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Based on teacher perceptions, would the use of social media via mobile devices in grades 9-12 classrooms increase student engagement in learning activities?

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BASED ON TEACHER PERCEPTIONS, WOULD THE USE OF SOCIAL MEDIA VIA MOBILE DEVICES IN GRADES 9-12 CLASSROOMS INCREASE STUDENT ENGAGEMENT IN LEARNING ACTIVITIES?

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by
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I have come to the frightening conclusion that
I am the decisive element in the classroom.
It is my daily mood that makes the weather.
It is my personal approach that creates the climate.
As a teacher I possess a tremendous power to make a child's life miserable and joyous.
I can be a tool of torture or an instrument of inspiration.
I can humiliate or humor, hurt or heal.
In all situations, it is my response that decides whether a crisis will be escalated or de-escalated, and a child humanized or de-humanized.

- Haim Ginott

This dissertation is dedicated to the many dedicated professors, teachers and educators who go far and beyond to be the instruments of inspiration for the students they teach each day. I hope the information in this monograph inspires the digital natives as well as the digital immigrants to embrace communication technology and academic social media via mobile devices in classrooms as a resource to facilitate literacy and learning for the 21st century millennial students. I hope this body of work and research helps to define the many facets and uses of social media networking via mobile devices in today's classroom, keeping in mind that teachers are the most decisive element in the classroom today and forever.

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I have heard it said that the journey to the doctoral degree is long and often arduous, but knowing how to navigate the course will certainly sustain those who venture on the pathway. I agree that the journey is a certainly a challenging endeavor, one filled with hard work, long trips, sleepless nights, anxiety and sacrifices leading to a lifelong investment. However on the road of my academic pursuit, I was blessed and fortunate to meet several outstanding people who helped me to navigate safe harbor. In fact if it were not for their assistance, guidance, encouragement, words of inspiration and camaraderie, my educational odyssey would not have been the exciting venture it was.

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ABSTRACT

This research study addressed teachers' perceptions of the use of social networking via mobile devices and the impact that social media accessed via mobile devices has on the learning engagement of students in grades 9-12 in select Louisiana high schools, in a rural southern parish of the United States (Gibbs, 2012). The study examined teachers' perceptions of whether or not the use of social media improved students' engagement in learning activities. Some researchers assert that the use of social media and smart cell phones is both the current and future mode of communication and that educators would do well to embrace these technology tools in the classroom, instilling correct use of the social media networking, or digital citizenship (Smith, 2007). Social media networking can inspire students to manipulate language and can also enhance student engagement in the classroom (Kolb, 2008). Other researchers maintain that social media networking through mobile devices promotes use of shortcuts, abbreviations, idioms and slang through chat acronyms. This study examined these two schools of thought by disseminating a fifty-two question survey to 240 high school teachers via Survey Monkey. However, only fifty-one were completed on Survey Monkey because of parish technology difficulties. Ninety-five teachers completed the surveys by way of paper copies. Results of both surveys were merged (a total of 146) to form the data used. Quantitative methods and results were balanced by qualitative analyses of teacher written responses to survey questions. The responses to the survey questions were used to determine whether the use of social media networking via mobile devices such as cell phones in grades 9-12 secondary classrooms increased student engagement in learning activities.

Overall this study revealed that teachers perceived that the use of social networking via mobile devices would improve student engagement in learning activities as the mobile devices

would motivate the disengaged student by addressing differentiated learning, vary learning styles and promote collaboration in the classroom. The perception of the teachers is that students already know how to download applications, calculate problems, research, email, and text on mobile devices enabling easy access to learning anytime, anywhere (Peat & Maldonado, 2006).

CHAPTER 1
INTRODUCTION

Background of the Study

The elusive hunt for solutions to improving America's malfunctioning education system continues to fill pages of research and documentaries. The *No Child Left Behind of 2001* has left a rubric for nearly every phase of assessment. Common Core, Course Choice, Career Diplomas, Partnership for Assessment of Readiness of College and Careers (PARCC), Value Added Measure (VAM), 80% Graduation Index, Student Learning Targets, Compass Evaluation, Highly Effective Teacher Performance, Comprehensive Curriculum, Grade Level Expectations, Race to the Top, A Nation at Risk, A National Curriculum and End of Course Testing provide curricular road maps as well as assessments that examine both students' understanding and the application of state standards and benchmarks. This accountability is the yardstick for measuring and tracking students and schools that are on target, high performing, failing or in need of intervention and ultimately remediation and/or a total state takeover.

Many educational research journals and studies refer in some way to America's failing grades in educating its children. The outcry is one of desperation, urgency and despair. Even Headstart preparation according to sources in *Time Magazine* is not meeting the mark in preparing young children for school. There is an urgent cry for change, reform, redesign, revitalization, rigor, and a general overhaul of today's classrooms (Levin, 2011). A recent study listed in *Time Magazine* (2010) shows that in spite of more "investment and stringent reforms for U.S. schools, still 69% of eighth-graders in 2009 scored below proficient in reading and 68% scored below proficient in mathematics" (Ripley, 2010, p. 9). The U.S. ranks fifth in cumulative K-12 education. The country ranks twenty-first out of thirty developed countries in science

education. Further studies show that the "U.S. ranks twenty-fifth in math literacy out of thirty developed countries" (Ripley, 2010, p.10). It is through this kind of tracking that researchers are able to keep abreast of teaching methods and curricula that facilitate learning, as these facts and arguments do indeed hold some validity in accessing the progress or lack thereof in American classrooms.

Research studies and fieldwork repeatedly agree that today's millennial generation--the 21st century students--is different from any other students America's teachers have encountered (Kaplan & Haenlein, 2010; Lenhart, Ling, Campbell & Purmobile, 2010). These students are technologically knowledgeable with the use of social media, mobile learning, social networking, social genres, instagrams, the techno-utopian dream and computer technology (Boyd, 2008). They use blogs, e-mails, Facebook, Tumblr, Twitter, text-messaging and other new forms of social networking (Lenhart, 2012). Technology has progressed to a point where mobile devices are plentiful and powerful enough to use mobile handheld computer options "showing a correlation between facebook usage and school quality" (Lam, 2007a, p.6).

Although educators' attempts to utilize social networking in today's classrooms are commendable and reflective of the times, however a problem lies with the format in which these students communicate with each other (Ong, 2002). All too often they communicate with each other by using slang, abbreviations, jargon and language unique to the culture they represent (Davis, 1992). The millennial generation does "not code-switch" (Benjamin, 2008, p. T31) for the different audiences with whom they are communicating. One important audience that students cannot use chat acronyms is standardized assessment graders. Therein lie many problems, such as" ineffective communications, a loss of standard grammatical skills, and misuse of technology tools by both students and adults" (Benjamin, 2008, p. T31).

In spite of the problems that social media and mobile devices bring, there is hope for social media via mobile devices as a reform for some of the ills that have befallen America's public schools, especially when the devices are used appropriately for academic endeavors. As with so many other dysfunctions in life, social media have both strong and weak points, depending on the perception of the viewer (Tapscott, 1999). For example, newspaper and television media are valuable tools for keeping viewers involved in current events with eye-witness accounts of the discussed events (Lenhart, Madden, Alexandra, Macgill & Smith 2007).

Table 1.1 Types of Mobile Devices

Type of Mobile Device	Description
Personal Data Assistant (PDA)	A small handheld computer with a touch screen interface…phases out in favor of smart phones with PDA features
Mobile phone	A telephone that uses cellular radio networks to send and receive communication rather than physical phone links. It has the ability to send and receive short text messages
Global Positioning Satellite Receiver (GPS)	Uses a network of satellites orbiting the earth for navigation and location finding. The GPS receivers have screens and mapping software that is used to find directions while driving
Portable Game Console	Mobile device designed for playing games
Media Player	Mobile device that is used for playing music and videos
Mobile computer	A type of computer that can be easily transported and uses batteries for power. It allows the user to work from any location and access the internet through a wireless network or at a wifi hotspot.

Note. Adapted from "Name five types of mobile devices" by Artman, 2013, p. 1

Some progressive educators and researchers assert that banning social media and mobile devices used to access these media from schools helps to avoid evils such as cheating on tests, bullying others, and accessing pornography and communicating with predators (Lederer, 2012;

Patsko, 2012; Taylor, 2009). However, the restrictions of not allowing students to use mobile devices in the high school can result in missed golden academic learning opportunities in the classroom (Ong, 2002). Inarguably, students lose opportunities to access world-wide resources, experiences, creativity, and communication with teachers for and about assignments. It is crucial for students to take advantage of learning opportunities through social media in this mobile age (Traxler, 2009).

In retrospect, current methods of teaching, grasping material, engaging students, using varied learning styles and differentiating instruction have done very little to enhance or improve student overall achievement in the present day classrooms (Matsuda, 2005; Ong, 2002). In fact, many studies show that American students continue to fall behind those of other industrialized nations that allow their students to embrace social media networking and mobile technology in the classrooms (Matsuda, 2005). Here, two schools of thought are clearly brought to the forefront and serve as a basis for this study. Arguments for and against use of social media networking in the classroom are clearly articulated and fully substantiated with concrete proof of past detrimental incidents that have happened with the use of social media; however, the present loss of global education in America's classrooms hangs in the balance. This debate is the subject of this research study (Duncombe & Boateng, 2009). Based on secondary teacher surveys and their perceptions, is it possible that social networking via mobile devices in grades 9-12 secondary classrooms increases student engagement in learning activities?

The studies and reviews from the Review of Related Literature disclose mixed reviews on the timely subject. Some researchers are adamant that the use of social media in the classroom via mobile devices results in a decline in students' writing and comprehension skills, as teachers see a major setback in the use or lack thereof of these skills in daily recitations;

writing and speaking skills (Besser, 2007; Swidey, 2008). Although several studies have been conducted to show that the use of social media via mobile devices in high school shows a decline in writing performance, they never really show how the results of the study brought the researchers to that conclusion; the data were never conclusive, specific or concrete (Aguilar & Rivero, 2006; Lusk, 2010; Lytle, 2011). The educators who contend that social media improved student engagement in learning activities saw more student motivation, engagement and excitement about the class work in general (Edwards, 2011; Horrigan, 2007; McCarthy, 2009; Thomas, Orthober & Scheltz, 2009).

Use of technology in the world as well as the classroom is nothing revolutionary, especially in the field of education. Technology has been a part of the growth of education from the beginnings of the colonial era in the mid-1600s (Dunn, 2011). Table 1.2 chronicles the evolution of technology in the classroom across the United States from 1650 to 2010 (Dunn, 2011).

Table 1.2 Evolution of Technology in the Classroom

Invention Date	**Technology**
1650	The horn-book- wooden paddle with printed lessons was popular in the colonial era.
1690	The New England Primer…was the first reading designed for American Colonies
1850-1870	Ferule- This is a pointer and also a corporal punishment device
1870	The magic lantern is a precursor to a slide projector
1890	The school slate was used throughout the 19th century in nearly all classrooms
1915	Teaching typing as occupational skill begins (qtd. in West, 1983). Type writers were invented by Christopher Sholes in 1866 and marketed by Remington in 1873 (qtd. in Yamada, 1983)… (Groff & Mouza, 2008; West, 1983) .
1925	Film projector- motion picture projector… Edison prediction
1925	Radio- NY "schools of air" started broadcasting programs to millions of children
1930	Overhead projector- first used in U.S. military schools

(Table 1.2 continued)

Invention Date	Technology
1936	Computer…Konrad Zust—Z1 Computer…first freely programmable computer…(Bellis, 2008)
1940	Mimeograph- hand-cranked copies
1950	Headphones- learning lessons through repetition and repeated drills… language labs
1951	Videotapes- Bing Crosby Enterprises… slurred and indistinct images
1958	Educational television- 50 channels of educational programming that aired across the country
1970	The hand-held calculator- the predecessor to TI-83... teachers feared they would undermine basic skills
1975	VHS and Betamax were developed by Sony Electric Corporation
1976-77	Apple I, II, & TRS 80 commodore Pet Computers (Bellis, 2008)
1980	Plato computer- early computer in education market
1981	IBM PC—Home Computer (Bellis, 2008; Moran & Dourish, 2001)
1985	CD-Rom drive- Paved the way for flash drives and personal storage
1985	Hand-held graphing calculator- successor to hand-held calculator; made advanced math easier
1993	Video CD (VCD) replaced Betamax…
1999	Interactive Whiteboard- chalkboard update; screen, projector, computer
2006	XO- Laptop (McVay, Snyder, & Gaetz, 2005)
2010	Apple iPad- original school slate. Thomas Edison said, "Scholars will soon be instructed through the eye."

Note. Adapted from "How some schools encourage texting in class" by Dunn, 2011

The evolution of the mobile phone has a long and storied history as well. Motal (2011) lists the chronology of the popular mobile phone and how it evolved. Table 1.3 presents a chronological list of the evolution of the mobile phone as well as its popularity today.

Table 1.3 The Evolution of the Mobile Phone

Date	Evolution of Mobile Phone
1973	Martin Cooper invents the mobile phone, a hulking device that was able to call people.
1965-70	TV comedy series *Get Smart* predicts the future by depicting a mobile phone…the shoe phone.
1983	Zach Morris uses the Motorola Dynatac 8000x.
1992	The first text message is sent.
1995	The film *Clueless* features teenage characters on mobile phones helping further the youth culture's mobile obsession.

(Table 1.3 continued)

Date	Evolution of Mobile Phone
1996	The first clamshell phone came to market.
1998	Bluetooth hits the market with easy hands-free phone use.
1999	The first Blackberry is used.
2000	Sharp Communications and J-Phone release the first camera phone.
2001	The film *Zoolander* satirizes the obsession with small mobile phones.
2002	Television hit *American Idol* airs and uses voting by calling or texting.
2003	Nokia launches its Nokia 1100, a best-selling phone.
2004	Standard Motorola Razr is introduced.
2005	Ring tones become popular.
2005	Paris Hilton's Sidekick device is hacked, prompting a focus on security.
2008	Android begins its ascent.
2011	Google and Visa announce their mobile wallet services.

Note. Adapted from "Infographic charts the evolution of the mobile phone" by Motal, 2011, p. 3

Statement of the Problem

As the world becomes more connected through advances in information and communication technologies, schools and classroom experiences will inarguably need to reflect those very same changes (Greenhow, Robelia, & Hughes, 2009). Reinventing American schools will require unprecedented effort by both the educational communities and the nation (Franklin, 2011). Facebook, Blogs, Instagram and Twitter, and other social media networking can no longer be seen as mere entertainment, nor can wireless or mobile technologies be seen simply as expensive toys for young people to entertain themselves. These very social media networks and devices that our students use today impact the way we operate, learn, interact, collaborate and communicate. These technologies also shape the "way we work, think and live in our society-at-large" (Green & Hannon, 2007, p. 29). Teachers of students who regularly use Web 2.0 technologies must develop a clear understanding, become cognizant of the new digital interaction and ultimately fuse them with today's instructional practices (Greenhow , 2009). For decades, business, industry, medicine, science and government agencies have used and merged many aspects of these modern technologies in their workplaces (King, 2012). It is the field of

education that has been late in using social networking and mobile technologies in the classroom, thus conceivably missing out on powerful learning opportunities and advantages that these technologies can afford to students in general (Fahser-Herro & Steinkuehler, 2009-2010). This lack of implementing technology via mobile devices does little to help students graduate from high school and prepare students for real world connections and common core curricula (Austin, 2006).

However, changing instructional approaches is no easy task, especially when technology is involved "because many myths cause moral panic" (Green & Hannon, 2007; Livingstone, 2008, p. 10). The emergence of technology and mobile social media networking push educators to understand these technologies for classroom use and to seek meaningful ways to incorporate these technologies into the classroom. Just as the typewriter, the television, the calculator, and the computer were infused into daily classroom instruction, the same must be done with mobile social media networking in order to bridge the disconnect between the ways students are taught in school and the ways the outside world approaches socialization (Attewell & Savill-Smith, 2005). This integration of technology in the classroom must be an evolution and not necessarily a revolution in the integration of mobile social media networking into today's classrooms (Greenhow, 2009). Combining face-to-face interaction with the virtual world should be an achievable challenge as the table below shows (Fahser-Herro & Steinkueler, 2009-2010). Table 1.4 presents an overview of practical uses of technology in the classroom.

Table 1.4 Practical Uses of Mobile Technology in the Classroom

Type of Mobile Technology Use	**Description**
Notetaking	Type documents, create spreadsheets, from tablet or phone, upload features

(Table 1.4 continued)

Type of Mobile Technology Use	Description
Taking pictures of assignments, diagrams	Modern smartphones and feature phones are fitted with cameras
Setting reminders for important dates	Project due dates and any other important dates from pictures are sent to Google calendar
Recording lectures	Use voice recording app to record lectures. (Check with teacher first.) Transfer recordings from phone to computer and listen to the lecture.
Textbooks	Load laptop up with textbooks. Load iPod application called GoogleReader and use with Apple with Textbooks in iBooks.
Further reading	Referenced lecture material can be quickly found on iPads or material can be emailed to self as a reminder to search for the topic later.

Note. Adapted from "What are some of the best uses for mobile devices in the classroom?" by Martin, 2012, p. 3.

In achieving these goals, the roles of teacher and student have inarguably been reversed from the way studies are normally implemented. In previous studies and implementations of these studies, teachers were the ones introducing new techniques and strategies to students. However, today's students have been using the technology of mobile social media networking outside the classroom and are quite familiar with the operative use of the technology tools. Ironically, it is teachers who are playing catch up and are at the mercy of their local school districts as to how much social media and mobile technology will be allowed in the schools to keep pace with today's students (Richtell & Stone, 2009).

Purpose of the Study

The research question that guided this research study was Based on teacher perceptions, does the use of social media networking through the use of mobile devices with students in grades 9-12 classrooms increase student engagement in learning activities? The purpose of this research study was to investigate the perceptions of teachers of grades 9-12 relative to the use of social media networking via mobile devices. Teacher perceptions of the use of social media

networking by the students they teach and their own use of social media networking, both inside and outside the classroom, were investigated. There was a focus on the degree to which the teachers' familiarity with social media and mobile technology impacts how the teacher will use the social media networking and mobile technology in the classroom.

Research Objectives

The research objectives for this study are listed below in order:

1. To describe the teacher population from 9-12 secondary teachers in seven public schools in one southern Louisiana parish based on teacher prior knowledge and thoughts on students' use of mobile devices. Results will be described according to the following variables:

a) Age

b) Gender

c) Ethnicity

d) Areas of certification

e) Subjects taught

f) Years in education

g) Number of years in current school

h) Grade levels currently teaching

i) Highest educational attainment

j) Type of school where currently teaching

k) Prior knowledge of the use of mobile devices

l) Thoughts on student mobile device use

2. To determine the perceptions of high school teachers about the utilization of social media via mobile devices in the classroom as measured by the Mobile Learning Survey for High School Teachers (See Appendix A).

3. To determine the perceptions of high school teachers about students' use of social media via mobile devices for educational purposes as measured by the Mobile Learning Survey for High School Students.

4. To gather the opinions of 9-12 grade high school teachers about the use of social media via mobile devices in high school classrooms.

5. To compile a list of personal concerns of 9-12 grade teachers about the use of social media via mobile devices in high school classrooms.

6. To determine if there was a difference that exists in the perceptions for mobile learning as measured by the Mobile Learning Survey for High School Students. Results will be described according to the following variables:

a) Gender

b) Ethnicity

c) Highest Educational Attainment

d) Type of School where currently teaching

7. The purpose of this objective was to determine if a model exists that would explain from demographic variables of age, ethnicity, gender, and type of school a significant portion of variance of social media via mobile device use as measured by the overall Mobile Learning Survey for High School Teachers.

Demographics of the Study Participants

The participants for study came from seven public high schools in a rural southern Louisiana parish. Approximately 240 teachers of grades 9-12 worked in the district (J. Richard, personal communication, January 7, 2013). About 60% of the teachers were Caucasian, 35% were African American, and about 5% were of other ethnicities (J. Richard, personal communication, January 7, 2013). The vast majority of the teachers were females; about 30% were males (J. Richard, personal communication, January 7, 2013). The teaching experience ranged from 1-40 years, and the ages ranged from 22-65 (J. Richard, personal communication, January 7, 2013). Most of the teachers had a Bachelor of Science degree; about 30% had a Master's or higher (J. Richard, personal communication, January 7, 2013).

Rationale and Justification of the Study

The controversy over whether social media networking such as text-messaging, Facebook, blogs, and Twitter via mobile devices such as iPhones and other smart phones increases student engagement in learning activities or serve to distract students is quickly becoming an all too familiar topic in America's educational history and reform. Some researchers view the introduction of social media networking via mobile devices as a revolution (Motal, 2011). There are many schools of thought dividing practitioners who adamantly claim with research-based evidence to have the needed national prescriptions to solve these problems (Lusk, 2010). Invariably, each school of thought believes the other's methodology to be flawed, inefficient and oftentimes indecipherable. The social media debate at times is quickly reaching an impasse, but new voices are emerging with hopes for world-class education for all of America's students. This world class education will eventually have to include the use of social media via mobile devices in the classroom. That important debate has become the rationale for

this study (Boyd, 2008; Lenhart, 2011; Milner, 2004; Morwick, 2008; Nankani & Ojalvo, 2010; Park, 2011).

Most school districts have banned or have filtered social media networking from school computers (Yuen, 2008). Even with the bans, about 80% of students have used some form of social media in schools (Rogers, 2009). This extremely high percentage of student use of social media in schools indicates that four out of five students have a cell phone. The fight by administrators to keep cell phones out of schools is a tough battle and great challenge for all those involved (Lederer, 2012). At any rate, the implication is that the use of social media by young adults is a shift that is here to stay for a long time. When students come to school, they have already been using social media probably from age twelve, since that is the earliest age at which the largest concentration of data focuses. In general, the research shows in a recent survey (Lenhart, 2012) that of the students surveyed in the ages of 12-17, 93% of this age group used social media of Facebook, Twitter or blogs.

Based on these high percentages of social media networking users, this research study will focus on what teachers are observing in the classroom concerning the degree of engagement in learning activities by students as a result of the direct impact on the use of social media networking through use of mobile technology.

The research was a descriptive study which rose from a mobile learning survey with one open-ended question. The data collected from the mobile learning survey focused on the number of replies given by the teachers. The target population was 240 secondary school teachers who taught 9-12 graders.

Significance of the Study

Social media networking is actually the way we transmit and communicate information to each other or to many other "networked publics, comparable to visits in parks and other outdoor spaces" (Boyd, 2008, p. 15). Transmission of information through a mobile format has a long history from oral tradition all the way to current social media networking on mobile devices (Boyd, 2008). Throughout the history of media, industrial or social changes in technology have been the dynamic that has reshaped the way we communicate with each other (Ito, 2013; Pohl, 2000). At times the changes appeared to be drastic or revolutionary, and thereby often met opposition from many who oppose this form of technology in the classrooms; however, the use of technology in whatever form it came continued to determine practice and social outcomes (Jordan, 2008). Current research on the use of modern day social media networking is astounding, and findings show that varied social media genres are growing and are evolving quickly, keeping pace with a global and worldwide economy (Davis, 2008; Ong, 2002; Zhang, 2002). Table 1.5 ranks countries by number of users accessing the Internet at least monthly via mobile devices.

Table 1.5 Top 10 Countries for the Mobile Web

Rank	Country	Percentage
1	Britain	52
2	Japan	51
3	United States	51
4	China	36
5	Spain	36
6	France	35
7	Russia	35
8	Poland	31
9	Germany	29
10	Mexico	27

Note. Adapted from "Top 10 Countries for the Mobile Web" by Olson, 2012, p. 3.

For these reasons, the study is crucially significant and its findings will probably continue to impact future generations. Studies must be done to understand the significance of social media networking via mobile devices in today's classrooms and the impact that social media networking has on student engagement in learning activities in the United States as well as globally. According to current and past research, social media networking will be a shift that will remain in existence for many years to come (Marwick, 2008). We must address not only its impact on students but also its impact on the ways social media networking may be utilized by teachers as instructional tools in today's classrooms. If educators are able to use social media in the classroom, they will be able to help students mass communicate in a global world (Katz, Blumler & Gurevitch, 1974). The study will address and show the need for school districts to lift or not lift bans on mobile devices, to allow or not allow social media networking in the classrooms and to provide strict policies on how these social genres must be used in the classroom, mainly through the use of digital citizenship (Gilemore & Halcomb, n.d.; Kessler, 2010; Scott & McGill, 2011;). If the social media networking via mobile devices increases student engagement, creativity in lessons must be varied, and policies and frameworks must be implemented to embrace the wonders of a global education (Davis, 2008). *Scholastic Magazine* (2012) compiled several suitable lesson plans utilizing mobile devices from across key content areas. These are actual lesson plans that can be or have been done in the classrooms. Also listed are a variety of lesson plans suitable for different mobile devices (Rogers, 2011). The lessons include content area, grade levels, expectations, common core standards, 21st century activity overview, procedure and extensions (See Appendix N).

Limitations of Study

The limitation of this study was that the survey was only distributed to one school district and addressed only 9-12 grade teachers. The study was also limited in that it did not address students or middle school and elementary school teachers.

Definitions of Terms

21st-century skills: The skills necessary for success in the 21st century are different from those needed in previous years. As our nation transitions from an "information age" to a "conceptual age," students must have critical-thinking, problem-solving, communication, and teamwork skills and creativity and awareness of the global economy to compete in today's work force (Clark et al., 2010, p.11).

Blog: A contraction of the term *web log.* A blog is a website where things can be published in an ongoing basis (Young Adult Library, n.d.).

Code switching: This process occurs when a person is able to adapt to and from formal and informal spoken and written arenas. "The concept focuses on audience designation and appropriateness" (Benjamin, 2008, T-31).

Computer-based training (CBT): Any instructional event that can be accessed via a stand-alone computer (Keegan, 2002).

Curriculum: A predefined series of learning events designed to meet a specific goal, such as certifying in a particular area or achieving required job skills and knowledge (Benjamin, 2008).

Digital Immigrants/Pilgrims: pre-digital age; as opposed to digital natives." Digital Immigrants teach slowly, step by step, one thing at a time, individually and seriously "(Wylie, 2007, p. 40).

Digital Natives: Native speakers of the digital language of computers, video games and internet. Today's students K through college represent the first generation to grow up with this new technology (See Appendix B). "Digital natives receive information fast, parallel the process and multi-task, love graphics, random access (hypertext) and network; eighty percent have cell phones" (Prensky, 2001a, p. 8).

E-Learning (Mobile Learning): Education via the Internet, network, or standalone computer. Network-enabled transfer of skills and knowledge. E-learning refers to using electronic applications and processes to learn. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM (Keegan, 2002).

Emoticon: A pictorial representation of a facial expression using punctuation marks and letters, usually written to express a person's mood. Emoticons are often used to alert a responder to the tenor or temper of a statement. The word is a portmanteau of the English words *emotion* and *icon* (Researcher developed).

Facebook: A social networking site that uses corporate email addresses, particularly university emails, to verify users as members of already existing social networks and then becomes an online extension of that network (Nielson & Webb, 2011).

Inquiry-based instruction: A student-centered, active learning approach driven more by learners' questions and critical-thinking and problem-solving skills than by teachers' lessons. It is associated with the idea of Confucius' "Tell me and I forget, show me and I remember, involve me and I understand." (Clark et al., 2010).

ICT: Information Communication and Technology--ICT is an umbrella term that includes any communication device or application. The term encompasses cellular phones (mobile), computer and the networks, radios and television. It contributes to universal access to education, equity in education, the delivery of quality learning and professional development and more efficient education management, governance and administration and audience response systems ARS (Jenkins, 2011; Kukulska-Hulme. 2007; Tremblay, 2010).

Lingo 2 Word: An online dictionary devoted to demystifying the new internet shorthand language of text messaging, chat rooms, and emails. Example: *BM4L*…best mate for life, buy more for life, be mine for life (Thalheimer, 2004).

LinkedIn: A business-related social networking site founded in December 2002. It is used for professional networking and has over 135 million registered users in more than 200 countries and territories (Young Adult Library, n.d.).

Literacy: ability to read for knowledge, write coherently, think critically about the written word; ability to understand all forms of communication. The forms may include but not limited to the following forms:

1) Body language
2) Pictures
3) Video of sound
4) Reading
5) Speaking
6) Listening
7) Viewing media and electronic text
8) Posting or commenting on a blog
9) Creating a profile on a social networking site
10) All social networking software requiring teens to read and write (Maiers, 2008)

Mobile Social Media: an umbrella term that refers to the set of tools, services, and applications that allow people to interact with others by using network technologies. Social media encompasses groupware, online communities, peer-to-peer and media-sharing technologies, and

networked gaming. Instant messaging, blogging, micro-blogging, forums, email, virtual worlds, texting, and social network sites are all genres of social media. Social media is sometimes referred to as social software or social computing or computer-mediated communication. Most genres of social media leverage personal computers and the Internet, but increasingly, mobile networks are serving as an additional key network technology. Social media includes systems that support one-to-one, one-to-many, and many-to-many interactions. Some enable many-to-many interactions and support the creations of spaces for people to gather and publics to form. These spaces and the resultant collective are called networked publics. "Usenet, the blogosphere, and social network sites are all examples of networked publics" (Boyd, 2008, p. 28; Livingstone, 2005).

