COMMON CHARACTERISTICS OF YOUNG PEOPLE WHO TEXT:

THE CONNECTION TO AUTONOMY, IDENTITY AND SELF-ESTEEM

by

Elizabeth M. Davis

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Approved:

Troy E. Beckert, Ph. D. D Major Professor	Ann M. Berghout Austin, Ph. Committee Member
Elizabeth B. Fauth, Ph. D. Committee Member	Byron R. Burnham, Ed. D Dean of Graduate Studies

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ABSTRACT

Common Characteristic of Adolescents Who Text: The Connection To Autonomy, Identity, and Self-Esteem

by

Elizabeth M. Davis, Master of Science

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Major Professor: Dr. Troy Beckert
Department: Family, Consumer, and Human Development

This study examined the relationship between adolescents' use of texting and their level of identity development, cognitive autonomy, and self-esteem. One hundred and nineteen Utah State University students participated in this study by filling out a questionnaire that included a section designed specifically to learn the texting habits of the participants, and also included sections derived from previously existing measures on identity, autonomy, and self-esteem.

The results show statistical significance of age and texting. Participants who were 23 years+ sent significantly less than those participants who were 19-22 years. Areas of gender, identity, and self-esteem were also analyzed. Implications of these findings for future research were also discussed.

(87 pages)

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CHAPTER I

INTRODUCTION

Mediums of communication have changed drastically in the last century, evolving from letters delivered by horsemen in the 1860s which progressed to a telegraph system that became widely used shortly thereafter (Bruno, 2009). A very efficient postal system was followed by the invention of the telephone which revolutionized communication. There have continued to be modifications and technological advancements until the present day when cell phones are not only a means of verbal communication, but also a device used for text messaging; taking, sending, and receiving photos; recording; sending and receiving video footage; and full internet access. Cell phones have progressed from being a luxury and novelty for the wealthy or the business class, to being not only a common household item but a convenience and necessity for individuals of all ages and most economic standings (Wei & Lo, 2006).

The advancements in technology in the last few decades have opened entirely new arenas of research for social scientists. Cell phone use among adolescents and emerging adults is of particular interest because adolescents incorporate technology-mediated communication more fully into their social lives than their older adult counterparts (Bryant, Sanders-Jackson, & Smallwood, 2006). In recent years there has been a marked increase in the number of cell phones owned and used by adolescents. The age at which someone is expected to have a cell phone has continued to decrease. Currently in some socioeconomic brackets, it is more unusual to find an adolescent who does not have a cell phone than an adolescent who does. Unfortunately, there is very little empirical research on the developmental implications of adolescent cell phone use. Most of the literature on

cell phone use among young people focuses on the physical dangers correlated to talking on the phone (or texting) while driving, or how cell phones are used for cyberbullying (Li, 2006).

Not only do we need more information and research on adolescents and emerging adults who own cell phones, but we also need more information on the specific ways that young people use their cell phones. Text messaging is an entirely new phenomenon. While having a cellular phone allows the user to speak to anyone at almost any time, text messaging allows the user to be in contact with multiple persons simultaneously, constantly, and in almost any circumstance. Texters are less inhibited by their circumstances and are able to maintain this type of instant communication almost constantly if they choose.

With a huge increase in teenage and emerging adult cell phone use, there has arisen a need for more understanding of their usage and what this use indicates. In addition, there is much to be learned about who uses text messaging and what developmental implications coincide with this use. Unfortunately, there is little empirical exploration on what young people talk about when they text and what the relationships are (if any) between texting and adolescent development.

The concepts of autonomy, identity, and self-esteem, are all vastly important to understanding adolescent development. The individual who is able to form a stable identity is more likely to make informed decisions regarding his or her life and maintain healthy levels of autonomy and self-esteem (Cobb, 2007), all of which are highly valued in the individualistic culture of the United States.

Because of the way adolescents' brains develop, they spend several years making decisions without the use of a fully developed pre-frontal cortex. The pre-frontal cortex is the part of the brain involved in short-term and long-term planning (Huttenlocher, 2002). Because the brain continues to develop well into adulthood, many adolescents make decisions concerning their future while relying heavily on their limbic system. The limbic system is the part of the brain that generates impulses and emotional reactions. This means that adolescents will be highly influenced by their emotions when making decisions. It makes intuitive sense that in order to understand and assist adolescents in making good decisions (despite the lack of complete brain development) it is important to understand their emotions particularly in respect to how they feel about themselves and possible factors which influence their feelings of self-esteem.

It also makes sense that in order to understand adolescents' level of development it is necessary to understand their ability to evaluate their own thoughts, self-assess, and make independent decisions. An adolescent who has developed the ability to use cognitive autonomy is better able to make important decisions which may impact their development. Understanding this allows researchers to examine outside influences on the adolescents' development (such as cell phone use).

There is insufficient information concerning the prevalence of cell phones among young people, the use of cell phones for texting among adolescents and emerging adults, and the possible influence this use could have on the development of their identity, their perceptions of their own autonomy and their level of self-esteem. There is also

insufficient information concerning how gender and age relate to the amount of texting done.

Statement of the Problem

Empirical information on the topic of cell phone use among adolescents and emerging adults is still greatly lacking in the scientific literature. This is unfortunate. Adolescence and emerging adulthood are developmental time periods that are both interesting and informative due to the multiple factors which are involved in adolescent development. These factors include the development of a stable identity, cognitive awareness, and the establishment and balance of a positive self-esteem. As previously mentioned, technology, especially any technology involving communication, is adapted more rapidly by this age group than any other. It would be both interesting and helpful to understand how this technology is used by this age group.

Much of the behavioral science literature focuses on the negative aspects of cell phone use among young people. Researchers have focused on unsafe driving habits and bullying (see Campbell, 2006; Raskauskas & Stoltz, 2007). While this information might be helpful in addressing negative cell phone behaviors, it leaves a significant amount of research still to be done in developmental areas of cell phone use among adolescents and emerging adults. There are many factors that affect how and why individuals use various forms of communication (Bryant et al., 2006). This study will focus on adolescents' and emerging adults' use of cell phone text messaging and its relationship to adolescent perceptions of their own level of autonomy, identity achieved, and self-esteem.

Purpose and Objectives

Research on developmental implications of adolescent and emerging adult cell phone text messaging is in its infancy. Information is needed regarding the extent to which young people send text messages. Additionally, there needs to be research done on what cell phone text messaging may indicate about areas of adolescent development. Is there a relationship between young peoples' text messaging habits and their own level of identity? Is there a relationship between text messaging habits and cognitive autonomy? And finally, is there a relationship between text messaging and level of self-esteem?

There is a large body of published research on developmental issues in adolescence including identity development, autonomy, and self-esteem. However, there is little reported as yet on how texting habits may link to the levels of identity, autonomy, and self-esteem among the users of these mediums of exchange.

In addition to learning about identity, autonomy, and self-esteem, the purpose of this study was to examine more about the connection between age, gender, and texting. More information is needed regarding common characteristics of texting such as: frequency of texting, where they text, and their perceptions of appropriate texting. The information acquired by this research is intended to be used as a starting point to assist others interested in doing similar research.

As an introductory step to understanding adolescents' and emerging adults' use of texting, it has been proposed that college students are a good initial source of information. This has been decided for several reasons. First, college students are

predominately categorized as emerging adults (as defined by Arnett, 2000). Second, emerging adults will have more of a history using their cell phone and so have more information concerning their "typical use." College students are often more developed cognitively and so will be better able to process and answer the questions regarding their own autonomy, identity, and self-esteem more accurately. Also, the varying ages of university students (17-23+) allow for age group comparisons. This will provide a good starting point to get accurate information on texting behaviors and how they influence these specific aspects of development.

Research Questions

The following research questions were used to guide this study:

1. What are common characteristics of adolescent and emerging adult texters?
2. Do gender and age relate to the number of texts sent?
3. Do the number of texts sent relate to adolescents' and emerging adults' perceptions of their own identity?
4. Do the number of texts sent relate to adolescents' and emerging adults' perceptions of their own autonomy?
5. Do the number of texts sent relate to adolescents' and emerging adults' self-esteem?

CHAPTER II

REVIEW OF THE LITERATURE

Over the past 25 years, the cell phone has gone from being a prop for science fiction movies to something commonly used by a vast number of the globe's population, including persons of all socioeconomic status and an increasingly wide range of ages (Anderson, 2007). Cell phone technology continues to advance rapidly, providing an ever-increasing capacity for communication. They offer not only the option of verbal communication but allow the individual to send text messages (also referred to as short message service, SMS), send and receive photographs and video clips, and send and receive email right on their phone (Walsh & White, 2007).

Texting is still a relatively new phenomenon; it has gained popularity only in the last 10 years, consequently there is very little empirical literature on texting. However, one of the interesting aspects of instant communication is that it is already so widely used and accepted (especially among the adolescent population) that for them, it barely falls into the category of technology but rather just a normal way of life (Lewis & Fabos, 2005). Texting is a relatively inexpensive form of communication that is easy and convenient; because of this it has gained popularity quite rapidly among the adolescent populations all over the world (Bryant et al., 2006).

The purpose of this study was to learn more about texting among young people and common characteristics of an adolescent or emerging adult texter (including age, gender, frequency of texting, and their perceptions regarding appropriate texting) and the level of identity they have achieved (Marcia, 1966). In addition, the relationship between

young people's use of texting and their perceptions of their own autonomy was examined. Also, the relationship between their use of texting and their level of self-esteem was examined. A brief history of the study of adolescence and review of the literature on adolescent identity, cognitive autonomy in adolescence, self-esteem, and adolescents' use of cell phones and text-messaging are below.

Adolescence

Sequential periods of development were proposed by both Plato and Aristotle, which included a middle period between childhood and before adulthood. The scientific study of adolescence (a term which means to grow up or grow into maturity) was initiated by G. Stanley Hall in 1904. Hall viewed adolescence as a time of storm and stress when children went from being beast-like to civilized (Steinberg & Lerner, 2004).

Although his theories were not widely accepted by other scholars of his time, his work sparked great interest in the field of adolescence and many great scholars followed. Anna Freud (1969), for example, viewed adolescent development as biologically driven, while Erikson (1963) saw this time period as one of inherited maturational growth (Steinberg & Lerner, 2004). All of these theorists, however, recognized the importance of the developmental period as one when adolescents begin to assert their independence, form a stable identity, and develop a stable sense of self-worth.

There are many theories on the multiple aspects adolescent development attempting to explain the physical, sexual, emotional, social, and cognitive development which occurs during this period. As previously mentioned, the focus of this research was

on adolescents' and emerging adults' use of text messaging and how that relates to the formation of a stable identity, their level of cognitive autonomy, and also their level of self-esteem.

Cell Phones

The first phone call made from a handheld cellular phone was made in Manhattan in April 1983; within less than 30 years about 2.8 billion people (out of 6.6 billion) have become cell phone users (Katz, 2007). In 2002, the number of subscribers to cell phones exceeded the number of fixed line subscribers on a global scale (Srivastava, 2005).

