

Communicating with 4-H Stakeholders: Examining Social Media Use in Rural and Urban Programs

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Abstract

Traditionally, 4-H agents have been communicating with stakeholders through newsletters; either in print or online. 4-H agents have used social media as an additional tool to communicate with their stakeholders since its introduction. Social media communication can help maintain or increase stakeholder involvement in the 4-H program because a large percentage of the population is active on social media. Using Uses and Gratifications Theory and Diffusion of Innovations Theory as frameworks, this study sought to determine how Florida 4-H agents engaged with their stakeholder audiences using social media, and vice versa. The uses and gratifications motivations for engaging in media were used to understand what motivations were used to engage their audience and what type of posts (according to motivation) stakeholders were engaged in most. The diffusion of innovations innovation-decision process helped to understand the audiences' decision to engage in posts dependent upon the motivation used. The results of this study concluded the selected 4-H programs differed in the content that they posted but the 4-H stakeholders did not differ in how they engaged in their respective programs posts.

Keywords: 4-H; extension; stakeholders; social media; communication

Introduction

The 4-H program has a rich history that can be traced back to many agriculturalists who had a passion for educating youth and equipping them with skills and knowledge that could be applied in their daily farm lives (Reck, 1951; University of California Agriculture and Natural Resources [UC ANR], n.d.). The children residing in rural areas in the late 1800s and early 1900s were taught by educated teachers from the city (Reck, 1951). These teachers taught general concepts in reading, writing, and arithmetic and provided little to no applications for the children to use these skills on the farm (Reck, 1951). This gap in applied knowledge called for the work of additional educational programming (UC ANR, n.d.).

No one specific person can receive credit for the youth education program which would become 4-H (Reck, 1951). However, the work of a few individuals can be traced back to this time period. Albert B. Graham, a superintendent of the Springfield rural schools, began teaching farm-related skills to boys and girls in the basement of the county building in 1902 (National 4-H Council, n.d.; Seevers & Graham, 2012; Rasmussen, 1989; Reck, 1951; UC ANR, n.d.). Graham called these experiment clubs, calling these clubs “The Tomato Club” and “Corn Growing Club” (National 4-H Council, n.d.). The experiment clubs acted as “a link between the [experiment]

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station and the farm” (Reck, 1951). In addition, the efforts of Dr. Liberty Hyde Bailey were recognized as he wrote, disseminated, and taught environmental education leaflets to students in rural communities (Seevers & Graham, 2012; Reck, 1951). Dr. Bailey was able to acquire funding from the New York Experiment Station Extension Bill in order for his environmental leaflets that reflected experiment station findings to be disseminated to teachers in rural areas (Seevers & Graham, 2012; Reck, 1951). This was the beginning of communicating and engaging rural audiences with university researched information (Rasmussen, 1989).

Around the time of Bailey’s communication work with educational leaflets, mass media came in the form of magazines, newspapers, and radio broadcasts. Many newspapers employed farm journalists to report agricultural news and information. Radio was commonly used by the agricultural industry in the early 1920s. At this time, Extension agents utilized radio broadcasting to deliver university research to rural farmers (Telg & Irani, 2012). In the 1930s the mass communication world introduced television broadcasting (Fidurko, n. d.). Rasmussen (1989) stated that in 1957 Michigan State University Extension was the leader in delivering thirty-minute, nutrition-related television programs for youth. Other states soon followed Michigan State University Extension’s lead in delivering television programs for youth audiences (Rasmussen, 1989). During the 1940s and 1950s, rural and urban audiences relied heavily on television broadcasting to receive agricultural information (Telg & Irani, 2012). However, reporters that specialized in communicating farm news began to decline in the 1980s, as many audiences shifted from rural to urban residences (Telg & Irani, 2012).

At the close of World War II, a greater demand for city audiences in the northern region of the United States was present, compared to rural audiences and traditional practices (Rasmussen, 1989; Wessel & Wessel, 1982). Needs of the people called for work in family and home economics (Rasmussen, 1989). Therefore, more urbanized 4-H programs in 13 northeastern states focused their efforts on gardening, nutrition/health, clothing, landscaping, and home grounds improvement (Wessel & Wessel, 1982). By the year 1950, 48 states had conducted work in urban areas (Rasmussen, 1989). Obtaining funding for these urban programs proved to be a struggle, however, the demographic statistics of the 4-H population in 1963 showed that “48 percent of the membership [lived] on the farm, 31 percent in non-farm areas, and 21 percent in urban areas” (Wessel & Wessel, 1982, p. 204). In 1965, the 4-H Foundation welcomed 4-H programs in urban areas, as long as urban programs would not affect the funding of rural 4-H programs (Wessel & Wessel, 1982). Significant contributions to urban work began after Congress began allotting funds to urban programs in 1973 (Rasmussen, 1989).

The 4-H population has experienced continuous increases since it expanded to include both suburban and urban programs. The 4-H program today is an extension of 100 public universities where local 4-H programs are available to youth in every county and parish in the United States (National 4-H Council, 2017). 4-H has become recognized as a youth development program governed by the Cooperative Extension System and is believed to be “the largest non-formal youth educational program in the world” (Phipps, Osborne, Dyer, & Ball, 2008, p. 54; Seevers & Graham, 2012). Today, as reported by the National 4-H Council (2016), 4-H is home to 6 million youth, of which 1.8 million reside in urban areas, 1.6 million reside in suburban areas, and 2.6 million reside in rural areas.