My Space: A social networking site with over 100 million registered members globally. It offers an interactive, user-submitted network of friends, personal profiles, blogs, photos, music and video (Kukulska-Hulme & Traxler, 2005).

Perception: A primary goal of perception is to recover, "or estimate objective properties of the physical world; reconstructs properties; become aware of through the senses" (Hoffman, 2009,p. 21).

Personal concerns: For this document, personal concerns refers to the respondents' misgivings or doubts about the use of social media via mobile devices in the classroom for high school students (Researcher developed).

Pinterest: A virtual pinboard-styled social photo sharing website. It allows one to organize and share all the beautiful things found on the web. People use pinboards to plan weddings, decorate their homes and organize their recipes (Researcher developed).

Semiotic: study of signs and sign using behavior, especially in language (Sharples, Taylor, & Vavoula, 2005).

Social Networking: In the online world, this term refers to the ability to connect with people through websites and other technologies, like discussion boards (Boyd & Ellison, 2007).

Sourcing: In personnel management, the term refers to the identification and uncovering of candidates (talents) through proactive recruiting techniques.

Student engagement: For students to be engaged, work must be significant, valuable, and real. The brain must be intimately involved in and connected with everything. Engagement often involves collaboration and is active, hands-on, minds-on, eyes-on (Lazonder, 2005). "It involves wondering, dreaming, reflecting, playing, interacting, communicating, exploring, discovering, questioning, networking, investigating, creating, recreating, co-creating, learning to listen and listening to learn, mutual inquiry" (Maiers, 2008, p.14).

Teacher opinions: For the purpose of the research, teacher opinions are based on teachers' prior knowledge of the use of mobile devices by students and whether they think that school districts should lift the bans on such use and allow the use of mobile devices for educational purposes and whether the actual application of the use of such devices would improve student engagement in learning activities.

Technology: A branch of technology that deals with the creation and use of technical means and their interrelation with life/society and the environment. It is a process, an invention or a method that never stops advancing (Boyd, 2008; Obringer & Coffey, 2007).

Tumblr: A micro-blogging platform and social networking website, owned or operated by Tumblr, Inc. The service allows users to post content to a short form blog, named a tumblelog (Young Adult Library, n.d.).

Usage: The job for which a device was created; in this case, the mobile device was designed for social communication (Researcher developed).

Utilization: Finding a non-tradition manner to create a new function; in this case, creating educational opportunities for the mobile device (Researcher developed..

YouTube: Allows people to post their own videos for others to watch, to give their opinions on the content that is there, and to make links between videos. YouTube has grown into an entertainment destination with people watching more than 70 million videos on the site daily (Nielson & Webb, 2011).

CHAPTER 2
REVIEW OF RELATED LITERATURE

The hunt for ways to improve America's malfunctioning schools is ongoing. However, the implementation of social media networking by way of mobile devices in classrooms may be one means of improving student learning. In order to make the use of mobile devices in the classroom a reality, educators must first carefully reevaluate policy debates affecting America's high school classrooms (Nielsen & Webb, 2011). People in general agree that school should prepare students for life (Nielsen & Webb, 2011). In retrospect, people in real life situations use cell phones on a daily basis. Such use is a part of life. When stakeholders, local school boards and schools continue to ban cell phones from the classrooms, they create an artificial world inside the schools (Taranto & Abbondanaza, 2009). Thus, banning use of cell phones in the classroom is not preparing students for the real world (Nielsen & Webb, 2011).

Theoretical Framework of Study

Sharples, Taylor and Vavoula (2005) offer an "initial framework for theorizing about mobile learning, to complement existing theories of classroom, workplace and informal learning" (Vavoula, 2005, p. 1). In the tradition of activity theory, learning is analyzed as a cultural-historical activity system mediated by tools that support the learners in the goals of transforming knowledge and skills. "The tool-mediated activity is separated into two perspectives or layers. In the semiotic layer, the learner's object-oriented actions are mediated by cultural tools and signs. The technological layer represents learning as an engagement with technology, in which tools such as computers and mobile phones function as interactive agents in the process of coming to know" (p.1). Sharples et al., (2005) maintain that the layers can be

separated to provide either a semiotic framework to promote discussion in the mobile age or a technological framework which proposes a requirement for the design of a new learning system.

What is special about a theory of mobile learning compared to other types of learning activity is that learners are continually on the move when learning is mobile. The learning theory supports the concept that people learn across space as they take ideas and learning resources gained in one location and make them applicable in another. In essence, learning takes place across time by revisiting prior knowledge (Vavoula, 2005).

Another theory of mobile learning is that learning must embrace learning outside classrooms and lecture halls. A study done by Vavoula (2005) of every day adult-learning found that 51% of reported learning episodes took place at home or in the learner's office at the workplace. "The rest of the adults in the study (49%) reported that learning episodes took place outdoors, at a friend's house, office, leisure, doctor's office or places of worship" (p. 5).

Another theory of learning was based on a study of contemporary accounts of practices conducted by the US National Research Council (National Research Council, 1999). It concluded that effective learning was learner centered, knowledge centered, assessment centered and community centered. These findings match a social-constructive approach, which views learning as an active process of building knowledge and skills through practice within a supportive community. This approach comprises a rapid and radical conceptual change in the field of learning (Sharples, et al., 2005a).

A theory of mobile learning must take into account the "ubiquitous use of personal and shared technology" (p. 6). For example, in the UK, 90% of young adults own mobile phones, showing how widespread mobile devices are accessible.

Sharples (2005b) developed an analysis of learning as conversation in context, drawing on Dewey's philosophy of Pragmatic Technology and Pask's Conversation Theory (Hickman, 1990) as foundations on which to build an account of the coming to know in a world mediated by mobile technology.

The dialectical relationship between technological and semiotic layers is easy to see in relationship to communication. The activity theory supports a technological system that enables certain forms of communication such as email, texting and creating networks of interaction and instant messaging that merge leisure and homework activities into seamless conversation. As they become familiar with technology, students invent ways of interacting; they create text messages (see Appendix F), short language, new rules and exclusive communities (Taylor, Sharples, Malley, Vavoula & Waycott, 2006). Learning is a process of coming to know through conversation and context. "Learning is mediated by knowledge and technology as instruments for productive inquiry, human-computer interaction, physical context and digital communication" (Sharples et al., 2005b, p. 5).

As mobile devices become more ubiquitous, researchers and practitioners are learning to incorporate modern technology into their instructional and educational environments (Barseghian, 2012b; Keegan, 2002; Pollara, 2011; Traxler 2009; Weier, 1991). While Keegan (2002) stated that "mobile learning is a harbinger of the future of learning," (p. 9) other researchers offer a framework for theorizing mobile learning with conversation theory and activity theory (Sharples, et al., 2005b; Uden, 2007; Zurita & Nussbaum 2007). Teachers and educators in the classroom need a solid theoretical foundation for using mobile devices for instruction in their classrooms (Kulowiec, 2011).

Mobile learning refers to the use of mobile or wireless devices for the purpose of learning while on the move. Kukulska-Hulme and Traxler (2005) along with Pollara, (2011) have identified typical examples of devices used for mobile learning such as cell phones, smart phones, handheld computers, tablet PCs, laptops and personal media players. Peters (2007) called these devices the first generation of portable information. Blogs, Twitter, YouTube or social networking sites such as Facebook and MySpace have made academic networking possible (Mohamad & Wollard, 2010; Peters, 2007). Furthermore, mobile learning refers not only to the instructional use of portable devices but also to learning across contexts. Winter (2006) addressed the nature of mobile learning as "mediated learning through mobile technology" (p. 9). Pea and Maldonado (2006) used the term "wireless interactive learning devices" or "WILD" (p. 437). The authors stated, "Mobile learning incorporates transformative innovations for learning futures" (p. 438). In a third study, Brown (2005) defines mobile learning as "an extension of e-learning" (p. 299). Another researcher, K. Peters (2007), stated that mobile learning is a subset of e-learning; it is a step toward making the education process "just in time, just enough and just for one" (p. 15). Weiser (1991) was the first scholar to define ubiquitous computing as an environment where computers are integral and embedded into the fabric of daily life (Parks, 2011). Ubiquitous learning allows students to have access to a variety of digital devices and services "whenever and wherever they need them" (van 't Hooft, Swan, Cook & Lin, 2007, p. 6). In the field of education, "ubiquitous computing allows the teacher to remain focused on his or her field of expertise while still utilizing technology to enhance student learning" (Crowe, 2007, p. 129).

The theory of mobile learning by Sharples et al. (2005a) uses as a framework Dewey's philosophy of Pragmatic Technology and Pask's Conversation Theory of building a framework

of coming to know in a world and culture of mobile technology (Hickman, 1990). The theory of mobile learning also embraces learning outside the classroom, as well as it embraces learner, knowledge, assessment, and community-centered approaches. Sharples et al., (2005a, p. 6) assert that learners are continually on the move when learning anytime, anywhere, whenever, wherever (van 't Hooft et al., 2007) via mobile devices and that people learn across space as they transport ideas and learning resources from one location to the next using tools that help support learners in their goals of digesting knowledge. The theories of Sharples et al., (2005a) and van 't Hooft et al. (2007) serve as model frameworks for this study of teachers' perceptions of the use of social media via mobile devices in the high school classroom. Mobile devices are portable and support learning on the move both inside and outside the classroom. Interactive agents such as smartphones, tablets, and e-readers support learning as an engagement between teachers and students in the process of coming to know (Sharples et al., 2005b, p. 8).

In a 2010 study by Lenhart et al., (2010b), researchers found that 75% of 12 to 17- year olds owned a cell phone. These phones are empowered with technology, and their use is an important part of the lives of adults as well as students. The Pew Internet Study by Lenhart et.al (2010b) also showed that texting is the dominant daily mode of communication between teens and all of those with whom they communicate. In retrospect, teens receive roughly 60 texts per day (Lenhart, 2012).

By allowing students to use cell phones as an educational tool to enhance learning, school districts can utilize modern teaching tools without meeting the expense of providing the technology (Lenhart et al., 2010). The perceived caveat is that school districts may have to meet the expense of providing technology for the small number of students who do not have access to cell phones (Lenhart et al., 2010). This requirement may be met by purchasing sets of mobile

devices, which may be checked out just as students currently check out library books (Nielsen & Webb, 2011). Nielsen and Webb (2011) explained how teachers can turn cell phones into an educational opportunity instead of an annoying distraction. The mobile learning concept can help to make America's educational reform a reality (Boyd & Ellison, 2007; Nielson & Webb, 2011).

Shih's mobile model draws on the philosophy of social constructivism through the use of collaborative discussion and learning styles theory based on digital storytelling. Mobile computing devices such as smart phones, pocket PCs, MP3 players, laptops, tablet PCs, and various Personal Data Assistants (PDAs) have evolved and represent an exciting new frontier in education and pedagogy(Shih & Mills, 2007). Mobile technologies can influence our teaching and learning in traditional education (Shih & Mills, 2007, p. 22).

There are several learning theories that address how people learn, such as behaviorism, constructivism, control theory learning styles, and social learning. It is necessary to study Shih and Mills' Mobile Learning Model shown in Figure 2.1.

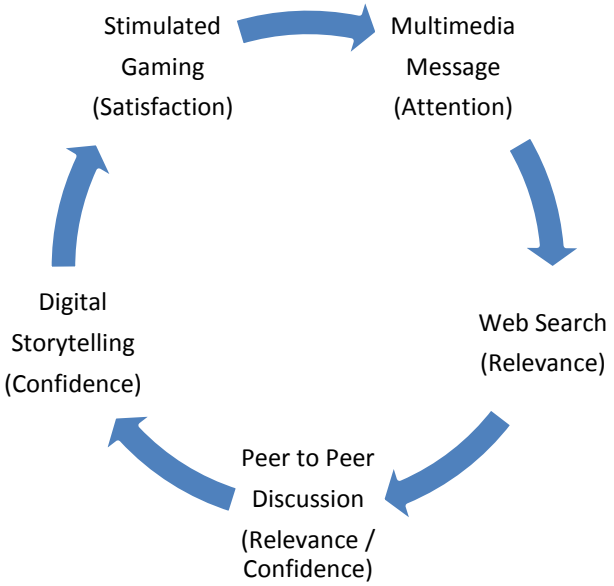

Figure 2.1 Learning cycle in Shih and Mills' Mobile Learning Model

Although there are several existing theories in the field of educational psychology that address learning theories, the ones used in this study were more suitable fits or lend themselves to stronger replications for this study relative to how social media works via mobile devices. The Sharples Activity Theory, Katz, Blumler, and Gurevitch's Uses and Gratifications Theory (1974), Shih's Learning Models (2007, p. 23), and Granovetter's Weak Ties Theory (1983), served appropriately for this study of social networking via mobile devices. Although these were older studies, because of their inner activity, they served as better theoretical frameworks than existing theories explaining the ways that social networking and mobile devices are used today (Passey, 2010; Wylie, 2007).

Definition and Framework of Social Media

Researchers define social media as media for social interaction with people or social communication (Boyd & Ellison, 2007; Kaplan & Haenlein, 2010; Lenhart et al., 2010). It refers to the use of web-based and mobile technologies, turning communication into interactive dialogue (Kaplan & Haenlein, 2010). Social media takes on many forms and must be clearly defined. Among these forms are weblogs, blogs, Internet forums, and video and social bookmarking (Bowman, 2009). Kaplan and Haenlein (2010, p. 4) identify at least six different types of social media: collaborative projects, blogs (Twitter), content communities (YouTube), social networking sites (Facebook), vertical game worlds (World of Warcraft), and virtual social worlds (Second Life)(Phillips, Baird & Fogg, 2011). What is important to remember here is the large variety of technologies of social media that exists. These include, but are not limited to blogs, email, instant messaging, music sharing, picture sharing, wall postings, and voice-over IP (Kaplan & Haenlein, 2010, p. 4).

In working with social media in the classroom or for personal use, users must be familiar with the ever-changing technology and must be able to distinguish between the kinds of social media and their uses (Ong, 2002). If social media are ever to become part of the school curriculums, teachers, educators, and administrators will need professional development, in-services and plenty of practice if they are to impact student learning (Ribble, 2009).

According to research done by Lenhart et al. (2010b), it is of importance to know the framework of social media because the statistics show that social media are here to stay and appeal to many. There are various statistics that account for social media usage and effectiveness for individuals worldwide. Some of the most recent statistics on the wide use of social media report that social networking now accounts for 22% of all time spent online in the United States. A total of 234 million people ages 13 and older in the United States used mobile devices in December 2009 (Lenhart, 2009). Reports indicate that Twitter processed more than one billion tweets in December 2009 and averages almost 40 million tweets per day (Lenhart, 2009), and as of June 2011, Facebook had 750 million users (Lam, 2007a; Mack et al., 2007). If Facebook were a country, it would be the third largest in the world (Lenhart, 2009). Overall, reports further indicate that one third of American high school students admit to cheating using social media and 83% of Americans own cell phones while about 73% of Americans send out text messages daily (Watters, 2011). Also, cell phone owners between the ages of 18-24 exchange an average of 109.5 messages per day or 3,200 messages a month (Watters, 2011). Reports indicate that cell phone users in the 13-17 age range are avid texters (Nilson, 2010). American students send out 440 text messages per week, and 100 of those in a week are sent during class time (Johnson, 2010). According to Lenhart et al., (2010), 73% of adolescents use

social media networking sites such as Facebook and Myspace. According to a report by Nielson Company (2009, p. 8),

> In the U.S. alone, total minutes spent on social networking sites have increased 83 percent year-over-year. In fact, total minutes spent on Facebook increased nearly 700 percent year-over-year, growing from 1.7 billion minutes in April 2008 to 13.9 billion in April 2009, making it the No. 1 social networking site for the month.

As seen in these statistics, social media are here to stay and have thus far impacted the world greatly. Yet according to a report from Common Sense Media, "70% of schools around the country ban student cell phone use during the school day. Social media are widespread in almost every walk of life" (Schachter, 2009, p. 2). The technology tools transcend age, gender, race, socioeconomic background, and status, as most people use some form of social media in their daily lives (Lam, 2007b). Since the technology tools are so prevalent in all walks of life, there is no wonder that students in the age range from 13 to 18 are the most avid users of social media (Marwick, 2008). Research studies indicate that many educators have recognized the attraction of social media and are seriously grappling with the complex issue of using this tool in the classroom to increase student engagement in learning activities (Marwick, 2008).

Texting is the dominant daily mode of communication between teens and all those with whom they communicate (Lenhart, 2009). "Texting among teens has risen from fifty texts a day in 2009 to sixty texts a day for the median teen text user" (p. 3). Older teens, boys, and blacks are leading the increase. Additionally, 87% of older teens ages 14-17 own cell phones and 77% of older teens text. Recent surveys by Lenhart (2009) show that while 57% of teens aged 12-13 own cell phones and 75% of all teens aged 12-17 text. "Boys of all ages increased their texting volume from a median of thirty texts daily in 2009 to fifty texts daily in 2011" (p. 3). Black teens showed an increase of sixth texts daily to eighty texts daily. Older girls text a median of

100 texts a day, and 63% of all teens say they exchange text messages every day with people in their lives. "Further, studies show that 39% of all teens communicate daily using their cell phones. They study showed that 35% of all teens do face-to-face socializing outside of school while 29% of all teens use social network site messaging. The study also revealed that 22% of all teens use instant messaging, and 6% of all teens use emailing. Still 23% of teens aged 12-17 own smart phones, and 31% of teens aged 14-17 own smart phones" (p. 4). There are no differences in ownership of smart phones versus regular cell phones by race, ethnicity, or income. Overall, 16% of all teens have used a tablet computer to go online, and 49% of all American teens have gone online on their mobile phones in the last thirty days (Lenhart, 2009; The Prevention Researcher, 2010).

Historical Overview of Social Networking

Gaining an insight into the educational value of social networking as accessed via mobile technology is much more complex than simply understanding how the technology works for the user (Schachter, 2009). The psychology behind the use of social media can "be revealed through studying social networking" (Boyd, 2008, p. 27). Stimulated by the outstanding study of Anatol Rapoport and Harvard theorist Harrison White (1983), the sociologist Mark Granovetter (1983) published his influential paper "The Strength of Weak Ties" (p. 1361). In his study, Granovetter (1893) found that interpersonal ties can be classified in three ways: strong, weak, and absent. The weak tie is the relationship between an individual and his or her acquaintances. The strong tie is the relationship between an individual and his or her close "friends" (p. 1366). The absent tie describes the relationship without substantial substance—a nodding acquaintance. The strength of an interpersonal tie is a linear combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services that characterize each tie (Granovetter, 1983). In social

network theory, relationships are viewed in terms of nodes and ties. Nodes are described as the individual actors within the network, and ties are the relationships between the actors. Thus, a social network is a map of all the relevant ties between nodes. "Strong ties are well-formed cliques, and weak ties function as bridge between any two dense clumps of close friends" (p. 1369). The fundamental working of Granovetter's (1983) "interpersonal ties" explains how information is transmitted through a social network (Granovetter, 1983, p. 1361).

In another theory presented by Katz, Blumler, and Gurevitch's (1974), the Uses and Gratification Theory contends that individuals mix and match uses of the social media with goals according to specific content, needs and social background. Users play an active role in choosing and using media "as to provide a framework for understanding the correlation between media and audiences" (Katz, Blumler, & Gurevitch, 1974, p. 5). The social connectedness helps to integrate and update (Matei, 2010) while overcoming barriers in using social networking in society and later in schools (Groff & Mouza, 2008). The Uses and Gratification Theory (1974) explains how individuals mix and match uses just as users of social networking mix and match their information technology tools to meet their own specific needs or gratification, content and social background (Groff & Mouza, 2008).

Granovetter's (1983) network theory, "The Strength of Weak Ties" (p. 1361), and Katz 's (1974) Uses and Gratification Theory serve as the theoretical framework of this research study. These theories are significant because they provide information demonstrating how the social network functions as a map of the relationships of an individual.

The Use of Mobile Technology Devices in High School Classrooms

Several studies conclude that text-messaging has a positive impact on students in the secondary classroom. Thomas and Orthober (2009) asked high school students in one Latin and

two English classes to voluntarily participate in receiving course-related text messages via their personal cell phones. Of the 66 students enrolled in the courses, 46 (70%) of the students participated in the study. The two teachers involved in the study texted projects and homework assignments to the students involved in the study. The purpose of the study was to identify problems and barriers as well as successes of text messaging in secondary schools. The study indicated that instructor-generated text messaging proved beneficial to students as there was an increase in student engagement, motivation, interaction and achievement (Thomas & Orthober, 2009). However, there were limitations to this study due to technology problems in the school, lack of desire, inappropriate uses and a lack of access to material by all participants in the study.

The possibility of more school districts rethinking their previous ideas about banning cell phones from their campuses has generated wide interest in researching the importance of the use of social media as academic networking for the mobile generation (Tremblay, 2010). Some researchers have indicated that bans of cell phones from schools are not successful in trying to enforce these rules. As a result of this discovery, many school administrators are exploring the use of mobile devices in their schools (Ito, 2013; Marwick, 2008; Pohl, 2000). These administrators seem to have concluded that cell phone use is a new dominant culture and shift that will remain for years to come. The focus should be "less on the downside and more on the positive" (Lenhart et al., 2007, p. 1). According to Johnson (2010) 69% of American high schools have banned the use of cell phones or the possession of cell phones on school grounds. In his study Johnson (2010) reported that the American Association of School Administrators promotes the use of cell phones. This group supports the use of smart cell phones such as iPhones and Blackberries because they offer applications that enhance learning in the classroom through students' use of technology tools (Johnson, 2010). The evidence suggests that the bans,

however well-intentioned, do not work in terms of preparing students for a global and first class education (Nielsen & Webb, 2011). More than 70% of American high school students carry cell phones and send about 440 text messages a week, 100 of those messages in class (Lu, 2008; Shane, 2012; Wakefield, 2011).

Overall, many investigators have recently turned to the use of cell phones (mobile learning) and text-messaging in the classrooms despite the misgivings and distractions that the use of this form of social media can cause (Horrigan, 2007; Matei, 2010; Ribble, 2009; Schachter, 2009). According to data recently gathered by Amanda Lenhart and Pew Research Center (2011), "88 percent of teen cell phone users send text messages" (p. 3). Free online resources available can transform cell phones into useful and purposeful handheld educational technology tools (Lenhart, 2011; Liang, Commins & Duffy, 2010). Research data shows that "over 80% of students 13 to 17 own cell phones"; therefore utilizing cell phones in secondary classrooms can save school districts plenty of money that otherwise would be spent on technology (Lenhart et al., 2011, p. 4). Cell phone use in the classroom can be effective when harnessed by strict policies and user contracts that are strongly enforced (Ribble, 2009). Simple management of student cell phones can make smooth transitions from social networking to academic networking thus helping to increase student engagement, achievement and motivation (Edwards, 2011). Several studies show in general how teachers can use technology in class with students using and predicting survey outcomes and student understanding strategies by asking questions such as "How well do you understand the concept of topics or issues?" (Boyd, 2008; Edwards, 2011; Lam, 2007a; Ribble, 2009; Swank, Beinfohr, & Christy, 2002). Research indicates that even the reluctant student will respond to this question via cell phone, thus helping

the teacher to review lessons or move on (Levin, 2011; Livingstone, 2002; Mack, Behler, Roberts, & Rimland, 2007).

One study indicated that 80% of students carry cell phones; therefore, school districts are fighting a losing battle trying to keep them out of the modern day classroom of this mobile generation (Tremblay, 2010). Research and many studies suggest that schools should be turning the perceived obstacles of cell phones at schools into opportunities to learn, engage, and increase student achievement (Rogers, 2009). Rogers (2009) conducted a study to determine what seventh grade students in a pre-Algebra I class had learned by administering a quarterly mathematics assessment. The assessment required that all seventh graders use a calculator (Rogers, 2009). However, the school could not provide enough calculators for every student. As a result of the inability of the school to provide the needed number of calculators, the principal allowed one student to use his cell phone, which had a calculator. The student was impressed that the principal loaned him his calculator and shared his knowledge with other students. This sharing was the springboard for a new culture of learning via mobile devices. Previously, students had never been allowed to use the calculator on their phones (Rogers, 2009).

Of the twenty-two students, nineteen had cell phones and were allowed to use the calculator on the phone (Boone, 2009). This study inspired the principal and staff to set strict guidelines for using the phone for instructional purposes only (Davis, 2010). Digital citizenship contracts and letters to parents were sent home to be reviewed, signed and returned to school. Training for teachers was given, and students were chosen as leaders to manage phones when they were not in use or used inappropriately (Rogers, 2009).

As recently as September 2011, studies showed that “83% of American adults own cell phones and that 73% send or receive text messaging as a form of social media” (Lenhart, 2011,

p. 2). One limitation of this study was that the researcher only looked at adults, but found that younger adults were much more active texters (Lenhart, 2011; Rogers, 2009). The research showed that "cell phone owners between the ages of 18 and 24 exchanged an average of 109.5 messages per day and more than 3,200 messengers per month" (Watters, 2011, p. 1). Studies completed by Watters found that those "cell phone users in the 13 to 17 age range were the most active texters among any other age group" (Watters, 2011, p. 1). However, many schools are facing questions about whether to allow students to bring and use cell phones and social media in the classroom as an educational tool (Gutton, 2011). Cell phones with Internet access can assist students to look up information and can double up as calculators and cameras (Rogers, 2009). Previous research indicated that text messaging was the preferred method of communication of teenagers (Nielsen & Webb, 2011). Passey (2010) concluded that as with any technology, use of cell phones and text messaging requires policies for acceptable use and that students need guidance on exactly what these policies are.

Studies show that the use of social media in the secondary classroom has become a hotly discussed issue for educators and school districts (Smith, 2007; Thelwall, 2008). While most parties agree that the global information that social media networking offers is unsurpassed, the drawbacks of cyber-bullying, cheating, predators, violations of federal government laws and possible inappropriate exchanges between teacher and student make ready and full acceptance of social media a risky and dangerous endeavor (Davis, 2010). Nilson (2010) provides insight into this debate and provides a general response to both sides of the argument. The author requires that educators consider every educational tool at their command to give their students the richest educational experience possible and that experience does include social media (Nilson, 2010).

After utilizing a wide variety of face-to-face teaching methods, it is time to integrate technology into courses to enhance both teaching and students' learning (Nilson, 2010). This approach to integrating technology and social media in secondary classrooms seems to be less confrontational and argumentative. Rather, it presents a common denominator to remove or refine major real or perceived dangers of the use of social media via mobile devices. Inherent in the statement is that technology is ubiquitous, universal, and futuristic and must be worked somehow into the present scheme of educating students. According to Nilson (2010) "students prefer different learning modalities to varying extents" (p.254).

Nilson's (2010) study encompassed readily available low-tech tools, visual aids such as the "ubiquitous" chalkboard, the flip chart, the overhead projector and other high-tech (computer based) tools (p. 255). Among these tools were YouTube, texting, Facebook, iPods, iPads, blogs, interactive white boards, "email, one-to-one or one-to-many, podcasts, space to post wikis" (p. 255), discussion boards, chat rooms, conferencing, web resources, multimedia presentations, MP3s, podcast, Power Points, Laptops, Link Rot, mobile devices, bookmarking tools, virtual worlds, Twitter, microblogging, Del.icio.us, MySpace, and e-learning (Nilson, 2010; Sutton, 2011). Overall the article and study show that technology and varied learning modalities must be worked into today's classrooms just as face-to-face instruction was worked into the instructional practices of previous years (Nilson, 2010; Raven, 2005; Tapscott & Williams, 2008).

Seamless support of education through the use of technology has long been a goal of many schools and school districts (Hartley, 2007). Schools interacting with the ever-present technology embrace the academic mission of enhancing teacher instruction and student achievement (Hartley, 2007). In a study done in Avon, Indiana, at Avon High School with an enrollment of 2,500 students, each senior used a laptop daily. Students were given the option to

rent one from the high school or bring their own personal laptops. Personal laptops brought to school were required to meet established minimum specifications set by the school district. Each teacher was assigned a tablet that connected wirelessly to any video projector in the school building (Swank et al., 2012).

Before Avon ventured into the "Wired for the Future" concept, staff members were trained by a technology integration specialist on how to incorporate the technology into the school's curriculum (Swank et al., 2012). Teachers were given time to practice, plan, learn and implement and buy into the program. The focus was not on teaching technology to students, but on using technology to enhance student learning. The study was done with juniors and seniors only (Swank et al., 2012). The study reveals that juniors started learning essential skills and were then involved with the technology their senior year. Of the 550 seniors, 480 participated in one of the 16 two-week training sessions. The training consisted of plenty of digital citizenship and school wide emails, log-ins to the district's network portal and print from network. Avon's students used Microsoft OneNote and teacher's electronic drop-boxes, logged onto web pages and viewed video podcasts of the previous day's assignments. Students also served as certified computer technicians (Swank et al., 2012). Overall, the study revealed that those students who completed one of the two week training sessions showed improvement in using laptops at the university level, using Internet search engines, and meeting the challenge of being a 21st century learner (Swank et al., 2012).

