate between the acceptable types of communication in various situations (Rosen et al., 2011; Smith & Parker, 2012). In addition, instructors needed to delineate the differences between formal and informal writing, as well as the importance of formal written work in SE if the students were to be competitive in academic and work settings (Bronowicki, 2014). The explosion of technological advances over the past decade has shown no hint of slowing down in the future, indicating the necessity of faculty utilizing this technology to: improve reflection and learning, better prepare students for occupations, enable students to utilize the technology properly, and educate students in the appropriate use of such technology.

Chapter 3: Methodology

Introduction

It was not known how texting and Textese influenced students' learning of writing in composition classes. To delve deeper into this topic, the researcher concluded a qualitative case study was the best methodology to gain an in-depth insight into the influence of texting on writing in composition courses in addition to the influence of the sub language, Textese, based on Yin's (2014) determination that this approach was more relevant in gaining a more thorough, comprehensive understanding of the topic. Baxter and Jack (2008) concurred that a qualitative case study permitted researchers to explore phenomena in its context using varying sources of data "to develop theory, evaluate programs, and develop interventions because of its flexibility and rigor" (p. 544).

By binding the case study to the topic of texting in composition classes, the researcher was able to explore the impact of this phenomenon in 2- and 4-year higher education institutions. Identifying the boundaries in which this study occurred, in addition to binding the topic matter as well as the courses impacted by the phenomena, Baxter and Jack (2008) noted it would remain a limited topic able to be covered in this case study. In an effort to triangulate data for the purposes of verification, validity, and reliability, the researcher utilized a variety of information collection methods after AQR and IRB approval, including faculty interviews, member checking, student questionnaires, documents in the form of e-mails from former students, and a comprehensive literature review. Utilization of multiple varying means of data collection through the researcher's use of questionnaires, interviews, audiovisual materials, member checking, and documents added to the validity and reliability of the

study. Carlson (2010) and Doyle (2007) identified the importance of incorporating member checking into the qualitative framework to verify and validate the information's accuracy, in addition to encouraging participant engagement in the process, reducing reflexivity, and bolstering triangulation. Research distinguished that member checking would "give power, voice, and engagement to the participant throughout the research process" (Carlson, 2010, p. 1105).

Furthermore, Yin's (2014) resolution that the Five-Cycle approach combined with the five components of case study research allowed researchers to gain increasingly relevant insight into the phenomenon being studied. The five components delineated in Yin's (2014) research were "1) a study's questions; 2) it's propositions, if any; 3) its unit(s) of analysis; 4) the logic linking the data to the propositions; and 5) the criteria for interpreting the findings" (p. 29). Utilization of this approach allowed the researcher to identify the most relevant criteria for evaluating and understanding the findings of the study. By delving into the topic utilizing the "how" and "why" questions particular to qualitative case study research, as well as including varying collection methods, the researcher was able to explore this contemporary educational phenomenon within the boundaries of its context.

A case study incorporating data and the analysis of that data from documentation, questionnaires, and in-depth individual interviews was conducted. The variety of data sources allowed the researcher to gain a deeper understanding of the phenomenon. The most informational qualitative data were gathered through documentation, questionnaires, and semi-structured, one-on-one interviews to answer the research question:

R1: How do texting and Textese influence student learning of writing in SE in college composition classes?

The qualitative data from these sources allowed the researcher to identify themes within the study's boundaries. Data gathered through the qualitative research provided a more comprehensive exploration into the usage and influence of texting and its sub-language on students' writing in composition classes. It was important to determine the influence of texting and Textese on students' writing as perceived by instructors who have taught with the current technology as well as students who used texting and Textese.

Furthermore, this data needed to be evaluated in terms of how professors who taught prior to the widespread use of technology in freshmen English composition courses perceived the impact of texting on teaching methods, pedagogy, and students' writing. This information was contrasted with the data gathered from professors who taught composition courses to note the perceived impact of texting on teaching methods, pedagogy, and students' writing. For the purposes of validation and accuracy, the qualitative research included member checking with those individuals prior to the writing of Chapter 4. In addition, after AQR and IRB approval the researcher conducted a pilot study of the student questionnaires to insure validity. By selecting the use of multiple consecutive semesters of e-mails from students formerly enrolled in Composition I classes, the researcher avoided bias. The researcher's rationale for choosing a qualitative case study approach was it would give a much deeper insight into how texting was directly and indirectly influencing students' writing by utilizing the Technology Acceptance Model (TAM) as well as themes brought to light through data analysis from the questionnaires, documentation in the form of students' e-mails, the one-on-one semi-structured interviews, and the member checking.

Statement of the Problem

It was not known how texting and Textese influenced students' writing in composition classes. While teachers and scholars have noted short term consequences from the usage of texting in teaching writing, additional consequences were identified regarding the impact of this SMS on SE and student engagement (Campbell, 2011). Turner (2009) delineated that a majority of students utilized a form of code switching between Textese and SE, depending on the medium used and the person(s) addressed. Aziz et al. (2013) concurred that students often switched between formal and informal writing, but added that texting and SMS was changing how people of all ages wrote citing Baron (2008), "as soon as children can distinguish between formal and informal language, SMS language does not affect their literacy" (Aziz et al., 2013, p. 12885). By utilizing the student questionnaires that included commonsense questions concerning the topic and that were validated in previously published articles (Baker et al., 2011; Lenhart, 2010; Plester et al., 2008; Purcell et al., 2013; Purcell et al., 2012), the researcher was able to explore how students perceived the impact of texting and Textese on their writing in Standard English.

While this questionnaire included Likert-style questions for gathering frequency data that the researcher utilized to identify the occurrence of usage of texting and Textese, the student questionnaire also featured qualitative questions that were thematically analyzed. Incorporating texting into English writing pedagogy made sense as the technology permeated individuals' daily lives. Research revealed that while students freely communicated using texting both in and out of the classroom, the use of it by instructors with students created stronger student engagement and interaction (Sweeny, 2010; Williams, 2011-2012).

One challenge facing students and instructors alike was the social acceptance of texting and Textese in informal writing. Aziz et al. (2013) noted the blurring of lines between formal and informal writing, which is also known as 'code switching'. Switching between informal writing and formal writing should occur dependent on the purpose of the writing as well as the intended audience. However, Aziz et al. (2013) stated,

> Students sometimes confuse the lines between formal English and the very informal SMS language. This is thought to be causing them to make a lot of spelling and grammatical errors in their assignments and tests, and makes it hard for teachers to distinguish what they are trying to say….Learners have a tendency to use it as an officially accepted and standard language and thus make different errors from incorrect spelling to even ungrammatical sentence constructions. (Aziz et al., 2013, p. 12885)

Additionally, Stine (2010) determined students in a basic writing course were more engaged in learning in a hybrid classroom that mixed face-to-face and online learning experiences. As texting and its use evolved, teachers needed to reconsider how and why students utilized it, as well as how and why it should be incorporated into curriculum and instructions to prepare students for a technologically based society. Moreover, the incorporation of texting may allow for teachers to be able to better communicate with students who believe being technologically connected to the Internet and others was a necessity (Bousquet et al., 2009; Bromley, 2010; Sweeny, 2010).

Research Question

The qualitative case study research was guided by the following research question:

R1: How do texting and Textese influence student learning of writing in SE in college composition classes?

Yin (2014) delineated that "'how' and 'why' questions are more *explanatory* and likely to lead to the use of case studies….Because such questions deal with operational links needing to be traced over time, rather than mere frequencies or incidence" (p. 10). Incorporating the "how" and "why" questions into the semi-structured faculty interviews and student questionnaires encouraged participants to explain their experiences with the phenomenon in their own words (Baxter & Jack, 2008).

By gathering data through multiple means – documentation, questionnaires completed by college students, individual semi-structured faculty interviews, member checking, and an extensive literature review – the researcher was able to gain a deeper understanding of the phenomenon. The individual semi-structured faculty interviews combined with the inclusion of open-ended qualitative research questions allowed the researcher to delve more deeply into these instructors' viewpoints and experiences concerning texting and Textese in writing in the composition classes. Additionally, member checking not only allowed the researcher to verify, clarify, and validate the information gained from the individual interviews, but also gave participants additional chances to add or clarify information that was obtained during the individual interviews. Documentation in the form of analysis of e-mails from former students of the researcher identified the frequency of the students' use of Textese and shortened text writing in written correspondence. The information gained from students' completion of a questionnaire not only identified how, when, and why students texted and used Textese (frequency data), but how they perceived its use was impacting their learning and writing through 28-Likert style questions and three qualitative questions in the student

questionnaire. The student questionnaire also allowed the researcher insight into when and why students believed individuals should text in relation to class.

Research Methodology

The researcher determined a qualitative case study was the best methodology, based on Yin's (2014) determination that this approach was more relevant in gaining an in-depth understanding of the phenomena. While numerous quantitative and mixed-methods studies were completed on the use of technology in the classroom, by students, and by instructors, the researcher believed that the in-depth personal observations and experiences of faculty and students would generate more specific knowledge on the influence of texting and Textese on students' writing in composition classes. Data for this qualitative case study were collected through various methods. By incorporating interviews, documents, member checking, and questionnaires, the researcher was able to build stronger construct validity, internal validity, and triangulate the data. Yin (2014) resolved that case study research was superior for exploring current events, since the case study itself was dependent upon "many of the same techniques as a history, but it adds the sources of evidence not usually included in the historian's repertoire: direct observation of the events being studied in interviews of the persons involved in the events" (p. 11).

To meet the requirements for strong construct validity, this study included interviews, member checking, documentation, and questionnaires that explored the topic and identified answers to the research question. Utilization of common sense questions previously noted in other published studies combined with the pilot study aided in preventing bias in the student questionnaires. Yin (2014) noted, "by developing convergent evidence, data triangulation helps to strengthen the construct validity of [the]

case study" (p. 121). In fact, Yin (2014) further specified that by not using multiple sources of data the qualitative case study would be incomplete and could possibly alter the case study framework. Additionally, the four design tests for case study research identified by Yin (2014) – construct validity, internal validity, external validity, and reliability – guided the researcher in this study.

Research Design

The research design utilized was the qualitative case study, which gave a more insightful examination of the phenomenon being explored. This design allowed the researcher to delve deeper into the following phenomenon: the influence of texting and Textese on students' writing in SE in composition courses, and English instructors' and students' use of and attitudes towards texting on writing composition classes as identified in Appendix A. By utilizing a case study approach, the method allowed the researcher to answer the "how" question raised in Appendix A, in addition to focusing on a contemporary issue whose significance demanded a study that filled current gaps in literature and knowledge. Utilizing the case study approach allowed the researcher to gather qualitative data from the semi-structured one-on-one faculty interviews, member checking, student questionnaires, and documents in the form of former students' e-mails. The case study not only explored a current topic, but this approach included interviews of the participants and the researcher's direct observations of the topic being studied (Yin, 2014).

After AQR and IRB approval, comprehensive one-on-one interviews were held with 10 volunteer participants who had previously attended the 49th and 50th Allerton English Initiative Conferences in Monticello, IL; all participants were English instructors at 2- and 4-year higher education institutions in Illinois (see Appendix E).

The researcher selected these 10 English instructors after AQR and IRB approval due to their current teaching of composition courses at a variety of institutions of higher education, including community colleges, 2-year colleges, 4-year private colleges and universities, and 4-year public colleges and universities. This selection enabled the researcher to explore the actual use of texting in composition classes as well as the perceptions and attitudes of faculty and students over a broader demographic range in the state of Illinois. These interviews combined with member checking aided in triangulating data and validating its accuracy to ensure construct validity as well as internal validity (Yin 2014). The necessity of construct validity, external validity, internal validity, and reliability were noted in Yin (2014), which delineated the importance of "(a) using multiple, not just single, sources of evidence; (b) creating a case study database; (c) maintaining a chain of evidence; and (d) exercising care in using data from electronic sources of evidence, such as social media and communications" (p. 105). Furthermore, the faculty interviews combined with the documentation based on e-mails from previous students and questionnaires that were completed by a group of 25 college students were the main qualitative focus of the research to identify how much texting and Textese were incorporated into the students' writing, instructors' attitudes towards the use of texting and Textese, students' attitudes towards the use of texting and Textese, as well as how often texting and Textese were used by the instructor and the students. Triangulation and analysis of the data gathered through faculty interviews, member checking, student questionnaires, and the e-mails aided research and built validity and reliability into the research. The study provided a more comprehensive look at the usage and impact of texting and Textese on writing in SE in composition classes.

During the data collection and analysis phases of the study, the researcher built internal validity through coding, pattern matching, theme building, and description building techniques in addition to the member checking and a pilot study. Yin (2014) noted that pattern matching strengthened a case study's internal validity "if the empirical and predicted patterns appear to be similar" (p. 143). The researcher not only examined frequency data from the former students' e-mails, but also utilized coding with the MAXQDA+ software. Saldaña (2013) identified that in a qualitative research to reveal themes within the data. Since strategic coding of the data yielded themes found within the sources, the researcher utilized the coding to build internal and external validity within the study:

> Like coding, thematic analysis where the search for themes in the data is a strategic choice as part of the research design that includes the primary questions, goals, conceptual framework, and literature review ….These should be dated as simple examples of something during the first cycle of analysis, then woven together during later cycles to detect processes, tensions, explanations, causes, consequences, and/or conclusions (Rubin & Rubin, 2012, p. 206). (Saldaña, 2013, p. 177)

Furthermore, the researcher utilized descriptive coding on the faculty interview transcripts as well as the three qualitative questions in the students' questionnaires for the purposes of reliability and internal validity. Saldaña (2013) defined descriptive coding as when the researcher "summarizes in a word or short phrase – most often a noun – the basic topic of a passage of qualitative data" (p. 88). External validity was used to focus the theory for the single-case study. Reliability was built based on the case study procedures, member checking, pilot study, and through the researcher's

development of a case study database during data collection. It was important to determine the influence of texting, Textese, and SMS on students' writing as perceived by instructors who have taught prior to and after the widespread use of texting in composition courses to delineate its effect. The qualitative research included member checking with those faculty individuals who participated in the interviews prior to the writing of Chapter 4. By transcribing the interviews and engaging the participants in validation and feedback through member checking, the researcher gained a more accurate set of results. The rationale for choosing a qualitative case study approach was that it gave a deeper insight into how texting directly and indirectly influenced students' writing in composition classes.

Population and Sample Selection

The research design utilized was the qualitative case study, which gave a more insightful examination of the phenomenon being explored. This design allowed the researcher to delve deeper into the following phenomenon: the influence of texting and Textese on students' writing in SE in composition courses, and English instructors' and students' use of and attitudes towards texting on writing composition classes as identified in Appendix A. By utilizing a case study approach, the method allowed the researcher to answer the "how" question raised in Appendix A, in addition to focusing on a contemporary issue whose significance demanded a study that filled current gaps in literature and knowledge. Utilizing the case study approach allowed the researcher to gather qualitative data after AQR and IRB approval from the semi-structured one-on-one faculty interviews, member checking, student questionnaires, and documents in the form of former students' e-mails. The case study not only explored a current topic, but

this approach included interviews of the participants and the researcher's direct observations of the topic being studied (Yin, 2014).

Comprehensive one-on-one interviews were held with approximately 10 volunteer participants who previously attended the 49th and 50th Allerton English Initiative Conferences in Monticello, IL; all participants were English instructors at 2- and 4-year higher education institutions in Illinois (see Appendix E) and were not contacted prior to AQR and IRB approval. The researcher selected these 10 English instructors due to their current teaching of composition courses at a variety of institutions of higher education, including community colleges, 2-year colleges, 4-year private colleges and universities, and 4-year public colleges and universities. This selection enabled the researcher to explore the actual use of texting in composition classes as well as the perceptions and attitudes of faculty and students over a broader demographic range in the state of Illinois. These interviews combined with member checking aided in triangulating data and validating its accuracy. Furthermore, the faculty interviews combined with the documentation that was based on e-mails from previous students and questionnaires that were completed by a group of 25 college students were the main qualitative focus of the research to identify how much texting and Textese were incorporated into the students' writing, instructors' attitudes towards the use of texting and Textese, students' attitudes towards the use of texting and Textese, as well as how often texting and Textese were used by the instructor and the students. The study provided a more comprehensive look at the usage and influence of texting and Textese on writing in SE in composition classes.

After approval from the AQR and IRB and during the data collection and analysis phases of the study, the researcher built internal validity through coding, pattern

matching, theme building, and explanation building techniques in addition to the member checking and pilot study. External validity was used to focus the theory for the single-case study. Reliability was built based on the case study procedures, member checking, pilot study, and through the researcher's development of a case study database during data collection. It was important to determine the influence of texting, Textese, and SMS on students' writing as perceived by instructors who have taught prior to and after the widespread use of texting in composition courses to delineate its effect. The qualitative research included member checking with those faculty individuals who participated in the interviews prior to the writing of Chapter 4. By transcribing the interviews and engaging the participants in validation and feedback through member checking, the researcher gained a more accurate set of results. The rationale for choosing a qualitative case study approach was that it gave a deeper insight into how texting directly and indirectly influenced students' writing in composition classes.

Sources of Data

Data for this qualitative case study were collected after approval of the AQR and the IRB through one-on-one semi-structured faculty interviews, member checking for validity and accuracy, documentation based on e-mails from previous students, and questionnaires that were completed by a group of college students. The researcher took numerous steps to protect all participants and to meet the standards of the IRB and AQR, and no contact was made with participants or data collected prior to approval by the AQR and IRB. Yin (2014) identified the need to gain evidence from varying types of sources, especially in case studies, because "a major strength of case study data collection is the opportunity to use many different sources of evidence" (p. 119).

Interview. Semi-structured, one-on-one interviews were conducted with approximately 10 volunteer English faculty members who previously attended the 49th and 50th Illinois Allerton English Initiative Conferences (see Appendices E and F). After AQR and IRB approval, these English faculty members were selected due to their experience teaching English composition classes at 2- and 4-year colleges and universities, which gave a diverse population. Some of these instructors taught at large, urban institutions, while others taught at very rural community colleges. The demographic differences aided the researcher in determining if the influence of texting on writing in composition classes varied due to geographic location or type of institution. These semi-structured interviews included four main qualitative questions: 1) how have you utilized your smartphone or cell phone to communicate with students? In what ways? 2) Have you noticed any use of texting or Textese (including emoticons, logograms, shortened sentence structure, etc.) in your students' written communications to you or their essays? Can you give any examples; 3) Does texting have a positive impact, negative impact, or no impact at all on students' writing and their ability to write in Standard English in your opinion? Can you give any examples or explain why you believe this; and 4) Do you have any other observations you would like to make concerning texting and/or Textese?

Prior to the writing of Chapter 4, member checking of the interview transcripts was held to validate the information gained from them. The individual interviews were audiotaped upon the participants' agreement to ensure validity and reliability. The researcher then transcribed the interviews and e-mailed them to the interviewees for member checking. Upon approval by the interviewees, the researcher then evaluated the data gathered in the interviews and follow-up information gained through member

checking to answer the research question "How do texting and Textese influence student learning of writing in SE in college composition classes?"

Documentation. Documentation in the form of e-mails to the researcher from students enrolled in Composition I classes between 2007 through 2014, was explored after approval of the AQR and IRB to note frequency data of the influence of texting and Textese on students' correspondence with instructors. The researcher kept and maintained students' e-mails in her role as an instructor, but the three consecutive semesters of e-mails (fall 2012, spring 2013, fall 2013) were selected due to the fact that the school changed its learning management platform making earlier semesters' e-mails unavailable. All identifying information was removed from the e-mails, and there were be no negative impacts or consequences for the authors of the e-mails. The researcher obtained permission to utilize these e-mails from the college's Dean (see Appendix C). To avoid bias, the researcher randomly selected Composition I classes from three consecutive semesters starting with the fall of 2012, and explored the use of texting and Textese in the students' writing.

Upon approval from the AQR and IRB, the researcher removed all identifying information from the e-mails prior to cutting-and-pasting them into a Word document with an identification number (coding), and all precautions were taken to protect the students' anonymity. It was determined to utilize three consecutive semesters of e-mails to avoid any bias on the part of the researcher. Yin (2014) noted, "the most important use of documents is to corroborate and augment evidence from other sources….Because of their overall value, documents plan explicit role in any data collection and doing case study research" (p. 107).

The researcher evaluated these documents in an effort to determine 1) how often Textese was utilized, 2) how often emoticons were utilized, 3) how often logograms were utilized, 4) how often informal language was used towards the instructor, 5) how often incorrect language connected to texting and Textese was utilized, and 6) how often the shortened sentences characteristic of texting were utilized (see Appendix G). The researcher utilized a chart adapted from the studies of Aziz et al. (2013) and Rosen et al. (2010) to create the e-mail evaluation chart utilized in this study. As the researcher started evaluating the e-mails utilizing this chart, it was realized that additional information needed to be gathered, including the number of sentences written, occurrence of verb tense errors, the occurrence of spelling errors, and the occurrence of run-on sentences. This information was then tallied by hand and then graphed in Excel to determine how much texting and Textese permeated this written form of communication in composition classes. By utilizing documentation, the researcher was able to evaluate the research question: "How do texting and Textese influence student learning of writing in SE in college composition classes?" with written communications from former Composition I students.

Questionnaires. To gain further insight into the impact of texting and Textese, the researcher created a student questionnaire to be given to volunteer students enrolled in other faculty member's composition classes after AQR and IRB approval. The questionnaire included questions focused on demographics, students' perceptions of texting and Textese, and students' use of texting and Textese (see Appendix D). The questionnaire's questions were designed to generate frequency data concerning students' use of texting and Textese, as well as including three qualitative questions to gain more in-depth insight into students' perceptions of texting and Textese in relation to writing.

To insure that students did not feel pressured into volunteering for the questionnaire, the researcher gained approval from English instructors to ask volunteer students in their classes rather than in the researcher's classes; students signed and received a copy of a signed Informed Consent Form. The researcher also received written permission from the students' Dean of the College (see Appendix C) to conduct the study.

To ensure validity, the researcher conducted a pilot study of the questionnaire with 20 volunteer students enrolled in her composition class. The students were then given the opportunity to evaluate the questionnaire for clarity and specificity in relation to the questionnaires' main focus. Yin (2014) specified, "Observations of the technology or curriculum at work are invaluable aids for understanding the actual uses of the technology or curriculum and any problems being encountered" (p. 114). The questions incorporated into this questionnaire were validated as commonsense questions concerning to topic often found in previously published studies (Baker et al., 2011; Lenhart, 2010; Plester et al., 2008; Purcell et al., 2013; Purcell et al., 2012).

Validity

Verification of the data and determination of internal validity required triangulation by collecting information through the documents, questionnaires (see Appendix D), one-on-one interviews (see Appendix E), and member checking. Students' e-mails were analyzed for frequency data based on specific categories of the use of texting and Textese for documentation data (see Appendix G). The researcher conducted a pilot study of the student questionnaires with 21 students enrolled in composition classes who would not be participating in the research to insure validity. The students' questionnaires were hand tallied for the first 28 questions, and the last three qualitative questions were coded; the data were then analyzed for usage and perceptions of texting

and Textese. Additionally, the questionnaires were used to generate frequency data as well as qualitative thematic data. In reference to the faculty interviews, the researcher verified all notes and transcripts from the interviews by comparing them to the audiovisual recording of each interview; and the researcher utilized member checking with participants to confirm the accuracy of the participants' meanings and comments to substantiate the accurateness of the data.

The choices of having three different data sources allowed the researcher to determine the accuracy of the data and its analysis. This insured the construct validity applied to the case study. By linking together multiple cause-effect relationships through analysis of the data collected through the documents, student questionnaires, and faculty interviews and denoting the "absence of spurious relationships and the rejection of rival hypotheses" (Yin, 2014, p. 239) to assure the internal validity of the research, the researcher was able to identify the influence of texting and Textese on students' writing. Yin (2014) defined external validity as "the extent to which the findings from a case study can be analytically generalized to other situations that were not part of the original study" (p. 238). The researcher anticipated that while this case study was not be completely generalizable due to its limitations, it was believed that the themes identified in the research and the results will aid instructors in better understanding the influence of texting and Textese on students' writing in composition classes.

Reliability

The reliability of this study was insured by the multifaceted approach to data collection, specifically the use of faculty interviews, documents, and student questionnaires; the utilization of an accepted data collection tool, specifically MAXQDA+, to analyze the data to identify themes and patterns; meticulous

documentation and record keeping by the researcher; utilization of a pilot study to validate the student questionnaire questions; exploring and analyzing students' observations through their questionnaire answers; and the videotaping/audiotaping of faculty interviews combined with member checking that allowed the researcher to validate notes taken during the interviews. In addition, the researcher's verification of information that was gathered during interviews was verified through member checking prior to the writing of Chapter 4, which ensured reliability and accuracy. For further validation, no contact was made with any of the participants and no data was collected prior to the approval of the AQR and IRB.

Yin (2014) specified the importance of researchers' taking steps to avoid bias in the study. Tying bias avoidance in with ethical research, Yin (2014) noted case study researchers must "strive for the highest ethical standards while doing research" (p. 76), adding that further steps to insure "professional competence" included "keeping up with related research, ensuring accuracy, striving for credibility, and understanding and divulging the needed methodological qualifiers and limitations to one's work" (p. 77). In an effort to prevent bias, the researcher utilized a pilot study to validate the questionnaire questions, as well as selected random classes of students' enrolled in Composition I during different semesters for e-mail analysis. The researcher self-monitored her own bias throughout every stage of the research. Furthermore, the implementation of Yin's (2014) Five-Cycle approach aided the researcher in maintaining validity and reliability throughout the study. In addition by establishing boundaries as noted in Baxter and Jack (2008), the researcher focused on exploring the topic as well as identifying information relevant to answering the research question.

Data Collection Procedures

Baxter and Jack (2008) noted the importance of having propositions to guide the case study, such as propositions that arise from "the literature, personal/professional experience, theories, and/or generalizations based on empirical data" (p. 551). These propositions structure the data collection and discussion in their ability to "focus the data collection, determine direction and scope of the study and together the report positions form the foundation for conceptual structure/framework" (p. 52). This research delineated the importance of the conceptual framework, as did Yin (2014). According to research,

> The conceptual framework serves several purposes: (a) identifying who will and will not be included in the study; (b) describing what relationships may be present based on logic, theory and/or experience; and (c) providing the researcher with the opportunity to gather general constructs into the intellectual 'bins'. (Baxter & Jack, 2009, p. 553)

The researcher gathered data for this qualitative case study after approval by the AQR and IRB through three methods: in-depth faculty interviews and member checking of transcripts, documentation of former students' e-mails, and student questionnaires. The semi-structured, one-on-one interviews with 10 English instructors and then member checking of the interview transcripts substantiated the veracity of the data. These instructors volunteered to be contacted concerning English issues and research for all participants when the faculty previously attended the 49th and 50th Illinois Allerton English Initiative Conferences, and after approval by the AQR and IRB the researcher utilized these volunteer lists to identify instructors to interview (see Appendix F). The interviews gathered qualitative information identifying how much texting and Textese

were incorporated into students' writing in composition classes, demographic information, as well as the regularity of instructors' use of texting with students. Demographic information was collected through a short survey the researcher asked the participants to complete immediately prior to the interview. The researcher then coded the answers to retain participant anonymity. The semi-structured, individualized interviews were held at a mutually agreed upon time and place, and when possible participants agreed to be interviewed. Member checking of the transcripts of those interviews occurred prior to the writing of Chapter 4 to check for validity.

Verification of the data and determination of internal validity required triangulation by collecting information after AQR and IRB approval through 25 students' questionnaires, document analysis of former students' e-mails, member checking, and 10 one-on-one faculty interviews. The researcher verified all notes and transcripts by comparing them to the audiovisual of each interview; and the researcher utilized member checking with faculty participants to verify the accuracy of the contributors' meanings and comments to authenticate the accuracy of the data. The rationale for choosing a qualitative case study approach was it would give a much deeper insight into how texting was directly and indirectly influencing students' writing in composition classes. The researcher took all necessary steps to meet all AQR and IRB ethical requirements and kept the data collected protected from anyone else by storing it locked in a fireproof safe, as well as keeping data on an external hard drive that was locked in the safe as well. Detailed contact information for the faculty participants was shredded after faculty determined if they would participate to protect their anonymity.

Documentation in the form of e-mails to the researcher (in her role as an instructor) from students enrolled in Composition I classes between 2007 and 2014, was

analyzed after AQR and IRB approval for the influence of texting and Textese on the students' written communication in composition classes; due to the change in the learning management system utilized by the researcher's college, it was decided to utilize e-mails from the fall 2012 semester, the spring 2013 semester, in the fall 2013 semester. To protect the students' rights and identities, all identifying information was removed from the e-mails, the e-mails' content was cut-and-pasted into a Word document, and there was no negative impact or consequences for the authors of the e-mails. The researcher gathered these e-mails from the communications that were regularly kept by the researcher in her role as an instructor. To avoid bias, the researcher randomly selected three classes from different semesters. These documents were be analyzed in an effort to determine 1) how often Textese was utilized, 2) how often emoticons were utilized, 3) how often logograms were utilized, 4) how often informal language was used towards the instructor, 5) how often incorrect language connected to texting and Textese was utilized, and 6) how often the shortened sentences characteristic of texting were utilized (see Appendix G). This information was then graphed to determine how much texting and Textese have permeated this written form of communication in composition classes. By utilizing documentation, the researcher was able to evaluate of "How do texting and Textese influence student learning of writing in SE in college composition classes?"

Students' use of texting and perceptions of its influence on their writing was explored through 25 questionnaires completed by volunteer students after approval by the AQR and IRB. These students were enrolled in composition classes taught by another instructor at a small, rural, Midwestern community college. The questionnaires covered students' perceptions on and usage of texting and Textese, as well as

demographic and frequency information (see Appendix D). The qualitative questions included as part of the questionnaire were transcribed into a Word document, coded using the codebook, and analyzed for pattern matching, descriptive matching, and themes. The first 28 Likert-style questions in the questionnaires were used to generate the frequency data that explored the usage of Textese and textisms in students' writing; this data were hand tallied. Students' viewpoints on the use of texting in class and its impact on their writing, its benefits as well as its negatives, gave further insight into how texting and Textese influenced their writing.

Data Analysis Procedures

The Five-Phase Cycle (Yin, 2014) for data analysis was used, including: compiling, disassembling, reassembling (and arraying), interpreting, and concluding. Compiling referred to the organization of the data and research notes in this study. Disassembling referred to further delineating and identifying the information gathered through the documentation, student questionnaires, and faculty interviews. Reassembling referred to taking the now disassembled information and data, and then creating new organizational and thematic patterns for this study from the faculty interviews, student questionnaires, and student e-mails. Baxter and Jack (2008) noted, "Yin suggests that returning to the propositions that initially formed the conceptual framework ensures that the analysis is reasonable and scope and that it also provides structure for the final report" (p. 553).