As the millennium years commenced, mass media saw a decline in physical newspaper sales, and the Internet began to take over as the new form of mass media communication (Telg & Irani, 2012). The last two decades have seen a shift in the tools people use to receive news and communicate with the world. In 1991, 68% percent of people watched the news on TV, 56% read a newspaper, and 54% listened to radio news (Pew Research Center, 2010). Since then, a decrease in engagement in those channels has occurred, coupled with an increase in online news sources

(Pew Research Center, 2010). In addition to print media weathering a change in identity, verbal communication has done the same. Electronic mail messages, text messages, and social media began being used in place of verbal communication (Eastman, 2013). In 1995, an Extension program in Ohio began using e-mail to distribute newsletters electronically in order to reach a larger audience (Siegrist, Labarge, & Prochaska, 1998). Podcasts became a reliable tool for Extension agents to extend their messages with audiences, as podcasts combined radio with Internet capabilities. As of 2007, 12 land-grant universities and their Extension programs were using podcasts as a way to communicate their information with larger audiences (Xie & Gu, 2007). Communicating with audiences using social media began to take shape as well. In 2009, 85 Facebook and Myspace pages were being used to communicate a variety of 4-H programs (Rhoades, Thomas, & Davis, 2009).

Today, communication is widely dependent upon social media as a vehicle to disperse information in a timely, efficient, and cost-effective manner (Ferree, 2015; Rhoades et al., 2009). Social media as a tool for communication has become advantageous because it has been adopted by 69% of the public (Pew Research Center, 2017). Seventy-three percent of American teens and 47% of American adults are active on social media channels (Lenhart, Purcell, Smith, & Zickuhr, 2010). According to the Pew Research Center (2017), Facebook (68%) has become the most widely used social media channel, followed by Instagram (28%). In 2017, social media was used by 71% of Americans in suburban communities, followed by 70% of urban residents, and 60% of residents in rural communities (Pew Research Center, 2017).

Facebook was determined the most desired platform by recent graduates/alumni of the Louisiana 4-H program (Zammit, 2016). Hill (2014) indicated that Facebook as a tool to connect with his clients "has been extremely useful in growing [his] county programs" (p.4). According to Mains, Jenkins-Howard, and Stephenson (2013), Facebook can be used as an effective, free tool to have an online presence for promoting both 4-H and Extension programs, maintaining or increasing contact with stakeholders, and dissemination of educational information. Facebook was the most used social media instructional technology by Extension youth educators in the states of Louisiana, Mississippi, and Tennessee (McClure, Buquoi, Kotrlík, Machtmes, & Bunch, 2014). Facebook was also the chosen platform by Texas Master Gardeners to disseminate educational material, landscaping being the most disseminated topic (Strong & Alvis, 2011). Although these studies examine the use of Facebook by Extension or 4-H and their audiences, these studies provide a gap in the literature understanding rural and urban county 4-H programs and their stakeholder audience's use of Facebook.

Ruth, Telg, Rumble, Lundy, and Lindsey (2016a) found that Florida Extension specialists had little confidence when using social media to promote their Extension focus area. However, an additional study by Ruth, Telg, Rumble, Lundy, and Lindsey (2016b) indicated that Florida Extension agents were the most interested in receiving training on how to use social media to promote their Extension focus area as compared to other public engagement training. Therefore, there was a need to identify current successful social media practices in both rural and urban 4-H programs in order to provide 4-H agents with the most effective social media communication methods in order to better market their programs. Research of this type could provide implications for the 4-H program in terms of delivering effective programs as it relates to the AAAE National Research Agenda (Thoron, Myers, & Barrick, 2016).

Conceptual Framework

Uses and Gratifications Theory (Lin, 1999) and the Diffusion of Innovations Theory (Rogers, 2003) were used collectively to create a conceptual framework for this study.

Uses and Gratifications

Uses and Gratifications Theory is an audience-centered approach which identifies how an audience interacts with media and how the media channels fulfill the audience's desires (Lin, 1999). An audience-centered approach is directly dependent upon the person's use, intention, selection, and engagement with the selected media channels (Blumler, 1979). The psychological perspective of Uses and Gratifications Theory seeks to explain why audiences choose to engage in a type of media and the satisfaction that media brings to an audience (Fisher, 1978). The psychological needs of an individual drive their motivations for engaging in a media type (Rubin, 1994). Motivations for engagement in the Internet and social media include escape, entertainment, social interaction, surveillance, information seeking, pass time, relaxation, communicatory utility, and convenience utility (Lin, 1999; Whiting & Williams, 2013). Escape as a motivation is described as using social media to ignore problems (Lin, 1999). Lin (1999) and Whiting and Williams (2013) described entertainment as a motivation to seek fun, enjoyment, and amusement out of engaging in social media. Using social media as a tool for social interaction is derived from the motivation to communicate with others in a designated space (Lin, 1999; Whiting & Williams, 2013). Surveillance as a motivation is described as engaging in social media in order to maintain an understanding of what is occurring around the world (Lin, 1999). The use of social media to fulfill a motive of seeking information is defined as looking for information that will educate and inform about a specific subject (Lin, 1999; Whiting & Williams, 2013). Using social media as a motivation to pass time and relax includes relieving stress and lapsing time (Lin, 1999; Whiting & Williams, 2013). The use of social media as a communicatory utility is driven by the motivation to use the information found through a social media channel to facilitate conversations with others (Whiting & Williams, 2013). Lastly, the motivation to use social media for convenience utility is for easy access to timely and valuable information (Whiting & Williams, 2013).

Gibson and Irlbeck (2015) sought to understand college students' uses and gratifications of the Pinterest online platform. The researchers investigated 63,696 pins that were pinned by 56 undergraduate agricultural communications students at Texas Tech University. The most pinned content by these undergraduate students was recipes (8,863), followed by fashion (6,545), and home décor/building (6,054). The content the undergraduate students pinned the least was related to finance. The study concluded that the sample of undergraduate students used Pinterest for "fun, entertainment, and their own personal situations" (Gibson & Irlbeck, 2015, p. 450).

