TEXAS COUNTY EXTENSION AGENTS PERCEPTIONS OF THE EFFECTIVENESS OF USING FACEBOOK TO COMMUNICATE WITH CONSTITUENTS

A Thesis

by

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Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

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May 2014

Major Subject: Agricultural Leadership, Education, and Communication

ABSTRACT

Extension, in its American form, has been charged with communicating research advancements to the public since its formal inception in 1914. Ways of communicating research have changed throughout time due to advancements in technology. The extension service is now also charged with communicating research advancements in inexpensive, efficient, and reliable ways and addressing local priority needs relative to each county agency. This study sought to describe Texas extension agents' confidence, ability, and perceptions using social media, Facebook in particular, to communicate with constituents.

The participants in the study were a randomly selected group of Texas extension agents. A web-based questionnaire was used to measure the perceived level of confidence, ability, and perceptions that each agent had about Facebook. Means, standard deviations, and minimum and maximum scores on the scales were used to describe agents' perceived levels of social media competence on a five-point, Likert-type scale, and if they used Facebook professionally or personally.

Findings indicated that the majority of the sample had Facebook profiles and logged in daily personally but did not use it professionally due to limitations and restrictions.

DEDICATION

I dedicate this work to the memory of my father Buddy Lewis,

and my grandpa, Warren Brannan Class of 1950.

NOMENCLATURE

Facebook	A free social networking service and website launched in February 2004 by Mark Zuckerberg, a Harvard student. It is home to 800 million active users currently and provides a place for people to post pictures, thoughts, links, and videos to share with the public (Kaplan & Haenlein, 2010).
Social Media	Refers to the use of web-based and mobile technologies to turn communication into an interactive dialogue, first used in 1979 (Merriam-Webster, 2013).
Outlet	Those elements of the mass media that focus on delivering news to the general public or a target public (Merriam-Webster, 2013).
Texas A&M Agrilife Extension Service	An organization with a mission to serve Texans through community-based education (Agrilife Communications, 2012).

TABLE OF CONTENTS

Page

Page

LIST OF TABLES

CHAPTER I

INTRODUCTION

Background and Setting

Social media in the continuously changing world of technology has provided new ways of communicating. Uses of social media range from networking with friends to advertising businesses and organizations. The first form of social media was developed in 1979; Tom Truscott and Jim Ellis from Duke University created Usenet, which was a worldwide discussion system that allowed Internet users to post public messages (Kaplan & Haenlein, 2010). Today's version of social media started 20 years ago with the first blog site. "The growing availability of high-speed Internet access further added to the popularity of the concept, leading to the creation of social networking sites such as MySpace in 2003 and Facebook in 2004" (Kaplan & Haenlein,2010, p.60). Social networking sites including Facebook and Myspace helped coin the term "social media," and contributed to the prominence it has today. Social media are forms of electronic communication that provide ways for users to create online communities to share information, ideas, personal messages, and other content (Merriam-Webster, 2013). Facebook, in particular, plays a key role in how people communicate and share information through time and space (Kaplan & Haenlein, 2010).

Created in February 2004 by a Harvard student (Kaplan & Haenlein, 2010), Facebook is the most popular social media outlet in the country with two-thirds of online American adults (67%) being Facebook users (Rainie, Smith, & Duggan, 2013).

Facebook was developed as a college site that allowed students to communicate and share pictures, videos, and thoughts in one place. The site started small, but grew very rapidly, first to other colleges and then to high schools and now to anyone over the age of 13 (Rethlefsen, 2010). Facebook started offering official pages for businesses and organizations in November 2007(Vorvoreanu, 2009). It offers a platform for businesses and organizations to use as outreach and marketing tools and it is a forum for professionals to share information and collaborate (Skeels & Grudin, 2009).
Rainie, Smith, and Duggan (2013) found that 67% of American adults have a profile on Facebook. According to Rethlefsen (2010), more links are shared via Facebook than any other social tool, including email. Companies and organizations can post links to other sites, can promote a new event or product, and can keep people readily updated on important upcoming dates and information. Facebook is becoming an important resource for companies and organizations to reach their targeted audience. Facebook is an efficient way to reach constituents because it is where the constituents have the most online presence. A typical user spends approximately 20 minutes a day on Facebook, and two-thirds of users log into Facebook at least once a day (Ellison, Steinfield, & Lampe, 2007).

Texas A&M Agrilife Extension Service has been helping citizens and communities for many years. The mission of Texas A&M Agrilife Extension is, "Improving the lives of people, businesses, and communities across Texas and beyond through high-quality, relevant education" (Agrilife Communications, Mission, 2012).The Texas A&M Agrilife Extension Service provides agents who educate citizens

on topics dealing with agriculture and help with community-based projects (Agrilife Communications, 2012). According to Jeff Ripley (personal communication, February 26, 2013) there are 506 county extension agents in Texas with a network of 250 county extension offices in Texas. All counties in Texas are represented by an extension agent who coordinates events and recruits workers in the county. Each county has different projects the agent, staff, and volunteers carry out, depending on the program delivery methods and resident input. Through the programs provided by each county's extension branch, Texans are better prepared to take care of themselves and family, have better tools for economic stability, and improve stewardship of the environment and of the state's natural resources (Agrilife Communications, 2012). Texans benefit from the services of the extension agency and rely on it for solutions. The Texas A&M Agrilife Extension agents and specialists respond with answers and with significant return on investment to boost the Texas economy (Agrilife Communications, 2012).

Extension agents have the responsibility to get information to their volunteers and/or workers and to notify them of upcoming events and projects. In today's society, there are many platforms to communicate, such as Facebook that can serve as useful tools to distribute a message to many people at one time. A study by Mirando et. al (2012) provides an example of how opportunities and challenges faced by a branch of extension services like animal agriculture have changed dramatically over the past few decades and requires the use of new approaches and emerging technologies that are available to extension professionals. Mirando et. al (2012) in their study about new technology as it applies to agriculture stated,

> Those in agriculture are increasingly resorting to the use of social media venues such as Facebook, YouTube, LinkedIn, and Twitter to access information required to support their enterprises. Use of these various approaches by extension educators requires appreciation of the technology and an understanding of how the target audiences access information available on social media. (p. 3677)

The use of technology is increasing and changing rapidly and professionals, including extension agents, have the opportunity to adopt tools such as social media and integrate them into learning and educational opportunities. Facebook is a viable tool in communicating with constituents because it is a medium that provides a fast and feasible way of communication (Skeels & Grudin, 2009). Extension agents would benefit greatly from keeping an open mind about incorporating Facebook into their methods of communication.

Statement of the Problem

Extension, in its American form, has been charged with communicating research advancements to the public since its formal inception in 1914 of the Smith-Lever Act (True, 1928). Numerous changes in communications have occurred and advancements have been made since 1914. A particularly notable recent advancement has been the emergence of social media (Kaplan & Haenlein, 2010). Facebook is a type of social media that has been documented as a viable communications platform (Skeels & Grudin, 2009). Facebook is a commonly used site that creates opportunity to communicate through posts, groups, events, etc.

There are several benefits to using Facebook to communicate. Deep budget cuts have placed extension systems in a defensive position as noted by Peters and Franz (2012). Extension agents are faced with the challenge of finding more efficient ways of carrying out their jobs. Facebook can offer a financially efficient way of organizing events and sending information to targeted audiences by limiting need of paid positions that are in charge of gathering and disbursing information. The speed in which information travels is one benefit of using Facebook (Skeels & Grudin, 2009). Facebook can allow extension agents the opportunity to post information with a click of a button. Another benefit provided by Facebook is convenience. With 67% of American adults having a profile on Facebook (Rainie, Smith, & Duggan, 2013), convenience is created by providing the opportunity for extension agents to transmit information at a location where the majority of adults are already occupying online.

Therefore, Facebook may be a viable form of communication between Texas's county extension agents and their constituents. However, no studies were found that have investigated county extension agents perceptions of Facebook or its potential as a communications tool. Thus, the overarching question guiding this study is, how effective do county extension agents in Texas believe Facebook is as a form of communication with constituents?