The research which has been done on cell phone use has shown some interesting results. A study conducted by Wei and Lo (2006) used the uses and gratifications theoretical framework to guide their research. They used multistage cluster sampling and ended up with 1,050 students (from 10 different colleges in Taiwan); 909 of these students elected to participate in the study by a questionnaire. Because this study was done in May 2001 such features as texting, photo messaging, and mobile internet were not yet available, therefore, they were not included in the questionnaire. The questionnaire was used to assess their levels of cell phones use (calls made and received) and the reasons for their cell phone use. The results of the analysis indicated that social connectedness is the predominant reason cited for owning and using a cell phone (Wei & Lo, 2006).

Cell phone technology has been adapted rapidly by adolescents. Ninety-four percent of the older teenagers in Norway had cell phones by the year 2001. A study in

Canada indicated that nearly half their teens (ages 15-19) owned cell phones by the year 2003. An interesting phenomenon in regard to cell phones is the relatively rapid adoption of cell phone use by adolescents in North America. Although its use has lagged behind other countries, it is quickly gaining popularity among North American adolescents (Campbell, 2006). According to a national survey done by CTIA and Harris Interactive (2008) approximately four out of every five teens in the United States carry a cell phone. This is a dramatic increase from the 40% of teens owning a cell phone in 2004.

When looking at gender differences, it is interesting to note that male and female adolescents (in North America) have taken up the cell phone in almost equal numbers. This is contrary to typical distribution of media trends which predict males as main users of new technologies (Campbell, 2006). There are many interesting aspects of cell phone use which remain to be explored.

Texting

It is interesting to note the changes in communication among adolescents even over the last decade. Ten years ago if you wanted to talk to a friend during class you passed notes with the help of your classmates and were careful to not get caught by the teacher. Now, passing notes has gone “high tech” and does not require the cooperation of your classmates. Texting has modernized the age old issue of passing notes; now “passing notes” may be done silently and quite subtly. One aspect of texting which makes it very popular among students is that physical proximity is no longer necessary in order to “pass notes” to friends. Texting makes it possible for students to electronically

"pass notes" (i.e., text) to anyone, not just their classmates. Also, texting may be done in mass quantities; one text may be sent to several friends, whereas paper notes required one per recipient.

Bryant and associates (2006) claim that adolescents are using cell phones to enhance their communication among family members, to make plans, and to maintain contact with friends when face-to-face communication is not an option. Texting is an easy, convenient and relatively inexpensive form of communication, it has become a highly popular choice among adolescent cell phone users (Bryant et al., 2006).

An additional incentive to use texting as a main means of communication is that there is an increased option to multi-task, therefore allowing the texter to engage in multiple activities at once. The ability to multi-task with texting is being evidenced more and more, even in the popular media. In the recent reality show "American Idol" an estimated 2.5 million votes were cast in favor of a favorite contestant via text message. While these numbers are not incredibly high, this show accepted only text messages from one cell phone provider (AT&T) which greatly limited the amount of participation (Amkey, 2003). This shows the beginning of an interesting trend in our society to rely on texting for a wide range of things, including casting our votes.

In addition to the option of multi-tasking, texting offers the unique option of being able to communicate at nontraditional times including: in the classroom, at work, and during the night. These times were previously neither socially acceptable nor feasible with the traditional telephone, but are now considered normal.

Research in this area has shown that even though texting is on the rise and has long surpassed other forms of communication (including email and Instant Messaging or IM) adolescents still tended to hold important conversations face-to-face (Bryant et al., 2006). This is very similar to the research on other types of instant communication, including IM and other forms of online communication. However, text messaging varies from other forms of instant communication in several aspects: one is that it is not anonymous; another is that you don't need a computer (or more importantly an internet connection) to send these messages, enabling it to be done anytime and almost anywhere.

Why Young People Text

According to some researchers, adolescents use these communication tools to enhance, enrich, or otherwise facilitate easier communication between the people with whom they are already in touch (Bryant et al., 2006). There is little research which indicates that texting increases the size of an adolescent's social network. Rather, the literature indicates that cell phones (and texting) supports or enhances existing relationships.

The results of some online surveys done by CTIA and Harris Interactive (2008) indicate that most teens prefer texting to talking due to the increased speed, privacy, and control afforded to the texter. Of the 2,089 adolescents surveyed, 42% reported that they can text blindfolded, and 47% indicated that without texting their social life would deteriorate or simply end. Additionally 40% said that a cell phone is the only phone that they will ever need.

Gender Differences in Cell Phones Use and Texting

Although there is not a lot of research on texting specifically, researchers have garnered some invaluable information regarding gender differences in other forms of communication. Empirical research done in the past has reported significant gender differences in the use of any form of a communication device. Research on the use of the fixed telephone indicated that women used the phone more and for longer periods of time; women used the phone primarily for social connections, to keep in touch with friends and family, and to stay connected with what was happening in the community (Wei & Lo, 2006).

Wei and Lo (2006) also indicated that when using the cellular phone women generally made and received more phone calls to and from both friends and family. Although their research was conducted before texting was a common feature on cellular phones, it is likely that the differences between the genders in their use of the cellular phone will also include their use of texting, and that females will use texting for the same reasons that they had previously used landlines.

Identity

Erikson (1968) recognized adolescence as a distinct developmental time period. He acknowledged in his theory that during adolescence the task is to form a stable identity. During this period of development adolescents gain the ability to think abstractly and to understand and consider hypothetical situations. Additionally, they mature physically and begin to experience changing expectations from significant adults

and peers. It is during this developmental period that adolescents begin to explore and form a stable identity.

The formation of identity is expedited by an adolescent's opportunity to explore (or experiment) in occupational, interpersonal, religious, and political realms of life. This time of exploration is referred to by Erikson (1968) as a psychosocial moratorium and ideally should allow the adolescent to form a fairly stable identity.

Marcia (1966), like Erikson, acknowledged adolescence as an important time period; he operationalized Erikson's work on psychosocial identity by classifying identity status into four levels. These levels are based on the exploration and commitment of an adolescent to interpersonal, religious, political, and occupational values. The four levels classified by Marcia are:

1. Achieved-the identity-achieved adolescent has had sufficient exploration (in these four categories of interpersonal, religion, politics, and occupation) and has made important commitments in these realms.

2. Moratorium-youth are still actively involved in the process of exploring their options; however, they have not made important commitments in these realms.

3. Foreclosed-youth have (without exploration) made strong commitments based mostly on the ideologies a significant adult figure.

4. Diffused-youth are both uncommitted and are typified by their lack of exploration.

In summary, an adolescent's identity is made up of a combination of stable characteristics such as goals, values, moral concerns, and outward components such as specific roles and behaviors (Walsh & White, 2007).

Most researchers have focused on identity formation in research on adolescence done by Arnett (2000) who has shown that identity achievement has rarely been reached by the end of high school and often continues on through the late teens and twenties. According to Arnett (2000), emerging adulthood is the developmental period between adolescence and adulthood, and is typlified by self-focused exploration. This is very similar to what Marcia (1966) classified as moratorium in his identity statuses.

Identity and Communication Technology

There have been interesting studies done on how certain technologies affect the formation of identity in adolescence and emerging adulthood. Dinter (2006) did a qualitative study on 12-18 year olds and through semi-structured interviews explored the role that computer and computer-based media have in their lives. Dinter concluded that computer use among adolescents did have an impact on adolescent identity formation. Computer use encouraged self-expression and the formation of social networks both of which may affect the development of a stable identity.

A similar study was done by Bers (2001), who indicated that experience in the virtual world through games, chat rooms, and social networking sites, offered a type of moratorium to young people. This virtual moratorium allowed them to explore different possibilities and actually helped them in the process of forming a stable identity. Although computer use and text-messaging are not the same, it makes logical sense that

if one communication technology has the ability to impact adolescent identity development, then other forms of communication-in this case text messaging-may have a similar impact.

Identity and Texting/Phones

Srivastava (2005) claimed that social interactions, and, therefore, aspects of identity, have been affected by cell phone use. In fact, the ability to expand and enhance one's social network may create a sense of identity for different groups of people, especially young people. According to Sheets, Fox, McGuire, and Spindler (2003), objects actually become a representation of the self; individuals are often aware of the symbolic nature of the items that others possess, and, therefore, people choose items which will influence others' impressions of themselves.

Walsh and White (2007) recently completed a study on identity and cell phone use, which focused on the identity effects that possessing a cell phone could have on their owner. They posited that because cell phones could be individualized through personalized ring tones, wallpapers, and decorative cases or covers, they may be used as a means of self-expression and may be a highly valued method of reflecting the owner's self-identity. This study included 252 university students who participated in two waves of data collection. The first measure administered (a self-report questionnaire) was used to assess the participants' identity influences. This included parts of an individual's identity which were highly valued. The second wave of data collection was a measure (also a self-report questionnaire) that assessed the participant's use of mobile phones during the previous week. The types of mobile phone use measured included: making or

receiving calls, texting (also referred to as short message services), or multimedia messaging services. A standard multiple regression analysis was conducted with mobile phone use as the dependent variable and the attitude (measured as identity influences) the independent variable. The linear combination significantly accounted for 59.5% of the variance of the intention to engage in high mobile phone use. These findings indicated that those participants who reported a positive attitude toward high levels of mobile phone use, perceived their peers (or others whose opinions they valued) as also having high approval for high use of a mobile phone. Identity emerged ($\beta = .25$, $p < .001$) as the strongest predictor of high mobile phone use (Walsh & White, 2007).

In addition to the status connected with the type of phone an individual possesses is the actual use of the phone; for example, some cell phone users engage in 'stage phoning' or speaking loudly on their phones to be noticed by others regardless of whether or not they are actually on the phone (Srivastava, 2005).

There has never been another technical device which has so rapidly become an integral aspect of human lives. It is unfortunate there is such a high probability that cell phones significantly affect individuals in a profound way, and yet there is currently so little research on the topic (Walsh & White, 2007).

According to Srivastava (2005), the cell phone has become the most intimate aspect of an individual's personal affects (e.g., keys, wallet, watch, money). Cell phones give the owner a sense of being constantly connected to the outside world. This feeling of connectedness may foster a sense of belonging which is an important aspect of

identity. The cell phone facilitates not only a sense of being constantly connected, but enhances the awareness of support from peers.

In summary, adolescence and emerging adulthood are both important developmental periods. The importance of identity formation in adolescence is a well-researched topic. There is considerable research which indicates that there are technologies including computers and cell phones which may have a profound impact on the adolescents who use them. The empirical literature also indicates that these technologies may influence the formation of their identity.

Autonomy

The construct of autonomy is described in the literature in a variety of ways; particularly in the psychosocial realm (Hila & Kulbok, 2004). Autonomy is often generalized as independence or the ability to act and make decisions independently. This was described by Sessa and Steinberg (1991) as, “a sense of self-reliance, a belief that one has control over his or her life, and subjective feelings of being able to make decisions without excessive social validation” (p. 42).

