Determining Effective Communication Strategies Used by Texas A&M

AgriLife Extension to Educate the Uninformed, Uninvolved Public

by

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ABSTRACT

The purpose of this study was to determine the effectiveness of communication strategies currently used by Texas A&M AgriLife Extension in reaching the portion of the population that is uninformed about and uninvolved in agriculture. Data for this study were collected using an online, self-administered survey instrument. Respondents were gathered using volunteer recruitment and an online snowball technique. The target population for this study included all who are not extensively familiar with or involved in agriculture, specifically Texas A&M AgriLife Extension, as determined by Section One of the survey instrument. Three-hundred and twenty-one surveys were completed; of those, one-hundred and ninety-five qualified as part of the uninformed, uninvolved public and were analyzed. Data were collected in three difference sections of the survey instrument: (1) eligibility questionnaire, (2) preference questionnaire, and (3) comprehension assessment. The instrument was designed to address communication strategies including print, digital, audio and video communication currently utilized by Texas A&M AgriLife Extension, gathering audience preference and comprehension to determine effectiveness. Respondents preferred digital mixed (example: online articles or most social media) across various types of communication content (research/data drive, news/current events, entertainment). The best comprehended communication methods were digital graphic, video, audio and digital mixed, in that order.

ACKNOWLEDGEMENTS

Today, as this season of my life comes to a close, I am overwhelmed with the feeling of gratitude. Foremost, I thank our Jesus, who died on the cross and rose again so that we may have new life full of redemption, freedom and insurmountable joy. Being strengthened with all power, according to his glorious might, for all endurance and patience with joy; giving thanks to the Father, who has qualified you to share in the inheritance of the saints in light (Colossians 1:11-12).

Next, I thank the three most important people in my life. My family is one that has plenty; *more* than enough. We have plenty of laughter, banter and sarcasm, plenty of dogs, plenty of TV-show and movie references, plenty of phone calls and FaceTime calls per week, and *plenty* of love. To my truly incredible parents: thank you for your support, which has absolutely no limitations and for your unconditional love. Thank you for patiently raising me to seek excellence, focus on the things that are truly important, and stand confidently in my ability and identity. And to my little brother who is smart, creative, intentional, and, without a doubt, the funniest person I know. Mitch, I am so thankful for you; being your big sister is one of my greatest joys!

Outside of my immediate family, I'm thankful for the wonderful group of grandparents, uncles, aunts, and cousins, both here on Earth and in Heaven. Every second I get to spend with each of you is so precious to me.

I have been blessed with a 'Boss Man' who is hard working, patient, joy-filled and has high expectations yet gives grace for growth. Perhaps my favorite thing about him, though, is he never, *ever*, asks anything of his people that he is not himself willing to do. He asks for excellence, he asks for your very best, he asks for a positive, life-

giving attitude in the midst of the trench-work, but you will never find yourself in the trenches without him standing right beside you. Lance Kieth is a man who serves, who leads, who sacrifices and who will always be the first to show up and the last to leave. Dr. Kieth, thank you for *everything;* I will be forever thankful for the opportunity to grow under your authority.

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Dr. Kevin Williams is one of *the* most enjoyable people to work with. K-Dub, I admire your fun, easy-going attitude, your patience for all people, your hard work that is never accompanied by griping, and the harmony you bring to each situation. Thank you for your help, encouragement, and for always giving me heck. It has been so fun getting to work with you – I promise to always feed chickens daily!

I am so thankful for every relationship that developed during my time at West Texas A&M University; the faculty, staff, advisors, teammates, fellow-students, baby buffs, and co-workers. WT is a place like no other, and it has been my absolute privilege to be a part of this family. GO BUFFS!

I would be remised not to thank the family full of friends I have been blessed with during my time at WT. I won't list you all by name (just in case I were to leave someone out, man wouldn't that be awkward…), but to each of you I say: thank you for being joyful, fun, and so darn life giving. Kyra and Brooklyn, the ones who've witnessed it all - thank you for speaking truth into me, for holding me accountable during the long nights and for sharing in my joy and celebration. I love both of you and I love getting to share a home with you! Ky, thanks for being my person; thankful for you always, beyond what words can express.

Finally, thank you to Mister, my big fur-baby, for keeping me sane during the whirlwind that is graduate school. He hung with me during the late nights, accompanied me on the long weekend writing days at the office, tolerated sometimes-shortened walks, listened to countless sections of thesis text, and never let me forget dinnertime. It is my strong believe that everyone should have a dog, especially one like Mister Darcy.

I pray God's favor on each of these people, for which I have so much gratitude. Here's to what's next; may we move forward never forgetting that the aim of our charge is love that issues from a pure heart and a good conscience and a sincere faith (1Tim 1:5).

Approved:

_____   _____
Dr. Tanner Robertson   Date
Chairman, Thesis Committee

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Member, Thesis Committee

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CHAPTER I

INTRODUCTION

Texas A&M AgriLife Extension provides services and oversees many programs, institutes and education networks across the state of Texas ("Texas Extension," n.d.). These entities range from production agriculture to resource management to youth development and beyond. This study seeks to determine which of the currently used communication methods by Texas A&M AgriLife Extension are effective in educating the uninformed, uninvolved public; that determination will lead to a recommendation for future promotional strategies.

Existing research predominantly addresses communication methods internally between extension professionals using semantics and intended messages in the Texas Extension Marketing Packet using semiotics (Edgar & Rutherford, 2006). Existing research explores internal communication and analysis of pictorial marketing, exclusively. Little research has been done that assesses audience perception and comprehension of current communication strategies. This study is designed to address communication strategies including: print, digital, audio and video communication currently utilized by Texas A&M AgriLife Extension, gathering audience preference and perception to determine effectiveness.

This study is designed to be specifically useful to the extension professionals in the Texas A&M AgriLife Extension District One office located in Amarillo, Texas.

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However, the results of this study could have implications beyond this office. Extension programs across the state of Texas and in other states can apply the findings in audience preferences and perception to their own marketing programs to identify effective communication strategies for their promotional objectives. These data will also prove applicable to organizations similar to the broad scope of extension (i.e. programs in agriculture, military support, youth development, environmental activism, and wildlife conservation). These are some, but not all of the areas for which extension services provide programs, institutions and education networks ("The Texas A&M AgriLife," 2016).

A long standing challenge the agricultural industry faces is the lack of consumer understanding or participation in the understanding of the industry and its processes. This research has the potential to determine gaps in consumer understanding and identify communication barriers between the agricultural industry and the uninformed, uninvolved public.

Statement of the Problem

Edgar & Rutherford (2006), asserted, "Extension's research-based information addresses relevant community issues from a wide variety of areas, including but not limited to: agriculture and natural resources, family and consumer sciences, 4-H and youth development, and community development" (p. 16). They go on to include, "the targeted audiences for extension materials are broad and diverse; spanning all ethnicities, age-groups, genders and geographical locations" (Edgar & Rutherford, 2006, p. 16). Extension is a truly unique government service, which offers programming opportunities

for nearly everyone in all walks of life. These programs could be used to remedy the agricultural knowledge-gap by educating people of all ages in the areas of agriculture and citizenship and increasing their community involvement. Eastin, Chicchirillo and Mabry (2015) explained, "as more information is made available via mediated communication channels, a knowledge gap between certain sectors of society widens" (p. 419). This knowledge gap is attributed with affecting the ability for civic engagement (Eastin, et al., 2015). In order for extension programs to be impactful, they must be marketed/communicated in an effective way to the diverse target population. However, the population engaged in extension activities is largely made up of those already informed in regard to and involved in agriculture (Rumble & Irani, 2016). It is this information that identifies ineffectiveness in communication to the portion of the population unfamiliar with agriculture.

Purpose and Objectives

The purpose of this study was to determine the effectiveness of communication strategies currently used by Texas A&M AgriLife Extension in reaching the portion of the population that is uninformed about and uninvolved in agriculture. In order to accomplish this purpose, the following objectives were established:

1. Determine the demographic characteristics of the respondents in this study.

2. Determine how the portion of the population that is uninformed about and uninvolved in agriculture prefers to receive information in the following categories: scientific, entertainment, awareness.

3. Determine how the uninformed, uninvolved public comprehends and
   retains information presented in communication strategies currently used
   by Texas A&M AgriLife Extension.

Definition of Terms

For the purpose of this study, the following terms were constitutionally or
operationally defined to help the reader better understand the study:

Communication – A process by which information is exchanged between individuals
through a common system of symbols signs or behavior (http://www.merriam-
webster.com/dictionary).

Effective – Producing a decided, devicisive, or desired effect (http://www.merriam-
webster.com/dictionary).

Entertainment-driven Information - What is conveyed or represented by a particular
arrangement or sequence of things for the purpose of being provided with amusement or
enjoyment.

Information Regarding News and Current Events – What is conveyed or represented by a
particular arrangement or sequence of things for the purpose of knowledge or perception
of a situation or fact.