The study was unique and appeared to have been costly and beyond the normal realm for most school budgets. The study did not say what happened to students who could not afford to rent or use the modern technology or what happened to teachers and staff who did not come on

board. The study did not mention what happened to students who violated digital citizenship rules. However, the positives revealed by its uses of technology and social media are goals for which to strive, thus increasing student engagement in learning activities at any level (Swank et al., 2012).

Of the many studies conducted on the use of social media in the secondary and college classrooms, there seems to be a focus on the impact that social media use in the classroom has on student engagement and the value-added role that technology networking can provide for students in the workplace (Beglau, 2011; Bonk, 2009; Nilson, 2010; Swank et al, 2012;). Further studies emphasize the role that the teacher plays in implementing innovative technologies in the class to enhance high quality teaching and technology integration into the instruction process (Ribble, 2009). Few studies focus on the role of administrators and what they must know to be able to meet the challenge of observing teachers who use innovative technology in the classrooms (Beglau, 2011). However, Beglau's (2011) research has a universal appeal in that it addresses the role of the administrator as a supervisor of teachers using technology. With so many accountability obligations set by policymakers, knowing how to evaluate teachers' use of technology is essential for principals in the 21st century (Miller, 2012). In his research, Beglau (2011) suggested that in order to understand the effective use of technology, "principals must be familiar with technology standards such as the National Educational Technology Standards for Teachers (NETS-T) that were developed by the International Society for Technology in Education (ISTE)" (p. 64).

Beglau (2011) presented many concepts that principals can consider as they supervise and evaluate classrooms in which technology is used. Technology integration should be accompanied by high quality teaching with clearly "designed learning goals, strong classroom

management, and monitoring of student understanding" of both assignment and technology use (Beglau, 2011, p. 65). Technology should not only be an add-on to lessons, but should also be an integral part of teaching and learning (Carey, 2012). Evaluation tools that align with the teaching philosophy of the school supplemented by tools that focus on technology use should and must all be part of the evaluation instrument (Beglau, 2011). Beglau concluded that principals must evaluate the effectiveness of instruction in literacy skills, adaption of traditional instruction, and transformation of technology to promote community learning of complex content (Beglau, 2011).

In order to embrace technology and all of its rapid advances, "teachers must continue to attend professional development programs"(Nilson, 2010, p. 256). The Enhancing Missouri's Instructional Networked Teaching Strategies (eMints) program at the University of Missouri provides participating teachers with two years of intensive professional development (Beglau, 2011). Teachers enrolled in this program teach in a technology rich 21st century classroom equipped with an interactive white board, projector, laptop, student computers, digital camera, and printer. Teachers also use the eMINTS "Hallmark of an Effective eMINTS Classrooms" (Beglau, 2011, p. 66). Earlier studies examined the roles of the teachers and students. This research completes the circle by discussing the role of the administrators in evaluating and promoting communication "technology and social media at their schools" (Beglau, 2011, p. 66).

Lu (2008) studied the use of short messages service (SMS) in second language learning, specifically the effectiveness of SMS vocabulary lessons of limited lexical information on the small screens of mobile phones. The study included thirty high school students who were randomly divided into two groups and given two sets of English words on paper or through SMS messages for a period of two weeks. Post-test results of the study showed that students who used

the brief SMS lessons recognized more vocabulary words than did those students who read the detailed printed material. The results of the questionnaire given to the 30 students who participated in the survey showed that students in general held a positive attitude towards learning vocabulary via mobile phones. There were limitations to the study because students in general did not always have access to SMS lessons, but the interest of students in the technology is evident. The study shows that student engagement does enhance vocabulary learning via mobile devices in the classroom.

Mobile learning is the mantra of educators (Bonk, 2009). A growing number of schools are turning to the smart phones students bring with them to school as an instructional device that can augment classroom learning (Shane, 2012). According to research, more than 60,000 people around the planet get mobile access to the Internet each hour (Iannucci, 2009). Applications for the iPhone are educational, with thousands of possible learning adventures accessible to students (Marcus, 2009). Students can access grammar lessons, language applications, Shakespearean plays or quotes, physics experiments, musical performances, and math review problems, all with a smart phone (Marcus, 2009). Mobile learning advocate John Traxler (2009) points out mobile professional development options are especially important for educators to teach effectively using mobile devices in the classroom. Studies vary as to why students should or should not use social media via mobile devices in the classroom. Research-driven interventions in the high school classes can work, but digital media policies must be in place (Chaplin, 2012).

In a new pre-doctorate study conducted by Rachel Feldman (2012), the University of Haifa, results revealed that 94% of Israeli high school pupils access social media via their cell phones during class. The study included 591 students in grades 9-12 and 144 teachers of various subjects in three Jewish high schools. “Only 4% reported not using their cell phones during

class" (p. 2). The study also showed that the most common use of the Internet in class was to access social media sites, listen to music, play games and send text messages and photographs. It was found that classes with permissive teachers used cell phones less while in classes with strict discipline, cell phones were used more. Based on the findings of the study, there was no time in the classroom that some pupils were not using their cell phones (Feldman, 2012).

The study also showed that 95% of the pupils take pictures, or make recordings during class, 94% send e-mails and text messages and 93% listen to music, while 91% talk on their phones during class. The research determined the frequency of the students' use of cell phones during class from "never" to "very often" (p. 2). The study further revealed the high use of interactive, multi-user functions to be disruptive during lessons. The data indicated that every pupil used a cell phone in 60% of his or her classes (Feldman, 2012).

The study further revealed that cell phones were more frequently used in humanities classes than math or science classes. Age also influenced the use of the cell phone. "Tenth graders used the cell phone more frequently than twelfth graders. The use of the cell phone dropped with more experienced teachers but gender of the teacher had no influence on classroom phone use" (Feldman, 2012, p. 3).

The study showed that students using the cell phones had plenty of freedom which implied at times disruption. The study did not mention any digital media policies or means to curb the flagrant use of the cell phone in the classroom for non-academic purposes (Chaplin, 2012; Kessler, 2010).

There is still some debate about the use of mobile devices in the high school classroom and the fear of inappropriate use and classroom distractions that can result from such mobile device use (Davis, 2010). Still, there are studies that underscore success in the high school

classroom (Ribble, 2009). In a recent case study at Sacred Heart Cathedral Preparatory in San Francisco, Ramsey Musallam's Advanced Placement Chemistry class used cell phones as a natural extension of the way he communicated with his students. The case study revealed that as "students walked into his class, they received a text blast asking a challenge question that related to the day's lesson. Students constantly anticipate the question and quickly reply, giving all students an opportunity to engage in the learning process" (Barseghian, 2012b, p. 2). The case showed that the teacher puts students in groups which is a fun way to stay motivated as he monitors each student's work station and gives directions, explains concepts, reviews and creates videos and provides online tutorials to find out about common questions (p. 2).

The case study also revealed that students took multiple-choice quizzes and sent answers through the use of a poll on their mobile devices. One of the strong features of the study was that student responses to the quiz were reviewed by which questions received the most votes. The data integration was rich, dynamic and the cognitive load was much higher. "The teacher's instructional practice was based on peer instruction and in quiz-based learning" (p. 6). The mobile devices, videos and polls supported the instruction without overemphasizing the use of mobile devices. The study concluded that seeing the answers that got the most votes made "big powerful impressions on the students as opposed to receiving visual distracters of wrong answers" (Barseghian, 2012b, p. 10).

The Use of Social Media in High School Classrooms

Several educators welcome social media into their classroom because of the many benefits that technology tools and social media genres offer to students (Marwick, 2008). Smith (2007) wrote that most schools have banned students from using social media. However, progressive educators claimed that banning social media from the classroom represents a major

disconnect with the world that awaits students outside the school walls (Smith, 2007). Educators also claimed that use of social media enabled students to see how their social network can influence their school activities and gave students a real-world perspective of how to collaborate and remain engaged in the classroom and learning activities (Franklin, 2011). Educators promoted and embraced social media because it did not replace the existing curriculum, but rather transformed it (Matei, 2010).

Many articles discussing the use of social media in schools differ on their views of whether the use of social media impedes a student's academic performance or helps to motivate and thus enhance student achievement. Some researchers argue that safety concerns are of the essence and override any possible educational value (Davis, 2008). Some researchers report that there are no data that support the theory that use of social media puts students in danger (Wolak, Finmklehor, Mitchell, & Ybarra, 2008). In a study of students who used social media, Kessler (2010) "concluded that these students' grades went up by as much as 50%" (p. 3). Furthermore, "chronic absenteeism" was reduced, and the school met its adequate yearly progress (Kessler, 2010, p. 3).

Further research indicated that predators, bullies, and pornographers do exist and can present dangers to children. School officials must develop codes of law and policies regarding social media (Lessig, 2006). The best way to help students safeguard against risks is to teach them what to avoid offline, something taught through digital citizenship (White, 2011). Cell phones are not the enemy. Often social media use in schools can outweigh risks. In essence, engaged students learn better because the modern technology encourages student collaboration, group work, helpful comments and online discussions (White, 2011).

A central issue in the common use of social media in the classroom is the perceived negative impact that it has on high school students in general (Lytle, 2011, p. 1). Research indicates that text messaging is quickly becoming a major mode of communication in the high school classroom across the country (Lytle, 2011). Slang terms and text-speak (See Appendix C) "such as *idk* (I don't know), *smh* (shaking my head) and *btw* (by the way) have become the norm on student assignments, homework, and examinations" (Lytle, 2011, p. 1). Teachers have seen a dramatic decline in the writing abilities of students due to their use of Twitter, Facebook and texting and that "texting during class can be distracting" (Besser, 2007, p. 1). A survey given to Fresno State students reported that 84% of the students used "text messaging on a regular basis" (p.1). Another "70% said they text messaged during class" (p. 1) which they thought was distracting. The study also revealed that 64% of students in the survey reported that they did not realize they were using a form of shorthand native to texting and social networking (Besser, 2007, p. 3). Teachers, college professors and college admissions officers have different views on this new trend, but agreed that they saw a decline in student written skills on college essays and college applications (Lytle, 2011).

Studies show that text messaging and instant messaging have become widely used by teenagers, but not in the most positive way (Besser, 2007). Teachers have noticed drastic changes in students' "general interest in the use of social media and excitement" in and for its use (Swidey, 2008, p. 3). However, students are not able to "code-switch from social networking to academic networking" (Benjamin, 2008, p. T-31). Now, teachers must explain in their lessons why using shortcut language is not acceptable on formal tests and assessments and in the business world (Besser, 2007). Besser's (2007) study revealed that texting and instant messaging for the most part caused laziness or disregard for regular school work. Texting can

also cause other problems for young adults who sometimes use this means of spreading rumors thus creating distractions in the classroom (Besser, 2007, p. 7).

Many schools have been reluctant to embrace technology tools in the classroom because of incidents of students and adults overusing mass communication tools (Taranto & Abbondanza, 2009). Research shows that many schools have banned all forms of social networking in schools (Taranto & Abbondanza, 2009). Some researchers contend that banning social networking or denying its popularity is inappropriate and borders on irresponsibility for students' education (Lusk, 2010). Mass communication can empower a growing cohort of connected individuals and organizations to create a wealth of learning and scientific discovery (Tapscott & Williams, 2008). Many agree that academic social networking is the answer (Field, 2012; Ribble, 2009). It combines aspects of social networking with an academic focus, thus creating digital citizenship, the framework for understanding appropriate technology use (Ribble, 2009).

Does the "F" in Facebook stand for "F" in school (Choney, 2010, p. 1)? Choney (2010) reviewed a study conducted by Netherlands' psychologist Paul A. Kirschnera of the Centre for Learning Success and Technologies at the Open University of Netherlands and Aryn C. Karpinskib of Ohio State University in which "219 U.S. university students between the ages of 19 and 54 found that Facebook users had a typical grade point average of 3.06, while "non-users" had an average GPA of 3.82" (p. 1). The study did not focus on whether or not Facebook is good or bad but on whether students could multi-task by performing the following tasks simultaneously: sending text messages, e-mailing, instant messaging, listening to music, or reading a book. The study showed that "while people may think constant task-switching allows them to get more done in less time, the reality is that task-switching actually extends the amount

of time needed to carry out tasks and normally leads to students' making more mistakes" (p. 3). The study further revealed that students who are on Facebook while studying or doing homework get "20 percent lower grades than do students who do not have social networking sites in visual range" (Choney, 2010, p. 4).

A central issue in the debate over use of social media via mobile devices such as cell phones involves "online support of teachers helping teachers to build literacy practices, developing community leadership skills and overcoming distance and isolation for small rural schools" (Aguilar & Rivero, 2006, p. 49). One study underscored the setbacks and problems that teachers from rural Louisiana, Mississippi and Arkansas encountered as literacy coaches, trying to overcome distance and isolation for their students (Aguilar & Rivero, 2006). It was a comprehensive school reform program that helped schools become learning organizations through professional development that enhanced teachers' abilities to provide knowledge-based instruction. The schools in the study included two schools from each of the three states (Aguilar & Rivero, 2006). "The grade levels included were grades four-eight and ranged in size from 583 to 848 students" (Aguilar & Rivero, 2006, p. 47). "The student population was predominantly black. The percentage of students receiving free and/or reduced lunch was 85% in Louisiana, 73% in Arkansas and 56% in Mississippi" (Aguilar & Rivero, 2006, p. 47). According to the study, supported literacy focuses on comprehension, writing and reading. Students wrote to learn. The teachers involved in the study attended a three-day supported institute during September and January. The purpose of the institute was to provide teachers with a framework for "integrating literacy strategies in all standards-based curricula for all content areas and with skills in collaboration and coaching for building a literacy community across those schools" (Aguilar & Rivero, 2006, p. 48).

The support of the programs was provided through blogging, as the teachers remained connected to one another after the summer institutes were over. The teachers had never used blogs before but found them to be valuable networking tools. "The teachers created posts, gave feedback and shared ideas, experiences and best practices" (p. 48). They never felt isolated (Aguilar & Rivero, 2006). They were able to "share experiences and knowledge with fellow teachers and serve as technology experts, community teachers, and leaders through blogging and other social networking" (Aguilar & Rivero, 2006, p. 48). The study proved successful for both teachers and students from the three states. Teachers were able to use technology to enhance and impact students (Aguilar & Rivero, 2006). Students were receptive to learning technology and showed improvement in learning achievement and engagement (Aguilar & Rivero, 2006).

The slow and easy process helped reluctant faculty to use technology school-wide and to understand that the model of a teacher closing his classroom door to the outside world is a thing of the past. The study revealed that when teachers are ready to embrace technology, the students are ready and able to do likewise (Aguilar & Rivero, 2006).

The creation of timely and innovative lessons that integrate tech-infused lessons using Twitter, a voice-to-text-application called Jott, YouTube and Google Docs has led researchers to study closely these social media networking tools as ways to upgrade teaching in today's classroom (Young, 2012).

Bean (2011), vice president of Learning Design for Kineo, a global organization specializing in e-learning solutions, confirmed that all that is clicky-clicky bling-bling (CCBB) does not make for an effective learning experience (p. 1). The alliterative lines capture the researcher's attention just as modern technology, social media tools, and communication technology achieve those goals in today's classroom. Through interviews and studies with

professionals in e-learning programs, Bean (2010) describes "CCBB as e-learning with lots of whizz and bang and clicking in an attempt to add pizzazz to dry content, making it more appealing" (p.1). Bean (2011) revealed that once the educators unwrapped the sparkle, they were left with a "load of e-learning unusable material" (p. 2). The study revealed that e-learning is at times dressed-up with seductive details that are interesting but irrelevant. At times material added to a multimedia presentation in an effort to spice it up by drawing people to it, all too often attracting the eye and engaging the brain, can be distracting from the main point (Clark & Mayer, 2007, p. 115; Cloud, 2012). According to Bean (2011), research was done on the effectiveness of CCBB. The research found that "extrinsic versus intrinsic motivation indicated that simple learning games could help students with perseverance" (p. 3). By creating simple learning games, teachers can ensure that learners are more able to retain the facts (Ely & Sitzmann, 2011).

However, the interview showed that the dark side of CCBB was revealed "when students were forced to practice drill without content. The CCBB research showed that casual games were a keystone for learning, but in order for this fact to be true, good strong questions must be written, questions that emphasize content, all that glitters is not gold (Bean, 2011, p. 10).

The interview by Bean warns against CCBB that distracts the learner. Bean (2011) points to research done in the 1980s and 1990s that found that the addition of interesting yet unimportant augmentation can divert learners from focusing on learning the main points of the lesson. This interview showed the dark side of social media when it is used for bells and whistles and thus ignoring student learning of the real substance. Many researchers concur that when social media network is used this way, it has a negative effect on learning (Azevedo, 2005; Klopher, 2008; Thalheimer, 2004).

As the use of social media continues to become a major part of the American teenagers' lives, a recent study conducted by Lenhart (2011), found that 69% of the teenagers who use social media networking sites said their peers are more likely to be kind to one another. Still 88% of these teens say they have witnessed people being mean and cruel to another person on the sites. Lenhart (2011) also found that 15% of the students in the study reported that they have been the target of mean or cruel behavior on social network sites. These findings are part of a new in-depth study that examined teens' behavior and experience on social network sites and their privacy and safety practices. The study also found that 95% of all teens ages 12-17 are now online and that 80% of online teens are users of social media sites. The study revealed that teens of all ages and background have witnessed these mean behaviors. Further, details from the study revealed that 90% of teenage social media users said they have ignored the mean behavior while 80% said they have personally defended a victim of meanness and cruelty. Still 79% said they have told someone to stop their mean behaviors, and 21% said they have personally joined in on the harassment of others on a social network site. The author found that for the most part, teenage social media sites are exciting and rewarding. But the majority has also seen a darker side, and for a subset of teens, the world of social media presents a climate of drama and mean behavior (Lenhart, 2011). The Lenhart (2011) study supports the concept that using social media in the classroom can result in added distractions and new forms of deviant behaviors.

In addition to studying behaviors that teenagers witness or experience on social media sites, Lenhart (2011) also examined instances of bullying that happened both online and offline. Among teenagers, 19% reported having experienced bullying in the last twelve months, either in person, by text message, by phone call or online in. The study revealed that 12% of all teens reported being bullied in person. Still another 9% said they were bullied by text message, and

8% said they experienced some type of online bullying through email, a social network site or instant messaging. Lenhart (2011) also revealed that 25% of teens using social media had an experience on the site that resulted in a face-to-face argument or confrontation, still 22% had an experience that ended their friendship with someone else. The study also revealed that 13% of the teens had an experience that caused problems with their parents, and 13% felt nervous about going to school the next day because of a bad experience on the social network site. Further, 8% of teens said they got into a physical fight with someone else because of something that happened on a social media site, and 6% got in trouble at school because of an experience on a social media site. Teens stated they received advice about online safety from parents (86%), teachers or adults at school (70%). Still, 18% of teens said that no one had influenced them about attitude towards online behavior and digital citizenship (Lenhart, 2011).

Other studies support the use of social media in spite of the "dangers that the use of social media can present, such as sexual predators, stalkers, and abductors" (Boyd, 2008, p. 30), drama, gossip, bullying, swearing, rumors and harassment (Milner, 2004). MySpace, Facebook, Twitter and blogs still have a tremendous impact on teen status, peer pressure, shared identity and inclusiveness (Ito, 2013). In a dissertation study, Boyd (2008), interviewed and observed several hundred teenagers in several states noting qualitatively their habits and uses of mainly Facebook and MySpace, over a 2.5 year period. Boyd (2008) used teenage social ability, fears and dangers, and the importance of technology and "network publics constructed by network technologies" as a framework for her study (p. 30). The study explained teenagers' concepts of social media such as MySpace, Facebook, and Twitter, emphasizing how technology determines practice and social outcomes (Boyd, 2008). In many similar studies, teenagers expressed what the social media meant to them (Boyd, 2008; Jordan, 2008; Kukulska-Hulme, 2007; Lenhart,

2011). Some viewed social media as places to hang out, meet, share, visit, comment, gather, and converse (Boyd, 2008). The studies showed teenagers viewed email as boring, because it had no pictures and it was "not about me" (p. 32) (Boyd, 2008; Jordan, 2008; Kukulska-Hulme, 2009; Lenhart, 2001;). The study also revealed how decorating profiles on MySpace allowed for student creativity and freedom of expression. In general, the teenagers welcomed the idea of using short expressions and short-hand (Baron, 2008). In essence, the new technologies have strengths and weaknesses, but it is how these new technologies are adopted in the classroom that can change cultural practices and the new culture of innovative technology such as "creating an oral culture that can technologize words and examine thought processes and social structures" (Ong, 2002, p. 55).

The evolving world of Internet communication is of much interest to researchers. An article by Smith (2007) provides a framework for using social networking technology in the classroom for learning as well as instruction. The study reminds readers that social networking is not just for flirting, social blogs, sexting, podcasts, tags and file swapping. Social genres offer students radically new ways to research, create, engage, and shape the way they learn, similar to various learning styles (Livingstone, 2008). Media-driven knowledge is here to stay and continues to advance each day (Marwick, 2008). The study emphasized the importance of schools' encouraging students to use modern technology since schools should reflect the world in which people live today (Zhang, 2002).

Schools must continue to monitor social media use by keeping students from wasting time chatting and sneaking into inappropriate sites (Kuloweic, 2011). The focus should be on frank discussions, ethical discussions, oral presentations, and ways to be safe (Savage, 2007). This research is unique in that it does not debate social media or just praise it. Yet, it offers a

compromise as to how to blend the best of both sides of arguments with the help of administrators, teachers, and stakeholders. Administrators must facilitate change for the whole community, giving teachers freedom and experimental time to fully understand the new concept of social media in the modern day classroom.

The central focus of this research study was to encourage more school policymakers and stakeholders that social media and mobile technology are shifts that are here to stay as a strong part of the world of our students today (Kessler, 2010). Repeated use of social media networking in secondary classrooms instructed by teachers can improve student comprehension and writing skills when taught correctly as part of the curriculum. The use of the social media tools coupled with innovative instruction will motivate, inspire and spark the learning process. The social media networking used by teachers in today's classrooms dictates that curricula will have to be transformed in order to accommodate the ways of the ever-changing social media and the way today's millennial students learn (Kerrey, 2000).

Since the debate over whether the use of social media in the classroom improves student engagement is a timely issue, the topic for this study is truly significant as more studies are being conducted more frequently to defend or refute the timely and formidable debate. Moreover, the debate has generated much discussion and has been the subject of discussion in many conferences, forums and journal articles (Aginam, 2012). With the rise of social networking that facilitates young people's use of slang, clipped words, informal grammar usage, text-messaging, text-speak, varied acronyms, Twitter, Facebook, YouTube, blogs, a study on the use of social media in the classroom is a usable and cutting edge study (Pollara, 2011; Savage, 2007).

Table 2.1 listed below addresses current as well as a few older theories or frameworks as they relate to the way people learn. The major categories are Behaviorism, Constructivism, and

Cognitivism. The table also provides a list of authors/researchers, kinds of mobile devices used in the studies, the benefits identified in the studies for students, the outcomes measured, and the results of the studies as the tasks impacted students (Flavell, 1979).

Table 2.1 Current Research on High School Student Learning and Social Media via Mobile Learning Devices

Author / Researcher (year)	**Mobile Device Used**	**Behaviorist or Constructivist Cognitivism Coding Tasks**	**Benefits Identified in Study**	**Outcome Measured**	**Results**
Frohberg, Goth, & Schwabe (2009)	Mobile phone	Constructivist	Students became ubiquitous and collaborative learners	Engagement	Positive
Shih & Mills (2007)	Mobile phone, MP3, tablet PCs	Behaviorist and Constructivist	Output, application, experiments, creative problem solving	Engagement	Positive
Naismith, Lonsdale, Vavoula, & Sharples (2004)	PDAs and mobile phones	Constructivist	Used for teachers for attendance and grade reporting	Engagement	Positive
Corbeil & Valdes-Corbeil (2007)	Podcast, iPod, smart phone, PDA	Behaviorist (reinforcing concepts and output) and Constructivist	Information and communica-tion	Engagement	Positive
Ally (2004)	m-learning devices	Constructivist (interpret, observe, process, personalize to personal meaning) Cognitive (memory, motivation, thinking, reflection)	Information-rich, greater use of visuals, instant assembly of learning materials, just in time learning and training	Collaborative	Positive

(Table 2.1, continued)

Author / Researcher (year)	**Mobile Device Used**	**Behaviorist or Constructivist Cognitivism Coding Tasks**	**Benefits Identified in Study**	**Outcome Measured**	**Results**
Craik & Lockhart (1972)	None	Cognitive Behaviorist	Motivation, thinking memory	Engagement	Positive
Paivio (1986)	Computers	Dual coding (memory is enhanced both verbal and vision form)	Memory, verbal, and vision	Engagement	Positive
Hein (1991)	Computers	Constructivist (learners construct knowledge for themselves-individually and socially constructs meaning as he or she learns)	Mental, language, social activity, learner thinks about learning, contextual	Attitude	Positive
Squire & Dikkers (2012)	iPhone, Kindle, iPad	Constructivism	Participate more fully in the world	Engagement	Positive
Barseghian (2012)	Cell phones, iPads	Cognitive, digital, media learning	Deconstruct and redesign classroom, reach students meaningfully	Engagement Activity	Positive
Rummel (2008)	Mobile phones	Constructivist, Cognitive	Engagement	Attitude	Positive
Hartnell-Young & Heym (2008)	Mobile phones	Constructivist, Behaviorist	Ease of use, convenience, lightweight, instant access	Engagement	Positive
Blackboard (Project Tomorrow 2011)	Cell phones	Constructivist	Technology in k-12, integrating technology	Engagement	Positive

(Table 2.1, continued)

Author / Researcher (year)	**Mobile Device Used**	**Behaviorist or Constructivist Cognitivism Coding Tasks**	**Benefits Identified in Study**	**Outcome Measured**	**Results**
Sutton, B. (2011)	Mobile cell phones MP3	Digital media, Cognitive, Constructivist	Ease of use, innovation, best practices	Engagement activists	positive

Note. Adapted from "*Mobile Learning in Higher Education: A Glimpse and a Comparison of Student and Faculty Readiness, Attitudes, and Perceptions" by Pollara,* 2011, p. 34

CHAPTER 3
METHODS

In order to understand if social media networking via mobile devices can be utilized on the high school level, this study investigated teacher perceptions of the educational value of social media networking via mobile devices. The purpose of the study was to assess the impact of the use of the ever popular social networking accessed through mobile technology on student learning engagement in today's 9th through 12th grade classrooms and to determine which social media devices teachers perceived to be most useful personally and professionally. It should be noted that in the rural parish from which this study's respondents came, the use of mobile devices is strictly prohibited by the local school district's governing authority. The rules are enforced but present a challenge by way of monitoring . Teachers are also prohibited from using mobile devices during instructional time (White, 2011). Most schools have taken the out of sight, out of trouble approach to handling the use of cell phones. It is obvious that after the school day students use the mobile devices but electronic devices are confiscated during instructional time if students are caught using the device (White, 2011).

Research Questions and Objectives

This research study aimed to answer the following question: Based on teacher perceptions, does the use of social media networking via mobile devices in grades 9-12 classrooms increase student engagement in learning activities? The research objectives for this study are listed below:

1. To describe the teacher population from seven public schools in one southern Louisiana parish based on teacher prior knowledge and thoughts on students' use of mobile devices. Results will be described according to the following variables:

a) Age

b) Gender

c) Ethnicity

d) Areas of certification

e) Subjects taught

f) Years in education

g) Number of years in current school

h) Grade levels currently teaching

i) Highest educational attainment

j) Type of school where currently teaching

k) Prior knowledge of the use of mobile devices

l) Thoughts on student mobile device use

2. To determine the perceptions of high school teachers about the utilization of social media via mobile devices in the classroom as measured by the Mobile Learning Survey for High School Teachers.

3. To determine the perceptions of high school teachers about students' use of social media via mobile devices for educational purposes as measured by the Mobile Learning Survey for High School Students.

4. To gather the opinions of 9-12 grade high school teachers about the use of social media via mobile devices in high school classrooms.

5. To compile a list of personal concerns of 9-12 grade teachers about the use of social media via mobile devices in high school classrooms.

6. To determine if there is a difference that exists in the perceptions for mobile learning as measured by the Mobile Learning Survey for High School Students. Results will be described according to the following variables:

a) Gender

b) Ethnicity

c) Highest Educational Attainment

d) Type of School where currently teaching

7. The purpose of this objective was to determine if a model exists that would explain from demographic variables of age, ethnicity, gender, and type of school a significant portion of variance of social media via mobile device use as measured by the overall Mobile Learning Survey for High School Teachers.