Yin's (2011) stage of interpreting occurred as the researcher reviewed and synthesized information and data in this study from a new perspective. Concluding referenced when the researcher drew conclusions from the collected data and information in this study (Yin, 2011). Data from the faculty interviews and qualitative

questions on the student questionnaires were coded thematically. Participants were coded to eliminate identifying information. The researcher utilized MAXQDA+ software to aid in analysis of the interviews and questionnaires after creating a qualitative codebook. Research determined,

> In case study, data from these multiple sources are then converged in the analysis process rather than handled individually. Each data source is one piece of the 'puzzle,' with each piece contributing to the researcher's understanding of the whole phenomena. This convergence adds strength to the findings as the various strands of data are braided together to promote a greater understanding of the case. (Baxter & Jack, 2008, p. 554)

Yin (2014) determined, "the *analytic generalization* may be based on either (a) corroborating, modifying, rejecting, or otherwise advancing theoretical concepts that you referenced in designing your case study or (b) new concepts that arose upon the completion of your case study" (p. 41). Analysis included pattern matching and themes for the interviews, questionnaires, and e-mail analysis, but frequency data analysis of the e-mails and questionnaires also included the occurrence of usage of texting and Textese. Once the analysis was completed, the researcher utilized Yin's (2011) steps of interpreting and concluding to analyze the data and determine themes. Yin's (2014) five techniques used in analysis included: "pattern matching, linking data to propositions, explanation building, time-series analysis, logic models, and cross-case synthesis" (Baxter & Jack, 2008, p. 554). To ensure that the researcher focused on the overall case, not just segments or portions of the case, the researcher adhered to Yin's (2014) steps. Analysis of the data collected through the documentation, questionnaires, interviews, member checking, and literature review needed to remain focused on the purpose of the

study as well as answering the research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?"

Ethical Considerations

Ethical considerations surrounding the research in this study included the privacy and protection of the human subjects, and the protection of their rights, needs, desires, values, and data as required by the appointed Grand Canyon University Institutional Review Board (IRB). The IRB approval letter for study #622510-1 was included in the dissertation's appendices (see Appendix L). No participants were contacted and no data was collected prior to AQR and IRB approval. The researcher employed safeguards to ensure the rights of the participants were protected, including: notifying the participants in written and verbal communications of what would occur and the framework for data usage; notifying participants of any and all data collection methods utilized by the researcher, including but not limited to electronic devices and the researcher's actions as found in the IRB's research exemption form; the researcher obtained written permission from the IRB as well as from anyone else necessary. In addition, the researcher made available to the participants transcriptions of interviews as well as the researcher's interpretations; the researcher abided by the participant's requests, welfare, requests for anonymity, and rights when decisions were made concerning the data and its usage; the researcher gave all participants signed copies of the Informed Consent Forms.

The researcher obtained written approval from the 49th and 50th Allerton English Articulation Initiative's chairperson Dr. Michael Day to utilize the volunteer contact lists from those meetings (see Appendix F). The researcher also gained permission from the Dean of the College (see Appendix C) where students completed the questionnaires and where the e-mails were analyzed. Moreover, the researcher gained signed Informed

Consent Forms from all participants involved in the research. These approvals have been retained in a secure location, specifically the fire-proof safe in which other records for this study were stored. To protect the identity of students, the researcher not only utilized the Informed Consent Forms, but had the students complete the questionnaires anonymously. To protect students from any perceived threats or coercion, the researcher had students from other instructors' classes complete the questionnaires; no students currently in the researcher's classes were included. Furthermore, the students' e-mails were coded with all identifying information removed to protect their identities.

All personal identifying information and details about the individuals in the research was coded and kept under lock and key; it was not be revealed in the drafts of the dissertation or its final copy. The writing of the dissertation and all notes kept electronically were located on the researcher's private external hard drive and on a separate CD ROM kept in a fire-proof safe; the author was the only one with access to the safe location. After the research was completed, all information was secured in a fire-proof safe only accessible to the researcher. At the end of seven years, this research will all be shredded or erased, leaving no discernible files of the original interviews. To avoid plagiarism, the researcher enforced utmost effort to properly cite all information gathered from the sources in the American Psychological Association 6th edition style and gained written permission when necessary. Every effort was made by the researcher to ensure the privacy and rights of the participants and all other persons involved with this study.

Limitations

The limitations to the methodology of this research included the dependence upon on volunteers to participate in the one-on-one faculty interviews, and the

researcher's lack of experience in coding the data collected, or of using MAXQDA+ software. Other limitations included:

1. The fact that this study was limited to the state of Illinois, which meant that the results may not parallel the influence of this technology on college students and instructors in other states;
2. The fact that this study was limited to 2-year and 4-year colleges and universities;
3. The fact that the participants for the interviews were selected from faculty who previously attended the 49th and 50th Allerton English initiative conferences, which was an English conference in the state of Illinois, but it may not have included all types of higher educational institutions;
4. The fact that the students answering the questionnaires were limited to attendees of a small rural community college.
5. Limitations on the researcher's ability to have scheduled the interviews within the existing time frame of the doctoral program at Grand Canyon University as well as within the schedules of the participants;
6. The possibility of bias on the part of the researcher, or response bias of the interviewee;
7. Possible bias due to poorly worded questions; possible reflexivity where the interviewee gave the researcher the answer he or she wanted to hear (Yin, 2014). The researcher conducted a pilot study to avoid such bias, as well as randomly selected classes of students' e-mails to explore.

In an effort to overcome the aforementioned limitations, the researcher diligently tried to craft the research question, interview questions, and questionnaire's questions to remove

bias and reflexivity (see Appendices D and E). Member checking was utilized to further engage participants in the interviews, as well as validate data. Additionally, the researcher attempted to include faculty from diverse demographics, including considerations of gender, age, ethnicity, geographic location, and by the type of college or university.

Summary

The research design and methodology, data collection and analysis, and protection of the participants for this study were paramount to its success in identifying how texting and Textese influence student learning of writing in SE in college composition classes. Implementing Yin's (2009) Five-Phase Cycle, which was an approved and proven approach to qualitative case study research, strengthened this exploration. Strict adherence to the rules for research by the AQR and the IRB were followed. By utilizing a variety of methods to gather the data and taking efforts to ensure its validity, accuracy, and reliability, the researcher attempted to avoid bias or corrupted data for final evaluation. In addition, the incorporation of coding software, such as MAXQDA+, enabled the researcher to avoid bias while protecting the anonymity of the participants. A codebook was created to identify major themes and sub-themes found within the interview transcripts. Furthermore, member checking for the faculty interviews and a pilot study with students with the students' questionnaires aided in the study's validity, as did the use of documents. Maintaining strong ethical considerations and protections for the participants, such as guaranteeing anonymity and safeguarding all data within a fire-proof safe only accessible to the researcher, met IRB requirements.

By implementing and conscientiously following these ethical procedures, the utmost effort was made throughout the research to protect the participants of this study.

All participants in the interview and student questionnaire data gathering activities were given signed copies of the Informed Consent Letter (see Appendix M). The validity of the study's framework and case study approach aided in the data analysis and identifying the results.

Chapter 4: Data Analysis and Results

Introduction

The qualitative case study approach used in this research was based on Yin's (2011) Five-Phase Cycle of data analysis, including: compiling, disassembling, reassembling (and arraying), interpreting, and concluding. The steps of disassembling and reassembling were utilized through the data analysis stage and determining results. This was guided by the problem statement: "It is not known how texting and Textese influence writing in composition courses" to answer the research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?". This chapter focused on the steps that were taken to analyze the gathered data and the results of that analysis.

Gathering of data for analysis and analyzing results were carefully conducted in this research and strictly followed the approval and guidelines of the AQR and IRB. Data were gathered in multiple ways, including faculty interviews, member checking of the interview transcripts, member checking, student questionnaires, and former students' e-mails. The collection of varying types of data aided in triangulating data, validating its accuracy, and building internal and construct validity. Data analysis allowed the researcher to identify how much texting and Textese were incorporated into the students' writing, instructors' attitudes towards the use of texting and Textese, students' attitudes towards the use of texting and Textese, how texting and Textese were influencing students' writing in composition classes, as well as how often texting and Textese were used by the instructor and the students. The study provided a more comprehensive look at the usage and influence of texting and Textese on writing in SE in composition classes.

During the data analysis phase of the study, the researcher built internal validity through Descriptive and Pattern coding, pattern matching, theme building, and explanation building techniques in addition to the member checking and pilot study. External validity was used to focus the theory for the single-case study. Reliability was built based on the case study procedures, member checking, pilot study, and through the researcher's development of a case study database during data collection. Yin (2014) delineated the importance of thorough analysis by incorporating four principles:

> First, your analysis should show that you attended to all the evidence….analysis should show how it sought to use as much evidence as was available, and your interpretation should account for all this evidence and leave no loose ends; second, your analysis should address, if possible, all plausible rival interpretations; third, your analysis should address the most significant aspect of your case study; fourth, you should use your own prior, expert knowledge in your case study…. demonstrate awareness of current thinking and discourse about the case study topic. (p. 168).

It was important to determine the influence of texting and Textese, on students' writing as perceived by instructors who have taught prior to and after the widespread use of texting in composition courses to delineate its effect. The qualitative research included member checking with those faculty individuals who participated in the interviews prior to the writing of Chapter 4. By transcribing the interviews and engaging the participants in validation and feedback through member checking, the researcher gained a more accurate set of results.

To remove bias, the building of a codebook for thematic, descriptive, and pattern matching analysis was utilized. This assisted with coding the faculty interviews and the

qualitative questions in the student questionnaires (see Appendix K; the entire codebook is available upon request). The faculty interviews section of the codebook included 11 major thematic categories and 79 sub-themes that revealed insight into the influence of texting and Textese on students' writing in SE in composition classes, as well as their perceptions of the influence of texting and Textese. The uploading of the member-checked faculty interview transcripts to MAXQDA+ allowed the utilization of the codebook to analyze the data for themes, descriptive words, and pattern matching. The transcripts of the qualitative questions from the student questionnaires were also uploaded to MAXQDA+ for coding utilizing the codebook as well as analysis.

The codebook section for the qualitative questions in the student questionnaires included seven major thematic categories and 18 sub-themes that revealed insight into the influence of texting and Textese on students writing in SE in composition classes, as well as their perceptions of the influence of texting and Textese. The 28-Likert style questions in the student questionnaire were hand tallied and analyzed for patterns (see Appendix N). The e-mails from former students were also hand tallied using the E-mail Evaluation Form (see Appendices G and I) that was adapted from Aziz et al. (2013) and Rosen et al. (2010).

Data from this study indicated differences among faculty in their perceptions of the use of texting/Textese in assignments, as well as its influence on students' writing. Students who participated in the student questionnaire also showed varying beliefs about the influence of texting on their writing, with most students indicating that it had no influence due to their utilization of code switching. The frequency data from the former students' e-mails identified patterns of the influence of texting and Textese on students' writing; however, the fear of some faculty that Textese with its emoticons, logograms,

shortened words, and other characteristics would destroy the students' ability to write was not supported by the frequency data. Some adverse influences from texting were identified in that data.

Descriptive Data

The research design utilized in this research was the qualitative case study, which gave a more insightful examination of the phenomenon being explored. This design allowed the researcher to delve deeper into the following phenomenon: the influence of texting and Textese on students' writing in SE in composition courses, and English instructors' and students' use of and attitudes towards texting on writing composition classes as identified in Appendix A. By utilizing a case study approach, the method allowed the researcher to answer the "how" question raised in Appendix A, in addition to focusing on a contemporary issue whose significance demanded a study that filled current gaps in literature and knowledge. The case study design allowed the research to be guided by the research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?".

Utilizing the case study approach allowed the researcher to gather qualitative primary data from the semi-structured one-on-one faculty interviews, member checking, student questionnaires, and documents in the form of former students' e-mails. This stage included Yin's (2011) focus on compiling information, so that the data gathered could be organized. Three different data gathering methods were employed after AQR and IRB approval: one-on-one faculty interviews, 25 volunteer student questionnaires, and three consecutive semesters of former students' e-mails. By gathering data through multiple sources, the information was triangulated and validity strengthened. Additionally, a pilot study of 20 volunteer composition students was implemented to

test, refine, and validate the student questionnaire (Yin, 2011). Member checking was utilized with the transcripts of the faculty interviews to allow participants to evaluate, respond, and clarify their responses and comments. The member checking further engaged the participants in the study and validated the accuracy of the transcriptions. The data from these multiple sources were converged in the analysis process, rather than handled individually. As the pieces of a puzzle come together to create a unique picture, so did the pieces of the 'puzzle' each of these data sources represented, which allowed a more in-depth understanding of the phenomenon.

Yin's (2011) stage of disassembling included further delineation and identification of the information gathered through the interviews, the student questionnaires, and the frequency data collected through former students' e-mails. Data were reassembled through differing methods; the interviews were transcribed, member checked, uploaded into the MAXQDA+ software, coded, and analyzed for patterns, themes, and ideas. Yin (2011) noted the importance of reassembling, or creating new thematic and organizational patterns from the gathered disassembled data.

The answers to the three qualitative questions in the student questionnaires were transcribed, uploaded into the MAXQDA + software, coded utilizing the codebook, and analyzed for patterns, themes, and ideas. The first 28 Likert-style questions of the student questionnaires were hand tallied and analyzed for patterns (see Appendix N). The frequency data collected through the evaluation of 210 former students' e-mails were hand tallied (see Appendix I). By triangulating the data and corroborating the varying themes and patterns found in the phenomena, a convergence of evidence brought construct validity to the research and its results (Yin, 2014).

After reassembling the data, the coded transcripts and qualitative answers from the student questionnaires were reviewed and synthesized in Yin's (2011) stage of interpreting. The qualitative data of faculty interview transcripts and student questionnaire answers' transcripts was uploaded into MAXQDA+ software, and a codebook was created to identify the themes and patterns. Baxter and Jack (2009) noted the importance of "pattern matching, linking data to propositions, explanation building, time-series analysis, logic models, and cross-case synthesis" (p. 554) in interpreting the reassembled data. Descriptive and pattern coding, pattern matching, theme building, and explanation building techniques were utilized throughout the interpretation of the data. In addition, the frequency data tabulated from the former students' e-mails and the first 28 Likert-style questions in the student questionnaires gave additional insight into answering the research question: "How do texting and Textese influence students' learning to write in SE in composition classes?".

Faculty interviews. Comprehensive semi-structured, one-on-one interviews were held after AQR and IRB approval with 10 volunteer participants who previously attended the 49th and 50th Allerton English Initiative Conferences in Monticello, IL; all participants were English instructors at 2- and 4-year higher education institutions in Illinois (see Appendix E). These 10 English instructors were selected due to their teaching of composition courses at demographically diverse institutions of higher education, including community colleges, 2-year colleges, 4-year private colleges and universities, and 4-year public colleges and universities (Appendix H). By interviewing faculty from diverse types of higher education universities, it allowed the research to be applicable to high education institutions in general.

As illustrated in Table 1 below, the faculty participants' institutions, years of experience teaching composition classes, and the average number of composition classes taught per year were identified. This information was necessary to validate the information gathered was from faculty participants at varying types of higher education institutions, and to ensure as much diversity as possible. Of the faculty participants noted in Table 1, 40% taught at a public community college, 30% at a private 4-year college or university, 10% taught at a 2-year private college, and 20% taught at a 4-year public university. Faculty participants taught college composition classes from nine years to 42 years, with the average number of years teaching composition classes as 23.1. The faculty participants' ranged in teaching composition classes from one class per year to 13 classes per year, with the average being 5.9 composition classes taught per year as illustrated in Table 1. One limitation in the faculty participants identified was that only 20% of the participants were male, and only one faculty member was African American.

Table 1

Faculty Participants' Higher Education Institution

	Gender	Type of Institution	Years Teaching Composition	Average Number of Composition Classes Per Year
Participant 1	Female	Community College	13	9-10
Participant 2	Female	4-year Private College	15 at high school, 10+ at university	6-7 at high school, 6-8 at university
Participant 3	Female	4-year Private College	17	6
Participant 4	Female	2-year Private College	11	5-6
Participant 5	Male	4-year Public University	31	1-2
Participant 6	Male	4-year Public University	34	5
Participant 7	Female	4-year Private College	32	4
Participant 8	Female	Community College	42	4
Participant 9	Female	Community College	9	8
Participant 10	Female	Community College	17	2

Faculty participants' ages ranged from 32 to 69 years of age, with the average age being 50.8 years as illustrated in Table 2 below. Included in the faculty were eight females and two males. The ethnic demographics included eight Caucasians, one African American, and one participant identified herself as mixed ethnicity of Caucasian, Hispanic, and Native American. Four of the faculty participants earned doctoral degrees, while the rest held master's degrees.

Table 2

Demographics of Faculty Interviewed

	Age	Ethnicity	Degree(s) Earned
Participant 1	50	Caucasian	B.A., M.A.
Participant 2	38	Caucasian	Ph.D.
Participant 3	69	Caucasian	A.A., B.S., M.A.
Participant 4	37	Caucasian, Native-American, Hispanic	B.A., M.A.
Participant 5	52	Caucasian	B.A., Ph.D.
Participant 6	58	Caucasian	B.A., M.A., Ph.D.
Participant 7	59	Caucasian	A.B., M.A.
Participant 8	67	Caucasian	Ph.D.
Participant 9	32	African American	B.A., M.A.
Participant 10	46	Caucasian	Ph.D.

Interviews were held at nine of the faculty members' schools, and one faculty member chose to be interviewed at home. Each interview was scheduled between September 2, 2014, and September 19, 2014, at the participants' convenience. Permission was received to audiotape the interviews for accuracy, and notes were also taken during all of the interviews. It was from these notes and the audiotapes that transcriptions were made of each interview and then sent to the participants for member checking. The researcher employed member checking of the faculty interview transcripts to verify the accuracy of the information gathered, to further engage the participants in the study, and to validate the opinions, perceptions, and comments made during the interviews.

Student questionnaires. After AQR and IRB approval, the student questionnaires were taken by 25 volunteer students who were enrolled in composition classes with another instructor at the researcher's school, a rural community college. The researcher determined to utilize another faculty member's students to avoid any perception on the students' part of pressure or coercion. The questionnaires consisted of 28 Likert-style questions and three qualitative questions. Students answering the

questionnaires included 17 females and eight males. Participants did not identify their ethnicity, but the participants' ages ranged from 18 to 25+ years, as noted in the demographic Table 3 below. Of the participants, 48% were 18 years of age, 8% were 19 years of age, 16% were 20 years of age, 0% were between 21 and 25 years of age, and 28% were 25+ years of age. The student participants included eight males (32%) and 17 females (68%). The variety of participants' ages, which included traditional and nontraditional college students, allowed for a broader understanding of the students' perceptions of the influence of texting and Textese on their writing in composition classes as well as allowing the research to explore whether or not age influenced students' perceptions concerning the influence of texting and Textese on their writing. Table 3 contains the demographic information for student participants.

Table 3

Student Questionnaire Demographics

Ages	18	19	20	21-25	25+
Male	3	2	2	0	1
Female	9	0	2	0	6

E-mail analysis. Upon AQR and IRB approval, three consecutive semesters of former composition students' e-mails were selected. The demographic information was stripped from the e-mails from former composition students that were utilized over a period of three consecutive semesters, including the fall 2012 semester, spring 2013 semester, and fall 2013 semester. A total of 210 e-mails from students enrolled in Composition I classes were evaluated for frequency data utilizing a chart adapted from questions asked by Aziz et al. (2013) and Rosen et al. (2010). The e-mail analysis focused on 23 categories in the E-mail Evaluation Form (see Appendices G and I). Included in the e-mail frequency data analysis, the numbers of e-mails, sentences

written, and words used fluctuated dependent upon the number of composition courses taught that semester. As illustrated in Table 4 below, there were 76 e-mails evaluated in the fall 2012 semester when two Composition I classes were taught, which included 194 sentences and 2,767 words; the number of e-mails decreased in the spring 2013 semester to 40 e-mails, which included 125 sentences in 1,442 words when one Composition I class was taught; and in the fall 2013 semester when two Composition I classes were taught there were 94 e-mails, which included 361 sentences and 4,613 words as illustrated in Table 4 below.

Table 4

Frequency Information on E-mails

	Number of E-mails	Number of Sentences	Number of Words
Fall 2012	76	194	2767
Spring 2013	40	125	1442
Fall 2013	94	361	4613

The differentiation in the number of e-mails from students can be explained by the varying number of classes of Composition I taught in the fall and the spring semesters.

Data Analysis Procedures

The research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?" focused all data collection and analysis procedures in this research. The qualitative data gathered from the faculty interviews and the student questionnaires were transcribed and uploaded into MAXQDA+ software where the data were coded for themes, patterns, and descriptions. The 28-Likert style questions in the student questionnaires were hand tallied and analyzed for insight into the influence of texting and Textese on students' writing, as well as the students' perceptions about the phenomenon. E-mails from former students were also hand tallied

using the E-mail Evaluation Form (see Appendices G and I) to determine frequency data. The E-mail Evaluation Form was adapted from questions asked by Aziz et al. (2013) and Rosen et al. (2010) with additional frequency data categories gathered as determined during the e-mail evaluation process. All of these steps were taken to answer the research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?"

Interview analysis. The semi-structured faculty interviews were structured around four open-ended questions: "How have you utilized your smartphone or cell phone to communicate with students? In what ways?", "Have you noticed any use of texting or Textese (including emoticons, logograms, shortened sentence structure, etc.) in your students' written communications to you or their essays? Can you give any examples?", "Does texting have a positive impact, negative impact, or no impact at all on students' writing and their ability to write in Standard English in your opinion? Can you give any examples or explain why you believe this?", and "Do you have any other observations you would like to make concerning texting and/or Textese?". Permission was received from Dr. Michael Day, chairperson of the Allerton English Initiative Articulation conferences to utilize the voluntary faculty contact lists from the 48th and 49th conferences (see Appendix F).

All individuals on these voluntary faculty contact lists taught at 2- and 4-year colleges and universities in the state of Illinois. There were 125 faculty members identified on those voluntary contact lists. Internet research of college and university websites was utilized to narrow down which faculty members actually taught composition. Research revealed that 54 faculty members taught English composition classes. After receiving permission from the IRB and AQR, all 54 faculty members were

contacted via e-mail at the end of August 2014, requesting their participation in the study (see Appendix J). In response to the initial e-mails, the response received was five acceptances and one person who did not wish to participate. The faculty members who affirmed that they would participate in the study were contacted, and dates, times, and locations where the interviews would take place were scheduled. In an effort to make the process convenient for the participants the researcher traveled to the agreed-upon locations for the interviews, so there was no financial cost to the participants.

Additional e-mails were sent out to those faculty members who did not respond after the initial e-mail on September 15, 2014. The response to the second e-mails was that five more individuals agreed to participate in the study; however, in follow-up phone calls and e-mails it was discovered that six faculty contacts were no longer employed at those higher education institutions and one faculty member had retired. After consulting with committee members, additional e-mails and telephone calls were utilized to contact potential participants at the end of September 2014; in the end, 10 semi-structured, one-on-one in-depth faculty interviews were conducted.

During the individual interviews, all participants were asked to complete a faculty demographic survey (see Appendix H) to gather information. Permission was obtained to tape record all of the interviews. In addition, copious hand written notes recorded the participants' answers. After the interviews were completed, the interviews were transcribed comparing it with the tape recordings to verify accuracy of what was said. Due to technological issues, the third interview tape recording was incomplete; therefore, the handwritten notes taken during the interview were utilized to write the transcript, and the participant was informed of the issue. Member checking was then implemented by e-mailing the transcript to the participant involved. At this point, the

participants were encouraged to verify the accuracy of what was transcribed, as well as deleting or adding any clarifying information as they so desired. Upon receiving responses to the member checking, changes were made as requested and the transcripts were uploaded into MAXQDA+ software. A codebook including 13 main code categories and 79 subcategories of code was created for Descriptive and Pattern coding to analyze the information.

Saldaña (2013) defined qualitative coding as "a researcher-generated construct that symbolizes and thus attributes interpreted meaning to each individual datum for later purposes of pattern detection, categorization, theory building, and other analytic processes" (p. 4). To identify thematic patterns in the qualitative, semi-structured one-on-one interviews, the researcher created codes in the MAXQDA+ software to link patterns in the data. As noted in Saldaña (2013), "Coding is thus a method that enables you to organize and groups similarly coded data into categories or 'families' because they share some characteristic – the beginning of a pattern" (p. 9). The patterns and descriptions explored through coding in the MAXQDA+ software enabled identification of themes throughout the interviews. For this purpose, the following codes were created: literacy rates negatively impacted; literacy rates positively impacted; does not use cell phone/smartphone to contact students; uses cellphone/smartphone to contact students; Textese – positive impact; Textese – negative impact; and Textese – no impact. Additional structure\syntax codes were created for the following: apostrophe errors, capitalization issues, shortened sentences, emoticons, and logograms. The coding categories were utilized to explore the influence of texting and Textese on students' ability to write in SE in composition classes and aided in the interpretation of the data.

E-mail analysis. The researcher randomly selected three Composition I classes that were taught over consecutive semesters to evaluate the e-mails of former students, including the fall 2013, spring 2014, and fall 2014. These e-mails were identified by date in class in the researcher's records that were kept as a part of her regular position as an instructor. Each e-mail was cut and pasted into a Microsoft Word document, identifying the date, time, and message. In addition, each e-mail was given an identification number based on its date and time of correspondence, and all names and personal identification information were removed. After printing off all of the e-mails from each semester, they were analyzed utilizing a chart adapted from Aziz et al. (2013) and Rosen et al. (2010) (see Appendices G and I). Each individual e-mail was evaluated for frequency data, and the results were hand tallied on individual analysis charts identifying: number of words written, number of words affected by texting and Textese language, instances of emoticons used, instances of logograms used, instances of shortened sentences used, instances of shortened words used, instances of informal language to the instructor, and instances of all caps used.

Additionally, the e-mails were evaluated for instances of commas obligatory, instances of comma errors, instances of apostrophes obligatory, instances of apostrophe errors, instances of question marks obligatory, instances of question mark errors, instances of periods obligatory, instances of period errors, instances of semicolons obligatory, instances of semicolon errors, instances of capital letters obligatory, and instances of capital letter errors. The number of times each instance was used and examples of usage in the e-mail were written down when applicable (see Appendices G and I). During the research it was identified that additional categories for frequency data collection were necessary, including the number of sentences, the number of run-on

sentences, spelling errors, and verb tense errors; these categories were added in the frequency data noted.

Student questionnaire analysis. The student questionnaires were validated through a pilot study conducted with 20 volunteer student participants who were enrolled in composition classes; these participants were not included in the actual student questionnaires. The actual student questionnaires utilized in this research included 25 volunteer student participants who were enrolled in the fall 2014 semester in composition one with another English instructor at the researcher's college. The students signed and were given copies of the Informed Consent Form, and the questionnaires were completed anonymously with only demographic and research information gathered. The answers to the 28 Likert-style questions were hand tallied (see Appendix N). For the three qualitative questions (#29-31), the students' answers were transcribed into a Word document and then uploaded the answers into MAXQDA+ software. These answers were then coded based on the qualitative codebook created for this study.

Results

The results of this study are based on qualitative coding using a codebook and analysis through the use of coding, pattern matching, descriptive themes on the faculty interviews and qualitative questions in the student questionnaires. The frequency data analysis of former students' e-mails and the 28-Likert style questions in the student questionnaires were hand tallied and analyzed (see Appendices, D, G, I, and N); all qualitative data were transcribed and analyzed using the qualitative codebook created in this research (see Appendix K). All of this data were collected and analyzed to answer the research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?" Addressing the gaps in the literature noted in the

literature review, this research focused on how texting and Textese are influencing students' learning of writing and writing in composition classes.

The researcher identified 11 major themes found in the data analysis, with seven of those themes linking back to the key theories. Data revealed the theme that the influence of texting and Textese on students' writing in SE caused a decreasing vocabulary, lack of detail, lack of depth of description, and lack of use of descriptive words by students. Another theme identified was that demographics did not influence a students' use of texting or Textese in writing. The third theme revealed was the perceptional differences between students and faculty on the influence of texting and Textese on students' revision of writing. Perceptions that syntax and structure errors were increased because of texting and Textese, including grammar errors, shortened spelling, shortened sentences, emoticons, and logograms, was the fifth theme identified through data analysis.

Seven of the 11 major themes found in the data analysis were tied in with the key theories as illustrated below in Table 5, including the Media Richness Theory, Technology Acceptance Model, Threaded Cognition Theory, Transactional Distance Theory, and the Uses and Gratification Approach. By reviewing and pattern matching the data analysis, specific conclusions were drawn from this study. Results for this study were broken down into the three main data gathering processes – faculty interviews, student questionnaires, and students' e-mails – and then were discussed by the aforementioned 11 themes.

Table 5

Major Themes Linked to the Key Theories

Theme	Technology Acceptance Model	Media Richness Theory	Uses and Gratification Approach	Transactional Distance Theory	Threaded Cognition Theory
Code switching by students between informal and formal writing, and the lack of differentiation between types of writing	X	X	X		
Perceptions about the influence of texting and Textese on students' writing	X	X	X		X
Perceptions that students read fewer books and more text messages or SMS, which negatively impacted literacy rates	X	X	X		
Texting was a form of writing, or an evolving form of written communication/language	X	X	X		X
Perception that mobile communication devices influenced students' engagement		X	X	X	
Texting and Textese were considered culturally acceptable in today's society	X	X	X		
Voice-to-text or speech-to-text applications positively influence students' grammar	X	X	X		

Analysis of the three main data gathering processes. The data for this study were collected utilizing 10 semi-structured faculty interviews, 25 voluntary student questionnaires, and 210 former Composition I students' e-mails. The qualitative data were transcribed, uploaded into MAXQDA+, coded, and then analyzed. The frequency data were determined through the use of hand tallying the numbers and evaluating them. The triangulation of data collected from these sources gave detailed and differing

viewpoints on the influence of texting and Textese on students' writing in Composition I classes.

***Faculty interviews*.** Throughout the 10 faculty interviews, 11 main themes arose, including the mixed perceptions of faculty concerning the influence of texting and Textese on students' writing. The thematic results were discussed further in Chapter 4 under the "Analysis of Main Themes in the Study". Nine of the faculty expressed mixed perceptions concerning the influence of texting and Textese on students' writing in SE, while one faculty participant believed it was a completely negative influence. Out of faculty references to perceptions of the influence of texting on students' writing being positive, negative, or mixed, 22 of the 29 comments (75.9%) indicated faculty saw the influence as positive or mixed, as illustrated in Figure1 below. This chart also specified that faculty overwhelmingly believed that texting and Textese had a negative influence on students' literacy rates, with 21 of the 27 references (77.8%) in the transcriptions identified as negative. Further data revealed that 55% of the faculty references to Textese in the interview transcriptions (31 out of 56 comments) indicated faculty perceived Textese as having a negative influence on students' writing.