Knowledge gap – A hypothesis that suggests that as the infusion of mass media
information into a social system increases, segments of the population with higher
socioeconomic status tend to acquire this information at a faster rate than the lower status
segments, so that the gap in knowledge between these segments tends to increase rather
than decrease (Tichenor, Donohue, & Olien, 1970, p. 159-160).

Research/Data-driven Information - What is conveyed or represented by a particular arrangement or sequence of things for the purpose of understanding a systematically organized body of knowledge on a particular subject.

Strategy – A careful plan or method (http://www.merriam-webster.com/dictionary).

Texas A&M AgriLife Extension – A unique education agency with a statewide network of professional educators, trained volunteers and county offices. It offers a diverse array of educational programs, activities and resources for Texas.

Uninformed – Not having a foundational knowledge of, not having an informational awareness about, not being educated in.

Uninvolved – Having no past experience with or current part in; not being included.

Limitations of the Study

The researcher acknowledges this study has limitations because it addresses communication method and does not address promotional content. It also fails to address an in-person, oral communication method. Another limitation of this study is the structure of the survey instrument. In the comprehension assessment portion of the survey, respondents were asked not to go back and look at the promotional artifact they were given when answering the comprehension questions. However, there was no structure in place to keep them from doing so, if they so desired.

Assumptions

There are a few basic assumptions that were understood while conducting this study. The researcher assumed the respondents in this study provided honest answers

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that reflected their familiarity with Texas AgriLife Extension and communication preferences. Furthermore, the researcher trusts that the survey was completed individually by each respondent without the assistance of anyone or anything. Also, the researcher targeted an open sample of respondents and assumed they would provide an accurate representation of the overall United States population.

Significance of Study

With the exponential increase in mediated communication channels, it cannot be assumed that access or exposure to information will translate to comprehension and retention of that information. For this reason, "a knowledge gap between certain sectors of society widens" (Eastin, et al., 2015, p. 419); for example, agricultural and nonagricultural.

With extension, "varying and ever-changing programs bridge the gap between rural and urban, and traditional and non-traditional agriculture" (Edgar & Rutherford, 2006, p. 16). However, communication strategies used by Texas A&M AgriLife Extension must be effective enough to be comprehended. As consumers of information take advantage of a greater choice of communication channels, they have an increased liberty to tune out what seems unimportant. It is vital that extension understands how consumers prefer to intake information and what type of information will be synthesized most effectively.

CHAPTER II

REVIEW OF RELATED LITERATURE

Purpose and Objectives

The purpose of this study was to determine the effectiveness of communication
strategies currently used by Texas A&M AgriLife Extension in reaching the portion of
the population that is uninformed about and uninvolved in agriculture. In order to
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    by Texas A&M AgriLife Extension.

Introduction

The following review of related literature was done to establish a theoretical
framework and background for this study. The related theories pertaining to this study

are: Knowledge Gap Theory and Constructivism Theory. This review consists of literature from the following topics: communication strategies, uninformed and uninvolved public, and Texas A&M AgriLife Extension.

Theoretical Framework

The theory of constructivism developed by theorist Jesse Delia, introduces the idea that some people are naturally more capable of high-level communication. The theory explains, "people who are cognitively complex in their perceptions of others have a greater capacity for sophisticated communication that will achieve positive outcomes" ("Constructivism- Interpersonal Communication Context," 2001, p.17). The central idea is based on the thought that cognitively complex individuals are naturally advanced in their communication and their ability to process messages from other outlets. This leads to the idea that some people may naturally be less prepared for promotional materials that utilize communication that can only be comprehended at a high level of cognitive complexity. For this particular study, one can assume that some participants may be able to synthesize meaning from materials that other participants will not notice. Therefore, one can deduce that promotional materials should be tailored to the cognitive complexity of the target audience.

The "knowledge gap theory posits the infusion of mass-mediated information into a society causes certain groups to acquire knowledge at a faster rate than others, leading to 'knowledge gaps' between informational haves and have-nots" (Specht, 2014, p.64). Past research employing knowledge gap theory has largely been surrounding promotional campaigns including those related to adolescent vaccinations, social media, cultural

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tailoring, health and wellness, and brand loyalty (Eastin, et al., 2015). However, it is very

possible that one can apply knowledge gap theory to the idea of agricultural literacy.

This gap may be best bridged through transparency and experiential learning methods

(Rumble & Irani, 2016). These methods may be achieved through the programming

provided by extension services ("The Texas A&M AgriLife," 2016). A reform in

promotional strategy must occur to increase participation in experiential learning methods

through Texas AgriLife Extension. Emerging promotional strategies must reach an

audience of varying cognitive complexities, as referenced in constructivist theory.
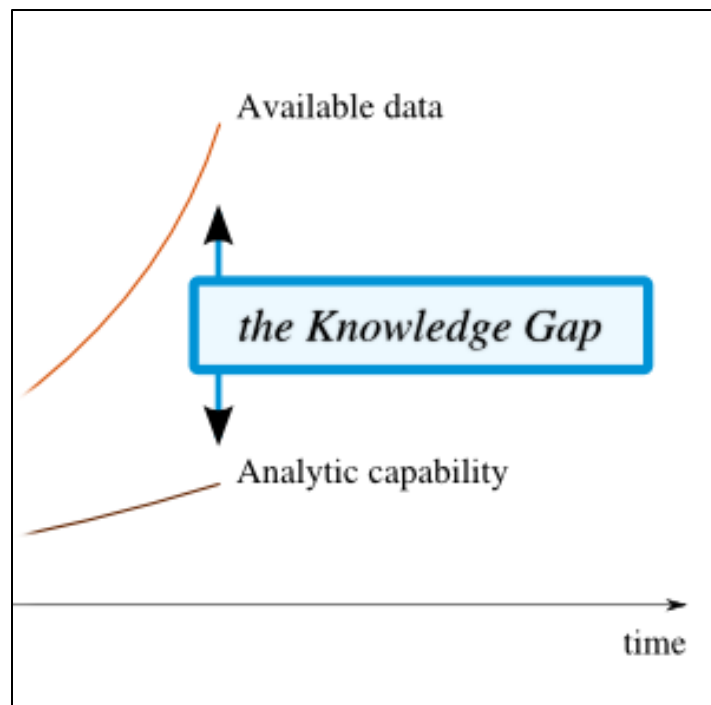

Figure 1: Visual Representation of The Knowledge Gap Theory
Source: (The Communication Complication, 2015)

According to Eastin, Cicchirillo and Mabry (2015), "as more information is made

available via mediated communication channels a knowledge gap between certain sectors

of society widens" (p. 419). They go on to explain the reason an increase in the

availability of mediated communication channels contributes to this knowledge gap is because consumers have the ability to tune out certain information, as given greater choice, via the increase in available information through these previously referenced, "mediated communication channels" (Eastin, et al., 2015). As consumers have the liberty to weed out and ignore information they deem uninteresting or irrelevant, the pressure increases for communication strategies to be efficient, engaging and effective (Eastin, et al., 2015). "Simply measuring access and/or exposure to information does not adequately represent the social inequities that may be found within particular individuals or communities" (Eastin, et al., 2015, p. 419). Access to information does not equate to the effectiveness at which the message is being communicated. Eastin, et al. (2015) also mentioned the importance of traditional media channels, as the Internet continues to grow in volume of available information.

Quisumbing, Meinzen-Dick, Raney, Croppenstedt, Behrman, and Peterman (2014), studied how the knowledge-gap contributed to the gender-gap in agriculture as a part of a research project for the Food and Agriculture Organization of the United Nations (FAO). "Agriculture is underperforming because half of its farmers-women-do not have equal access to the resources and opportunities they need to be more productive" (Ouisumbing, et al., 2014, p. 4). Here, they suggest that inefficiency is a result of appropriate information and resources not reaching those needing them. Ettema and Kline (1977), listed factors that may account for widening knowledge gaps. Three of those factors included: "differences in existing knowledge from prior exposure", "differences in amount of social contact relevant to the topic under study", and "differences in exposure and retention of information" (Ettema & Kline, 1977, p. 181).

The first factor seems to stress the importance of content being communicated building upon existing knowledge, or being at a level that consumers of information can comprehend. The second factor explains that communicated information must be relatable and relevant to social contact the consumer would experience in every day life. The third factor stresses a point, which has been asserted in other research as well: exposure to information does not equal retention of that information.

<div align="center">Communication Strategies</div>

Hughes, Johnson, Edgar, Miller, and Cox (2016) discussed the content analysis of the written and visual elements of promotional pieces including "website, booth display, educational videos, electronic newsletters, radio and television segments, press releases and event programs, print and banner advertisements and logos" (p. 13). These are all avenues of message communication that can be utilized by companies and organizations toward their target audiences. A message is an "explicit reference to attributes via verbal or visual content" (Laczniak & Muehling, 1993, p. 328). Thus far, such research has investigated the messages intended by extension services in promotion, but the effectiveness of those strategies in communicating the intended message is largely uninvestigated.