Population

The target population for this study was 9^{th} -12^{th} grade secondary school teachers from seven public schools in one southern Louisiana parish. The accessible population was 9^{th} -12^{th} grade teachers whose email addresses were available in the database of the parish central office. The researcher obtained the email addresses from the principals of the schools and obtained their permission to allow their 9^{th} -12^{th} grade teachers to participate in the study. There were 240 high school teachers in the seven schools in the southern Louisiana parish. Participation on the part of the teachers was voluntary. This research study used a census (100% sample) of all those teachers in seven high schools in one southern Louisiana parish who taught 9^{th} through 12^{th} grade students across the curriculum.

Ethical Considerations and Study Approval

Prior to conducting and collecting data for this study, an application for exemption from institutional oversight was submitted to the LSU Institutional Review Board. The study was granted approval and given the IRB #E8436 (See Appendix D).

Instrumentation

An extensive review of the literature showed that no existing instrument has been developed to conceptualize the perceptions of 9^{th} – 12^{th} grade teachers on the use of social media via mobile devices in the secondary classroom and whether the use of such instruments showed an increase or a decrease in the engagement of students in learning activities, based on teacher observations and perceptions. Based on the review of literature, previous studies have demonstrated the use of social media via mobile devices decreased student engagement in learning activities while other studies showed that the use of mobile devices increased student engagement in learning activities (Pollara, 2011). Ninth through twelfth grade secondary teachers completed the Mobile Learning Survey that has been constructed for this study. The survey consisted of 52 questions, divided into seven sections.

Part I of the survey consisted of eleven questions and assessed the demographics of each of the participants. According to Desjardins, Rubenson and Milana (2006), age, gender, teacher certification, subjects taught, grade levels taught, race, years of teaching experience, and highest degree attained can affect participation in a study. Respondents were also asked to write responses to items in the survey.

Part II of the Mobile Learning Survey for High School Teachers, consisted of one question with ten parts, and assessed the prior knowledge of the respondent's use of mobile technology devices. Skills assessed included the ability to access the Internet and to download

podcasts and applications on mobile devices, to use a mobile device as a calculator, alarm or calendar, to use a mobile device to translate a sentence into another language and to use a mobile device to send emails and post comments on a blog. Respondents were asked to respond to those items that applied to them.

Part III of the Mobile Learning Survey for High School Teachers consisted of one question with 16 items and assessed teachers' perceptions and observations of how they thought their students used their mobile devices. Teachers identified whether they believed their students used mobile devices to look up information, engage in social networking, set alarms, text, and take pictures. Respondents were asked to check all responses that applied.

Part IV of the Mobile Learning Survey for High School Teachers consisted of 15 items and assessed the teachers' perceptions of their students' utilization of mobile devices in the classroom. The responses to each item in this portion of the survey ranged from "strongly disagree" to "strongly agree." Respondents were asked to rate their level of agreement with those statements on a four-point Likert-type scale: 1=strongly disagree, 2=disagree, 3= agree, and 4=strongly agree.

Part V of the Mobile Learning Survey for High School Teachers consisted of 9 items and assessed the teachers' perceptions of the effects of mobile device usage on students' engagement in learning activities. The responses to each item in this portion of the survey ranged from "strongly disagree" to "strongly agree." Respondents were asked to rate their level of agreement with those statements on a four-point Likert-type scale: 1=strongly disagree, 2=disagree, 3= agree, and 4=strongly agree. One question required teachers to choose the statement that most resembled their attitudes toward incorporating mobile learning into future classrooms. A final

item consisted of an open-ended question, which focused on "should students be able to participate in discussion forums from their mobile devices?"

Part VI of the Mobile Learning Survey for High School Teachers consisted of 8 items, which elicited teachers' opinions on the use of social media. The responses to each item in this portion of the survey ranged from "strongly disagree" to "strongly agree." Respondents were asked to rate their level of agreement with those statements on a four-point Likert-type scale: 1=strongly disagree, 2=disagree, 3= agree, and 4=strongly agree.

Part VII of the Mobile Learning Survey for High School Teachers consisted of 5 items, which elicited teachers' personal concerns on the use of social media via mobile devices. The responses to each item in this portion of the survey ranged from "strongly disagree" to "strongly agree." Respondents were asked to rate their level of agreement with those statements on a four-point Likert-type scale: 1=strongly disagree, 2=disagree, 3= agree, and 4=strongly agree.

Pilot Test

A pilot test was given to teachers in one parish school to test the survey questions. Twenty pilot surveys were given to teachers who taught grades 9-12. The pilot survey was given to a convenient sample of teachers whom the researcher believed would take the survey and return it. The survey was given to fourteen females and six males whose ages ranged from 24 to 62. A total of fifty-one questions were included on the survey, some of which were devised by the School Improvement Team and the Faculty Advisory Committee along with some of the business teachers of the school where the pilot took place. Suggestions for improvement of the survey were also taken from the researcher's dissertation committee chair and the committee members. Some teachers said they preferred to have a range for the age questions rather than writing their actual age. Number 16 on the survey was duplicated and had to be reworked and

renumbered. Some of the teachers for the pilot believed that student perceptions should have been included while others thought Survey Monkey would have been easier to complete than a paper survey. A total of 19 surveys were returned with little difficulty.

Data Collection

The Mobile Learning Survey for High School Teachers was administered through both Survey Monkey and hard copies. The online survey was used because it was economical, user-friendly, convenient and timely for the nature of this research about the use of social media networking through mobile technology devices. Also, the teachers in this target population were all entered in the database from their respective school. All teachers who taught 9-12 grades in all subject areas and who had a usable email address in the database system were surveyed for this study. According to Dillman, Smyth and Christian (2009), surveyors should make at least five contacts with participants. Multiple contacts were made to teachers in this study. Five contacts were made over a three-week period. The following process was used to collect data from the participants.

The Survey of Mobile Learning for High School Teachers was administered online via Survey Monkey. Consent forms (See Appendix E) to complete the study were sent to high school principals of the participating parish's public high schools. The Survey Monkey system should have been easily accessible, economical and user friendly for most school systems. Teachers at seven parish public high schools were surveyed. Email addresses of each teacher were obtained from the parish email database and updated by each of the principals of the high schools to be surveyed. Before the surveys were sent to all of these teachers, five teachers took the survey. After seeing that Survey Monkey worked for these five teachers, surveys were sent in the form of an email to the larger sample from the seven high schools. Parish teachers were given two

weeks to complete the survey with a drawing for a prize for those who completed the survey earliest.

After three days, several teachers indicated that they had trouble completing the survey online because of a technical problem dealing with accessibility within the system computer server. Access to Survey Monkey was denied to teachers who attempted to complete the survey on school computers. The chair of the researcher's committee decided that in order to meet the deadline for the survey and to facilitate the completion of the survey by those teachers who were unable to complete it at school and may not have had home access to a computer, paper copies of the survey were sent to each of the seven high schools. Several reminders were later sent via email to teachers who had received a survey encouraging them to complete it. The seven schools were assigned numbers alphabetically by school name. School 1 returned twenty-six of fifty surveys; School 2 returned eighteen of thirty-five. School 3 returned ten of seventeen surveys while School 4 completed 1eleven of eighteen surveys. Eighteen of thirty surveys were returned by School 5, fifty-six of sixty by School 6, and eleven of thirty by School 7. After three weeks, 150 surveys were completed out of a possible 240 (See Appendices F-J). Fifty-one surveys were completed online, and ninety-five were completed on paper. Four surveys were not counted because they were completed by middle school teachers, as three of the seven public high schools in the parish have 7-12 grade configuration. A total of 60.8% of the surveys were used in the study.

All responses were carefully examined to eliminate double responses and data input errors as entries were checked three times. Results of all paper copy questionnaires were put in Excel spreadsheet and later converted into Survey Monkey. In comparing all fifty-two items in the Survey Monkey results and the fifty-two items of the paper results, no significant differences

were found other than item #39 where sixteen respondents wrote out answers as opposed to no responses on the Survey Monkey. The respondents who used Survey Monkey chose not to provide a written or keyed response to item #39.

CHAPTER 4
RESULTS

The primary purpose of this study was to explore and reveal the opinions and concerns based on their perceptions of teachers of grades 9-12 on the use of social media via mobile devices in the classroom. Teacher volunteers were from seven public schools in one southern Louisiana parish. The results of each of the seven objectives of the study are presented in this chapter.

Objective One

Objective one was to describe the teacher population in the seven public schools in one southern Louisiana parish based on the following demographic characteristics:

a) Age

b) Gender

c) Ethnicity

d) Areas of certification

e) Subjects taught

f) Years in education

g) Number of years in current school

h) Grade levels currently teaching

i) Highest educational attainment

j) Type of school where currently teaching

k) Prior knowledge of the use of mobile devices.

l) Thoughts on student mobile device use

Age. Participants (N= 143) were asked to provide their actual ages which were then grouped into the following six categories: (1) 21-25, (2) 26-35, (3) 36-45, (4) 46-55, (5) 56-65, and (6) 65 and above. The respondents' ages ranged from 22 to 67 years. The mean age was 41.1 and the standard deviation was 11.9. The largest group of respondents indicated their age fell between 36 and 45 years (n= 43, 30.0 %). The second largest group indicated their ages were 26 to 35 years (n= 40, 27.9%). Table 4.1 illustrates the respondents' ages.

Table 4.1 Age Distribution of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Age (in years)	**n**	**Percentage**
21-25	10	7.0
26-35	40	28.0
36-45	43	30.0
46-55	27	18.9
56-65	21	14.7
65 and above	2	1.4
Total	143	100.00

Note. Three participants did not respond to this item

Gender. The second variable examined was gender. The larger number of participants indicated their gender as female (n= 94, 64.8%) while fifty-one participants (35.2%) indicated their gender as male. One respondent failed to indicate his/her gender.

Certification. Another variable that was examined was whether the respondents were certified teachers or not. The majority of the participants (n= 139, 95.2 %) was certified teachers while seven (4.8%) were not certified teachers.

Ethnicity. The next variable examined was ethnicity. The largest number of participants identified their ethnicity as White Americans (n= 83, 58.0%) or African Americans (n=54, 37.8%). Three respondents failed to indicate their ethnicity. Table 4.2 illustrates the ethnicity of the participants.

Table 4.2 Ethnicity of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Ethnicity	n	Percentage
White American	83	58.0
African American	54	37.8
Hispanic and Latino	2	1.4
Asian	1	0.7
American Indian	1	0.7
Two or more races	1	0.7
Alaska Native	1	0.7
Native Hawaiian	0	0.0
Other Pacific islander	0	0.0
Total	143	100

Note. Three participants did not respond to this item

Areas of Certification. The next variable that was examined was the areas in which the participants are certified. The largest number of participants (n= 39, 26.7%) was certified in English, while only one participant (.7%) was certified in Industrial Arts. Table 4.3 illustrates the areas of certification of the participants.

Table 4.3 Areas of Certification of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Areas of Certification	n	Percentage
English	39	26.7
Social Studies	32	21.9
Science	28	19.2
Mathematics	22	15.1
Physical Education	20	13.7
Administration/teacher	16	11.0
Business	14	9.6
Special Education	10	6.8
Family and Consumer Science	8	5.5
French	7	4.8
Art	6	4.1
School librarian/English teacher	5	3.4
Music	4	2.7
Agriculture	3	2.1
Speech	3	2.1

(Table 4.3 continued)

Guidance	2	1.4
Spanish	2	1.4
Industrial Arts	1	0.7
Total	223	

Note. Total does not equal 100% because some participants are certified in more than one area.

Subjects Taught. The next variable that was examined in the study was the subject in which teachers participating in the survey were presently teaching. The largest number of participants (n= 34, 23.3%) taught English. The second largest groups (n=23, 15.8%) each taught science and math, and the third largest group (n=21, 14.4%) taught social studies. Table 4.4 illustrates what subject each participant taught.

Table 4.4 Subjects Taught by 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Subjects taught	**n**	**Percentage**
English	34	23.3
Mathematics	23	15.8
Science	23	15.8
Social Studies	21	14.4
Physical Education	13	8.9
Administration/teacher	12	8.2
Special Education	11	7.5
Business	10	6.8
Art	7	4.8
Family and Consumer Science	7	4.8
French	5	3.4
Music	4	2.7
Spanish	3	2.1
Agriculture	2	1.4
Guidance	2	1.4
School librarian/English teacher	2	1.4
Speech	2	1.4
Industrial Arts	1	0.7
Total	182	

Note. Total does not equal 100% because some participants taught multiple subjects

Years in Education. Another variable that was examined was how many years the participants had been in education. Years were divided into the following categories: (1) 1-5

years, (2) 6-10 years, (3) 11-15 years, (4) 16-20 years, (5) 21-25 years, (6) 26-30 years, (7) 31-35 years, (8) 36-40 years and (9) 41 and over. The survey revealed that the largest number of the participants had been in education for 6-10 years (n=32; 21.9%). The results also showed that 56.8% of the teachers had one-fifteen years, while 43.2% had sixteen or more years of experience. Table 4.5 illustrates the data collected on number of years the participants had in education.

Table 4.5 Number of Years in Education of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Number of years in Education	**n**	**Percentage**
1-5	29	20.9
6-10	32	23.0
11-15	18	12.9
16-20	27	19.4
21-25	13	9.4
26-30	8	5.8
31-35	6	4.3
36-40	4	2.9
41 and above	2	1.4
Total	139	100

Note. Seven participants did not indicate the number of years they had been in education.

Number of years in current school. Another variable that was examined in the Mobile Learning Survey was the number of years each teacher served in their current school. The survey asked that each respondent write out in the box provided on the questionnaire the number of years in their current school. Of the 146 participants in the survey, 143 responded to the statement. Three respondents failed to respond to this item in the questionnaire. The mean number of years in the current school as recorded by the respondents was 9.0 years (SD = 8.4). The number of years in the current school ranged from 1 to 39 years.

Grade levels taught. The next variable that was examined was grade levels taught. The largest number of the participants said they taught grade 10 (n=106, 72.6%). The second largest

group said they taught grade 11 (n=104, 71.2%). Table 4.6 illustrates data regarding grade levels taught by the study participants.

Table 4.6 Grade Levels Taught by 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Grade levels taught by participants	n	Percentage
Grade 9	99	67.8
Grade 10	106	72.6
Grade 11	104	71.2
Grade 12	92	63.0

Note. Total does not equal 100% because some participants teach several or all grade levels.

Highest Educational Attainment. Regarding the highest level of education completed, the largest number of participants (n=85, 58.2%) reported completion of a Bachelor's degree. The second largest number (n=45, 30.8%) reported Masters Degree as the highest level of education attained. Table 4.7 illustrates the highest educational attainment.

Table 4.7 Highest Educational Attainment of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Highest Educational Attainment	n	Percentage
Bachelor's Degree	85	58.2
Master's Degree	45	30.8
Master's Plus 30	13	8.9
Specialist Degree	2	1.4
Doctoral Degree	1	0.7
Total	146	100

Type of School where currently teaching. The next variable examined was type of school where the participants currently taught. Participants were asked to report whether the school where they currently taught was either public or public magnet. The majority of the participants (n=126, 86.5%) reported that they currently taught in a public school. Only a few (n=16, 13.5%) taught currently in a public magnet school.

Prior Knowledge. The next variable examined the prior knowledge of the use of select mobile devices by the participants. Prior knowledge was assessed by having participants check

all that applied to them among a list of ten tasks that they could perform on selected mobile devices. A majority of participants (n= 136, 93.2%) was knowledgeable in accessing the Internet on a mobile phone. The second largest number (n=132, 90.4%) of participants was knowledgeable in using a mobile device as a calculator, and the third largest group (n=128, 87.7%) was knowledgeable in sending an email on a mobile device. Table 4.8 indicates the choices that 9^{th} -12^{th} grade secondary school teachers in one southern Louisiana parish made on their prior knowledge of mobile device usage.

Table 4.8 Prior knowledge of Mobile Device Usage of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Priot Knowledge I know how to …	**n**	**Percentage**
• Access the internet on a mobile device	136	93.2
• Use a mobile device as a calculator	132	90.4
• Send an email on a mobile device	128	87.7
• Set an alarm/alert for a potential due date on a mobile device	123	84.2
• Download a mobile application on a mobile device	116	79.5
• Find the definition of a word I don't know on a mobile device	115	78.8
• Access a social networking site on a mobile device	112	76.7
• Post a comment to a blog or respond to a post on a mobile device	107	73.3
• Download a podcast on a mobile device	78	53.4
• Translate a sentence into another language on a mobile device	74	50.7

Note. Total does equal 100% because participants chose multiple responses.

Thoughts on student mobile device use. Participants (n=146) in the study were also asked to indicate how they thought their students used mobile devices. A list of 15 choices was given and participants were asked to check all that applied. The survey showed that the majority (n= 129, 88.4%) of participants believed that their students were engaging in social networking on their mobile devices. The second largest group (n= 101, 69.2%) thought that their students used mobile devices to text a classmate during class, and the third largest group (n=69, 47.3%) thought their students used mobile devices to take pictures or videos with their mobile device

that they used for an assignment. Table 4.9 illustrates distribution of participants' thoughts of how their students were using mobile devices.

Table 4.9 Perception of Mobile Device Usage of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

I think my students are…	n	Percentage
• Engaging in social networking on their mobile devices	129	88.4
• Texting a classmate during class	101	69.2
• Taking pictures or videos with their mobile device that they use for an assignment	69	47.3
• Texting a classmate about the content of a class	68	46.6
• Texting a classmate about the level of engagement in the class (i.e., I'm bored, this is cool, etc.)	68	46.6
• Playing an educational game (i.e. Words with Friends) on their mobile device	63	43.2
• Downloading applications that help them learn something new	53	36.3
• Using mobile devices to look up something that they didn't know or didn't understand during class	58	39.7
• Writing notes on their mobile device to remind themselves of an assignment	53	36.3
• Setting alarms or reminders on their mobile devices to help them remember that an assignment is due or a test is coming up	50	34.2
• Texting a classmate about the teacher's ability	50	34.2
• Using their mobile device as a study tool	43	29.5
• Accessing an Educational Management System on their mobile device	23	15.8
• I don't have a clue	11	7.5
• None of the above	3	2.1
• Other (See Appendix L)	16	11.0

Note. Total does equal 100% because participants chose multiple responses.

Objective Two

Objective two was to determine the perceptions of high school teachers about the utilization of social media via mobile devices in the classroom as measured by the Mobile Learning Survey for High School Teachers. Participants in the study were asked to respond to fifteen statements using a Likert-type scale with four response options which were 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree. Table 4.10 illustrates the mean score and

standard deviation for the respondents' level of agreement with each of the fifteen items on the **Mobile Learning Survey (MLS).** An interpretive score was developed by the researcher to help interpret the overall mobile learning survey perception of students utilization scale means and standard deviations of 9^{th}-12^{th} grade secondary school teachers from seven public schools in one Southern Louisiana parish. The question with the highest scale score was "Students should be able to download mobile applications that could help them study" with a mean score of 3.26 (SD = .603). The question with the lowest scale score was "Students should be able to take quizzes with their mobile devices" with a mean score of 2.27 (SD = .53). The overall mean scale score was 2.95 with a standard deviation of .53 and the means of the scale ranged from 3.26 to 2.27. The interpretive scale will be used for subsequent statements in the survey.

The following interpretive scale was developed by the researcher to aid in reporting teacher perceptions. Using the interpretive scale thirteen items received a rating of "Agreement" and one item received a rating of Disagreement.

- 1.00 – 2.02 = strongly disagree (SD)
- 2.03 – 2.70 = disagree (D)
- 2.71 – 3.34 = agree (A)
- 3.35 – 4.00 = strongly agree (SA)

Table 4.10 Mobile Learning Survey Perception of Students Utilization Scale Means and Standard Deviations of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

MLS Items 14-28	M[a]	SD	Category[b]
• Students should be able to download mobile applications that could help them study.	3.26	.603	A
• Students should be able to easily view course materials (syllabus, notes, assignments) on their mobile devices.	3.11	.723	A
• Students should be able to access Educational Management Systems in a mobile format on their mobile devices.	3.11	0638	A

(Table 4.10, continued)

MLS Items 14-28	M[a]	SD	Category[b]
• It would be easy for students to engage in discussions (comment) using a mobile application or website in mobile format.	3.11	.543	A
• Learning on a personal mobile device would be easy for students because they are already familiar with all of its functions.	3.11	691	A
• Mobile learning opportunities would allow students to learn and study in places they couldn't normally.	3.07	.655	A
• My students would be more likely to ask for help if they could communicate through their mobile devices.	2.96	.814	A
• My students would be more likely to participate in class activities (excluding class discussions) outside of class time if they could do so through their mobile device.	2.94	.813	A
• My students would be more likely to engage in class discussions inside of class if they could post their thoughts from their mobile phones.	2.93	.833	A
• Students should be able to participate in discussion forums from their mobile devices.	2.89	.723	A
• It would not require a lot of effort for students to learn how to use a mobile application designed for my class.	2.89	.803	A
• My students would be more likely to engage in class discussions outside of class if they could post their thoughts from their mobile devices.	2.89	.794	A
• Mobile learning should be incorporated into classes.	2.80	.914	A
• It would be easier for students to complete classwork and assignments if they could use their mobile devices.	2.85	.742	A
• Students should be able to take quizzes on their mobile devices.	2.27	.871	D
All items	2.95	.53	A

Note. Two participants did not respond to the item.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]Interpretive scale: 1-2.02=SD, 2.03-2.70= D, 2.71-3.34= A, 3.35-4.00= SA

To further examine the perceptions of high school teachers regarding the utilization of social media via mobile devices in the classroom as measured by the Mobile Learning Survey for High School Teachers, factor analysis procedures were used to investigate the correlation structure of the variables in this scale. Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) test were run on the data to ensure that the data was appropriate for factor analysis. The

Bartlett test was statistically significant with a p <.001 and the KMO was .903 (the KMO was above .70 as is required according to Kaiser, 1974). An inspection of the factor matrix showed several correlations that were greater than 0.30. Common Factor Analysis with Principal Axis Factoring extractor was undertaken on the data. To determine the number of underlying factors to be extracted, the researcher used the Kaiser factor with an eigenvalue greater than one, percentage of variance criterion or percentage of total variance extracted by successive factors > 5%, and the Cattell Scree plot examination (Hair, Black, Babin, Anderson, & Tatham, 2006). Factor loadings that were greater than 0.30 met the minimum criteria necessary to be considered for interpretation (Hair, et al., 2006).

The initial factor analysis of these fifteen items yielded two factors and an examination of the scree plot indicated two factors and was supported by the percent of variance extracted which was 48.93% for the first factor and 7.83% for the second factor. If the percent of total variance explained was less than 5.00 % then it was not considered a factor. There are several ways to determine the number of factors produced; one way is to exam the amount of total variance explained and the second way is to exam the scree plot. The scree plot was one of two ways used to identify the number of factors for extraction. This was accomplished by identifying the most pronounced bend (or elbow) in the scree plot curve. All items in this scale loaded on two factors ranging from .44 to .78. Due to the strong cross loadings of the items on the two factors the researcher examined both the Pattern and Structure Matrix for clarity on how to determine the factors. The Pattern and Structure Matrix both indicated that items that cross loaded from the MLS survey - "My students would be more likely to participate in class activities (excluding class discussions) outside of class time if they could do so through their mobile device" (-0.47), "My students would be more likely to engage in class discussions inside of class if they could

post their thoughts from their mobile devices" (-0.48), and "My students would be more likely to engage in class discussions outside of class if they could post their thoughts from their mobile devices" (-0.46) - belong to factor two. The first factor had 12 items with a factor score of 2.96 (SD = .63) the item means ranged from 2.27 to 3.26. The Cronbach's alpha for the first factor (reliability statistic) was .91. Cronbach's alpha is a measure of the reliability of the data (Messick, 1995). The second factor had 3 items with a factor score of 2.91 (SD = .662) and the items ranged from 2.89 to 2.93. The Cronbach's alpha for the second factor was .91. Table 4.11 shows the factor loadings for Factor One and Factor Two.

Table 4.11 Factor Loading for Perceptions of Utilization Scale of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Subscale – Utilization	Factor 1	Factor 2
• Students should be able to download mobile applications that could help them study.	0.78	
• It would be easier for students to complete class work and assignments if they could use their mobile devices.	0.77	
• Mobile learning should be incorporated into classes.	0.76	
• My students would be more likely to participate in class activities (excluding class discussions) outside of class time if they could do so through their mobile device.	0.76	-0.47
• My students would be more likely to engage in class discussions outside of class if they could post their thoughts from their mobile devices.	0.76	-0.48
• Students should be able to participate in discussion forums from their mobile devices.	0.75	
• Mobile learning opportunities would allow students to learn and study in place they couldn't normally.	0.73	
• Students should be able to easily view course materials (syllabus, notes, assignments) on their mobile devices.	0.73	
• Students should be able to access Educational Management Systems in a mobile format on their mobile devices.	0.72	
• My students would be more likely to engage in class discussions inside of class if they could post their thoughts from their mobile phones.	0.70	-0.46
• My students would be more likely to ask for help if they could communicate through their mobile devices.	0.70	

(Table 4.11, continued)

Subscale – Utilization	Factor 1 Factor 2
• It would be easy for students to engage in discussions (comment) using a mobile application or website in mobile format.	0.66
• Learning on a personal mobile device would be easy for students because they are already familiar with all of its functions.	0.62
• Students should be able to take quizzes on their mobile devices.	0.53
• It would not require a lot of effort for students to learn how to use a mobile application designed for my class.	0.44

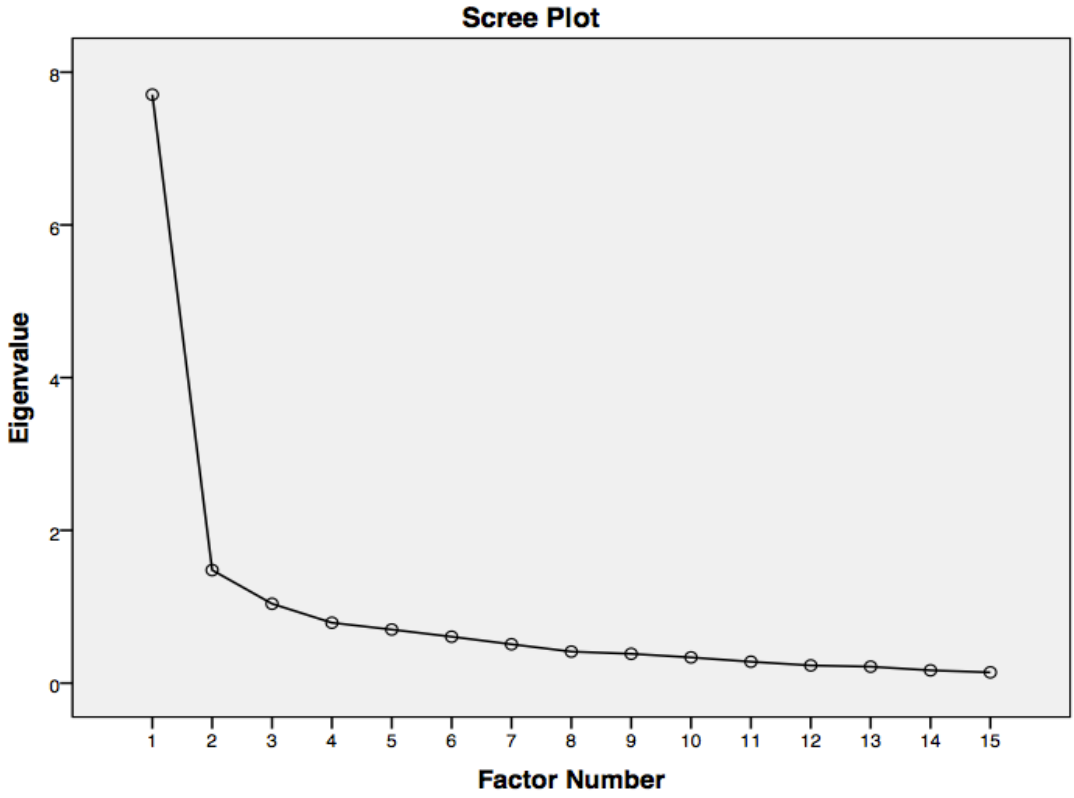

Figure 4.1: Scree plot for perceptions of utilization scale of 9th-12th grade secondary school teachers from seven public schools in one southern Louisiana parish

Objective Three

Objective three of the study was to determine the perceptions of high school teachers for students using social media via mobile devices in the classroom for educational purposes. Participants of the study were asked to respond to nine statements using a Likert-type scale with

four response options which were as follows: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree. In addition to the nine statements that could be answered using the Likert-type scale, one open-ended question was also included in the section focused on whether students should be able to participate in discussion forums from their mobile devices. The total scale score was 2.94 with a standard deviation of .62 and the means for the scale ranged from 3.25 to 2.43. The item with the highest mean (M= 3.25, SD=.62) in this scale was "Students would think it is fun to use an interactive mobile device in my classroom." The item with the lowest mean score (M=2.43, SD=.86) for this scale was "I believe using mobile applications for learning in my classroom would benefit students' writing skills." Table 4.12 illustrates the mean scores and standard deviations for the respondent's level of agreement with each of the nine items assessed on the Mobile Learning Survey Perceptions of Student Usage Scale Mean.