Purpose of the Study

The purpose of this study is to describe how effective county extension agents in Texas perceive Facebook to be as a communications tool for use with constituents by examining how they use Facebook and, whether or not they believe Facebook is a useful

and viable communications tool. The data provided from this study determines Texas extension agents' accessibility to using Facebook professionally. The study sought to find out if the agents are accessing Facebook from their homes, mobile devices or offices. This provided insight of where the majority of Facebook usage was occurring in order to be able to target future research in the provided areas. The study was also interested in examining the agents' perceived confidence and ability in using social media and to identify the agents' perceptions of using Facebook in particular. The data provided by the agents would help determine the level of acceptance the agents had of using social media and would also help provide information about future adoption of using social media in the workplace. This study served as an introduction to future research on the use of social media in the workplace by providing a targeted audience's perceptions and abilities of using Facebook to communicate with constituents in a particular field.

Research Questions and Objectives

To pursue the proposed overarching question, the following research questions and enabling objectives were used:

RQ1: How do County Extension Agents use Facebook?

RO1.1: Describe frequency of county extension agents' personal Facebook use

RO1.2: Describe frequency of county extension agents' professional Facebook use

RO 1.3: Describe where county extension agents' access Facebook (home, office, mobile devices)

RQ2: How Efficacious are County Extension Agents using Social Media?

RO2.1: Describe county extension agents' perceived confidence in using social media

RQ3: What are County Extension Agents' Professional Developmental Needs for using Facebook as a Communications Tool in the Workplace?

RO 3.1: Describe county extension agents' ability to use new social media such as Facebook

RO3.2: Describe county extension agents' perceptions of using Facebook in the workplace

RO3.3: Determine county extension agents' professional developmental needs for using Facebook as a communications tool in the workplace

Limitations of the Study

There were limitations faced in this study including accessibility and agents leaving counties due to retirement or job change. The initial invitation for the questionnaire was sent to 128 participants; of those, 15 agents had retired. Another

limitation was accessibility. Some agents reported having restricted access to Facebook in their office (n = 16), and did not have Internet at their home to access Facebook when they were not working. Some of the commonly occurring restrictions the agents reported were, "county blocks agents from social media sites because it is viewed as personal and not professional", and "access is limited and can only be used if proven necessary to county". Age of participants was another limitation. The majority of Facebook users are between the ages of 18-35 (Rainie, Smith, & Duggans, 2013). The average Texas extension agent is 43 years old; therefore, reduced adoption of social media by their age is considered a limitation. This study yields data that can be generalized throughout Texas; however the data cannot be generalized beyond the state of Texas.

Significance of the Problem

Facebook can provide a fast, cheap, and accessible way for Texas county extension agents to communicate with their constituents (Skeels & Grudin, 2009). The majority of Americans are already occupying Facebook for both personal and professional reasons (Lenhart, Purcell, Smith, & Zickuhr, 2010; Ellison, Steinfield & Lampe, 2007) and the method of posting information and receiving a message is a quicker process and more likely to be read as opposed to traditional forms of communication such as email (Mirando et. al, 2012; Skeels & Grudin, 2009; Kaplan & Haenlein, 2010; Rethlefsen, 2010). The Texas A&M Agrilife Extension System is being faced with changes such as budget cuts and the need to communicate to a large audience in more efficient ways (Peters & Franz, 2012). Extension agents are being forced to

come up with creative ways of communicating in inexpensive, efficient ways. Facebook provides an answer to this problem and is user friendly enough to understand and utilize.

Previous research has shown that social media is emerging to provide professionals a primary way of communicating with constituents in an efficient way (Kaplan & Haenlein, 2010; Mirando et.al, 2012; Skeels & Grudin, 2009). There are many social media outlets discussed in the literature that can be beneficial; however, for the purpose of this study the focus will be on Facebook due to the high user rate compared to other types of social media (Rethlefsen, 2010). The reviewed literature provided insight as to how Facebook can provide ways for the extension system to conquer the challenges they are facing (Lenhart et. al, 2010; Skeels & Grudin, 2009; Mirando et.al, 2012).

CHAPTER II

REVIEW OF LITERATURE

Theoretical Framework

The research questions and objectives will be guided by two theories; unified theory of acceptance and use of technology (Venkatesh, Morris, Davis, & Davis, 2003) and the Social Cognitive Theory (Bandura 1986).

Unified Theory of Acceptance of Use of Technology

The adoption of the use of technology to communicate with constituents in the corporate world is on a continuous rise in necessity (Anderson & Schwager, 2004). Venkatesh et. al (2003) established an user acceptance theory known as the *Unified Theory of Acceptance and Use of Technology*, or UTAUT. UTAUT was formulated with four core determinants of intention and usage and four moderators of key relationships (Venkatesh et. al, 2003). Venkatesh et. al (2003) described the theory as,

> a useful tool for managers needing to access the likelihood of success for new technology introductions and helps them understand the drivers of acceptance in order to proactively design interventions targeted at populations of users that may be less inclined to adopt and use new systems. (p. 426)

The Anderson and Schwager (2004) study found that wireless network technologies present unique opportunities and challenges for businesses, as well as small and medium enterprises. According to Palen (2002) wireless communication opportunities are allowing consumers and businesses to transcend time and place, thus, increasing

accessibility and expanding both social and business networks. Clarke (2001) adds that wireless communication also promises to provide convenience, localization, and personalization of services. The acceptance of the wireless technologies can be a challenge; however, the UTAUT model offers ways to understand the process of incorporating new technologies and provides useful approaches in introducing new technology.

Social Cognitive Theory

Bandura's (1986) social cognitive theory is comprised of three essential parts; personal, environmental, and behavioral in which all parts work together to influence self efficacy. Self-efficacy is an individual's confidence in his or her ability to influence events in his or her life (Bandura, 1986). Bandura (2009) suggested that acquiring knowledge and skills regarding innovations are necessary, but not sufficient for their adoption of practices. Several factors determine whether people will act on what they have learned including environmental inducements, adoptive behavior, and personal incentives. The greater the relative benefits provided by an innovation the higher the incentive are to adopt it (Bandura, 2009).

Personal determinants in the social cognitive theory are directly influenced and always changing by environmental factors. Bandura (2009) suggested that an individual's personal beliefs will be more or less apparent depending on the environment or main crowd opinion an individual is around. Bandura (2009) describes it as individuals being who they need to be in given situations.

Environmental determinants in the social cognitive theory are influenced both by personal perspective and behavior in a situation (Bandura, 2009). Personal views partly determine which environmental events will be observed, what meaning will be conferred on them and whether they leave any lasting effects while behavior influences what environment an individual will put themselves in (Bandura, 2009).

Behavioral determinants are influenced by symbols that individuals associate with personally and that are provided by certain environments (Bandura, 2009). According to Bandura (1986) through the medium of symbols people can communicate with others at any distance in time and space. As suggested by Bandura (2009) behavior effects personal action. An example of this as identified in this study is the way in which contact information is found. Social media is commonly used to look up contact information (Skeels & Grudin, 2009) and the location that people go to look up contact information or behavior of individuals in decision making processes is influenced by the actions and behavior of influential people around the individual looking for contact information.

UTAUT builds a framework that describes the factors of the acceptance of social media and introduces ways that can be used in this study by extension agents to incorporate and teach agents how to use social media in the workplace. The social cognitive theory provides an explanation of how personal, environmental and behavioral factors work together to explain an individual's self-efficacy. This study used self-efficacy models from the Wang and Haggarty (2011) to identify the ability and confidence of the extension agents in using social media.

Literature Related to Facebook as a Communication Tool

Facebook as a social media outlet has grown exponentially over the past few years. In recent years it has opened up its accessibility to businesses and organizations (Vorvoraunu, 2009). Facebook usage statistics change continuously; however, the Lenhart et. al (2010) study conducted by the Pew Research Center's Internet and American Life Project provided insight on recent numbers. The study was part of a series highlighting the attitudes and behaviors of adults ages 18-29 on social networking sites including blogs, Facebook, and Twitter. The study found a lot of information on all three categories; however, for representation in this study the focus will be on the Pew findings on Facebook. The results of this study indicated that 63% of adults access the Internet using multiple devices and 59% of those people accessed it wirelessly (Lenhart et. al, 2010). According to Rainie, Smith, and Duggan (2013), Facebook is currently the social network of choice among adults with 67% of all social networking profiles being Facebook profiles. The research from the Pew Research Center shows that the majority of adults have Facebook accounts that they utilize (Rainie, Smith, and Duggan, 2013).

Facebook has been found to help people in both their professional and personal lives. According to Ellison, Steinfield, and Lampe (2007) using Facebook correlates directly with building social capital. The study examined how offline and online communication occurs and continues over time and looked at any overlaps there might be between the two. It found that online social networking systems such as Facebook support both the maintenance of existing social ties and the formation of new

connections (Ellison, et al., 2007). This study supports the notion that the use of social media can increase and build social connections.