King, Meyers, Baker, and Doerfert (2017) conducted a content analysis of 25 non-profit organization Facebook pages' content. The researchers analyzed the Facebook pages' attributes (organization's mission and goals present, organization's website link available, an official logo, contact information, etc.), post characteristics (text, video, graphics), communicative function (information, community, and action), and engagement (likes, comments, and shares) (King et al., 2017). This study showed 75% of the posts were graphics, organizations were not likely to reply to comments left by stakeholders, and information was most often used as a communicative function (King et al., 2017). The audience members were most likely to engage in posts in the form of shares of all communicative functions and most likely to engage in the form of likes with community posts (King et al., 2017).

Reichenback (2014) studied 10 nonprofit organization and 10 corporate organization Facebook pages in order to determine the organizations' motivations to engage stakeholders in their brand on social media (Reichenback, 2014). The findings indicated that both organization types marketed their brand intrinsically; product promotion by the brands created the least amount of engagement, where informational posts fostered the most engagement; and corporate organization Facebook pages had the most followers and likes on posts, where nonprofit organization Facebook pages had the most engagement in terms of comments and page shares (Reichenback, 2014).

Diffusion of Innovations

Diffusion of Innovations Theory is a social change theory that aims to understand the adoption process of new ideas (Rogers, 2003). The adoption of innovations occurs through communicative processes where two-way communication is imperative to the rate of adoption (Rogers, 2003). Communication is the process of connecting those who are aware of the innovation and those who are unaware of the innovation through a type of communication channel, generally through a mass communication channel (Rogers, 2003). Time is the variable in the process that determines adoption or rejection, early adopters from late adopters, and the rate of adoption (Rogers, 2003).

The individual or unit that must go through the process of deciding to or not to adopt an innovation. This behavioral process of innovation-adoption includes five steps (a) knowledge, (b) persuasion, (c) decision, (d) implementation, and (e) confirmation (Rogers, 2003). The knowledge stage occurs when an individual or unit becomes cognitively aware of an innovation, understands how an innovation is useful, and is aware of how an innovation functions in the space where it is intended to function (Rogers, 2003). Change agents generally have the largest effect on audiences through creating awareness of an innovation in the knowledge stage (Rogers, 2003). The persuasion stage is where an individual or unit becomes affectively involved in understanding an innovation and forms a positive or negative attitude about the innovation (Rogers, 2003). After knowledge is gained and attitudes are formed, the individual or unit formulates a decision to adopt or reject the use of an innovation (Rogers, 2003). Even when a decision is made to reject the adoption of an innovation, individuals or units have the opportunity become late adopters (Rogers, 2003). Also, adopters of an innovation have the opportunity to discontinue their adoption at a later date (Rogers, 2003). The application piece of this process comes into play in the implementation stage, where individuals or units begin to put the adopted innovation to use (Rogers, 2003). Lastly, a confirmation stage occurs. This is the stage where individuals or units are able to continue their use of the innovation or choose to discontinue the use on a more permanent basis (Rogers, 2003).

Bowen, Stephens, Childers, Avery, and Stripling (2013) conducted a study of 207 county 4-H Extension program assistants, agents, and directors in Tennessee to determine their social media use. The researchers developed a survey to determine which social media channels were used by the Extension personnel, how the Extension personnel used social media to communicate with their 4-H stakeholders, and to determine Extension personnel's perspectives on current and future use of social media (Bowen et al., 2013). Diffusion of Innovations Theory was used to guide this study in order to understand the adoption of social media by 4-H Extension personnel (Bowen et al., 2013). The results indicated social media channels were being used by most 4-H Extension personnel weekly and that social media has been adopted by 4-H programs broadly (Bowen et al., 2013). However, the study also supported the idea that not all social media technology has been accepted and suggested that training and professional development be offered to 4-H agents (Bowen et al., 2013).

A study completed by Moran (2014) aimed to qualitatively understand the adoption of social media marketing by eight marketing professionals in the real estate industry. The researcher used the diffusion of innovations' rate-of-adoption characteristics (relative advantage, compatibility, complexity, observability, and trialability) and adopter categories (innovators, early adopters, early majority, late majority, and laggards) to guide the study. The results showed that three of the five diffusion of innovation rate-of-adoption characteristics (observability, relative advantage, and complexity) were present in real estate marketing via social media (Moran, 2014). In addition, the adopters in the early majority of social media marketing were mostly college-

educated millennials (Moran, 2014). Lastly, Moran (2014) found using social media as a marketing tool will continue to increase, but there is still a significant need to help social media users “effectively use social media to meet objectives” (p. 37).