After determining preferred and most appropriate communication methods, it is important to include the most pertinent information in messages. Alender (2016) concluded in a study regarding volunteer motivations that "many respondents agreed or strongly agreed with statements that assessed motivations involving social interactions" (p. 11). The opportunity to learn and serve in a social environment is proven to be an

important factor in volunteer recruitment, a factor in which Texas AgriLife Extension excels ("The Texas A&M AgriLife," 2016).

In this study, the initial transfer of information from promotional item, to audience, is investigated to determine what makes an item successful in communicating the scope and mission of extension services. Determining what makes communication strategies effective has much to do with the lifespan of the communicated information (Gorham, 2016). It is vital that information be received and synthesized properly by audiences. It is equally important the obtained information be spread and further communicated beyond the primary recipients. Gorham (2016) discussed the idea that if information is not spreadable, or is not worth sharing, the information is dead to begin with. "The public is no longer a consumer of media; instead, the public is responsible for the creation of media and is involved in a participatory culture" (Gorham, 2016, pp. 6-7). Communicated information must be engaging/applicable enough to be spread by the public, the true catalysts of media transfer.

Rumble and Irani (2016) investigated the importance of transparent communication by agricultural industries' impact on the attitudes of college students. They found college students that were communicated to at a high transparency level had a more positive attitude toward production agriculture than those communicated to at a low transparency level. These findings emphasize that information provided to consumers, whether seemingly educated or uneducated in the agricultural industry, must be transparently and accurately communicated with to build positive brand associations.

Uninformed and Uninvolved Public and Agricultural Literacy

In this study, participants who are uniformed and uninvolved in the agricultural industry, specifically Texas A&M AgriLife Extension, will be the target sample. The contextual definitions of these terms for the purpose of this study, are as follows:

Uninformed – Not having a foundational knowledge of, not having an informational awareness about, not being educated in.

Uninvolved – Having no past experience with or current part in; not being included.

Eastin, Cicchirillo and Mabry (2015) explained as more information is available to consumers, the gap between groups in society widens, affecting their ability for civic engagement, even though all groups have equal access to information sources. As a result of this constant flood of information, the knowledge level of those in and outside of the agricultural industry is continually polarized, creating this 'uninformed and uninvolved public'. Hughes et al. (2016) discussed the importance of consumer agricultural literacy, stating that "individuals who respond to agricultural issues without a basic understanding of all sides are more likely to react without reason" (p. 11). Agricultural literacy is the understanding an individual possesses about the agricultural practices, its history, and the "growing concern regarding the U.S. population's disconnect from the sources of its food and fiber" (Specht et al., 2016, p.65). In a study by Specht, McKim, and Rutherford (2014), experiential learning is highlighted as an important but poorly studied strategy to enhance agricultural literacy among populations not familiar with agriculture. Educational experiences are thought to bridge the disconnect between worlds.

Studies have been conducted determining non-agrarian consumer perceptions of the agricultural industry, its processes, and its promotion conforming the gap associated with those who identify non-agrarian and those who identify with the industry (Specht, 2014). This research emphasizes the importance of life experiences in the industry and supports the idea of experiential learning programs (Specht, 2014). Texas AgriLife Extension is the key to experiential learning.

Texas A&M AgriLife Extension

Texas A&M AgriLife Extension is a sector of a government agency with the following mission: "Through the application of science-based knowledge, we create high-quality, relevant continuing education that encourages lasting and effective change" ("The Texas A&M AgriLife," 2016). "The Texas A&M AgriLife Extension Service is a unique education agency with a statewide network of professional educators, trained volunteers, and county offices. It reaches into every Texas county to address local priority needs" ("The Texas A&M AgriLife," 2016). According to Edgar and Rutherford (2012), "materials and information provided by the extension service are disseminated to publics through various mediums including newspapers, radio, workshops, direct order, or in-person at county Extension offices" (p. 15). They go on to explain the challenge Extension faces with its extremely broad target marketing focus.

While extension is rooted in agriculture, the programs and services offered now reach far beyond the confines of production agriculture. Extension promotion targets such an expansive audience because of the widely diverse services and programs; offering something applicable to anyone regardless of gender, ethnicity, age or

geographical location ("The Texas A&M AgriLife," 2016). According to the Texas A&M AgriLife Extension website (2017), their programs are divided into four areas: agriculture and natural resources, community economic development, family and consumer science, and volunteer programs. In addition to these programs, extension services offer many online and in-person courses and job trainings in many areas. Extension also facilitates research initiatives and communicates statewide requirements and reports.

According to Robideau and Santl (n.d.), young peoples and parents' "learning styles naturally lean toward a balance between face-to-face interactions and web-based experiences" (p. 1). For this reason, they suggested extension offices reconsider the communication tools they use in program development.

CHAPTER III

METHODOLOGY

Purpose and Objectives

The purpose of this study was to determine the effectiveness of communication

strategies currently used by Texas A&M AgriLife Extension in reaching the portion of

the population that is uninformed about and uninvolved in agriculture. In order to

accomplish this purpose, the following objectives were established:

4. Determine the demographic characteristics of the respondents in this

study.

5. Determine how the portion of the population that is uninformed about and

uninvolved in agriculture prefers to receive information in the following

categories: scientific, entertainment, awareness.

6. Determine how the uninformed, uninvolved public comprehends and

retains information presented in communication strategies currently used

by Texas A&M AgriLife Extension.

Design

This quantitative study employed descriptive statistics. The researchers chose this

method to describe the effectiveness of communication strategies currently used by Texas

A&M AgriLife Extension in educating the uninformed and uninvolved public. Data pertaining to demographic information, familiarity with Texas A&M AgriLife Extension, communication strategy preference and artifact comprehension were recorded in a descriptive questionnaire.

<u>Population</u>

The target population in this study was U.S. citizens, uninformed and uninvolved with Texas A&M AgriLife Extension. The population was not a random selection, but rather open to all volunteer respondents. Participants of undetermined and random gender, ethnicity, and age were selected outside of commonly visited establishments (such as Wal-Mart or Lowe's Supermarket) on a voluntary basis. These establishments were in Amarillo, Texas (population: 190,695) and Canadian, Texas (population: 2,649), as to reach a rural and urban demographic ("Current Amarillo", 2016), ("Current Canadian", 2016). Those individuals volunteered their email addresses. The instrument was also distributed using online solicitation through the social media platforms 'Facebook' and 'GroupMe'. Participants were encouraged to share the survey upon completion to create a snowball effect (Biernacki & Waldorf, 1981).

There were a total of 321 respondents in this study. Of those, 195 responses were used for data analysis. Responses were excluded because of incompletion; determined by not enough answers being submitted to add value to the study. Responses were also excluded if respondents did not qualify as part of the uninformed, uninvolved public, as determined by an eligibility questionnaire in Section One of the survey instrument. If individuals were determined to not be part of the target population, the survey

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programming immediately took them to the end of the survey without allowing them access to sections two or three of the instrument.

<u>Instruments and Procedure</u>

The survey instrument was an online, self-administered questionnaire. The survey was developed and hosted at qualitrics.com. A link to the survey was distributed to all volunteer participants via email. The survey link was also distributed using social media, specifically Facebook and GroupMe. There were a total of 321 survey responses. Individuals that volunteered their email addresses during solicitation were sent two emails, exactly one week apart starting August 10th, 2017, with the survey link and a reminder to complete the survey and share it as they saw fit. Also included in the emails was a thank you message for those who had completed the survey.

The survey instrument was self-developed and tested for reliability and validity. The instrument consisted of a consent form and three sections including an eligibility questionnaire (which also included demographic questions), a preference questionnaire, and a comprehension assessment. Section One of the survey consisted of four demographic questions including sex, age, population of current city/town of residence, and employment status. Section One also included four likert-type scale statements, to determine whether or not the respondent qualified as part of the uninformed, uninvolved public. For each statement, respondents had the opportunity to answer: 'strongly agree', 'agree', 'neutral', 'disagree' or 'strongly disagree'. If respondents answered with a majority of agree or strongly agree responses, determining they did not qualify as part of the uninformed and uninvolved public, they were immediately directed to the end of the survey. Section Two of the survey consisted of three questions, each asking participants

to rank eight methods of communication according to preference. Question One asked about entertainment-driven information, question two asked about research/data-driven information and question three asked about information regarding news and current events. The eight communication methods were print text, print mixed, digital text, digital mixed, digital graphic, digital video, audio and video. An example of each method was included to clarify for respondents. Section Three of the survey was a randomized comprehension assessment. Each of the eight previously mentioned communication methods has a block within the section and each individual survey was randomly assigned one block for the respondent to complete. Each block had an artifact from Texas A&M AgriLife Extension in that specific communication method and three multiple-choice questions based on content comprehension.