An important distinction is made in the literature regarding the cultural differences that exist in that autonomy is highly valued in some cultures and not as highly valued in others, depending on the worldview. It is predominantly a Western (specifically European-American) ideal to be independent and self-contained (Raef, 2004). So acknowledging that autonomy does not have the same priority between

cultures and worldviews, it is still (overall) considered an important component of adolescent and emerging adulthood development.

In addition to recognizing the cultural importance placed on autonomy, it is necessary to acknowledge that autonomy is not dichotomous, nor is autonomy a continuum of dependence and independence (Raef, 2004). Autonomy in adolescence is not a single concept; autonomy is actually a tripartite conceptualization which includes emotional autonomy, cognitive autonomy, and behavioral autonomy (Beckert, 2007). Although there is information on each of these aspects of autonomy, the literature on cognitive autonomy is not as abundant as behavioral and emotional autonomy.

Each aspect of autonomy is important and deserves empirical attention in research, however, the research questions which drove this study concern the connection between a young person's level of use of cell phones (specifically for texting) and their ability to be autonomous in their thoughts. As previously mentioned, the literature on the topic of cognitive autonomy is not abundant; it is only recently that researchers have begun to realize the implications of evaluating young peoples' impressions of their own thoughts (Beckert, 2007). A brief review of the existing literature on cognitive autonomy follows.

Cognitive autonomy implies an ability to have independent beliefs, mind-sets, and an ability to think for oneself without undue influence from either adult figures or peer groups (Sessa & Steinberg, 1991). It is not uncommon for adolescents to rely on advice or information from their friends to assist them in their decision-making processes

(Beckert, 2007). This is not an indication of cognitive autonomy, but rather an indicator that an adolescent is not yet able (or is not currently) using cognitive autonomy.

Cognitive autonomy indicates an ability to evaluate one's own thoughts, to make decisions independently, and to self-assess (Beckert, 2007). An adolescent or emerging adult who is able to use cognitive autonomy is better able to make decisions which will impact their future, and avoid unhealthy risk-taking behaviors.

Autonomy and Communication Technologies

Adolescents' and emerging adults' rapid uptake of all forms of communication technology suggest that if there is an effect (either positive or negative) from this use of technology that there should be evidence of those effects within this age group. Giles and Price (2008) examined the relationship between computer use among adolescents and their perceived level of parental control. Very few of the interactions between variables reached significance; however, they found a positive correlation between higher maternal control and high computer use. It is interesting that higher maternal control was predictive of higher computer use and problematic computer use (2.9 % and 3.9 % explained variance, respectively).

Although there is much research which needs to be done on the effects of autonomy in relation to technology, there are important insights which can be gained from the existing literature. It is possible that if high maternal control is related to increases, in an adolescent's use of the computer, that adolescents will likewise use other forms of communication technology to exert independence and explore their autonomy.

Autonomy and Texting

Adolescents' and emerging adults' desire for autonomy is not a new topic in the literature. There is an abundance of information on ways that young people seek to either gain or demonstrate their autonomy. However, of interest within this study is the connection between the adolescents' and emerging adults' perception of their own autonomy and how this perception may relate to their use of cell phones, in particular their texting habits.

Cell phone use among young people may be a demonstration of the autonomy they are seeking (or the autonomy they feel they have). Engaging in activities that are self-directed and rely on personal choices like texting, are expected to facilitate feelings of independence and autonomy (Weinstein & Mermelstein, 2007). For these young users, however, the cellular phone may be a technology of contradiction; used both in the development of a sense of autonomy and identity while simultaneously being used as a potential tool of social control (Campbell, 2006).

Campbell (2006) qualitatively interviewed eleven 14- to 17-year-old girls of middle class status and of Euro-Canadian descent. He conducted semi-structured interviews regarding their attitude toward their use of both home and cellular phones. He also asked questions regarding parental control, media influences (in particular advertising), and the possible impact of gender. Although the findings are not generalizable to the entire adolescent population, Campbell found that cell phones (not telephones) are viewed as a tool of connection, mobility, and style. Also, after an in-depth analysis of 150 advertising images which promoted telephone or cellular use, he

concluded that common themes used to advertise cell phones are increased independence (from parents) status and self-expression.

Forms of instant communication such as texting have a high potential to affect relationships. When a young person's social support (whether it be peers or family) is instantly and constantly available to them, it may affect the strength of their relationships and possibly increase their feeling of dependence and therefore decrease their level of autonomy. If an adolescent or emerging adult is constantly linked to his/her peer groups and other important individuals (i.e., parents, siblings, or other important adult role models) instead of relying on their own judgment they may rely unduly on advice and counsel from another source.

In summary, the quest for autonomy is a widely acknowledged aspect of development. As previously stated there is considerable research which examines the impact that communication technologies may have on young people who use them. There is some research which indicates that autonomy is increased through an adolescent's (or emerging adult's) use of communication technologies and other which research indicates that use of these technologies (such as computers and cellular phones) may actually decrease the young person's level of autonomy.

Self-Esteem

Self-esteem is often generalized as the way individuals feel about themselves. Most people are of the opinion that a high self-esteem is important. There have even been programs dedicated to increasing young people's self-esteem based on the

erroneous belief that increased self-esteem would decrease their participation in high risk behaviors (e.g., drug and alcohol use, risky sexual activities). However, research does not show that individuals with high self-esteem are less likely to engage in these behaviors. Conversely, research has indicated that individuals with high self-esteem are actually more likely to engage in risky behaviors than those who have low self-esteem (Baumeister, Campbell, Krueger, & Vohs, 2003).

Some research, however, has shown benefits of having a high self-esteem. These benefits fall into two basic categories: enhanced initiative and pleasant feelings. Researchers have found a positive relationship between high self-esteem and happiness. These correlations, however, are not definitive and are open to debate (Baumeister et al., 2003). So while increasing an individual's self-esteem may not decrease the likelihood that he/she will engage in high risk behaviors, there are some positive correlates of a high self-esteem.

Defining self-esteem at a conceptual level remains ambiguous. Due to this vagueness in the definition of self-esteem and what contributes to or detracts from high self-esteem there has been much debate as to whether self-esteem is a construct which can be considered stable and/or measurable (Harter, 1982).

Self-esteem, like identity, is not a one-dimensional concept. Rosenberg (1965) was one of the first to attempt to measure it as a construct with any success. He posited that self-esteem is actually divided into two parts, the baseline and the barometric. The baseline self-esteem, also referred to by other researchers as global self-esteem (Harter, 1982), indicates a stable self-esteem (or self concept) with very little fluctuation or

change over time. The specific self-esteem (or barometric), however, is a little more variable and more likely to be affected by outside influences.

Baseline Self-Esteem

According to Rosenberg, Schoenbach, Schooler, and Rosenberg (1995), baseline/global self-esteem correlates directly to the psychological well-being of an individual. Baseline self-esteem does not fluctuate based on environmental factors and, therefore, more accurately describes the actual views/feelings of an individual, not the current emotions of the individual based on environmental factors.

Barometric Self-Esteem

Again looking at Rosenberg's operational definitions of the two components of self-esteem, the barometric/specific self-esteem is the construct which can be successfully correlated to behavior (1965). Barometric self-esteem is used more accurately to describe current moods or temporary feelings of either happiness or sadness. These feelings are temporary and are likely to fluctuate in accordance with the environmental stimulants (e.g., good day is to high barometric self-esteem as a bad day is to low barometric self-esteem).

Self-Esteem and Communication Technology

Ehrenberg, Juckes, White, and Walsh (2008) examined personality factors and self-esteem as a predictor of young people's technology use. They looked specifically at their use of cellular phones, and instant messaging (IM). The sample consisted of 200 university students who owned cell phones and used computers. Participants were

administered a questionnaire to evaluate their level of cell phone use, the NEO FFI Personality Inventory to determine their personality type, and the Cooper Smith Self-Esteem Inventory Adult Form to assess their self-esteem.

Multiple regression analysis was used to assess the predictors (personality factors and self-esteem) and the use of cell phones and IM. The most significant predictors of high cell phone use were agreeableness and self-esteem. The analysis also showed that the individual's use of a mobile phone and IM was a significant negative predictor of self-esteem.

Self-Esteem and Texting

It makes intuitive sense that the instant communication afforded through text messaging would influence teenage barometric self-esteem. The constant connection to peer groups and family members provides an increased opportunity to have both positive and negative exchanges which can affect an adolescent's mood (or barometric self-esteem).

Research on the importance of social support as related to self-esteem in adolescence indicates a clear connection. In fact, the opportunity to be connected to social support groups may provide adolescents with approval which will, in turn, enhance their self-esteem, particularly if these connections are self-directed (Harter & Whiteshell, 2003). Texting is a self-directed activity and offers constant connection to others, thus, this constant connection may have a positive influence on an adolescent's self-esteem.

Summary

Based on the literature which has been reviewed, the impact of the cell phone upon the adolescent population, while vast, has largely gone unstudied and there is still much regarding the influence that texting may have on the adolescents during an important period when they are forming their identities, becoming more autonomous, and dealing with issues of self-esteem.

The purpose of this study was to learn more about the texting habits of adolescents and assess the developmental link between adolescents' and emerging adults' use of texting and their level of identity achieved. Also, I intended to learn if their texting habits related in any way to their perceptions of their own autonomy. Finally, it was the purpose of this research to determine the degree to which the texting habits of adolescents in any way related to their levels of self-esteem.

Research Questions

The following research questions were used to guide this study:

1. What are common characteristics of adolescent and emerging adult texters?
2. Do gender and age relate to the number of texts sent?
3. Do the number of texts sent relate to adolescents' and emerging adults' perceptions of their own identity?
4. Do the number of texts sent relate to adolescents' and emerging adults' perceptions of their own autonomy?

5. Do the number of texts sent relate to adolescents' and emerging adults' self-esteem?

CHAPTER III

RESEARCH METHODOLOGY

This study quantitatively evaluated data provided from responses to a questionnaire about cell phones, text messaging, and three aspects of adolescent development; identity, cognitive autonomy, and self-esteem. The questionnaire was administered to lower division college students. This chapter provides a brief description of the research design, sampling method, measurement, and data analysis.

Research Design

Given the exploratory scope of the research questions, a cross-sectional descriptive design was deemed appropriate. First, data on the text messaging habits of the participants, information on their identity level, and perception of their own cognitive autonomy and feelings of self-esteem were obtained coded and analyzed. Descriptive statistics and inferential statistics including *t* tests, one-way analysis of the variance (ANOVA), and chi square were computed in order to determine how adolescents and emerging adults use of texting related to (a) identity level, (b) perceptions of autonomy, and (c) self-esteem. Additionally, the relationship between the number of texts and gender and age were also analyzed.

Sample

This study used a sample of convenience. There were 119 participants in this study. The participants were predominantly white (87.4%) female (58.0%) and male

(41.0%) college students ranging in age from 17 – 23+. The participants were recruited from psychology courses at Utah State University. These classes were selected based on the instructors' willingness to participate. Invitations for participation were extended to any student in the participating classes. Self-selected male and female cell phone users were asked to complete the questionnaire regarding their texting habits and opinions.