Conceptual Model

Figure 1 offers a visual representation of the conceptual model explaining how 4-H stakeholders become engaged in social media posts published by 4-H agents. Previous research indicated rural audiences engage less online when it comes to news media, online shopping, and social media use than urban audiences (Gilbert et al., 2010; Hindman, 2000). Therefore, stakeholders’ engagement in social media is suspected to differ, based on whether they are a stakeholder of a rural or urban 4-H program. Stakeholders’ affiliations with a rural or urban 4-H program are expected to drive their motivations to use social media channels and how they receive gratifications from certain types of social media posts. Motivations for engaging in social media were described by Rubin (1994) as a way to meet an individual’s psychological needs. Escape, entertainment, social interaction, surveillance, information seeking, pass time, relaxation, communicatory utility, and convenience utility are the primary motivations for engaging in the Internet and social media channels (Lin, 1999; Whiting & Williams, 2013). The audiences’ motivations for engaging in 4-H social media posts are expected to guide their innovation-decision process. Rogers (2003) described the innovation-decision process as knowledge, persuasion, decision, implementation, and confirmation. Stakeholders of the 4-H program should have previous knowledge of the program and be interested in continuing to gain knowledge of the program through social media. It is expected for the stakeholder to form a positive or negative attitude toward a post published by their respective 4-H program and then decides to engage in the post or not to engage in the post. Stakeholders engage in the post (liking, commenting, sharing, etc.) then engagement or disengagement consequences occur. Consequences of engagement may include receiving updates on further engagement in the post or response to the post from the 4-H agent, to name a few. The innovation-decision process is expected to ultimately lead to stakeholder engagement in social media posts published by rural or urban 4-H programs. The arrow connecting engagement with social media posts back to the 4-H stakeholders signifies this is a cyclical process. The cyclical process indicates that continued engagement in social media posts will maintain or increase stakeholders’ engagement in the 4-H social media channels. Previous research indicated Extension programs, such as 4-H, have the opportunity to produce effective and efficient communication with stakeholders via social media channels (Fuess & Humphreys, 2011). Chappell (1990) also stated that effective communication is predictive of successful marketing of programs.

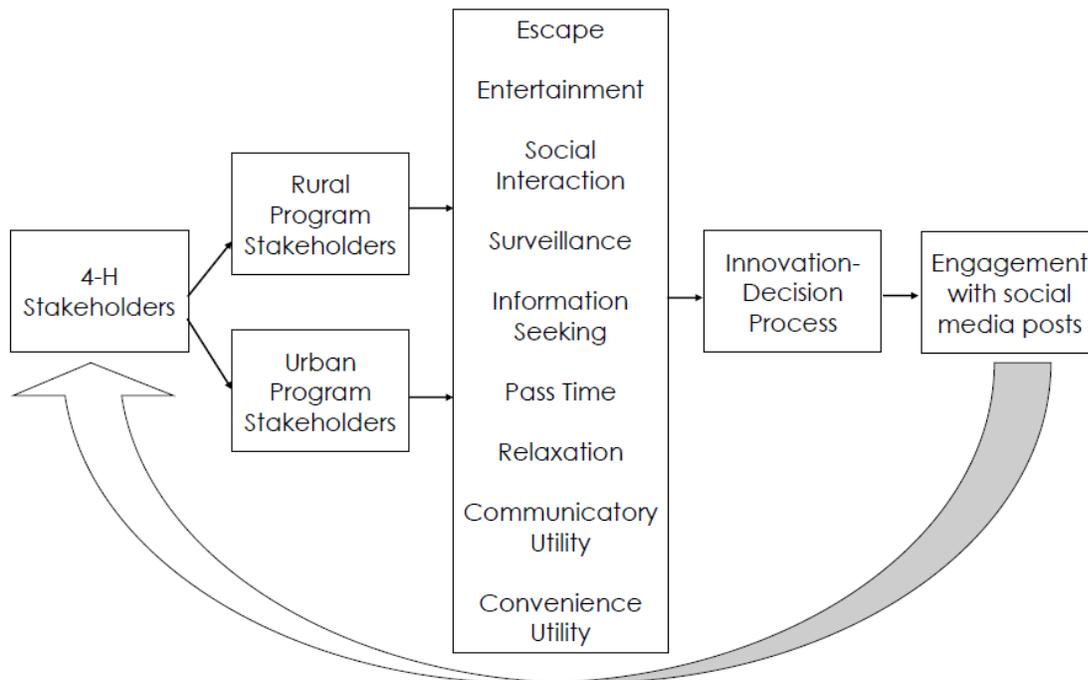


Figure 1. A conceptual model of 4-H stakeholders leading to engagement in social media posts.

Purpose and Objectives

The purpose of this study was to investigate social media use by Florida 4-H agents for engaging rural and urban 4-H stakeholder audiences. Two research objectives were used to guide the focus of this study:

1. Describe stakeholder engagement with social media posts (text, pictures, videos, etc.) included in the social media channels of selected rural and urban 4-H programs; and
2. Describe the social media stakeholder engagement patterns (time of day, day of week, etc.) in selected rural and urban 4-H programs.

Methods

A quantitative content analysis was used to meet the objectives of the study. The content analysis was considered quantitative because the content was being analyzed for pre-determined categories, rather than coding for emerging themes (Ary, Jacobs, Sorensen, & Walker, 2014).

Population and Sample

The population for this study was the 67 county 4-H programs in the state of Florida. From this population, the sample included two rural and two urban Florida county 4-H programs. Parallel, purposive sampling methods were used to determine the sample population. Parallel sampling methods were used because all four counties were purposively sampled at the same time, rather than being sampled at different points in the study (Ary et al., 2014). Two rural Florida counties and two urban Florida counties were chosen because of their “strong” media presence. The decision to include two rural and two urban programs were made to be able to conduct an in-

depth content analysis of every social media channel used in both types of programs, rather than conducting a content analysis of one social media channel in multiple rural and urban counties. To be classified as a rural county, the number of residents must not exceed 50,000 residents. Thus, urban counties house more than 50,000 residents (United States Census Bureau, 2010). The 4-H agents of the chosen counties were contacted to ask for consent for the researcher to view, code, analyze, and report the analytic data for the 4-H programs' social media channels. Once consent from each county was provided to the researcher, the counties became a part of the sample.

Data Analysis

A codebook was developed to properly code the social media posts. Due to the counties in the sample only using Facebook within the time period of the data collection, only Facebook data were collected. The social media posts were then separated by the program which submitted the post (i.e., rural or urban). The demographic analytics of the stakeholders following the social media channel was collected.