Reliability and Validity

A panel of experts reviewed the instrument used in this study to ensure current content and face validity (Wynd, Schmidt, & Schaefer, 2003). Faculty from an agricultural department in a non land-grant university were included in the panel; two agricultural education professors and one agricultural communication professor. Also included in the panel of experts was an Extension Specialist from Texas A&M AgriLife Extension – District One and a graduate communications professor. The panel was used to gain insight as to clarity, readability, appropriateness, and validity. Minor changes were made to the instrument based on recommendations from the panel. These changes included grammatical and language changes.

Upon determining validity, a pilot was run with 10 respondents. Reliability statistics were run on scaled questions in the survey instrument and the instrument was found to be reliable (a=.691). Feedback was collected from respondents and minor changes were made to the instrument with approval from the panel of experts.

Review of the survey instrument by the Institutional Review Board (IRB) at West Texas A&M University was required. The IRB conducts reviews of research to ensure the rights and wellbeing of human subjects involved in medical and behavioral research. The Chairperson of the IRB approved the research on April 24th, 2017.

Data Collection

Contact was first made with some participants outside of commonly visited establishments (such as Wal-Mart or Lowe's Supermarket) on a voluntary basis. Those individuals volunteered their email addresses for survey distribution. Other participants were initially introduced to the survey online through the social media platforms, 'Facebook' and 'GroupMe'. All participants were encouraged to share the survey upon completion to create a snowball effect; therefore some participants were contacted by previous respondents to complete the survey. Respondents who volunteered their email addresses were emailed twice, with the emails being two weeks apart, starting on August 10th, 2017. The first email thanked volunteers for offering their email addresses and included a link to the Qualtrics survey. The second email thanked participants who had responded to the survey instrument and encouraged non-respondents their participation in the study was appreciated. Data collection began on July 31st, 2017 and ended on September 7th, 2017. A total of 321 responses were collected, 195 of which qualified for

data analysis. The other 126 survey responses were incomplete surveys, either because

the respondent decided not to complete the survey, or because the eligibility

questionnaire in section one of the survey instrument determined he/she was not part of

the 'uninformed and uninvolved public'. The eligibility questionnaire consisted of four

likert-scale statements. Response data for those statements are as follows:

Table 3.1 demonstrates the level of agreement to the following statement, 'I have a

comprehensive understanding of the services and programs that Texas AgriLife

Extension offers'. With this statement 68.2 percent (n=133) of the population either

disagreed or strongly disagreed. Only 2.1 percent (n=4) of the population strongly agreed

with the statement.

Table 3. 1

Eligibility Questionnaire – Statement 1

	Frequency (*f*)	Percent (%)
Strongly Disagree	62	31.8
Disagree	71	36.4
Neutral	35	17.9
Agree	23	11.8
Strongly Agree	4	2.1

Table 3.2 demonstrates the level of agreement to the following statement, 'I have

previous experience with Texas AgriLife Extension'. With this statement 76.4 percent

(n=149) of the population either disagreed or strongly disagreed.

Table 3. 2

Eligibility Questionnaire – Statement 2

	Frequency (*f*)	Percent (%)
Strongly Disagree	79	40.5
Disagree	70	35.9
Neutral	16	8.2
Agree	18	9.2
Strongly Agree	12	6.2

Table 3.3 demonstrates the level of agreement to the following statement, 'I can recall

seeing or hearing promotional materials previously distributed y Texas AgriLife

Extension'. 'Agree' was the most common response; 27.7 percent (*n*=54) of the

population agreed with the statement.

Table 3. 3

Eligibility Questionnaire – Statement 3

	Frequency (*f*)	Percent (%)
Strongly Disagree	52	26.7
Disagree	52	26.7
Neutral	23	11.8
Agree	54	27.7
Strongly Agree	14	7.2

Table 3.4 demonstrates the level of agreement to the following statement, 'I have strong

opinions about the work Texas AgriLife Extension does'. 35.4 percent (*n*=69) of the

population were neutral toward the statement; 'neutral' was the most common response.

With this statement 57.4 percent (*n*=112) either disagreed or strongly disagreed. Only 1.0

percent (*n*=2) of the population strongly agreed with the statement.

Table 3. 4

Eligibility Questionnaire – Statement 4

	Frequency (*f*)	Percent (%)
Strongly Disagree	54	27.7
Disagree	58	29.7
Neutral	69	35.4
Agree	12	6.2
Strongly Agree	2	1.0

Data Analysis

The IBM Statistical Package for Social Science (SPSS) version 24 was used to input data into a spreadsheet. That spreadsheet was consolidated, to delete data from incomplete responses and responses from individuals who did not qualify as part of the uninformed and uninvolved public, as determined by Section One of the survey instrument. Responses in the data set were then coded to simplify interpreting output. For the objectives of this study, frequencies, and medians and box plots were used to product output.

CHAPTER IV

RESULTS AND FINDINGS

The purpose of this study was to determine the effectiveness of communication strategies currently used by Texas A&M AgriLife Extension in reaching the portion of the population that is uninformed about and uninvolved in agriculture. In order to accomplish this purpose, the following objectives were established:

1. Determine the demographic characteristics of the respondents in this study.

2. Determine how the portion of the population that is uninformed about and uninvolved in agriculture prefers to receive information in the following categories: scientific, entertainment, awareness.

3. Determine how the uninformed, uninvolved public comprehends and retains information presented in communication strategies currently used by Texas A&M AgriLife Extension.

The finding for each objective of this study is explained with the information and data found from the research conducted.

<div align="center">Findings Related to Objective One</div>

Objective 1: Determine the demographic characteristics of the respondents in this study.

Of the 321 respondents who received the survey, 195 surveys were completed and used in this study (*n*=195). Table 4.1 indicates the distribution of respondent sex. The

	Frequency (*f*)	Percent (%)
Male	42	21.5
Female	152	77.9
Prefer not to specify	1	.5

male respondents made up 21.5 percent (*n*=42) of the population and female respondents made up 77.9 percept (*n*=152) of the population. There was .5 percent (*n*=1) of respondents preferred not to specify their sex.

Table 4. 1

Sex of Respondents

Table 4.2 demonstrates the demographic of respondent age. Respondents age 18-30 made up 77.4 percent (*n*=151) of the population, respondents age 31-49 made up 10.8 percent (*n*=21) of the population, respondents age 50-65 made up 7.7 percent (*n*=15) of the population, respondents 66-80 made up 3.1 percent (*n*=6) of the population and respondents over the age of 80 made up 1.0 percent (*n*=2) of the population.

Table 4. 2

Age of Respondents

	Frequency (*f*)	Percent (%)
18-30 Years	151	77.4
31-49 Years	21	10.8
50-65 Years	15	7.7
65-80 Years	6	3.1
80+ Years	2	1.0

Table 4.3 demonstrates the demographic of respondent locale. Respondents residing in a

town with a population of 50,000 people or more made up 54.4 percent (*n*=106) of the

population, respondents residing in a town with a population of 2,500-49,999 people

made up 35.9 percent (*n*=70) of the population, and respondents residing in a town with

less than 2,500 people made up 9.7 percent (*n*=19) of the population.

Table 4. 3

Locale of Respondents

	Frequency (*f*)	Percent (%)
50,000 or more residents	106	54.4
2,500 to 49,000 residents	70	35.9
Less than 2,500 residents	19	9.7

Table 4.4 demonstrates the demographic of respondent employment status. Respondents

classified as employed full-time made up 41.5 percent (*n*=81) of the population.

Respondents classified as full-time student made up 39.5 percent (*n*=77) of the

population. Respondents classified as employed part-time made up 7.2 percent (*n*=14) of

the population. Respondents classified as retired made up 5.1 percent (*n*=10) of the

population. Respondents classified as part-time student made up 3.6 percent (*n*=7) of the

population. Respondents classified as not working but seeking employment made up 2.1

percent (*n*=4) of the population. Respondents classified as not working and not seeking

employment made up 1.0 percent (*n*=2) of the population.

Table 4. 4

Respondents' Employment Status

	Frequency (*f*)	Percent (%)
Part-Time Student	7	3.6
Full-Time Student	77	39.5
Employed Part-Time	14	7.2
Employed Full-Time	81	41.5
Does Not Work (Seeking Employment)	4	2.1
Does Not Work (Not Seeking Employment)	2	1.0
Retired	10	5.1

Findings Related to Objective Two

Objective 2: Determine how the portion of the population that is uninformed about and uninvolved in agriculture prefers to receive information in the following categories: scientific, entertainment, awareness.

The following eight tables (4.5 – 4.12) show the summary of what communication methods respondents prefer to receive research/data driven information. Table 4.5 shows how respondents ranked print text (example: newspaper). The most common ranking was second with 21 percent (*n*=41). Over 50 percent (*n*=100) of respondents ranked print text in the top three communication methods for research/data driven information. The median of the data was 3.0, or a third place ranking.