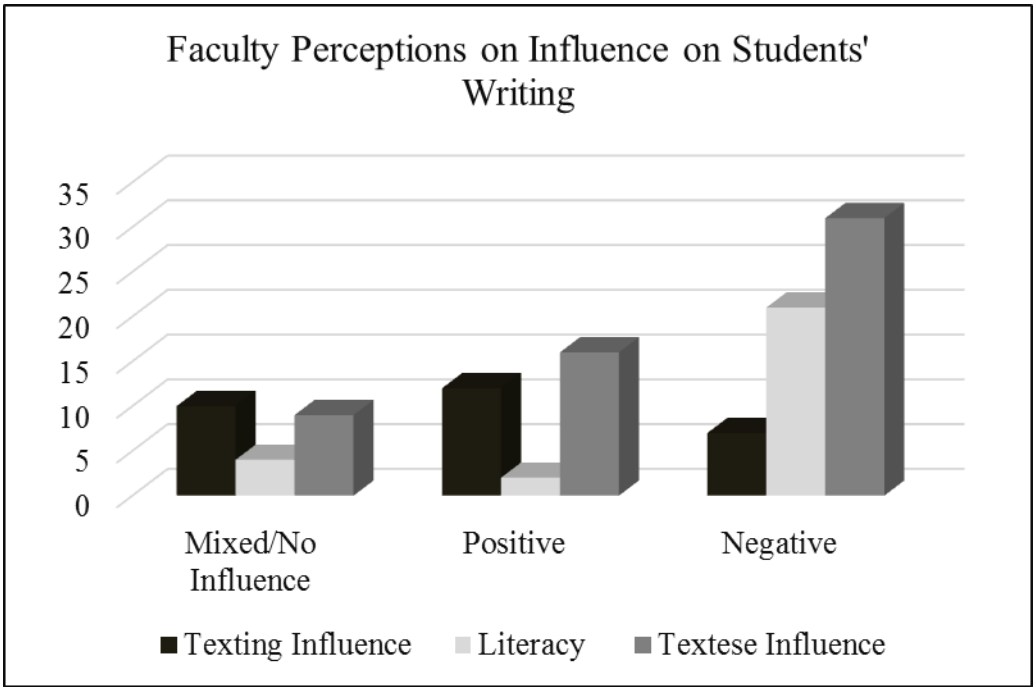

Figure 1. Faculty Perceptions on Influence of Texting and Textese on Students' Writing.

Furthermore, the transcripts identified that 19 of 32 comments (59%) indicated faculty believed students utilized code switching between formal and informal writing, while only 13 comments (41%) indicated that code switching was not used by students (Figure 2). This data supported the 36 comments in the transcripts that specified faculty believed that texting caused students to have issues with code switching between formal and informal writing (16 comments), or the students lack the ability to differentiate between formal and informal writing assignments (20 comments).

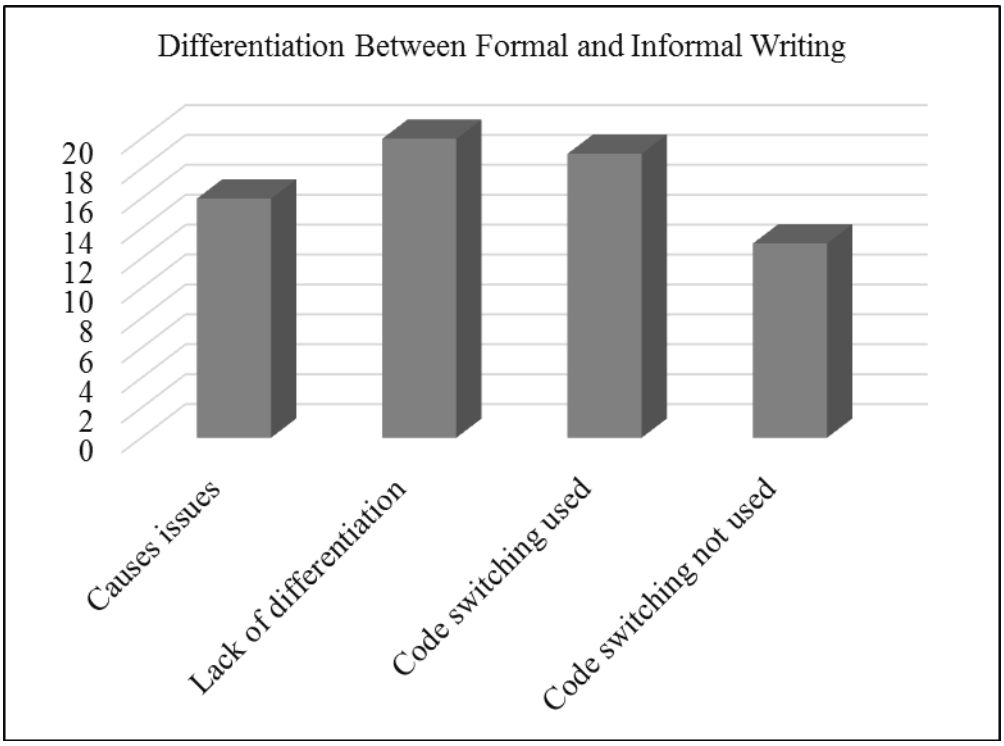

Figure 2. Faculty Perceptions on Student Ability to Code Switch.

However, despite concerns about the influence of texting, Textese, and cell phones/smartphones in the classroom, most faculty used the devices to interact with students outside of class. As illustrated in Figure 3, faculty referenced a variety of uses of texting and their cell phones/smartphones in connection with their students, including checking grades or grading work, contacting students, editing essays or other assignments, answering students' questions, as a means of quick communication with students, checking on student absences, and other issues. Two of the 10 faculty members indicated that they did not utilize their cell phones/smartphones to communicate with students; although, one identified that he texted with graduate students and students who had graduated, and the other identified that she would text with students she knew well outside of the class.

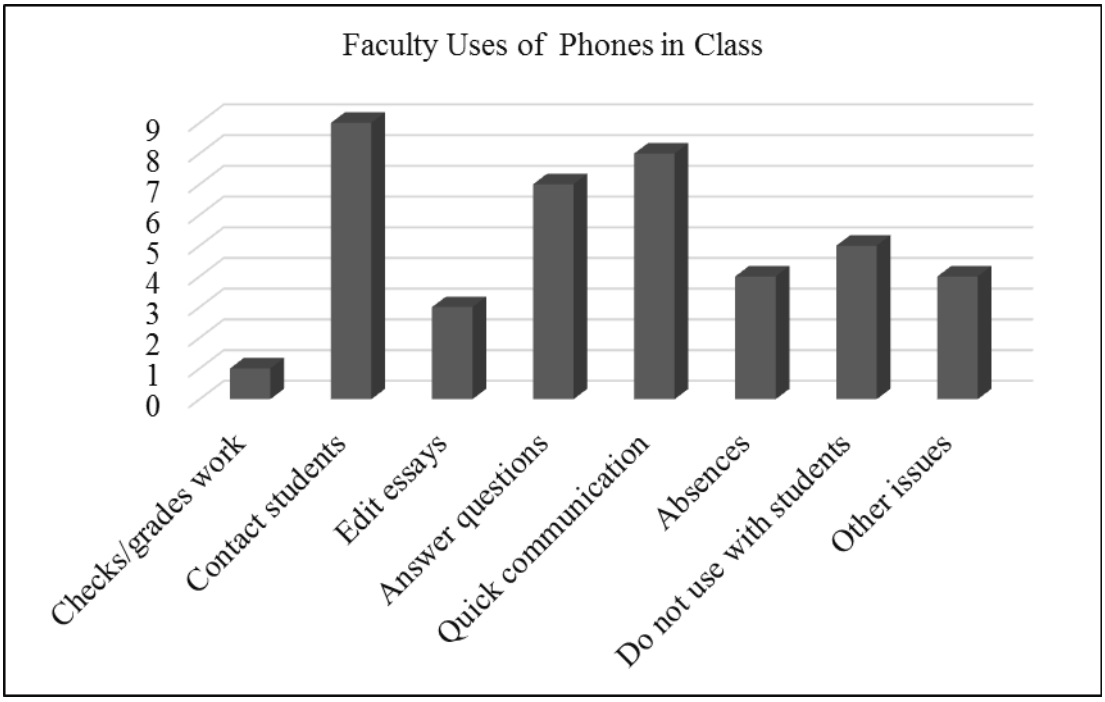

Figure 3. Faculty Usage of Phones/Texting in Class.

Student questionnaires. The 25 students who completed the questionnaires were enrolled in Composition I classes at a small, rural, Midwestern community college. Participants included eight males and 17 females. As illustrated in Table 6 below, the age demographics of the participants by gender ranged from 18 years to more than 25 years, including traditional and nontraditional students. Studies have noted that the Millennial generation was raised with access to and utilization of cell phones and smartphones (CDW Government LLC, 2010; Lenhart, 2010; Lenhart et al., 2010; Madden et al., 2013). By incorporating students who were at least 18 years of age (48%) and those considered nontraditional students (those students 25+ years of age, 28%), the research was able to explore what, if any, influence age had upon students' perceptions and use of cell phones/smartphones in composition classes, and their perceptions on how these mobile devices influenced their writing.

Table 6

Population Age Demographics

	18 years	19 years	20 years	25+ years
Male	3	2	2	1
Female	9	0	2	6

Among the students participating in the questionnaires, 92% indicated they owned a cell phone/smartphone with texting capabilities, as illustrated in Table 7 below. All of the 25 respondents indicated that they had access to a cell phone/smartphone; however, one male participant had access to a device that had no texting abilities. None of the participants did not have access to at least a cell phone or a smartphone. As identified in the *Pew Internet & American Life Project*, today's college students have become digital natives (Lenhart, 2010; Lenhart et al., 2010; Madden et al., 2013; Rideout et al, 2012).

Table 7

Access to Cell Phones/Smartphones

	Own Phone with Texting Capabilities	Access to Phone with Texting Capabilities	Access to Phone without Texting Capabilities
Male	8	0	0
Female	15	1	1

In answer to the question "how often do you text on a daily basis?" 59% of the females and 63% of the males indicated they texted 30+ times a day. As illustrated in Figure 4 below the frequency with which texting has permeated the lives of these participants (see Appendix I). Only one male student indicated that he did not text; none of the female students identified that they did not text on a daily basis.

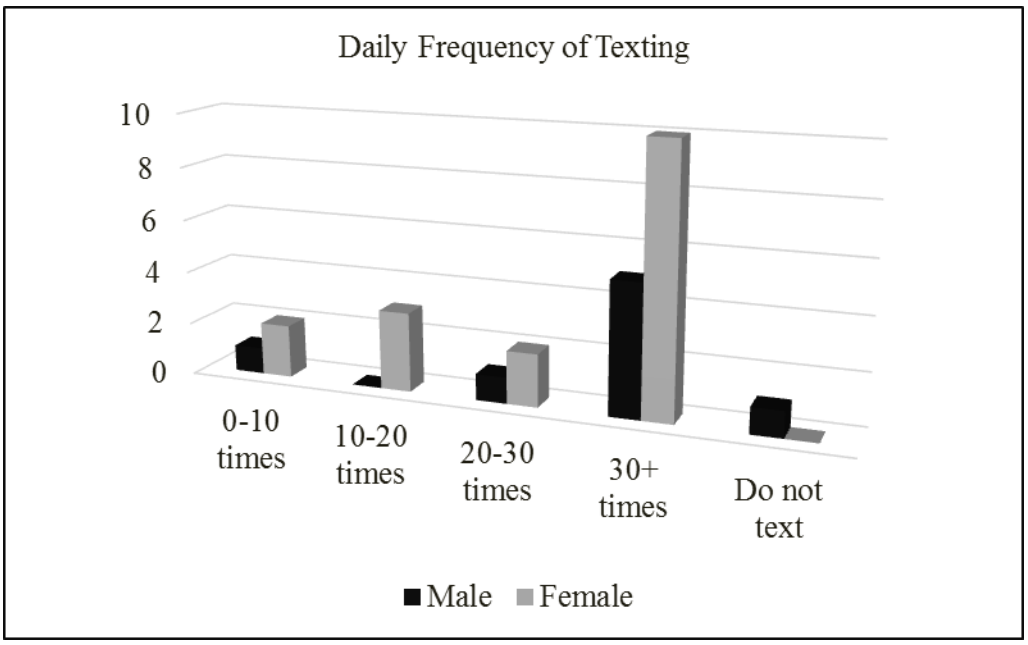

Figure 4. Frequency of Students' Self-reported Texting.

When students were asked if their use of Textese changed dependent upon who they were texting (i.e. – a professor, a boss, a friend, etc.), 12 of the 25 students (48% including four males and eight females) strongly agreed that they utilized code switching between formal and informal written communications. An additional five students (one male and four females), or 20%, indicated they agreed that they utilized code switching depending on whom they were writing. The students' responses specified that 68% stated they utilized code switching to differentiate between informal and formal written communications, as seen in Figure 5. This theme paralleled faculty beliefs that most students were able to code switch between formal and informal writing, as seen in Table 12. Furthermore, 16% of the students (one male, three females) indicated that they neither agreed nor disagreed that "My use of Textese changes depending on who I am texting (such as a friend, a professor, a boss)". The last four students, two males and two females, indicated that they strongly disagreed that they utilized code switching depending on whom they were writing.

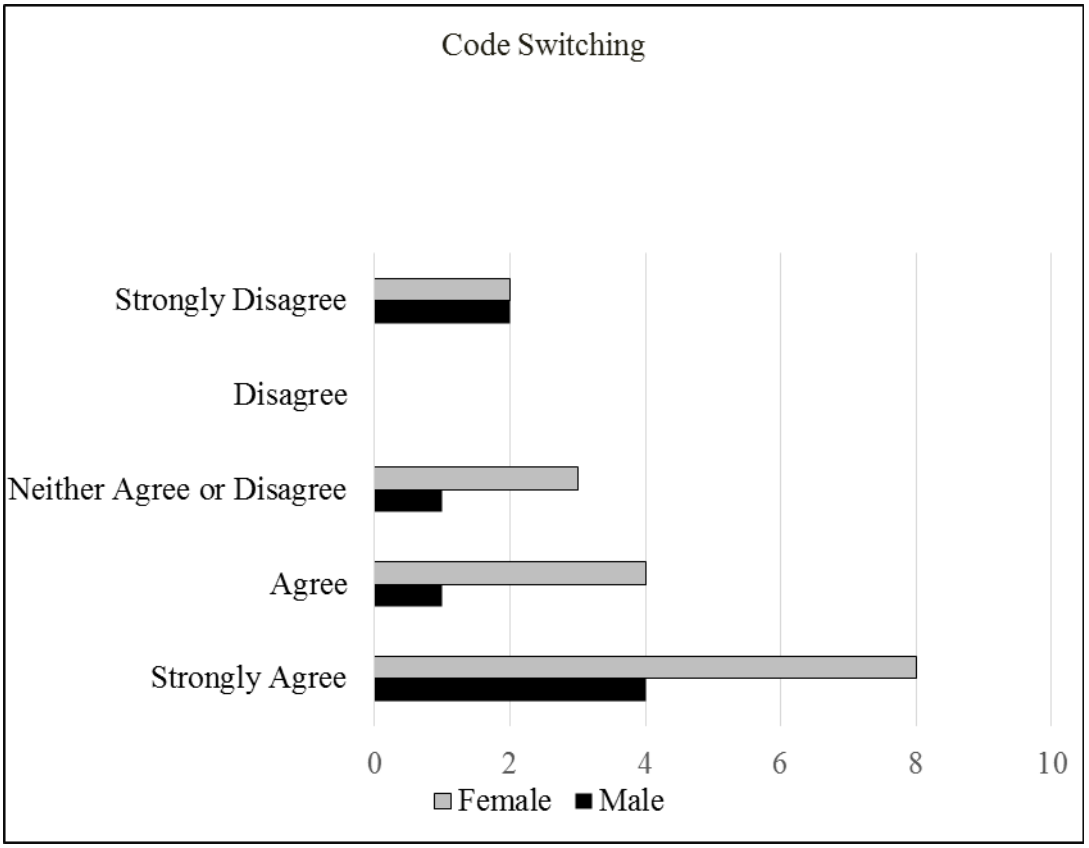

Figure 5. Code Switching Between Formal and Informal Writing.

When asked if they ever used the emoticons found in Textese in writing outside of text messages, most students strongly disagree that they did, as illustrated in Figure 6 below. Most students believed that they eliminated all Textese from their formal writings and class assignments due to code switching. However, five of the 25 students (20%) acknowledged that they had utilized emoticons in written work either intentionally or unintentionally.

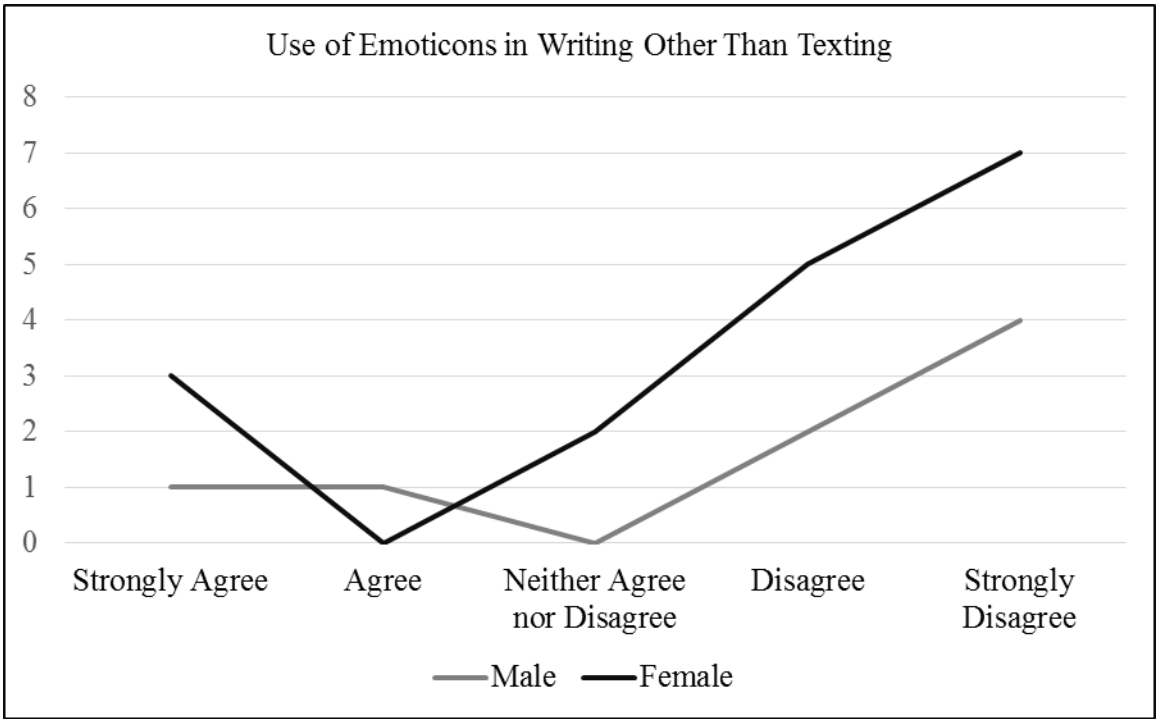

Figure 6. Students' Utilization of Emoticons in Writing.

One theme that arose from the student questionnaires' answers was that students believed texting did not appear in their written essays and assignments, yet 11 of the 25 students (44%) indicated it negatively influenced their writing, while only two students identified that texting positively influenced their writing, grammar, and spelling as illustrated in Figure 7. Despite this, only two students believed texting positively influenced their completion of work, and 12 of the 25 students (48%) indicated that texting had no influence one way or the other on their ability to complete work.

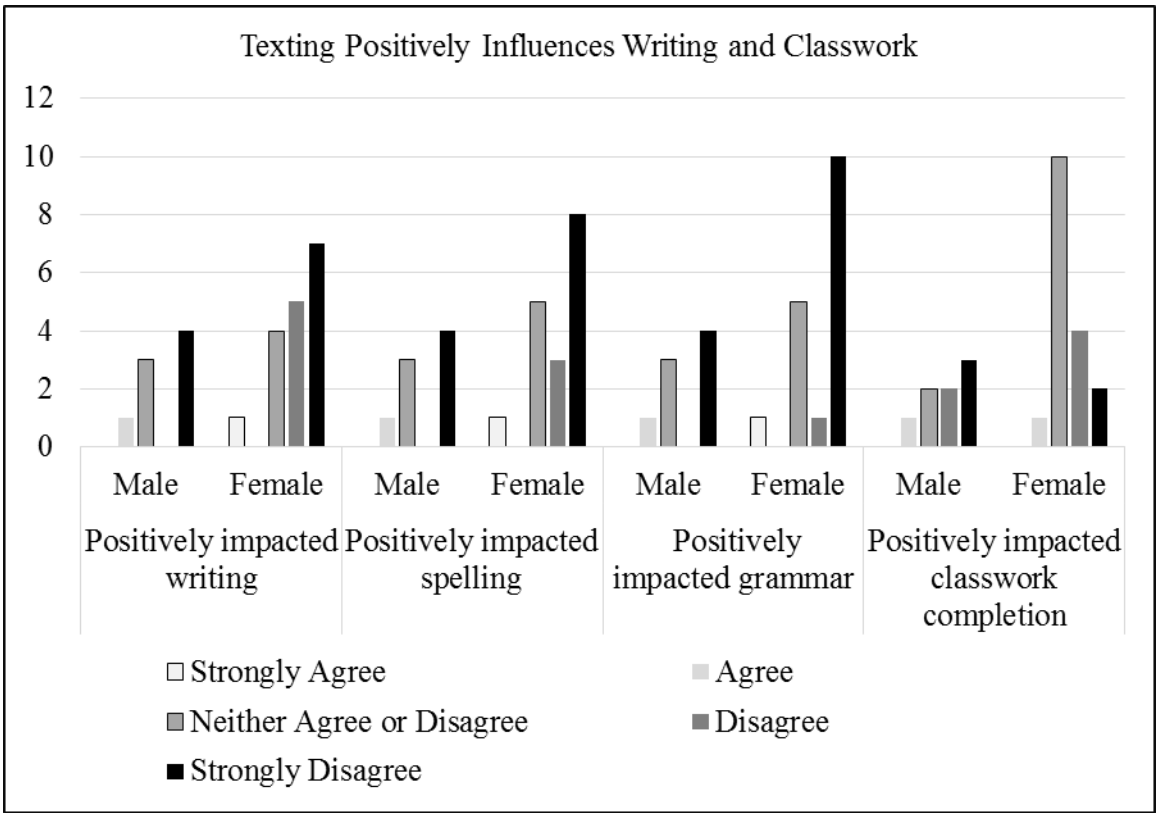

Figure 7. Positive Influence of Texting on Writing and Classwork.

On the other hand, some students believed that texting had a negative influence on their writing and their completion of classwork, as illustrated in Figure 8. Despite their preference for texting, or their belief that they eliminated texting from their written work due to code switching between formal and informal writing, students identified that they did perceive negative influences from texting on their writing, grades, and work. When asked if texting negatively influenced their essay grades, six out of 25 students (24%) indicated they agreed it was a negative influence, 10 students (40%) indicated it had no influence on their essay grades, and nine students (36%) disagreed that it influenced their essay grades.

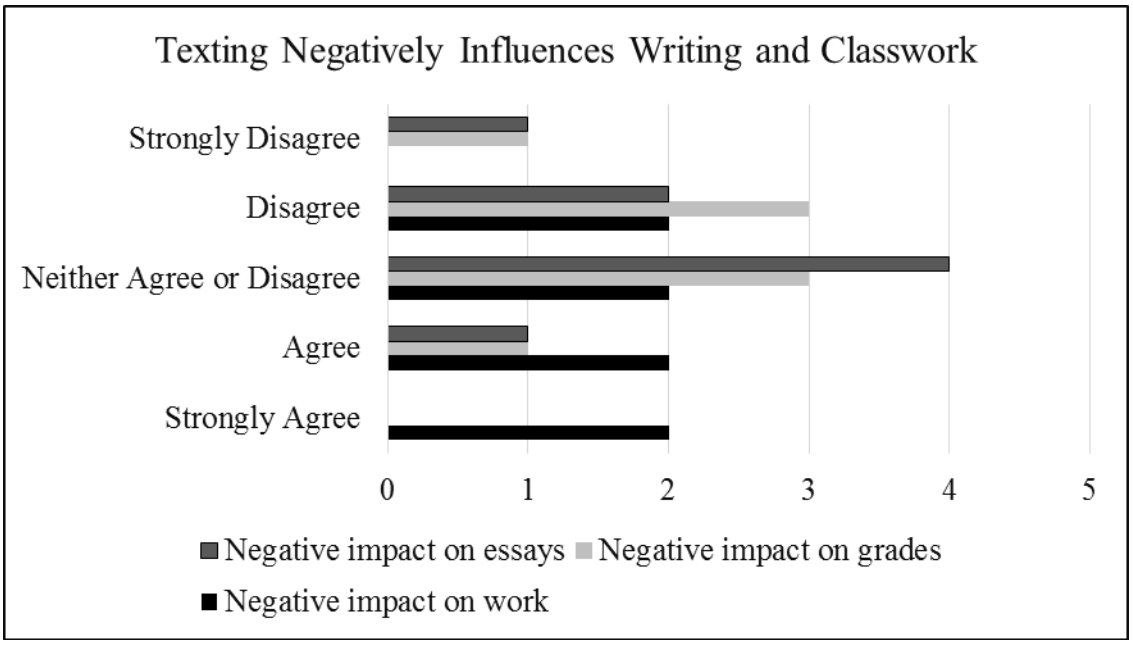

Figure 8. Students' Perceptions on Negative Influence of Texting.

Analysis of the three qualitative questions in the student questionnaires utilizing the codebook created during this research (see Appendix K) revealed that a majority of the students did not perceive texting to have any influence on their writing, mainly because they indicated they utilized code switching between formal writing for class assignments and essays, and informal writing for texting to friends.

E-mail evaluations. In an effort to answer the research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?" 210 e-mails from former students enrolled in composition classes were evaluated to show the actual use of texting and Textese in students' written communications. The e-mails were evaluated and hand tallied based on the e-mail evaluation form (see Appendices G and I) to determine frequency data. Based on this evaluation, additional categories needed to be created including: instances of use of run-on sentences, instances of verb tense errors, and instances of spelling errors. These

additional categories were necessary due to the number of misspellings and other syntax errors that were noted by the researcher during the evaluation of the e-mails.

The e-mails originated from students in the fall 2012 semester (76 e-mails), the spring 2013 semester (40 e-mails), and the fall 2014 (94 e- mails) semester who were enrolled in composition classes at a small, Midwestern community college. The number of e-mails and words written varied each semester dependent on the number of classes taught and the number of students enrolled in the classes. The e-mails included a total number of 8,822 words, including 2,767 words in the fall 2012 semester (31%), 1,442 words in the spring 2013 semester (16%), and 4,613 words in the fall 2013 semester (52%). The frequency of words affected by texting and Textese in the e-mails were 402 words out of 8,822 words (4.6%). This statistic included 123 words out of 2,767 words affected by texting and Textese in the fall 2012 semester (4.44%), 83 words out of 1,442 words affected by texting and Textese in the spring 2013 semester (5.76%), and 196 words out of 4,613 words affected by texting and Textese in fall 2013 semester (4.25%). As illustrated in Figure 9, the number of words affected by texting and Textese was minimal in the students' e-mails at less than 6% each semester.

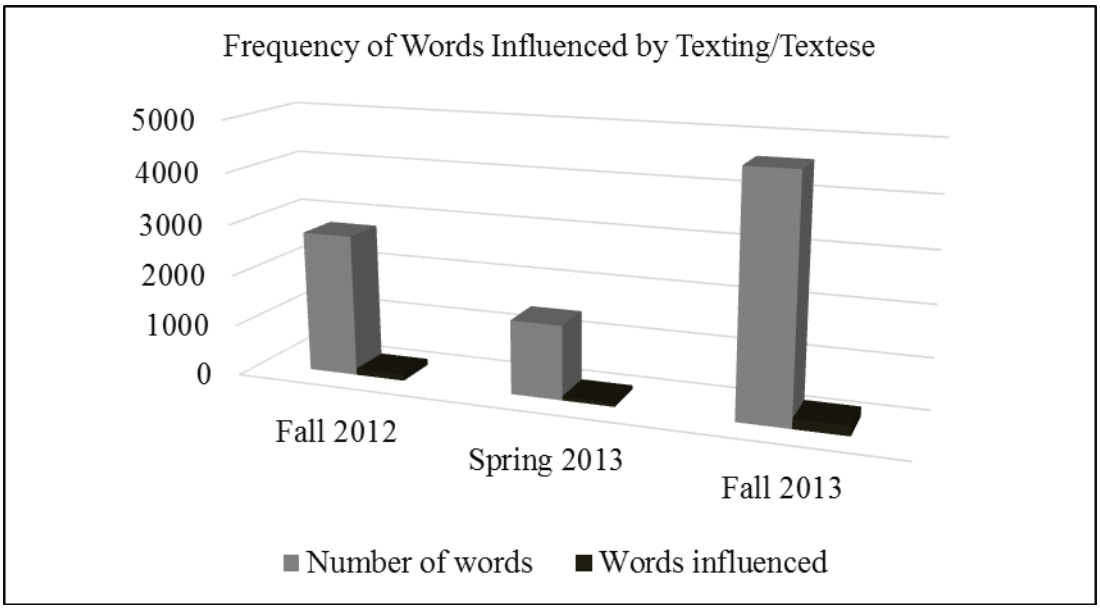

Figure 9. Frequency of Words and Sentences iIluenced by Texting or Textese.

One noticeable increase in the frequency data analysis were the number of grammatical/syntax errors found within the students' e-mails increased, with the most dramatic increase involving capitalization errors, as illustrated in Figure 10. As delineated in Appendix I, capitalization errors were noted in 132 out of 438 obligatory capital letters (30.14%) in the fall 2012 semester, in 69 out of 272 obligatory capital letters (25.37%) in the spring 2013 semester, and in 195 out of 1,222 obligatory capital letters (15.96%) in the fall 2013 semester. In the students' use of words that had all letters capitalized, five words out of 2,767 words (0.18%) were treated in this manner in the fall 2012 semester, four out of 1,442 words (0.28%) were treated this way in the spring 2013 semester, and 14 out of 4,613 words (0.3%) were made into all capital letters in the fall 2013 semester.

Evaluation of the usage of commas, apostrophes, question marks, periods, and semicolons indicated higher frequencies of misuse. Frequency data identified 35% of the obligatory commas (171 errors out of 494 obligatory) were misused, including 61% of

the commas used in the fall 2012 semester (100 errors out of 165 obligatory), 61% of the commas used in the spring 2013 semester (57 errors out of 93 obligatory), and 6% of the commas used in the fall 2013 semester (14 errors out of 236 obligatory). The frequency of students' misuse of apostrophes was 18% (34 errors out of 187 obligatory). Data identified in the fall 2012 semester out of 40 obligatory apostrophes there were 13 errors (33%), in the spring 2013 semester there were 12 errors out of 40 obligatory apostrophes (30%), and in the fall 2013 semester there were 29 errors out of 107 obligatory apostrophes (27%). The highest frequency rate for errors was found with the use of semicolons, where students incorrectly used semi-colons 89% of the time (16 errors out of 18 obligatory). During the fall 2012 semester 92% of students incorrectly utilized semicolons (12 errors out of 13 obligatory), while in the spring 2013 semester semi-colons were used improperly 100% of the time (three errors out of three obligatory) and in the fall 2013 semester one error was noted out of two obligatory uses (50%) as seen in Figure 10.

Further assessment of the frequency data in the e-mails revealed errors with the treatment of question marks and periods. Frequency data identified 25% of obligatory periods were used improperly (150 errors out of 594 obligatory). Research noted that in the fall 2012 semester, out of 155 obligatory periods there were 48 errors (31%); in the spring 2013 semester, out of 108 obligatory periods there were 23 errors (21%); and in the fall 2013 semester, out of 331 obligatory periods there were 79 errors (24%). Data indicated that 39% of the question marks were misused in the e-mails, with 33 errors noted out of 85 obligatory question marks. A 39% error rate was noted in the fall 2012 semester with 13 errors out of 33 obligatory question marks. In the spring 2013 semester of the 13 obligatory question marks there were eight errors (62%), and in the fall 2013

semester out of the 39 obligatory question marks there were 12 errors (31%) as seen in Figure 10 below.