Although it was a sample of convenience there was a representative number of male (n = 49) and female (n = 69) participants, which allowed a comparison of gender as a defining variable in cell phone use. Likewise, the age distribution lent itself to analysis. Because of the preponderance of Caucasian participants (87.4%), ethnicity was not examined as a contributing factor of cell phone use (see Table 1).

Procedures

Prior to the initiation of this study, proper approval was obtained from the Institutional Review Board (IRB) at Utah State University. In accordance with IRB protocol, anonymity was maintained by ensuring that no names were requested as part of the survey and the only qualifying information obtained was concerning gender and age. These procedures eliminated the possibility that researchers would be able to connect names to data. The data used for this thesis were analyzed in aggregate and the individual surveys were destroyed following the initial data entry. After receiving IRB approval, the student researchers attended three undergraduate psychology classes where the instructors deemed it appropriate to gather data. Following the study introduction,

class members who qualified (owned a cell phone) and who wished to participate were provided with the questionnaire.

Data Collection

Instructors allotted time for the participants to complete the questionnaire in class. One class received lab credit from their instructor for completing the survey. The student researchers administering the questionnaire were trained as to the manner of administration. It was explained to the participants that their surveys would be anonymous (e.g., there were no names included on the questionnaire). The same individuals administered the questionnaires to each group of students in order to maintain consistency in the instructions and information given.

In addition to the instructions, the purpose of the study was explained to the students participating. They were told that the purpose was to learn more about them, their use of texting, and their perceptions of appropriate texting. Assistance was provided to any students who had difficulty with the instructions or understanding the questions on the survey. Students took approximately 10-15 minutes to complete the full survey. Of the estimated 125-130 students enrolled in those classes, 119 completed surveys, giving an approximate response ratio of 95%.

Instrumentation

The instrument used in this study was a self-report questionnaire, which included a section designed specifically to learn the texting habits of the participants, created

specifically for this research. The questionnaire also included sections derived from previously existing measures on identity, autonomy, and self-esteem.

Texting

The texting portion of the survey included three sections of questions regarding (1) their personal preferences when using a cell phone; (2) their actual use of text messaging including the number of texts sent and received per month; and (3) their views of proper texting etiquette; when it's appropriate to text, appropriate topics for texting, and appropriate locations.

Identity

The most common measure of Marcia's (1966) identity statuses is the Extended Objected Measures of Ego Identity Status (EOMEIS). In order to be able to apply the EOMEIS to the research being done in this study it was necessary to specify the areas of interest to the research. The eight categories which were originally targeted by the EOMEIS are identified as: (1) occupation, (2) religion, (3) politics, (4) leisure, (5) lifestyle, (6) dating, (7) friendship, and (8) marriage/gender roles.

There are eight questions in each category totaling sixty-four questions. In an effort to target the aspects most salient to this research, and in an effort to maintain brevity in the survey, only the questions concerning dating, friendship, and leisure were kept for this study. This left 24 of the original 64 questions included on this modified EOMEIS.

The (Modified) Extended Objected Measures of Ego Identity Status (EOMEIS) was used to measure the identity level of the participants. Each of the 24 items was designed to measure a specific identity status within each of the three domains of dating, friendship, and leisure. For example, here is a sample question designed to measure the level of foreclosure, “I couldn't be friends with someone my parent's disapprove of.” A question designed to determine the level of diffusion, “I seem only to get involved in recreational activities when others ask me to join them.” A sample question for moratorium, “I've never had any real close friends -- it would take too much energy to keep a friendship going,” and finally, achievement, “I've tried numerous recreational activities and have found one I really love to do by myself or with friends.”

Identity Scoring

The summed subscale scores were obtained for each aspect of identity achievement targeted by this research (namely, friendship, dating, and leisure) in order to form a measure of achievement, moratorium, foreclosure, and diffusion. Each of the 24 items was assigned a numerical value ranging from one (strongly disagree) to six (strongly agree). Identity status classification in this study was done differently than in Akers, Jones, and Coyl (1998). Akers et al. method of classification resulted in a disproportionate number of respondents without a clear status distinction. To reduce this problem in this study the following procedures were used: first, the identity score was calculated in each of the five dimensions for each participant, then the original score was transformed into a *Z* score (this allowed for a comparison of the *Z* scores from each status within each dimension for the respondents and to assign the highest particular status *Z*

score as the status for that dimension). Finally, the identity statuses that each participant received from the five dimensions were summed and the identity status with the highest frequency was the status to which the participant was assigned. Hence, after the classification procedures, the participant was assigned an overall identity status.

Identity and Reliability

The Cronbach's alpha for identity status scores in the original study of 1,159 adolescents in the United States was .74 for achievement, .71 for moratorium, .79 for foreclosure, and .78 for diffusion. Because the current study used an abbreviated version of the Extended Objected Measures of Ego Identity Status reliability for the current scores were calculated as a whole. The Cronbach's alpha for the current study are presented in the next chapter.

Autonomy

The Cognitive Autonomy and Self Evaluation (CASE) inventory was used to assess cognitive autonomy. The CASE inventory is a 27-item instrument using a six-item Likert-scale with response options ranging from one (strongly disagree) to five (strongly agree). The CASE evaluates five areas of autonomous thought including the participant's ability to: (a) use evaluative thinking, (b) voice opinion, (c) make decisions, (d) self-assess, and (e) use comparative evaluation.

Autonomy Scoring

The CASE inventory has five subscales implicating evaluative thinking (8 items), voicing opinions (5 items), decision-making (6 items), self-assessing (3 items), and

comparative validation (5 items). Higher scores indicate greater level of cognitive autonomy. Each of the responses to the 27 items is assigned a numerical value ranging from 5 to 1. A value of 5 indicates the highest response. The lower numbers indicate a less favorable response with a score of 1 indicating the least favorable. On the *CASE* inventory, all questions were worded positively except for those on the comparative validation scale and one question in the scale of voicing opinions. An example of a positively worded question is, "I like to evaluate my thoughts." An example of a negatively worded question is, "I need my views to match those of my friends." Reverse coding was used on the negatively worded questions.

Autonomy Validity and Reliability

The Cronbach's alpha for North American respondent scores indicated an overall alpha coefficient of .85. Scale alphas for scores ranged from .64 to .87 indicating good reliability in most cases (Beckert, 2007). Alpha coefficients for the present study are presented in the next chapter.

Self-Esteem

Rosenberg's (1965) Self-Esteem Scale (RSE) was used to measure the self-esteem of the participants in the study. The RSE is a 10-item self-report measure of global self-esteem. It consists of statements related to overall feelings of self-worth. The items are answered on a four-point scale ranging from strongly agree to strongly disagree.

Self-Esteem Scoring

In order to get a score on self-esteem it was necessary to sum the scores for the 10

items. Strongly Agree (SA) = 3, Agree (A) = 2, Disagree (D) = 1, Strongly Disagree (SD) = 0. However, items 2, 5, 6, 8, and 9 are reverse scored, that is; Strongly Agree = 0 to Strongly Disagree = 3. Scores range from 0-30. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem.

Self-Esteem Validity and Reliability

Rosenberg's Self-Esteem Scale (RSE) has demonstrated acceptable reliability across scores from a large number of different sample groups. The scale has been shown to have a high level of reliability ($\alpha = .88$) in adolescent populations (Barrett, Webster, & Wallis, 1999).

CHAPTER IV

RESULTS

The results of this study, evaluating texting among young people, are outlined below. Additionally, how these texting behaviors related to gender, age, identity, autonomy, and self-esteem are summarized in this chapter. Analyses for this study proceeded according to the specifications outlined at the end of Chapter III. For each of the five research questions, the results of the survey and analyses are presented below. The results are organized by research question starting with reliability reports and an overview of the independent variable.

Reliability of Measures

Cronbach's alpha reliability coefficients were used to assess the internal consistency of the responses for each of the measures used. In this study the respondent scores showed adequate reliability for a majority of the scales. According to Henson (2001), when research is introductory (e.g., this study) a Cronbach's alpha of .50 or .60 is sufficient. In accordance with the modifications made in the Extended Objected Measures of Ego Identity Status (EOMEIS) the Cronbach's alpha in this study included all the responses in the measure. As a result of the necessary modification the overall Cronbach's alpha was a little low (alpha = .53) which was expected but still sufficient for this study.

Cronbach's alpha scores for the responses to the Cognitive Autonomy Self-Evaluation (CASE) showed good reliability with the overall Cronbach's alpha score

(alpha = .76). For this study the scores were analyzed for each scale of the CASE instrument. The respondent scores yielded sound reliability results for most of the scales. The Cronbach's alpha for each of the scales is as follows: evaluative thinking (alpha = .86), voicing opinion (alpha = .67), decision-making (alpha = .63), self-evaluation (alpha = .75), and comparative validation (alpha = .72). The reliability score for the responses to Rosenberg's self-esteem scale were good (alpha = .87) as was expected from the literature.

Research Question One

In response to research question one which asked, "What are common characteristics of adolescent and emerging adult texters?" Table 1 includes demographic information for all the participants of this study. As seen in Table 1 a majority of the participants in this study were white (87.4%) female (58%) and male (41.0%) college students ranging in age from 17-19 (37.4%), 20 – 22 (40.2%), and 23+ (22.4%). As was expected, a majority of the participants categorized themselves as texters (92.5%). Length of phone ownership ranged from 4+ years (39.6%), 3-4 years (21.8%), 2-3 years (17.6%), between 1-2 years (12.6%), and within a year (7.6%).

As seen in Figure 1, the levels of texting varied among the participants. Of the 119 students surveyed (24.4%) sent 1,500-10,000 texts per month, (27.7%) sent 400-1,499, (35.3%) sent 1-399 texts per month, and (12.6%) did not respond to this question. Figure 2 shows the breakdown into the number of texts the participants sent per day. Of the 119 participants (6.7%) of the participants sent 100-150+ texts per day, 50-100 per

Table 1

Frequencies and Percentages of Participants' Demographic Characteristics

Characteristics	Frequency	Percent
Gender		
Female	69	58.0
Male	49	41.2
Missing[a]	1	.8
Ethnicity		
Asian	3	2.5
Hispanic/Latino	5	4.2
Native-American	4	3.4
White	104	87.4
Other	3	2.5
Texts per Day		
150+	11	9.2
100-150	8	6.8
50-100	21	17.6
10-50	46	38.7
0-10	32	26.9
Missing[a]	1	.8
Age		
17-19	40	37.4
20-22	43	40.2
23+	24	22.4
Texter		
Yes	110	92.5
No	8	6.7
Missing[a]	1	.8
Time owning a cell phone		
0-1 year	9	7.6
1-2 years	15	12.6
4+	47	39.6

(table continues)

Characteristics	Frequency	Percent
Missing[a]	1	.8
Daily texts		
0-10	32	26.9
10-50	46	38.7
50-100	21	17.6
100-150	8	6.7
150+	11	9.3
Missing[a]	1	.8
Monthly Texts		
0-375	39	32.8
400-1250	33	27.7
1500-10000	29	24.4
Missing[a]	18	15.1

[a] When a participant failed to complete the entire survey the absence of data was labeled as "missing" in the table.

day, (38.7%) 10-50 texts per day and (26.9%) sent between 0-10 texts per day.