Table 4. 5

Preference Rank Results – Print Text

	Frequency (*f*)	Percent (%)
1st	35	17.9
2nd	41	21.0
3rd	24	12.3
4th	22	11.3
5th	22	11.3
6th	13	6.7
7th	15	7.7
8th	23	11.8

Table 4.6 shows how respondents ranked print mixed (example: magazine). The least popular rankings were first and last. 5.1 percent (*n*=10) of respondents ranked print mixed the first and 6.2 percent (*n*=12) of respondents ranked print mixed eighth (last). The median of the data was 4.0, or a fourth place ranking.

Table 4. 6

Preference Rank Results – Print Mixed

	Frequency (*f*)	Percent (%)
1st	10	5.1
2nd	28	14.4
3rd	42	21.5
4th	27	13.8
5th	29	14.9
6th	28	14.4
7th	19	9.7
8th	12	6.2

Table 4.7 shows how respondents ranked digital text (example: online article). The most common ranking was first with 46.7 percent ($n=91$). Results from second to eighth declined ordinally. Only 2.5 percent (n=5) of respondents ranked digital text sixth or lower. The median of the data was 2.0, or a second place ranking.

Table 4. 7

Preference Rank Results – Digital Text

	Frequency (*f*)	Percent (%)
1st	91	46.7
2nd	42	21.5
3rd	26	13.3
4th	19	9.7
5th	12	6.2
6th	3	1.5
7th	1	0.5
8th	1	0.5

Table 4.8 shows how respondents ranked digital mixed (example: online magazine or most social media outlets). The majority of respondents ranked digital mixed in the top four; 73.3 percent ($n=143$). The most common ranking was second place with 22.1 percent ($n=43$), followed by fourth place with 20.5 percent ($n=40$). The median of the data was 3.0, or a third place ranking.

Table 4. 8

Preference Rank Results – Digital Mixed

	Frequency (*f*)	Percent (%)
1st	29	14.9
2nd	43	22.1
3rd	31	15.9
4th	40	20.5
5th	19	9.7
6th	17	8.7
7th	8	4.1
8th	8	4.1

Table 4.9 shows how respondents ranked digital graphic (example: online photographs). The least popular rankings were first and last. There were 4.1 percent (*n*=8) of respondents that ranked digital graphic the first and 0 percent (*n*=0) of respondents that ranked digital graphic eighth (last). The most common ranking was fifth place with 23.1 percent (n=45). The median of the data was 5.0, or a fifth place ranking.

Table 4. 9

Preference Rank Results – Digital Graphic

	Frequency (*f*)	Percent (%)
1st	8	4.1
2nd	16	8.2
3rd	38	19.5
4th	31	15.9
5th	45	23.1
6th	32	16.4
7th	25	12.8
8th	0	0.0

Table 4.10 shows how respondents ranked digital video (example: online YouTube video). The most common ranking was sixth with only 20.0 percent (n=39). Only 22.6 percent (n=44) of respondents ranked digital video in the top three. The median of the data was 5.0, or a fifth place ranking.

Table 4. 10

Preference Rank Results – Digital Video

	Frequency (*f*)	Percent (%)
1st	8	4.1
2nd	16	8.2
3rd	20	10.3
4th	31	15.9
5th	23	11.8
6th	39	20.0
7th	27	13.8
8th	31	15.9

Table 4.11 shows how respondents ranked audio (example: radio). The most common ranking was seventh with 28.2 percent (n=55). 69.7 percent (n=136) of respondents ranked audio sixth or below; in the bottom three. Only 7.7 percent (n=15) of respondents ranked audio in the top three. The median of the data was 6.0, or a sixth place ranking.

Table 4. 11

Preference Rank Results – Audio

	Frequency (*f*)	Percent (%)
1st	6	3.1
2nd	4	2.1
3rd	5	2.6
4th	16	8.2
5th	28	14.4
6th	39	20.0
7th	55	28.2
8th	42	21.5

Table 4.12 shows how respondents ranked video (example: TV commercial). The most common ranking was eighth with 40.0 percent (*n*=78). There were 75.4 percent (n=147) of respondents that ranked video sixth or below; in the bottom three. The median of the data was 7.0, or a seventh place ranking.

Table 4. 12

Preference Rank Results – Video

	Frequency (*f*)	Percent (%)
1st	8	4.1
2nd	5	2.6
3rd	9	4.6
4th	9	4.6
5th	17	8.7
6th	24	12.3
7th	45	23.1
8th	78	40.0

The following eight tables (4.13 – 4.20) show the summary of what communication

methods consumers prefer to receive information regarding news and current events.

Table 4.13 shows how respondents ranked print text (example: newspaper). The most

common ranking was third with 19.0 percent ($n=37$), followed by first with 18.5 percent

($n=36$). 74.9 percent ($n=146$) of respondents ranked print text fifth or above. The

median of the data was 4.0, or a fourth place ranking.

Table 4. 13

Preference Rank Results – Print Text

	Frequency (*f*)	Percent (%)
1st	36	18.5
2nd	24	12.3
3rd	37	19.0
4th	25	12.8
5th	24	12.3
6th	18	9.2
7th	10	5.1
8th	21	10.8

Table 4.14 shows how respondents ranked print mixed (example: magazine). The most

common ranking was sixth with 17.9 percent ($n=35$). There were 81.5 percent ($n=159$)

of respondents that ranked print mixed between third and seventh. The median of the

data was 5.0, or a fifth place ranking.

Table 4. 14

Preference Rank Results – Print Mixed

	Frequency (*f*)	Percent (%)
1st	1	.5
2nd	18	9.2
3rd	28	14.4
4th	34	17.4
5th	32	16.4
6th	35	17.9
7th	30	15.4
8th	17	8.7

Table 4.15 shows how respondents ranked digital text (example: online article). The most common ranking was second with 32.8 percent (*n*=64), followed by first with 28.2 percent (*n*=55). That means that 61 percent (*n*=119) of respondents ranked digital text in the top two. Only 4.1 percent (*n*=8) of respondents ranked digital text sixth or below; in the bottom three. The median of the data was 5.0, or a fifth place ranking.

Table 4. 15

Preference Rank Results – Digital Text

	Frequency (*f*)	Percent (%)
1st	55	28.2
2nd	64	32.8
3rd	33	16.9
4th	23	11.8
5th	12	6.2
6th	6	3.1
7th	0	0.0
8th	2	1.0

Table 4.16 shows how respondents ranked digital mixed (example: online magazine or most social media outlets). The most common ranking was first with 32.8 percent (*n*=64). Results from second to eighth declined fairly ordinally. The median of the data was 3.0, or a third place ranking.

Table 4. 16

Preference Rank Results – Digital Mixed

	Frequency (*f*)	Percent (%)
1st	64	32.8
2nd	30	15.4
3rd	25	12.8
4th	28	14.4
5th	22	11.3
6th	14	7.2
7th	7	3.6
8th	5	2.6

Table 4.17 shows how respondents ranked digital graphic (example: online photographs). The least popular rankings were first and last. 2.6 percent (*n*=5) of respondents ranked print mixed the first and 2.1 percent (*n*=4) of respondents ranked print mixed eighth (last). The most common ranking was fifth with 24.6 percent (*n*=48). The median of the data was 4.0, or a fourth place ranking.

Table 4. 17

Preference Rank Results – Digital Graphic

	Frequency (*f*)	Percent (%)
1st	5	2.6
2nd	15	7.7
3rd	35	17.9
4th	27	13.8
5th	48	24.6
6th	35	17.9
7th	26	13.3
8th	4	2.1

Table 4.18 shows how respondents ranked digital video (example: online YouTube video). The most common ranking was seventh with 26.2 percent (*n*=51). 67.7 percent (*n*=132) of respondents ranked digital video sixth or below; in the bottom three. The median of the data was 6.0, or a sixth place ranking.

Table 4. 18

Preference Rank Results – Digital Video

	Frequency (*f*)	Percent (%)
1st	3	1.5
2nd	11	5.6
3rd	8	4.1
4th	26	13.3
5th	15	7.7
6th	47	24.1
7th	51	26.2
8th	34	17.4

Table 4.19 shows how respondents ranked audio (example: radio). Rankings for audio were fairly evenly distributed, save the most common and least common rankings. The most common ranking was seventh with 25.6 percent ($n=50$). The least common ranking was seventh with 7.7 percent ($n=15$). The median of the data was 6.0, or a sixth place ranking.

Table 4. 19

Preference Rank Results – Audio

	Frequency (*f*)	Percent (%)
1st	15	7.7
2nd	18	9.2
3rd	20	10.3
4th	21	10.8
5th	21	10.8
6th	26	13.3
7th	50	25.6
8th	24	12.3

Table 4.20 shows how respondents ranked video (example: TV commercial). The most common ranking, by far, was eighth with 45.1 percent ($n=88$). The median of the data was 7.0, or a seventh place ranking.