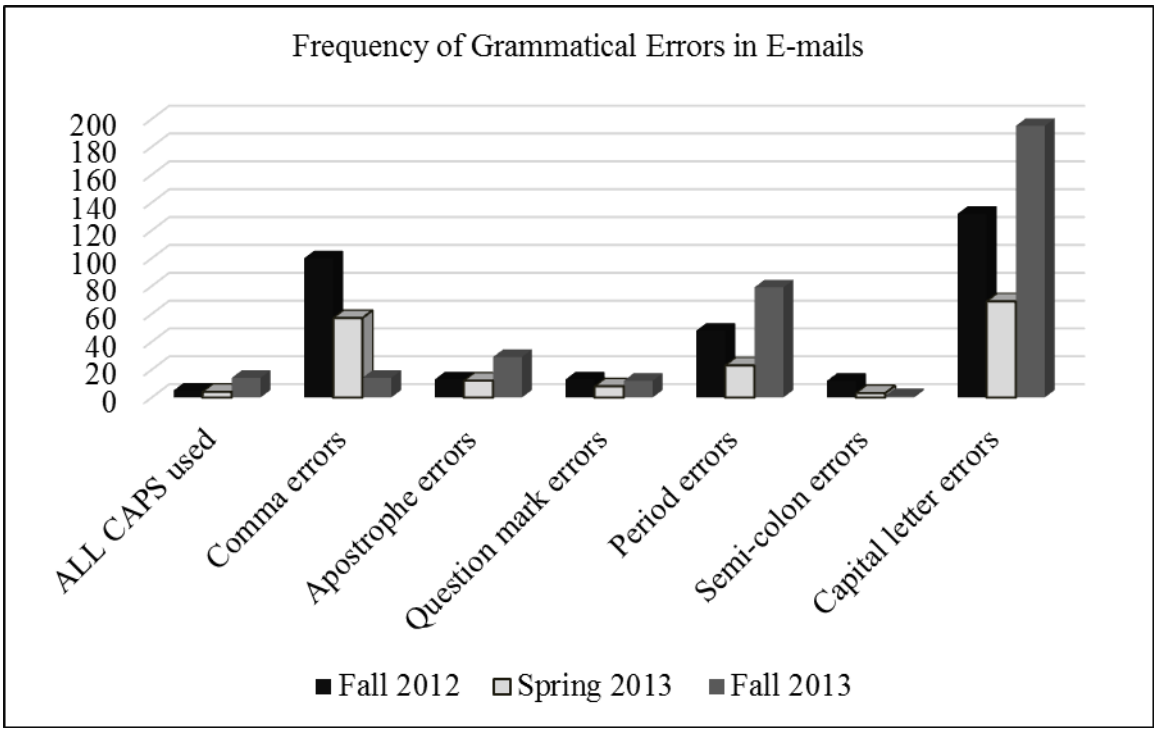

Figure 10. Frequency of Grammatical Errors in E-mails.

Frequency and analysis of former students' e-mails indicated that texting and Textese were impacting the proper use of grammar in students' written communications, but not in a pervasive manner. In Table 18 below (see Appendix I) research identified the frequency of emoticons used by students were 13 out of 8,822 words (0.15%). The researcher determined that in the fall 2012 semester three emoticons were used out of 2,767 words (0.1%), in the spring 2013 semester one emoticon was used out of 1,442 words (0.07%), and in the fall 2013 semester there were nine emoticons used out of 4,613 words (0.2%).

Although not emoticons, the e-mail evaluation revealed that 23 of the 8,822 words that were written (0.26%) had every letter of the word capitalized. This statistic included five of the 2,767 words written in the fall 2012 semester, four of the 1,442 words written in the spring 2013 semester, and 14 of the 4,613 words written in the fall 2013 semester. The frequency analysis of logograms utilized by students in the e-mails identified that 38 of the 8,822 words (0.43%) were logograms. In the fall 2012 semester, 13 of 2,767 words (0.5%) were logograms, 11 of 1,442 words (0.8%) in the spring 2013 semester were logograms, and 14 of 4,613 words (0.3%) in the fall 2013 semester were logograms.

Evaluation of the frequency of shortened sentences in the e-mails revealed that of 640 sentences, 126 were shortened (19.7%). The data revealed that in the fall 2012 semester, 29 of the 194 sentences (15%) were shortened; in the spring 2013 semester, 32 of 125 sentences (27%) were shortened; and in the fall 2013 semester, 65 of 321 sentences (20%) were shortened. In addition to shortened sentences, research noted 14%, or 91, instances where the authors of the e- mails utilized run-on sentences. In the fall 2012 semester, 29 of 194 sentences (15%) written were run-on sentences. Furthermore, in the spring 2013 semester 20 of 125 sentences (16%) written were run-on sentences, and in the fall 2013 semester 42 of 321 sentences (13%) written were run-on sentences as illustrated in Figure 11.

In reference to the frequency of grammatical errors found within the former students' e-mails, 408 of the 8,822 words (4.6%) were misspelled with 120 spelling errors (29%) occurring in the fall 2012 semester, 78 spelling errors (19%) occurring in the spring 2013 semester, and 210 spelling errors (51%) occurring in the fall 2013 semester. Also noted in the e-mails were 14 verb tense errors (0.16%) out of 8,822

words, including seven errors (50%) in the fall 2012 semester, one error (7%) in the spring 2013 semester, and six errors (44%) in the fall 2013 semester. Students improperly utilized capital letters 21% of the time in the e-mails, with 396 errors out of the 1,932 obligatory capitalizations. Data indicated that in the fall 2012 semester, out of 438 obligatory capitalizations there were 132 errors (30%); in the spring 2013 semester, out of 272 obligatory capitalizations there were 69 errors (25%); and in the fall 2013 semester, out of 1,222 obligatory capitalizations there were 195 errors (16%). The evaluation of instances of informal language to the instructor were numerically tallied as 267 instances out of 8,822 words, or 3%. Breakdown of the instances of informal language to the instructor included 88 instances in the fall 2012 semester, 76 instances in the spring 2013 semester, and 103 instances in the fall 2013 semester as illustrated in Figure 11.

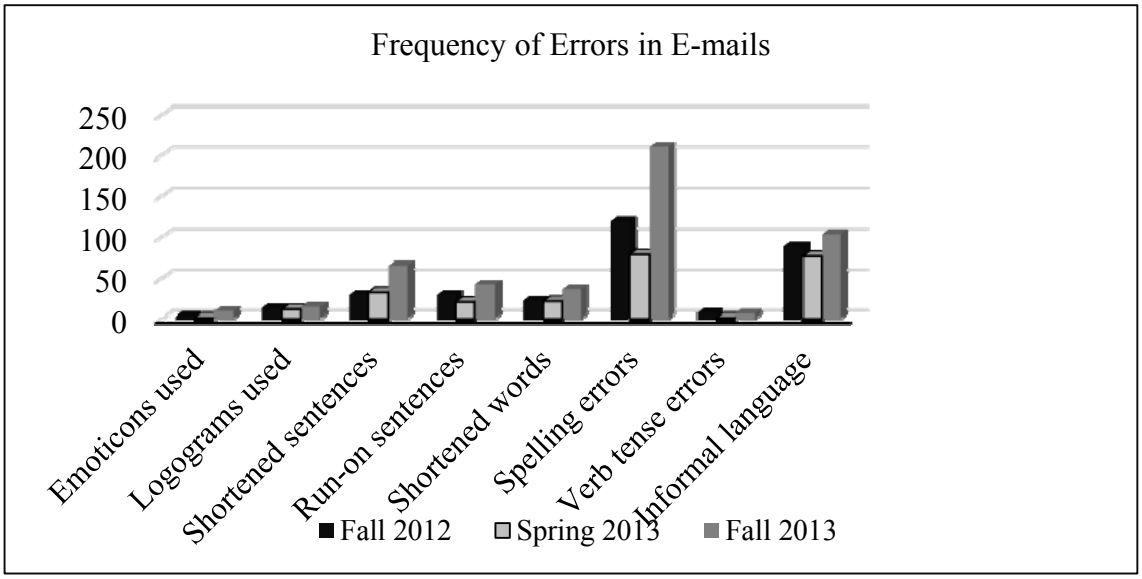

Figure 11. Frequency of Errors in E-mails.

Analysis of main themes discovered in study. The data were separated into 11 main themes that arose from the three main sources of data: faculty interviews, student

questionnaires, and former students' e-mails. The main themes aided in understanding not only the perceptional similarities and differences between faculty and students on the influence of texting on students' writing, but also the cultural ramifications of this influence. These main themes were identified using the qualitative codebook created for this research (see Appendix K) and included: code switching between formal and informal writing; perceptions over texting and Textese; influence of texting on literacy, reading, and writing; texting was identified as a type of writing; influence of texting on student engagement, including questions, uses, and disruptions; influence of demographics on texting; influence of texting on revisions; influence of voice-to-text programs; influence on detail in writing; influence on syntax and sentence structure; and influence on the cultural acceptance of texting and Textese. By exploring these qualitative themes in connection to the key theories, a pattern of the ease of use, variety of uses, and quick communication based on the Media Richness Theory (Park et al., 2012), the Uses and Gratification Approach (Park et al., 2012), the Transactional Distance Theory (Ng'ambi, 2011), and the Technology Acceptance Model (Venkatesh & Davis, 2000) was established. In addition, the students' ability to complete multiple tasks at the same time was evaluated using the Threaded Cognition Theory (Salvucci & Taatgen, 2008).

Code switching between formal and informal writing. Code switching between informal and formal writing, which ties in with the lack of differentiation between informal and formal writing; both tie in with the Threaded Cognition Theory, Media Richness Theory, the Transactional Distance Theory, and the Uses and Gratification Approach. "It's a two-way street of knowing how to use it well, but to not use Textese inappropriately," observed one faculty member (Participant #2) at a private, 2-year

community college. Participant #6, a professor at a 4-year public university and director of the college's first year writing program stressed, "That is really one of our biggest roles as writing teachers: is helping them understand the different contexts and audiences for writing and helping them adapt what they say and how they say it for those audiences." This ability to switch back and forth, differentiating between formal and informal writing, was seen as beneficial for students and indicative of the Threaded Cognition Theory. Faculty Participant #8, who taught at a 2-year public community college, expressed the belief that students were able to differentiate between formal and informal writing situations for the most part,

> I don't think it has to harm or have a negative effect, though, I think students these days are really good at living in compartments. They are able to do several things at one time that I think students before [could not do] … [today's students are] capable of watching TV, talking to their friend, texting, IM'ing, doing homework, and listening to music, perhaps all literally at one time. In the same way I think that they are capable of compartmentalizing my formal essay should look this way, my e-mails can look this way, even though I think they haven't quite grasped when I'm writing to my professor perhaps I should be a bit more formal. Students have this ability to compartmentalize, they will literally switch in their mind and when they begin to write they turn into their best understanding of grammatically [correct writing] depending on their exposure to reading formal texts will determine what that's going to look like for them. They all switch over to this formal person when they start trying to write a composition paper for me.

Differentiating between formal writing, such as essays and assignments students have time to write, revise, edit, and submit, and informal writing, such as in-class writing

assignments, timed essays, e-mails, and texts, was one issue that all of the faculty members in the study addressed. In fact, according to the Technology Acceptance Model (Venkatesh & Davis, 2000) faculty who utilized texting and mobile communication devices were more likely to see positive benefits from its use, or at least the ability of students to differentiate between formal and informal writing. Another faculty member, Participant #4, who taught at a 2-year private college, referenced the different between the formal and informal writing received from students, stating:

> I have one student who will send me an e-mail, 'c u l8tr' text messages, but writes absolutely beautifully. Wonderful papers, won our English award twice, so he's obviously able to bridge the gap between what is appropriate academic writing versus just the everyday sending the teacher a text.

Several students specified that texting and Textese did not influence their writing due to the fact that they utilized code switching between formal and informal written work. As one 18-year-old female student wrote, "it doesn't impact my writing. I never used Textese when I'm doing assignments." This belief was repeated by another 18-year-old female student who stated, "Texting and Textese does not impact my writing. I may write in Textese with my friends, but I know when to." The Threaded Cognition Theory elucidated that students were able to complete multiple tasks at once, which would include switching back and forth between styles of writing. This belief that students were adept at code switching was mirrored in the comments of an 18-year-old male student:

> I do not feel that texting and Textese impacts my ability to communicate in writing, for I believe they are two completely different types of communication that I approach differently. Texting, depending on the person, is usually informal

> and not highly analyzed for errors before sent, where as [sic] I see formal writing to be an art to take seriously.

Age did not seem to influence whether or not students believed texting influenced their writing due to code switching. One nontraditional student opined, "I do not believe it affects me… I am 26 and so by the time texting came out I was already a Junior in high school, and most of my writing habits had already been formed". Often, students indicated that those who utilized Textese in class were, as one 18-year-old female student who believed that texting had no influence on her writing stated, "I feel as that people who uses [sic] Textese among people other than friends are showing their lack of english [sic]."

While some students indicated that the auto correct and Spell Check features of their cell phones/smartphones aided in their spelling and written communications, not all faculty and students agreed with that statement. One student, a 19-year-old male, wrote, "Half of my text [sic] are not typed out words it's all abbreviated! I've caught myself doing that in writing a paper. Here lately I have started typing out all words so maybe I could help my writing." This failure to translate the code switching into actual writing was referenced by one faculty member at a 4-year private college (Participant #3), who stated: "My students tell me, 'I spell out all of the words, because my phone helps me', but I see the Textese in the e-mails."

***Perceptions over texting and Textese*.** Tied in with the Technology Acceptance Model, many of the faculty perceptions about the influence of texting and Textese on students' writing, tied in with whether or not the faculty themselves were frequent users of texting. Proponents of the utilization of texting to encourage students' engagement, questions, and writing saw the influence of texting as either negligible or positive. This

perception tied in with the Threaded Cognition Theory, Media Richness Theory, and Uses and Gratification Approach that the faculty and students believed that the influence of texting and Textese was useful in building students' writing skills. However, not all faculty and students espoused this belief, often pointing to the negative influences of texting on writing with examples of poor grammar, reduced levels of literacy, poor spelling, little detail, and shortened sentences.

*Positive influence***.** Many proponents of texting believed that it encouraged students to write, even if the writing was not the formal academic writing many of them expected. As one professor at a 4-year university (Participant #2) explained, "For students who normally wouldn't be writers at all in any way, shape, or form, it's really positive, because then they can put something on the paper." By encouraging students to be able to write, even if it was not academic prose, the faculty believed texting influenced students into writing more than if they did not have writing available. These faculty, who were proponents of texting, believed that faculty who utilized texting could help students learn to distinguish when and where it was acceptable to use. An instructor at a 2-year urban college (Participant #7) stated, "They still know differences and they been taught differences in audience and levels of formality, and they have that coming through from high school. They are not very good at that necessarily, but they know that there is a difference." Other faculty voiced the opinion that students could be taught grammar, syntax, and structure if texting were used, because just by getting the students to write (even if in text) was important. A 2-year community college instructor (Participant #1) acknowledged, "Grammar will come around, they will get it, they will understand how important it is, but if we can use a format that is more enjoyable for them, then we can teach them".

Students also believed that they had the ability to code switch between formal and informal language, which was supported by the Threaded Cognition Theory, Media Richness Theory, and Uses and Gratification Approach. A 20-year-old male student identified texting's influence as positive, because "you are using words and practicing language every text." This viewpoint was mirrored by a nontraditional female student who wrote, "I think texting has a positive impact on my writings because it helps a lot with spelling and sometimes grammar."

In addition, utilization of texting or voice-to-text software allowed students who had difficulty writing to actually get words written down on a page, according to proponents of texting. One faculty professor at a 4-year university (Participant #2) indicated the voice-to-text would aid students in producing a transcription of their thoughts: "So what on one hand might seem like a lazy shortcut for some students could really be a Godsend for other who are just unable to get that first word or sentence or paragraph down." However, this positive perception was not accepted by all faculty or students.

*Negative influence***.** Students as well as faculty members recognized that texting could have a negative influence on the students' writing and engagement in class. An instructor at a rural 2-year community college emphasized the negative influence of texting due to the frequency students' text:

> I had a student say in class just today she has sent over 1,000 texts this month; 1,000. Even if they are only three or four words or three or four emoticons, that's 4,000 signals that are ingrained in her brain now rather than doing the proper grammar, so it definitely has an effect.

The negative influence perceived by faculty concerning texting often tied in with a lack of frequent texting on the instructor's part, which was emphasized with the Technology Acceptance Model. As an instructor at a 2-year community college who supported texting in class and saw its influence as negligible, Participant #9 explained the permeation of texting into students' lives and writing,

> They are texting, always texting, texting. That is their preferred method of getting information back and forth, which is interesting. I would think that would have an effect on their writing if this is the main way they communicate: not forming full sentences, not a full verbal exchange, not writing full sentences in email, but just even casual communication I think there is going to be a change and then I think this is going to find its way into writing.

Faculty concerned with what they consider the negative influence of texting on students' writing point to the frequency of texting as one of the main reasons why they view it as harmful. Often those who expressed concerns over the influence of texting on students' writing referenced the lack of practice of academic writing as one of the reasons. This also built upon the students who failed to differentiate between formal writing and informal writing, whether in the classroom or the real world, which stirred additional concerns with faculty over the negative influence of texting. One professor at a 4-year college (Participant #10) observed,

> When I'm reading text in a text by students like the summer lit classes we do this for oral communication, just words piling up on one another; running, running, running sentences just run-on sentences, so I don't know because I did start to see some of those same students in their papers doing that same behavior with language. I was thinking well if you're doing it with the phone and texting,

> you're not seeing the difference between when you write a paper for a grade or maybe a job application, resume. Maybe you can't tell the difference between informal and formal writing. You need to think about your practice and start learning some things that might help you to gain some control over your language.

This lack of control over writing and language was a direct effect of texting, according to faculty. Pointing to the use of emoticons, logograms, shortened words, shortened sentences, grammar errors, etc., some faculty believed that the influence of texting led to lowered literacy rates and writing knowledge. However, not all students' writing was equally influenced by texting, as a 4-year university professor, Participant #6 explained,

> I would say the egregious ones are using letters for numbers and emoticons, and things like that, but the less egregious ones that are still, one might argue, residue of text speak are the informality, lack of punctuation, capitalization, and the lack of greeting.

Students were also mixed on their opinions about the influence of texting being negative. One nontraditional male student wrote, "I feel like spell/grammar have ruined most actual knowledge I had of either or all of it." The frequency also factored into an 18-year-old female student's response: "Sometimes your [sic] so used to using 'text talk' you use it in everything you write. Also, sometimes your spelling sucks because you abbreviate words and phrases." This point mirrored the concept of the Transactional Distance Theory in that students used the most efficient, quickest way to write, which left room for misunderstandings and what would be considered by faculty as academically inferior writing in Standard English. An instructor at a 2-year private college expressed the frustration with texting, "Somebody has to figure out a way to

improve using the phone to improve students' writing, teaching them the difference between informal and formal communication." Faculty fear over the failure of students to differentiate between formal and informal writing had real world implications. One faculty member used her sister's experience working with individuals in a career services capacity as to how texting was negatively influencing individuals' writing abilities:

> Now, she's working with all of these people who use Textese, and they never learned they weren't supposed to use it in formal writing…. She gets these applications filled with Textese, and that's where our students don't realize you need to know how to do this, you need to know when to get rid of it, I guess. My students are able to get rid of it pretty quickly, but I guess it's just elaborating on when they need to get rid of it, and that might be more important than they think even in what they think are informal conversational styles, informal social media.

While real world implications existed for how texting influenced students' writing, faculty and student perceptions on whether this influence was positive or negative were dependent on the participants' adherence to the Technological Acceptance Model.

Influence of texting on literacy, reading, and writing. A major theme that arose from the faculty interviews was the concern that students were not reading, which meant that the influence of texting on their writing was perceived to be stronger. Students were reading fewer books and more text messages or SMS, so faculty believed the students were also negatively influencing their writing due to the shortness of text messages, which tied in with the Media Richness Theory and the Uses and Gratification Approach. As an instructor at a 2-year private college (Participant #3) explained, "They don't read

and therefore, they can't write. They don't know the larger words, because they don't read." If reading was influencing writing, and students were mainly reading text messages and SMS, then faculty believed it would negatively influence their writing. A professor at a 4-year university (Participant #2) expounded that texting could possibly already exit in the written works that students read,

> I will be surprised the day I pick up a book and I find the mixing of the academic and the texting. I wonder if our graphic novels, or if print that is consumed by our younger generation that's more popularly pitched, is already making use of these innovations?

The concern for the amount of texting students read was specified by the same professor, "They spend so much time writing in text and texting their friends and e-mailing their friends, they're not used to communicating with language."

For students with lower reading and writing literacy levels, texting was believed by some professors to exacerbate the challenges of writing academically. A professor at a 4-year private college (Participant #10) specified that students in her developmental reading classes utilized smiley faces when they wrote journal responses to readings, or answered questions from a lecture. Due to seeing emoticons, the professor worried,

> If you're practicing this one way, meaning you write with no control, no thought, no reflection, no checking, nothing; then, you are always going to do that because your practice has created a habit. I'm a big believer in habits, so they can have positive things or negative things.

Differentiating between the colloquial vernaculars native to a rural community as opposed to lower literacy levels was difficult for students and instructors. Faculty indicated that discerning the influence of texting in this type of a situation would be

difficult. Participant #10 reflected on the residents of the low literacy, low socio-economic area her college served: “I never thought about [the concept that] is it just the low literacy, or is it now because they’re coming out with the generation where it’s the text, it’s the Twitter, it’s this, it’s that?”

On the opposite side, one professor at a 4-year university professed strong beliefs that reading and writing in the cyber world increased their communication, reading, writing, and knowledge bases. Referencing not only texting, Tweeting, and other SMS utilized by today’s individuals, Participant #6, who spent much of the last two decades exploring online interactions, noted positive influences found in computer gamers who not only learned mythology and history, but communication skills as well while playing computer games:

> There is a real opportunity in the amount of communication students are having with each other and you’ll find this among gamers. People denigrate gamers as being slackers or wasting their time, but if you look at how much communication they have, what are the tools that they will use, what are the terms of rhetoric, whether it is in a short hand or not, they know how to communicate. I think one of the ways we can capitalize on what students are already doing in information venues like texting and like gaming is that when they reach us in our classes we say, ‘Hey, we know you’re already a good writer for some occasions and audiences, because of how many of you have done this, this, and that. So, let’s not pretend that we don’t know how to write. Let’s just figure out ways to transfer those skills to genres and formats and styles that are appropriate for different audiences and occasions, some of whom will be your other professors and some of whom will be your employers’.

Texting is writing. The debate over whether or not texting was an evolving written language was forwarded by faculty participants. Several of the faculty participants considered texting as a form of writing, or an evolving form of written communication/language, which tied in with the Uses and Gratification Approach, Media Richness Theory, and the Threaded Cognition Theory. Due to the widespread use and understanding of Textese, its ease of use, the evolving beliefs concerning the expansion of Textese as a visual, symbolic language, four of the faculty members indicated they would consider it an evolving language and writing form. The usage of emoticons, logograms, and shortened text was not appropriate for formal writing, but more than half of the faculty indicated they allowed or at least accepted this type of writing in informal writing. One faculty member (Participant #3) at a 4-year private college delineated,

> It really is a visual language, because looking at it it's hard to decipher, but if you read it aloud it's very easy to decipher. That's kind of an interesting point; plus, with the emoticons those are highly visual and what's interesting with the emoticons as they can be taken in any number of ways. They are open to interpretation, so I think maybe we need to, and I can I don't see it so much here, they are at some point needs to be some kind of address made to the students were using this that you know that smiley face could be considered a smirk, a smile, a sarcastic look – – all of those possibilities exist and if you are not telling us what it means using those adverbs and adjectives that have fallen to the wayside were not going to know your interpretation, which can invalidate some of your points in your paper if you're doing that.

Among the concerns resonating among faculty participants was the need for students to be taught how to properly code switch between formal and informal writing dependent upon audience, tone, purpose, and other requirements. The widespread use of texting by students and faculty of varying ages prompted one professor (Participant #2) who taught at a 4-year private college to note,

> I think of texting now in the broader context of a lot of social media use where often people are inputting on a small keyboard or using voice-to-text, and I'm coming around to the perspective that more writing is better than less writing. What we're actually witnessing, or may be witnessing, is a Renaissance of writing if you're willing to broaden the definition of writing. People are doing more writing than they used to as more communicative exchanges migrate to e-mail, Facebook, to phone texting, that sort of thing. Now whether that has implications for growth in cognitive sophistication, I'm not sure.

However, not all faculty believed that Textese was an evolving language, or that texting in and of itself was writing. One faculty member at an urban community college who identified themselves as "pro-technology" and who incorporated the use of cell phones and smartphones in the classroom along with other technology, Participant #9, stated: "I don't think even students really consider it as a method of writing as such, it's just a quick messaging tool."

Influence on students' engagement. The influence of cell phones/smartphones in the classroom and their influence on students' engagement, including the use of texting, ties in with the Transactional Distance Theory, the Media Richness Theory, and the Uses and Gratification Approach. Faculty and students indicated widespread use of texting and Textese; although, the perceptions of the influence of texting on students'

writing varied considerably. Faculty who considered themselves pro-technology and texting viewed it as a form of writing that enhanced engagement within the class, increased students' questions and discussions with instructors, and increased the amount of writing students actually did. Faculty who saw more negative influence in students' writing from texting, identified disrupted attention spans, students' texting while in class, and students utilization of Textese in written work as issues.

Questions increased. While some previous studies identified increased student engagement from texting in the classroom, the increased engagement revealed in this study was amplified communication between faculty and students. One faculty professor (Participant #2) at a 4-year private college stated,

> I have more students willing to give me a quick text. My students are much more likely to communicate with me now than they ever were. I mean I never had anyone calling me at my office, and I always have students' texting and e-mailing, and occasional Facebook, and occasional Twitter, just constant, which is good there are always good questions. I think because they have to think about it at least a second, it helps them verbalize or synthesize what the problem is, instead of coming to my class… and saying, 'Oh, I didn't do it because I didn't understand'. Well, there's no excuse because you can contact me all the time.

That same faculty member specified that when contacting students informally, she would incorporate some Textese into her responses, such as 'LOL'. Utilizing this approach, the professor believed that students were more receptive to asking questions and contacting her concerning class.

The use of texting, Twitter, Facebook, and other social media to interact with students was seen as a way of bridging a gap between the faculty and their students, who

they often considered digital natives: “I use hashtags, I use what they understand, and what I’m trying to do is make a bridge between where their understanding is to where I hope they will end up being by the end of my course” (Participant #9). The perception of increased willingness of students to contact faculty with questions or clarifications was a dominant theme found in the interviews. A community college instructor, Participant #1 observed,

> Our students enjoyed texting and if we can find a way to use texting to get them to do their work, I think we would be doing them a service and ourselves a service. The teachers have to adapt, the students aren’t going to adapt. They want the technology, we have to find ways to incorporate it.

This belief by faculty that it was necessary to identify ways to incorporate texting into a learning environment, because the students increasingly utilized it and that it would benefit them in a globally interconnected world where mobile communication was a necessity tied in with the Media Richness Theory and the Uses and Gratification Approach delineated by Park et al. (2012).

Increased uses. All but two of the faculty participants identified that they utilized cell phones and smartphones to communicate with students, including texting, but most discouraged the use of the mobile device and texting during class. Participant #5, a professor at a 4-year private college, specified that she models good behavior with her phone for her students by turning it off when in class, spelling out all of the words, and using correct grammar. An instructor at a 2-year community college (Participant #8) regularly utilized smartphones in class to have students complete polling questions on assigned work. The use of programs such as Insight, which allowed faculty to view

students' writing on computers and make comments, was indicated as improving student engagement by one community college instructor (Participant #1),

> In class when I'm using the Insight program and when students are working on an essay, if I send them a little e-mail that is just to them through the Insight a lot of times the students will ask a question back through that and they say they feel more comfortable asking questions through that than raising their hands and asking a question.

This willingness to communicate utilizing texting or Instant Messaging indicated the students' comfort with texting as opposed to face-to-face communications, a point brought to light with the Uses and Gratification Approach and Media Richness Theory (Park et al., 2012).

At one small, 2-year community college, Participant #3 explained the faculty incorporated writing utilizing texting to a friend, e-mailing a professor, and then formal letters as a means to teach students how to code switch between differing audiences. As Participant #2, a professor at a 4-year university noted, "They have never been taught how to communicate with adults or a professional….A lot of our students don't realize there should be a little bit of difference, even if you're texting or e-mailing a professor." Another professor (Participant #10) at a 2-year community college allowed minimal Textese in Discussion Forums for online classes,

> I will see it in my discussion forums because I teach online, I use D2L. They will do that from time to time in a post. I am not worked up about it, because I consider the discussion post fairly informal. As long as they are not swearing, using hate language, threats, anything like that, and I do ask for the basics of Standard English. I want their 'I's' capitalized. I would like you to control over a

> sentence, show me you've got some control, but I don't go through and check for. In their papers I don't recall it, I think it was more if problem of run-ons, just constant jamming up of words, not capitalizing the pronoun I. There are some other phrases, but one summer I was a little astounded. It wasn't like BFF, like best friends forever, it might have been OMG, oh my God. I think I did go back to that person and say this is the sort of language we use in texting, you can't do this in a formal paper for college essay or class credit writing. I gave the individual a chance to revise it, and she did. But, now, her posts continued to be definitely as heavy with these kinds of things [Textese]. She was young, she was 18 to 20, and she was the rare exception. Most of them [students], regardless of age 40-ish or 20-ish, it would be these other problems of the run-on's, the fragments, not capitalizing 'I'.

That professor also noted an increased use of emoticons and logograms in the writings of her developmental reading students, a concern that other faculty expressed as well.

*Disruptive in class***.** One of the biggest perceptions of the negative influence of the presence of cell phones/smartphones in the class was that they were disruptive to students, even if the devices were put away in backpacks or students' purses. The Transactional Distance Theory identified that students' attention was focused on how close their mobile devices were to them, what messages were being sent, what messages needed to be sent, what messages were being received, as well as what social communications were occurring while the device was near the student. One faculty member (Participant #3) from a private 2-year college noted, "I think that texting and cell phones keep them from becoming fully involved in the classroom. If their phone is

there, even if it is put in a backpack or purse, they are thinking about it, about the messages they are receiving or missing."

Of the faculty members interviewed, only Participant #1 at a rural community college had a campus-wide policy on the use of mobile devices in class. This policy required all electronic devices to be turned off and put away during class, or the student would be disciplined and, eventually if the behavior was repeated, administratively withdrawn from the class. All other faculty members interviewed indicated they had policies concerning texting and the use of phones during class in their syllabi, but no campus-wide policy concerning the use of mobile devices in class.