Skeels and Grudin (2009) provided insight as to why communicators prefer the use of Facebook over other forms of communicating such as email. Skeels and Grudin (2009) focused on whether the use of social media enhances or reduces productivity and found that on the basis of preference social media increases productivity. In terms of communication through Facebook, it enables lightweight communication without interruption. Several people in the study commented on the advantage of a pull technology over email, meaning that people can choose when to look, so those who post information do not burden receivers the way a call or email would (Skeels & Grudin, 2009). Some people commented professionally that status updates helped them keep up with trends and information in their particular fields (Skeels & Grudin, 2009).

Warr (2008) acknowledged that this is the era of social networking and that it was essential in efficient communication. The study concluded that social computing has radically changed the way people interact with both information and one another on the internet, giving people the ability to generate, self-publish, and find information more efficiently, and share expertise in an approach that is much easier and cheaper than that of earlier knowledge management systems (Warr, 2008). According to Pattison (2009) Facebook is a simple and free way to create a location for information transfer and the increase of a fan base.

Facebook has been proven to be a useful tool in communicating; however, there are challenges that first-time users or business pages face. According to Kaplan and

Haenlein (2009), social media literacy is lagging in a significant number of consumers. While businesses are trying to incorporate the use of social media they are finding it hard to educate users on efficient ways of communicating (Vorvoreanu, 2009). Corporate decision makers are steadily trying to identify ways firms can make profitable use out social media outlets, such as Facebook (Kaplan & Haenlein, 2009).

In terms of small business, according to a study by Rae (2004) mainstream media and social networking is not assumed to be effective. The challenge of educating the business industry on how to use social media effectively is essential in assuring the adoption of the communication tools, such as Facebook. In relation to the population in this study, another challenge potentially faced by extension agents is the connection between personal and professional Facebook pages. Rethlefsen (2010) found that privacy is an issue essential to address when using more than one profile on Facebook. A potential lag in acceptance of using Facebook as a communication tool in the work place would be employees' or participants' hesitation of using the professional profile to protect their personal profiles from being connected and therefore seen by the public.

Literature Related to the Extension Service

The Texas A&M Agrilife Extension Service, as a component of the land-grant university system, has a mission to disseminate new knowledge and to foster its application and use (Mirando et. al, 2012). According to True (1925), the Smith-Lever Act of 1914 was set in motion to assure that extension work shall consist of giving instruction and practical demonstrations in agriculture and home economics to persons in

the community. The act outlined the job of extension agents and they have been working since to find cost effective and convenient ways of carrying out their jobs.

The extension service in recent years has been faced with the challenges of doing their job cost effectively and to be open to the idea of increasing technology use. Peters and Franz (2012) described some of the challenges agents are facing as deep budget cuts throughout all programs and increased accountability within each county. Agents are responding to the budget cuts by engaging in organizational change, restructuring and developing strategic plans in order to save the programs as well as their individual jobs (Peters & Franz, 2012). Mirando et. al (2012) found that in order for the extension service to continue to be successful under these restrictions it needs to adapt the new ways of communicating to create more funding. Mirando et. al (2012) offers suggestions on how agents can use media to connect and maintain relationships with farmers and ranchers through the use of social media. Social media as supported in previous literature can provide ways for extension agents to communicate effectively, conveniently and cost efficiently (Kaplan & Haenlein, 2009; Pattinson, 2009; Warr, 2008; Lenhart et. al, 2010; Ellison, Steinfield & Lampe, 2007; Vorvoreanu, 2009; Skeels & Grudin, 2009).

CHAPTER III

METHODS

The Wang and Haggerty (2011) study provided guidance for this study. The method used to determine the perceptions of extension agents using Facebook to communicate was evaluated using a virtual competence test similar to the one used in the Wang and Haggerty (2011) study, and a construct developed by the committee and related literature. Perceived confidence and ability were the constructs used in this study in order to study the specific characteristics within the scope of this study. Wang and Haggerty (2011) used several constructs to examine virtual competence such as remote working self-efficacy, virtual social skill and outcomes of individual virtual competence that were considered for this study but were outside of the scope of the study; however, could be used as a reference in future studies. This chapter addresses the research design, populations and samples, the instrumentation utilized to collect data, the processes implemented to determine validity and reliability of the instrument, the process of data collection, and lastly, the data analysis process used for this study.

Research Design

The research design of this quantitative study is cross-sectional, descriptive. The overarching construct this study will measure is Texas county extension agents' perceived confidence and ability to use social media and their perception of using Facebook to communicate with constituents. Three measures were obtained using a questionnaire sent electronically to a random sample of extension agents in Texas.

Population and Sample

The target population for this study was county extension agents in the state of Texas in the year 2013. The frame used to identify county extension agents in Texas was a list of email addresses received from extension personnel in the month of June, 2013. The email list received by the Texas A&M Agrilife Extension personnel was scrutinized to minimize duplications or omissions that would be potential sources of frame error.

Previous similar studies (Mirando et. al, 2012; Peters & Franz, 2012; O'Neill, Zumwalt, & Bechman, 2011; Cornelisse et. al, 2011; Seger, 2011) have identified county extension agents as the population of interest. The population of this study was identified as agents in Texas due to the proximity of the researcher and time frame in which the study needed to take place. The population size according to Jeff Ripley, Assistant Professor and Extension Specialist, is 506 (personal communication, 2012). The names of the extension agents in Texas from the frame were entered into a Microsoft Excel spread sheet in alphabetical order. Each member of the population was numbered in chronological order, beginning with the number one corresponding with the first name of the alphabetized list. The master population list was randomly assigned into four separate groups of varying numbers. A simple random sample was obtained for the pilot study which was group one and then another simple random sample was obtained providing the sample that was used for this study, which was group two (n=129).

Instrumentation

The data collection instrument (Appendix A) used in this study was researcher developed after consulting a similar study (Wang, 2011). The questionnaire consists of seven sections.

The first section of the questionnaire sought to identify how many years the respondent was an extension agent, if they had a Facebook account, and if they could access Facebook in their office. The last part of this section asked the respondent if they had any restrictions related to using Facebook professionally in the workplace. This section tried to identify basic characteristics about the agents.

The purpose of the second section of the questionnaire was to identify how and where the agents access Facebook. The questionnaire also sought to identify the frequency at which the respondent logged into Facebook both personally and professionally from their home, office, or mobile device. The purpose of identifying the characteristics in this section was to determine how and from where Facebook usage occurred the most.

The purpose of the third section of the questionnaire was to measure the perceptions of using Facebook through questions about personal and professional use by each agent. The questions were executed using a Likert-type, five-point scale responses ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The purpose of the questions was to identify the levels of perceived effectiveness and usefulness of using Facebook to communicate with constituents.

The purpose of the fourth section of the questionnaire was to identify whether the respondent thought "events" and "groups" on Facebook are useful through two simple yes or no questions.

The purpose of the fifth section of the questionnaire was a two-part section that sought to answer the virtual competence of the respondent. Agents were asked to answer a series of questions in two scales; the first being a scale the asked the respondents to rate their perceived confidence on a five-point scale responses ranging from 1 = *not at all confident* to 5 = *totally confident*. The scale aimed at identifying how confident each respondent perceived themselves to be at using social media. The second part of the virtual competence measures sought to identify the ability each respondent had at using social media. The agents were asked to answer a series of questions about their perceived ability on a five-point scale, responses ranging from 1 = *extremely incapable* to 5 = *extremely capable*. The scale aimed at identifying how capable each respondent was at using social media.

The purpose of the last section of the questionnaire was to determine basic characteristics of the respondents such as age and gender.

The design and format of the data collection instrument was guided by Dillman (2007). Dillman (2007) suggested that self-administered questionnaires should be "constructed in ways that make them easy to understand and answer" (p. 79). Dillman (2007) also noted that "respondent-friendly questionnaire design can improve response rates" (p. 81). Dillman's(2007) online strategy of look and feel of the questionnaires was used in the format of each question. Each question fit within the online page with little to

no scrolling involved. A progress bar notifying the participant on the length left of the questionnaire was placed at the bottom of the questionnaire. The questionnaire was short in length as to not turn the participant off from taking the questionnaire.