Table 4. 20

Preference Rank Results – Video

	Frequency (*f*)	Percent (%)
1st	16	8.2
2nd	15	7.7
3rd	9	4.6
4th	11	5.6
5th	21	10.8
6th	14	7.2
7th	21	10.8
8th	88	45.1

The following eight tables (4.21 – 4.28) show the summary of what communication methods consumers prefer to receive entertainment driven information. Table 4.21 shows how respondents ranked print text (example: newspaper). The most common ranking, was 8th with 30.8 percent (*n*=60), followed by seventh with 23.6 percent (*n*=39); 50.8 percent (*n*=99) of respondents ranked print text in the bottom two. The median of the data was 7.0, or a seventh place ranking.

Table 4. 21

Preference Rank Results – Print Text

	Frequency (*f*)	Percent (%)
1st	8	4.1
2nd	14	7.2
3rd	11	5.6
4th	15	7.7
5th	22	11.3
6th	26	13.3
7th	39	20.0
8th	60	30.8

Table 4.22 shows how respondents ranked print mixed (example: magazine). The most common ranking was seventh with 23.6 percent ($n=46$). Only 25.1 percent ($n=49$) of respondents ranked print mixed in the top four; 74.9 percent ($n=146$) of respondents ranked print mixed in the bottom four. The median of the data was 6.0, or a sixth place ranking.

Table 4. 22

Preference Rank Results – Print Mixed

	Frequency (*f*)	Percent (%)
1st	4	2.1
2nd	10	5.1
3rd	19	9.7
4th	16	8.2
5th	30	15.4
6th	38	19.5
7th	46	23.6
8th	32	16.4

Table 4.23 shows how respondents ranked digital text (example: online article). The most common ranking was second with 26.7 percent ($n=52$). 78.5 percent ($n=153$) of respondents ranked digital text in the top four. The median of the data was 3.0, or a third place ranking.

Table 4. 23

Preference Rank Results – Digital Text

	Frequency (*f*)	Percent (%)
1st	30	15.4
2nd	52	26.7
3rd	39	20.0
4th	32	16.4
5th	16	8.2
6th	17	8.7
7th	5	2.6
8th	4	2.1

Table 4.24 shows how respondents ranked digital mixed (example: online magazine or most social media outlets). The most common ranking was first with 43.1 percent (*n*=84). The median of the data was 2.0, or a second place ranking.

Table 4. 24

Preference Rank Results – Digital Mixed

	Frequency (*f*)	Percent (%)
1st	84	43.1
2nd	34	17.4
3rd	19	9.7
4th	20	10.3
5th	13	6.7
6th	12	6.2
7th	8	4.1
8th	5	2.6

Table 4.25 shows how respondents ranked digital graphic (example: online photographs). The most common ranking was third with 22.1 percent ($n=43$). The median of the data was 3.0, or a third place ranking.

Table 4. 25

Preference Rank Results – Digital Graphic

	Frequency (*f*)	Percent (%)
1st	22	11.3
2nd	33	16.9
3rd	43	22.1
4th	29	14.9
5th	27	13.8
6th	25	12.8
7th	10	5.1
8th	6	3.1

Table 4.26 shows how respondents ranked digital video (example: online YouTube video). The most common ranking was fourth with 20.0 percent ($n=39$). The least common ranking was first with 9.7 percent ($n=19$); there was a fairly even distribution across all 8 rankings. The median of the data was 4.0, or a fourth place ranking.

Table 4. 26

Preference Rank Results – Digital Video

	Frequency (*f*)	Percent (%)
1st	19	9.7
2nd	30	15.4
3rd	20	10.3
4th	39	20.0
5th	21	10.8
6th	24	12.3
7th	21	10.8
8th	21	10.8

Table 4.27 shows how respondents ranked audio (example: radio). The most common

ranking was seventh with 20.5 percent (*n*=40). Only 15.9 percent (*n*=31) of respondents

ranked audio in the top three. The median of the data was 6.0, or a sixth place ranking.

Table 4. 27

Preference Rank Results – Audio

	Frequency (*f*)	Percent (%)
1st	8	4.1
2nd	6	3.1
3rd	17	8.7
4th	26	13.3
5th	35	17.9
6th	28	14.4
7th	40	20.5
8th	35	17.9

Table 4.28 shows how respondents ranked video (example: TV commercial). The most

common ranking was eighth with 16.4 percent (*n*=32). The least common ranking was

second with 8.2 percent (*n*=16); there was a fairly even distribution across all 8 rankings.

The median of the data was 5.0, or a fifth place ranking.

Table 4. 28

Preference Rank Results – Video

	Frequency (*f*)	Percent (%)
1st	20	10.3
2nd	16	8.2
3rd	27	13.8
4th	18	9.2
5th	31	15.9
6th	25	12.8
7th	26	13.3
8th	32	16.4

Findings Related to Objective Three

Objective 3: Determine how the uninformed, uninvolved public comprehends and retains information presented in communication strategies currently used by Texas A&M AgriLife Extension.

Table 4.29 shows the summary of respondents' comprehension scores for the print text artifact. For print text question one, 16 percent (*n*=4) of respondents answered incorrectly and 84 percent (*n*=21) of respondents answered correctly. For print text question two, 16 percent (*n*=4) of respondents answered incorrectly and 84 percent (*n*=21) of respondents answered correctly. For print text question three, 16 percent (*n*=4) of respondents answered incorrectly and 84 percent (*n*=21) of respondents answered correctly. Total, for the print text artifact, 16 percent (*n*=12) of questions were answered incorrectly and 84 percent (*n*=63) of questions were answered correctly.

Table 4. 29

Comprehension Question Results – Print Text

	Frequency (*f*)	Percent (%)
Incorrect	12	16
Correct	63	84

Table 4.30 shows the summary of respondents' comprehension scores for the print mixed artifact. For print mixed question one, 33.3 percent (*n*=8) of respondents answered incorrectly and 66.7 percent (*n*=16) of respondents answered correctly. For print mixed question two, 16.7 percent (*n*=4) of respondents answered incorrectly and 83.3 percent (*n*=20) of respondents answered correctly. For print mixed question three, 25 percent (*n*=6) of respondents answered incorrectly and 75 percent (*n*=18) of respondents answered correctly. Total, for the print mixed artifact, 25 percent (*n*=18) of questions were answered incorrectly and 75 percent (*n*=54) of questions were answered correctly.

Table 4. 30

Comprehension Question Results – Print Mixed

	Frequency (*f*)	Percent (%)
Incorrect	18	25
Correct	54	75

Table 4.31 shows the summary of respondents' comprehension scores for the digital text artifact. For digital text question one, 100 percent (*n*=22) of respondents answered correctly. For digital text question two, 18.2 percent (*n*=4) of respondents answered incorrectly and 81.8 percent (*n*=18) of respondents answered correctly. For digital text question three, 40.9 percent (*n*=9) of respondents answered incorrectly and 59.1 percent (*n*=13) of respondents answered correctly. Total, for the digital text artifact, 19.7 percent

(*n*=13) of questions were answered incorrectly and 80.3 percent (*n*=53) of questions were

answered correctly.

Table 4. 31

Comprehension Question Results – Digital Text

	Frequency (*f*)	Percent (%)
Incorrect	13	19.7
Correct	53	80.3

Table 4.32 shows the summary of respondents' comprehension scores for the digital

mixed artifact. For digital mixed question one, 8.3 percent (*n*=2) of respondents

answered incorrectly and 91.7 percent (*n*=22) of respondents answered correctly. For

digital mixed question two, 12.5 percent (*n*=3) of respondents answered incorrectly and

87.5 percent (*n*=21) of respondents answered correctly. For digital mixed question three,

20.8 percent (*n*=5) of respondents answered incorrectly and 79.2 percent (*n*=19) of

respondents answered correctly. Total, for the digital mixed artifact, 13.9 percent (*n*=10)

of questions were answered incorrectly and 86.1 percent (*n*=62) of questions were

answered correctly.

Table 4. 32

Comprehension Question Results – Digital Mixed

	Frequency (*f*)	Percent (%)
Incorrect	10	13.9
Correct	62	86.1

Table 4.33 shows the summary of respondents' comprehension scores for the digital

graphic artifact. For digital graphic question one, 100 percent (*n*=24) of respondents

answered correctly. For digital graphic question two, 8.4 percent (*n*=2) of respondents

answered incorrectly and 91.7 percent (*n*=22) of respondents answered correctly. For

digital graphic question three, 100 percent (*n*=24) of respondents answered correctly.

Total, for the digital graphic artifact, 2.8 percent (*n*=2) of questions were answered

incorrectly and 97.2 percent (*n*=70) of questions were answered correctly.

Table 4. 33

Comprehension Question Results – Digital Graphic

	Frequency (*f*)	Percent (%)
Incorrect	2	2.8
Correct	70	97.2

Table 4.34 shows the summary of respondents' comprehension scores for the digital

video artifact. For digital video question one, 41.7 percent (*n*=10) of respondents

answered incorrectly and 58.3 percent (*n*=14) of respondents answered correctly. For

digital video question two, 100 percent (*n*=24) of respondents answered correctly. For

digital video question three, 25 percent (*n*=6) of respondents answered incorrectly and 75

percent (*n*=18) of respondents answered correctly. Total, for the digital video artifact,

22.2 percent (*n*=16) of questions were answered incorrectly and 77.8 percent (*n*=56) of

questions were answered correctly.