Of the 119 students who participated in this survey, 110 consider themselves "texters." These self-identified texters sent anywhere from 1 to 10,000 texts per month. An interesting aspect of texting habits is that although texting is popular among our participants (92.5%) there was some variety in their perceptions of when and where is appropriate to text and the content of an appropriate text. For example, when asked if cell phones were banned in the classroom 8.4% responded "yes and the rule is enforced" 39.5% "yes but the rule is not enforced," 25.2% responded "No," and 24.4% responded "I don't know." The remaining 2.5% did not answer. So, although the actual rules regarding cell phone use were similar for each of the classes, the participants' perceptions of those rules varied considerably. This same group of students, when asked if they used

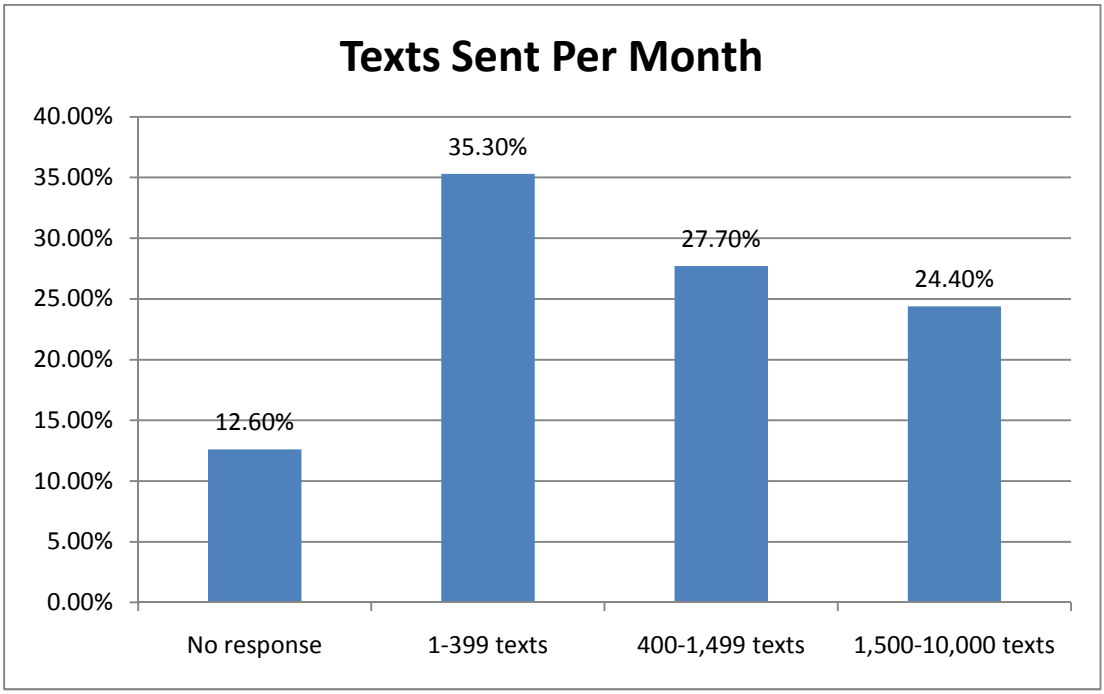

Figure 1. Number of texts participants (*n* = 119) sent per month.

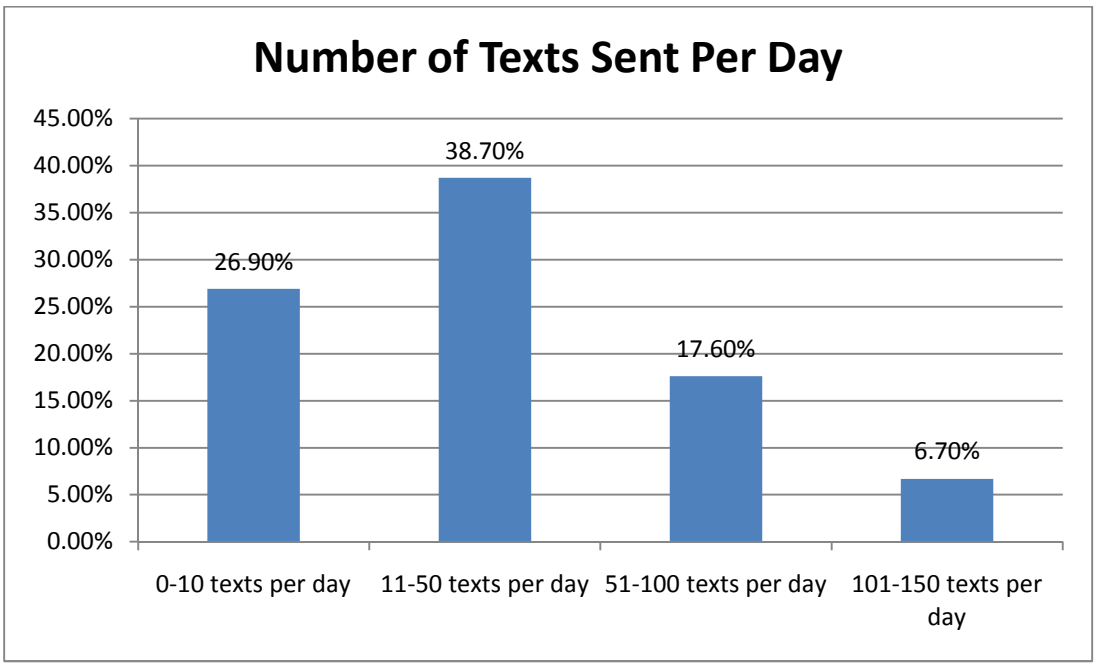

Figure 2. Number of texts particpants sent per day.

their cell phone without permission (i.e., on the sly in class) 68.1% responded “Yes” and 27.7% responded “No.” The remaining 3.4% said the question did not apply to them. It was also interesting that a full 68.1% of the participants indicated that they do text without permission.

Table 2 shows the distribution of answers for questions regarding the appropriateness of using a text message in specific circumstances. The questions were asked on a scale ranging from 1-10: 1 indicating not at all appropriate and 10 indicating completely appropriate. For ease in examining the responses the answers have been grouped in 1-3, 4-6, and 7-10.

It is interesting that although 91.5% of the participants indicated that it is not appropriate to use texting to end a relationship, 11.0% indicated that they had done so. As seen in Table 7 there were some commonalities regarding what the participants felt were appropriate versus inappropriate texting behaviors.

Another interesting common occurrence among the participants was their use of fake texting. Of the participants who responded to the question regarding fake texting (n = 114), 107 indicated that they had fake texted somewhere between 0 - 5 times in the last month. Six participants indicated that they had done so 6 - 10 times in the last month, and one participant indicted that they had fake text 10 - 15 times in the past month.

Table 2

Frequencies and Percentages of College Participants Views of Appropriate Texting

Questions	Frequency (n = 118)	Percent
Is it appropriate to use texting to ask for a steady relationship?		
Always 1-3	104	88.1
Sometimes 4-6	12	10.2
Never 7-10	2	1.7
Have you ever? (asked someone for a steady relationship via text?)		
Yes	13	11.0
No	105	89.0
Is it appropriate to use texting end a relationship?		
Always 1-3	108	91.5
Sometimes 4-6	5	4.2
Never 7-10	8	6.8
Have you ever? (ended a relationship via text?)		
Yes	13	11.0
No	105	89.0

Research Question Two

Gender

In response to research question two which asked, "Do gender and age relate to the number of texts sent," a *t* test was run to determine if there was a significant difference between the numbers of text messages sent by females versus males. This was done by taking the average mean scores of the male participants and comparing it to the average mean scores of the female participants. Participants were provided with four

options from which to select the behavior pattern that most closely matched their current texting habits. The options for the number of text messages sent per day included, (1) 0-10, (2)10-50, (3) 50-100, and (4) 100+. Respondents who indicated that they averaged 0-10 text messages per day were given a score of 1; those who averaged 10-50 text messages per day were given a score of 2, and so on up to a score of 5 for those participants that averaged more than 100 texts per day. This was done because there was some precedence for assuming equal intervals from both the frequency distribution of these data and past uses of Likert scales as interval scales. As Table 3 shows the mean score and standard deviation for the females (*M* = 2.33, *SD* = 1.04) indicated that female participants sent more than 10-50 texts per day, the mean score and standard deviation of the males (*M* = 2.28, *SD* = .98) indicated that the males also sent more than 10-50 texts per day. The difference between the female and male mean scores indicated that although there was not a statistically significant difference between gender and the amount of texting done, females did text slightly more per day than their male counterparts. Based on this analysis, the levels of texting (i.e., the amount of those sent) for these participants were not influenced by the gender of the texter.

Table 3

t *Test for Equality of the Means Amount of Texts Per Day Males Versus Females*

Gender	*N*	*M*	*SD*	*t*	*df*	*p*
Female	66	2.33	1.04	.271	107	.787
Male	43	2.28	.98			

Age Differences

A one-way analysis of the variance (ANOVA) was conducted to evaluate the relationship between age and texting. Table 4 shows the mean scores and standard deviations for the three age groups analyzed. The participants were put into three age categories, 17-19 (*N* = 40), 20-22 (*N* = 43), and 23+ (*N* = 24) in order to facilitate analysis of texting between the ages. The division was roughly guided by frequencies of the ages of the participants. It was beneficial to have three groups in order to analyze trends among the age groups. The division was also deemed appropriate due to the developmental differences often found between those in their teens and those in their twenties. Once again, options to describe individual texting habits were used. A significant difference was found for those participants 23+ years old compared to the other two age groups. The mean score and standard deviation for the oldest group (*M* = 1.80, *SD* =.88) indicated that those participants aged 23+ averaged more than 0-10 but less than 10-50 texts per day. This was significantly less than the mean of the 20-22 year old group (*M* = 2.23, *SD* = .92), which showed that they sent more than the 10-50 texts

Table 4

One-Way ANOVA for Age of Participants and the Number of Texts sent Daily

Age	*N*	*M*	*SD*	*df*	*F*	*p*
17-19	40	2.70	1.02			
20-22	43	2.23	.92	2, 104	7.07	.001
23+	24	1.80	.88			
Total	107	2.30	1.00			

per day. And the mean of the 17-19 year old group (M = 2.70, SD = 1.02), which showed that the youngest group sent more than 10-50 and approached 50-100 texts per day, which was the highest of all the age groups. When compared to each other the older groups (23+) scores were significantly lower than the younger groups scores F (2, 104) = 7.07, p = .001), indicating that those participants 23 years old and older text significantly less than their younger counterparts.

Research Question Three

A chi-square was conducted in order to answer research question three which asked, "Do the number of texts sent relate to adolescents' perceptions of their own identity?" The groups were assigned the same categories of number of texts per day as in the previous questions. They were then analyzed in comparison to the categories of level of identity achievement, which included achievement, moratorium, foreclosure, and diffusion.