The following interpretive scale was developed by the researcher to aid in reporting teacher perceptions from the Mobile Learning Survey: 1.0-2.02= 1 Strongly Disagree, 2.03-2.70=2 Agree, 2.71-3.34=3 Agree, 3.35-4.0=4 Strongly Agree. Using the interpretative scale eight items received a rating of "Agree" and one item received a rating of "Disagree".

Table 4.12 Mobile Learning Survey Perceptions of Student Usage Scale Means and Standard Deviations of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

MLS Items 29-37	M[a]	SD	Category[b]
• Students would think it's fun to use an interactive mobile device in my classroom.	3.25	0.62	A
• I believe students can be taught to appropriately use mobile devices for learning.	3.17	0.64	A
• I would like to learn how to create mobile applications, so that I can incorporate them into my lessons.	3.07	0.81	A
• I would like to learn more about mobile learning so that I can incorporate it my classroom.	3.06	0.87	A
• I would like my students to be able to use mobile devices to access course content and practice skills.	3.00	0.75	A

(Table 4.12, continued)

MLS Items 29-37	M[a]	SD	Category[b]
• I think students would be more motivated to learn if they could use mobile devices.	2.97	0.77	A
• I believe students should be able to use mobile devices as learning tools in my classroom to improve comprehension.	2.77	0.85	A
• I believe using mobile applications as learning tools in my classroom would improve student literacy.	2.71	0.81	A
• I believe using mobile applications for learning in my classroom would benefit students' writing skills.	2.43	0.86	D
All items	2.94	0.62	A

Note. Four participants did not respond.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]Interpretive scale: 1-2.02=SD, 2.03-2.70= D, 2.71-3.34= A, 3.35-4.00= SA

In item 38 participants in the study were asked to choose the statement that most resembled their attitude toward incorporating mobile learning in their future classroom. Participants were given three statements for which they were to choose the one that best fitted their ability or projection for future classroom use. Of the 146 participants, one hundred forty-two responded to item 38 while four did not respond. Table 4.13 illustrates the breakdown of the teachers' responses. In statement 1; 28.2% (n=40) of the respondents indicated that they would be able to effectively incorporate mobile learning into their classroom. In statement 2; 57.8% (n=82) of the respondents indicated that they would be able to effectively incorporate mobile learning into their classrooms with training, and in response to statement 3; 14.0% (n=20) of the respondents indicated that they did not think they would be able to effectively incorporate mobile learning into their classroom.

Table 4.13 Projection for Future Classroom Use of Mobile Learning of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

MLS Item Number 38 Choose the statement that most resembles your attitude toward incorporating mobile learning in your future classrooms		
MLS Item Number 38	n	Percentage
• I will be able to effectively incorporate mobile learning into my classroom with training.	82	57.8
• I will be able to effectively incorporate mobile learning into my classroom.	40	28.2
• I don't think I will be able to incorporate mobile learning into my classroom.	20	14.0
Totals	142	100.0

Note. Four participants did not respond.

Question 39 was an open-ended statement, which asked participants to respond to the statement "students should be able to participate in discussion forums from their mobile devices." Of the 146 participants, 101 (69.2%) responded to the question. A total of fifty-nine participants agreed by indicating a simple yes or agree without elaboration. A total of thirteen respondents wrote statements of elaboration. A total of thirteen participants selected a simple no statement of disagreement while there were sixteen no's with comments. Collectively, some of the written comments by participants are listed below. For additional comments, see (Appendix K.)

- Agree if it is done at home. Some students may not be able to afford mobile devices which would be unfair.
- Agree totally.
- Currently we use an internet social media forum designed specifically for education called Edmodo. My students access it regularly from the internet at home and at school to post discussions, questions, submit assignments, and receive teacher feedback and notifications. There is a mobile application for this device that students could use in the

classroom to post responses in discussions if allowed to use cell phones in the classrooms. I believe students would be more motivated to post the discussions if allowed to do so from their cell phones in class.

- I agree and think they would do well in class discussions.
- I definitely agree with this statement.
- I strongly agree with this statement.
- Strongly agree as most that I know have facebook/twitter already and discuss between themselves already.
- They would be more likely to answer.
- This would motivate students more since they are digital natives.
- Will make for better discussion.
- Yes, but at home only.
- Yes, students should be able to use mobile devices to interact within the classroom.
- Yes they should be able to but it should be based upon the students maturity level.
- Disagree, face to face discussions are best.
- From a mobile device would be fine but not a cell phone. I think cell phones would be a distraction and a liability for theft.

There were a total of 45 or 30.8% of participants who did not respond to the statement.

To further examine the perceptions of high school teachers about students' use of social media via mobile devices in the classroom measured by the Mobile Learning Survey for High School Teachers, factor analysis procedures were used to investigate the correlation structure of the variables in this scale. Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) test were run on the data to ensure that the factor was appropriate for analysis and the KMO was .903

and the Bartlett's was p<.001 (the KMO was above .70 as is required according to Kaiser, 1974). An examination of the factor matrix showed several correlations were greater than 0.30. Common Factor Analysis with Principal Axis Factoring extractor was utilized on the data. To determine the number of underlying factors to be extracted the researcher used the Kaiser factor with an eigenvalue greater than one, percentage of variance criterion or percentage of total variance extracted by successive factors > 5%, and the Cattell Scree plot examination (Hair et al., 2006). Factor loadings that were greater than 0.30 met the minimum necessary criteria to be considered for interpretation (Hair et al., 2006).

The initial factor analysis yielded one factor with an eigenvalue greater than 1.0. The total variance explained was 59.1% for just factor one. An examination of the scree plot also indicated one factor as evidenced by a large drop in the scree plot. The scree plot was used to identify the optimum number of factors for extraction. This was accomplished by identifying the most pronounced bend in the scree plot curve. Furr (2011) indicated that a large drop from the first to the second factor followed by a leveling off following the second factor allows the researcher to justify that there is only one factor. All factors loaded ranging from .61 to .88. The single factor had 9 items and a Cronbach's alpha (reliability statistic) of .93. Cronbach's alpha is the measure of the reliability of the data (Messick, 1995). The factor score for the Pereptions of Usage Scale was 2.94 (SD .62) with items ranging from 3.25 to 2.94. Table 4.14 shows factor loadings for the 9 items in the survey.

Table 4.14 Factor Loading for Perceptions of Usage Scale of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Subscale-Student Use	Factor 1
• I believe students should be able to use mobile devices as learning tools in my classroom to improve comprehension.	.88
• I think students would be more motivated to learn if they could use mobile devices.	.83

(Table 4.14, continued)

Subscale-Student Use	Factor 1
• I believe using mobile applications as learning tools in my classroom would improve student literacy.	.83
• I would like my students to be able to use mobile devices to access course content and practice skills.	.82
• I would like to learn more about mobile learning so that I can incorporate it my classroom.	.76
• I believe using mobile applications for learning in my classroom would benefit students' writing skills.	.73
• I would like to learn how to create mobile applications, so that I can incorporate them into my lessons.	.73
• I believe students can be taught to appropriately use mobile devices for learning.	.69
• Students would think it's fun to use an interactive mobile device in my classroom.	.61

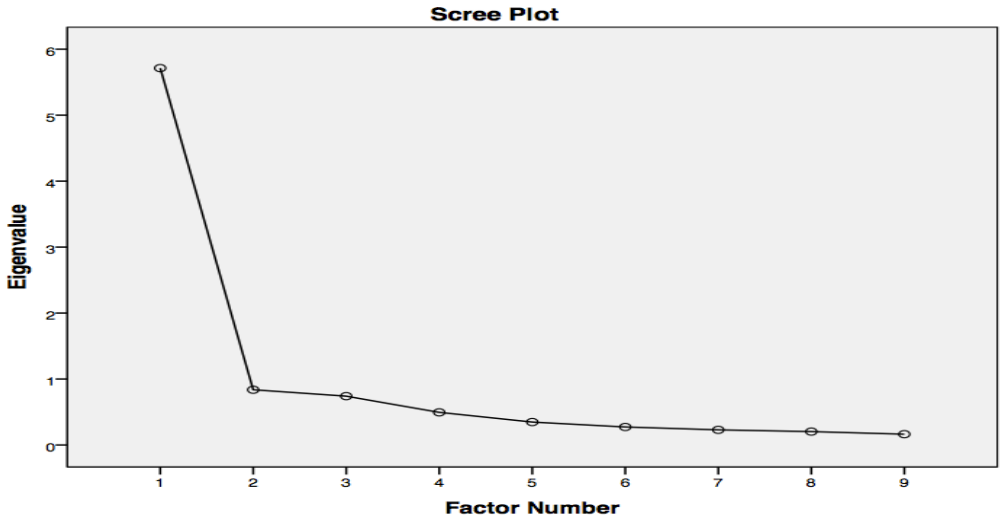

Figure 4.2: Scree plot for perceptions of usage scale of 9th-12th grade secondary school teachers from seven public schools in one southern Louisiana parish

Objective Four

Objective four of the study was to determine faculty opinions on the use of social media via mobile devices in grades 9-12 classrooms. Participants were asked to provide their opinion on the students' use of mobile devices in the classroom. Eight questions were asked on the

survey using a Likert-type scale with the following responses available: 1=strongly disagree, 2=disagree, 3= agree, 4=strongly agree. The overall scale score mean was 2.94 with a standard deviation of .40 and the mean scores on the scale ranged from 3.38 to 2.53. The item with the highest mean value was "texting is often substituted for oral conversation" with a mean of 3.38 and a standard deviation of .57. The item with the lowest mean value was "texting is a form of communication that is becoming very effective" with a mean score of 2.74 and a standard deviation of .80. Table 4.15 below illustrates the mean score and standard deviation for each of the eight items representing respondent's level of agreement with the statement of classroom use.

The following interpretive scale was developed by the researcher to aid in reporting teacher opinions from the Mobile Learning Survey: 1.0-2.02= 1 Strongly Disagree, 2.03-2.70=2 Agree, 2.71-3.34=3 Agree, 3.35-4.0=4 Strongly Agree. Using the intrepretative scale one item received a rating of "Strongly Agree", six items received a rating of "Agree" and one item received a rating of "Disagree".

Table 4.15 Mobile Learning Survey Opinions of Usage Scale of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

MLS Items 40-47	M[a]	SD	Category[b]
• Texting is often substituted for oral conversation.	3.38	0.57	SA
• Texting weakens students' writing and verbal skills.	3.26	0.71	A
• Videos, podcasts, and blogs are valuable tools for teaching.	3.01	0.64	A
• Social media can be a valuable tool for collaborative learning.	2.98	0.70	A
• Use of social media in the classroom would lead to increased instances of cyber bullying.	2.80	0.74	A
• The use of social media in the classroom would increase my students' engagement in learning activities.	2.79	0.78	A
• Texting is a form of communication that is becoming very effective.	2.74	0.80	A

(Table 4.15, continued)

MLS Items 40-47	M[a]	SD	Category[b]
• School districts should lift bans and allow schools to use social media in secondary schools.	2.53	0.92	D
All items	2.94	.40	A

Note: N=146. Missing values replaced with variable mean.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]Interpretive scale: 1-2.02=SD, 2.03-2.70= D, 2.71-3.34= A, 3.35-4.00= SA

To further examine the perceptions of high school teachers about students' use of social media via mobile devices in the classroom measured by the Mobile Learning Survey for High School Teachers, factor analysis procedures were used to investigate the correlation structure of the variables in this scale. Various statistical tests such as Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) test were run on the data to ensure that the data was appropriate for analysis and Bartlett's was significant at the $p<.001$ and the KMO was at .772 (the KMO was above .70 as is required according to Kaiser, 1974). A visual inspection of factor matrix showed several numbers of correlations were greater than 0.30. Common Factor Analysis with Principal Axis Factoring extractor was utilized on the data. To determine the number of underlying factors to be extracted the researcher used the Kaiser factor with an eigenvalue greater than one, percentage of variance criterion or percentage of total variance extracted by successive factors > 5%, and the Cattell Scree plot examination (Hair et al., 2006). Factor loadings greater than 0.30 met the minimum criteria to be considered for factor interpretation (Hair et al., 2006).

The total variance explained was 47% with factor one explaining 34.9% and factor two explaining 12.6% of the variance. The initial factor analysis yielded two factors with eigenvalues greater than 1.0 and examination of the scree plot also indicated two factors. The scree plot was used to identify the optimum number of factors for extraction. This was accomplished by identifying the most pronounced bend in the scree plot curve. Two factors were

extracted with loadings for Factor 1 ranging from .59 to .88 while loadings for Factor 2 ranged from .40 to .63. This tends to indicate the presence of two factors, as evidenced by a large drop in the first scree plot (Furr, 2011). The first factor had 5 items with a factor score of 2.81 (SD = .61) and the items ranged from 2.55 to 2.93 and the Cronbach's alpha (reliability statistic) for the scale was .85. The second factor had three items with a factor score of 14 (SD = .45) and the items ranged from 2.79 to 3.38 and the Cronbach's alpha for the scale was .58. The scree plot indicated two factors and the tables below show those two factors. Table 4.16 shows factor loadings for two factors.

Table 4.16 Factor 1 and 2 Loading for Opinions of Usage Scale of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Subscale-Opinions on Use	Factor 1	Factor 2
• School districts should lift bans and allow schools to use social media in secondary schools.	0.88	
• The use of social media in the classroom would increase my students' engagement in learning activities.	0.78	
• Texting is a form of communication that is becoming very effective.	0.71	
• Social media can be a valuable tool for collaborative learning.	0.68	
• Texting weakens students' writing and verbal skills.		0.63
• Texting is often substituted for oral conversation.		0.63
• Videos, podcasts, and blogs are valuable tools for teaching.	0.59	
• Use of social media in the classroom would lead to increased instances of cyber bullying.		0.40

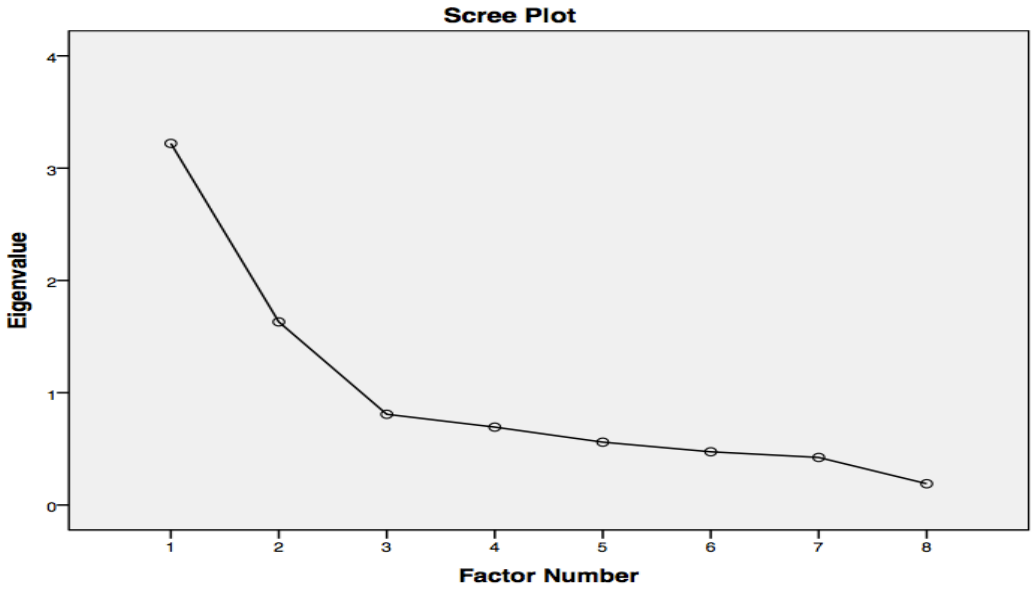

Figure 4.3: Scree plot of opinions of usage scale of 9th-12th grade secondary school teachers from seven public schools in one southern Louisiana parish

Objective Five

Objective five of the study was to determine teachers' personal concerns on the use of social media via mobile devices in grades 9-12 classrooms. Participants in the survey were asked to provide their personal concerns on the use of mobile devices in the classroom. Five questions were asked on the survey using a Likert-type scale with the following available responses: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree. The overall scale mean was 2.69 with a standard deviation of .74 and the means of the scale ranged from 3.27 to 2.29. The item with the highest mean score was "If the school district allowed students to use mobile devices in the classroom as learning tools, would you be willing to receive professional development and training in the use of such mobile devices?" with a mean score of 3.27 and a standard deviation of .69. The item with the lowest mean score was "If the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way you communicate

with students. Students would have access to your time beyond the traditional school day. Would you be in favor of this infringement on your time outside of school hours?" with a mean score of 2.29 and a standard deviation of .93. Table 4.17 below illustrates the mean scores and standard deviations representing respondent's level of agreement with each item from the Mobile Learning Survey.

The following interpretive scale was developed by the researcher to aid in reporting teacher concerns from the Mobile Learning Survey: 1.0-2.02= 1 Strongly Disagree, 2.03-2.70=2 Agree, 2.71-3.34=3 Agree, 3.35-4.0=4 Strongly Agree. Using the interpretative scale three items received a rating of "Agree" and two items received a rating of "Disagree".

Table 4.17 Mobile Learning Survey Personal Concerns Scale Means and Standard Deviations of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

MLS Items 48-52	M[a]	SD	Category[b]
• If the school district allowed students to use mobile devices in the classroom as learning tools, would you be willing to receive professional development and training in the use of such mobile devices?	3.27	0.69	A
• If the school district allowed students to use mobile devices in the classroom as learning tools, would you expect your school district to provide you and your students with mobile learning devices and technical support such as data packages, text messaging, educational apps, etc.?	3.19	0.78	A
• If the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way you communicate with students. Are you concerned about the possibility of inappropriate communication between teachers and students?	3.12	0.76	A
• If the school district allowed students to use mobile devices in the classroom as learning tools, would you be willing to use your personal mobile device and cell phone contract to facilitate student learning?	2.50	1.04	D

(Table 4.17, continued)

MLS Items 48-52	M[a]	SD	Category[b]
• If the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way you communicate with students. Students would have access to your time beyond the traditional school day. Would you be in favor of this infringement on your time outside of school hours?	2.29	0.93	D
All Items	2.69	.74	A

Note. N=146. Missing values replaced with variable mean.
[a] Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]Interpretive scale: 1-2.02=SD, 2.03-2.70= D, 2.71-3.34= A, 3.35-4.00= SA

To further examine the personal concerns of high school teachers about students' use of social media via mobile devices in the classroom measured by the Mobile Learning Survey for High School Teachers, factor analysis procedures were used to investigate the correlation structure of the variables in this scale. A visual inspection of the factor matrix showed several correlations greater than 0.30. To ensure that the factor was not a single matrix the Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) test were run on the data to ensure that the factor was appropriate for analysis and both tests were found to be statistically significant (the KMO was above .70 as is required according to Kaiser, 1974). The Common Factor Analysis with Principal Axis Factoring extractor was tried on the data presented. To determine the number of underlying factors to be extracted the researcher used the Kaiser factor with an eigenvalue greater than one, percentage of variance criterion or percentage of total variance extracted by successive factors > 5%, and the Cattell Scree plot examination (Hair et al., 2006). Factor loadings that were greater than 0.30 met the minimum criteria to be considered for interpretation (Hair et al., 2006). This scale had a low Kaiser-Meyer-Olkin Measure of Sampling Adequacy (MSA) of .673 as the acceptable value for this MSA should be at .70 minimum value (Hair et al., 2006).

The initial factor analysis yielded one factor with an eigenvalue greater than 1.0 and an examination of the scree plot indicated one factor. The scree plot was used to identify the optimum number of factors for extraction. This was accomplished by identifying the most pronounced bend in the scree plot curve. Only three items loaded in this factor. Two items were removed that did not load successfully. The two items were: If the school district allowed students to use mobile devices in the classroom as learning tools, would you expect your school district to provide both you and your students with mobile learning devices and technical support such as data packages, text messaging, educational apps, etc? (loaded on factor one at .012) and If the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way you communicate with students. Are you concerned about the possibility of inappropriate communication between teachers and students (loaded on factor one at -3.26)? These low loading factors were dropped from the factor analysis and the factor analysis was re-analyzed. The variance explained was 54.5 %. The scree plot for re-analyzed factor clearly showed a presence of only one factor. This indicated the presence of one factor, as evidenced by a large drop in the first scree plot, but with only three items the Cronbach's alpha (reliability statistic) was .42 (Furr, 2011). The factor score was 2.91 (SD = .65) and the items ranged from 2.29 to 3.25. Table 4.18 shows the factor loadings for the three items in the survey.

Table 4.18 Factor Loading for Personal Concerns Scale of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Subscale-Personal Concerns	Factor 1
• If the school district allowed students to use mobile devices in the classroom as learning tools, would you be willing to use your personal mobile device and cell phone contract to facilitate student learning?	0.81

(Table 4.18, continued)

Subscale-Personal Concerns	Factor 1
• If the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way you communicate with students. Students would have access to your time beyond the traditional school day. Would you be in favor of this infringement on your time outside of school hours?	0.79
• If the school district allowed students to use mobile devices in the classroom as learning tools, would you be willing to receive professional development and training in the use of such mobile devices?	0.58

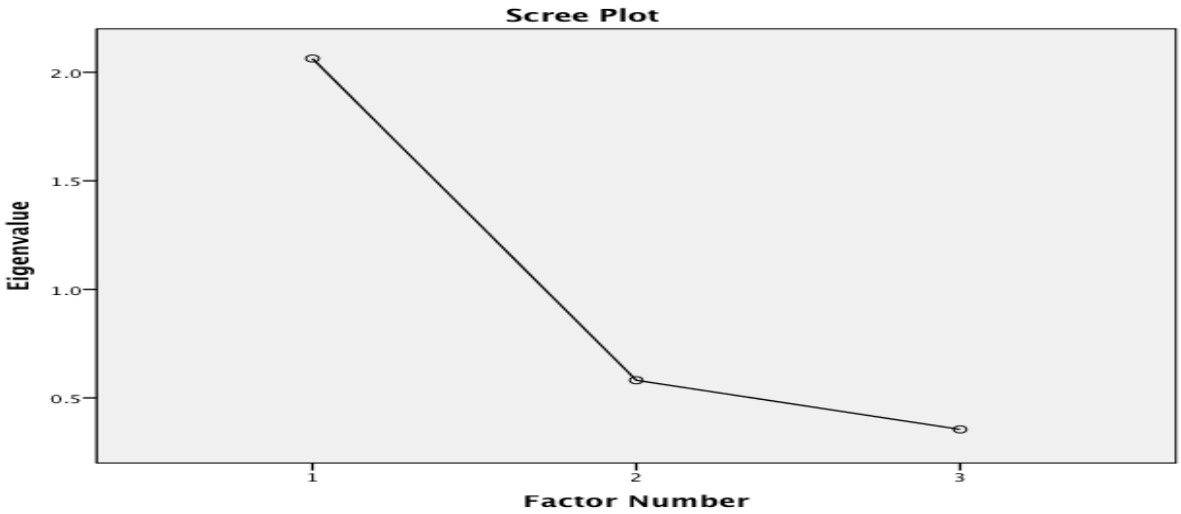

Figure 4.4: Scree plot for personal concerns scale of 9th-12th grade secondary school teachers from seven public schools in one southern Louisiana parish

Objective Six

Objective six was to determine if differences exist in overall perceptions of usage, opinions, personal concerns and utilization scores as measured by the MLS for High School Teachers based on the following demographic variables of gender, ethnicity, highest educational attainment, and type of school where the teachers taught. In some cases the levels of individual categorical variables were combined to form new categories. The variable

ethnicity which had nine levels (African American, Alaska Native, American Indian, Asian, Hispanic and Latino, Native Hawaiian, Other Pacific Islander, Two or more races, and White American) was combined into two levels (Black and Non-black). The variable highest educational attainment had five levels (Bachelor's degree, Master's degree, Master's plus 30, specialist degree, and Doctoral degree) which were combined into three levels consisting of Bachelor's Degree, Master's Degree, and Higher than Master's Degree.

a) Gender

b) Ethnicity

c) Highest Educational Attainment

d) Type of School

Gender. Differences in overall perceptions of usage, opinions, personal concerns and utilization scores were first examined by gender. A comparison of the overall perception of utilization mean scores between males and females was undertaken through calculation of one-way analysis of variance (ANOVA). The mean score for males was 3.01 (SD=.50) and the mean score for females was 2.93 with a standard deviation of .54 (Table 4.19).

Table 4.19 Perception of Utilization Scale Group Sizes, Mean Scores, and Standard Deviations by Gender on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Gender	n	M[a]	SD
Male	51	3.01	0.50
Female	92	2.93	0.54
Total	143	2.95	0.53

Note. Three respondents failed to respond to the gender item or provide data for calculation of the overall perception of utilization mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA).

Results from the Levene Test of Homogeneity of Variance revealed the presence of equal

variances between groups ($F_{1, 141}$=.115, p = .735). The differences in overall perception of utilization mean scores between the gender groups were not statistically significant ($F_{1, 143}$ = 2.95, p = .38).

A comparison of the overall perception usage mean score between males and females was calculated by one-way analysis of variance (ANOVA). The mean score for males was 2.99 (SD=.60) and the means score for females were 2.91 (SD=.62) (Table 4.20).

Table 4.20 Perception of Usage Scale Group Sizes, Mean Scores, and Standard Deviation by Gender on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Gender	n	Mean[a]	SD	F[b]
Male	51	2.99	0.60	
Female	92	2.91	0.62	
Total	143	2.94	0.62	

Note. Three respondents failed to respond to the gender item or provide data for calculation of the overall perception of use mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The differences in overall perception of utilization mean scores between the gender groups were not statistically significant ($F_{1, 143}$=2.95, p=.38).

Results from the Levene Test of Homogeneity of Variance revealed the presence of equal variance between groups ($F_{1, 141}$=.199, p=.657). The differences in overall perception of the usage mean score between the gender groups were not statistically significant ($F_{1, 141}$=.526, p =.469).

A comparison of the overall teacher opinions of the use mean score between males and females was calculated by one-way analysis of variance (ANOVA). The mean score for females and males are found in Table 4.21.

Results from the Levene Test of Homogeneity of Variances revealed the presence of equal variance between groups ($F_{1, 141}$=.688, p=.408). The differences in overall opinion of use mean score between the gender groups was not statistically significant ($F_{1, 141}$=.013, p=.91).

Table 4.21 Opinions of Usage Scale Group Sizes, Mean Scores, and Standard Deviation by Gender on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Gender	n	Mean[a]	SD	F[b]
Female	92	2.94	0.39	
Male	51	2.93	0.47	
Total	143	2.94	0.40	

Note: Three respondents failed to respond to the gender item or provide data for calculation of the overall perception of teacher opinions mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The differences in overall opinion of use mean score between the gender groups was not statistically significant ($F_{1, 141}$=.013, p=.91).

A comparison of the overall personal concerns mean scores between males and females were calculated by one-way analysis of variance (ANOVA). The mean scores for females and males are found in Table 4.22.

Results from the Levene Test of Homogeneity of Variance reveals the presence of equal variances between groups ($F_{1, 143}$=3.199, p = .735). The difference in overall perception of utilization mean scores between the gender groups was not statistically significant ($F_{1,143}$=2.95, p =.38).

Table 4.22 Personal Concerns Scale Group Sizes, Mean Scores, and Standard Deviation by Gender on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Gender	n	Mean[a]	SD	F[b]
Female	92	2.90	0.48	
Male	51	2.83	0.45	
Total[b]	143	2.90	0.47	

Note. Three respondents failed to respond to the gender item or provide data for calculation of the overall teacher concerns mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The difference in overall perception of utilization mean scores between the gender groups was not statistically significant ($F_{1,143}$=2.95, p =.38).

Ethnicity. Differences in overall perceptions of usage, opinions, personal concerns and utilization scores were also examined by ethnicity. The variable ethnicity which had 9 levels

(African American, Alaska Native, American Indian, Asian, Hispanic and Latino, Native Hawaiian, Other Pacific Islander, Two or more races, and White American) was combined into two levels (Black and Non-black). Participants who indicated anything other than African American were categorized as 0 (Non-black) and those who identified as African American (Black) were categorized as 1. The overall mean is 2.95 and the standard deviation is .62. The sample size, overall mean score, and standard deviations reported by ethnicity are illustrated in Table 4.23.

Table 4.23 Perception of Usage Scale Group Size, Mean Scores, and Standard Deviations by Ethnicity on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Ethnicity	n	Mean[a]	SD	F[b]
Non-black[c]	82	2.85	0.63	
Black	59	3.09	0.59	
Total	141	2.95	0.62	

Note. Five respondents failed to respond to the ethnicity item or provide data for calculation of the overall perception of utilization mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The findings from the F test showed that there was a statistically significant difference in the overall perception of usage scores between the reported groups ($F_{1, 139} = 5.49$, $p = .021$).
[c]Non-black was coded as 0 while black was coded as 1.