Table 4. 34

Comprehension Question Results – Digital Video

	Frequency (*f*)	Percent (%)
Incorrect	16	22.2
Correct	56	77.8

Table 4.35 shows the summary of respondents' comprehension scores for the audio

artifact. For audio question one, 18.1 percent (*n*=4) of respondents answered incorrectly

and 81.8 percent (*n*=18) of respondents answered correctly. For audio question two, 100

percent (*n*=22) of respondents answered correctly. For audio question three, 22.7 percent

(*n*=5) of respondents answered incorrectly and 77.3 percent (*n*=17) of respondents

answered correctly. Total, for the audio artifact, 13.6 percent (*n*=9) of questions were

answered incorrectly and 86.4 percent (*n*=57) of questions were answered correctly.

Table 4. 35

Comprehension Question Results – Audio

	Frequency (*f*)	Percent (%)
Incorrect	9	13.6
Correct	57	86.4

Table 4.36 shows the summary of respondents' comprehension scores for the video

artifact. For video question one, 4.8 percent (*n*=1) of respondents answered incorrectly

and 95.2 percent (*n*=20) of respondents answered correctly. For video question two, 14.3

percent (*n*=3) of respondents answered incorrectly and 85.7 percent (*n*=18) of

respondents answered correctly. For video question three, 4.8 percent (*n*=1) of

respondents answered incorrectly and 95.2 percent (*n*=20) of respondents answered

correctly. Total, for the video artifact, 7.9 percent (*n*=5) of questions were answered

incorrectly and 92.1 percent (*n*=58) of questions were answered correctly.

Table 4. 36

Comprehension Question Results – Video

	Frequency (*f*)	Percent (%)
Incorrect	5	7.9
Correct	58	92.1

CHAPTER V

RECOMMENDATIONS AND CONCLUSIONS

Summary

As the availability and distribution of information increases, consumers have their pick of information they would like to intake and information they would like to ignore (Eastin, et al., 2015). This choice contributes to the knowledge gap between those involved in agriculture and those outside of the industry. However, there is a government agency that has the tools necessary to fill the gap. Extension services' "varying and ever-changing programs bridge the gap between rural and urban, and traditional and non-traditional agriculture" (Edgar & Rutherford, 2006). How should extension services get these programs to the portion of the population that needs them most? Here one can see the vitality of communicated information that consumers will choose to intake rather than ignore. Evaluating the communication method preferences and comprehension of the uninformed, uninvolved public is important in determining effective methods as they apply to this group, and bridging the knowledge-gap.

Purpose and Objectives

The purpose of this study was to determine the effectiveness of communication strategies currently used by Texas A&M AgriLife Extension in reaching the portion of

the population that is uninformed about and uninvolved in agriculture. In order to accomplish this purpose, the following objectives were established:

1. Determine the demographic characteristics of the respondents in this study.

2. Determine how the portion of the population that is uninformed about and uninvolved in agriculture prefers to receive information in the following categories: scientific, entertainment, awareness.

3. Determine how the uninformed, uninvolved public comprehends and retains information presented in communication strategies currently used by Texas A&M AgriLife Extension.

Conclusions

Objective 1: *Determine the demographic characteristics of the respondents in this study.*

A total of 321 respondents participated in the survey, and of those, 195 survey responses were completed and analyzed as part of this study (*n*=195). A large majority of the disqualified responses were not included because participants were determined not to be part of the 'uninvolved, uninformed public', by the eligibility questionnaire. Based on the large number of respondents disqualified from this study, we can determine that, as much of the population was from the state of Texas (specifically the panhandle or West Texas), a large amount of people already have a somewhat developed understanding of the work Texas A&M AgriLife Extension does. An extremely high number (44.9%) of individuals reported on the eligibility questionnaire that they could recall seeing or hearing promotional materials previously distributed by Texas AgriLife Extension.

However, a very small number of people reported having a comprehensive understanding, having previous experience, or having strong opinions regarding Texas A&M AgriLife Extension. This shows an ineffectiveness of the materials being distributed (Eastin, et al., 2015).

Respondents were found to be primarily female, with 77.9 percent (*n*=152) of the sample being female, 21.5 percent (*n*=42) of the sample being male, and .5 percent (*n*=1) of the sample preferring not to specify. A large majority, 77.4 percent (*n*=151) of the population was between 18 and 30 years of age. Over half of respondents reported not currently living in a rural town/area. Living in cities with 50,000 or more people were 54.4 percent (*n*=106) of respondents. The majority of respondents reported either being employed full-time or full-time students. Full-time employees made up 41.5 percent (*n*=81) of respondents and 39.5 percent (*n*=77) of respondents were full-time students.

Objective 2: *Determine how the portion of the population that is uninformed about and uninvolved in agriculture prefers to receive information in the following categories: scientific, entertainment, awareness.*

The most preferred communication methods for entertainment driven information were digital graphic, digital text and digital mixed. Digital graphic (example: online photographs) had a median ranking of third. Digital text (example: online article) also had a median ranking of third. Digital mixed (example: online magazine or most social media) had a median ranking of second; 84 respondents (43.1 percent) ranked digital mixed 1st.

The most preferred communication methods for research or data driven information were print text, digital mixed and digital text. Print text (example: newspaper) had a median ranking of third. Digital mixed (example: online magazine or most social media) also had a median ranking of third. Digital text (example: online article) had a median ranking of second; 91 respondents (46.7 percent) ranked digital text first.

The most preferred communication method for information regarding news and current events was digital mixed (example: online magazine or most social media) had a median ranking of third; 64 respondents (32.8 percent) ranked digital mixed first.

Objective 3: *Determine how the uninformed, uninvolved public comprehends and retains information presented in communication strategies currently used by Texas A&M AgriLife Extension.*

The artifact that received the most correct answer responses and was therefore the best comprehended was the digital graphic artifact; only 2.8 percent (n=2) of respondents' answers were incorrect. The artifacts in order from best comprehension scores to worst comprehension scores are as follows: digital graphic, video, audio, digital mixed, print text, digital text, digital video, and print mixed. The artifact that received the least correct answer responses and was therefore the worst comprehended was the print mixed artifact; 25 percent (n=18) of respondents' answers were incorrect.

Discussion/Implications

Ultimately, this study has determined that consumers most prefer to intake various types of information via digital mixed communication method and consumers best comprehend digital graphic, video and audio artifacts. Digital mixed was the fourth best-comprehended promotional artifact. However, digital mixed was the best-comprehended artifact that actually included written words, which required reading. The digital graphic, video and audio artifacts did not require respondents to read anything, but rather observe visuals and listen to spoken words.

Print artifacts either text or mixed, were rather unsuccessful in the preference or comprehension portion of the results. This implies that the digital age is upon us, and resources are best invested in digital, video and audio strategy.

There are some demographical exceptions to the overall implications of the data. These exceptions are presented in the box plots in Appendix E. Box plot one shows the entertainment-based print text and print mixed rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts more favorable rankings for print text among older generations, specifically those 65-80 years of age. From this, one can conclude that for entertainment based extension programming targeting 65-80 year olds print text promotion may still be an advantageous investment regardless of urban or rural locale. The data shown for print mixed does not justify an exception to previous recommendations based on age range or locale.

Box plot two shows the entertainment-based digital text and digital mixed rankings with regards to age and locale demographics. Outliers are denoted with employment status. While digital text rankings are fairly consistently ranked more

favorably, this box plot depicts less favorable rankings for digital mixed among older generations, specifically those 31-80 years of age living in communities with less than 2,500 people and those 65-80+ years of age living in communities with 50,000 or more people. From this, one can conclude that for entertainment based extension programming targeting these age groups and locales, digital mixed promotional may not be the most effective investment.

Box plot three shows the entertainment-based digital graphic and digital video rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts less favorable rankings for digital graphic and digital video among those 50-80+ years of age. From this, one can conclude that for entertainment based extension programming targeting 50-80+ year olds digital graphic and digital video promotion may not be the most effective strategy.

Box plot four shows the entertainment-based audio and video rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts more favorable rankings for audio among those 80+ years of age. From this, one can conclude that for entertainment based extension programming targeting 80+ year olds, audio may still be an advantageous investment.

Also included in Appendix E are the box plots for research/data driven information. Box plot five shows the research/data-based print text and print mixed rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot shows fairly favorable rankings across the board for print text and print mixed communication methods across all age ranges and locales.

Box plot six shows the research/data-based digital text and digital mixed rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts very favorable rankings for digital text among all age ranges and all locales. Box plot six also shows the digital mixed communication method receiving a less favorable ranking in the 65-80+ age range in communities with 50,000 or more people. From this, one can conclude that for research/data based extension programming targeting 65-80+ year olds; digital mixed promotion may not be an effective communication strategy.