A chi-square test was run to compare the participants' level of identity with the number of texts sent per day to see if there was a relationship between the two variables. The participants' texting habits did not differ by identity status, $\chi^2(12, N = 96) = 12.38$, $p > .05$. Table 5 shows the number and percentage of participants who sent 0-10, 10-50, 50-100, and 100+ texts per day and their identity status.

Although no significant relationship was found between number of texts sent per day and level of identity, it is interesting to note that of the identity statuses, the highest percentage of participants who sent 100+ texts per day (33.33%) were categorized in the

Table 5

Participants' Level of Daily Texting and Identity Status

Texts sent per day	Achievement		Moratorium		Foreclosure		Diffusion		Transition		Total
0-10	2	20.00%	4	44.44%	1	7.14%	6	17.14%	9	32.14%	22
10-50	5	50.00%	2	22.22%	6	42.86%	14	40.00%	10	35.71%	37
50-100	2	20.00%	0	0.00%	5	35.71%	7	20.00%	6	21.43%	20
100+	1	10.00%	3	33.33%	2	14.29%	8	22.86%	3	10.71%	17
Total	10		9		14		35		28		96

moratorium status. Incidentally, the moratorium status also had the highest percentage of participants which sent the fewest texts per day (44.44%). So percentage-wise, those participants in the moratorium status sent the most and the fewest texts per day of any of the identity statuses.

Research Question Four

In response to research question four, "Do the number of texts sent relate to adolescents perceptions of their own autonomy?" A one-way analysis of variance (ANOVA) was conducted to evaluate the relationship between the amount of texts sent and the participants' scores on the Cognitive Autonomy Self-Evaluation (CASE) inventory. Table 6 shows the effect of the participants' self-reported levels of texting for each scale on the CASE inventory. There was no statistically significant difference between groups for areas of cognitive autonomy that dealt with evaluative thinking,

meaning that groups who text the most compared to those groups who text the least showed no difference in their scores on evaluative thinking F (3, 101) = .10 p = .959; voicing opinion F (3, 103) = 1.35, p = .260; decision-making F (3, 105) = .13, p = .943; self-assessing F (3, 104) = .64, p = .593; or comparative validation F (3, 103) = 1.31, p = .274. However, scores tended to be higher for individuals who averaged 10-50 text messages per day in areas of evaluative thinking (M = 2.84, SD = .54) and decision making (M = 3.08, SD = .36). The scoring ranged from 1-5, 1 being low and 5 being high. These mean scores indicated that, while not statistically significant, there was a difference in the average scores of those participants who sent 10-50 texts. Compared to the other groups, they scored higher on evaluative thinking and decision-making. Additionally, those participants who sent only 0-10 texts had the lowest mean scores for several categories of cognitive autonomy including: evaluative thinking (M = 2.78, SD = .55), voicing opinion (M = 2.33, SD = .57), decision-making, and self-assessing (M = 2.14, SD = .70), which was tied with those participants who sent 100+ texts per day. So while not statistically significant, it is interesting that those participants who sent the fewest texts per day scored the lowest in several categories of cognitive autonomy.

Research Question Five

Research question five asked, “Do the number of texts sent relate to adolescents and emerging adults’ self-esteem?” A one-way analysis of the variance (ANOVA) was performed in order to evaluate the relationship between the number of texts sent per day

Table 6

One-Way ANOVA on Amount of Texts Sent and Level of Cognitive Autonomy

Source	*N*	*M*	*SD*	*df*	*F*	*p*
Evaluate thinking						
0-10	24	2.78	.55			
10-50	42	2.84	.54	3, 101	.102	.959
50-100	20	2.76	.48			
100+	19	2.81	.63			
Voicing opinion						
0-10	24	2.33	.57			
10-50	44	2.45	.5	3, 103	1.359	.260
50-100	20	2.50	.54			
100+	19	2.67	.62			
Decision-making						
0-10	25	3.02	.57			
10-50	44	3.08	.36	3, 105	.128	.943
50-100	21	3.07	.38			
100+	19	3.03	.39			
Self-assessing						
0-10	25	2.24	.63			
10-50	44	2.41	.63	3, 104	.637	.593
50-100	20	2.43	.64			
100+	19	2.24	.78			
Comparative-validation						
0-10	25	2.14	.70			
10-50	43	2.28	.62	3, 103	1.315	.274
50-100	20	2.00	.48			
100+	19	2.03	.55			

by the respondent and the respondents' level of self-esteem. Rosenberg's self-esteem scale measured self-esteem and was reported in numbers on a range of 0-30. Scores

below 15 indicate low self-esteem, 15-25 are in the normal range, and 25-30 are categorized as a high self-esteem (Rosenberg, 1965). Table 7 shows the mean self-esteem scores and standard deviations for the four categories of texters. Those individuals who sent 0-10 texts per day (*M* = 18.33, *SD* = 4.03), those who sent 10-50 had a group average score of (*M* = 20.16, *SD* = 3.48), those who sent 50-100 text per day had an average self-esteem score of (*M* = 20.12, *SD* = 3.68), and those respondents who send 100+ texts per day had an average self-esteem score of (*M* = 20.63, *SD* = 5.15).

Each of the group's mean scores were within the normal self-esteem range. The mean scores of these groups were similar; there was no statistically significant relationship between the number of texts sent per day and the respondents' level of self-esteem. Although not statistically significant, it is of interest that the highest mean score

Table 7

One-Way ANOVA on Level of Self-Esteem and Number of Texts Sent Per Day

Texts per day	*N*	*M*	*SD*	*df*	*F*	*p*
0-10	24	18.33	4.03			
10-50	36	20.16	3.48	3, 91	1.463	.230
50-100	16	20.12	3.68			
100+	19	20.63	5.15			

for self-esteem (*M* = 20.63, *SD* = 5.15) was of the group which sent 100+ texts per day and also had the largest standard deviation; meaning this group had the most variation in their individual scores.

CHAPTER V

DISCUSSION

Introduction

The purpose of this study was to contribute to the knowledge of adolescents' and emerging adults' use of texting and its possible relationship with identity development, level of cognitive autonomy, and level of self-esteem. The differences between ages and gender were also analyzed. A selection of students attending Utah State University participated in this study. A total of 119 participants responded to a survey on cell phone use, which measured preferences for cell phone use and the quantity of texting done, as well as perceptions regarding appropriate texting. Additionally, participants completed a modified version of the Extended Objected Measures of Ego Identity Status (EOMEIS), which examined the level of identity achieved, the Cognitive Autonomy and Self-Evaluation (CASE), which examined five areas of cognitive autonomy, and Rosenberg's self-esteem scale (RSE) which measured the level of self-esteem of the participant.

In this chapter the possible implications of the findings are discussed. Additionally, the possible limitations of this study are outlined, and suggestions are made for others interested in doing similar research. Finally, conclusions of the study are discussed.

Research Question One

The first research question focused on common characteristics of those

adolescents and emerging adults who text. According to Lewis and Fabos (2005), instant communication (such as texting) is already so widely used and accepted (particularly among young people) that it barely falls into the category of technology, but rather just a normal way of life. Not surprisingly, texting was a very popular method of communication among the participants (92.5%). In addition to demographic information of the participants (e.g., age, gender, ethnicity), information regarding their attitudes or perceptions towards texting was analyzed to identify some of the commonalities in what the participants indicated was appropriate versus inappropriate texting.

It was interesting that a majority of the participants (68.1%) indicated that regardless of classroom rules they do text without their instructor's knowledge. This may indicate that the desire for constant communication is a common characteristic of adolescent and emerging adult texters. It would be interesting to know if willingness to disregard classroom rules has increased with the prevalence of texting or if it remains comparable to the days of old-fashioned passing of notes in class. It is possible that texting is more than just a high tech way to pass notes. Texts may be sent and received in any location, at any time, by any person with a text capable cell phone, thereby making it a more extensive medium of communication than a simple note.

In regards to texting and relationships the majority (88.1%) felt that using a text to ask for a steady relationship was inappropriate. Additionally, (91.5%) felt that it was inappropriate to use a text to end a relationship. These findings correspond to previous research in this area done by Bryant et al. (2006) which showed that despite the

popularity of texting, adolescents still tend to hold important (e.g., initiating or ending a relationship) conversations face-to-face.

Another common characteristic of young texters is their use of fake texting (93.8%) of the participants had fake text in the past month. Typical reasons given for fake texting included answers such as, “feeling dumb” and “I do it when I am waiting for someone so I don't look like I am just sitting there”. According to Elkind and Bowen (1979), adolescents believe that others are always watching and evaluating them. This belief that that everyone is watching them is referred to as imaginary audience. It is possible that these incidences of fake texting could be the result of imaginary audience. This feeling of being on a stage may compel adolescents, and emerging adults, to perform (i.e.,fake text) for their audience. It would be interesting to see further research which explored the possible relationship between young peoples’ use of fake texting and identity, cognitive autonomy and self-esteem.

Research Question Two

According to Wei and Lo (2006), women generally make and receive more phone calls to and from both friends and family. It was expected that this study would produce similar findings in regards to text messaging. There was a difference found between the genders; female participants did use their cell phones (in this instance for texting) more than their male counterparts. However, due to the lack of statistical significance in this study it was concluded that levels of texting (i.e., the amount of those sent) was not influenced by the gender of the texter. It is possible that future research done with a

sample large enough to allow for a simultaneous analysis of both gender and age, may find statistical significance. It is also possible that gender and use of texting are not in any way related to each other.

According to Campbell (2006) cell phone technology (particularly texting) has been adapted rapidly by adolescents in North America. This concurs with the results of this study which indicate that texting is more popular among the younger participants. As expected the older participants (those 23 years and older) sent significantly less texts than their younger counterparts age (17-19, and 20-22) with the youngest group (17-19) having sent the most texts.

Because texting has really become popular in the last 10 years, for the younger participants (17-19) texting is just a normal way of life (Lewis & Fabos, 2005). However, some of the older participants (23+) may have experienced a portion of their life without texting and, therefore, may not be as comfortable with texting as their younger counterparts.

This decrease of texting with the increase of age could also be due to the emphasis in adolescence on friends and social interactions. According to Srivastava (2005) the ability to expand and enhance one's social network (through cell phone use) may create a sense of identity for different groups of people, especially adolescents. Therefore, as identities are formed and become more stable, it makes intuitive sense that a dependence on social networks would decrease.

Research Question Three

The results of the questionnaire on the relationship between texting behaviors and identity status indicated that there was not a significant relationship between the quantity of texts sent per day and the participants self-reported level of identity achievement. These findings were surprising given the empirical literature which emphasizes the importance of social interactions (including texting) on the development of adolescent identity (Srivastava, 2005).