Influence of demographics. The perception that demographics did not influence a students' use of texting or Textese in writing, unless it limited a students' access to or use of the Internet or a smartphone. A professor at a 4-year private college noted that some families intentionally avoid utilizing computers and cell phones/smartphones. Another faculty member (Participant #8) at a 2-year urban community college utilized a learning management system with texting built in to communicate with students, an opportunity available due to the urban setting. The advantage was improved communication between the faculty member and her students:

> We had an SMS LMS, so this is a smart texting system learning management system. I would communicate with all of my students with just a quick button on my phone, it was a really neat way to communicate with them. I would tell them updates on their grades, I would tell them where to go to find certain information to prepare for writing papers, you know things of that nature.

All of the faculty participants specified that gender did not influence whether or not a student utilized Textese in writing; however, age appeared to influence the use of

Textese. One community college instructor (Participant #1) stated, "The nontraditionals are more respective of not having their cell phone out in class. [They are] much more concerned with how their texts or their e-mail or their language comes across, more so than the traditional age college student." All faculty participants indicated that students of all ages were texting, and that some of the Textese permeated informal and formal writing alike.

Influence on revisions. One often-voiced concern by faculty was the influence of texting on students' revision of what they have written. A professor at a 4-year university (Participant #2) stated, "They are used to having to vomit their thoughts on the text, just sending it and not editing, and then paying the consequences for them later." The concern that students were not editing what they wrote, or revising their work to improve it prior to submission, concerned faculty due to the students' lack of practice of writing. A faculty member at a 2-year private college (Participant #3) believed, "Regular freshmen don't revise, they don't read what they write, and they've never had to before in high school or junior high."

Despite being considered digital natives, most of the composition students were perceived by faculty as being negatively influenced by texting when it came to revisions. As a professor at a 4-year private college, Participant #10, stated, "When you think about communication I'm not so sure they're actually making edited choices, reflections involved in choices for conciseness or meaning, punctuation, and grammar correctly." With advances in smartphones, tablet computers, and other mobile electronic devices, faculty indicated that they, too, were utilizing the evolving technology to aid in teaching. Participant #3, who taught at a private 4-year college, explained that her granddaughter,

who was away at college, would send her a copy of an essay and that she would text back and forth with her granddaughter with suggestions about improving the essay.

Many of the students, however, believed that they overcame the influence of texting and Textese by simply proofreading more carefully than they did previously. A male who was 25+ years of age wrote, "I do often have to edit out various texting acceptable phrases, in exchange for more academic sounding examples." An 18-year-old female echoed this sentiment, "Every now and then I write like I'm txting [sic]. I don't think it affects me negatively because it makes me proofread a lot more."

Influence of voice-to-text. That voice-to-text, speech-to-text, or talk-to-text applications positively influenced students' grammar and word choice in that the students focused more on what they were saying orally into the program. Tying in with the Media Richness Theory and Uses and Gratification Approach (Park et al., 2012), faculty indicated that this type of program was beneficial to those individuals who utilized it regularly. Faculty differentiated between students who were regular users of a voice-to-text program as opposed to students who were infrequent users of the same program. Furthermore, delineation was made between students who were utilizing the programs because of physical or learning challenges versus students who were just using the voice-to-text programs short-term or on their phones. Participant #4, who taught at a 2-year private college, questioned the impact that voice-to-text would have on Textese and its use in the future:

> Obviously, the grammar is improved because they're speaking and most of them while they write horribly, they speak pretty well. I wonder what influence that has on their texting if they start using the talk to text versus the students who don't have the smartphones and are still using the holdovers from the texting and

> Textese? I wonder if that is going to eventually kill Textese, especially with all of these hands-free laws.

The evolution of the voice-to-text software was identified by faculty as beneficial to anyone who utilized the program on a regular basis and who 'trained' the program to their voice, speech, and language patterns.

*Beneficial to students***.** Students who utilized voice-to-text programs were perceived by faculty to benefit because the students might otherwise not communicate at all, especially in the cases of those who were physically or learning challenged. The utilization of voice-to-text or talk/speech-to-text programs were utilized in many of the school writing centers or laboratories where students' wrote. One faculty participant (Participant #3) whose grandson was learning disabled saw positive use of voice-to-text programs,

> My grandson plays text messages on the phone, so that it reads the message to him. He is learning disabled and was deprived of oxygen at birth. He texts his cousins and communicates with the cell phone with the voice-to-text. It can be made to good use for certain students, especially developmental students.

In addition, other faculty saw it as a way to encourage students to overcome writing blocks or challenges in that it incorporated more sensory input than just texting. Participant #6, who taught at a 4-year university, enthusiastically welcomed the use of voice-to-text,

> First, I would like to say I love voice to text and I use it all of the time, because I am a fumble fingered, getting to be an old man. I find it a big release to be able to voice text, particularly with my daughter. It makes mistakes, so I have to be alert and correct them. I do think there is an element of multisensory or

> multimodal, you're working in two distinct channels of communication. One, audio, spoken, and one visual, which is text. I would guess if you're monitoring yourself for the same reasons that we ask students to read their papers out loud, and expect that some of them will be able to detect errors. There is something that forces you, an internal monitor, when you're creating language, producing language off the cuff, and I won't say this is true for all learning styles, or all presentation styles, but I would guess that for most of us that's true.

Detrimental to students. This belief that students' writing was improved by using voice to-text was not shared by all faculty. Participant #9, who taught at a 2-year community college stated,

> I have students with disabilities and we have [Dragon speak] on some of the computers in the labs and in the tutoring area, so there will be identified computers that have it on there in our STAR program, which is the accommodations program, they have that available, too. I'm familiar with that program and I've watched students use it where you have to say, 'blah blah blah blah blah comma' 'blah blah blah blah blah capital letter'. They have to speak it out, but they're not necessarily all putting in the pieces that they need to put. They are aware when they are using it. I think there is a difference between regular users – a person who has to do it all of the time – and somebody who might have a short-term need to use it. Most of the people I've seen use it are students with disabilities that are permanent disabilities, and they are always going to be using that program. They have learned to use the program, and they know that they have to speak the punctuation and all. They are not necessarily any more correct, they just put it in where they think they need to put it in.

The widespread availability of low cost voice-to-text, talk-to-text applications for mobile devices have also led to increased use as the technology evolved. A professor at a 4-year public university, Participant #6 stated,

> I think there is great potential in thinking about the productive interrelationships between audio and typing and hand written communication styles, and the degree to which they inter inform each other and also be good tools for writers who are struggling with different learning styles to provide multiple channels. For someone who has a lot of trouble either typing or handwriting to be able to talk something out and have it transcribed, and look at what was transcribed, correct the mistakes, and move from there; I think that's great power and I think that no one should denigrate that potential for writers.

The down sides to utilization of voice-to-text programs were the insertion of incorrect words due to auto correct functions, lack of training of irregular users, and the lack of students' knowledge of correct syntax and structure. Participant #4, who taught at a 2-year private college, referenced spelling errors due to auto correct:

> Their spelling has gotten much worse I think because of the texting, and not because they are using Textese, but just because it completes the work for them. You don't have to type in the full word. I admit I'm frustrated when my phone won't type in the full word for me. Also, the same thing with the iPad, it will complete the word, or any type of textual device. Even on my iPad, you type in three letters and hit the space key because the word is spelled. I think that another carryover is definitely the ability to spell is gone. With the computer they can use spell check, so that might be a little hang up of texting, also.

The importance of training the software to the user's voice and vocabulary was also stressed as essential by Participants #2 and #6.

***Decreasing depth of detail in writing*.** One concern referenced by all of the faculty participants was the lack of detail, depth of description, use of descriptive words in students' writing, and decreasing vocabulary was a result of texting. Faculty Participant #4, who taught at a 2-year private college, identified the limitations in the use of cell phones or smartphones to send messages, stating,

> I'm sure a lot of them when they are e-mailing you they're using their cell phones to e-mail. In the past I would get these long e-mails that would fully explain. Now, they're very short in vague, and I wonder if it has to do with the fact that it is difficult to type a long e-mail on your cell phone regardless of the kind of keyboard you have.

Another faculty member who taught at a 4-year public university (Participant #5) saw a positive influence in that texting required students to express themselves more concisely and with more specificity. The briefness found in texting required students to become more succinct in their messages, according to Participant #5 who noted,

> I think that certainly in academia I am always trying to urge concision, and if texting helps people really distill a thought into an economical form that could have a positive influence on how people express themselves in academic genres…. I would say that students who are unaware of genre as a concept and how that relates to an audience and to an audience's need for a message to be contextualized may not recognize that transferring of discourse practices from one realm or platform in this case to another could be problematic. It could be flagged in a negative way by readers with certain academic expectations.

*Decreasing vocabulary***.** These academic expectations required a good use of a vocabulary as well as syntax and structure requirements found in formal writing. A teacher at a 2-year community college (Participant #9) identified a difference in the vocabulary of today's students, but did not draw a conclusion that the decrease in vocabulary was from texting. As an example, the participant referenced a relative who was a poor writer:

> I think, in general, they just have a poorer vocabulary, a poorer ability to write and express what they're trying to say accurately. Whether that dips into the texting area or not, I can only think of a couple of individuals that I know, one is a step granddaughter who texts and makes messes of even her texts who would never probably ever write at all if she didn't text. It may even be a good impact, because there is writing coming out of her. It's bad writing, but it is writing and she is the kind of person who would not writing thing unless something compelled her to that.

*Lack of details***.** The perception that texting was encouraging students to write was considered a positive influence by faculty, even if the writing or vocabulary would not be considered appropriate for formal essays; whereas, the faculty believed in the past these students might not have written anything. Another writing issue that faculty mentioned was the lack of the use of details, descriptors, adjectives, and adverbs within students' writing. A faculty member at a 2-year private college (Participant #4) stated,

> Those short choppy sentences are really, to me, indicators of Textese even if they are not spelling like Textese. The fact that those adjectives and adverbs are just not there….There are other students that still it is the short choppy sentences. I can't get them to elaborate on the literature that they've read, because their

> descriptors are just so synced and to the point, 'It was good'….Explain it more, tell me more. You can't get them to elaborate, so as a literature teacher part of that is I don't think they read, or they didn't pay attention when they were reading. But, the writing professor in me says maybe they're just limited in their vocabulary and their ability to describe what they are thinking, to get those words on paper.

This limited vocabulary and lack of detail lead some faculty to notice that often students had difficulty meeting page length requirements. An instructor at a 2-year private college (Participant #4) observed, "Ironically, their papers were much shorter, they had trouble meeting length requirements because they were using so much code speak. I don't see that code speak anymore, it's starting to die away."

*Students' perceptions vary***.** While several students' indicated they saw a definite influence on their writing from texting, only a few believed it negatively impacted their writing due to their use of code switching. A 19-year-old male student wrote that texting "has a negative impact, because you don't care about grammar and spelling on text messages." For faculty members, the encouragement for texting being a positive influence comes from using it as an example for students to differentiate between formal and informal writing. A faculty participant (Participant #10) who taught at a 4-year private college recognized word usage patterns in texts and e-mails that she received from students as being the same issues she was seeing in their formal essays. The instructor used this to teach students about writing for different purposes and audiences,

> It's how I started to I think trying to get across to some of my students what trouble with fragments and run-ons that when I told him I see this in your text and then I see it in your paragraph in your paper, so somehow recognizing this is

> a complete sentence; whereas, this is just conversational language, we go from thought to thought, we don't worry about if you get it or not, because we can always clarify it in another text. They kind of resisted me, and then a few of them felt a little bit more like taking it seriously, like 'Oh, you mean that's a problem?'

However, students often saw texting as improving their writing skills and vocabulary. A 20-year-old male student saw texting as improving his vocabulary, "Texting has a positive impact on my writing because it helps me learn words that I might not of new [sic] before." An 18-year-old male student saw texting as improving a variety of aspects of his writing,

> I believe texting has more of a positive impact than anything if used correctly. My vocabulary is increased at times when someone text [sic] a word I am unfamiliar with or when I use a thesaurus to use a better word. Spell check also helps with my spelling.

One professor at a 4-year university indicated students often struggled to express themselves without using Textese,

> You have students recognizing you're not supposed to use this in formal writing, but they are trying to manipulate it the best they know how and not in a deceitful way still be able to use it. That gets into discussions of do they now have fear that they can't adequately express themselves without J/K, LOL, emoticons…. They have grown up in a world where everyone older than them has said, 'Oh, well, you're not living in a face-to-face world, because you can't do anything without tonality and without visual expressions'. Well, with the emoticons and the various slang they are trying to re-create this and that's the world they've

> known, but when they are in a fully non-face-to-face world, a fully academic world where it's just their words, maybe they don't feel confident choosing the correct words or feeling that the tone comes through adequately, so there like, 'No, I've got to put in a J/K, I've got to put in an LOL'. Then you get into the whole issue of what are they trying to say, and how can we replace what they are using – whether it is an emoticon, and LOL, or what have you – with whatever the academic version is?

By infusing Textese into formal essays, even in a parenthetical aside to an instructor, students showed the permeation of texting into their vocabularies and writing. In addition to influencing students' writing, whether positively or negatively, faculty and students agreed that texting also influenced the syntax and structure of their writing.

Influence on syntax and structure.While a few faculty members indicated that students' syntax and structure errors were increased because of texting and Textese, including grammar errors, shortened spelling, shortened sentences, emoticons, and logograms, not all faculty believed this to be true. Those faculty who saw texting as having a negative influence, such as one participant at a 2-year community college (Participant #1), identified texting as having "ruined their grammar….ruined their standard usage of English." This instructor identified deficiencies in students' writing that compound issues with texting, "Many of them were deficit in their standard of usage of English in the first place with the double negatives and using colloquialisms and regional dialect."

However, other faculty were not convinced that texting was influencing writing negatively. One professor at a 4-year private college (Participant #8) incorporated lower

literacy rates with the syntax and structure issues in students writing more so than texting:

> I would say based on what I have seen those [students with low level literacy rates and or learning disabilities] students write fragments, but I really am just not sure that that is related to texting. I've watched students change over the last nine years, because that's as long as I've been teaching, and the first couple of times I ran into having students in my classroom who were obviously misplaced, they should have been in college readiness programs. I see the similar strain, I see the students who have issues with not knowing basic grammar rules, don't know what is run-on sentences, can't identify a fragment, can't identify a sentence, don't know what clauses are, things like that.

Mixed perceptions on the influence of texting on students' syntax, structure, and writing were also expressed by faculty. A professor at a 4-year university (Participant #5) established the positive influence of texting on informal writing, but a possible negative influence on formal writing:

> [Texting] has a positive impact on informal writing, because they are able to grasp an idea and get the tone in the field and the idea down. Without editing or knowledge of that next step in formal writing it can, depending on the student, depending on how much they text, depending on all of these other factors, have a negative impact on formal writing.

Another professor at a different 4-year university identified positive influences from texting on students' writing and the amount they write. As detailed in the Media Richness Theory and Uses and Gratification Approach, Park et al. (2012) explored the importance of ease of use and variety of uses in an individual's utilization of technology.

The professor, Participant # 6, specified the importance of utilizing texting to engage and teach students how to write for different audiences and purposes:

> I was interviewed for a *New York Times* article more than 10 years ago about this, and I did say I thought that it was a double edged sword in that there are obvious negative effects if we look at the writing, but the fact that they've been writing at all on any kind of device is a plus. The challenge now is to harness the raw energy and not to criticize it, but to help students convert that into something that is available, appropriate, and/or persuasive to different kinds of audiences.

The perception of texting and Textese negatively influencing grammar was voiced by faculty as well as students. The issues of not punctuating correctly, not capitalizing, shortened sentences, run-on sentences, and shortened words were mentioned repetitively by participants. An instructor at a 2-year urban community college (Participant #7) stated,

> They've gotten very, very loose about capitalization and punctuation, they're just waiting for AutoCorrect to throw a period at the end of the sentence, but they will not capitalize necessarily or they'll use a few of the abbreviations, not super text abbreviations, but a few of the shortcuts – 'through' 'thru' - that kind of thing. AutoCorrect fixes the 'I' and they don't bother with capitalizations.

All faculty participants indicated usage issues, specifically with students not capitalizing the pronoun 'I', or incorporating logograms in with formal writing. Most faculty, though, identified the use of logograms and emoticons being present in informal writing as opposed to the formal writing of essays. This perception tied in with the Uses and Gratification Approach of Park et al. (2012), where students preferred the easy access and use of texting language over the more formal standardized English that was

expected by professors in students' writing. Teaching at a 2-year urban community college, Participant #7 determined the use of Textese occurring in informal writing was a negligible influence, but did not see the influence of texting in formal essays,

> In e-mails I think because the e-mail feels more informal, I think my students for the most part seem to understand that writing a paper is such a formal exercise that they write more formally. They're more conscious of their process, so I have not run into composition essays where people will be using text speak. They will slip into a conversational style that is less formal, but typically they are trying to copy the sound of their own voices in their head, so it is as if they are trying to have a conversation and they are writing out that conversation, instead of considering that writing is a bit of a more formal process. I can't say that I can see that texting is necessarily effecting their composition, their papers, but I see it a lot in their e-mails.

This perception was mirrored by an instructor at a 2-year community college (Participant #3), who referenced emoticons and logograms in students' writing. The participant identified the shortened style of words and spelling as unacceptable,

> They write 'u' or 'UR' for 'your'. They put emoticons in their messages and essays, I don't know if it's supposed to make me happy or what. Another thing I have noticed is that they never look at what they've written. They were using the symbols [emoticons] and I always say no symbols. They write 'im' instead of saying 'I'm' and leave out the apostrophe and capitalization. They confuse 'they are', 'their', and 'there'. They put a colon and end parentheses :) to make a smiley face. In addition they put a tilde when addressing someone. They also use X's and O's in writing.

However, one faculty member at a 2-year urban community college (Participant #7) commented on the students' egalitarian viewpoints that lead to their viewing of professors as equals, often which lead the students' writing to display a tendency to be short and to the point in writing regardless of whether the students were writing an essay, a text, an assignment, or an e-mail. This perception supported the Transactional Distance Theory by Ng'ambi (2011), where students' transactional distance needed to be narrowed to avoid confusion or excess information. The instructor (Participant #7) stated,

> This generation seems to be more egalitarian than my generation. It's almost like they're trying to write a telegram, they're trying to get the most efficient language out as fast as possible in order that communication might be reached so that they can receive a reply, but it's all about efficiency. It's not in an effort to be rude, it's in an effort to be efficient.

This efficiency in writing also supported the Uses and Gratification Approach by Park et al. (2012), where students demonstrated preferential use towards technology (in this case, writing) that was easy and fast to use.

*Evolution in writing***.** The perception that students' writing was evolving the way American English continuously evolved was presented by more than one faculty member. A professor at a 4-year university (Participant #6) specified that students utilized grammar in their formal and informal writings:

> They have grammar; it just might not be the grammar that we expect. I feel strongly about this because it is something that I teach teachers of writing when we get into the discussion of writing… We talk about the different ways grammar is used. Grammar is a descriptive term of how people subject and verb

> it across the page. The matter how they do it, they're doing it. They might not do it the way we want them to do. It's all about teaching them what's appropriate for different contexts and audiences.

Faculty concerns over students learning to write properly in varying contexts and to diverse audiences overrode the instructors' concerns about the influence of texting on students' writing. However, students' questionnaire answers also identified concern over the influence of texting on their writing, as well as the difference between formal and informal writing. One 18-year-old female student wrote, "I tend to forget how to use commas and sometimes how to correctly spell words. I believe this because I have seen it in my own writing." This was supported by a 19-year-old male student's comment, "It could go either way, but I think its negative because if you text a lot you will get used to spelling things wrong and not using the right punctuation." Another 19-year-old student wrote, "Negative -> because of the grammar issues."

Considered culturally acceptable.The belief that texting and Textese were considered culturally acceptable in today's society was expressed by all faculty and students in the study. Students were raised in a technologically oriented world, where the Internet, cell phones/smartphones, and other mobile devices were considered a part of their everyday lives. While faculty may have mixed perceptions on how texting influenced students' writing, the participants all agreed that texting and Textese had permeated students' lives and some of their writings. A professor at a 4-year private college, Participant #8, stated,

> Texting, it's almost friend speak. I recently I followed John McWhorter, he's a linguist who teaches at Stanford and he was a Fellow in Manhattan. John McWhorter's research, he has this wonderful talented talk called 'Texting is

> Killing Language JK', where he talks of little bit of a spoof, he's kind of making fun of the notion that texting is necessarily killing language. His defense is that texting is another way to speak quickly. We are talking to one another, are transmission of language reception, and then our ability to respond simultaneously, we aren't able to copy that necessarily in writing. This is the first time we're almost able to instantaneously bring speech to written text in history. So kind of by necessity that writing, that composition, must be short, it must be brief, it has to be able to be sent quickly, and your fingers have to be able to be really fast, and the transmission by necessity must be quick in order for it to copy speech. I think he's on to something. I think that texting is Newspeak, like George Orwell's *1984*.

The ease of use of texting and Textese coincided with the desire of individuals to be constantly connected to the Internet and social media, which ties in with the Media Richness Theory by Park et al. (2012), who found that individuals sought out technology that had a wider variety of applications and gave the users better access to the cyber world. A professor at a 4-year university (Participant # 5) opined,

> I don't want to sound like a doomsday prophet of, 'Oh, no, it's the end of all writing as we know it', because that's not true….It has positive ramifications, as I said, we've got students communicating through words in which they wouldn't have before.

The cultural acceptance of texting as a form of writing that caused the evolution of writing and literacy was a perception that tied in with the Uses and Gratification Approach and Media Richness Theory of Park et al. (2012). One 4-year university professor (Participant #6) stated,

> Colleagues of mine who are interested in the subject…are pointing to the fact that it's not bad, that more writing is being done these days….a book that talks more generally about the shift from a reading intensive culture to a writing intensive culture that began happening after World War II. If you believe that argument, if that argument is attractive to you, then I think we can see what is happening right now with increased use of texting on small devices, on other social media platforms that really emphasize a type of telegraphic communication. All of that fits within this larger umbrella of writing emphasized over reading, which is really an inversion of the first half of our history of literacy in this country, which was more reading intensive earlier on.

Indeed, if texting were part of a progression in writing, then the continuing evolution of texting and what was considered acceptable writing in Standard English would eventually merge. One professor at a 4-year university stated,

> Dennis Barrett is a colleague here that has studied the history of language intensively, and he is quite familiar with the American case, and will argue any day of the week that the way English is spoken and written in America is very dynamic, always changing, always evolving. It seems to me that there is right now sort of a bright line between the mixing of Arabic numerals and the Roman alphabet, which is done now in texting space freely, but not in more formal print genres. But, who's to say that the bright line might begin to fade?

Lower literacy levels. While several faculty considered the evolution of texting and its permeation of daily life and writing as positive, some faculty viewed the influence of texting on literacy as negative. A faculty member at a 2-year private college (Participant #3) had mixed perceptions of texting's influence, "The convenience of

being able to text is wonderful, but it's almost like it is not a good influence" on writing. While some faculty believed that the influence texting had on all students' writing was negative, most faculty differentiated the influence of texting on students who scored low on reading and writing literacy tests. A 4-year university professor (Participant # 6) commented,

> I would say that students who have had less exposure to practicing academic and professional writing in high school are most likely to exhibit those traits in first year's composition. It's the students who come from high schools that are struggling, that have not really had opportunities to practice writing for audiences and purposes.

Referencing the theme of students' lowered literacy being tied to texting, one professor at a 4-year university (Participant #5) remarked on having more concern for lower literacy rates than the influence of texting. This professor noted the negative trend in lower literacy rates as being more important than the influence of texting on students' writing:

> I have less concerns about the texting and more concerned about the literacy its issues, but they're connected, they really are. I have students who won't read blogs, but they'll read texts or they'll read these new social media things like Whisper and Secret, where people write two lines of what their deep, dark secrets are and that's sort of today's Penny bloods. Where people put their two lines like on Twitter, but it's their serial novel…. If you want to become insane about it, just re-read *Fahrenheit 451*, where the main theme was it wasn't the government that did this to the people, the people did this to themselves. They said they didn't want to read long things, they wanted everything to be quick and

> easy and short. It talked about Textese and that's what's pretty cool, because *Fahrenheit 451* predicted everything; predicted Textese and predicted the idea of it. People would do this to themselves, and it didn't come from outside; it didn't come from some sort of authority; it came from the people going we just 'Ain't nobody got time for that'.

Handwriting. One sub-theme that arose among faculty concerns was the decreased emphasis on handwriting skills due to the use of texting, keyboards, and touch screens on phones, tablets, computers, and other mobile devices. A professor at a 4-year university (Participant #5) referenced,

> It concerns me the way that writing is connected with reading, and the way then that you can connect this with the lack of cursive. I've just had my freshman writing students write me in cursive. I thought their heads were going to explode, because the set I want you to write something in cursive. They were like, 'Why?' I explained there are studies that demonstrate the connection between cursive writing and reading literacy, and I want to see it because I am curious and I have theories. Some of them I thought their brains were going to explode, because they couldn't remember how to make some of the letters.

The shortness of messages and lack of reading led to students with limited vocabularies and inadequate exposure to academic prose, according to faculty. Without the practice of reading and writing academically, many students were considered by faculty to be at a disadvantage when it came to college writing level skills, which was only exacerbated by the influence of texting. One 4-year university professor (Participant #2) stated, "You don't write a book, you want to be done. The goal [of writing] is to be done."

Tying in reading and handwriting skills with lower literacy levels and texting was a concern expressed by several of the faculty. Teaching at a 4-year university, one professor (Participant #2) commented, "I think it [lack of handwriting] is due to Textese, because that issue is all they're going to need to know how to do is type and use the phone". The emphasis on keyboarding and touching or swiping on a screen led to decreased usage of handwriting, which negatively influenced spelling, grammar, syntax, writing, and students' muscle coordination, according to faculty. While many of the students believed that texting had no influence on their writing due to code switching, a nontraditional student aged 25+ wrote, "Plz have kidz call. L8R! [sic]." Although this example displayed the influence of texting on writing, other challenges were specified by instructors who saw a decrease in handwriting as a negative influence of texting. An instructor at a 2-year community college (Participant #9) summed up the challenges faced by students who no longer handwrote notes, essays, or written communications:

> They don't have the handwriting skills anymore, and I think that the constant texting, the e-mailing, and being on the keyboard has weakened their handwriting skills, so we might see the same kind of effect in their linguistics skill, syntax skill at the sentence level.

Another subtheme repeatedly raised by faculty was the shortness of the students' writing, which tied in with texting utilizing mobile devices. As an instructor at a 2-year urban community college, Participant #7, who was the youngest faculty member interviewed, explained a difference between her generation and today's students' communications:

> One thing I have noticed is on a smartphone or even on a BlackBerry you will get that screen that has the entire keyboard, the QWERTY, which is not the same

> as how it used to be. It was not like that before where you see numbers and letters all over the place, and you have to kind of figure out how to text …. I have noticed just a change in texting over the last five years or so where now folks are actually texting whole sentences a lot more than they used to. I think the reason texting had abbreviated itself so much was because it was just incredibly inefficient, your fingers were too big to push all those numbers for a lot of people, sometimes your keyboard was not lighted or backlit, so you're just pushing buttons on a little flip phone and trying to make sure you're hitting the right one and then you have to deal with AutoCorrect and so many other problems. I think what the iPhone has done, what the smartphone has done giving you a full keyboard you can turn your phone horizontal and you're almost literally typing just with your phones, but you are typing. I think that has given at least people in my generation, and that's who I text with primarily, a comfort level that they now don't have to memorize these little [abbreviations]. You can fully write out a full sentence and send it, so there has been some ease in the machines and how they've changed and it has helped us. I think the taking in of the voice-to-text as it refers to writing, they don't have a choice. Receiving a full sentence means you are being forced to use and examine syntax, you're being forced to digest grammar, all of those things are a part of your reality and you're taking them in, so I think we don't have a lot of choice. Eventually, you're going to start producing what you have been exposed to.

Faculty focused on the influence of texting on handwriting, reading, writing, and literacy. Whether the faculty considered the influence of texting and Textese to be positive, negative, or negligible, all instructors referenced the decreases in those areas.

Limitations

Limitations to the analysis and results of this study included demographic boundaries and confines to the research. These limitations included:

1. The fact that only two males participated in the faculty interviews;
2. The fact that only two of the faculty members identified themselves as ethnicities other than Caucasian; one of the faculty participants was African-American, the other identified herself as Hispanic, Native American, and Caucasian;
3. The fact that 70% of the faculty interviewed were aged 40 and older (see Appendix H);
4. The unknown ethnicity of students who participated in the student questionnaires;
5. The researcher's lack of long-term experience in coding and use of the MAXQDA+ software;
6. The fact that this study was limited to the state of Illinois, which meant that the results may not parallel the influence of this technology on college students and instructors in other states;
7. The fact that this study was limited to 2-year and 4-year colleges and universities;
8. The fact that the participants for the interviews were selected from faculty who previously attended the 49th and 50th Allerton English initiative conferences, which was an English conference in the state of Illinois, but it may not have included all types of higher education institutions;

9. The fact that the students answering the questionnaires were limited to attendees of a small rural community college.
10. The possibility of bias on the part of the researcher, or response bias of the interviewee, which the researcher overcame through the incorporation of multiple sources, member checking, a pilot study, and validation of sources;
11. Possible bias due to poorly worded questions; possible reflexivity where the interviewee gave the researcher the answer he or she wanted to hear (Yin, 2014). The researcher conducted a pilot study and member checking to avoid such bias, as well as randomly selected classes of students' e-mails to explore.

Summary

Throughout this chapter, the procedures for compiling and analyzing the data were outlined and explained. Utilizing Yin's (2014) Five-Phase Cycle for analysis, the data were compiled, disassembled, and reassembled to answer the Research Question, "How do texting and Textese influence student learning of writing in SE in college composition classes?" Three data collection sources were utilized during this research, including 10 individual, semi-structured faculty interviews, 25 anonymous Composition I students who volunteered to complete a questionnaire, and 210 former Composition I students' e-mails. In addition, a pilot study was completed with 20 students to validate the student questionnaire. Member checking was also employed with the faculty interview transcripts to further engage the participants and to check the information for accuracy. The 28 Likert-style questions in the student questionnaires and the former students' e-mails were hand tallied and analyzed for frequency and patterns. A codebook was created using the MAXQDA+ software in conjunction with the faculty interview

transcripts and the three qualitative questions in the student questionnaires. The qualitative analysis of the transcripts and questions included descriptive and pattern matching. Further insight was gained through the exploration of the data with the key theories: the Technology Acceptance Model, the Media Richness Theory, the Transactional Distance Theory, the Threaded Cognition Theory, and the Uses and Gratification Approach.

Frequency data analysis of the e-mails indicated that students had increased grammatical, syntax, and structure errors in their writing that could be tied to texting, but the use of Textese, including emoticons and logograms, was minimal. In the student questionnaires, frequency data identified that most students considered texting to not influence their writing due to their ability to code switch between formal and informal writing. However, at least half of these students considered texting to have a negative influence on their essay grades, spelling, and grammar.