The Levene Test of Homogeneity of Variance revealed the presence of equal variance between the different ethnic groups ($F_{1, 139} = .064$, $p = .801$). The findings from the F test showed that there was a statistically significant difference in the overall perception of usage scores between the reported groups ($F_{1, 139} = 5.49$, $p = .021$). Blacks had a statistically significant higher mean score than non-blacks.

Differences in overall perceptions of usage mean scores were then examined by ethnicity. The sample size, overall mean scores, and standard deviations by ethnicity are illustrated in Table 4.24.

Results from the Levene Test of Homogeneity of Variance revealed the presence of equal variance between groups ($F_{1, 139}$=.015, p=.903). The difference in overall perceptions of usage mean scores between the ethnic groups was not statistically significant ($F_{1, 139}$=2.82, p=.095).

Table 4.24 Perception of Utilization Group Size, Mean Scores, and Standard Deviations by Ethnicity on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Ethnicity	n	Mean[a]	SD	F[b]
Non-black	82	2.89	0.54	
Black	59	3.04	0.50	
Total	141	2.95	0.53	

Note. Five respondents failed to respond to the ethnicity item or provide data for calculation of the overall perception of utilization mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The difference in overall perceptions of usage mean scores between the ethnic groups was not statistically significant ($F_{1, 139}$=2.82, p=.095).

Difference in overall opinions of use mean scores was also examined by ethnicity. The sample size, overall mean scores, and standard deviations by ethnicity are illustrated in Table 4.25.

Table 4.25 Opinions of Usage Group Size, Mean Scores, and Standard Deviations by Ethnicity on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Ethnicity	n	Mean[a]	SD	F[b]
Non-black	82	2.90	0.39	
Black	59	2.98	0.42	
Total	141	2.94	0.40	

Note. Five respondents failed to respond to the ethnicity item or provide data for calculation of the overall opinions of use mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). The difference in overall opinions of use mean scores between ethnic groups was not statistically significant ($F_{1, 139}$=1.12, p=.23).

Results from the Levene Test of Homogeneity of Variance revealed the presence of equal variance between groups ($F_{1, 139}$=001, p=.98). The difference in overall opinions of use mean scores between ethnic groups was not statistically significant ($F_{1, 139}$=1.12, p=.23).

Difference in overall personal concerns mean scores was also examined by ethnicity. The sample size, overall mean scores, and standard deviation reported by ethnicity are illustrated in Table 4.26.

Table 4.26 Personal Concerns Scale Group Size, Mean Scores, and Standard Deviations by Ethnicity on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Ethnicity	n	Mean[a]	SD	F[b]
Non-black	82	2.64	0.77	
Black	59	2.79	0.69	
Total[b]	141	2.70	0.74	

Note. Five respondents failed to respond to the ethnicity item or provide data for calculation of the overall personal concerns mean score on the questionnaire.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The difference in overall personal concerns mean scores between ethnic groups was not statistically significant ($F_{1, 139}$=1.47, p=.23).

Results from the Levene Test of Homogeneity of Variance revealed the presence of equal variance between groups ($F_{1, 139}$=1.91, p=.17). The difference in overall personal concerns mean scores between ethnic groups was not statistically significant ($F_{1, 139}$=1.47, p=.23).

Highest Educational Attainment. A comparison of the overall mean scores of perception of usage, opinions, personal concerns and utilization by the respondents' highest level of education attained was calculated by use of the one-way analysis of variance test (ANOVA). The data was recoded to allow for analysis. The data were recoded into three education categories: Bachelor's degree, Master's degree, and Higher than Master's degree. The Levene Test of Homogeneity of Variance for the perception of usage mean revealed the presence of equal variance between the different groups based on the highest level of education attained ($F_{2, 141}$ = .837, p = .435). The F test indicated no statistically significant differences between the three groups ($F_{2, 141}$ = 2.23, p = .111). The overall mean scores and standard deviations were calculated as well (Table 4.27).

Although there were some differences in the overall perception of use, none of the differences were statistically significant.

Table 4.27 Perception of Usage Scale Group Size, Mean Scores and Standard Deviations by Highest Educational Attainment on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Highest Level of Education Attained	n	Mean[a]	SD
Bachelor's Degree	83	2.85	0.58
Master's Degree	45	3.02	0.69
Higher than Master's Degree	16	3.16	0.54
Total	144	2.94	0.62

Note. Two respondents failed to respond to the highest educational attainment or provide data for calculation of the overall perception of usage scores.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA).

A comparison of the overall perception of utilization mean scores by the respondents' highest educational attainment was calculated by the use of a one-way analysis of variance (ANOVA). The mean score for highest level of education attained for the "Higher than Master's degree" category was slightly higher than that of the Master's degree category. The sample size, overall perception of utilization mean scores, and standard deviations are illustrated in Table 4.28.

Table 4.28 Perception of Utilization Scale Group Sizes, Mean Scores and Standard Deviations by Highest Educational Attainment on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Highest Level of Education Attained	n	Mean[a]	SD	F[b]
Bachelor's Degree	83	2.89	0.50	
Master's Degree	45	3.01	0.62	
Higher than Master's Degree	16	3.09	0.35	
Total	144	2.95	0.53	

Note. Two respondents failed to respond to the highest educational attainment or provide data for calculation of the overall perception of utilization scores.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The differences in overall perception of utilization mean scores by highest educational level attained were not statistically significant ($F_{2, 141}$=1.24, p=.29).

Results from the Levene Test of Homogeneity of Variance revealed the presence of equal variance between groups ($F_{2, 141}$=1.28, p=.28). The differences in overall perception of utilization mean scores by highest educational level attained were not statistically significant ($F_{2, 141}$=1.24, p=.29).

A comparison of the overall opinions of use mean scores of respondents by level of education attained was calculated by the use of one-way analysis of variance (ANOVA). The mean score for highest level attained was again for the "Higher than Master's degree" category. The sample size, overall opinions of use mean scores, and standard deviations are illustrated in Table 4.29.

Results from Levene Test of Homogeneity of Variance revealed the presence of equal variance between groups ($F_{2, 141}$=1.07, p=.34). The difference in overall perception of utilization mean scores by highest educational level attained were not statistically significant ($F_{2, 141}$=1.22, p=.28).

Table 4.29 Opinion of Usage Scale Group Sizes, Mean Scores, and Standard Deviations by Highest Educational Attainment on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Highest Level of Education Attained	n	Mean[a]	SD	F[b]
Bachelor's Degree	83	2.89	0.36	
Master's Degree	45	2.99	0.45	
Higher than Master's Degree	16	3.01	0.44	
Total	144	2.94	0.40	

Note. Two respondents failed to respond to the highest educational attainment or provide data for calculation of the overall opinion of use scores.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]The difference in overall perception of utilization mean scores by highest educational level attained were not statistically significant ($F_{2, 141}$=1.22, p=.28).

A comparison of the overall personal concerns mean score of respondents by level of educational attainment was calculated by the use of a one-way analysis of variance test

(ANOVA). The highest mean score was found in the "Higher than Master's degree" category, followed by the "Master's Degree" category. The sample size, overall personal concerns mean scores, and standard deviations are illustrated in Table 4.30.

Table 4.30 Personal Concerns Scale Group Sizes, Mean Scores, and Standard Deviations by Highest Educational Attainment on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Highest Level of Education Attained	n	Mean[a]	SD	F[b]
Bachelor's Degree	83	2.59	0.74	
Master's Degree	45	2.82	0.77	
Higher than Master's Degree	16	2.90	0.55	
Total	144	2.69	0.74	

Note. Two respondents failed to respond to the highest educational attainment or provide data for calculation of the personal concerns of use scores.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA).). [b]The difference in overall perception of utilization mean scores by highest educational attainment groups were not statistically significant ($F_{2, 141}$=2.39, p=.09).

Results from the Levene Test of Homogeneity of Variance revealed the presence of equal variance between groups ($F_{2, 141}$=1.73, p=.18). The difference in overall perception of utilization mean scores by highest educational attainment groups were not statistically significant ($F_{2, 141}$=2.39, p=.09).

Type of School Where You Teach. Differences in Overall Perceptions of Mobile Device Utilization scores were examined by respondents reported type of school where they teach. The group reporting the highest overall mean score for type of school in which they taught was public with n=124, M=2.93. The sample size, overall perception of mobile device utilization score means and standard deviations are illustrated in Table 4.31.

The Levene Test of Homogeneity of Variance revealed the presence of equal variance between the two categories of the reported type of school in which participants taught

($F_{1, 140}$=1.50, p =.23). There was no significant differences in the overall perception of utilization score with the groups based on the type of school in which teachers taught ($F_{1, 140}$=.96, p =.33).

Table 4.31 Perception of Utilization Scale Group Sizes, Mean Scores, and Standard Deviations by Type of School on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Type of School Where Teachers Teach	n	M[a]	SD	F[b]
Public	124	2.94	0.52	
Public Magnet	16	3.11	0.54	
Total	140	2.96	0.52	

Note. Six respondents failed to respond to the item.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]There was no significant differences in the overall perception of utilization score with the groups based on the type of school in which teachers taught ($F_{1, 140}$=.96, p =.33).

Differences in Overall Perceptions of Mobile Device Usage scores were examined by respondents reporting type of school where they taught. The group reporting the highest overall mean score for type of school they taught was public magnet with n=16, M=3.13. The sample size, overall perception of mobile device utilization score means and standard deviations are illustrated in Table 4.32.

Table 4.32 Perception of Usage Scale Group Sizes, Mean Scores, and Standard Deviations by Type of School on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Type of School Where Teachers Teach	n	Mean[a]	SD	F[b]
Public	124	2.93	0.63	
Public Magnet	16	3.13	0.46	
Total	140	2.95	0.62	

Note. Six respondents failed to respond to the item.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]There were no statistically significant difference in the overall perception of usage score by the groups based on the type of school in which teachers taught ($F_{1, 140}$=1.6, p =.21).

The Levene Test of Homogeneity of Variance for the perception of usage score revealed the presence of equal variance between the two categories of the reported type of school in which

participants taught ($F_{1, 140}$=1.4, p =.25). There were no statistically significant difference in the overall perception of usage score by the groups based on the type of school in which teachers taught ($F_{1, 140}$=1.6, p =.21).

Differences in overall opinions of use scores were examined by respondents reported type of school where they taught. The group reporting the highest overall mean score for type of school they taught was public magnet with n=16, M=3.02. The sample size, overall opinion of use score means and standard deviations are illustrated in Table 4.33.

Table 4.33 Opinions of Usage Scale Group Sizes, Mean Scores, and Standard Deviations by Type of School on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Type of School	n	M[a]	SD	F[b]
Public	124	2.93	0.40	
Public Magnet	16	3.03	0.39	
Total	140	2.94	0.40	

Note. Six respondents failed to respond to the item.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA). [b]There was no statistically significant difference in the overall opinions of use mean score between the groups ($F_{1, 140}$=.685, p=.41).

The Levene Test of Homogeneity of Variance for the opinions of usage revealed the presence of equal variance between the groups ($F_{1, 140}$=.032, p=.86). There was no statistically significant difference in the overall opinions of use mean score between the groups ($F_{1, 140}$=.685, p=.41).

Differences in overall personal concerns scores were examined by type of school where they taught. The group reporting the highest overall mean score for type of school in which teachers taught was public magnet with n=16, M=3.00. The sample size, overall personal concerns score means and standard deviations are illustrated in Table 4.34.

Table 4.34 Personal Concerns Scale Group Sizes, Mean Scores, and Standard Deviations by Type of School on the MLS of 9th-12th Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish

Type of School	n	Mean[a]	SD
Public	124	2.67	0.58
Public Magnet	16	3.00	0.75
Total	140	2.70	0.74

Note. Six respondents failed to respond to the item.
[a]Response Scale: 1=strongly disagree (SD), 2=disagree (D), 3=agree (A), 4= strongly agree (SA).

The Levene Test of Homogeneity of Variance was statistically significant ($F_{1, 140}$=4.14, p=.04) (indicating that the variances were not equal). Because of the statistically significant Levene test, an F test was not appropriate and thus a Welch test for equality of means was used ($F_{1, 22}$=4.36, p=.048). This test was barely statistically significant at the .048 level.

Objective Seven

Objective seven was to determine if a model exists that would explain a significant portion of variance of social media via mobile device use as measured by the Mobile Learning Survey for High School Teachers. The independent demographic variables were: age, gender, race or ethnicity, and type of school in which the respondent taught when the survey was conducted. A stepwise regression analysis was utilized for this analysis due to the exploratory nature of the research. The first step in this analysis was to examine the data to make sure that it was coded in a format that would allow for regression. The independent variable race or ethnicity in previous analysis had been recoded as dichotomous variables to allow for analysis and thus no further recoding was needed for the regression analysis.

The first step in the analysis process was to examine the correlation between perception of usage scale (dependent variable) and all of the independent variables. After examining the analysis for correlation the data was entered into the regression analysis in a stepwise method.

Hair et al. (2006) recommend a multitude of diagnostic checks: collinearity ("which is the overlap between two predictor variables, that is, the extent to which they intercorrelate with each other. If there is plenty of collinearity between the predictor variables, only some will enter into the regression analysis" (Borg & Gall, 1989, p.606), variance inflation factor (VIF) and tolerance. These diagnostic tests indicated that the results did not violate any of the ranges for the diagnostics.

A graphic histogram illustration of the plotted standardized residuals for the dependent variable scale mean shows an approximation of a normal curve. This curve would assume normality (see Figure 4.5 below).

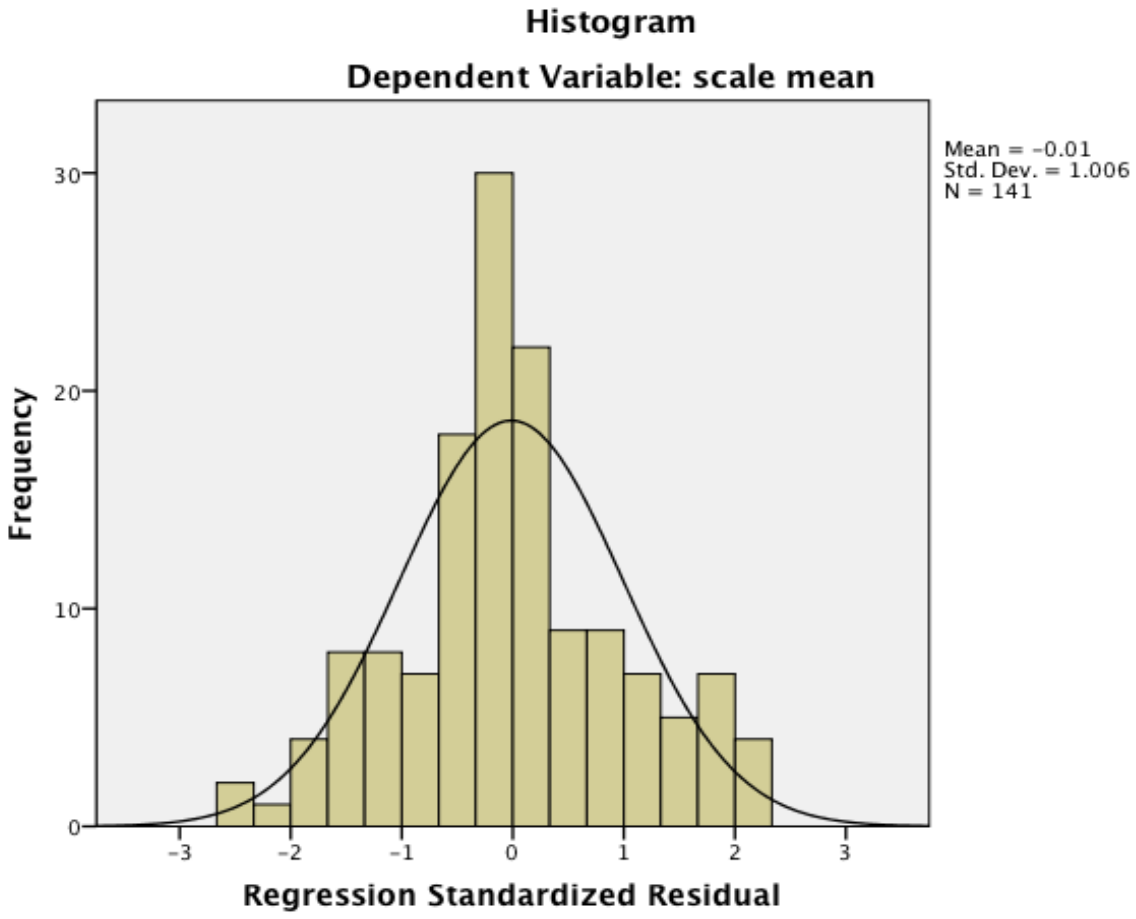

Figure 4.5 Histogram Depicting Standardized Residuals for the Dependent Variable Scale Mean

The regression results presented in the following tables are for the overall MLS for High School Teachers. The only independent demographic variables that were entered into the regression are variables that had statistically significant correlation with the dependent variable.

Table 4.35 Correlation Between the Mobile Learning Survey Various Independent Variables (Gender, Age at Last Birthday, Black-Non Black, and What Type of School Do They Teach)

		Scale mean	Black and non black	What is your gender?	In which type of school do you teach?	What was your age at your last birthday?
Pearson Correlation	scale mean	1.000	.212	-.039	.092	-.138
	black and non black	.212	1.000	-.108	-.066	.095
	What is your gender?	-.039	-.108	1.000	-.072	-.024
	In which type of school do you teach?	.092	-.066	-.072	1.000	-.020
	What was your age at your last birthday?	-.138	.095	-.024	-.020	1.000
		Scale mean	Black and non black	What is your gender?	In which type of school do you teach?	What was your age at your last birthday?
Sig. (1-tailed)	scale mean	.	.007	.325	.143	.056
	black and non black	.007	.	.105	.223	.136
	What is your gender?	.325	.105	.	.202	.391
	In which type of school do you teach?	.143	.223	.202	.	.407
	What was your age at your last birthday?	.056	.136	.391	.407	.

(Table 4.35, continued)

		Scale mean	Black and non black	What is your gender?	In which type of school do you teach?	What was your age at your last birthday?
N	scale mean	135	135	135	135	135
	black and non black	135	135	135	135	135
	What is your gender?	135	135	135	135	135
	In which type of school do you teach?	135	135	135	135	135
	What was your age at your last birthday?	135	135	135	135	135

Table 4.36 indicates that only one independent variable, black and non-black was retained in the equation and explained a cumulative 4.5% of the overall variance in the dependent variable overall MLS perceptions of usage.

Table 4.36 Significance of the Regression Equation and Model Summary for the Construct of Perception of Usage

Model	df	SS	MS	F[a]	P[b]
Regression	1	1.052	1.052	6.284	.013
Residual	133	22.268	.167		
Total	134	23.320			

Model Summary

Model	R	R^2 Cumulative	R^2 Change	F Change	df1	df2	Sig. F Change
1	.212	.045	.045	6.284	1	133	.013

[a] One Way Analysis of Variance
[b] .05 Alpha Level for the Two-Tailed Test of Significance

The coefficient values, t values and corresponding significance levels for the independent variable retained in the regression equation predicting perception of usage scores are presented in Table 4.37.

Table 4.37 Coefficient Values, Standard Errors, Standardized Coefficient Values, T Values, and Significance Levels for Independent Variables Retained in the Regression Equation Predicting Perception of Usage

Variable	β	SE	Beta	t	p[a]
Constant	2.843	.046		62.150	<.001
Black and Non-black	.180	.072	.212	2.507	.013

[a].05 Alpha Level for the Two-Tailed Test of Significance

The variables excluded from the regression equation and their corresponding t values and significance levels are illustrated in Table 4.38.

Table 4.38 Excluded Variables, Standardized Coefficients, T Values, Significance Levels, and Partial Correlations for the Regression Equation Predicting Perception of Usage

Variable	Beta In	t	p	Partial Correlation
Gender	-.017	-.194	.847	-.017
Age at last birthday	-.159	-1.891	.209	.109
Which school do you teach	.107	1.261	.650	.040

[a].05 Alpha Level for the Two-Tailed Test of Significance

Based on the data gathered from the Mobile Learning Survey (MLS) for high school teachers, the regression model for the overall MLS indicated a statistically significant result with the ethnicity variable only. Black teachers had a statistically significant higher mean score for the MLS than did all other ethnicities, which also indicated the effects of the data are not due to just chance alone.

CHAPTER 5
SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Purpose of Study

The primary purpose of this study was to explore and reveal the opinions, concerns, and perceptions of teachers of grades 9-12 on the utilization of social media via mobile devices in the classroom. Specifically the study addressed the following objectives:

1. To describe the population of 9^{th}-12^{th} Grade Secondary School Teachers from Seven Public Schools in One Southern Louisiana Parish based on teacher prior knowledge and thoughts on students' use of mobile devices. Results were described according to the following variables:

a) Age

b) Gender

c) Ethnicity

d) Areas of certification

e) Subjects taught

f) Years in education

g) Number of years in current school

h) Grade levels currently teaching

i) Highest educational attainment

j) Type of school where currently teaching

k) Prior knowledge of the use of mobile devices

l) Thoughts on student mobile device use

2. To determine the perceptions of 9-12 grade high school teachers about the utilization of social media via mobile devices in the classroom as measured by the Mobile Learning Survey for High School Teachers.

3. To determine the perceptions of 9-12 grade high school teachers about students' use of social media via mobile devices for educational purposes as measured by the Mobile Learning Survey for High School Students.

4. To gather the opinions of 9-12 grade high school teachers about the use of social media via mobile devices in high school classrooms.

5. To compile a list of personal concerns of 9-12 grade teachers about the use of social media via mobile devices in high school classrooms.

6. To determine if there is a difference that exists in the perceptions for mobile learning as measured by the Mobile Learning Survey for High School Students. Results were described according to the following variables:

a) Gender

b) Ethnicity

c) Highest Educational Attainment

d) Type of School

7. The purpose of this objective was to determine if a model exists that would explain from demographic variables of age, ethnicity, gender, and type of school a significant portion of variance of social media via mobile device use as measured by the overall Mobile Learning Survey for High School Teachers.

Procedures

This study surveyed as its target population 9-12 grade high school teachers in the southern region of the United States. The accessible population of 240 high school teachers was contacted by email available from the district's central administrative office's database.

The questionnaire used in this study was the Mobile Learning Survey for High School Teachers. The survey consisted of seven sections: Demographics, Teachers' Prior Knowledge, Teacher Thoughts on Student Use of Mobile Devices, Perception of Mobile Device, Utilization and Perception of Mobile Devise Usage, Faculty Opinions, and Teacher Personal Concerns. The questionnaire was designed by the researcher and his major professor based on the review of the empirical literature. The questionnaire was reviewed by the researcher's graduate committee and then pilot tested by high school teachers and school administrators.

A total of 240 9-12 grade high school teachers were emailed the survey. A total of fifty-one teachers completed the survey via email and ninety-five completed a hard copy for a total population completing the survey of 146 or a 60.8% response rate.

Summary of Major Findings

Objective One.

The purpose of this objective was to describe the demographic characteristics and prior knowledge and thoughts of high school teachers in one Southern Louisiana parish on students' use of mobile devices. A large proportion of the teachers in the study sample were between 21 and 39 years old, female, non-black, had completed a bachelor's degree, had 1-20 years as a teacher with 1-10 years in their current position, and with all of them employed in the public school system. Almost all teachers in the study were knowledgeable about using a mobile device for various purposes such as accessing the internet, emailing, and using as a calculator. They

also felt that their students were using mobile devices to network socially and for school-related work.

- **Age.** The two largest groups of teacher respondents indicated that their age fell between 36 and 45 years (n = 43, 30%) and 26-35 years (n = 40, 27.9%).
- **Gender.** The larger number of the respondents reported their gender as female (n = 94, 64.8%) while the remaining 35.2% (n = 51, 35.2%) indicated the gender was male.
- **Certification.** The majority of the respondents (n = 139, 95.2%) were certified teachers.
- **Ethnicity.** The larger number of respondents identified themselves as non-black (n = 82, 58.2%). The next largest group identified themselves as black (n = 59, 41.8%).
- **Areas of Certification.** The largest number of the participants reported that their area of certification was English (n = 39, 26.7%) while the second highest group reported their area of certification (n = 32, 21.9%) was social studies.
- **Subjects taught.** A large number of the participants (n = 34, 23.3%) taught English while n = 23, (15.8%) taught mathematics and n = 23 (15.8%) taught science.
- **Years in education.** The largest number of the participants (n = 32, 23%) have been in education between 6-10 years. The second largest number of the participants (n = 29, 20.9%) have been in education 1-5 years and the third largest number (n = 27, 19.4%) have been in education 16-20 years.
- **Number of years in current school.** The largest number of participants (n = 94, 65.7%) had been at their current school from 1-10 years.
- **Grade levels currently teaching.** The largest number of the participants (n = 106, 72.6%) taught 10^{th} grade while the second largest number (n = 104, 71.2%) taught 11^{th} grade.

- **Highest educational attainment.** The majority of the participants (n = 85, 58.2%) reported having completed a Bachelor's Degree while the second largest number of participants (n = 45, 30.8%) reported having completed a Master's Degree.
- **Type of school where employed.** The majority of the participants (n = 126, 88.7%) reported teaching in a public school while only 16 of the participants (11.3%) reported teaching in a public magnet school.
- **Prior knowledge.** A majority of participants (n= 136, 93.2%) reported that they had prior knowledge in accessing the Internet from a mobile phone. The second largest number (n=132, 90.4%) of participants reported that they had knowledge in using a mobile device as a calculator, and the third largest group (n=128, 87.7%) reported they had knowledgeable in sending an email on a mobile device.
- **Thoughts on student mobile device use.** The survey showed that the majority (n= 129, 88.4%) of participants believed that their students are engaging in social networking on their mobile devices. The second largest group (n= 101, 69.2%) thought that their students used mobile devices to text a classmate during class, and the third largest group (n=69, 47.3%) thought their students used mobile devices to take pictures or videos with their mobile device that they use for an assignment.

Objective Two.

The purpose of the objective was to determine the perceptions of 9-12 grade high school teachers about the utilization of social media via mobile devices in the classroom as measured by the Mobile Learning Survey for High School Teachers. Based on factor analysis of the fifteen questions from the survey, fourteen of the questions had a mean score ranging from 3.27 to 2.83 or to "agree". The factor analysis showed that the respondents agreed that students should be

able to download mobile applications that could help them study (M=3.27, SD= .608). They also agreed that learning on a personal device would be easy for students because they are already familiar with all of its functions (M= 3.11, SD= .701) and they agreed that it would be easy for students to engage in discussions (comment) using a mobile application or website in mobile format (M = 3.11, SD = .543). Only one item received a (M= 2.27, SD= .848) mean score which indicates disagree on the interpretive scale. The respondents disagreed that students should be able to take quizzes on their mobile devices.

Objective Three.

The purpose of this objective was to determine the perceptions of 9-12 grade high school teachers about students' use of social media via mobile devices for educational purposes as measured by the Mobile Learning Survey for High School Students.

Based on the factor analysis and descriptive statistics of the ten questions on the survey, the respondents agreed with eight of the questions with a mean score ranging from 3.25 to 2.71. The highest levels of agreement were on the question that students would think it's fun to use an interactive mobile device in the classroom (M= 3.25, SD = .623), that students can be taught how to appropriately use mobile devices (M= 3.17, SD= .643), that I would like to learn how to create mobile applications (M= 3.06, SD= .813) and I would like to learn more about mobile learning so I can incorporate it into my classroom (M= 3.06, SD = .868). The respondents agreed that students would be more motivated to learn if they could use mobile devices (M= 2.96, SD= .978) and agreed that they would like their students to use mobile devices to access course content and practice skills (M= 2.99, SD= .751). The respondents disagreed (M= 2.44, SD= .865) that using mobile applications for learning in the classroom would benefit students' writing skills.

Objective Four.

The purpose of this objective was to gather the opinions of 9-12 grade high school teachers about the use of social media via mobile devices in high school classrooms.

Based on factor analysis and descriptive statistics on faculty opinions on the use of social media via mobile devices in the high school classroom, participants responded to eight questions expressing their concerns about the use of social media via mobile devices. The factor analysis showed that the respondents were in agreement on all eight questions. They strongly agreed that texting is often substituted for oral conversation (M= 3.39, SD= .574). They also agreed that texting weakens students' writing and verbal skills (M=3.27, SD= .695). They agreed that social media can be a valuable tool for collaborative learning (M= 2.99, SD= .704) and that videos, podcasts, and blogs are valuable tools for teaching (M= 2.99, SD= .660).

While they agreed that the use of social media via mobile devices can be a valuable tool, and that school districts should lift bans and allow schools to use social media in secondary schools (M =2.55, SD= .930) they also agreed that social media in the classroom would lead to increased instances of cyber-bullying (M= 2.78, SD= .732).

Objective Five.

The purpose of this objective was to compile a list of personal concerns of 9-12 grade teachers about the use of social media via mobile devices in high school classrooms.