The content analysis data were collected using two consistent coders. The content analysis portion of this study was designed to not be emergent in nature, refraining from allowing new variables to emerge through the coding process (Ary et al., 2014). The non-emergent analysis design was used to collect data and draw conclusions on the specific variables that were determined by the purpose and objectives of this study. Reliability of the study was ensured by using the two coders who were both under the same understanding of the coding procedures (Riffe, Lacy, & Fico, 1998), adding stability and reproducibility to the study (Krippendorff, 2004). The coders were given the codebook that included conceptual and operational definitions of each variable and were provided training on proper coding procedures to ensure consistency and accuracy among coders (Riffe et al., 1998). Once an understanding of the content being analyzed was reached between the two coders and the posts for the months of June 2017 and July 2017 were collected from each county's Facebook page, each coder coded 10% of the content that was randomly selected (Riffe et al., 2005). The 10% of the content that was analyzed by each coder was then compared to ensure consistency among the coders. The intercoder reliability was found to be in substantial agreement ($\kappa = 0.70, p < .001$) for type of posts, in almost perfect agreement ($\kappa = 0.83, p < .001$) for post motivation (Landis & Koch, 1977). The intercoder reliability for the number of likes, comments, shares, and people reached were all in almost perfect agreement with the Cohen's kappa value of 1.000 ($p < .001$). Lombard, Snyder-Duch, and Bracken (2002) stated that an acceptable level of reliability is a Cohen's kappa of 0.70 or higher. Once an acceptable level of agreement was reached among coders, the remaining content was divided evenly amongst each coder and coded. The coders analyzed each post individually and coded for (a) post type, (b) post content, and (c) number of engagements of posts. The demographic and engagement pattern analytics of the social media channels, as a whole, were recorded as well. One coder was the researcher, and the second coder was a graduate student.

The type of post frequency statistics was calculated for each individual county, and the frequencies for the rural and urban counties were calculated as well. The average number of engagements for each type of posts were calculated for each individual county and the collective rural and urban counties. The type of motivation used was calculated for the individual counties, as well as the collective rural and urban counties. The average number of engagements for the motivation used was calculated for the individual counties and the rural and urban counties. Due to the type of post, motivation of post variables, and engagements, frequency statistics could only be reported on these variables because of their nominal nature (Riffe et al., 1998).

The researcher was one of the content analysis coders. The researcher does have experience in the 4-H program, however, her 4-H experiences are largely from the Florida 4-H program. The researcher was a member of the Florida 4-H program for 5 years and worked for the Florida 4-H program for 2 years while in college. The second content analysis coder is a fellow graduate student in the same department. The second coder has knowledge of the 4-H program but did not extensively participate in the 4-H program. The second coder was knowledgeable about content analysis methods and communications research.

Results

To provide context for the following results, the number of followers for each county will be provided. Miami-Dade County had 348 followers, Broward County had 483 followers, Baker County 393 followers, and Levy County had 450 followers.

Objective 1: Describe stakeholder engagement with social media posts (text, pictures, videos, etc.) included in the social media channels of selected rural and urban 4-H programs.

Miami-Dade County – urban

For the months of June 2017 and July 2017, Miami-Dade County had posted a total of 19 posts. The agent in Miami-Dade County posted mostly prerecorded video and some text ($n = 8$). Through the coding process, it was found that most posts included text and other content. Multiple action photos, multiple posed photos, graphics, and shared content were not used at all through the two months that were coded.

In addition to being the most posted type of posts, the posts that included text and a prerecorded video also received the largest average number of shares (see Table 1). Text and prerecorded video posts also reached the largest number of people on average. The amount of people reached with text and prerecorded video posts were almost three times the number of people reached with text and live video posts, which was the next largest number of people reached. Text and single posed photo received the largest number of likes and comments.

Table 1

Average Number of Engagements for Each Type of Post - Miami-Dade County

	Likes	Comments	Shares	People Reached
Prerecorded Video	8.00	0	2.00	258.00
Single photo-posed	13.00	0	0	0
Multiple photos-combination of posed and action photos	8.00	3.00	2.00	1.00
Text + Single photo-posed	31.00	6.00	0	600.00
Text + Multiple photos-combination of posed and action photos	4.50	0	0.50	226.00
Text + Flyer	1.00	0	0	132.00
Text + Prerecorded Video	16.00	4.25	13.00	2267.63

Text + Live Video	10.67	2.67	1.33	657.00
Text + Flyer + Link + Shared Content	2.00	0	0	65.00

The number of posts published to motivate the audience to engage in the post because of its social nature (i.e. pictures, videos, content without any information, etc.) was recorded the most ($n = 17$). This county had two informative posts (i.e. flyers, events, etc.) published. There was no evidence of posts that contained any type of entertainment (i.e. funny videos, comic, etc.).

Table 2 indicates the average number of engagements for each type of audience motivation. On average, the stakeholder audience liked, commented, and shared social post most. The social posts also reached the largest number of people in their stakeholder audience.

Table 2

Average Number of Engagements by User Motivation – Miami-Dade County

	Likes	Comments	Shares	People Reached
Social	13.47	3.00	6.65	1260.18
Informative	1.50	0	0	98.50
Entertainment	0.00	0.00	0.00	0.00

Broward County – urban

For the months of June and July Broward County had 13 posts. Of those posts, photo albums that contained both posed and action shot pictures were posted most frequently ($n = 3$). Posts that contained links with text and flyers with text were posted second most frequent. ($n = 2$) Prerecorded video, live video, and multiple action shot photos were not used over the course of the two-month analysis period.

Although multiple photos that consisted of both posed and action shots were posted the most, followers engaged by liking posts that consisted of multiple posed the most (see Table 3). Posts that included text and a link were engaged most by the stakeholder audience through comments. The stakeholders shared single posed photo posts the most. The single posed photo posed that the stakeholder shared most frequently also reached the largest number of people on average.