The qualitative questions in the student questionnaires identified that students' had mixed perceptions concerning the influence of texting; although, some students indicated it negatively influenced their ability to write, spell, and use grammar. Even when students professed that texting and Textese had no influence on their writing, they often made grammatical and spelling errors in their written comments. The qualitative data generated from the faculty interviews revealed that most of the faculty had mixed perceptions concerning the influence of texting and Textese on students' writing. While several faculty members voiced the belief that texting increased students' writing experience, one faculty member considered it as ruining students' writing, grammar, spelling, vocabulary, and literacy. Many of the faculty members expressed concern over what they perceived to be the decreasing literacy level of students, but while some

instructors considered this a direct effect from texting, others indicated there were additional issues causing the decline. Data gathered and analyzed in this section of the research led to the conclusions, interpretation, and gaps needing future research addressed in Chapter 5.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

In Chapter 5, an extensive summary of how texting and Textese were influencing students' writing in SE was explored. The chapter outlined the summary of the study, which was guided by Yin's (2011) Five-Phase Cycle, explaining the first three chapters of this dissertation; the summary of findings and conclusions drawn from the data that were analyzed in this study; the study's limitations; the theoretical, practical, and future implications; and recommendations for future research and practice. Incorporation of three sources of data collection – 10 one-on-one semi-structured faculty interviews, 25 anonymous student questionnaires, and 210 former composition students' e-mails – allowed for elimination of bias, triangulation, and validity of results. In addition, member checking the faculty interview transcripts and conducting a pilot study of the student questionnaire established accuracy and veracity of the information gathered.

The research question was based on a gap that appeared in the comprehensive literature review, "How do texting and Textese influence student learning of writing in SE in college composition classes?" Not only are mobile communications devices permeating individuals' lives (Aziz et al., 2013; Rideout et al., 2012), but the technology was found in educational institutions and workplaces worldwide. In fact, individuals with less access to computers and mobile devices were seen as less able to compete in the higher education and workplace environments (Fairlie, 2011). Research identified that "more than 80 percent of all jobs require the use of computers in the workplace and 95 percent of jobs held by college graduates require their use" (Fairlie, 2011, p. 3). Furthermore, Fairlie's (2011) study revealed, "limited computer skills among some low-

income community college students may place them at a major disadvantage when entering the labor market or transferring to 4-year colleges" (p. 19).

Research highlighted that perceptions between faculty and students, as well as faculty and faculty or students and students, differed on the benefits of the incorporation of texting, SMS, and mobile communications devices within the classroom. The attitudes of instructors varied from those who encouraged the use of texting and technology within the classroom, to those faculty who used it outside of the classroom for personal communications (Aziz et al., 2013; Bronowicki, 2014; Kolowich, 2011; Pearson, 2011). A gap in faculty incorporating texting, SMS, and mobile communication devices in the course pedagogy and lessons revealed a disparity between the traditional lecture/note taking classroom that most faculty were raised in versus the Millennial students raised in the computer age where multi-modal cooperative learning was expected (Baker et al., 2012). Faculty who encouraged the utilization of texting, SMS, and mobile communications devices cited amplified student engagement and empowerment within the classroom, promoting increased questions, discussions, and learning (Husbye & Elsener, 2013; Kim et al., 2013; Ng'ambi, 2011). However, those faculty who viewed the incorporation of texting, SMS, and mobile technology within the classroom referenced the negative influences of students improperly utilizing the technology, loss of student focus on the subject matter, decreased student productivity in assignment completion, and decreased writing ability (Bronowicki, 2014; McDonald, 2013).

While faculty attitudes and perceptions varied on the benefits of students utilizing texting, SMS, and mobile technology, students themselves also had diversified views on the influence of texting and Textese on their writing (Grinols & Rajesh, 2014;

Kim et al., 2013; Rosen, 2010). In addition, many students and faculty referenced students' ability to code switch between formal and informal writing and written communications (Thomas & McGee, 2012). It was through the literature review that the research question was formed.

To answer the research question, qualitative data from the faculty interviews and student questionnaires were transcribed, uploaded to MAXQDA+ software, coded using a codebook created for this research, pattern matched, descriptively matched, and then analyzed for themes and patterns. The 28 Likert-style questions from the student questionnaire were hand tallied and analyzed for pattern matching themes. The 210 e-mails from former students were evaluated for frequency data with a chart (see Appendices G and I) adapted from previous research by Aziz et al. (2013) and Rosen et al. (2010). The results of the e-mail evaluation were hand tallied and evaluated for frequency data.

The necessity for this research was due to the evolving influence and rapid growth of texting and Textese over the past decade. Faculty and students needed to understand the influence of texting and Textese on students' writing to determine how and if instructors needed to incorporate texting or SMS in class lessons and pedagogy. The results of the study expanded the growing field of knowledge among English faculty on the influence of texting on students' writing by exploring how this influence effected teaching in composition classes as well as how texting influenced students' writing. Understanding the positive and negative influences of texting on students' writing allowed faculty to better teach students to write in a technologically-evolving world where the Internet and texting permeated individuals' lives worldwide. In addition, this research was necessary to add knowledge to the utilization, integration,

and influence of texting on students' writing; the way instructors' and students' perceptions and attitudes effected the technology's usage; and in instructing faculty and administrators in on the utilization and importance of technology in enhancing students' learning.

Summary of the Study

Over the past two decades, written communication underwent a transformation from putting pen to paper, to texting, Tweeting, and a plethora of other types of SMS on iPads, laptops, smartphones, desktops, and other mobile electronic communication devices. Technological advancements lead to individuals' lives permeated with instant communications (DeSantis, 2012). Studies revealed 95% of teenagers were online and 74% of teens and adults under 50 were "mobile internet users" (Madden et al., 2013). As this technology saturated daily lives, the sublanguage known as Textese increased in discussions as well as written works (Park, 2010). This qualitative case study research was guided by the question, "How do texting and Textese influence student learning of writing in SE in college composition classes?" Research explored three main data sources: one-on-one, semi-structured faculty interviews; student questionnaires; and e-mails from former Composition students.

The necessity for this exploratory qualitative case study research was determined after an extensive review of the existing literature on how texting and Textese influenced students' writing in composition class. The knowledge gained in this research would aid faculty in utilizing texting to improve students' writing, or aid in identifying how texting and Textese were influencing students' writing and how faculty should approach this influence. As noted in the comprehensive literature review, previous

studies left gaps and limitations in the knowledge of how texting use integrated into a class impacted the faculty and writing.

In addition, the perceptions of students and instructors on the influence and use of texting and Textese in enhancing the academic experience needed to be evaluated. By explaining how texting and Textese influenced students' ability to communicate in SE in writing in composition classes from the perspectives of the faculty and the students, this study expanded existing knowledge. Gaps in the existing literature caused by focusing only on one perspective were filled by the inclusion of the insights and perspectives from both students and English faculty gathered through the analysis of interviews, questionnaires, and e-mails.

This research revealed that most faculty were utilizing texting to not only communicate with students, but to increase student engagement and learning. Furthermore, the study discovered that while texting and Textese were influencing students writing, the influence was not the rampant use of emoticons and logograms, but instead increased use of shortened sentences, lack of detail, capitalization errors, and more informal language used in communications with instructors. A last revelation from this research was the students, for the most part, utilized code switching between formal and informal writing and audiences.

The research of this qualitative case study exploring the influence of texting and Textese on students' writing in SE in composition classes was guided by Yin's (2014) Five-Phase Cycle. Yin (2014) stressed the importance of compiling, disassembling, reassembling, interpreting, and concluding. The qualitative case study approach was because it "facilitates exploration of a phenomenon within its context using a variety of data sources …..[allowing the researcher to study the phenomenon through] a variety of

lenses which allows for multiple facts of the phenomenon to be revealed and understood" (Baxter & Jack, 2008, p. 544). By incorporating multiple sources of data, the research was able to be triangulated and validity was established.

As the extensive literature review was compiled and analyzed, gaps in the literature and unanswered questions were raised. While many of the existing studies focused on either the faculty's perceptions or the students' perceptions, a gap of literature existed exploring the perceptions of both faculty and students. In addition, as the literature review was evaluated and amassed, it became apparent that there was no single theory in existence that completely covered the topic. However, research revealed that five key theories were applicable to understanding the influence of texting and Textese on students' writing in composition classes, including the Technology Acceptance Model, the Transactional Distance Theory, the Threaded Cognition Theory, the Media Richness Theory, and the Uses and Gratification Approach. Each of these theories helped explain faculty and students perceptions concerning the influence of texting and Textese on students' writing. The Technology Acceptance Model (Venkatesh & Davis, 2000), the Threaded Cognition Theory (Salvucci & Taatgen, 2008), the Transactional Distance Theory (Ng'ambi, 2011), the Media Richness Theory (Park, Chung, & Lee, 2012), and the Uses and Gratification Approach (Park, Chung, & Lee, 2012) were determined to be the five main theories applicable to this research, since no one theory was identified facilitated further understanding of the phenomenon.

Additionally, the literature review illuminated three main attitudes of instructors towards the use of texting in the classroom and how texting influenced students' writing: some instructors avoided technology as much as possible (Gurd, 2009), some instructors progressively incorporated texting and technology in class to stimulate students'

engagement and writing abilities (Aziz et al., 2013; *Instructional Innovation*, 2012), while other instructors utilized computers within the class but reserved the use of texting for communications that were not related to class (Kesler, 2011, Pearson, 2011). However, previous literature indicated students often believed that texting and Textese had no influence to negligible influence on their writing. Exploration of previous studies on texting brought to light the important subjects, trends, and key theories including:

1. Instructors were incorporating texting inside and outside of the classroom to increase students' engagement and knowledge, which faculty viewed positively and negatively depending on the study (Aziz et al., 2013; Bronowicki, 2014; Kolowich, 2011);
2. A majority of instructors were raised in classrooms where traditional lecture/note taking behavior occurred; however, Millennial students were multi-modal and viewed traditional lectures as barriers to learning, expecting their instructors to be facilitators of cooperative learning (Baker et al., 2012);
3. Students enhanced critical thinking skills, understanding, and engagement when separated into small groups and required to discuss literary works through texting (Ng'ambi, 2011; Reich, 2008).
4. Students were empowered to increase engagement, ask more questions, and build a stronger classroom community through the texting (Ng'ambi, 2011).

This qualitative case study collected data after approval from the AQR and IRB from three main sources: 10 one-on-one, individual, semi-structured faculty interviews; 25 anonymous volunteer questionnaires completed by students enrolled in Composition I classes; and three consecutive semesters' of e-mails (210) from former students' enrolled in Composition I classes including the fall 2012, spring 2013, and fall 2013

semesters. A pilot study was conducted with the student questionnaires for validity prior to the dissemination of the student questionnaires to study participants. To avoid any concerns about volunteer students perceiving coercion or pressure to participate, students from Composition I classes taught by other English faculty were included. In addition, member checking was employed with the transcripts of the faculty interview to build engagement and accuracy.

To analyze the data, the 210 e-mails from former students were evaluated utilizing a chart adapted from Aziz et al. (2013) and Rosen et al. (2010), hand tallied, and evaluated for frequency data. The 25 student questionnaires included 28 Likert-style questions and three qualitative questions. The 28 Likert-style questions from the student questionnaires were hand tallied and evaluated for frequency data and pattern matching. A qualitative codebook was created to analyze the qualitative answers to the questionnaires' questions and the faculty interview transcripts. The questionnaires' qualitative answers and the interview transcripts were uploaded into the MAXQDA+ software to be coded and analyzed utilizing the codebook. The data analysis identified 11 main themes, but one overarching academic concern that Textese was permeating and ruining students' writing was revealed to be unfounded. Through this analysis, the research question, "How do texting and Textese influence student learning of writing in SE in college composition classes?" was answered.

Summary of Findings and Conclusion

Research in this qualitative case study answered the question, "How do texting and Textese influence students' learning of writing in SE in college composition classes?" Documents revealed that there were 11 main themes identified in the qualitative research, including: code switching between formal and informal writing;

perceptions over texting and Textese; influence of texting on literacy, reading, and writing; texting was identified as a type of writing; influence of texting on student engagement, including questions, uses, and disruptions; influence of demographics on texting; influence of texting on revisions; influence of voice-to-text programs; influence on detail in writing; influence on syntax and sentence structure; and influence on the cultural acceptance of texting and Textese. While descriptive and pattern matching themes were employed during coding and analysis to identify these 11 main themes, additional insight was gained through the information gleaned from the frequency data in the former students' e-mails and the 28 Likert-style questions in the student questionnaires. Overall, the perceptions and applications of texting by faculty and students were positive; however, numerous negative influences were identified.

Code switching. Most of the students and faculty identified that students were able to code switch between formal and informal writing; however, the influence of texting and Textese could be seen in the 210 e-mails from former students as well as the other data. Faculty interviews revealed that all instructors interviewed believed students utilize code switching, but students needed more guidance and instruction on differentiating between formal and informal writing. Tied in with the Technology Acceptance Model, the Media Richness Theory, the Transactional Distance Theory, and the Uses and Gratification Approach, those faculty who utilized texting and mobile communication devices were more inclined to perceive positive benefits from its use; these instructors also differentiated between a student's use of Textese in formal and informal writing. In the student questionnaires, 17 of the 25 students (68%) indicated that they agreed with the statement, "My use of Textese changes depending on who I am

texting", and eight out of 25 students (32%) disagreed or strongly disagreed with the statement, "Texting negatively impacts my essay grades."

Most faculty who were interviewed also perceived that students utilized code switching between formal and informal writing, and several of the faculty specified a lack of concern over Textese used in informal writing or communications. Evaluation of student e-mails indicated the fear of Textese permeating students writing was unfounded; however, some influence of texting and Textese was substantiated in the students' written communications. While only 4.56% of the words written in students' e-mails were affected by texting and Textese, just under 20% of the 640 sentences written in the 210 e-mails were shortened, just over 25% of the 594 obligatory periods at the end of sentences were errors, and of the 1,932 obligatory capital letters there were 20.5% errors – – all of which are indicative of texting.

The widely voiced concern of English academia that texting and Textese were the ruination of students' writing in Standard English that was identified in the literature review was not realized in this study, despite one faculty member's beliefs that it was ruining students' grammar. The e-mails of former students showed that out of the 8,822 words written, only 0.15% were emoticons, 0.43% were logograms, 0.26% were instances of all capital letters utilized, and 0.9% were shortened words. In the student questionnaires only four out of 25 students (16%) agreed or strongly agreed with the statement, "I have used Textese in an essay or assignment for class", while 16 of this 25 students (64%) disagreed or strongly disagreed with that statement; the remaining three students neither agreed nor disagreed.

Even though students did not believe that texting or Textese influences their writing due to their ability to code switch, 15 of the 25 students (60%) disagreed or

strongly disagreed with statements identifying texting and Textese as having positive impacts on their spelling and grammar in essays while only two of the 25 students (8%) agreed or strongly agreed with the statements. Additionally, 16 of the 25 students (64%) disagreed or strongly disagreed that texting and Textese positively impacted their writing, while two students (8%) agreed or strongly agreed texting positively influenced their writing, and seven students (28%) neither agreed nor disagreed with the statement. In fact, most students believed they code switched when writing, including 18 of the 25 students (72%) disagreed or strongly disagreed with the statement, "I have used emoticons in writing other than in text messages"; four students (16%) agreed or strongly agreed with the statement, while three students (12%) neither agreed nor disagreed. This revealed that a majority of students believed that they utilized code switching, a much stronger perception among students than faculty. As the Threaded Cognition Theory indicated, most students were capable of code switching between formal and informal writing and audiences. Further research into whether or not a student's reading and writing literacy level influenced the use of Textese would be beneficial.

Perceptions over texting and textese. Those faculty who were proponents of students' use of texting perceived that it increased students' questions, and engagement, and either viewed the influence of texting was either negligible or positive depending on the instructor's experiences. While some faculty identified texting as an evolving form of writing, other instructors saw it as a way to increase the amount that students wrote. Despite the studies in the literature review and faculty perceptions of students' increased questions and engagement, most students revealed that they were more likely to text peers in reference to homework or assignments. In reference to the statement "I text

classmates in reference to homework and/or assignments", 14 out of 25 students (56%) agreed or strongly agreed, six students (24%) disagreed or strongly disagreed, and five students (20%) neither agreed nor disagreed with that statement. However, when responding to the statement "I text my instructors concerning homework and/or assignments", only seven out of 25 students (28%) agreed or strongly agreed with the statement, while 10 students (40%) disagreed or strongly agreed, and eight students (32%) neither agreed nor disagreed. Furthermore, when asked to respond to the statement, "My instructors encourage me to text them concerning assignments and/or homework", nine students out of 25 (36%) agreed or strongly agreed, four students (16%) disagreed or strongly disagreed, and 12 students (48%) neither agreed nor disagreed. This identifies a disparity between the faculty's perceptions of their availability or increased in student engagement through the use of texting versus the students' perceptions.

As far as getting feedback from instructors via text messages, most students indicated they did not want instructors texting them information concerning their essays or assignments. Responding to the statement "Instructors should text me information clarifying grammatical errors in my essays or assignments", 15 out of 25 students (60%) disagreed or strongly disagreed, seven students (28%) agreed or strongly agreed, and three students (12%) neither agreed nor disagreed. In response to the statement "Instructors should text me information clarifying Standard English writing errors in my essays or assignments", 14 out of 25 students (56%) disagreed or strongly disagreed, seven students (28%) agreed or strongly agreed, and four students (16%) neither agreed nor disagreed.

Despite most faculty indicating positive perceptions of the use of texting in class, which tied in with the Technology Acceptance Model, most students and faculty indicated that the use of texting within the classroom was extremely limited. Responding to the statement "Students should be allowed to text in class if it is related to a class assignment" 12 students (48%) disagreed or strongly disagreed while seven students (28%) agreed or strongly agreed, and six students (24%) neither agreed nor disagreed. Furthermore, in response to the statement "Teachers should include texting to other students or the instructor as part of class assignments", 16 of 25 students (64%) disagreed or strongly disagreed, while five students (20%) agreed or strongly agreed, and for students (16%) neither agreed nor disagreed. In addition, 11 out of 25 students (44%) disagreed or strongly disagreed with the statement, "Texting has a positive impact on my completion of classwork". Out of the 25 students, only two students (8%) agreed with the statement, but 12 students (48%) neither agreed nor disagreed with the statement.

Although students and faculty indicated increased use and acceptance of texting and mobile devices within the classroom as tied in with the Technology Acceptance Model, Threaded Cognition Theory, Media Richness Theory, and Uses and Gratification Approach, the inference that can be drawn from this study was that students did not want to have texting incorporated into class assignments, or required as part of the class work. In fact, most students and faculty perceived texting as negatively influencing spelling and grammar, or at least negatively influencing spelling and grammar.

Influence of texting on literacy, reading, and writing. Despite the fact that many faculty indicated students were reading more due to texting, one major theme that arose from faculty interviews was the negative effects of students not reading enough.

All of the faculty participants tied reading with writing ability. Faculty believed that students' writing was negatively influenced by the fact that they were reading fewer books and that students were reading increased numbers of text messages or SMS. Several faculty comments referenced the repeated exposure to improper grammar, spelling, syntax, and sentence structure through texting is negatively influencing students' writing. In the frequency data collected with the e-mails from former students, while evidence of emoticons or logograms permeating students writing was revealed to be unfounded, the increased instances of informal language to the instructor (3%) and amplified grammatical errors were identified. These grammatical errors included: comma errors, 171 errors out of 494 obligatory (35%); apostrophe errors, 34 errors out of 187 obligatory (18%); question mark errors, 33 errors out of 85 obligatory (38.8%); period errors, 150 errors out of 594 obligatory (25%); capital letter errors, 396 errors out of 1,932 obligatory (20.5%); and semi-colon errors, of 18 obligatory (89%).

Although the use and acceptance of texting by faculty and students tied in with the Media Richness Theory, the Technology Acceptance Model, and the Uses and Gratification Approach, the influence of texting was not always positive. Some professors believed that texting exacerbated writing difficulties for students with lower reading and writing literacy levels. Instructors also specified the lack of practicing good grammar, sentence structure, and syntax through texting negatively influenced students' writing. Furthermore, instructors indicated the difficulty in determining whether or not a student's poor writing ability was due to texting, socio-economic factors, or low-level literacy.

In addition, the use of Textese caused confusion about the message that was being received by faculty as well as students. The student questionnaires revealed that

16 out of 25 students (64%) indicated agreement or strong agreement with the statement "I have received text messages that I did not understand because of the person's use of Textese", while six students (24%) disagreed or strongly disagreed, and three students (12%) indicated they neither agreed nor disagreed. The confusion over messages utilizing Textese was not limited to just students. Faculty mentioned that they could not understand messages from students that were heavily laced with Textese; although, one faculty member stated that the use of Textese by students was decreasing, while another faculty participant noted that she returned e-mails to students explaining that she did not understand the phrases and spellings in Textese and asking students to resubmit the message in Standard English. Concerns over the increased reading by students of writing that was not correct grammatically, structurally, or in syntax indicated the need for additional studies into the ties between reading and writing literacy and texting.

Texting was considered writing. The perception that texting was a style or form of writing created mixed comments from faculty; several faculty identified texting as an evolution of writing, while other instructors viewed it simply as a communication tool. The visual nature of Textese, along with its widespread use and understanding, as well as its ease of use were identified by several faculty members as being reasons that Textese was a symbolic, visual language, and that texting was writing. A majority of the faculty found that texting was an informal writing style that evolved from mobile electronic devices. Whether it was a text, Tweet, Instant Message, or other SMS, faculty differentiated between formal writing and informal writing, which was inclusive of texting. The worldwide use of texting and Textese as noted in the literature review identified the usage as being acceptable due to the Media Richness Theory and the Uses and Gratification Approach.

The use of texting and Textese tied in with the Threaded Cognition Theory in that students in the questionnaires revealed they were comfortable texting while completing other actions, with 14 out of 25 students (56%) agreeing or strongly agreeing with the statement, "I can text and complete classwork at the same time", while only five students (20%) disagreed or strongly disagreed with the statement; six students (24%) neither agreed nor disagreed with the statement. Furthermore, 12 out of 25 students (48%) disagreed or strongly disagreed with the statement, "Texting during class impacts my grade negatively"; however, seven students (28%) agreed or strongly agreed with the statement, and six students (24%) neither agreed nor disagreed with the statement. While students were not asked about their perceptions as to whether or not texting was writing, the data revealed that a majority of students did believe that texting did not hurt their grades or engagement in class.

Influence of texting on student engagement. Although faculty expressed mixed perceptions over whether or not texting positively influenced students' engagement in class and students indicated texting did not negatively influence their completion of classwork, the results from this study were inconclusive. Tying in with the Technology Acceptance Model, Media Richness Theory, and Uses and Gratification Approach, faculty and students who perceived texting as useful and a form of writing were more likely to view the use of texting and cell phones/smartphones as beneficial to students' learning and engagement in class. A majority of the faculty considered themselves pro-technology and viewed texting as a writing form that increased students' discussions and questions, enhanced students' learning and engagement, and amplified the amount students wrote. Faculty also noted that the use of Textese in informal communications

with students built a stronger learning community as long as the Textese was kept out of formal writing.

The student questionnaires, however, revealed that while students believed they could text and multi-task at the same time the students did not want to have texting incorporated into classwork. In the student questionnaires, 16 out of 25 students (64%) disagreed or strongly disagreed with the statement, "Teachers should include texting to other students or the instructor as part of class assignments", while only five students (20%) agreed or strongly agreed with the statement; four students (16%) neither agreed nor disagreed with the statement. Furthermore, the statement "Students should be allowed to text in class if it is related to a class assignment" had 12 students out of 25 (48%) disagreeing or strongly disagreeing, while seven students (28%) agreed or strongly agreed, and six students (24%) neither agreed nor disagreed with the statement. A majority of the students also disagreed with the statement, "Students should be allowed to text in class if it is unrelated to a class assignment" with 12 out of 25 students (48%) disagreed or strongly disagreed, nine students (36%) agreed or strongly agreed, and four students (16%) neither agreed nor disagreed with the statement. While the Transactional Distance Theory indicated that students would benefit from a shortened learning distance between themselves and their instructors, the students specified they did not want texting incorporated into the class curriculum.

One positive influence from texting was the faculty's perception of increased communication between faculty and students. A majority of faculty (80%) utilized cell phones/smartphones to communicate with students concerning quick communication, absences, and questions concerning assignments. However, students were more reticent in their perspectives of contacting instructors. Ten of the 25 students (40%) disagreed or

strongly disagreed with the statement, “I text my instructors concerning homework and/or assignments”, while seven students (28%) agreed or strongly agreed, and eight students (32%) neither agreed nor disagreed with the statement. Additionally, students disagreed with instructors’ texting the students concerning grammatical or writing errors in their assignments by a margin of two to one. Therefore, there was an apparent disconnect between faculty and student perspectives, which could lead to future studies in how classroom community influences whether or not students were comfortable in texting their instructors.

While professors identified increased communication with students through texting or other SMS mediums, the lack of formality and increased usage of Textese was also noted. Some faculty viewed this informality as negative, but most faculty accepted the lack of formality due to the medium of communication. Another concern identified was the disruption of students’ utilizing cell phones/smartphones in class when the use was unrelated to class assignments. Several faculty voiced the concern that students were not completely engaged in learning, because they were texting, checking Facebook, Tweeting, or utilizing other social media. Faculty also expressed the belief that even if the cell phone/smartphone was turned off or put away in a purse or backpack, the students were focusing on the messages they needed to send or were receiving rather than the lesson.

Influence of demographics. The data did not support that the demographics of age, gender, or ethnicity affected the influence of texting and Textese on students’ writing. Faculty indicated increased utilization of texting among traditional and nontraditional students alike, as well as male and female students. However, one demographic was identified on whether or not texting and Textese influenced students’

writing, and that was whether or not the student was located in a rural area. The effect of students being located in a rural area where the student may not have access to the Internet, or possibly only have dial up Internet, was identified as effecting whether or not the student's writing was influenced. In addition, one faculty member (Participant #5) specified that some of her students chose to not own computers, cell phones, smartphones, or other mobile electronic devices. Several of the faculty voiced the concern that students failed to read and revise messages they sent using texting, which was seen in all students regardless of demographics.

Influence of texting on revisions. One of the largest chasms of difference between student and faculty perceptions was on the influence of texting on students' revisions of written work. Several faculty members specified a lack of practice in writing, including revisions, as a negative influence on writing from texting since individuals who texted usually typed in the words and then sent them without reviewing the message. This lead to confusion concerning the message, especially when auto correct inserted the wrong words. However, other faculty members believed that editing could be efficiently executed utilizing cell phones/smartphones or tablets. Two of the faculty mentioned the ease and quickness of editing student essays using texting. This tied in with the Uses and Gratification Approach, the Media Richness Theory, and the Transactional Distance Theory. By being able to respond to students and their work through texting, faculty answered questions and gave feedback, which built engagement and learning.

Students, on the other hand, believed texting negatively influenced their writing. In the student questionnaires, 16 out of 25 students (64%) disagreed or strongly disagreed with the statement, "Texting and Textese have positively impacted my

writing"; only two students (8%) agreed or strongly agreed with the statement, while seven students (28%) neither agreed nor disagreed. In the qualitative answers to the student questionnaires, 19 comments by students indicated a negative influence of texting and Textese on writing, five comments indicated a positive influence, while 42 comments indicated texting and Textese had no influence on students' writing (see Appendix O). These results indicated the need for faculty to incorporate the methods of revising written work as well as teaching students how to utilize mobile devices in their revisions within the course pedagogy, so that students were prepared to implement these tools for 'real world' occupations. Without learning how to properly proofread and revise their written work with and without a cell phone/smartphone, students would be at a disadvantage in an occupation that required written communication since errors in grammar, syntax, spelling, and structure would be viewable by others in the business.

Influence of voice-to-text. Although students were not asked about the voice-to-text or speech-to-text applications available through cell phones/smartphones and other software programs, faculty identified that the students' who utilized this feature on a regular basis were positively influenced. Individuals needed to 'train' the software to their voices and language patterns, as well as learning how to properly utilize the program. Once this was accomplished, faculty indicated that the writing of regular users was positively influenced through word choice and grammar, in that students focused more on what they said and how it sounded. The positive influences of voice-to-text was seen as being widely available to laptops, cell phones/smartphones, iPads, and other electronic mobile devices; the software was a downloadable application that was reasonably priced/free depending on the service; aided students with physical or learning challenges; utilized multiple forms of input for the student user (voice and visual); aided

students with writer's block or challenges; and was fairly easy to use once a person and their voice/language was trained to the program. All of these positive influences tied in with the Uses and Gratification Approach, the Technology Acceptance Model, and the Media Richness Theory where the software aided the user's writing.

Despite the aforementioned positive influences, faculty raised concerns over the negative effects of the voice-to-text application. One negative effect was that students would not input the correct grammar, syntax, and sentence structure. Additional negative effects included: the auto spelling could input the wrong word (homonyms) and the students' would not read or revise what they had spoken; the students would become lazy with the syntax and sentence structure, expecting the computer to correct everything for them; and a lack of training prior to using. These concerns were justified, and future studies would need to incorporate how voice-to-text programs were influencing students' writing, as well as if students were utilizing texting and Textese within those programs.

Influence on detail in writing. A theme referenced by all faculty members was the lack of detail, depth of description, use of descriptive words in students' writing, decreasing vocabulary, and short choppy sentences, which were identified as negative effects from texting. While some faculty indicated the succinctness found in texting was a positive influence that made students write more concisely and with increased specificity, as well as identifying texting as a means to increase students' writing, not all faculty agreed with this perception. A majority of faculty participants identified decreased vocabulary in students' writing; however, a definitive correlation could not be drawn between texting being the cause of the decreased vocabulary. The faculty also noted diminished utilization of descriptive words, adjectives, adverbs, and descriptors

combined to create a lack of detail in students' writing. Another negative influence of texting, according to faculty, was that students were often limited in vocabulary and experience in academic writing, so the students often struggled to utilize more academic words; instead, the students defaulted to the Textese they were used to writing.

Faculty and student participants agreed that texting and Textese was negatively influencing students' writing. Many faculty specified this decline in vocabulary and detail was due to the shortness and spatial limitations of texting. In response to the statement "Texting and Textese have positively impacted my writing", 16 out of 25 students (64%) disagreed or strongly disagreed with the statement while two students (8%) agreed or disagreed, and seven students (28%) neither agreed nor disagreed. Since students and faculty identified the infusion of Textese or texting characteristics in students' writing, faculty needed to build pedagogy in the composition class lessons to address the negative influences of texting and Textese while buffeting the positive influences. Analysis of the students' questionnaires and the faculty interviews indicated a need for faculty to incorporate increased use of detail, adjectives, adverbs, vocabulary, and other descriptors within the composition classrooms. Faculty also needed to implement assignments building on texting and formal writing where students would learn better code switching techniques between formal and informal writing.

Influence on syntax and sentence structure. Faculty stated there was an increase of grammatical, syntax, and structure errors since texting became widespread; however, deficiencies in students' writing could not definitely be tied to texting despite the perceptions revealed in the faculty interviews and student questionnaires. Mixed faculty perceptions on this issue lead to a delineation that texting was a positive influence on students' informal writing, but a negative influence on students' formal

writing. A few faculty members saw texting as a completely negative influence on students' grammar, syntax, structure, spelling, and vocabulary. In the coding scheme created in MAXQDA+, out of references in the faculty transcripts to the influence of Textese on students' writing, 31 were negative comments, 16 were positive comments, and nine comments were neither negative nor positive.

Faculty cited the writing errors they identified as being caused by texting and Textese: shortened sentences, grammar errors, shorted spelling, emoticons, and logograms. However, other faculty participants viewed texting as an evolution in informal writing. The main focus of faculty comments overall was that the increasing errors in students' writing were probably exacerbated by texting and Textese, but in informal writing these errors would be acceptable whereas in formal writing they would not be tolerated.