Validity and Reliability

An instrument "can be reliable without being valid, but it cannot be valid unless it is first reliable" (Ary, Jacobs, Razavieh, & Sorensen, 2010, p. 226); thus, reliability must be established by an appropriate method. The researcher-developed questionnaire was constructed using information from a similar study, as well as the input of professionals in the field. The questionnaire consisted of seven sections containing the types of questions previously noted.

Validity

"Validity is the most important consideration in developing and evaluating measuring instruments" (Ary et al., 2010, p. 243). Two types of validity were determined for the data collection instrument used in this study: face validity and content validity. Face validity was determined by a panel of qualified experts by asking each expert to determine if the online questionnaire "appeared valid for its intended purpose" (Ary et al., 2010, p. 439).

Content validity of the data collection instrument was determined by the same panel of experts as face validity. Each expert on the panel assessed the "appropriateness and representativeness of the items" on the questionnaire (Ary et al., 2010, p. 256). Construct underrepresentation and construct-irrelevant variance was addressed by providing each of the experts with an online copy of the questionnaire and the research

questions. The experts were asked to determine if the questionnaire adequately addresses the "important dimensions of the construct" and did not contain questions which would be "extraneous to the construct" (Ary et al., 2010, pp. 243-244).

Reliability

Reliability was determined by conducting a pilot test for the data collection instrument. Using a randomly selected group from the original four groups of agents' reliability of the pilot study was determined. The group randomly selected for the pilot study was group one (n = 128). An electronic version of the questionnaire was sent by email using Qualtrics. Cronbach's alpha was measured in all three constructs and the outcomes were all greater than .8.

Institutional Approval

After the data collection instruments were developed, but prior to implementation of the data collection process, the researcher submitted a proposed plan outlining the data collection process and all related materials to the Texas A&M University Institutional Review Board. The data collection process began after receiving approval from the Institutional Review Board and followed the requirements and specifications set forth in the approval notice

Data Collection

Dillman (2007) indicated a schedule for sending questionnaires and correspondence to subjects in his *Tailored Design Method*. Reliability was determined according to Dillman's suggestions of the delivery process through a personalized brief description letter (Appendix B) emailed to the subjects with the first questionnaire

(Appendix A) in the pilot study (n = 127). Six agents responded that they had retired and were no longer working as an extension agent bringing the sample size to n = 123. A reminder (Appendix C) and the same questionnaire (Appendix A) was sent to non-respondents 10 days after the initial questionnaire. The data collection process was repeated every 10 days for a total of four times. The final follow up was completed by calling the remaining non-respondents and sending the questionnaire again after a verbal confirmation that the participant would fill out the questionnaire. Appendix E shows the process and dates of data collection. Ninety-five (77.2%) responses were received from extension agents in the pilot study. The same process was repeated for the sample used in this study (n = 128) for group two. Fifteen agents responded that they had retired and were no longer extension agents and two opted out of the study bringing the sample population to n = 111. Ninety-seven (87.4%) responses were received from extension agents in the sample population.

Data Analysis

Respondent data from each electronic questionnaire in sample population (n = 111) was downloaded from qualtrics.tamu.edu and put into the program SPSS. Data were analyzed using SPSS version 21 for Windows platform computers. In determining the appropriate analysis of the data, the primary guidance was scales of measurement as outlined by Ary et al. (2010).

RQ1: How do County Extension Agents use Facebook?

Research Objective 1.1: Frequency of county extension agents' personal Facebook use

The purpose of RO1.1 was to describe the frequency of county extension agents' personal use of Facebook. Each subject was asked to indicate in whole numbers how many days in a typical week he or she log into his or her personal Facebook account. The responses of how many days were string data in which frequencies and percentages were reported.

Research Objective 1.2: Frequency of county extension agents' professional Facebook use

The purpose of RO1.2 was to describe the frequency of county extension agents' professional use of Facebook. Each subject was asked to indicate in whole numbers how many days in a typical week they log into their professional Facebook account. The responses of how many days were string data in which frequencies and percentages were reported.

Research Objective 1.3: Describe where county extension agents' access Facebook

The purpose of RO1.3 was to describe where county extension agents accessed Facebook. The subjects were asked how many days during a typical week they accessed Facebook from their home, mobile device and office both personally and professionally. The data was reported separately for personal use and for professional use. For this study, number of days was string items so frequencies and percentages were reported.

RQ2: How Efficacious are County Extension Agents using Social Media?

Research Objective 2.1: Describe county extension agents' perceived confidence in using social media

The purpose of RO2.1 was to describe county extension agents' perceived confidence in using social media. The subjects were asked to rate their perceived confidence on a five-point Likert-type scale where responses ranged from 1 = *Not at all Confident* to 5 = *Totally confident*. This data gauged each subjects overall perceived confidence in using social media. Levels of confidence were scale data; therefore, frequencies and percentages were reported. The summated scale also reported mean and standard deviation of the data.

RQ3: What are County Extension Agents' Professional Developmental Needs for using Facebook as a Communications Tool in the Workplace?

Research Objective 3.1: Describe county extension agents' ability to use new social media such as Facebook

The purpose of RO3.1 was to describe county extension agents' ability to use new social media such as Facebook. The subjects were asked to rate their ability of using social media on a five-point Likert-type scale where responses ranged from 1 = *Extremely Incapable* to 5 = *Extremely Capable*. This data gauged each subjects overall ability of using social media. Levels of ability were scale data; therefore, frequencies and percentages were reported. The summated scale also reported mean and standard deviation of the data.

Research Objective 3.2: Describe county extension agents' perceptions of using Facebook in the workplace

The purpose of RO3.2 was to describe county extension agents' perceptions of using Facebook in the workplace. The subjects were asked to rate their perceptions of using social media in the workplace on a five-point Likert-type scale where responses ranged from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. This data gauged each subjects overall perceptions of using social media. Levels of perceptions were scale data; therefore, frequencies and percentages were reported. The summated scale also reported mean and standard deviation of the data.

Research Objective 3.3: Determine county extension agents' professional developmental needs for using Facebook as a communications tool in the workplace

The purpose of RO3.3 was to describe county extension agents' professional developmental needs for using Facebook in the workplace. Subjects were asked to answer a "yes" or "no" question, at the end of the survey to indicate if he or she would be interested in going to a social media workshop, if provided. This question helped determine if there was an interest in participating in a social media workshop combined with the overall survey helped the researcher identify if there was a perceived need for social media use

CHAPTER IV

FINDINGS

The purpose of this study was to examine if county extension agents in Texas had a Facebook account and determine ways they are using Facebook both personally and professionally. This study sought to determine extension agents' ability and perceived confidence of using Facebook to communicate with constituents. The target population was extension agents in Texas.

Subject Characteristics

Of the agents who responded to the invitation request, 77% (n = 71) indicated they had a Facebook account; 23% (n = 21) indicated they did not have a Facebook account.

Agents included in this study were 52.2% male (n = 44) and 47.8% female (n = 48). The average age of respondents that had a Facebook was 42, and the average age of respondents who did not have a Facebook was 47. The average experience for all participants was 13 years as a county extension agent. Table 1 shows the selected demographic characteristics of respondents based on Facebook user status.

Table 1
Demographics of Texas county agent Facebook users

	Yes				No				Total			
	f	%	*M*	*SD*	*f*	%	*M*	*SD*	*f*	%	*M*	*SD*
Sex												
Female	43	60.6			5	23.8			48	47.8		
Male	28	39.4			16	76.2			44	52.2		
Age			42.4	10.5			47.0	10.8			43.4	10.7
Experience[a]			13.3	9.5			13.8	8.4			13.4	9.2

Note. *f* = 48 females, 44 males; *M* = 43.4 age, 13.4 experience; *SD* = 10.7 age. 9.2 experience; [a] = Years of experience as a county agent, Range = 1 to 45 years

Findings by Research Question

RQ1: How do County Extension Agents use Facebook?

Research Objective 1.1: Frequency of county extension agents' personal Facebook use

The purpose of Objective 1.1 was to describe county extension agents' personal Facebook use. The participants were asked to indicate how many days during a typical week he or she log into his or her personal Facebook profile. Knowing how much the agents logged onto their personal Facebook accounts is an indicator they were using Facebook regularly and to be able to distinguish and separate personal time spent on Facebook compared to professional time spent on Facebook. Knowing how many days agents log onto their Facebook personally will help identify if the targeted audience has a presence on Facebook regularly, which will also help explain why or why not the outlet is being used in a professional setting. Among the extension agents, 35.2 % (*n* = 25) responded that they log onto Facebook seven days a week. The next highest response of the sample, 21.1 % (*n* = 15) responded that they logged onto Facebook five times a

week. This shows that the majority of the agents sampled are on their personal Facebook profiles five to seven days a week.