It is interesting to consider the possible connections between a young person's level of identity and their perception of appropriate use of texting. The participants were asked to respond to the statement, "It is acceptable to text while in church" by indicating on a Likert scale their level of agreement: (1) strongly agree, (2) agree, (3) neutral, (4) disagree, and (5) strongly disagree. The perceptions of appropriate versus inappropriate texting use varied greatly amongst them. Of the participants, 1.6% indicated that they strongly agreed that it was appropriate, 4.2% agreed, 14.4% were neutral, 32.2% disagreed, and 48.3% strongly disagreed that texting in church is appropriate. It is possible that their perceptions of appropriateness of texting (e.g., while in church) are a result of their own judgment (indicating an achieved identity) or of their parents/peers' beliefs (indicating a foreclosed identity). It is possible, however, that the number of texts sent does not relate to adolescents' and emerging adults' perceptions of their own identity. Further research along this line of inquiry could produce some very interesting findings.

Research Question Four

According to Beckert (2007), it is not uncommon for adolescents to rely on advice or information from their friends to assist them in their decision-making processes. If an adolescent is constantly linked to his/her peer groups or other important individuals, instead of relying on their own judgment, they may rely too heavily on advice and counsel from outside sources. Surprisingly the results of the questionnaire on texting and the Cognitive Autonomy Self-Evaluation (CASE) yielded no significant difference in any of the scale levels.

Although not statistically significant, interestingly, with the exception of voicing opinion, slightly higher scores were found for those participants who were right in the middle (10-50 or 50-100) in regards to their texting habits. For example, those participants who sent 10-50 texts per day had the highest mean score on evaluative thinking (M = 2.84, SD = .54), decision-making (M = 3.08, SD = .36) and comparative validation (M = 2.28, SD = .62), while those who sent 50-100 had the highest mean score on self-assessing (M = 2.43, SD = .64). This may indicate that some reliance on others (i.e., moderate texting) is healthier than either little (0-10 texts per day) or extensive (100+ texts per day) reliance on others.

There has been considerable research which examines the impact that communication technologies may have on young people who use them (see Campbell, 2006; Ehrenberg et al., 2008). While there is some research which indicates that autonomy is increased through young peoples' use of communication technologies, and other research which indicates that use of these technologies such as computers and

cellular phones may actually decrease the young person's level of autonomy. Due to lack of statistical significance, this study does not confirm previous findings. In fact, it is possible that these findings indicate that there is not a relationship between number of texts sent and adolescents' and emerging adults' perceptions of their own autonomy. Although inconclusive in its findings this study does demonstrate the need for further research to understand more fully the possible relationship between young peoples' use of texting and their cognitive autonomy.

According to McElhaney and Allen (2001), adolescents whose parents foster autonomy are more likely to have positive social relationships with peers and family. It is possible that the participants that had the highest mean scores for evaluative thinking and decision-making developed their cognitive autonomy under the encouragement of their parents. This encouragement, according to McElhaney and Allen also fosters positive social relationships and may relate to their higher level of texting.

Research Question Five

Research question five was designed to examine the possible relationship between adolescents' use of texting and their level of self-esteem. Previous research done by Lee and Robbins (1998) on self-esteem and social connectedness showed a positive relationship between the two. It was expected that this study would show a relationship between texting (as a form of social connectedness) and self-esteem. However, the results of the questionnaire on texting and self-esteem (RSE) yielded no significant differences. This may be because texting does not relate significantly to social

connectedness as was previously assumed. Therefore, if texting is not significantly related to social connectedness, then texting (as a form of social connectedness) may not relate significantly to level of self-esteem.

Although not statistically significant, it is noteworthy that the highest mean score for self-esteem (*M* = 20.63, *SD* 5.15) was in the group which sent 100+ texts per day, indicating that there may be a connection between self-esteem and texting, with higher numbers of texting relating to higher levels of self-esteem. Further research is needed in order to understand more fully the possible relationship between adolescent's use of texting and their level of self-esteem. It is possible that research applied to a larger sample which included a wider range of ages (particularly younger adolescents) may show the expected relationship. It is also possible that there is no relationship between the number of texts sent and an adolescent's level of self-esteem. Further research is needed to determine if there is a relationship between texting and level of self-esteem.

Limitations

There are a number of limitations in this study which need to be considered. One limitation is that participants were selected by convenience, rather than by random selection. It is possible that the specific type of education the participants were receiving (i.e., they were all in psychology classes) might have had some impact on the findings. Random selection across disciplines would eliminate the possibility of confounding factors such as this.

This study was also limited by the age of the participants; they were all college-aged (17 years and up). Although this demographic yielded some interesting results, in order to gain a better understanding of the uses and effects of texting in adolescence a wider range of ages may produce some interesting results. Future research could focus on a younger population in order to better understand the effect of age on texting.

Another possible threat to internal validity was the use of a newly created instrument to measure participants' use of texting. Because this was the first time this instrument was used, it is possible that it fell short of maximizing variability. There are changes that could be made to the instrument in order to increase the instrument's effectiveness. One example of this is the question on number of texts sent per day. Rather than offering a multiple choice, it may be more effective to have the question be formatted as a fill in the blank, thereby increasing the accuracy of the information gathered regarding the participant's actual use of texting.

Directions for Future Research

This study shows some interesting differences which give insight to future research. Future research involving a wider range of ages (particularly including those aged 10-17) could provide a closer look at the differences between texters who are prepubescent, adolescent, and emerging adult. Further research conducted with a larger sample may produce results in the areas of identity, cognitive autonomy, and self-esteem which offer more statistical significance than the results of this study. As previously

mentioned, the instrument used to measure the participants' use of texting may offer more accurate data after being revised.

Additionally, future research may focus more on other aspects of texting. For example, instead of looking at number of texts sent as a variable, an examination of fake texting as it relates to identity development, cognitive autonomy, and self-esteem may produce some very interesting findings.

Conclusions

This research project was conducted with the intended purpose to add to the literature on adolescent development, in particular the connection between their use of text messaging technology and their perceptions of autonomy, the level of identity achieved, and their self-esteem.

In this study, several common characteristics of young texters were identified including widespread attitudes towards appropriate and inappropriate use of texting. Additional research could analyze the significance of these widespread attitudes among young people (regarding texting) in relation to other aspects of adolescent development. As mentioned earlier, advances in technology and instant communication are being absorbed rapidly by the adolescent population and are in constant use. The developmental ramifications of young people having this constant connection to family, friends, and peers bears further scrutiny.

One significant relationship was found between the age of the texter and the amount of texts sent per day. The older participants (23+) sent significantly fewer texts

per day than their younger counterparts (17-19, 20-22). The findings of this study confirm that that the relationship between age and texting is negative (as age increases texting decreases). Additional research could further explore the relationship between age and texting. Although participants in this study showed no significant differences between gender, there was a difference between male and female use of texting with females sending more texts per day. Further research which included a broader range of ages may find that gender differences would be more apparent (and statistically significant) among younger texters. Additional research may also show that there is not a demonstrable relationship between number of texts sent and identity, cognitive autonomy, or self-esteem and that texting is not a significant influence on adolescent development.

The information acquired by this research is intended to be used as a starting point to assist others interested in doing similar research. This study focused on text messaging and its possible relationship with adolescents' and emerging adults' development identity, cognitive autonomy, and self-esteem. This study has highlighted the lack of current information on the developmental ramifications of communication technologies. Further research is needed not only on texting, but also on other technologies which are becoming increasingly popular. Communication technologies such as social networking sites (e.g., Facebook, MySpace, and Twitter) all deserve attention in the social sciences.

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APPENDIX

Cell Phones, Texting, and Development

Directions: Please answer all of the questions to the best of your ability by circling the correct answer.

1. Please circle one Female Male
2. Do you consider yourself…?
   a. African-American
   b. Asian
   c. Hispanic/Latino
   d. Native-American Indian
   e. White/Anglo
   f. Other (Please list) - _____
3. What is your date of birth? Month_____ Year _____
4. Current GPA _____
5. How much do you study for your classes?
   a. More than most students
   b. About the same as most students
   c. Less than most students
6. Do you have a job currently?
   a. Yes full-time
   b. Yes part-time
   c. No
7. What do you consider your family's income?
   a. Upper class
   b. Middle class
   c. Working class
8. Do you own a cell phone?
   a. Yes
   b. No (If no skip to question 29)
9. Who pays the bill for your phone?
   a. All me
   b. Mostly me partially my parents
   c. Half me half parents
   d. Mostly my parents partially me
   e. My parents
   f. Other_____
10. When your cell phone contract comes up for renewal do you
    a. Purchase a new phone
    b. Take the "free" phone that comes with the renewal
    c. Keep your old phone
    d. Other _____
    e. I don't know it hasn't happened yet

11. Do you use text messaging on your phone?
    a. Yes
    b. No
12. What type of plan do you have?
    a. Unlimited texting
    b. Pay per each text
    c. Specific amount of texts per month (i.e.,1000 per month)
    d. Unlimited within provider but limited to others
    e. Other_____
13. Do you have your phone with you now?
    a. Yes
    b. No
14. When using your cell phone do you prefer to (please circle one)
    a. Call
    b. Text
    c. Both equally
    d. Neither
15. Approximately how many people do you have in your phonebook/address book?
    a. 200+
    b. 100-200
    c. 50-100
    d. 50 or less
    e. Other _____
16. What are the most common reasons for deleting someone from the phonebook? (please explain)
17. How often do you delete someone from your phonebook?
    a. Daily
    b. Weekly
    c. Monthly
    d. Seldom
    e. Never
18. Do you feel guilty for deleting someone from your phonebook?
    a. Always
    b. Often
    c. Sometimes
    d. Seldom

e. Never

19. How long have you had a cell phone? (please circle one)
    a. 0-1 years
    b. 1-2 years
    c. 2-3 years
    d. 3-4 years
    e. 4 plus years
20. On average how many texts do you send a day?
    a. 150 +
    b. 100-150
    c. 50-100
    d. 10-50
    e. 0-10
21. How many different people do you text in a typical day? _____
22. How many texts do you send in one month (Please see attached sheet at end of survey to get instructions on how to access this information)
    _____
23. In a typical week approximately how many texts do you send to each of the following?
    a. Family_____
    b. Friends_____
    c. Classmates_____
    d. Coworkers_____
    e. Other _____
24. What is the purpose of most of your texting? (circle all that apply)
    a. Get specific information
    b. Chat in class
    c. Make plans
    d. Just talk
    e. Gossip
    f. Other_____
    g. Other_____
25. On average I *call* (not text) on my cell phone to my friends about _____times per day
    a. 0
    b. 1-2
    c. 2-3
    d. 4 or more
26. On average I *call* (not text) to my parents on my cell phone about - _____times per day

a. 0

b. 1-2

c. 2-3

d. 4 or more

27. Are cell phones banned in any of your classes?

a. Yes, and the rule is enforced

b. Yes, but the rule is not strictly enforced

c. No

d. I don't know

28. Do you use your cell phone in class without your teacher knowing?

a. Yes

b. No

Please indicate your level of agreement with the statements below.