The student questionnaires revealed that students overwhelmingly believed that texting and Textese negatively impacted their writing, especially their grammar and spelling. Students recognized that texting and Textese were influencing the grammar and spelling in their writing even when they utilized code switching. Since 15 students out of 25 (60%) disagreed or strongly disagreed that texting and Textese were positive influences on their grammar and spelling, it demonstrated the concern students had over the widely accepted use of texting. These findings tied in with the Media richness theory and Uses and Gratification Approach that explored the significance of having a variety of uses as well as ease of use with an individual's usage of technology, including texting.

Cultural acceptance of texting and Textese. Despite differences in opinion between students and faculty on the influence of texting and Textese on students' writing, all participants in the faculty interviews and student questionnaires determined

that the utilization of texting was culturally acceptable, as was minimal use of Textese. Students were digital natives, raised in a technologically oriented world where the Internet, cell phones/smartphones, and other mobile devices kept them consistently connected to social media and communications. The mass utilization of texting combined with the ease of use tied in with the Uses and Gratification Approach, the Technology Acceptance Model, and the Media Richness Theory. These theories supported the belief that individuals sought out technology as well as texting and incorporated them into their lives because the mobile electronic devices had a larger variety of applications combined with ease of use and fast access to the cyber world. Furthermore, all of the students except one in the questionnaires revealed that they texted daily, often utilizing Textese in their missives.

Not all participants viewed texting and Textese as positive influences or culturally acceptable. A few faculty distinguished that texting caused students to have lower literacy reading and writing levels, while other faculty members voiced concern over students' lack of practice and education in handwriting. Furthermore, faculty worried that students would continue to value conciseness over detail in their writing. Overall, while concerns were raised about the negative influence of texting and Textese being culturally accepted, faculty could take steps to negate any adverse effects by simply incorporating lessons and assignments requiring students to differentiate between writing in texts versus writing formally, inclusion of handwritten assignments, and responding to readings in writing.

Implications

As a qualitative case study, this research sought to answer the question, "How do texting and Textese influence student learning of writing in SE in college composition

classes?" In an effort to gain a deeper understanding of the phenomenon of the influence of texting and Textese on students' writing, a qualitative case study following the methodology in Yin's (2014) Five-Phase Cycle and supported by Baxter and Jack (2008) was to gain an in-depth exploration of a current phenomenon that allowed the research to encompass several facets of the issue. Utilizing the participants' own words and perceptions, the research presented a strong study incorporating perceptions of faculty and students as well as frequency data. Based on the Five-Phase Cycle, data were compiled, disassembled, reassembled, interpreted, and conclusions were drawn indicating that texting and Textese influence students' writing in composition classes. However, the influence was mixed, with positive and negative effects. Results from this study included theoretical, practical, and future implications.

Theoretical implications. The five theories that framed this study combined with the use of the qualitative case study approach and Yin's (2014) Five-Phase Cycle garnered a diverse amount of data, from qualitative to frequency. Yin (2014) stressed the importance of inclusion of a variety of sources and data collection methods to improve accuracy, validity, and avoid bias. Incorporating three data collection methods – the 10 semi-structured, one-on-one faculty interviews; the 25 anonymous students who completed the questionnaires; and the 210 e-mails from former composition students – permitted the collection of rich detail and frequency data that allowed for a broader, more in-depth exploration into the influence of texting and Textese on students' writing. All efforts were taken to protect the participants by removing all identifying information, obtaining signed Informed Consent Forms with copies given to participants, and utilization of anonymous volunteer students enrolled in another English

instructor's classes to avoid the perception of coercion or pressure in completion of the student questionnaire.

Validity, reliability, and accuracy were ensured through careful crafting of questions for the faculty interviews by utilization of common sense questions that were open-ended, member checking of faculty transcripts prior to writing Chapter 4, utilization of three consecutive semesters of former composition students' e-mails to avoid bias, and a pilot study on the student questionnaire. Inclusion of faculty from diverse higher education institutions broadened the applicability of the study's results. In addition, the creation of the codebook (see Appendix K) and descriptive and pattern matching during analysis aided in avoiding bias in the study and ensuring accuracy of the results. The utilization of the MAXQDA+ software program to aid in qualitative coding and analysis also helped to remove any bias.

Additionally, the literature review was the basis for the research question that guided this study: "How do texting and Textese influence student learning of writing in SE in college composition classes?" Chapter 2's literature review included information from the Grand Canyon University library, the Illinois Eastern Community Colleges' library, Google scholar, Amazon, and the Internet. Numerous empirical articles, books, *You Tube* videos, dissertations, presentations, and conference papers were analyzed for the literature review. Gaps and limitations in existing knowledge were identified through this process, but specific information gained from the extensive readings for the literature review, which was divided into three main themes: Theme 1 – Instructors' Incorporation of Technology with subthemes of the Technology Acceptance Model study, faculty perceptions and apprehensions, texting and SMS enhanced learning, faculty perceptions of texting and SMS, students' perceptions of texting and SMS, and

SMS and texting use in coursework; Theme 2 – Faculty and Students' Disconnect Over Lectures and Technology with subthemes of texting and SMS in the classroom, and faculty/students' disconnect over texting and SMS; and Theme 3 – SMS's Impact on Critical Thinking, Learning, and Writing with subthemes of texting and SMS in traditional classrooms, texting and class performance, textisms and writing, translating Textese to SE, and texting and literacy. The literature review also identified that no one single theory overall covered the influence of texting and Textese on students' writing in composition classes. Therefore, five main theories were utilized in this study: the Technology Acceptance Model, the Transactional Distance Theory, the Media Richness Theory, the Threaded Cognition Theory, and the Uses and Gratification Approach. All of these theories were applicable to different facets of the topic.

Although this study increased knowledge on the necessity of faculty and students' increasing their awareness of the positive and negative influences of texting and Textese, identified the best use of this technology to enhance the learning experience, increased reflection and dialogue on the topic, and aided faculty in preparing students for an occupational future where 21st-century job skills will be demanded by employers, there were limitations evident with this qualitative case study approach. Limitations included the lack a larger demographically mixed participant population, the limiting of the students to a rural community college, the limited number of non-Caucasian participants, and the limited number of English faculty willing to participate in the study. These limitations could be addressed in future studies, especially in quantitative or mixed methods studies.

While the data analysis of the influence of texting and Textese on students' writing in SE in composition classes revealed mixed theoretical implications. Beneficial

implications outweighed the negative implications, which would require faculty to take actions to overcome. There were 12 positive theoretical, practical, and future implications revealed through this research. Implication 1 - Students increased the amount of writing they did when utilizing texting, SMS, or mobile communication devices; albeit, the increase was in informal writing through texting. Implication 2 - Faculty and students utilized and valued texting for a quick written communication format. Furthermore, texting was culturally acceptable, with all faculty members and 24 of the 25 students (96%) who participated utilizing the technology. Implication 3 - Some faculty viewed texting as an evolving, symbolic language that was another form of writing.

Other implications were that students' writing was more concise and specific due to texting (Implication 4), since the allotted space on the cell phone/smartphone and the smaller keyboard caused individuals to shorten their messages (Mose, 2013). In addition, research revealed emoticons, logograms, and other characteristics of Textese were not permeating students' formal essays (Implication 5). Implication 6 - While some faculty viewed texting as an extremely negative influence on writing, most faculty noted the lack of the utilization of the logograms, emoticons and other characteristics of Textese within students' writing as evidence of students' ability to code switch. Another implication identified that voice-to-text software, which utilized texting and sometimes Textese, allowed individuals who were regular users to 'write' messages orally, and was identified by some faculty as improving students' writing (Implication 7). The voice-to-text software allowed individuals with writing blocks, learning disabilities, or physical disabilities to speak their written work into writing (Implication 8).

Furthermore, additional implications included an increased engagement in class or subject matter was revealed in the Literature Review (Implication 9). Implication 10 - The incorporation of texting, SMS, or mobile communication devices increased communication with faculty and peers; although, most students indicated they would contact peers through text messages – 14 out of 25 students (56%) agreed or strongly agreed, six students (24%) disagreed or strongly disagreed, and five students (20%) neither agreed nor disagreed with the statement – as opposed to contacting faculty with questions through texting – seven students (28%) agreed or strongly agreed they did this, while 10 students (40%) disagreed or strongly disagreed, and eight students (32%) neither agreed nor disagreed. Implication 11 - Most faculty were accepting of texting as long as Textese was not found in students' formal essays, but the use of Textese in informal writing (especially communications) was overlooked. Lastly, most students and faculty identified that students usually code switched between formal and informal writing, noting different audiences, writing styles, and tones (Implication 12).

On the other hand, eight negative influences of the use of texting and Textese also emerged from the data analysis. Implication 1 - Faculty and student participants both identified harmful influences from texting and Textese on students' writing, even those students employing code switching. These undesirable effects on students' writing were identified by faculty and students. One negative implication was the faculty perception that texting was exacerbating declining literacy rates (Implication 2). Although, this study did not pursue identifying a definitive link between the two, many faculty referenced their beliefs that the two were connected. Another negative implication was that the conciseness and shortness of texting was permeating students' writing (Implication 3) and decreasing the amount of detail students included, as well as

decreasing words that were descriptive, adjectives, or adverbs (Implication 4). This lack depth of detail was deemed a result of the conciseness of text messages. Implication 5 - Faculty and students also perceived that a negative implication was students' grammatical errors were increasing, including capitalization, punctuation, spelling, and syntax. These increased errors were often attributed to the use of auto correct or spell check programs and another implication – that students were less likely to read or revise texts, which was also seen in the lack of students' reading or revising their formal essays (Implication 6). Implication 7 - Despite students' ability to often multi-task, meaning they could text and complete other activities at the same time, faculty and some students perceived texting and the use of cell phones/smartphones in class as disruptive. Lastly, faculty believed students were so ingrained in texting and utilizing keyboards that they were not used to writing out work by hand, or using cursive writing (Implication 8).

By aligning and evaluating the data gathered in this study, the insight gained beneficially added to the field of knowledge in how texting and Textese influenced students' ability to write in Standard English in composition classes. The incorporation of texting within lessons and pedagogy would aid faculty in facilitating student learning, engagement, and preparation for occupations after graduation. The results of this study include theoretical, practical, and future implications.

Practical implications. Despite hand-wringing, 'end of writing as we know it' predictions, the practical implications of this study determined that texting and Textese have not destroyed students' writing in Standard English in composition classes. Answering the research question, "How do texting and Textese influence students' learning of writing in SE in college composition classes?", the influence of texting and Textese on students' writing was found to be that the influence was not as ominous as

predicted by some faculty; however, data analysis revealed there were distinct effects of texting on students' formal and informal writing. In fact, some faculty identified texting as actually increasing the amount students' wrote informally. This did not mean that the influence of texting and Textese on students' writing was completely positive. While the logograms and emoticons found in Textese were minimally found in students' writing, most students were able to code switch between formal and informal writing.

The four main trends that emerged through the literature review and the 11 themes determined through analysis in this study indicated that faculty were going to need to incorporate texting and ways to overcome some of the negative influences of texting and Textese within assignments and pedagogy for composition classes. As a senior research scientist in MIT's Computer Science and Artificial Intelligence Laboratory noted, "More and more, humans will be in a world in which decisions are being made by an active set of cooperating devices. The Internet (and computer-mediated communication in general) will become more pervasive but less explicit and visible" (as cited in Anderson & Rainie, 2014, p. 26). To meet this future and to facilitate students' occupations in this upcoming world, it was necessary for faculty to prepare students by incorporating texting and the use of mobile electronic devices into the classroom in order to create graduates who can utilize and gain employment a technologically-evolving world. In addition, students must be able to utilize technology to communicate in the world depicted in the predictions of Anderson and Rainie (2014). Practical implications of this qualitative case study research identified the importance of faculty and students to address the positive and negative influences of texting and Textese on students' writing. The positive influences of texting were noted

as: increased informal writing, cultural acceptance, voice-to-text benefitting regular users who had learning or physical challenges, benefitting students with writing blocks, increasing engagement and communication between faculty and students, and the importance of teaching and using code switching between formal and informal audiences with different audiences and tones. The analysis of the students' questionnaires and the faculty interviews indicated a need for faculty to incorporate increased use of detail, adjectives, adverbs, vocabulary, and other descriptors within the composition classrooms to offset the influence of texting. Faculty also needed to implement assignments building on texting and formal writing where students learned better code switching techniques between formal writing, informal writing, and varying audiences. Overall, while concerns were raised about the negative influence of texting and Textese being culturally accepted, faculty could take steps to negate any adverse effects by simply incorporating lessons and assignments requiring students to differentiate between writing in texts or SMS versus writing formal, professional, polished works.

Future implications. The future implications of this research were based on what this study did and did not encompass as well as gaps illuminated in the literature review. While this study did explore the influence of texting and Textese on students' learning of writing in SE in composition classes, there were limitations that left room for future research. Due to the limitations of this research, a larger quantitative or mixed methods study would gain broader analytic generalizability compared to this case study. Although this study revealed the in-depth perceptions and uses of texting and Textese by students and faculty in relation to composition classes and writing the ability of this study to be applied to a broader audience was undetermined.

Faculty and student participants in this study combined with the frequency data gathered from the former students' e-mails revealed the necessity of future research on the influence of texting and Textese on students' learning of writing in SE in composition classes. Future research could incorporate a larger demographic group of students and faculty, including age ranges, gender, increased types of ethnicity, and students from differing geographic areas. Furthermore, with technology continuously evolving, future implications were that texting would continue to influence the ways individuals communicate and write. Additional studies would need to explore and evaluate more closely the ties between texting and literacy, texting and grammatical errors, and building faculty-student learning, engagement, and communication utilizing texting. Anderson and Rainie (2014) predicted 15 theses concerning the digital future, which faculty and students needed to prepare to meet.

Recommendations

The final section of this dissertation delineated the recommendations for future research and actions identified as necessary from the study's discoveries and conclusions. As was discussed in the future implications, additional studies need to be conducted on specific issues and gaps raised in this study. Broader analytic generalizability would be gained from a quantitative or mixed methods study with a larger demographic representation of area and participants. In addition, future research was identified as necessary from the influence of texting on specific areas of writing, literacy, and engagement of students. By completing additional research based on this study it will broaden and advance the field of knowledge on the influence of texting and Textese on students' learning of writing, which will aid faculty in addressing the

positive and negative effects of this issue. The rest of this chapter focused on recommendations for future research and recommendations for practice.

Recommendations for future research. The literature review that spurred this research formed the question that drove this study, "How do texting and Textese influence students' learning of writing in SE in composition classes?". The results of this study have left open areas for future research that would advance scientific knowledge in this subject even further, aiding faculty in evolving course lessons and pedagogy to better prepare students for a technologically driven workforce where communication, both written and oral, was via the World Wide Web. Driven from the literature review and discoveries in this study, future recommendations for research were identified. These limitations or gaps in knowledge required further exploration beyond this study, including six recommendations for further research. Recommendation 1 was further research into whether or not a student's reading and writing literacy level influenced the use of Textese. Recommendation 2 was research into concerns over the increased reading by students of writing that was not correct grammatically, structurally, or in syntax indicated the need for additional studies into the ties between texting or SMS and reading and writing literacy. Recommendation 3 was identifying how classroom community influenced whether or not students were comfortable in texting their instructors. Recommendation 4 identified needed research into how voice-to-text programs were influencing students' writing, as well as if students were utilizing texting and Textese within those programs. Recommendation 5 was research into middle/high school students based on their Grade Point Average to determine how texting and Textese influence students' writing dependent on their academic abilities. The last

recommendation was for quantitative or mixed methods research into how texting and Textese were influencing students' writing.

By undertaking additional research, an even deeper understanding of this phenomenon and its effects on students' writing would be gained. This future research would add to the 11 main themes noted in this study and either broaden or deepen the knowledge, which would aid faculty and administrators in building evolving composition pedagogy to meet students' needs. Future research would also aid students in grasping a better understanding of how texting and Textese were influencing their writing, as well as giving them a stronger writing base. The foundation of this study lead to recommendations for practice that could be implemented now to benefit faculty and the students in composition classes.

Recommendations for practice. Although the aforementioned future research has been recommended, there are several recommendations for practice that were identified in this study. In Chapter 1 the evolution of texting and its influence on writing was established, in addition to the fact that this technology and texting would continue to evolve. The influence of texting and the Textese language that developed were noted in several studies within the literature review, but those studies left gaps in the scientific knowledge of this phenomenon. Inclusion of faculty, students, and written e-mails from former students in this study broadened the knowledge of the influence of texting and Textese on students' writing. The use of Yin's (2014) Five-Phase Cycle allowed the study's data to generate results and conclusions that yielded insight into necessary areas for future studies, but also identified recommendations for practice that could be made now.

The first recommendation of practice was for faculty to incorporate more writing lessons where students had to differentiate between types of formal and informal writing. For example, having assignments where students wrote information in a text message, an e-mail, and a letter, but having the students write to differing audiences (friend, family, boss/supervisor, professor, etc.). By completing additional practice with these varying types of writing, students would better learn to differentiate between formal and informal writing, varying audiences, and varying tones (Aziz et al., 2013; DeJonge & Kemp, 2012).

The second recommendation for practice was for faculty to stress the importance of revisions and individuals' reading what they have written before sending a message or turning in an essay/assignment. Instructors would need to teach students how to critically read and analyze their writing. Emphasizing the importance of reading and revising would improve critical analysis skills, improve peer editing skills, and decrease errors in spelling, grammar, syntax, and structure (McDonald, 2013; Mikkelson & Davidson, 2011; Purcell et al., 2013). By increasing lessons and assignments utilizing revisions and requiring reading of work prior to submission these actions would become behaviors that students were in the practice of performing.

A third recommendation for practice was the inclusion of formal and informal writing requiring increased use of details, descriptors, adjectives, and adverbs. Since this study revealed students' writing was being negatively influenced by texting through the elimination of detail for conciseness in texting, then faculty needed to offset this characteristic by incorporating assignments with more detailed writing (Purcell et al., 2013). One way this recommendation could be achieved would be to have students work

on their own revisions in class, as well as detailed instructions for students who were peer editing classmates' papers.

A fourth recommendation of practice was that faculty need to be trained in utilizing mobile communication devices, texting, and social media in reference to communicating with students. Statistically, 55.3% of faculty did not use social media, including texting, for professional purposes (Moran et al., 2012). If faculty were trained and educated on utilizing social media, including texting, the instructors would be more comfortable and more willing to utilize it as explained in the Technology Acceptance Model (Venkatesh & Davis, 2000), the Media Richness Theory (Park et al., 2012), and the Uses and Gratification Approach (Park et al., 2012). Numerous studies revealed the beneficial utilization of texting, SMS, and mobile communication devices in the educational environment (Grinols & Rajesh, 2014; Husbye & Elsener, 2013; Kim et al., 2013). The ability of faculty to communicate and engage students using the technology these students were raised utilizing would increase learning.

A fifth recommendation of practice was for instructors to move their approach to teaching into the technology age. Millennial students expected more out of a class than just lecturing, the traditional old-fashioned teaching methods most faculty were taught (Smith & Parker, 2012). Instead, students learned more and were better engaged when lessons were presented utilizing technological connections to the World Wide Web where interactive lessons were accessed through mobile communication devices (Smith & Parker, 2012). Students became engaged with the subject matter and each other through texting on Social Network Sites in classrooms, and gained a deeper reflective comprehension on the subject matter (Park & Son, 2011). Furthermore, faculty who incorporated the use of texting and cell phones/smartphones or other mobile

communication devices created a classroom environment where students reflected on the subject matter, learned proper netiquette behaviors, were taught critical thinking skills, and learned proper code switching between formal and informal venues and audiences (Ahn, 2011; Aghaee, 2010; Wankel & Blessinger, 2013).

These five recommendations of future practice were currently available for instructors to increase student learning and engagement. Future expectations of technology evolution identified the necessity of students' utilization of texting and mobile communication devices (Anderson & Rainie, 2014). Therefore, faculty and higher education institutions must prepare students for a technologically oriented workforce and world after graduation.

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Appendix A

Analysis Plan for Research Question

Research Question	Phenomenon (problem) Being Studied	Sources of Data	Analysis Plan
R1: How do texting and Textese influence student learning of writing in SE in college composition classes?	Instructors' perceptions of how texting and Textese are impacting students' learning of writing in SE in composition classes.	Student questionnaires Student e-mails Interviews Member checking	Statistical data will need to be gathered from student e-mails. Pattern matching and themes will need to be utilized in the interviews and student questionnaire. Create qualitative codebook then input data to MAXQDA+. After analysis is completed, the researcher will utilize Yin's (2011) last 2 steps: interpreting and concluding with the generated data.

Appendix B

Systemic Review of Major References' Themes in Literature Review

Author	Topic	Themes	Methodology
Anderson, Franklin, Yinger, Sun, & Geist (2013)	Using tablets and other technology in classrooms	Mobile devices preferred for reference, discussion, and learning activities. Some students limited by access. Schools needed mobile learning support through a strong data network, good Internet connection, and training for students and faculty.	Phenomenological study using quantitative and qualitative data collected from 38 students over 9 weeks at a Midwestern university
Aziz, Shamim, Aziz, & Avais, (2013)	Impact of texting/SMS language on academic writing	Texting does not negatively impact students' writing.	Qualitative analysis of 50 student papers at the Institute of Information Technology in Lahore, Pakistan.
Baker, Lusk, & Neuhauser (2012)	Using cell phones and other devices in classrooms	Faculty and students viewed use of mobile devices very differently in classes. Most students favored use in class, while faculty were against use of mobile technology in class.	Quantitative analysis of 978 (882 students, 96 faculty) surveys from 3 public universities in North Carolina, New York, and Texas
Bronowicki (2014)	Negative impact of texting on formal writing	Students supported using mobile devices in class, but identified it negatively impacted academic writing. Faculty needed to emphasize formal writing with more formal assignments. Students were unable to differ between formal and informal writing, leading to issues with academic and career success.	Master's theses
Dansieh (2012)	SMS texting's impact on students writing	Majority of students texted in and out of class daily. Majority of students and faculty believed texting negatively impacted writing in Standard	Mixed methods descriptive case study of 400 students and 30 lecturers at Wa Polytechnic in Ghana

Author	Topic	Themes	Methodology
		English.	
Ng'ambi (2011)	Using texting and mobile phones in class	Mobile phones need to be imbedded into the class and pedagogy to enhance learning, discussion, and engagement. Transactional Distance Theory negatively impacted students and was diminished by using mobile devices in class.	Qualitative observations and discussions both face-to-face and online with 18 students at the University of Cape Town, South Africa over the period of a semester
Park, Chung, & Lee (2012)	3 theories of text-based communication media	Younger users preferred texting and Facebook messaging. One theory cannot completely explain the users' attraction to technology. Media Richness Theory was an important role in technology use.	1,500 students e-mailed a survey link, 414 completed survey at a public university in the southwest
Purcell, Buchanan, & Friedrich (2013)	Impact of digital tools on students' writing and how writing is taught	Students were increasingly reliant on mobile tools. Texting is the main form of communication among teens.	Quantitative analysis of 2,462 AP and National Writing Project teachers in surveys and focus groups.

Appendix C

Site Permission Form

LINCOLN TRAIL COLLEGE

An Illinois Eastern Community College
11220 State Highway 1 • Robinson, IL 62454-5707 • 618 544-8657

July 15, 2014

Office of Academic Research
Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804

Dear IRB Members,

After reviewing the proposed study, "A Qualitative Case Study of Social Technology's Influence on Students' Writing", presented by Winifred Ann Reed Wolven, I have granted authorization for Winifred Ann Reed Wolven to conduct research at Lincoln Trail College.

I understand the purpose of the study is to explore the influence of texting and textese on students' writing in composition classes. Winifred Ann Reed Wolven will conduct the following research activities: an anonymous student survey and analysis of e-mails from former students. It is understood that this project will end no later than September 1, 2014.

I have indicated to Winifred Ann Reed Wolven that Lincoln Trail College will allow the following research activities: onsite data collection through anonymous student questionnaires and file access of former students' e-mails on the condition that all identifying information of the students is removed and FERPA requirements are followed.

To ensure that the employees are protected, Winifred Ann Reed Wolven has agreed to provide to me a copy of any Grand Canyon University IRB-approved, consent document before she recruits participants at Lincoln Trail College. Winifred Ann Reed Wolven has agreed to provide a copy of the study results, in aggregate, to our college.

If the IRB has any concerns about the permission being granted by this letter, please contact me at the phone number listed below.

Sincerely,

Robert Conn

Robert Conn

Dean of Instruction

Lincoln Trail College
11220 State Hwy. 1
Robinson, IL 62454-5707
PH. 618-544-8657
Fax 618-544-7423

Appendix D

A Qualitative Case Study of Social Technology's Influence on Students' Writing

Student Questionnaire

Thank you for participating in this study. By participating in this questionnaire, you are assisting the researcher in further learning about the impact of texting and Textese on students' writing, which will broaden the base of existing knowledge for English instructors. By participating in this study, you are not relinquishing your right to hold the researcher or Grand Canyon University liable for negligence. Your participation in this study is voluntary and your identity will remain anonymous. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Furthermore, if significant findings are developed that may relate to your willingness for continued participation, the information will be provided to you and you will be allowed to withdraw for any reason from the study without penalty. If you choose to withdraw, you need to notify the researcher that you no longer wish to participate either in writing or electronically. Any questions that you have concerning your rights or concerning the research may be addressed to the Chair of the Human Subjects Institutional Review Board, through the College of Doctoral Studies at (602) 639-7804. Thank you for participating. Please circle your answers to the following questions clearly.

***Textese*:** "An abbreviated vocabulary that includes initialisms (e.g. *lol* for laughing out loud), letter/number homophones (e.g. *gr8* for great), contractions or shortenings (e.g. *cuz* for because), emoticons (symbols representing emotions (e.g.: (for sad), and the deletion of unnecessary words, vowels, punctuation, and capitalization" (Drouin, 2011, p. 67).

1)How old are you?
   A.18
   B.19
   C.20
   D.21-25
   E.25+

2)What is your gender?
   A.Female
   B.Male
   C.Prefer not to answer

3)Do you own or have access to a cell phone or smartphone with texting capabilities?
   A. Own a cell phone with texting capabilities
   B. Have access to a cell phone with texting capabilities
   C. Own or have access to a cell phone without texting capabilities
   D. Do not own or have access to a cell phone

4)How often do you text on a daily basis?

A. 0-10 times
B. 10-20 times
C. 20-30 times
D. 30+ times
E. I do not text

5)If you have a cell phone or smartphone with texting capabilities, do you have an unlimited texting plan, or are you limited in the number of texts you can send per day?

1.I have limited texting plan of 50 or fewer texts per day
2.I have an unlimited texting plan
3.I do not have a texting plan
4.I do not know what my plan is

For the remaining questions, please identify whether you 1 – Strongly Agree, 2 – Agree, 3 – Neither Agree or Disagree, 4 – Disagree, 5 – Strongly Disagree.

6)I text classmates in reference to homework and/or assignments.

1 2 3 4 5

7)I text my instructors concerning homework and/or assignments.

1 2 3 4 5

8)My instructors encourage me to text them concerning assignments and/or homework.

1 2 3 4 5

9)It distracts me when students near me are texting in class.

1 2 3 4 5

10)Instructors should text me information clarifying grammatical errors in my essays or assignments.

1 2 3 4 5

11) Instructors should text me information clarifying Standard English writing errors in my essays or assignments.

1 2 3 4 5

12) While texting, I use Textese in my messages.

1 2 3 4 5

13) My use of Textese changes depending on who I am texting (such as a friend, a professor, a boss).

1 2 3 4 5

14)I have received text messages that I did not understand because of the person's use of Textese.

1 2 3 4 5

15)I have used Textese in an essay or assignment for class.

1 2 3 4 5

16)Texting and Textese have positively impacted my writing.

1 2 3 4 5

17) Texting and Textese have positively impacted my spelling in essays.

1 2 3 4 5

18)Texting and Textese have positively impacted my grammar in essays.

1 2 3 4 5

19)Students should be allowed to text in class if it is related to a class assignment.

1 2 3 4 5

20) Students should be allowed to text in class if it is unrelated to a class assignment.

1 2 3 4 5

21)I have been distracted by receiving or sending a text in class.

1 2 3 4 5

22)Teachers should include texting to other students or the instructor as a part of class assignments.

1 2 3 4 5

23)I can text and complete classwork at the same time.

1 2 3 4 5

24)Texting has a positive impact on my completion of classwork.

1 2 3 4 5

25)Texting has a negative impact on my completion of written assignments.

1 2 3 4 5

26)Texting during class impacts my grade negatively.
1 2 3 4 5

27) Texting negatively impacts my essay grades.
1 2 3 4 5

28)I have used emoticons (smiley faces, etc.) in writing other than in text messages.
1 2 3 4 5

For the remaining questions, please answer the following questions.

29)In your opinion, does texting and Textese impact your ability to communicate in writing? Why or why not?

30)Does texting have a positive impact, negative impact, or no impact at all on your writing and your ability to write in Standard English? Can you give any examples or explain why you believe this?

31)Does texting have a positive impact, negative impact, or no impact at all on your writing of essays? Can you give any examples or explain why you believe this?

Appendix E

Faculty Semi-structured Interview Questions and Demographic Questionnaire

A Qualitative Case Study of Social Technology's Influence on Students' Writing

Semi-structured Faculty Interview Questions

Thank you very much for taking the time to participate in my doctoral research study. Your input and views are extremely important in helping me learn how texting and Textese are influencing students' learning to write in Standard English in composition classes. This interview should last approximately 1 hour. Would it be alright for me to tape this interview for verification purposes? By participating in this interview and completing the Demographic Survey, you are assisting me in further learning about the impact of texting and Textese on students' writing, which will broaden the base of existing knowledge for English instructors. By participating in this study, you are not relinquishing your right to hold the researcher or Grand Canyon University liable for negligence. Your participation in this study is voluntary and your identity will remain anonymous. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Furthermore, if significant findings are developed that may relate to your willingness for continued participation, the information will be provided to you and you will be allowed to withdraw for any reason from the study without penalty. If you choose to withdraw, you need to notify the researcher that you no longer wish to participate either in writing or electronically. Any questions you have concerning your rights or concerning the research may be addressed to the Chair of the Human Subjects Institutional Review Board, through the College of Doctoral Studies at (602) 639-7804. Thank you again for agreeing to participate in this research. Would you mind completing this quick demographic survey?

***Textese*:** "An abbreviated vocabulary that includes initialisms (e.g. *lol* for laughing out loud), letter/number homophones (e.g. *gr8* for great), contractions or shortenings (e.g. *cuz* for because), emoticons (symbols representing emotions (e.g.: (for sad), and the deletion of unnecessary words, vowels, punctuation, and capitalization" (Drouin, 2011, p. 67).

1)How have you utilized your smartphone or cell phone to communicate with students? In what ways?
2)Have you noticed any use of texting or Textese (including emoticons, logograms, shortened sentence structure, etc.) in your students' written communications to you or their essays? Can you give any examples?
3)Does texting have a positive impact, negative impact, or no impact at all on students' writing and their ability to write in Standard English in your opinion? Can you give any examples or explain why you believe this?

4)Do you have any other observations you would like to make concerning texting and/or Textese?