Research Objective 1.2: Frequency of county extension agents' professional Facebook use

The purpose of Objective 1.2 was to describe county extension agents' professional Facebook use. The participants were asked to indicate how many days during a typical week they log into their professional Facebook profile. The data was used to compare the number of days the agents logged into Facebook professionally versus personally. Among the extension agents, 24.6 % (n = 17) responded that they logged onto their professional Facebook profiles five times a week. The next highest number of the sample, 20.3% (n = 14) responded that they do not log onto their professional Facebook profiles at all during a typical week.

Research Objective 1.3: Describe where county extension agents' access Facebook

The purpose of Objective 1.3 was to describe how and where the agents log onto Facebook both personally and professionally. The participants were asked a series of questions pertaining to the number of days and how they accessed Facebook personally and professionally during a typical week, i.e., from their home, office, or mobile device. The purpose for objective 1.3 was to identify what source most of the participants used to access Facebook and to distinguish which way personally or professionally they accessed each source the most. Table 2 describes the frequency and percentage the participants logged onto Facebook personally and professionally from their home, office and mobile device.

Among the highest percentages, 27.1 % (n = 19) of the sample logged into their personal Facebook from home seven days a week, compared to 22.5 % (n = 16) who logged in no days of the week from their office, and 34.3 % (n = 24) who either logged in no days or seven days a week from their mobile device. Table 2 shows the frequencies and percentages of personal access to Facebook.

Table 2
Where and how county agents access Facebook personally and professionally

	0		1		2		3		4		5		6		7	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Personally	5	7.0	9	12.7	3	4.2	5	7.0	6	8.5	15	21.1	3	4.2	25	35.2
Home	17	24.3	11	15.3	3	4.3	3	4.3	2	2.9	12	17.1	3	4.3	19	27.1
Office	16	22.5	12	16.9	12	16.9	12	16.9	5	7.0	12	16.9	0	0.0	2	2.8
Mobile device	24	34.3	4	5.7	4	5.7	6	8.6	4	5.7	2	2.9	2	2.9	24	34.3
Professionally	14	20.3	6	8.7	8	11.6	8	11.6	4	5.8	17	24.6	2	2.9	10	14.5
Home	37	53.6	6	8.7	5	7.2	6	8.7	4	5.8	3	4.3	0	0.0	8	11.6
Office	13	18.8	8	11.6	8	11.6	8	11.6	6	8.7	23	33.3	0	0.0	3	4.3
Mobile device	38	55.9	5	7.4	3	4.4	7	10.3	1	1.5	4	5.9	0	0.0	10	14.7

Note. *f* = number of agents logged into Facebook and how many days of the week; % = percentage of agents logged into Facebook.

Among the highest percentages in table 2 above, 24.6 % (n = 17) of the sample logged into their professional Facebook from home five days a week, compared to 33.3 % (n = 23) who logged in five days of the week from their office. The majority of the sample, 55.9 % (n = 38) logged in no days of the week from their mobile device. Table 2 shows the frequencies and percentages of professional access to Facebook.

RQ2: How Efficacious are County Extension Agents using Social Media?

Research Objective 2.1: Describe county extension agents' perceived confidence in using social media

The purpose of Objective 2.1 was to describe county extension agents' perceived confidence of using social media. Some questions in this instrument were created by Wang and Haggerty (2011) and were used to identify how confident agents were at using social media or getting help if needed to learn how to use social media. The study by Wang and Haggerty (2011) was grounded on the social cognitive theory (Sandura, 1956), which described how personal, environmental, and behavioral factors affect each other in the process of learning and in this case using social media. Table 3 includes the frequencies and percentages of the agents' perceived confidence of using social media to complete their jobs, if they already have a Facebook profile. Table 4 identifies the frequency and percentage of the agents' perceived confidence of using social media to complete their jobs if they do not already have a Facebook profile. Participants rated their perceived confidence on a five-point, Likert-type scale where 1 = *not at all confident* and 5 = *totally confident*.

Table 3
Texas county agents perceived confidence of using social media who have a Facebook Profile (*n* = 71)

I could complete my job using social media if…	1		2		3		4		5	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
I had never used one like this before	9	12.7	10	14.1	24	33.8	11	15.5	17	23.9
There is no one around to tell me what to do as I go	5	7.0	13	18.3	22	31.0	14	19.7	17	23.9
I had only the manuals for reference	6	8.5	12	16.9	21	29.6	15	21.1	17	23.9
I could call someone for help if I got stuck	0	0.0	5	7.0	15	21.1	25	35.2	26	36.6
I had seen someone else using it before trying it myself	3	4.2	5	7.0	21	29.6	22	31.0	20	28.2

Note. Bipolar scale: 1 = Not at all confident; 5 = Totally confident; Summated *M* = 3.54; *SD* = .99

Table 3 above showed the average perceived confidence extension agents in the sample had using social media and reported the mean (*M* = 3.54). The agents confidence levels were between 3 and 4 on the confidence scale, with 1 = *not at all confident* and 5 = *totally confident*. The standard deviation in the sample was (*SD* = .99) with a min of 1.2 and a max of 5. This finding was consistent with Wang and Haggarty (2011) in that if scores for perceived confidence were high, then it would suggest that perceived ability would be high, all working together to produce overall competence in social media use.

Table 4
Texas county agents perceived confidence of using social media who do not have a Facebook profile (*n* = 21)

I could complete my job using social media if…	1		2		3		4		5	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
I had never used one like this before	6	27.3	4	18.2	7	31.8	3	13.6	1	4.5
There is no one around to tell me what to do as I go	6	27.3	6	27.3	3	13.6	5	22.7	1	4.5
I had only the manuals for reference	4	18.2	3	13.6	7	31.8	5	22.7	2	9.1
I could call someone for help if I got stuck	3	13.6	0	0.0	6	27.3	7	31.8	4	18.2
I had seen someone else using it before trying it myself	4	18.2	1	4.5	9	40.9	5	22.7	2	9.1

Note. Bipolar scale: 1 = Not at all confident; 5 = Totally confident; Summated *M* = 2.84; *SD* = 1.1

Table 4 above showed the average perceived confidence extension agents in the sample without a Facebook had using social media and reported the mean (*M* = 2.84). The agents confidence levels were between 2 and 3 on the confidence scale, with 1 = *not at all confident* and 5 = *totally confident*. The Standard Deviation in the sample was (*SD* = 1.1) with a min of 1 and a max of 5. This finding was consistent with Wang and Haggarty (2011) who noted that if scores for perceived confidence were not high then it would suggest that perceived ability would reflect that by being low, all working together to produce overall competence in social media use.

RQ3: What are County Extension Agents' Professional Developmental Needs for using Facebook as a Communications Tool in the Workplace?

Research Objective 3.1: Describe county extension agents' ability to use new social media such as Facebook

The purpose of Objective 3.1 was to describe county extension agents' ability to use social media, in particularly Facebook, to do their job. Some questions in this section

of the instrument were created by Wang and Haggerty (2011) was used to identify the ability of each agent of using social media in the workplace in order to carry out their jobs, while taking into account the agents' perceived confidence. The study by Wang and Haggerty (2011) was grounded on the social cognitive theory (Bandura, 1986), which described how personal, environmental, and behavioral factors affect each other in the process of learning and in this case using social media. Table 5 identifies the frequency and percentage of each agent's perceived ability of using social media if he or she already have a Facebook profile. Table 6 identifies the frequencies and percentages of the agents' perceived ability of using social media to complete their jobs if they do not already have a Facebook profile. This information helped the researcher to determine if agents believe that they are able to use social media in order to carry out their jobs regardless of if they currently used social media. The participants rated their perceived ability on a five-point Likert-type scale where 1 = *extremely incapable* and 5 = *extremely capable*.