Based on factor analysis and descriptive statistics from SPSS, participants were asked to respond to five questions based on their personal concerns about the use of social media via mobile devices in the high school classrooms. The responses ranged from strongly agree to disagree. The factor analysis showed that the respondents strongly agreed that if the school district allowed students to use mobile devices in the classroom as learning tools, teachers would

be willing to receive professional development and training on the use of such mobile devices (M= 3.27, SD= .694). According to the survey, the respondents also agreed that if the school district allowed students to use mobile devices in the classroom as learning tools, teachers would expect their school district to provide both teachers and students with mobile learning devices and technical support such as data packages, text messaging, educational apps, etc. (M= 3.18, SD= .784). While the previous two questions were in agreement, the next question was a disagreement. The respondents agreed that if the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way teachers communicate with students. The MLS item read, Are you concerned about the possibility of inappropriate communication between teachers and students? (M= 3.12, SD= .764).

The respondents disagreed that if the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in classroom and outside the classroom would change the way teachers communicate with students. Students would have access to your time beyond the traditional school day. Would you be in favor of this infringement on your time outside of school hours? (M= 2.29, SD= .933).

Objective Six.

The purpose of this objective was to discuss differences in teacher perceptions of mobile device use by selected variables (gender, ethnicity, highest educational attainment, and type of school.)

- **Gender.** The F test that examined the effect of the independent variables on the dependent variables was used to show that the differences in the overall Perception of

Mobile Device Utilization of mobile device use in the classroom between gender groups were not statistically significant ($F_{1, 141}$=.115, p=.735).

- **Ethnicity.** The study revealed that ethnicity was statistically significant for the perception of usage scale with a p value of .021. Black teachers had a higher usage mean at 3.09 than non-blacks. All other scales were not statistically significant when the independent variable ethnicity was examined.
- **Highest Educational Attainment.** The study revealed that there was no significant difference in the overall perception of mobile device utilization scores within reported teacher educational attainment ($F_{2, 141}$=1.24, p=.29).
- **Type of School Where Teachers Teach.** The difference in the overall perception of utilization scores between groups based on type of school where teachers teach was significant. There was a statistically significant difference in the Personal Concerns Scale score. Due to a statistically significant Levene statistics at the 0.4 level, the researcher could not use the ANOVA test and used the Welsh test for equality of means. That test was significant but at the .048 level.

Objective Seven.

The purpose of this objective was to determine if a model exists that would explain from demographic variables of age, ethnicity, gender, and type of school a significant portion of variance of social media via mobile device use as measured by the overall Mobile Learning Survey for High School Teachers. This objective was accomplished using regression analysis with the overall scale mean as measured by the Mobile Learning Survey for High School Teachers as the dependent variable. Data analysis included Pearson's product moment correlations and stepwise multiple regression analysis where the probability of *F* to enter the

equation was set at .05, and the probability of *F* to be removed from the model was set at .10. The only variable that entered the model was ethnicity, which explained 4.5% of the variance in mobile learning device use. Black teachers had a significantly higher mean score on the MLS than other ethnic groups combined.

Findings and Conclusions

Finding One. The majority of the respondents to the survey were non-black females followed by black females. The majority of respondents were 26-35 and 36-45 years old. The majority of the respondents were certified. Over half of the respondents teach English, Social Studies, Science and Mathematics respectively, all of which are core area courses. At present in these courses, students must take End of Course tests (EOC) in Algebra I, Biology I, English II, English III, Geometry, and American History and must score excellent, good, or fair for promotion and for passing the course. The majority of the respondents had been teaching 1-5 years and 6-10 years and 16-20 years. Collectively seventy-nine respondents had been teaching 1-15 years and sixty had been teaching 16 years or more. The majority of the respondents earned a Bachelor's Degree.

The survey findings indicated that the participants had the following experience with mobile devices: the survey showed that 93.2% could access the internet from a mobile device while 90.4% could use a mobile device as a calculator. The survey showed that 87.7% of participants could send an email on a mobile device while 84.2% could set an alarm/alert for a potential due date on a mobile device. The survey further revealed that 80.1% of the participants could download a mobile application on a mobile device while 78.8% could find the definitions of words they did not know on a mobile device. The MLS survey revealed that 76.7% were able to access a social networking site on a mobile device. On the other hand 49.3% could not

translate a sentence into another language and 46.6% could not download a podcast on a mobile device.

Most of the respondents thought their students were completing the following tasks on mobile devices: the survey showed that 88.4% believed their students were engaging in social networking on the mobile devices while 67.2% felt their students were texting during class. The survey indicated that 47.3% believed their students were taking pictures or videos with their mobile devices that they use for assignments while 46.6% think their students were texting class mates about the level of engagement in the class and 43.2% believed their students were playing an education game on the mobile devices.

Conclusion for Finding One: As a result of these findings, the study concluded that based on teachers prior knowledge as indicated in the survey, participants were technically knowledgeable about the use of mobile devices and perceived their students to be equally proficient. This theory is reinforced by Amanda Lenhart (2009) and Naismith et al., (2004) studies on "more and more teens use cell phones".

Finding Two. The majority of the respondents agreed that their students would be likely to participate, engage in class discussions inside and outside class, ask for help, view course work, download mobile applications and participate in discussion forums. While they agreed that mobile devices are valuable tools, they disagreed that students should be able to take quizzes using their mobile devices. Previous studies by Pollara (2011) focused on college students and college faculty, whereby the majority of students and professors agreed to being quizzed by use of mobile devices. As a result of these positive findings, more schools are rethinking the bans on cell phones (Johnson, 2010).

Conclusion for Finding Two: The respondents were very receptive and positive to the possibility of students using social media via mobile devices in the classroom as they embrace learning to teach with mobile technology (Crowe, 2007). According to the respondents, they did not want the use of social media via mobile devices to include quizzes and testing.

Finding Three. The respondents agreed on eight out of nine questions relative to what they believed their students could do with the use of mobile devices in the classroom. They believed and agreed that students can be taught how to use mobile devices appropriately and as learning tools to improve comprehension. The respondents disagreed that mobile application would improve students' writing skills.

Conclusion for Finding Three: Based on the MLS, the teachers perceived that while the use of social media via mobile devices can be a positive tool in today's classroom, the survey indicated that use of social media via mobile devices weakened writing and grammar skills. If these skills are not taught in class and students continue to show a decline in writing skills, then teachers and school districts will continue to wonder if social media via mobiles devices should be used in the classroom (Jenkins, 2011).

Finding Four. Faculty opinions on the use of social media via mobile agreed that school districts should lift bans and allow students to use mobile devices (Chaplin, 2012). Social media can be a valuable tool for collaborative learning, for increased student engagement in learning activities and for texting as an effective form of communication. However, while social media is valuable, the respondents agreed that the use of social media via mobile devices can also increase instances of cyber-bullying. Most importantly, the respondents agreed that texting weakens students' writing and verbal skills and texting is often substituted for oral conversation.

Conclusion for Finding Four: The respondents believe that school districts should lift bans and allow schools to use social media via mobile devices in secondary schools to increase student engagement in the learning activities. The respondents perceived that school curriculums must underscore oral discussions, oral recitations, strong emphasis on grammar, usage, mechanics and composition to combat the reality that testing weakens students' writing and verbal skills. The respondents believe that learning via mobile devices can be relevant and meaningful (Levin, 2011).

Finding Five. Based on the factor analysis and descriptive statistics report from SPSS, the results from the survey's five questions and their responses to faculty personal concerns on the use of social media via mobile devices, the results showed that the faculty agreed on four personal concerns. They strongly agreed that if the school district allowed students to use mobile devices in the classroom as learning tools, teachers would be willing to receive professional development and further training in the use of such mobile devices. The respondents also agreed that they would expect the school district to provide students and faculty with mobile learning devices and technical support such as data packages, text messaging, educational apps, and learning technology transformation (Scott & McGill, 2011).

The respondents disagreed to students having access to their personal time beyond the traditional school day. They were not in favor of infringement of their time outside of school hours. The respondents also agreed that they were concerned about the possibility of inappropriate communication between teachers and students.

Respondents were supportive of the use of social media via mobile devices in the classroom to increase student engagement in learning activities. They were prepared to do professional development to enhance and support their prior knowledge, but they agreed that the

district should provide mobile devices, data packages and text messaging services to both student and teachers. The survey revealed that there was a concern about the increase in inappropriate communications between students and teachers, but these problems can be reduced by educating the mobile generation (Tremblay, 2010).

Conclusion for Finding Five: Although the respondents raised legitimate concerns, through professional development, digital citizenship, mobile etiquette (Pollara, 2011) and strict district-wide policies, some of these concerns may be reduced by educating students about the dangers of inappropriate use of social media via mobile devices. Researchers should be cautioned that the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was low but acceptable and that this scale needs to be revised or retested.

Finding Six. After the completion of the regression model, the data revealed that, in relation to the perceptions of utilization of the use of social media via mobile devices, the mean scores for black teachers was 3.06 while non-black teachers had a 2.8. The two variables that loaded were age and ethnicity.

Conclusion for Finding Six: Based on the data provided, black teachers of the survey were more receptive to the use of social media via mobile devices than non-black teachers. As the age increased, the respondents were less receptive to such use of social media via mobile devices; however, the data does reveal that teachers are positioning themselves for a mobile, connected future (Peters, 2007).

Finding Seven. Based on the data gathered from the Mobile Learning Survey (MLS) for high school teachers, the regression model did indicate statistically significant results for Black teachers versus non-blacks.

Conclusion for Finding Seven: The data indicates that Black teachers had a higher mean score on the MLS survey regarding the uses of mobile learning in the classroom and that social media via mobile devices could be used to aid in increased learning activities and to make the transition to technology transformation (Scott & McGill, 2011). That a predictive model for mobile device use from demographics was not found (only 4.5% of the variance is explained by ethnicity – non black over black) suggests other variables have to be included in the analysis. The only inference one can draw from the results of the regression analysis is for further exploration or modeling.

Implications for Future Research

The Mobile Learning Survey indicated that high school teachers are in favor of using social media via mobile devices in the classroom and that the use of such technology would increase student engagement in learning activities.

While the study did provide positive information about 9-12 grade teachers' perceptions, concerns, and opinions about the use of mobile devices in the classroom, the study was limited to the perceptions of high school teachers, a replication from a previous study that focused on college faculty and college students on the use of mobile learning inside and outside the classroom (Pollara, 2011).

A more in-depth study for the future might include, with parents' permission, students' use of social media via mobile devices in the classroom. The study could conceivably focus on a control group that is taught by traditional face-to-face instruction and an experimental group that is taught the same subject but by use of social media via mobile devices. Following Common Core state standards as a measuring stick, the course taught should come from English, math, science, or social studies. The length of time for the experiment would last about 14 weeks. The

experiment would be evaluated on the basis of an end of course assessment noting which groups had higher achievement based on the study. Further research could focus on all of the following future studies:

--How texting can improve writing and communication skills

--How to implement effective testing on social media via mobile devices in the 9-12 classroom—similar to current EOC or upcoming PARCC

--Does the use of social media via mobile devices in grades 9-12 improve student discipline, attendance, achievement, engagement?

-- Does the use of social media via mobile devices in grades 9-12 improve better parent involvement?

-- Does the use of social media via mobile devices in grades 9-12 improve or enhance instruction?

-- Does the use of social media via mobile devices in grades 9-12 enhance communication with other industrialized countries?

-- Is the use of social media via mobile devices in grades 9-12 an infringement of teachers' time outside of classroom (2.29)?

-- Does the use of social media via mobile devices in grades 9-12 increase instances of cyber-bullying (2.80)?

-- Does the use of social media via mobile devices and texting in grades 9-12 weaken students' writing and verbal skills (3.26A)?

-- Is the use of social media via mobile devices in grades 9-12 becoming an effective oral communication skill?

--Should high school students be allowed to take in class quizzes using social media via mobile devices (2.27)?

Recommendations for Practice

Based on the results of this study the following suggestions are strongly recommended by the researcher to support the full implementation and effective use of mobile technology in the high school classrooms. After studying the advantages and disadvantages of social networking via mobile devices in the classroom, the researcher strongly believes that the advantages outweigh the disadvantages and therefore recommends that bans on the use of social networking via mobile devices be lifted with strict adherence to existing computer use policies. Lifting the bans on the use of mobile devices by school districts have and will probably continue to present challenges. However, should school districts continue to ban mobile devices from today's classrooms, the educational needs for the 21st Century students will not be met to compete in a global economy. School districts must study the cost effectiveness of needed technology, seek grants for technology, and transfer monies allocated for textbooks to electronic books that can be used via mobile devices including tablets and iPads. In order to stay on the cutting edge of education with other industrialized countries, it is imperative that electronic technology be integrated into traditional classrooms anytime and anywhere to enhance academic networking and student engagement in learning activities.

The district-wide policies and legal statutes that govern the use of mobile devices in schools must be consistently reviewed, clearly articulated, and strongly enforced by administration and faculty. Since most school districts have in place computer agreement policies in which students and parents agree to strict guidelines governing computer use, it is recommended that similar policies be written to govern the use of mobile devices as students

access the internet, run applications, listen to music, and check homework emails, vary learning and virtual environments, and enhance opportunities for collaboration and day-to-day learning. Districts must develop acceptable use policies for cell phones and other mobile devices that include clear guidelines for permission, directions, and limitations for use only to complete assignments related to instruction. Teachers must frequently give lessons on internet safety, appropriate use of texting, audio, and visual media, social media etiquette or digital citizenship, and the consequences for inappropriate use of these devices. Policy agreements must be signed by parents, students, and teachers, and then filed in student folders as points of references that all parties involved understand the terms of the agreement set forth (Rogers, 2011).

The researcher also strongly recommends that instructional time in digital citizenship and social media etiquette be mandated by school districts to include lessons in various courses: computer literacy, computer science, Introduction to Business Computer Applications, Business Computer Applications, Library Orientation, Business English, English classes as well as Journey to Success Classes. Districts must also mandate that district policies for digital citizenship and social media etiquette be placed in student handbooks, reviewed at Open Houses with parents, and reviewed at class orientation meetings. The repetition of the correct use of social media via mobile devices will at best help students understand the importance of mobile technology as an educational tool (Attewell, 2005b; Boone, 2009; Lusk, 2010; Prensky, 2001).

Professional development, monthly in-services, back-to-school in-services, workshops and dialogues for teachers must be provided for teachers by individual schools and school districts. There must be an alignment between the curricula taught to students in the computer classes and the teacher in-services. It is recommended that since technology changes constantly, updates to digital citizenship and the use of mobile devices and mobile technology be provided

district-wide each semester or in yearly professional development sessions. It is supported by the researcher that schools should establish technology teams from the faculty to assist teachers with the use of mobile technology to enhance student academic networking and student engagement.

In order to ensure safety and maximum use of social media via mobile devices, parents, school boards, community and stakeholders must also be involved in the process of correct implementation. The research suggested that the focus must change from social media only to academic social media via mobile devices. Educating stakeholders and providing general information and professional development will help students to better use mobile devices as educational tools in today's classrooms.

Newsletters, school and district websites, school newspapers, student handbooks, pamphlets, and multimedia messaging must post guidelines for social media etiquette and digital citizenship so that all stakeholders are apprised of student appropriate use of social media via mobile devices. Schools and school districts should have readily available upon request some form of media communication and acceptable policy use of technology tools to distribute to stakeholders including parents and anyone with a demonstrated interest in educating students. There must be some understanding among stakeholders and students in terms of what students need and what stakeholders expect. There must be a balance between students' needs and wants at home and at school. Students want their phones; schools are apprehensive about distractions, cheating, sexting, and bullying (Davis, 2008). Parents are concerned about safety; teachers are concerned with universal cheating, texting, poor grammar usage, and inappropriate contact between teachers and students. School boards on the other hand struggle with what they should support (Rogers, 2011). Sharing best practices among all involved parties can help blend ideas

and come to terms with what is best for the 21st century classroom (Chang, 2010; Crabtree, Nathan & Roberts, 2003; Rogers, 2011).

In addition to formulating a partnership with community stakeholders, schools and school districts must also develop partnerships with textbook companies, vendors, local and national business corporations, mobile networks, and grant writing agencies to secure mobile devices and equipment for schools, access for all students, affordability by districts to equip schools with hardware necessary to utilize mobile devices and to ensure that rates for mobile devices for faculty, staff, and students do not increase. All of the above facts are crucial and strongly recommended in implementing major initiatives involving technology at school or school district levels.

Summary

Research shows that a culture of collaboration is at the very heart of social networking and the bedrock of knowledge sharing (Boyd, 2008; Dunn, 2010). The 21st century social (Boyd, 2008; Smith, 2007). Schools must reflect and acknowledge in some way the world in which we live, and come to the reality that we live in a social world (Field, 2012; Smith, 2007).

In the world of social networking, and mobile technology, schools must train even their most technologically savvy teachers to stay on the cutting edge and keep up with the latest trends in the use of academic networking (Smith, 2007). This concept can be achieved by school districts and its teachers helping students to responsibly use social media via mobile devices appropriately (Franklin, 2011). In-depth research shows that schools have always taught children how to present themselves through oral presentations, and now it is imperative that teachers prepare the 21st century student to present themselves electronically in a global world (Smith, 2007).

Through general and basic digital citizenship students must be taught how to avoid inappropriate sites generally through frank discussions and clear examples that force students to make ethical decisions (Ribble, 2009). Specifically, students should be taught that posting racy pictures online and communicating with older people are not acceptable behaviors (Smith, 2007). As our digital natives numbers continue to grow and the use of mobile devices continues to expand, a day without cell phones will be almost impossible to handle. The real world tools that mobile devices provide are becoming commonplace and widely used (Feller, 2006). Hopefully we as educators and policy makers can discern from and make fuller use of social networking via mobile devices in the high school class room, thus providing a safe and lawful environment for today's students (Lenhart, 2012; Prensky, 2001a; Rogers, 2011).

There can be no doubt that the school reform is needed in America. Part of that reform must consider the shift in our society from hard wired computers to mobile learning and tools such as tablets and smart phones with calendars, internet access, emails, calculators, and camera functions. These are harbingers of future learning (Keegan, 2002). These real world tools and the use of wireless devices enhance learning while students are on the move anytime and anywhere (Traxler, 2009). The wireless technology can be an excellent reform for the 21st century student or digital natives by improving student attention, student engagement, student learning and student achievement. Studies show no difference in smart phone ownership across racial, income, or ethnic lines (Shane, 2012). Conversely there are valid concerns that mobile phones can facilitate cheating, sexting, cyberbullying, classroom distractions, and inappropriate use of racy pictures. In other words, some research shows that the mobile devices can exacerbate existing problems (Taylor, 2009; Watters, 2011). These are the major concerns of local school districts, principals, schools boards, teachers and parents. If kept unaddressed these concerns can

indeed be perceived as real obstacles underscoring the use of today's technology. In retrospect, cyberbullying is the new name for traditional old bullying; sexting is the new name for flirting and a replacement for explicit love letters (sexual predators). The act of texting such information is immature at best and criminal at worst. It is the criminal mind that produces the greatest concerns for the school boards, parents, teachers, and other stakeholders. Cheating predates mobile phones. Simply speaking, cyberbullying, sexting, and cheating all show signs of an erosion of ethics rather than a technical problem (Keegan, 2002). All of these are technological reincarnations of new forms of old behaviors. In essence our society must turn these perceived obstacles into opportunities for reformed or improved learning cultures (Traxler, 2009). As the shift in education becomes more mobile, instructional pedagogy must also change to embrace modernity (Gibbs, 2012). Digital etiquette, digital citizenship, appropriate use of the smart phone as an educational tool must be taught to students just as regular classes are taught, all adhering to strict school and district policies (Rogers, 2011).

The Mobile Learning Survey for High School Teachers completed by 146 high school teachers indicated that they know how to access the internet, download applications, and send emails on their mobile devices. They also believe that their students can download applications, engage in social networking and can use the mobile device as a study tool to improve student achievement. Most of all they believe their students would more likely engage in class discussions and participate in learning activities. Results of the study showed that teachers believed that mobile learning should be incorporated into today's classes. They believed that it would be easier for students to complete class work and assignments, and learn to study in places they could not normally do so before the advent of social media via mobile devices. The survey

also revealed that the teachers would like to learn more and attend more professional development in-services on the use of mobile devices in the high school classrooms.

The perceptions of the teachers who participated in the Mobile Learning Survey were that students should be able to use their mobile devices in the classroom to increase student engagement in learning activities. Conversely, their perceptions of students taking quizzes on the mobile devices were disagreed upon by most of the teachers and that the use of mobile devices did not improve writing skills and could increase cyberbullying. One of the major concerns that teachers taking the Mobile Learning Survey perceived was that the teachers would not want their personal time away from school infringed upon by assisting students complete assignments after hours. Another major concern of the teachers in the Mobile Learning Survey addressed perceived fears that there would be increased inappropriate communication between teachers and students.

Overall the teachers of the mobile learning survey indicated that they were ready to embrace the use of mobile devices in today's class room and strongly believed that the school districts should lift the bans on mobile device use in schools. They believed that lifting the existing bans, like many progressive districts have done and are doing, would turn perceived obstacles into opportunities for effective teaching and result in an increase in engaged learning (Traxler, 2009). Based on the Mobile Learning Survey, these statements summarize how these secondary teachers perceive the use of social media via mobile devices in today's 9-12 secondary classrooms.

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APPENDIX A
MOBILE LEARNING SURVEY FOR HIGH SCHOOL TEACHERS

Welcome!

Fellow educator, please fill out this survey to the best of your ability. The survey is divided into six sections. It should take approximately 15-20 minutes to complete the survey. For the purpose of this survey, "mobile device" includes any handheld device capable of multiple functions, including but not limited to accessing the internet, running applications, listening to music, and checking emails. Examples of such devices include smart phones such as iPhones, Blackberries, and Androids as well as other devices such as iPads. Mobile devices such as the limited or single-feature cell phones will not be considered. There will be a drawing for those who complete and return surveys by February 12, 2013, and electronic prizes will be given to early responders. Thank you for your participation.

Objective: To survey attitudes, perceptions and utilization of social networking websites and content-sharing tools by secondary school teachers.

By completing this survey, you are agreeing to participate in this study. If you have any concerns or questions about your rights as a participant, please contact the Institutional Review Board Chairman, LSU at (225) 578-8692 or irb@lsu.edu.

Demographics

1. What was your age at your last birthday? _____

2. What is your gender?
   - o Male
   - o Female

3. Are you a certified teacher?
   - o Yes
   - o No

4. What is your area of certification? Check all that apply.
   - o Administration/teacher
   - o Agriculture
   - o Art
   - o Business
   - o English
   - o Family and Consumer Science
   - o French
   - o Guidance
   - o Industrial arts
   - o Mathematics
   - o Music

- Physical Education
- School librarian/teacher
- Science
- Social studies
- Spanish
- Special education
- Speech

5. What subjects do you teach? Check all that apply.
    - Administration/teacher
    - Agriculture
    - Art
    - Business
    - English
    - Family and Consumer Science
    - French
    - Guidance
    - Industrial arts
    - Mathematics
    - Music
    - Physical Education
    - School librarian/teacher
    - Science
    - Social studies
    - Spanish
    - Special education
    - Speech

6. How many years have you been in education?
    - 1-5
    - 6-10
    - 11-15
    - 16-20
    - 21-25
    - 26-30
    - 31-35
    - 36-40
    - 41 and over

7. How many years have you been in your current school? _____

8. What is your race or ethnicity?
    - African American
    - Alaska Native
    - American Indian
    - Asian

- Hispanic and Latino
- Native Hawaiian
- Other Pacific Islander
- Two or more races
- White American

9. What grade levels do you teach? Check all that apply.
   - 9^{th}
   - 10^{th}
   - 11^{th}
   - 12^{th}

10. What is your highest educational attainment?
   - Bachelor's degree
   - Master's degree
   - Master's plus 30
   - Specialist degree
   - Doctoral degree

11. In which type of school do you teach?
   - Public
   - Public Magnet

Prior Knowledge

12. I know how to… Please check all that apply.
   - Access the internet from a mobile device
   - Download a podcast on a mobile device
   - Download a mobile application on a mobile device
   - Find the definition of a word I don't know on a mobile device
   - Use a mobile device as a calculator
   - Set an alarm/alert for a potential due date on a mobile device
   - Translate a sentence into another language on a mobile device
   - Access a social networking site on a mobile device
   - Send an email on a mobile device
   - Post a comment to a blog or respond to a post on a mobile device

How do you think your students are using their mobile devices?

13. I think my students are… Please check all that apply.
   - Downloading applications that help them learn something new
   - Using mobile devices to look up something that they didn't know or didn't understand during class
   - Engaging in social networking on their mobile devices
   - Writing notes on their mobile device to remind themselves of an assignment

- Setting alarms or reminder on their mobile device to help them remember that an assignment is due or a test is coming up
- Texting a classmate during class
- Texting a classmate about the content of the class
- Texting a classmate about the teacher's ability
- Texting a classmate about the level of engagement in the class (i.e. I'm bored, this is cool, etc.)
- Taking pictures or videos with their mobile device that they use for an assignment
- Accessing an Educational Management System on their mobile device
- Using their mobile device as a study tool
- Playing an educational game (e.g. Words with Friends) on their mobile device
- None of the above
- I don't have a clue
- Other: _____

Perception of Mobile Device Utilization in the Classroom

14. My students would be more likely to participate in class activities (excluding class discussions) outside of class time if they could do so through their mobile device.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

15. My students would be more likely to engage in class discussions inside of class if they could post their thoughts from their mobile devices.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

16. My students would be more likely to engage in class discussions outside of class if they could post their thoughts from their mobile devices.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

17. My students would be more likely to ask for help if they could communicate through their mobile device.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

18. Mobile learning should be incorporated into classes.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

19. Students should be able to easily view course materials (syllabus, notes, assignments) on their mobile device.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

20. Students should be able to download mobile applications that could help them study.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

21. Students should be able to access Educational Management Systems in a mobile format on their mobile device.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

22. Students should be able to take quizzes on their mobile devices.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

23. Students should be able to participate in discussion forums from their mobile device.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

24. It would not require a lot of effort for students to learn how to use a mobile application designed for my class.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

25. Learning on a personal mobile device would be easy for students because they are already familiar with all of its functions.

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

26. It would be easy for students to engage in discussions (comment) using a mobile application or website in mobile format.

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

27. Mobile learning opportunities would allow students to learn and study in places they couldn't normally.

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

28. It would be easier for students to complete classwork and assignments if they could use their mobile device.

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

Perception of Mobile Device Usage on Students' Learning Engagement in High School Classrooms

29. I believe students can be taught how to appropriately use mobile devices for learning.

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

30. I believe students should be able to use mobile devices as learning tools in my classroom to improve comprehension.

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

31. I believe using mobile applications for learning in my classroom would benefit students' writing skills.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

32. I think students would be more motivated to learn if they could use mobile devices.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

33. Students would think it's fun to use an interactive mobile device in my classroom.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

34. I believe using mobile applications as learning tools in my classroom would improve student literacy.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

35. I would like my students to be able to use mobile devices to access course content and practice skills.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

36. I would like to learn more about mobile learning, so that I can incorporate it in my classroom.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

37. I would like to learn how to create mobile applications, so that I can incorporate them into my lessons.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

38. Choose the statement that most resembles your attitude toward incorporating mobile learning in your future classroom.
- I will be able to effectively incorporate mobile learning into my classroom.
- I will be able to effectively incorporate mobile learning into my classroom with training.
- I don't think I will be able to incorporate mobile learning into my classroom.

39. Students should be able to participate in discussion forums from their mobile devices.

_____

_____

Faculty Opinions on Social Media Use

40. Social media can be a valuable tool for collaborative learning.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

41. Use of social media in the classroom would lead to increased instances of cyber bullying.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

42. Videos, podcasts, and blogs are valuable tools for teaching.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

43. School districts should lift bans and allow schools to use social media in secondary schools.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

44. The use of social media in the classroom would increase my students' engagement in learning activities.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

45. Texting weakens students' writing and verbal skills.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

46. Texting is form of communication that is becoming very effective.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

47. Texting is often substituted for oral conversation.
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

Personal Concerns

48. If the school district allowed students to use mobile devices in the classroom as learning tools, would you be willing to receive professional development and training in the use of such mobile devices?
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

49. If the school district allowed students to use mobile devices in the classroom as learning tools, would you be willing to use your personal mobile device and cell phone contract to facilitate student learning?
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

50. If the school district allowed students to use mobile devices in the classroom as learning tools, would you expect your school district to provide both you and your students with mobile learning devices and technical support such as data packages, text messaging, educational apps, etc.?
- Strongly disagree
- Disagree
- Agree
- Strongly Agree

51. If the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way you communicate with students. Students would have access to your time beyond the traditional school day. Would you be in favor of this infringement on your time outside of school hours?

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

52. If the school district allowed students to use mobile devices in the classroom as learning tools, student use of mobile devices in the classroom and outside the classroom would change the way you communicate with students. Are you concerned about the possibility of inappropriate communication between teachers and students?

- Strongly disagree
- Disagree
- Agree
- Strongly Agree

APPENDIX B
NATION'S TEACHERS DESCRIBE 21ST CENTURY STUDENTS

Our mobile learning survey shows that teachers are in agreement that student engagement in learning activities would improve via mobile devices in the classroom. An enhancement to student engagement is a thorough knowledge and understanding of the characteristics of the 21st century or millennial student and the teachers of those students as well. The information below, Learning in the 21st Century: Teaching Today's Students on Their Terms (2007) provide a quick glance at the 21st century student.