Semi-structured Faculty Interview Demographic Survey

Please answer the following survey questions concerning demographic information for this study prior to the scheduled semi-structured interview. You do not need to identify yourself or answer any questions that make you uncomfortable. All answers will be kept confidential.

1)How old are you? _____

2)What is your gender? ____ Male ____ Female ____ Prefer not to answer

3)Do you own or have access to a cell phone with texting capabilities? ___ yes ___ no

4)Do you own or have access to a smartphone with texting and Internet capabilities?

____ yes ____ no

5)How long have you been teaching composition classes? _____

6)On average, how many composition classes do teach in a year? _____

7)Which best describes the higher education institution where you currently teach:

2-year community college	2-year technical college	4-year private college/university	4-year public college/university

_____ none of the above

8)What is your ethnicity?

Caucasian	African-American	Hispanic	Asian	Native American	Other

_____ prefer not to answer

Appendix F

Data Collection Permission Form

Ann Wolven

From: Wolven, Ann [wolvena@iecc.edu]
Sent: Tuesday, May 07, 2013 12:35 PM
To: Vmi81wife@cinergymetro.net
Subject: FW: Allerton

From: Michael Day [mailto:mday@niu.edu]
Sent: Tuesday, May 07, 2013 11:34 AM
To: Wolven, Ann
Subject: RE: Allerton

Hi Ann,

It was a pleasure getting to know you at Allerton!

Here are the two internet discussion groups I mentioned to you. The first, WPA-L is a group of writing program administrators and writing teachers, and lots of people ask and answer questions there. WPA stands for the Council of Writing Program Administrators.

http://wpacouncil.org/wpa-l

The second is for tech-oriented writing teachers.

http://www.interversity.org/lists/techrhet/subscribe.html

You can also send a message to those who were at Allerton. If you don't have the list of email addresses, send the inquiry to me and I will forward it, OK?

Thanks and take care,

Michael

>>> "Wolven, Ann" <wolvena@iecc.edu> 5/7/2013 9:47 AM >>>
Michael – I wanted to thank you again for such a wonderful learning experience at Allerton this past April. I always gain new insight into ways to improve my teaching and approach the subject matter. The first night when I arrived, you mentioned two different sources for information, the WAP and another source, in reference to gaining information for my dissertation on the impact of Instant Messaging and texting on college students writing. Can you please explain to me these sources again? I am not sure what WAP stands for, to be honest. Also, I wanted to verify that it would be okay for me to utilize the list of Allerton participants who stated they were willing to be contacted to use for research in my doctorate study. Thank you, and I hope you have a wonderful summer. Ann Wolven, Lincoln Trail College

Appendix G

E-mail Evaluation Form

Researcher will complete chart to evaluate students' use of texting and Textese in written communication with the researcher in her capacity as a college instructor.

E-Mail Analysis Chart

E-mail Coding: _____ Date: _____

Researcher will complete chart to evaluate students' use of texting and textese in written communication with the researcher in her capacity as a college instructor.

Category	Number of Times Used	Example of Usage in E-Mail
Number of words written		
Number of words affected by texting and textese language		
Instances of emoticons used		
Instances of logograms used		
Instances of shortened sentences used		
Instances of run-on sentences		
Instances of shortened words used		
Instances of spelling errors		
Instances of verb tense errors		
Instances of informal language to the instructor		
Instances of ALL CAPS used		
Instances of commas obligatory		
Instances of comma errors		
Instances of apostrophes obligatory		
Instances of apostrophe errors		
Instances of question marks obligatory		
Instances of question mark errors		
Instances of periods obligatory		
Instances of period errors		
Instances of semi-colon errors		
Instances of semi-colon errors		
Instances of capital letter obligatory		
Instances of capital letter errors		

Chart adapted from questions asked by Aziz, S., Shamim, M., Aziz, M.F., & Avais, P. (2013, February 5). The impact of texting/SMS language on academic writing of students – What do we need to panic about?. *Elixir Linguistics and Translation, 55,* p. 12884-12890, and Rosen, L.D., Chang, J., Erwin, L., Carrier, L.M., & Cheever, N.A. (2010). *The relationship between "textisms" and formal and informal writing among young adults.* Unpublished manuscript, Department of Psychology, California State University, Dominguez Hills, California.

Appendix H

Faculty Interview Demographic Survey Results

Question #1: Faculty were the following ages: 50, 38, 69, 37, 52, 58, 59, 67, 32, 46

Question #2: Faculty were divided into the following genders:

Male - 2 Female - 8 Prefer not to answer – 0

Question #3: Own or have access to a cellphone with texting capabilities:

Yes - 10 No – 0

Question #4: Own or have access to a smartphone with texting and Internet capabilities:

Yes – 10 No – 0

Question #5: Type of texting plan:

Unlimited - 7 Limited - The limit - Unknown limit – 3

Question #6: Length of teaching composition classes:

Participant	**Years**
1	13 years
2	15 on high school level; 10+ on college/university level
3	17 years college/university
4	11 years
5	31 years
6	34 years
7	32 years
8	42 years
9	9 years
10	17 years

Question #7: Average number of composition classes taught per year:

Participant	Number
1	9-10
2	High school – 6-7; University – 6-8
3	6
4	5-6
5	1-2
6	5
7	4
8	4
9	8
10	2

Question #8: Higher education institution where they currently teach:

Participant	2 year community college	2-year technical college	4-year private College/university	4-year public College/university
1	1			
2			1	
3			1	
4	1 private, 2 year			
5				1
6				1
7			1	
8	1			
9				1
10	1			

Question #9: Ethnicity:

Participant	Caucasian	African American	Hispanic	Asian	Native American	Other	Prefer not to answer
1	1						
2	1						
3	1						
4	1		1		1		
5	1						
6	1						
7	1						
8	1						
9		1					
10	1						

Appendix I

E-Mail Frequence Analysis Chart

E-Mail Frequency Analysis Chart

Category	Fall 2012	%	Spring 2013	%	Fall 2013	%	Total	Total %
Number of words written	2767		1442		4613		8822	
Number of words affected by texting and textese language	123	4.44	83	5.76	196	4.25	402	4.56
Instances of emoticons used	3	0.10	1	0.07	9	0.20	13	0.15
Instances of logograms used	13	0.47	11	0.76	14	0.30	38	0.43
Instances of shortened sentences used	29		32		65		126	
Instances of run-on sentences	29		20		42		91	
Instances of shortened words used	22	0.80	21	1.46	36	0.78	79	0.90
Instances of spelling errors	120	4.34	78	5.41	210	4.55	408	4.62
Instances of verb tense errors	7	0.25	1	0.07	6	0.13	14	0.16
Instances of informal language to the instructor	88	3.18	76	5.27	103	2.32	267	3.03
Instances of ALL CAPS used	5	0.18	4	0.28	14	0.30	23	0.26
Instances of commas obligatory	165		93		236		494	
Instances of comma errors	100	60.6	57	61.29	14	5.93	171	1.94
Instances of apostrophes obligatory	40		40		107		187	
Instances of apostrophe errors	13	32.5	12	30	29	27.10	34	0.39
Instances of question marks obligatory	33		13		39		85	
Instances of question mark errors	13	39.4	8	61.54	12	30.77	33	38.82
Instances of periods obligatory	155		108		331		594	
Instances of period errors	48	30.96	23	21.30	79	23.87	150	25.25
Instances of semi-colons obligatory	13		3		2		18	
Instances of semi-colon errors	12	92.30	3	100	1	50	16	88.89
Instances of capital letter obligatory	438		272		1222		1932	
Instances of capital letter errors	132	30.14	69	25.37	195	15.96	396	20.50

Chart adapted from questions asked by Aziz, S., Shamim, M., Aziz, M.F., & Avais, P. (2013, February 5). The impact of texting/SMS language on academic writing of students – What do we need to panic about?. *Elixir Linguistics and Translation, 55,* p. 12884-12890, and Rosen, L.D., Chang, J., Erwin, L., Carrier, L.M., & Cheever, N.A. (2010). *The relationship between "textisms" and formal and informal writing among young adults.* Unpublished manuscript, Department of Psychology, California State University, Dominguez Hills, California.

Appendix J

Faculty Request for Participation

A Qualitative Case Study of Social Technology's Influence on Students' Writing

Date _____

Dear _____:

I am a graduate learner under the direction of Dr. Erich Randall in the Department of Doctoral Studies at Grand Canyon University. I am conducting a research study to research how texting and its vernacular, Textese, impact students' ability to write in composition classes.

I am inviting your participation, which will involve a face-to-face semi-structured individual interview to take place at a mutually agreed upon time and place near where you live, as well as a shorter follow-up interview to verify the accuracy of the information gathered. The individual interviews will take place before September 15, 2014, and the follow-up interviews will be concluded by September 30, 2014. You have the right not to answer any question, and to stop the interview at any time.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Participants in the study are English educators at 2- and 4-year colleges and universities, so participants must be 18 years of age or older to participate in the study. I will select participants from those instructors who agree to participate in order to insure a balance sample population based on demographics and types of higher education organizations. After selecting participants based on the aforementioned considerations, I will arrange with you a time, date, and location for an interview at your convenience.

Benefits from participating in this study will be that you will be adding to the field of knowledge concerning the use of texting and impact of texting in college composition classes. There are no foreseeable risks or discomforts to your participation.

The process for participants will be that after you agree to the interview, we will set up a time, date, and location for the interview at your convenience. The interview will last approximately 60 minutes, and I will ask you to complete a short demographic survey prior to the start of the interview. If you so desire, I can send you the questions for the interview in advance. During the interview, I will be taking notes and, with your permission, audio/visually taping it for verification and accuracy purposes. Following the interviews, I will transcribe them and e-mail you a copy of the transcription to verify

your comments and meanings in a follow-up interview. I would ask that any changes that you believe need to be made be e-mailed back to me. After the follow-up interviews are completed, your participation in this study would be completed.

Individuals participating in this qualitative study will be guaranteed confidentiality. The researcher will be removing all identifying information from the study and will utilize random coded numbers to identify participants; no one will be given access to those numbers. In addition, all audio/video recordings of interviews, correspondence regarding interviews, and transcribed notes and interviews will be kept in a locked safe that no one except for the graduate learner will have access to for 7 years; after that time they will be destroyed. Your responses will be confidential. The results of this study may be used in reports, presentations, or publications but your name will not be used.

I would like to audio/videotape this interview purely as a means of verification of information given, as well as observation of the interview. The interview will not be recorded without your permission. Please let me know if you do not want the interview to be taped; you also can change your mind after the interview starts, just let me know. As previously stated, all tapes of the interview, transcriptions, etc. will be kept in a locked safe for 7 years, accessible only to the researcher, then destroyed by being shredded or burned.

If you have any questions concerning the research study, please contact the research team at: Ann Wolven (812) 881-9304 (cell) or (812) 886-3815, or 1403 Old Orchard Rd., Vincennes, IN. 47591. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the College of Doctoral Studies at (602) 639-7804.

Thank you for considering participating in this study.

Winifred Ann Reed Wolven

Appendix K

Qualitative Codebook for Faculty Interviews and Student Questionnaires

The researcher created the following codes for the evaluation of the qualitative, semi-structured, one-on-one interviews with faculty and the qualitative questions in the student questionnaire. The codebook is available upon request.

Bold Face - Denotes a major category **Denotes subtopic of category ***Denotes subtopic of subtopic

Faculty Interview Transcripts
Code switching
Code switching used by students
Code switching not used by students
Texting influencing reading and vicariously writing
Positive influence – students reading more
Negative influence – students reading less
No influence
Perceptions about texting
Increasing amount of writing
Faculty – Mixed
Faculty – Positive
Faculty – Negative
Demographic influences
Family does not own computers
Students come from urban schools
Students come from rural area
Traditional students use in class
Nontraditional students use in class
Race does not influence texting
Race influences texting
Socio-economics do not influence texting
Lower socio-economics negatively influences texting
Age does not influence use
Age influences use
Gender does not influence use
Gender influences use
Types of writing
Handwriting – Texting has not influence
Handwriting – Texting positively influences
Handwriting – Texting negatively influences
Causes desire for condensed writing/information
Frequency of texting
Impact on revisions
Texting in written assignments/essays
Texting in note taking
Issues between formal/informal writing

Lack of differentiation between formal/informal writing
Texting is writing
Texting in written communications
Impact of cell phones in classroom
Students not reading
Students reading more
Informal address to instructor
Students want shortened information
**Cell phone presence negatively impacts learning
***Lack of verbal interaction between students
***Interrupts concentration
***Students expect immediate answers
***Students expect immediate connection to Internet
***Disruptive
**Cell phone presence has no influence on learning
**Cell phone presence positively influences learning
***Voice-to-text/Speech-to-text
    Regular users – positive influence
    Regular users – negative influence
    Infrequent users – positive influence
    Infrequent users – negative influence
No influence on grammar/language
***Faculty can model good behavior with devices
***Encourages students' questions
***Improves engagement
Uses with students
Checks/grades assignments with cell phone/smartphone
Uses cell phone/smartphone to contact students
Does not use cell phone/smartphone to contact students
Edit student papers/comment on student papers
Other issues
Answer questions on essays
Absences
Answer questions on assignments
Quick communication
Literacy rates negatively influenced
Literacy rates positively influenced
Literacy rates – no influence
Structure/Syntax
Spelling errors from Spell Check or phone auto correct
Limited vocabulary
Texting has a positive influence on vocabulary
Lack of detail, depth of description in writing
Language/word usages problems caused by texting
Negative influence on spelling
Causes issues with understanding
Grammar errors

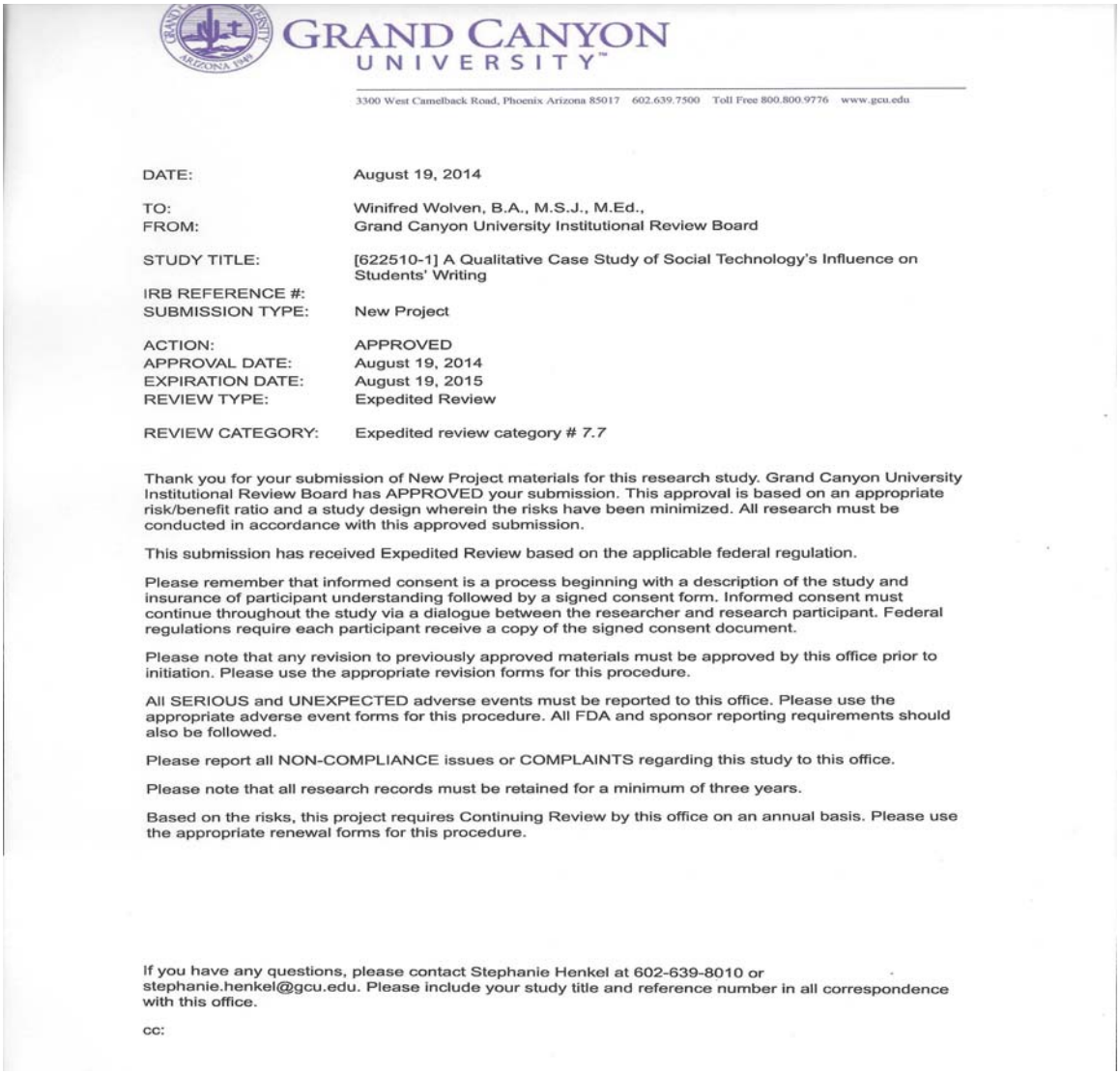
Texting helps fix grammar
Texting has no influence on grammar
Apostrophe errors
** Capitalization errors
***Using ‘i’ instead of ‘I’
Shortened sentences
Emoticons
Logograms
Textese usage and perceptions
Use considered culturally acceptable
Textese – positive influence
Textese – negative influence
Textese – no influence

Student Opinions from Student Questionnaire Qualitative Questions

Texting is writing
Textese
Used accidentally in written work
Does not use in written work
Uses in written work
Influence on vocabulary
No influence on vocabulary
Positive influence on vocabulary
Negative influence on vocabulary
Influence on spelling
No influence on spelling
Positively influences spelling
Negatively influences spelling
Code switching
Does not use code switching
Uses code switching
Student – Influence on grammar
No influence on grammar
Positively influences grammar
Negatively influences grammar
Influence on writing
Do not text
Student – No influence on writing
Student – Positively influences writing
Student – Negatively influences writing

Appendix L

Institutional Review Board Approval Letter



GRAND CANYON UNIVERSITY™

3300 West Camelback Road, Phoenix Arizona 85017 602.639.7500 Toll Free 800.800.9776 www.gcu.edu

DATE:	August 19, 2014
TO:	Winifred Wolven, B.A., M.S.J., M.Ed.,
FROM:	Grand Canyon University Institutional Review Board
STUDY TITLE:	[622510-1] A Qualitative Case Study of Social Technology's Influence on Students' Writing
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	August 19, 2014
EXPIRATION DATE:	August 19, 2015
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category # 7.7

Thank you for your submission of New Project materials for this research study. Grand Canyon University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.

Based on the risks, this project requires Continuing Review by this office on an annual basis. Please use the appropriate renewal forms for this procedure.

If you have any questions, please contact Stephanie Henkel at 602-639-8010 or stephanie.henkel@gcu.edu. Please include your study title and reference number in all correspondence with this office.

cc:

Appendix M

Informed Consent Form

A Qualitative Case Study of Social Technology's Influence on Students' Writing

INFORMED CONSENT FORM

I hereby give my consent to participate in Winifred Ann Wolven's study as part of her doctoral dissertation examining the impact of texting and Textese on students' writing in composition classes. I am aware that she can be reached at (812) 881-9304 (cell phone) or (812) 886-3815 (home phone), by e-mail at vmi81wife@cinergymetro.net, or by mail at 1403 Old Orchard Rd., Vincennes, IN. 47591. By participating in this study, I recognize that I am assisting the researcher in further learning about the impact of texting and Textese on students' writing, which will broaden the base of existing knowledge for English instructors. This knowledge will aid instructors in better understanding of and possible uses for texting in relation to students' writing and pedagogical implications for composition classes.

By participating in this study, I am not relinquishing my right to hold the researcher or Grand Canyon University liable for negligence. I realize that my participation in this study is voluntary. If I choose not to participate or to withdraw from the study at any time, there will be no penalty. Furthermore, if significant findings are developed that may relate to my willingness for continued participation, the information will be provided to me and I will be allowed to withdraw for any reason from the study without penalty. If I choose to withdraw, I need to notify the researcher that I no longer wish to participate either in writing or electronically. I am aware that any questions I have concerning my rights or concerning the research may be addressed to the Chair of the Human Subjects Institutional Review Board, through the College of Doctoral Studies at (602) 639-7804.

This study into texting's impact on students' writing in composition classes will require the doctoral learner to interview me in an individual interview at a mutually agreed upon time and place between September 2014 and October 2014, as well as including my participation in member checking the interview transcripts for the purposes of verification and validation. I understand there will be at least 12 other English instructors from colleges and universities who are also being interviewed in the course of this study. The choice of using audio/visual recording of the interviews is up to me, the participant; I can choose to allow or disallow the recording of the interview at any point in the interview. I understand there will be no negative impact on me if I

choose not to allow audio/visual recording. Furthermore, I recognize that there will be no reasonably foreseeable risks and/or discomforts to me as a participant in this study.

Individuals participating in this qualitative study will be guaranteed confidentiality. The researcher will be removing all identifying information from the study and will utilize random numbers to identify participants; no one will be given access to those numbers. In addition, all audio/video recordings of interviews, correspondence regarding interviews, and transcribed notes and interviews will be kept in a locked safe that no one except for the graduate learner will have access to for 7 years; after that time they will be destroyed. Your responses will be confidential. Under no circumstances will information be disclosed to another entity for any purpose without specific and expressed agreement from the subject; however, the results of this study may be used in reports, presentations, or publications, but your name and identifying information will not be used.

By signing this consent form, I verify that I understand this research protocol and the risks that I may be exposed to as a participant of the study. I have had the opportunity to ask questions for clarification about all aspects of the study. I realize that I have the right to ask questions and/or withdraw from the study at any time without penalty. If the study protocol changes in a way that would significantly affect the participants, I will be notified and asked to sign a new Informed Consent. Signing this form does not imply that I give up any legal rights in relation to the study. I will receive a copy of the signed consent form.

_____ _____

Subject's Signature Date

_____ _____

Witness (if necessary) Date

INVESTIGATOR'S AFFIDAVIT

The subject has been provided with the research study information detailed in this Informed Consent and has been given the opportunity to ask questions and receive clarification regarding any component of the study. I attest that the subject appears to understand the ramifications and risks of participating in the study. To the best of my knowledge, a medical, language, or other communication barrier has not hindered the subject's understanding of the proposed involvement in the research.

_____ _____

Signature of Investigator Date

Appendix N

Student Questionnaire Results Questions 1-28

Question #	Gender	A – 18 years	B – 19 years	C – 20 years	D – 21 - 25 years	E – 25+ years
1. How old are you?	M	3	2	2	0	1
	F	9	0	2	0	6
	Gender	**A Female**	**B Male**			
2. What is your gender?	M	0	8	0	0	0
	F	17	0	0	0	0
	Gender	**A - own a cell phone with texting capabilities**	**B - have access to a cell phone with texting capabilities**	**C - own or have access to a cell phone without texting capabilities**	**D - do not own or have access to a cell phone**	
3. Do you own or have access to a cell phone or smartphone with texting capabilities?	M	8	0	0		0
	F	15	1	1		0
	Gender	**A - 0-10 times**	**B – 10-20 times**	**C – 20-30 times**	**D – 30+ times**	**E – I do not text**
4. How often do you text on a daily basis?	M	1	0	1	5	1
	F	2	3	2	10	0
	Gender	**A - I have limited texting plan of 50 or fewer texts per day**	**B - I have an unlimited texting plan**	**C - I do not have a texting plan**	**D - I do not know what my plan is**	
5. If you have a cell phone or smartphone with texting capabilities, do you have an unlimited texting plan, or are you limited in the number of texts you can send per day?	M	0	6	0		2
	F	0	16	0		1

Question #	Gender	1 – strongly agree	2 - agree	3 - neither agree nor disagree	4 - disagree	5 - strongly disagree
6. I text classmates in reference to homework and/or assignments.	M	3	2	1	1	1
	F	5	4	4	1	3
7. I text my instructors concerning homework and/or assignments.	M	1	1	3	1	2
	F	2	3	5	3	4
8. My instructors encourage me to text them concerning assignments and/or homework.	M	2	1	5	0	0
	F	1	5	7	0	4
9. It distracts me when students near me are texting in class.	M	1	2	0	2	3
	F	4	3	3	4	3
10. Instructors should text me information clarifying grammatical errors in my essays or assignments.	M	1	1	2	4	0
	F	4	1	1	6	5
11. Instructors should text me information clarifying Standard English writing errors in my essays or assignments.	M	1	1	3	2	1
	F	4	1	1	6	5
12. While texting, I use Textese in my messages.	M	1	1	3	1	2
	F	3	5	3	3	3
13. My use of Textese changes depending on who I am texting (such as a friend, a professor, a boss).	M	4	1	1	0	2
	F	8	4	3	0	2
14. I have received text messages that I did not understand because of the person's use of Textese.	M	2	4	1	0	1
	F	7	3	2	3	2
15. I have used Textese in an essay or assignment.	M	0	1	1	0	6
	F	3	0	2	2	8
16. Texting and Textese have positively impacted my writing.	M	0	1	3	0	4
	F	1	0	4	5	7
17. Texting and Textese have positively impacted my spelling in essays.	M	0	1	3	0	4
	F	1	0	5	3	8
18. Texting and Textese have positively impacted my grammar in essays.	M	0	1	3	0	4
	F	1	0	5	1	10
19. Students should be allowed to text in class if it is related to a class assignment.	M	2	1	2	1	2
	F	0	4	4	5	4
20. Students should be allowed to text in class if it is unrelated to a class assignment.	M	2	0	3	0	3
	F	1	6	1	5	4

Question #	Gender	1 – strongly agree	2 - agree	3 - neither agree nor disagree	4 - disagree	5 - strongly disagree
21. I have been distracted by receiving or sending a text in class.	M	0	1	5	1	2
	F	1	6	2	4	4
22. Teachers should include texting to other students or the instructor as part of class assignments.	M	1	0	3	2	2
	F	3	1	1	6	6
23. I can text and complete classwork at the same time.	M	0	4	1	1	1
	F	5	5	4	1	2
24. Texting has a positive impact on my completion of classwork.	M	0	1	2	2	3
	F	0	1	10	4	2
25. Texting has a negative impact on my completion of written assignments.	M	2	2	2	2	0
	F	3	2	6	1	5
26. Texting during class impacts my grade negatively.	M	0	1	3	3	1
	F	1	5	3	2	6
27. Texting negatively impacts my essay grades.	M	0	1	4	2	1
	F	2	3	6	1	5
28. I have used emoticons (smiley faces, etc.) in writing other than in text messages.	M	1	1	0	2	4
	F	3	0	2	5	7

Appendix O

Frequency Data from Coding in MAXQDA+

MAXQDA

- Code System [761]
  - Student Opinions from Student Survey [0]
    - Texting is writing [2]
    - Textese [0]
      - Used accidentally in written work [7]
      - Does not use in written work [8]
      - Uses in written work [0]
    - Influence on vocabulary [0]
      - No influence on vocabulary [4]
      - Positive influence on vocabulary [5]
      - Negative influence on vocabulary [7]
    - Influence on Spelling [0]
      - No influence on spelling [2]
      - Positively influences spelling [5]
      - Negatively influences spelling [15]
    - Code switching [0]
      - Does not use code switching [4]
      - Uses code switching [22]
    - Student - Influence on grammar [0]
      - No influence on grammar [5]
      - Negatively influences grammar [14]
      - Positively influences grammar [3]
    - Influence on Writing [1]
      - Do not text [1]
      - Student - Negatively influences writing [19]
      - Student - No influence on writing [42]
      - Student - Positively influences writing [5]
  - Codeswitching [1]
    - Codeswitching used by students [19]
      - Codeswitching not used by students [13]
  - Texting influencing reading and vicariously writing [2]
    - Positive influence - students reading more [2]
    - No influence [0]
    - Negative influence - students reading less [8]
  - Perceptions about texting [0]
    - Increasing amount of writing [3]
    - Faculty - Mixed [10]
    - Faculty - Negative [7]
    - Faculty - positive [12]
  - Demographic influences [0]
    - Family doesn't own computers [1]
    - Students come from urban schools [1]
    - Students come from a rural area [2]
    - Traditional students use in class [2]
    - Nontraditional students use in class [2]
    - Race does not influence texting [1]
    - Race influences texting [0]
    - Socio-economics do not influence texting [1]
    - Lower socio-economics negatively influences texting [3]
    - Age does not influence use [0]
    - Age influences use [0]
    - Gender does not influence use [1]
    - Gender influences use [0]
  - Types of writing [0]
    - Handwriting - Texting has no influence [1]
    - Handwriting - Texting positively influences [0]

MAXQDA

- Handwriting - Texting negatively influences [3]
- Causes desire for condensed writing/information [9]
- Frequency of texting [10]
- Impact on revisions [5]
- Texting written in assignments/essays [18]
- Texting in note taking [1]
- Issues between formal/informal writing [16]
- Lack of differentiation between formal/informal writing [20]
- Texting is writing [14]

Texting written in communications [17]

Impact of cell phones in classroom [1]

- Students not reading [6]
- Students reading more [2]
- Informal address to instructor [9]
- Students want shortened information [4]
- Cell phone presence negatively impacts learning [3]
  - Lack of verbal interaction between students [2]
  - Interrupt concentration [3]
  - Students expect immediate answer on phone [3]
  - Students expect immediate connection to Internet [0]
  - Disruptive [2]
- Cell phone presence has no influence on learning [2]
- Cell phone presence positively influences learning [9]
  - Voice-to-text/Speech-to-text [8]
    - Regular users - positive influence [10]
    - Regular users - negative influence [0]
    - Infrequent users - positive influence [0]
    - Infrequent users - negative influence [2]
    - No influence on grammar/language [1]
  - Faculty can model good behavior with devices [3]
  - Encourages students' questions [6]
  - Improves engagement [18]

Uses with students [0]

- Checks/grades assignments with cell phone/smartphone [1]
- Uses cell phone/smartphone to contact students [9]
- Does not use cell phone/smartphone to contact students [5]
- Edit student papers/comment on student papers [3]
- Other issues [4]
- Answer questions on essays [2]
- Absences [4]
- Answer questions on assignments [5]
- Quick communication [8]

Literacy rates negatively influenced [21]

Literacy rates positively influenced [2]

Literacy rate - No influence [4]

Structure/Syntax [0]

Impact of texting/Textese on students' sentence structure/syntax

- Spelling errors from Spell Check and phone auto correct [3]
- Limited vocabulary [9]
- Lack of detail, depth of description in writing [14]
- Language/word usage problems caused by texting [16]
- Negative influence on spelling [7]
- Causes issues with understanding [7]
- Grammar errors [11]

MAXQDA

Shortened spelling [1]
Apostrophe errors [0]
Capitalization issues [3]
Using 'i' instead of 'I' [4]
Shortened sentences [13]
Emoticons [19]
Emoticons used in students' writing

Logograms [23]
Textese [9]
Instances of use

Use considered culturally acceptable [28]
Positive influence [16]
Textese has a positive impact on students' writing

No influence [9]
Textese has neither a positive nor a negative impact on students' writing

Negative influence [31]
Textese has a negative impact on students' writing

Sets [0]