Table 5

Texas county agents perceived ability of using social media who have a Facebook profile (*n* = 71)

To what extent do you feel you are capable of…	1		2		3		4		5	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
Using Facebook to give timely feedback when communicating with others whom you are not able to meet in person	0	0.0	11	15.5	7	9.9	23	32.4	30	42.3
Using Facebook to receive timely feedback when communicating with others whom you are not able to meet in person	1	1.4	11	15.5	9	12.7	26	36.6	24	33.8
Using Facebook to convey multiple types of information (factual and emotional information) when communicating with others whom you are not able to meet in person	0	0.0	12	16.9	12	16.9	21	29.6	26	36.6
Using Facebook to transmit varied symbols (words, numbers, pictures) when communicating with others whom you are not able to meet in person	2	2.8	11	15.5	12	16.9	21	29.6	25	35.2
Tailoring the message to fit other parties' requirements when using Facebook to communicate with others whom you are not able to meet in person	2	2.8	11	15.5	17	23.9	22	31.0	19	26.8

Note. Bipolar scale: 1 = Extremely incapable; 5 = Extremely capable; Summated *M* =3.8; *SD* = .99

Table 5 above showed the average perceived ability extension agents in the sample had using social media and reported the mean (*M* = 3.8). The agents ability levels were between 3 and 4 on the confidence scale, with 1 = *extremely incapable* and 5 = *extremely capable*. The standard deviation of the sample was (*SD* = .99) with a min of 1.6 and a max of 5.This finding was consistent with Wang and Haggarty (2011) who noted if scores for perceived confidence were high then it would suggest that perceived ability would be high, all working together to produce overall competence in social media use.

Table 6

Texas county agents perceived ability of using social media who do not have a Facebook profile ($n = 21$)

To what extent do you feel you are capable of…	1		2		3		4		5	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
Using Facebook to give timely feedback when communicating with others whom you are not able to meet in person	6	27.3	7	31.8	6	27.3	3	13.6	0	0.0
Using Facebook to receive timely feedback when communicating with others whom you are not able to meet in person	7	31.8	5	22.7	6	27.3	3	13.6	0	0.0
Using Facebook to convey multiple types of information (factual and emotional information) when communicating with others whom you are not able to meet in person	6	27.3	7	31.8	4	18.2	3	13.6	1	4.5
Using Facebook to transmit varied symbols (words, numbers, pictures) when communicating with others whom you are not able to meet in person	7	31.8	8	36.4	3	13.6	3	13.6	0	0.0
Tailoring the message to fit other parties' requirements when using Facebook to communicate with others whom you are not able to meet in person	6	27.3	9	40.9	2	9.1	4	18.2	0	0.0

Note. Bipolar scale: 1 = Extremely incapable; 5 = Extremely capable; Summated M =2.2; SD = 1.0

Table 6 above showed the average perceived ability extension agents in the sample without a Facebook had using social media and reported the mean ($M = 2.25$). The agents ability levels were between 2 and 3 on the confidence scale, with 1 = *extremely incapable* and 5 = *extremely capable*. The standard deviation of the sample was ($SD = 1.0$) with a min of 1 and a max of 4. This finding was consistent with Wang and Haggarty (2011) who noted if scores for perceived confidence were not high then it would suggest that perceived ability would reflect that by being low as well, all working together to produce overall competence in social media use.

Research Objective 3.2: Describe county extension agents' perceptions of using Facebook in the workplace

The purpose of Objective 3.2 was to describe the agents' perceptions of the effectiveness of using Facebook in the workplace to carry out their jobs. Table 7 includes frequencies and percentages for the agents' perceptions of using Facebook to communicate within their jobs. The participants rated their perceptions on a five-point, Likert-type scale where 1 = *strongly disagree* and 5 = *strongly agree*. The participants were also asked to answer two agree or disagree questions about the importance of using "events" and "groups" on Facebook. Among the extension agents who had a Facebook profile, 76.4 % (n = 55) agreed that creating Facebook "events" helps them communicate with constituents, whereas, 20.8 % (n = 15) disagreed. Also among the extension agents who had a Facebook profile in this sample, 63.9 % (n = 46) agreed that creating Facebook "groups" helps the agents efficiently stay in touch with clientele or committees, whereas 33.3 % (n = 24) disagreed.

Table 7
Texas county agents perceptions of using Facebook in the workplace (*n* = 71)

	1		2		3		4		5	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
Facebook can be used as a tool to effectively communicate with people	3	4.3	4	5.7	7	10.0	20	28.6	36	51.4
Facebook is helpful in finding people or contacts that I am searching for	3	4.2	13	18.3	17	23.9	21	29.6	17	23.9
Facebook effectively helps me find general information that I am looking for	12	16.9	19	26.8	3	22.5	16	22.5	8	11.3
Facebook is helpful in finding information on events occurring close to me	7	9.9	17	23.9	17	23.9	17	23.9	13	18.3
Facebook helps me communicate messages to constituents quickly and effectively	8	11.3	5	7.0	10	14.1	21	29.6	27	38.0
Facebook is an easy social media outlet to figure out and understand	5	7.0	4	5.6	7	9.9	29	40.8	26	36.6
I believe the majority of people I know have a Facebook account	4	5.6	5	7.0	11	15.5	22	31.0	29	40.8

Note. Bipolar scale: 1 = Strongly disagree; 5 = Strongly agree; Summated *M* = 3.61 ; *SD* = .99

Table 7 above showed the average perceptions of using Facebook in the workplace extension agents in the sample had using social media and reported the mean (*M* = 3.61). The agents' confidence levels were between 3 and 4 on the perceptions scale, with 1 = *strongly disagree* and 5 = *strongly agree*. The Standard Deviation in the sample was (*SD* = .99) with a min of 1 and a max of 5. This finding only included responses from extension agents who reported they had a Facebook profile.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary of Findings

This study sought to answer three main research questions about extension agents' use of Facebook. The findings for the research question answered how county extension agents used Facebook. The findings determined that among the extension agents in the sample the most personal Facebook use was from their mobile device. The data also indicated that among extension agents in the sample the most professional Facebook usage was from their office; however in the case of using Facebook professionally the majority of the sample reported not using Facebook by home, office or mobile device at all in a typical week.

The study also looked at describing the extension agents' perceived confidence in using social media based on the Wang and Haggarty (2011) model, which found that more agents' perceived themselves as being more confident than not at using social media. The next part of the Wang and Haggarty (2011) model used in this study sought to find the ability of extension agents in using new social media, Facebook in particular. The findings showed that more agents of the sample also perceived themselves as being more capable than not at using new social media.

The last part of this study sought to identify the perceptions of extension agents on using Facebook in the workplace. The study found that extension agents' perceptions held a mean of 3.6, leaning on the upper end of the scale which described that Facebook is a useful and viable tool in the workplace.

Conclusions

RQ1: How do County Extension Agents use Facebook?

RO1.1: Describe frequency of county extension agents' personal Facebook use

Objective 1.1 described the frequencies and percentages of extension agents' personal Facebook use. This study concluded that roughly a third of agents occupy Facebook daily and of those agents they access Facebook from their mobile device the most. The agents who have a Facebook profile are logging onto it daily so they already have a presence on social media.

RO1.2: Describe frequency of county extension agent's professional Facebook use

Objective 1.2 described the frequencies and percentages of extension agents' professional Facebook use. This study concluded that 24.6 % of agents occupy Facebook at least five days a week; of those agents they access Facebook professionally from their office the most. The evidence provided in objective 1.2 data had two extreme ends which indicated that if the participants log onto their professional Facebook profiles they do it the majority of the days of the week or they do not log in at all to their professional Facebook profiles. There were comparatively lower ranges of professional usage when compared to personal use. Agents were either using Facebook professionally most days or they are not using it professionally at all.

RO 1.3: Describe where county extension agents access Facebook (home, office, mobile devices)

Objective 1.3 reported frequencies and percentages of modes of access extension agents' use. Among the three modes; home, office, and mobile device, personally

Facebook was accessed using a mobile device the most. Professionally, if Facebook was accessed at all it was most accessed from the office. The findings from this objective concluded that there was a high range of personal Facebook usage from home and mobile devices. The data also concluded that while not many reported using Facebook professionally, the ones that did are accessing it the most from the office, which was consistent with the O'Neill, Zumwalt, and Bechman (2011) study that found that only 22% of the respondents reported social media outreach to their extension administrator. The data shows that Facebook is being used professionally, however within extension, implementing the use of Facebook within the workplace is a slow process.

RQ2: How Efficacious are County Extension Agents using Social Media?

RO2.1: Describe county extension agents' perceived confidence in using social media

Objective 2.1 reported frequencies and percentages of respondents levels of perceived confidence for both groups within the sample; agents who had a Facebook and agents who did not have a Facebook. The means and standard deviations reported for these groups concluded that for agents who had a Facebook their levels of perceived confidence was a step higher than the means reported for the agents who did not have a Facebook. This finding was consistent with the Wang and Haggerty (2011) study that described that perceived confidence and ability reflect one another and are also dependent on each other to produce virtual competence. The data concluded that if the agents had a Facebook their perceived confidence reflected that by being on average higher than that of the agents who did not have a Facebook.