29. On a scale of 1-10 is it appropriate to use texting to *Ask for a date*?

Always Inappropriate Always Appropriate

1 2 3 4 5 6 7 8 9 10

30. Have you ever done it? (asked someone for a date via text?)

Yes No

31. On a scale of 1-10 is it appropriate to use texting to *Ask on a formal date (i.e.,prom)*?

Always Inappropriate Always Appropriate

1 2 3 4 5 6 7 8 9 10

32. Have you ever? (asked someone on a formal date via text?)

Yes No

33. On a scale of 1-10 is it appropriate to use texting to *ask for a steady relationship (i.e.,boyfriend/girlfriend)*?

Always Inappropriate Always Appropriate

1 2 3 4 5 6 7 8 9 10

34. Have you ever? (asked someone for a steady relationship via text?)

Yes No

35. On a scale of 1-10 is it appropriate to use texting to *end a relationship (i.e.,break up)*?

Always Inappropriate Always Appropriate

1 2 3 4 5 6 7 8 9 10

36. Have you ever? (ended a relationship via text?)

Yes No

Please indicate your level of agreement with the statements below.

37. It is acceptable to text in class during lecture?

Strongly Agree Agree Neutral Disagree Strongly Disagree

38. It is acceptable to text while in church.

Strongly Agree Agree Neutral Disagree Strongly Disagree

39. It is acceptable to text while at work.

Strongly Agree Agree Neutral Disagree Strongly Disagree

40. It is acceptable to text while hanging out with friends.

Strongly Agree Agree Neutral Disagree Strongly Disagree

41. It is acceptable to text other friends while on a date.

Strongly Agree Agree Neutral Disagree Strongly Disagree

42. Is cell phone use (including texting) allowed in your school? Yes No
43. Should texting be allowed in your school? Yes No
44. Do you ever save texts? Yes No
45. If yes why? (please explain)
46. At night where do you keep your cell phone?
    a. In/close to your hand
    b. On the bed
    c. On the night stand
    d. On the dresser
    e. On the floor
    f. Other_____
47. Have you ever pretended to talk on your cell phone? Yes No
48. What was the purpose for pretending to talk on the phone? (please explain)
49. How many times in the last month have you pretended to talk on the phone (please circle one)
    a. 1-5
    b. 6-10
    c. 10-15
    d. 15-20
50. How many times in the last month have you pretended to text?
    a. 1-5
    b. 6-10
    c. 10-15
    d. 15-20
51. What was the purpose for pretending to text? (please explain)
52. Do you turn your phone off at night?
    a. Always
    b. Usually
    c. Rarely
    d. Never
53. If you always or usually turn your phone off then why? (circle all that apply)
    a. Parents make me
    b. So I can sleep
    c. Other_____
54. When you don't turn your phone off at night why not? (circle all that apply
    a. I use it for an alarm
    b. I want to stay connected
    c. I usually forget to turn it off

d. To save the battery life

e. Other_____

55. At what time of night do you stop responding to texts?
    a. 8:00pm-10:00pm
    b. 10:00pm- 12:00am
    c. 12:00am- 2:00am
    d. 2:00am- 4:00am
    e. Never I am always available to text.

56. Is there anything else about cell phones or texting that you would like to add?

Directions: For each item, circle the answer that best illustrates your thoughts today. Answer all of the questions by clearly circling one of the five choices.

57. If I have something to add to a class discussion I speak up.

Always Often Sometimes Seldom Never

58. I think about the consequences of my decisions.

Always Often Sometimes Seldom Never

59. I look at every situation from other people's perspectives before making my own judgments.

Always Often Sometimes Seldom Never

60. When I disagree with others I share my views.

Always Often Sometimes Seldom Never

61. I need family members to approve my decisions.

Always Often Sometimes Seldom Never

62. I think of all possible risks before acting on a situation.

Always Often Sometimes Seldom Never

63. I like to evaluate my daily actions.

Always Often Sometimes Seldom Never

64. I consider alternatives before making decisions.

Always Often Sometimes Seldom Never

65. I stand up for what I think is right regardless of the situation.

Always Often Sometimes Seldom Never

66. I think about how my actions will affect others.

Always Often Sometimes Seldom Never

67. I think about how my actions will affect me in the long run.

Always Often Sometimes Seldom Never

68. I like to evaluate my thoughts.

Always Often Sometimes Seldom Never

Directions: For each item, circle the answer that best illustrates your thoughts today. Answer all of the questions by clearly circling one of the five choices.

69. I feel that my opinions are valuable enough to share.

Strongly Agree Agree Neutral Disagree Strongly Disagree

70. I need my views to match those of my parents.

Strongly Agree Agree Neutral Disagree Strongly Disagree

71. I am good at identifying my own strengths.

Strongly Agree Agree Neutral Disagree Strongly Disagree

72. It is important to me that my friends approve of my decisions.

Strongly Agree Agree Neutral Disagree Strongly Disagree

73. There are consequences to my decisions.

Strongly Agree Agree Neutral Disagree Strongly Disagree

74. I can tell that my way of thinking has improved with age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

75. At school I keep my opinions to myself.

Strongly Agree Agree Neutral Disagree Strongly Disagree

76. I think more about the future today than I did when I was younger.

Strongly Agree Agree Neutral Disagree Strongly Disagree

77. I am best at identifying my abilities.

Strongly Agree Agree Neutral Disagree Strongly Disagree

78. My decision making ability has improved with age.

Strongly Agree Agree Neutral Disagree Strongly Disagree

79. I need my views to match those of my friends.

Strongly Agree Agree Neutral Disagree Strongly Disagree

80. I am good at evaluating my feelings.

Strongly Agree Agree Neutral Disagree Strongly Disagree

81. I am better at decision making than my friends.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Directions: For each item, circle the answer that best illustrates your feelings today. Answer all of the questions by clearly circling one of the four choices.

82. I care about what others think of me.

Strongly Agree Agree Neutral Disagree Strongly Disagree

83. I am the best judge of my talents.

Strongly Agree Agree Neutral Disagree Strongly Disagree

84. On the whole I am satisfied with myself.

Strongly Agree Agree Disagree Strongly Disagree

85. At times, I think I am no good at all.

86. Strongly Agree Agree Disagree Strongly Disagree

87. I feel I have a number of good qualities.

Strongly Agree Agree Disagree Strongly Disagree

88. I am able to do things as well as other most other people.

Strongly Agree Agree Disagree Strongly Disagree

89. I feel I do not have much to be proud of.

Strongly Agree Agree Disagree Strongly Disagree

90. I certainly feel useless at times.

Strongly Agree Agree Disagree Strongly Disagree

91. I feel that I am a person of worth, at least on an equal plane with others.

Strongly Agree Agree Disagree Strongly Disagree

92. I wish could have more respect for myself.

Strongly Agree Agree Disagree Strongly Disagree

93. All in all, I am inclined to feel that I am a failure.

Strongly Agree Agree Disagree Strongly Disagree

94. I take a positive attitude about myself.

Strongly Agree Agree Disagree Strongly Disagree

DIRECTIONS: Each of the following statements reflects personal feelings held by some people in this society. We are interested in how much you agree with each statement. Because these statements reflect personal feelings and attitudes, there are no right and wrong answers. The BEST response to each of the following statements is your *PERSONAL OPINION*. We have tried to cover many points of view. You may find yourself agreeing with some of the statements and disagreeing with others. Regardless of how you feel, you can be sure that many others feel the same as you do.

RESPOND TO EACH STATEMENT ACCORDING TO YOUR OPINION BY CIRCLING THE ANSWER THAT BEST REFLECTS YOUR OPINION

1= Strongly Disagree 2= Moderately Disagree 3= Disagree Somewhat

4= Agree Somewhat 5= Moderately Agree 6 = Strongly Agree

95. My parents know what's best for me in terms of how to choose friends.
1 2 3 4 5 6

96. All my recreational preferences were taught to me by my parents and I haven't really felt a need to look for others.
1 2 3 4 5 6

97. Even if my parents disapproved, I could be a friend to a person if I thought she/he was basically good.

98. 1 2 3 4 5 6

99. When I'm on a date, I like to "go with the flow."
100.1 2 3 4 5 6

101.I haven't thought much about what I look for in a date-- we just go out to have a good time.
1 2 3 4 5 6

102.While I don't have one recreational activity I'm really committed to, I'm experiencing numerous activities to
identify one I can truly enjoy.
1 2 3 4 5 6

103.I know my parents don't approve of some of my friends, but I haven't decided what to do about it yet.
1 2 3 4 5 6

103. Some of my friends are very different from each other. I'm trying to figure out exactly where I fit in.
1 2 3 4 5 6

104. I've tried numerous recreational activities and have found one I really love to do by myself or with friends.
1 2 3 4 5 6

105. I couldn't be friends with someone my parent's disapprove of.
1 2 3 4 5 6

106. My parent's recreational activities are enough for me-- I'm content with the same activities.
1 2 3 4 5 6

1 2 3 4 5 6
Strongly disagree Moderately disagree Disagree somewhat Agree Somewhat Moderately Agree Strongly Agree

107.I've been experiencing a variety of recreational activities in hopes of finding one or more I can enjoy for
sometime to come.

1 2 3 4 5 6

108. My dating standards are flexible, but in order to change, it must be something I really believe in.
1 2 3 4 5 6

109 I've had many different kinds of friends, but now I have a clear idea of what I look for in a friendship.
1 2 3 4 5 6

110. I don't have any close friends-- I just like to hang around with the crowd and have a good time.
1 2 3 4 5 6

111. I would never date anyone my parents disapprove of.

1 2 3 4 5 6

112. I've never had any real close friends -- it would take too much energy to keep a friendship going.
1 2 3 4 5 6

113. Sometimes I wonder if the way other people date is the best way for me.
1 2 3 4 5 6

114. The standards or 'unwritten rules' I follow about dating are still in the process of developing -- they haven't completely gelled yet.

1 2 3 4 5 6

115. My rules or standards about dating have remained the same since I first started going out and I don't anticipate that they will change.

1 2 3 4 5 6

116. I have one recreational activity I love to engage in more than any other and doubt I'll find another that I enjoy more.

1 2 3 4 5 6

117. I seem only to get involved in recreational activities when others ask me to join them.
1 2 3 4 5 6

118. I join my friends in leisure activities, but I really don't seem to have a particular activity I pursue systematically.
1 2 3 4 5 6

119. I've dated different types of people and now know exactly what my own "unwritten rules" for dating are.
1 2 3 4 5 6

How to find out how many texts you use in a month

Directions: Below is a list of the major cell phone providers. Please follow the instructions listed underneath the cell phone company to which you subscribe. This will give you a total of texts sent in the current cycle. To determine how many are sent each day you will need to divide the number of texts sent so far in the cycle by the number of days since beginning the current cycle. Multiply this by 30 and that will be your month's average. If you have questions please ask the individual administering the questionnaire.

Sprint (Nextel)
1800- 639-6111
To get minutes/messages press *2 and talk

T-mobile
1800-937-8997
#674# "send"
Displays number of messages sent from that phone (not the whole plan)

Cingular & AT&T
1800- 331- 0500
Star 3432 # displays messages for phone

Alltell
Press *611 "send" then select "option one" you will receive information on the minutes used and the text messages sent from that phone.

Cellular One
1-800-730-2351
Dial *611 (must speak with a rep to ask)

Verizon
#data (3282) "send"
You will receive a text telling you how many texts you have sent that month