Table 3

Average Number of Engagements for Each Type of Post - Broward County

	Likes	Comments	Shares	People Reached
Single photo-posed	5.00	0	2.00	585.00
Multiple photos- posed	12.00	0	0	241.00
Multiple photos-combination of posed and action photos	4.00	0	0	110.33
Text + Link	1.00	1.50	0	105.00

Text + Single photo-posed	9.00	0	1.00	408.00
Text + Single photo-action shot	9.00	0	0	420.00
Text + Multiple photos-combination of posed and action photos	10.00	1.00	1.00	215.00
Graphic + Shared Content	1.00	0	0	100.00
Text + Flyer	1.00	0.50	1.00	217.50

Posts published to motivate the followers to engage in the posts because of its social nature were published the most ($n = 8$). There were five posts published that aimed to appeal to stakeholders' informative motivations. No post published in the content analysis time period demonstrated entertaining qualities.

Broward County's followers engaged most in posts that targeted followers' social motivations (see Table 4). The social posts received the largest average number of likes and reached the largest average number of people. The informative posts received the largest average number of comments and shares.

Table 4

Average Number of Engagements by User Motivation – Broward County

	Likes	Comments	Shares	People Reached
Social	7.13	0.125	0.50	275.00
Informative	1.00	0.80	0.80	149.00

Baker County – rural

Baker County published 19 posts for the months of June and July. Posts that included multiple photos, both posed and action shots with text were published most frequently ($n = 3$). Posts that include text, live videos, multiple photos that are both posed and action shots, and flyers were the next most frequently published ($n = 2$). Prerecorded video, single action shot photos, multiple posed photos, multiple action shot photos, or graphics were not posted by Baker County during the content analysis time period.

Posts that included multiple photos that were posed and action shots with text were posted the most frequent and did receive the most average number of likes (see Table 5). However, this type of post did not reach a large number of people. Posts that consisted of live video with text received the largest average number of comments, shares, and reached the largest number of people. Live videos with text posts were also the only type of post that received any comments at all.

Table 5

Average Number of Engagements for Each Type of Post - Baker County

	Likes	Comments	Shares	People Reached
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Text	2.00	0	1.50	124.00
Live Video	3.50	0	2.50	610.00
Single photo-posed	3.00	0	0	16.00
Multiple photos-combination of posed and action photos	9.00	0	0	1.00
Flyer	3.00	0	0	144.50
Text + Single photo-posed	5.00	0	0	166.00
Text + Multiple photos-combination of posed and action photos	13.67	0	1.33	1.00
Text + Link + Flyer	1.00	0	4.00	832.00
Text + Live Video	4.00	3.00	6.00	1029.00
Text + Multiple photos-combination of posed and action photos + Shared	2.00	0	0	131.00
Live Video + Shared	2.00	0	0	38.00
Text + Event	1.00	0	0	43.00
Text + Event + Shared	0	0	0	35.00

Posts that were published to appeal to the followers' social motivation were published most frequently ($n = 12$), followed by informative posts ($n = 7$). There were no posts that appeared to have been posted to target the followers' entertainment motivations.

Posts that appeared to be published with the followers' social motivations were engaged in most frequently in form of likes, comments, and shares (see Table 6). In addition, social posts reached the largest average number of people. Although there were seven informative posts, the informative posts did not receive any comments.

Table 6

Average Number of Engagements by User Motivation – Baker County

	Likes	Comments	Shares	People Reached
Social	6.83	0.33	1.25	217.08
Informative	1.71	0	1.00	206.71

Levy County – rural

For the months of June and July, Levy County had 54 posts. The posts that occurred the most in the two-month time period were posts that included multiple photos that were a combination of still and action shots accompanied by text and were shared ($n = 7$). The next most frequent type of post published was text posts ($n = 6$), followed by posts that consisted of text and a combination of posed and action shot photos ($n = 5$). Levy County had a large variety of type of

posts with prerecorded video being the only type of posts not being used throughout the two-month time period.

Overall, the posts produced during the two months received low amounts of engagements which is reflected by the average number of engagements for each type of post (see Table 7). There was a decent average number of people reached for most posts, but the average number of engagements were not reflective of the reach. Many posts received little to no engagements. Comments and shares seemed to lack more where likes seemed to be the stakeholders' choice of engagement.

Table 7

Average Number of Engagements for Each Type of Post – Levy County

	Likes	Comments	Shares	People Reached
Text	1.67	1.83	0.17	118.50
Single photo-posed	11.00	2.00	0	261.00
Single photo-action shot	0.33	0	0	92.00
Multiple photos-combination of posed and action photos	5.00	0	5.00	333.00
Flyer	2.00	0	0	181.00
Link	0	0	1.00	101.5
Text + Link	0.33	2.00	0	63.00
Text + Graphic	1.33	0	0.67	145.33
Text + Single photo-posed	4.75	0	1.75	320.00
Text + Single photo-action shot	0	0	2.00	283.00
Text + Multiple photos-combination of posed and action photos	4.00	0.40	1.40	203.40
Text + Flyer	2.00	0	1.00	117.00
Text + Live Video	3.00	0	3.00	215.00
Text + Multiple photos-posed photos	8.67	1.00	2.00	263.67
Text + Flyer + Shared Content	1.00	0	0	57.00
Text + Multiple photos-combination of posed and action photos + Shared Content	2.00	0.14	0	95.00
Text + Single photo-posed + Shared Content	3.00	0	0	81.00
Text + Shared Content	0	0	0	60.00
Text + Single photo-posed + Link	2.00	0	0	151.00

Text + Link + Shared Content	3.00	0	0	126.00
Multiple photos-combination of posed and action photos + Shared Content	0.50	0	0	72.50
Text + Graphic + Shared Content	0.75	0	0	82.50
Text + Multiple photos-action shots + Shared Content	1.00	0	0	65.00

Levy County posts seemed to be most commonly social ($n = 24$) and informative ($n = 17$) in nature. There were the fewest amount of posts that were considered entertainment ($n = 4$). There were nine posts published that were considered social and informative in nature posted by Levy County.