RQ3: What are County Extension Agents' Professional Developmental Needs for using Facebook as a Communications Tool in the Workplace?

RO 3.1: Describe county extension agents' ability to use new social media such as Facebook

Objective 3.1 reported frequencies and percentages of respondents levels of perceived ability for both groups within the sample; agents who had a Facebook and agents who did not have a Facebook. The means and standard deviations reported for these groups also concluded that for agents who had a Facebook, perceived themselves as having a higher ability than that of agents who did not have a Facebook. These finding are also consistent with the Wang and Haggerty (2011) constructs and outcomes. Wang and Haggerty (2011) suggest that without a high perceived confidence in using social media then the level of ability a person has using social media will be relatively low. Seger (2011) found similar data relative to extension. The Seger (2011) study concluded that the key element that exists among all barriers of learning to use social media is that, "there is no realistic way for extension to stay ahead of new technology" (pg.5). The study provided the insight of how new technology will change the dynamics of extension's relationship with current and future clientele by forcing all agents to reexamine how they transmit information. The data from this study like Seger (2011) shows that while social media is still in a slow adoption process within extension, the need for it in order to keep up is essential.

RO3.2: Describe county extension agents' perceptions of using Facebook in the workplace

Objective 3.2 reported frequencies and percentages of perceptions of Facebook use in the workplace by agents who already have a Facebook profile. The mean and standard deviation helped to identify where in the range of perception the average agent fell on the scale. The mean concluded that agents scored on the higher end of agreeing that Facebook was beneficial in communicating professionally. The findings identified that there is positive perceptions about how Facebook can be used efficiently in the workplace.

RO3.3: Determine county extension agents' professional developmental needs for using Facebook as a communications tool in the workplace

Objective 3.3 sought to take into account all the constructs in order to find the bigger answer of if there are professional developmental needs for the use of Facebook to communicate. All the constructs tied together conclude that there is a low percentage of professional Facebook use but the need to find ways of teaching how to use it and how to adopt social media is present. Previous research as identified in this study has suggested that while there is a lack of social media adoption, it provides opportunities for efficient communication that extension agents could benefit from.

This study along with related literature concluded that Facebook reaches a large audience at one time in sending information as opposed to sending emails one on one. Rainie, Smith, and Duggan (2013) found that 67% of online adults are using Facebook which suggests agents that are not using Facebook might not be reaching all potential

audiences in an efficient way. This study received an 87.4% response rate. The reason for the response rate success could be attributed to several factors. The topic of this study is a fairly new and a relevant area of research for extension agents, which could be one reason for the response rate along with having Dr. Darrell Dromgoole, Associate Director for County Programs; sign off on the email sent to each agent and several follow up emails and reminders. Agents regularly communicate with Dr. Dromgoole about work related topics, so having him sign off on the questionnaire used in this study influenced the responses of the agents in a positive way.

Implications

This study shows outcomes that offer positive insight in future research involving social media use in the workplace. Based on the data found in this study extension agents in particular are using Facebook both personally and professionally and feel they are confident, capable and open to using Facebook professionally in order to carry out their jobs. This offers evidence that would support future research in the area of professional social media use. While there is not much recent research in this area, this study shows that there is a perceived need and willingness to incorporate more social media use in the workplace. This study also supports future education opportunities. Social media is already being incorporated in educational lesson plans in order to adapt to changing technology. Evidence provided in this study shows a push for more growth in extension programming incorporation of social media. This study provided data that suggests that more agents are using Facebook personally than professionally. This indicates that agents know how to use Facebook, they just do not see the connection of

how Facebook can be used in the workplace to provide efficient, quick ways of communicating.

Future research on modes of communication effectiveness, social media incorporations in lesson planning, and professional workshops can all help to push the adoption process of professional social media use. Respondents in this study indicated that if there was a workshop over proper social media use that they would attend, supporting the need and want for future involvement of social media in the workplace.

Recommendations

Based on the results of this study, it is recommended that professional social media usage be included in extension workshops. The confidence, capability, and positive perceptions of extension agents already exists based on the data collected in this study, however not a lot of emphasis is being place on effective ways of using Facebook and other forms of social media. This study proved that extension agents are using Facebook personally and professionally, but personal use is by far the most widely type of usage. There is a disconnect between personal and professional Facebook use in which agents indicated their willingness to bridge the gap with guidance. Although beyond the scope of this study, there is good likelihood based off the findings in this study that if workshops incorporated seminars on the effective ways of using social media professionally and identified specific tips on how to use social media efficiently, then professionals in general could use that knowledge and apply it to any job.

Suggestions for future research in this area are examining training of social media and the characteristics of the trainer. According to Robertson (1967) on the theory

of diffusion of innovation, the mass media actually influence opinion-leaders, who in turn influence the less-influential people of a specified group in order to help with the adoption process of any innovation. Opinion-leaders according to Robertson (1967) are scattered throughout society at all levels of social class, meaning that leaders can be influential to others and in this case after they have been influenced by the effectiveness of using social media to communicate. Following the model of diffusion of innovations the demographic characteristics found in this study would suggest that the extension trainer on professional social media use be about 43 years of age and have at least 10 years of experience in order to be the most alike other agents, and should be competent not only in using social media but also in teaching it.

Further suggestions for future research is after initial teaching of social media use, tests using measures such as the one in this study or additional scales like the ones examined by Wang and Haggerty (2011) should be used to make sure or determine if the lessons on using social media is working and being used effectively by agents. This study identified that there is a small presence of professional social media use but determines that the confidence, ability and positive perception of extension agents encourages a need for further research on this particular topic.

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APPENDIX A

TEXAS EXTENSION AGENT QUESTIONNAIRE

Q1 Dear Texas Extension Agent: I hope this e-mail finds you well. I am writing to ask for your help. As a county extension agent you can provide insight that is important to preparing future Extension Agents to incorporate social media into their work. More specifically, your input will help to determine how we assess the capability and willingness to adopt the use of social media to communicate with Extension clientele.

This survey will take approximately10 minutes to complete, but you don't have to do it all at once. Once you begin the survey, we will send you periodic reminders until it is complete. Please click on the link below to begin. More information about the survey and how we will use your responses follows the link.

Follow this link to the Survey: ${l://SurveyLink?d=Take the Survey} Or copy and paste the URL below into your internet browser: ${l://SurveyURL}

How did we come up with the items?

Some questions were drawn from previous research on virtual competence and have already been tested. The remaining questions were compiled by a panel of experts in the fields of communications and social media.

Why are you contacting me and what is this going to be used for?

You're opinion about how Texas Extension Agents use and perceive social media as a tool to communicate is extremely valuable.

The findings in this study will provide a better understanding of the acceptance and usability of using Facebook to effectively communicate with constituents. Admittedly, some of the items may not pertain to you or be important to your job, but we don't want to assume what's important. Your responses will be used to further research in the area of social media and how it is used professionally.

What do I do if an item doesn't pertain or relate to me?

Answer to the best of your ability and your response will be greatly appreciated.

Why are we doing this?

We believe social media use professionally is paramount to Extension efficiency in communicating. More importantly, we want to prepare our students—your future colleagues—to the best of our ability.

Fortunately, you can help us do that! Thank you in advance for your willingness to take part in this endeavor.

If you have any questions concerning this research, please contact Lacey Lewis at lacey@neo.tamu.edu.

Darrell A. Dromgoole

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Confidentiality is of great concern to our research team. Only summary results will be reported. Your individual responses will be confidential and will not be identified in any manner. Should you choose not to participate in this study, please click on the link at the very bottom of this page to prevent follow-up messages. Individuals who do not complete the electronic questionnaire by next Friday, August 2nd, will receive a reminder message. You may refuse to participate or withdraw at any time without affecting your relationship with the researchers or university, and without consequence or loss of benefits.

Follow the link to opt out of future emails ${l://OptOutLink?d=Click here to unsubscribe}

Q2 Have you read and do you understand the reasons for this survey?

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip To End of Survey

Q1 Rounding to the nearest whole number: How many years have you been a County Extension Agent in Texas?

Q2 Do you have a Facebook account?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To New social media is introduced on a regular basis….

Q3 Are you able to access Facebook in your office?