Today, information and communications technologies (ICTs) infiltrate classroom around the world at an exceedingly rapid pace. Millennials, the current generation of students, were born between 1980 and 2000. On average, Millennials spend 6.5 hours each day saturated in print, electronic, digital, broadcast and news media. They listen to and record music; view, create and publish Internet content; play video games; watch television; talk on mobile phones and instant message every day (Learning in the 21st Century: Teaching Today's Students on Their Terms, 2009 p. 3).

Research shows that these young people share the following characteristics:

- **They like to be in control**. Millennials do not want to be bound by traditional schedules, and they do not necessarily want to sit in a classroom to learn or in an office to work. They prefer activity.
- **They like choice**. In project-based environments, Millennials use technology to complete tasks in new and creative ways.

- **They are group-oriented and social**. Relentlessly exposed to the world via the media, Millennials constantly network socially. They are highly collaborative; sharing what they learn with others actually helps them create their own personal identities.
- **They are inclusive**. Millennials have been taught to be tolerant of all races, religions and sexual orientations. They are not limited by the information available at their local library or by linear searched in encyclopedias on topics.
- **They are practiced users of digital technology**. The Millennial generation is the first to be surrounded by digital media. Millennials can perform more functions with mobile phones, handheld devices and other wireless equipment than they can with traditional computers. They often prefer computer-mediated communication and have developed their own language, which consists of acronyms like "LOL" ("Laughing out loud"), "ATM" ("At the moment"), "BTW" ("By the way") and other Internet slang (Learning in the 21st Century: Teaching Today's Students on Their Terms, 2009 p.4).
- **They think differently**. Technology itself is not amazing to Millennials. As former generations first try to understand how a new technology works, this generation does not marvel at it; Millennials simply accept technology, adapt to it and use it.
- **They are more likely to take risks**. The dot-com boom of the late 1990's resulted when early Millennials shared a common mentality.
- **They value time off because they view life as uncertain**. Millennials watched events like the 1999 shooting massacre at Columbine High School and the terrorist attacks on September 11, 2001, live on television. As a result of these tragedies, they view life differently. They observe their parents working hard in anticipation of earning a certain status or achievement level before taking a break. In response, Millennials want their

own time—and when it is free—to be dictated according to their own terms (Learning in the 21st Century: Teaching Today's Students on Their Terms, 2009 p.4).

A note about teachers who instruct the Millennials revealed that through research, the National Education Association has determined today's teachers are generally white, female, 43 years old and married. They are more educated and experienced than teachers of the past; more than half hold advanced degrees and have 15 years or more of experience. And, of course, these teachers are seeing their work and their classroom transform as they improve their lessons and teaching using technology (Learning in the 21st Century: Teaching Today's Students on Their Terms, 2009 p.5).

- **They may resist learning about new technology.** Coming from the Baby Boom generation and somewhat reluctant to adopt new technology too quickly, some educators feel intimidated by students' knowledge of tools they do not understand.
- **They work in environments where professional development is under-emphasized and undervalued by their employers.**
- **They need support and planning time.**
- **New technology takes them out of their comfort zones.** Technology requires teachers to play more of a facilitator role—rather than a more directive or authoritative one. This new role conflicts with traditional teaching methods and requires teachers to step back and allow learning to happen without their hands-on direction (Learning in the 21st Century: Teaching Today's Students on Their Terms, 2009 p.5).

The classroom has changed since Millennials began moving through today's school systems. As teachers work to engage and educate this generation of students, they face the following challenges:

- **Learning must be relevant to students.**
- **Technology can be distracting.** Although Millennials respond best to high technology, these students and—more often—their teachers may become very distracted by it.
- **Technology can be expensive.**
- **Millennials risk being over-schooled and overworked.** The most scheduled generation ever, Millennials are pushed to succeed unlike any previous generation (Learning in the 21st Century: Teaching Today's Students on Their Terms, 2009 p.5).

APPENDIX C
CREATIVE LIST OF CHAT ACRONYMS USED IN TEXT MESSAGING (SHORTHAND, INITIALISMS, OR ABBREVIATIONS)

As teachers across the nation embrace and implement information and communications technologies (ICT) in the classroom via mobile devices, it would be wise for teachers to learn the chat acronyms or shorthand that the 21st century student (millennial) uses in everyday conversation. Standard writing and communication are the accepted norm, but often times abbreviations filter creep into the texting and writing. Here is an annotated list of chat acronyms taken from Netlingo (n.d.)

143- I love you
182- I hate you
2G2BT- Too good to be true
2moro- Tomorrow
2nite- Tonight
303- Mom
411- Information
4EVER- Forever
9- Parent watching
99- Parent is no longer watching
AWOL- Absent without leave
AYK- As you know
BC- Because
BFF- Best friends forever
BMOC- Big man on campus
BTDT- Been there done that
BTDTGTS- Been there done that got the tee-shirt
BYOB- Bring your own bottle
CRB- Come right back
CYL- See you later
DF- Dear friend
DGT- Don't go there
DWB- Don't write back
FAQ- Frequently asked question
FEAR- Forget everything and run
FOFL- Falling on floor laughing
G2G- Got to go
G4I- Go for it
GIWIST- Gee, I wish I'd said that
GR2BR- Good riddance to bad rubbish
GR8- Great
GT- Good try
HAND- Have a nice day
HB- Hurry back
HIG- How's it going
HTH- Hope this helps
HU- Hook up
HUGZ- Hugs
IDKY- I do not know you
IYD- In your dreams
IGTP- I get the point
IHNO- I have no opinion
ILMJ- I love my job
IOH- I am outta here
ITA- I totally agree
J2LYK- Just to let you know
J4Y- Just for you
JAM- Just a minute
JTOU- Just thinking of you
KB- Kick butt
KISS- Keep it simple stupid
KOTC- Kiss on the cheek
LMKHTWOFY- Let me know how that works out for you
LMOA- Left message on your answering machine
LOL- Laughing out loud
MYL- Mind your language
OMG- Oh my God
OMW- On my way
OTP- On the phone
SMT- Something
SNERT-Snotty nosed egotistical rotten teenager
SWALK- Sealed with a loving kiss

QT- Cutie **RL-** Real life
SYL- See you later
TTYT- Talk to you tomorrow
TISNT- That is not true
R- Are
RHIP- Rank has its privileges
TISNT- That is not true
R- Are
RHIP- Rank has its privileges
PWCB- Person will call back
ROTFL- Rolling on the floor laughing
RUT- Are you there
S- Smile
S2U- Same to you
TY- Thank you
UR- You are
UTM-You tell me
WE- Whatever
WOG- Wise old guy
WTG- Way to go
WYP- What's your problem
XOXO- Hugs and kisses
YGBK- You gotta be kidding
YGM- You've got mail
YOYO- You're on your own
YSIC- Why should I care
YSK- You should know
YTB- You're the best
YTTT- You talk too much
YW- You're welcome
YWIA- You're welcome in advance
YYSSW- Yeah, yeah sure sure whatever
ZZZ- Sleeping, bored, tired

APPENDIX D
INSTITUTIONAL REVIEW BOARD APPROVAL

LSU
LOUISIANA STATE UNIVERSITY
College of Humanities & Social Sciences
Department of Psychology

September 24, 2013

To: Gary Byerly
Dean of the Graduate School
Louisiana State University

Through Matthew Lee
Associate Vice Chancellor

This week I was informed by a graduate student, Rodney J. Johnson, in the School of Human Resource Education that he defended his dissertation but never went through the IRB. His major professor is Dr. Krisanna Machtmes, who has since left LSU. His major professor had told him she would submit the IRB protocol, but she acknowledges that it never got submitted.

I met with Mr. Johnson on September 24. I also asked him to prepare the exemption materials he should have submitted earlier. I told him it is not possible for the IRB to give retroactive approval to a study. However, I would review his project and send my recommendations to you.

Mr. Johnson's study involved surveys of high school teachers. His survey does not cover any sensitive questions. His sample does not include any vulnerable people. He obtained oral consent from his participants but not written consent. He told participants the study was confidential. These procedures would be allowed under IRB rules if he had applied for an exemption. Had he applied for an exemption, it would have been granted.

I found no evidence that he harmed anyone in his study.

In summary, I believe that, while putting LSU in jeopardy of federal audits by violating LSU policy on the use of human subjects, he did no harm to any of his participants.

Sincerely,

Robert C. Mathews,

Chair LSU Institutional Review Board

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psychology@lsu.edu • www.lsu.edu/psychology

APPENDIX E
CONSENT FORM

Study Title: Based On Teacher Perceptions, Would The Use Of Social Media Via Mobile Devices In Grades 9-12 Classrooms Increase Student Engagement In Learning Activities?

Performance Site: Louisiana State University at Baton Rouge

Investigator: The following investigators are available for questions about this study: Rodney Johnson, 337-948-9891, 337-331-2121; e-mail: rjjohnson@tigers.lsu.edu, rodney7232@att.net

Purpose of the study: The purpose of this study is to understand how 9-12 grade high school teachers think about using social media via mobile devices in the classroom. The study will also investigate teachers' prior knowledge, their perceptions, their opinions, and concerns about the use of mobile devices to increase student learning engagement. The study will examine what high school teachers think about the use of mobile devices inside and outside of class and the impact that their devices have on student learning. Finally, the student will study the variance of perceptions based on age, gender, ethnicity, certification, and number of years in education.

Subject inclusion: 9^{th}-12^{th} grade secondary school teachers from seven public schools in one southern Louisiana parish

Study procedures: Teachers will be asked to participate in a 15-20 minute survey on line or on paper. The survey will consist of 52 questions. The focus is on teachers' perceptions of the use of social media via mobile devices in 9-12 grade classrooms to increase student engagement in learning activities.

Benefits: Subjects will not receive any monetary benefits from this study.

Risks: This study does not present any risks for participants.

Right to refuse: Subjects may choose not to participate or withdraw from the study at any time without penalty or loss of any benefits to which they might otherwise be entitled.

Privacy: Results of the study may be published, but no names or identifying information will be included in the publication. Subject identity will remain confidential since no names were placed on surveys.

Signature: This has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifications to the investigator. If I have questions about subjects' rights or other concerns, I can contact Robert C. Matthews, Institutional Review Board, (225) 578-8692. I agree to participate in the study described above and acknowledge the investigator's obligation to provide me with a signed copy of this consent form.

APPENDIX F
SURVEY INITIAL CONTACT

Survey Initial Contact

Dear Secondary Educator:

In recent years, there has been an increase in the debate over the use of social media networking in the schools. I am conducting a study based on teacher observations on the use of social media in secondary schools.

You have been selected to participate in this study because of your volunteer service with the state 4-H Youth Development Program. As a secondary school educator who works with students everyday, your unique perspective, observations and opinions are valuable to this study and research.

Your help is needed by filling out a Web-based questionnaire which will take approximately 15-20 minutes to complete. Participation in this study is completely voluntary and your responses will remain strictly confidential.

By completing this survey, you are agreeing to participate in this study. If you have any concerns or questions about your right as a participant, please contact Robert C. Mathews, Institutional Review Board Chairman, LSU at (225) 578-8692 or irb@lsu.edu.

If you prefer responding to a paper-based questionnaire, I would be glad to mail you one if you emailed me your physical address at rjjohnso@tigers.lsu.edu.

Thank you for your assistance with this study. Feel free to contact us if you have any questions or concerns.

Sincerely,

Rodney J. Johnson
Doctoral Candidate
School of Human Resource Education
rjjohnso@tigers.lsu.edu
(337) 948-9891

Krisanna Machtmes, PhD
Associate Professor
School of Human Resource Education
Louisiana State University
machtme@lsu.edu
(225) 578-7844

APPENDIX G
SURVEY FIRST REMINDER

Survey First Reminder

Dear Secondary Educator:

A Web-based social media networking questionnaire was emailed to you a couple of days ago. It is for a study based on teacher observations aimed at assessing the impact of the use of social media in the secondary classroom. As a secondary school educator, you unique perspective, observations and
Opinions are valuable to this study.

If you have not completed the survey, please do so today by clicking on the link below. It will only take 10-15 minutes of your time. Participation in this study is completely voluntary. Your responses will remain strictly confidential.

If you prefer responding to a paper-based questionnaire, I would be glad to mail you one if you emailed me your physical address at rjjohnso@tiger.lsu.edu. Please feel free to contact me if you have any questions or concerns.

By completing this survey, you are agreeing to participate in this study. If you have any concerns or questions about your rights as a participant, please contact Robert C. Mathews, Institutional Review Board Chairman, LSU at (225) 578-8692 or irb@lsu.edu.

COMPLETE THE SURVEY BY CLICKING ON THE LINK AT THE END OF THIS EMAIL.

Thank you for your assistance with this study.

Sincerely,

Rodney J. Johnson
Doctoral Candidate
School of Human Resource Education
rjjohnso@tigers.lsu.edu
(337) 948-9891

Krisanna Machtmes, PhD
Associate Professor
School of Human Resource Education
Louisiana State University
machtme@lsu.edu
(225) 578-7844

APPENDIX H
SURVEY SECOND REMINDER

Survey Second Reminder

Dear Secondary Educator:

Your participation is still needed in a 15-20 minute Web-based adult learning questionnaire. Please accept my sincere gratitude if you have already completed the questionnaire. If you have not, please do so by clicking the link at the end of this email.

As a secondary educator, your unique perspective, observations, and opinions are valuable to understanding the readiness of adults to engage in learning throughout life. Your participation is vital to the success of this study.

Participation in this study is completely voluntary and your responses will remain strictly confidential. If you prefer responding to a paper-based questionnaire, I would be glad to mail you one if you emailed me your physical address at rjjohnso@tiger.lsu.edu. Please feel free to contact me if you have any questions or concerns.

By completing this survey, you are agreeing to participate in this study. If you have any concerns or questions about your rights as a participant, please contact Robert C. Mathews, Institutional Review Board Chairman, LSU at (225) 578-8692 or irb@lsu.edu.

Sincerely,

Rodney J. Johnson
Doctoral Candidate
School of Human Resource Education
rjjohnso@tigers.lsu.edu
(337) 948-9891

Krisanna Machtmes, PhD
Associate Professor
School of Human Resource Education
Louisiana State University
machtme@lsu.edu
(225) 578-7844

APPENDIX I
SURVEY THIRD REMINDER

Survey Third Reminder

Dear Secondary Educator:

This is your final chance to participate in a very timely Web-based study. Please accept my sincere gratitude if you have already completed the questionnaire. If you have not, please do so by clicking the link at the end of this email.

As a secondary educator, you unique perspective, observations, and opinions are valuable to understanding the readiness of adults to engage in learning throughout life. Your participation is vital to the success of this study.

Participation in this study is completely voluntary and your responses will remain strictly confidential. If you prefer responding to a paper-based questionnaire, I would be glad to mail you one if you emailed me your physical address at rjjohnso@tiger.lsu.edu. Please feel free to contact me if you have any questions or concerns.

By completing this survey, you are agreeing to participate in this study. If you have any concerns or questions about your rights as a participant, please contact Robert C. Mathews, Institutional Review Board Chairman, LSU at (225) 578-8692 or irb@lsu.edu.

Sincerely,

Rodney J. Johnson
Doctoral Candidate
School of Human Resource Education
rjjohnso@tigers.lsu.edu
(337) 948-9891

Krisanna Machtmes, PhD
Associate Professor
School of Human Resource Education
Louisiana State University
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APPENDIX J
SURVEY THANK YOU

Survey Thank You

Dear Secondary Educators:

I would like to take this opportunity to thank you for participating in the Web-based questionnaire based on teacher observations on the use of social networking in the secondary classroom.

We appreciate your interest, perspective and opinions on this timely subject. Your insight is quite valuable to this study.

Sincerely,

Rodney J. Johnson
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APPENDIX K
SURVEY PARTICIPANTS' WRITTEN RESPONSES TO MOBILE LEARNING SURVEY STATEMENT 39

- I don't agree.
- I think students would play on their phones instead of doing educational things.
- Is this a question? Again, mobile devices are not allowed at school. In fact, I as the teacher am not allowed to have "electronic devices." Until our backwards school board changes their policies, mobile learning is not an option.
- No they would text or play on social media.
- None applicable to my group.
- Not in class.
- The mobile device will hinder social interaction. It definitely would hinder written communication because mobile communication has its own abbreviated language and students are currently struggling with basic sentence structure and proper grammar as well as the correct spelling of various words.
- No, I don't believe students should be able to participate in discussion forums from a mobile device. Society already depends on technology far too much in my opinion. Also, social networking applications are causing too much drama between teens. My survey answers may seem that they are contradicting one another. However I answered in this way because I definitely realize that students would love to use mobile devices in the classroom. I do not agree that they should use mobile devices in the classroom because I feel that teachers are already having to "entertain" students entirely too much. I am young and I do understand that times have changed, but I guess I am old-fashioned in

that I believe in self-discipline and hard work, not only fun. It's great to make learning fun, but why does it have to be mainly in the form of technology? What happens if we lose technology one day? Will anyone know how to write anymore? Text is already ruining grammar skills and mechanics just as calculators are ruining math skills. What is wrong with a pen, pencil, books and good examples? Sorry for sounding like Ray Bradbury in his short story "The Pedestrian" or "There Will Come Soft Rains", but I feel like we are backtracking in education instead of moving forward. In a sense we are watering down everything for students and leaving more children behind in the process.

A total of 6 responses indicated that participants were not sure of a direct yes or no answer. Those results follow:

- Need more training.
- Equity is a huge issue here. While I'm all for using mobile devices in the classroom not all students have these so if it becomes a mandatory thing it is unfair to those of certain socioeconomic statuses.
- If it were in a professional setting with strict rules.
- In my area of my school, not all students have access to a mobile device. Internet at home is an issue. This would be an obstacle and added expense for my students.
- ? (Response was a question mark)
- As long as it is not during class time.

APPENDIX L
SURVEY PARTICIPANTS' WRITTEN RESPONSES TO MOBILE LEARNING SURVEY STATEMENT 13

Statement #13 on the Mobile Learning Survey for High School Teachers included a written response adjacent to "Other". A total of 16 participants responded to "Other" by either placing a check mark or by giving a written statement. There were five participants who checked "Other" with no written response; one participant placed a question mark (?); and ten participants wrote statements addressing how they thought their students were using mobile devices. Their responses are listed as they were written:

- Texting people outside of school.
- Taking pictures of tests and assignments to send to other students to cheat.
- Texting but not about school.
- Texting on neighborhood issues and creating school problems.
- Taking pictures or videos to upload to social media.
- In addition to all that which is listed above, I think my students are visiting sites that they should not visit. This includes people in other classes, people outside of school, taking pictures of tests, downloading music for entertainment, downloading inappropriate pictures, videoing events that they should not. These bad habits are similar to violations of internet usage policies as they pertain to computer use.
- Contacting parents when situations do not go their way.
- Cheating and bullying.
- Giving answers.
- Playing games, listening to music and bullying.

APPENDIX M
ACCEPTABLE USE AND AVAILABILITY POLICIES

Since the Mobile Learning Survey addressed teachers and their perceptions of how social media could be used in high school classrooms via mobile devices, Kip Rogers (2011) in his book Mobile Learning Devices provided a comprehensive list of learning activities mobile learning devices.

Rogers (2011) provided in his book a sample class survey of Mobile Learning Device use and availability, a sample letter to families regarding cell phone use in class and a sample policy on acceptable use of the cell phone in class. These samples can be modified to fit each school that uses social media via mobile devices and are absolutely necessary to communicate with parents and to set guidelines for acceptable cell phone use in the classroom. These samples are reproducible as stated by the author and are used as models for teachers.

Class Survey of Mobile Learning Device Use and Availability

Name _____

1. Do you own a cell phone? □ Yes □ No

2. What features do you have on your cell phone? (check all that apply)

□ Calculator	□ Tip Calculator	□ Camera
□ Video Camera	□ Stop Watch	□ Alarm
□ Internet	□ Text Messaging	□ Multimedia Messaging
□ Address Book	□ Blue Tooth	□ Voice Recorder
□ Memo Pad	□ Other _____	□ Other _____

3. How many text messages are you allowed to use per month?

_____

4. How many cell phone talking minutes can you see per month?

_____

5. What cell phone features do you use most often?

_____

_____

6. How often do you feel about being able to use your cell phone in class to learn?

_____

_____

_____

Sample Letter to Families Regarding Cell Phone in Class

Dear Family,

As part of 21st century leaning, students in our class will be participating in an instructional unit in which they will be allowed to use their cell phones in class. Students who have cell phones will be able to use the following features:

- Calculator
- Stopwatch
- Camera and/or video
- Text messaging (if available)

Acceptable use of cell phones during classroom use is expected. Our policy on acceptable use of cell phones in class is attached. Please go over the policy with your child, sign, and return.

We are looking forward to doing some exciting activities using the cell phone in class that will enhance student understanding of district, state, and national standards. If you have questions, please do not hesitate to contact me at _____.

□ □

My child _____,

□ has my permission to use the text messaging feature on his/her cell phone.

□ has my permission to use limited text messaging on his/her cell phone and should not go over _____ [number] sent/received text messages.

We have discussed the acceptable classroom use of the cell phone.

_____

Parent's signature

_____

Student's signature

_____

Teacher's signature

Sample Policy on Acceptable Use of Cell Phone in Class

Name _____

1. Students will use their cell phones to only complete assignments that are related to the instructional lesson.

2. Students will keep cell phones turned off or left in lockers when they are not being used for instructional purposes in class.

3. Students will only send text messages, pictures, or video messages to others outside of the classroom with permission and directions from the teacher.

4. Students will not record still or moving images or voices of students or the teacher without permission from the teacher.

5. Students will not post recordings of still or moving images or voice recordings of students or the teacher online without their permission.

6. Students will practice Internet safety with online resources.

7. Students will post only appropriate text, audio, and visual media to online websites.

□ □

I _____ understand that violation of our class acceptable cell phone use policy may result in my not being able to participate in additional class activities that involve using the cell phone. I also understand that I may receive disciplinary consequences for violating school board policies regarding cyberbullying.

_____
Parent's signature

_____
Student's signature

_____
Teacher's signature

APPENDIX N
MOBILE LESSON PLAN SAMPLES

Mobile Learning Lesson Plans

Lesson Plan	Lesson Plan Name	Description of Lesson Plan
Lesson Plan 1	Collecting Biological Phenomena in Everyday Life	As a homework assignment, students will use their cell phones to take pictures and/or videos of biological organisms that they encounter on their everyday travels.
Lesson Plan 2	Local History Scavenger Hunt	Students will work in groups to complete a mobile scavenger hunt on local history. The students will travel to find clues, collect images, and complete challenges at the clue locations.
Lesson Plan 3	Periodic Table Ringtones and Review	Students will use their cell phones to create ringtone raps and jingles about chemical elements from the periodic table.
Lesson Plan 4	Geometry Digital Blogging Books	Students will use their cell phones to record their observations about geometric shapes in their everyday lives and put them onto a web log. They will use their cell phones to capture both images and audio.
Lesson Plan 5	Summarizing by Text-messaging Shakespeare	English students will text their 140-character summaries of the homework reading from *Romeo and Juliet* to an interactive web screen.
Lesson Plan 6	Peer Review and Collaboration	Using chat tools and/or voice recorders, students will construct a short text using a voice recording device and then work with a partner to analyze and deconstruct the text.
Lesson Plan 7	Using Basic Digital Cameras to Engage Reluctant Writers	Students will use digital cameras to record a frozen dramatic scene from relevant class text and then use the scene to retell the original narrative.

Note. Adapted from *Scholastic Magazine*, "Mobile learning lesson plans," 2012, p. 1.

MP3 Podcast Poetry Lesson Plan

Content Area**:** Language Arts/All Contents
Grade Levels: 4-12
Features and Materials: MP3 player, Audacity, or GarageBand
ISTE Standards: Creativity and innovation (1a, 1b), Technology Operations and Concepts (6a, 6b)
21st Century Skills: Communication, collaboration, creativity, and innovation
Activity Overview
In this activity, students will be given an opportunity to use their favorite song as inspiration to create and record a podcast of an original poem that is a spinoff of their favorite song. The students will then download each other's poems and identify several elements of poetry within each poem.
Procedure
1. Place students in groups of two or three. Have the group decide on a song to use for the activity. Students should work together to write the poem. The poem should be a continuation of the song, a response to the song, or a parody of the song.
2. Ask students to create a plan for their podcast. The plan should specify which student will read the poem and any music that will be used before, during, or after the podcast.
3. The reader should practice reading the poem to other students in the group. Have the students record the poem using Audacity or GarageBand (or any available digital audio recording software).
4. Ask students to publish the podcasts and upload them to a class website for other students in the class to be able to download to an MP3 player.
5. Ask students to download any two podcasts to their MP3 players and listen to them.
6. Ask students to identify any of the following elements of poetry: figurative language, rhyme, alliteration, and onomatopoeia, as well as any vivid words used in the poem.
Extension
Have a student or another staff member record several famous poems on an MP3 player, and use the MP3 player as part of a center activity. Ask students to compare and contrast two recorded poems on a Venn diagram.

iPod Electronic Lab Report Lesson Plan

Content Area: Science
Grade Levels: 4-12
Features and Materials: GarageBand, iMovie, cell phone camera or digital camera, and Photobucket.com
ISTE Standards: Creativity and innovation (1a, 1b), Technology Operations and Concepts (6a, 6b)
21st Century Skills: Communication, collaboration, creativity, and innovation
Activity Overview
In this activity, students will be given an opportunity to listen to audio directions to complete a science lab activity. The students will then create an electronic lab report that summarizes their experiment.
Procedure
1. Place students into cooperative learning groups with an iPod. Ask them to listen to the directions for the lab activity as they go through the steps to complete the lab.
2. Ask students to use their cell phones to take photographs of the different stages of the experiment. Ask students to upload the photographs to Photobucket and then download the photos to a school computer.
3. After students have completed the experiment, ask them to use an iPod with a voice recorder to summarize their findings (the conclusions) of the experiment.
4. Ask students to upload their pictures and the MP3 audio file to their computer and create a short iMovie that summarizes their experiment.
5. Upload student movie to a class website, YouTube, or SchoolTube channel for sharing with other students.
Extension
1. Do the same activity with any content area, and include video.
2. Ask students to create a science safety podcast or iMovie for sharing with other students.

iPod Touch Vocabulary Lesson Plan

Content Area: All contents (vocabulary study)
Grade Levels: 3-12
Features and Materials**:** iPod touch, Google Docs (Spreadsheet), Laptops, GFlashApp, and Wi-Fi Internet access
ISTE Standards: Creativity and innovation (1a, 1b), Research and Information Fluency (3b), Technology Operations and Concepts (6a, 6b)
21st Century Skills**:** Communication and collaboration
Activity Overview
In this activity, students will summarize definitions of vocabulary words and create electronic flash cards to use when studying.
Before the Lesson
1. Set up a free Google account at www.google.com by selecting the Gmail
link on the top left of the screen and then choosing "Sign up for Gmail."
2. After you set up Gmail, select the Documents link to set up your Google Docs, which allows you to create and edit spreadsheets.
3. Download the free GFlash app to all iPod touch devices you wish to use.
4. Go to Gwhizmobile.com/desktop/creating.php and download the flash card template form that works with Google Spreadsheet.
5. Create a spreadsheet in Google Docs, and name the spreadsheet for the unit of study, for example, "Geometry Ch.2 Vocabulary."
Procedure
Help each student create his or her own Google account in class. In Google Docs, invite all students to contribute to the Google Spreadsheet.
1. Place students into several small groups of two or three. Assign each group to a laptop. Give each group equal amounts of vocabulary words that are related to the current unit of study.
2. Have each group open the Google spreadsheet. Explain to students that they will enter vocabulary words in column A and a summarized definition for each vocabulary word in column B of the Google Spreadsheet. All students will contribute to the same document at the same time. Ask students to take turns using the flash cards by asking each other questions.
Extension
1. There are several options on GFlash that students can use with the flash cards, for example, multiple-choice function and reverse question and answers.
2. Ask two students to select vocabulary words and compare their similarities and differences on a Venn diagram.
3. Students can add pictures and sound to the cards or even a third and fourth side to a card.

VITA

Rodney J. Johnson was born in Opelousas, Louisiana, and attended school in the Acadiana area, graduating with honors from Opelousas High School. He later attended Louisiana State University, receiving a Bachelor of Science degree in English Education, a Master's degree in Education and Administration, and a Master's plus 30. He completed his Ed.D. in Administration from California C. University in 1996. He holds membership and leadership roles in several local, professional, and social organizations.

Professionally, he has served as a high school teacher, assistant principal, and is presently serving as the principal of Opelousas High School. He also has served as an adjunct professor at Louisiana State University in Eunice since 1996. He is currently a candidate for the Doctor of Philosophy Degree in the School of Human Resource Education and Workforce Development at L.S.U. to be awarded in May, 2014. Rodney currently resides in Opelousas, Louisiana.