Table 8 indicates the average number of engagements for each type of audience motivation. On average, Levy County's stakeholder audience liked social + informative post most. Informative posts received the comments on average from stakeholders. Social posts received the largest number of shares. Social + informative posts reached the most people on average.

Table 8

Average Number of Engagements by User Motivation – Levy County

	Likes	Comments	Shares	People Reached
Social	2.71	0.46	0.92	177.17
Informative	1.71	0.65	0.47	104.18
Entertainment	1.25	0	0.25	77.25
Social + Informative	3.67	0.33	0.56	182.33

Objective 2: Describe the social media stakeholder engagement patterns (time of day, day of week, etc.) in selected rural and urban 4-H programs'.

The urban county stakeholders were most engaged in Facebook posts on Sunday, whereas the rural county stakeholders were most engaged on Friday (see Table 9). The urban county stakeholders were most engaged in Facebook posts at nine o'clock at night, whereas the rural county stakeholders were engaged most at eight o'clock at night (see Table 10).

Table 9

Days of Week Stakeholders are Most Engaged

	Most Engaged	# of Engagements
Miami-Dade County	Sunday, Monday	347
Broward County	Sunday	454
Baker County	Friday	388
Levy County	Friday	435

Table 10

Time of Day Stakeholders are Most Engaged

	Most Engaged	# of Engagements
Miami-Dade County	9:00 pm	198
Broward County	9:00 pm	238
Baker County	8:00 pm	230
Levy County	8:00 pm	260

Conclusions

Overall, the results indicated that the engagement used by 4-H agents and the engagement in social media by stakeholders differed across the rural and urban counties studied here. The stakeholders in the Miami-Dade County (urban county) engaged (by the total amount of engagements) most in posts that included text and a prerecorded video. Broward County's (urban county) stakeholders had the largest total amount of engagements in posts that included multiple posed photos and posts that included text and photos that were both posed and action shot photos. The stakeholders in Baker County (rural county) engaged the most (by the total amount of engagements) in posts that included text and multiple posed and action shot photos. Single posed photos were the type of posts that received the largest total amount of engagements from stakeholders in Levy County (rural county). Therefore, it can be concluded that the stakeholders in the rural counties studied here are similar in the fact that they engage posts that include some sort of picture component. However, only one urban county included in this study was similar to these rural counties in their amount of engagement in posts that included picture(s). The urban audiences studied were most engaged in posts toward the end of the weekend and beginning of the week (Sunday) and later (9:00 pm) than the rural audiences studied which were engaged in posts on at the beginning of the weekend (Friday) and earlier (8:00 pm). Both the rural and urban counties studied chose to appeal to their audiences' social motivations the most and hardly appealed to their audiences' entertainment motivations.

The study aimed to understand rural and urban stakeholders' engagement with their respective 4-H programs' social media platforms. However, it was discovered through this study that the counties chosen to be involved in this study only used Facebook. Similarly, Zammit (2016) found that recently graduated alumni of Louisiana 4-H were most interested in staying connected via Facebook and McClure et al. (2014) found that Facebook was the most used social media instructional technology by youth development educator. In order to understand engagement, the motivation (i. e. social, informative, and entertainment) of the social media post was analyzed. The motivations were adapted from the uses and gratification theory (Lin, 1999; Whiting & Williams, 2013). The urban counties studied chose to communicate with their audience using social motivation. Social posts reached the largest number of people, on average. The rural counties studied chose to engage their audiences through social motivation, as well. The social posts reached the largest number of people and received the largest number likes and shares, on average. This study suggested that social posts reached the largest number of people for both the rural and urban 4-H programs studied.

The audiences' motivations should guide their decision to engage in social media posts. This study used Rogers' (2003) Diffusion of Innovations Theory and innovation-decision process as a framework to understand the audiences' decision to engage in social, informative, and entertainment motivated posts. The rural stakeholder audiences studied engaged less in posts as

compared to the urban stakeholder audience studied despite the rural counties having 11 more followers than the urban counties. This is an indication that the rural programs included in this study are not hitting the mark on engaging their audience through the correct motivations, where the urban programs studied here are. The rural program studied here may consider “re-inventing” how they use social media to engage their audiences (Rogers, 2003). Rogers (2003) stated that re-invention is a part of the implementation stage of the innovation-decision process that may arise when the innovation (social media posts) is being used differently by the audience (stakeholders) than originally intended to be used by the implementer (4-H agent). It is possible that the rural stakeholders studied here may need to be engaged using other motivations than the three motivations studied here. Therefore, the rural stakeholders are “re-inventing” how they are motivated by engaging in the social media posts by possibly engaging in posts less or choosing to only engage in posts that motivate them in others ways that motivate them not included in this study.

This study did not confirm the results of the study completed by King et al. (2017). The study completed by King et al. (2017) indicated that of text, video, and graphic content, the 25 non-profit organizations posted mostly (75%) graphics. The results of this study indicated that the urban programs used mostly video content, and the rural programs used mostly photos and text content.