- Yes (1)
- No (2)

Q4 Are there restrictions related to using Facebook professionally in your workplace? (For example an office policy or blocking web access)

- Yes (1)
- No (2)

Q4A If yes, explain in the line below

_____

Q5 Using whole numbers: How many days during a typical week do you log into your personal Facebook profile?

Q6 Using whole numbers: How many days during a typical week do you log into your personal Facebook profile from your office?

Q7 Using whole numbers: How many days during a typical week do you log into your personal Facebook profile from your mobile device?

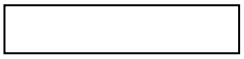
Q8 Using whole numbers: How many days during a typical week do you log into your personal Facebook profile from your home?

Q9 Using whole numbers: How many days during a typical week do you log into your professional Facebook profile?

Q10 Using whole numbers: How many days during a typical week do you log into your professional Facebook profile from your office?

Q11 Using whole numbers: How many days during a typical week do you log into your professional Facebook profile from your mobile device?

Q12 Using whole numbers: How many days during a typical week do you log into your professional Facebook profile from your home?



Q16 Please rate the following statements about your perception of using Facebook.

	Strongly Disagree (1)	2 (2)	3 (3)	4 (4)	Strongly Agree (5)
Facebook can be used as a tool to effectively communicate with people (1)	❍	❍	❍	❍	❍
Facebook is helpful in finding people or contacts that I am searching for (2)	❍	❍	❍	❍	❍
Facebook effectively helps me find general information	❍	❍	❍	❍	❍

that I am looking for (3)					
Facebook is helpful in finding information on events occurring close to me (4)	❍	❍	❍	❍	❍
Facebook helps me communicate messages to constituents quickly and effectively (5)	❍	❍	❍	❍	❍
Facebook is an easy social	❍	❍	❍	❍	❍

media outlet to figure out and understand (6)					
I believe the majority of people I know have a Facebook account (7)	❍	❍	❍	❍	❍

Q30 Creating Facebook "events" helps me communicate with constituents.

❍ Agree (1)

❍ Disagree (2)

Q31 Participating in Facebook "groups" helps me to efficiently stay in touch with clientele or committees.

❍ Agree (1)

❍ Disagree (2)

Q19 New social media is introduced on a regular basis and used both personally and professionally. Please rate how the following statements applies to your use of social media.

	Not at all confident (1)	2 (2)	3 (3)	4 (4)	Totally confident (5)
I could complete my job using social media if I had never used something like this before (1)	❍	❍	❍	❍	❍
I could complete my job using social media if there is no one around to tell me what to do as I go (2)	❍	❍	❍	❍	❍
I could complete my	❍	❍	❍	❍	❍

job using social media if I had only the manuals for reference (3)					
I could complete my job using social media if I could call someone for help if I got stuck (4)	❍	❍	❍	❍	❍
I could complete my job using social media if I had seen someone else using it	❍	❍	❍	❍	❍

before trying it myself (5)					

Q20 Please rate the following statements on your ability to use Facebook.

	Extremely Incapable (1)	2 (2)	3 (3)	4 (4)	Extremely Capable (5)
To what extent do you feel you are capable of using Facebook to give timely feedback when communicating with others whom you are not able to meet in person? (1)	❍	❍	❍	❍	❍
To what extent do you feel	❍	❍	❍	❍	❍

you are capable of using Facebook to receive timely feedback when communicating with others whom you are not able to meet in person? (2)					
To what extent do you feel you are capable of using Facebook to convey multiple types of information	❍	❍	❍	❍	❍

(factual and emotional information) when communicating with others whom you are not able to meet in person? (3)					
To what extent do you feel you are capable of using Facebook to transmit varied symbols (words, numbers, pictures) when	❍	❍	❍	❍	❍

communicating with others whom you are not able to meet in person? (4)					
To what extent do you feel capable of tailoring the message to fit other parties' requirements when using Facebook to communicate with others whom you are not able to meet in person? (5)	❍	❍	❍	❍	❍

Q32 In what year were you born?

Q33 What is your sex?

- Male (1)
- Female (2)

Q34 Are there any additional comments you would like to share in regards to this study?

Q27 Would you be interested in attending a social media workshop in the future?

- Yes (1)
- No (2)

APPENDIX B

TEXAS EXTENSIONS AGENT EMAIL INVITATION

Dear Texas Extension Agent:

I hope this e-mail finds you well. I am writing to ask for your help. As a County Extension Agent you can provide insight that is important to preparing future Extension Agents to incorporate social media into their work. More specifically, your input will help to determine how we assess the capability and willingness to adopt the use of social media to communicate with Extension clientele.

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Why are you contacting me and what is this going to be used for?
You're opinion about how Texas Extension Agents use and perceive social media as a tool to communicate is extremely valuable. The findings in this study will provide a

better understanding of the acceptance and usability of using Facebook to effectively communicate with constituents. Admittedly, some of the items may not pertain to you or be important to your job, but we don't want to assume what's important. Your responses will be used to further research in the area of social media and how it is used professionally.

What do I do if an item doesn't pertain or relate to me?
Answer to the best of your ability and your response will be greatly appreciated.

Why are we doing this?
We believe social media use professionally is paramount to Extension efficiency in communicating. More importantly, we want to prepare our students—your future colleagues—to the best of our ability. Fortunately, you can help us do that!

Thank you in advance for your willingness to take part in this endeavor.

If you have any questions concerning this research, please contact Lacey Lewis at lacey@neo.tamu.edu.

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APPENDIX C

TEXAS EXTENSION AGENT REMINDER

Dear Texas Extension Agent:

I hope this e-mail finds you well. I am writing to ask for your help. As a County Extension Agent you can provide insight that is important to preparing future Extension Agents to incorporate social media into their work. More specifically, your input will help to determine how we assess the capability and willingness to adopt the use of social media to communicate with Extension clientele.

This survey will take approximately10 minutes to complete, but you don't have to do it all at once. Once you begin the survey, we will send you periodic reminders until it is complete.

You were asked 10 days ago for your feedback. This is just a reminder that you and people like you are the only participants that can provide the feedback needed for this study.

Please click on the link below to begin.

Follow this link to the Survey:

${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Thank you in advance for your willingness to take part in this endeavor.

If you have any questions concerning this research, please contact Lacey Lewis at lacey@neo.tamu.edu.

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APPENDIX D

TEXAS EXTENSION AGENT THANK YOU LETTER

Dear Texas Extension Agent:

Thank you so much for participating in this survey. The feedback you have provided will greatly help further research in the area of professional use of social media, Facebook in particular.

If you have any further questions feel free to contact the researcher at

lacey@neo.tamu.edu

Thanks again and have a great day!

APPENDIX E

DATA COLLECTION ACTIVITY

Data Collection Activity	Medium	Date Sent
Texas Extension Agents: Pilot		
Initial Invitation and survey	e-mail	7/22/2013
1st Thank You and Reminder message	e-mail	8/02/2013
2nd Thank You and Reminder Message	e-mail	8/13/2013
3nd Thank You and Reminder message	e-mail	9/12/2013
Final Follow Up	phone	10/03/2013
Texas Extension Agents: Sample		
Initial Invitation and Survey	e-mail	8/13/2013
1st Thank You and Reminder Message	e-mail	8/23/2013
2nd Thank You and Reminder Message	e-mail	9/02/2013
3nd Thank You and Reminder Message	e-mail	9/12/2013
Final Follow Up	phone	10/04/2013

APPENDIX F

REPORTED SOCIAL MEDIA RESTRICTIONS

Reported Social Media Restrictions

1. County does not allow access to any social media, chats or videos.
2. County Employees are not suppose to be on Facebook during operating hours. We have talked to our Judge and explained that we use Facebook as a tool in our job. We have permission to use it.
3. County IT views Facebook as personal and not professional. We have to continue to stay on top of preventing them from blocking them out.
4. I had to get special permission from county IT to be able to access facebook at work for 4-H use.
5. It is only to be used for business reasons.
6. Limit use
7. No one under 18 on the ag webpage.
8. No personal use of facebook during working hours. However, this is one avenue we utilize to reach our 4H youth and volunteers.
9. Office policy
10. Social media sights are blocked unless permission to access social media websights is sought to have it unblocked.
11. The county has a block on Facebook and other sites. We have a pass through code that allows us a one hour window to post on the office facebook page.
12. The county Has A policy for social media but it is allowed.

13. There were restrictions when we first started using the county system, but we told them we needed to have access to Facebook for work purposes.