The study completed by Reichenback (2014) yielded different results compared to this study. Reichenback's (2014) study looked at the difference in how non-profit and corporate organizations engage their audience on Facebook. Similarly, this study investigated how rural and urban audiences engage with their respective 4-H Facebook pages. Reichenback (2014) found a difference in the audience engagements of the two Facebook pages where one audience was more engaged by liking posts and the other audience was more engaged by commenting on posts. The audiences of the urban and rural 4-H programs in this study both choose to engage mostly by liking posts, however, the rural audience engaged far less than the urban audience.

The results of the study completed by Bowen et al. (2013) signified that 4-H programs had broadly adopted social media as a form of communication with their stakeholder, but also indicated that not all social media technology had been accepted. The results from this study are similar to the results of Bowen's et al. (2013) study. It was intended to analyze multiple platforms for this study, however, the 4-H agents included in this study only actively use Facebook as a form of social media communication. Similar to the results of Bowen et al. (2013) study, social media is being used but not all social media technology has been accepted. The rural program had adopted social media but did not largely use prerecorded videos as a tool to engage their audience.

Implications and Recommendations

Miami-Dade County's audience responded well to posts that included prerecorded video with text to communicate messages. This county continuing to communicate to their urban audience through video should maintain or increase stakeholder engagement. To expand the breadth of content posted using video, this urban county should consider including informative content to appeal to their audience's informative motivations. Informative content could include information about an upcoming event, provide details about a specific program, or provide explanations about the 4-H program as a whole. A large amount of posts that were published by this county appealed to the audience's social motivations. Diversifying the type of content posted should engage this specific audience's informative and entertainment motivations, as well.

The 4-H programs, both rural and urban, in this study should consider publishing various types of posts that will appeal to different audience segments' motivations for engaging in posts.

This should cycle through posts, with no particular order or time, that appeal to their stakeholders' social, informative, and entertainment motivations. The results of the study indicated that social posts were the most published by both the rural and urban 4-H agents. These 4-H agents in the counties studied should consider putting more thought into posting more information and entertainment motivated posts. Informative posts can be information about Florida 4-H, 4-H, their county's 4-H program, the impact of the program, the enrollment numbers of the program, or a promotional video featuring youth that provides information about the program. The informative posts for these counties can be creative and eye-catching by creating visual graphics that depict the desired information. Entertainment posts could include videos of a youth camp where the agent interviews a number of kids about the funniest thing that has happened to them this week, videos of youth telling their favorite joke, and silly but appropriate photos that celebrate holidays.

In order for 4-H agents to determine which type of posts their stakeholders are engaging in, the 4-H agents in the counties studied here can create a campaign of varying post types and post them periodically throughout one month. After the month is over, the 4-H agents can evaluate the performance of the posts by reviewing the analytics. The performance of the posts should then guide what these 4-H agents publish in the future. Audiences can change over time, therefore, this type of campaign should be done periodically.

The rural programs studied posted more frequently and had more followers but received far fewer engagements. To increase the number of engagements received, these rural programs in this study should consider using videos, since videos were rarely used. The type of post that occurred second most often was text posts. Although having the largest number of comment engagements, the text posts were fairly low in the number of like and share engagements. The rural programs in this study should consider using less text-type posts since their audience was less engaged in this type of post. The rural programs in this study did diversify their content between the audience's social and informative motivations, however, they were lacking in appealing to the audience's entertainment motivation. The rural programs in this study can consider lightening up their posts by including relevant but entertaining videos, comics, and pictures. The rural programs in this study could consider branching out beyond using the three audience motivations in this study. The rural agents involved in this study can post content to target other audience motivations (escape, surveillance, pass time, relaxation, communicatory utility, and convenience utility) in an effort to increase stakeholder engagement in posts.

Although this study brought forward preliminary results, there are several ways this study could be carried out further to gain much deeper insight into an audience's engagement with rural and urban social media communication. A further analysis of social media posts can be done to analyze stakeholder comments for emerging themes to acquire a deeper understanding of the engagement between stakeholders and their 4-H programs.

A broader study can be conducted to analyze posts for more than a two-month time period. Analyzing the content for one complete year could give more context to what is actually happening in the social media engagement process. Expanding the sample size to include all the counties in the state of Florida could bring light to what is really occurring in the social media communication process rather than just seeing what is happening in a small number of the counties. This study could be expanded across multiple states to understand how rural and urban 4-H programs across the United States are using social media as a tool to engage with their stakeholders.

A study could be conducted to more broadly understand stakeholders' motivations to engage in social media posts published by 4-H agents. This study could be experimental in nature where agents publish posts that target all possible motivations indicated by Lin (1999) and Whiting

and Williams (2013) contributing to the Uses and Gratifications Theory and posts are analyzed to determine which targeted motivations the stakeholder audience engages more in. To further this study, interviews with the stakeholder audiences could be conducted to determine if what they engage in on social media matches what they perceived their motivation for using social media is.

A study could be conducted to determine the preferred communication channels for 4-H agents and the stakeholders of 4-H programs. This study would set out to understand what communication channels 4-H agents use to communicate with their stakeholders and which communication channels 4-H agents think are the most useful. The study would take a look into what communication channels stakeholders of these 4-H programs are most likely to get their information from. These channels can be outside the realm of social media based upon the fact that social media was not widely adopted across social media platforms by the counties purposively chosen to participate in this study.

A study with 4-H agents could be conducted to evaluate their level of knowledge and comfort with social media as a tool to communicate with their stakeholder audiences. Understanding the 4-H agents' level of knowledge and comfortability with social media will better guide the content of future workshops used to train these agents on how to use this social media as a tool. To extend this study further, polling 4-H agents about what skills specifically there are or are not knowledgeable about and what exactly makes them uncomfortable about using social media can better guide these trainings. The results of this study could inform the type of resources provided to the 4-H agents in the future.

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