Box plot seven shows the research/data-based digital graphic and digital video rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts fairly middle-of-the-road rankings for both digital graphic and digital video communication methods, regardless of age range or locale.

Box plot eight shows the research/data-based audio and video rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts rather unfavorable rankings for both audio and video communication methods, regardless of age range or locale.

Also included in Appendix E are the box plots for news/current event information. Box plot nine shows the news/current event print text and print mixed rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts favorable rankings for print text among all age ranges and all locales. However, print text is a less favorable communication method among those in the 18-30 age range in all three locale categories. Box plot nine also

shows the print mixed communication method receiving middle-of-the-road rankings regardless of age range or locale. From this, one can conclude that news/current event extension programming targeting 18-30 year olds would not be best promoted using the print text communication method.

Box plot ten shows the news/current event digital text and digital mixed rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts fairly favorable rankings for digital text and digital mixed among all age ranges and all locales. However, digital mixed is a less favorable communication method among those in the 65-80+ age range in communities with 50,000 or more people.

Box plot eleven shows the news/current event digital graphic and digital video rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts unfavorable rankings for digital graphic and digital video among all age ranges and all locales.

Box plot twelve shows the news/current event audio and video rankings with regards to age and locale demographics. Outliers are denoted with employment status. This box plot depicts unfavorable rankings for audio and video among all age ranges and all locales. However, video received very favorable rankings among 50-65 year olds in communities with less than 2500 people and 65-80 year old in communities with 50,000 or more people.

<u>Recommendations</u>

Foremost it should be known that the results of this research represent a descriptive study, and should be applied and generalized with caution. The results of the eligibility questionnaire in Section One of the survey suggest that though a large number or people can recall seeing promotional items from Texas A&M AgriLife Extension, those materials have not been effective in engaging individuals in extension programming, developing their understanding of extension or developing their opinions of extension programming. This conclusion presents the need for reform of the promotional materials Texas A&M AgriLife Extension is using. Since comprehension was so high across all promotional artifacts, one can deduce that the issue lies within the promotional method and marketing strategy chosen, rather than the content of the promotional items.

As previously discussed, print artifacts (either text or mixed) were among the least preferred and worst comprehended communication methods. This means that, if Texas A&M AgriLife Extension intends to apply the results of this study to their communication strategy, it may be wise to uninvest their resources in printed promotional materials and develop their strategy for promotion through digital channels. The implications of respondents preferring the digital mixed communication method means Texas A&M AgriLife Extension might consider pursuing online articles and most social media promotional outlets in order to reach the uninformed, uninvolved public. Additionally, because respondents best comprehended the digital graphic, video and audio artifacts, it would be advantageous for extension professionals to integrate these elements into their communication strategy. For example: putting photos, video or audio

clips into online articles or social media promotion. Extension services should integrate these easily comprehended artifacts (digital graphics, videos, audio clips), into the most preferred and fourth-best comprehended communication method (digital mixed: online articles and most social media). This would provide a very efficient use of resources and very strong promotional artifacts. Though digital mixed was overall the most preferred method, there are preferred communication methods for each category of communication. Entertainment-based information is most preferred through digital mixed, digital graphic, and digital text. Research/Data driven information is most preferred through digital text, digital mixed and print text. News/Current Events is most preferred through digital mixed. However, some exceptions do exist regarding specific communication methods as they apply to certain age ranges and locales. For entertainment-based information, the following exceptions exist:

- Print Text is a preferred method of communication among the 65-80 age range.

- Digital Mixed is not a preferred method of communication among the 31-80 age range in communities with 2,500 or less people, and the 65-80+ age range in communities with 50,000+ people.

- Digital Graphic is not a preferred method of communication among the 50-80+ age range.

- Audio is a preferred method of communication among the 80+ age range.

For research/data driven information, the following exception exist:

- Digital Mixed is not a preferred method of communication among the 65-80+ age range in communities with 50,000+ people.

For news/current events information, the following exceptions exist:

- Print Text is a preferred method of communication among the 31-80+ age range.

- Print Text is not a preferred method of communication among the 18-30 age range.

- Digital Mixed is not a preferred method of communication among the 65-80+ age range in communities with 50,000+ people.

- Video is a preferred method of communication among the 50-65 age range in communities with 2,500 or less people, and the 65-80 age range in communities with 50,000+ people.

It is recommended that Texas AgriLife Extension consider the target population for a given promotional strategy and employ the corresponding, most effective communication method.

Future Research Direction

This survey instrument proved reliable for determining consumer preferences and comprehension of communication methods as they apply to Texas A&M AgriLife Extension. However, this population included people of all geographic areas, in and outside of the reach and influence of Texas A&M AgriLife Extension. One suggestion for the replication of this study would be to choose a targeted geographic population and limit the respondents to those in the target geographic area, or pursue a more well rounded representation of the national population as a whole.

Additional research could be pursued in many directions. A similar study to this one might be conducted, largely utilizing the comprehension assessment portion of the survey. As Texas A&M AgriLife Extension modifies there communication strategy in accordance with the results of this study and promotional artifacts are modified and/or created, this study could be repeated to check/evaluate the effectiveness of the improved artifacts. Research could also be conducted using the portion of the population that is already actively involved in Texas A&M AgriLife Extension, to determine how they became involved in Extension programming. This type of study would want to focus on promotional materials rather than interpersonal communication. Though, a study could also be conducted which focuses on the role of interpersonal communication in information transfer and the effect this has on Extension involvement. This study would open the door to determining what aspects of interpersonal communication have been effective in recruiting individuals to engage in Extension programming. Once these factors are identified, training program could be developed to equip people with the tools necessary to develop an organized interpersonal communication strategy. This study found that the use of most social media platforms would be an effective promotional strategy for Texas A&M AgriLife Extension. A study could be conducted to determine which social media platforms would most efficiently promote among the target audience.

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APPENDIX A

CONSENT FORM

Consent Form
West Texas A&M University Master's Thesis Research Participation

Title of Research: "Determining Effective Communication Strategies Used by Texas AgriLife Extension to Educate the Uninformed, Uninvolved Public"

Age and Physical Condition: I state that I am 18 years of age or older, in good physical health, and wish to participate in the program of research being conducted by graduate student Mallory Leach and Dr. Tanner Robertson of the WTAMU Department of Agricultural Sciences.

Purpose: The purpose of this research is to determine which of the currently used communication methods by Texas AgriLife Extension are effective in educating the public based on that population's communication preferences and comprehension of promotional materials.

Experimental Procedure: The experimental procedure will involve three instruments. The head researcher and undergraduate research assistants will accept participants as they volunteer and first administer instrument one. Instrument one will determine their eligibility to be considered part of the "uninvolved and uninformed public," thus determining their eligibility to contribute to the study. The participant will answer all questions in written form and, upon completion, questions 3a through 3d will be totaled. Participants with a score of 12 or below will be eligible to complete instruments two and three. Upon determination of eligibility, instrument two will be administered to eligible participants to determine their communication preferences and tendencies. Finally, each participant will participate in a quasi-experiment using one promotional piece of each style where they will become acquainted with each piece and then take a short assessment to assess their retention from each piece. Participants will be thanked and their names will be entered to win a Wal-Mart gift card valued at $100.

Risks and/or Discomforts: I understand that my participation and/or performance in this study in no way affects my daily life or my good standing with Texas AgriLife Extension Services. I understand names and phone numbers entered in the gift-card drawing will not be retained after completion of the raffle and will be destroyed appropriately as not to release participant identities or information.

Benefits: I understand that this study could offer me benefits in knowledge of Extension services. I also understand the purpose of this study is to discover which communication strategies offer the best opportunity for effective communication between Extension services and the uninformed, uninvolved public to best serve that population.

Opportunity to Ask Questions or Withdraw: I understand I am free to ask questions or to withdraw from participation at any time without any penalty whatsoever. I also understand that my participation in this study is in no way a requirement, but rather is completely voluntary. I understand I also have the right to participate in the study in part if I do not wish to participate in full. Example: answering some questions and choosing not to answer other question(s).

Confidentiality: All information collected during this research will remain confidential. Research reports or publications will report data in aggregate or demographic form only and no individual identities or results will be reported. All individual identities will be replaced with anonymous identification numbers to differentiate subject groups.

If at any time I have complaints or concerns that I prefer not to express to the Principal Investigator or Faculty Mentor I may contact Dr. Spaulding, Vice President of Research and Compliance.

Dr. Spaulding
(806) 651-2731
aspaulding@wtamu.edu

Name of Principal Investigator: Mallory J. Leach
Phone Number: (806) 651-2550
Email: mleach@wtamu.edu

Name of Faculty Mentor: Dr. J. Tanner Robertson
Phone Number: (806) 651-2591
Email: trobertson@wtamu.edu

_____   _____
Signature of Research Subject   Date

_____
Printed Name of Research Subject

APPENDIX B

SURVEY INSTRUMENT

Texas AgriLife Extension and Effective Communication

Section One
Eligibility Questionnaire

1. What is your sex?
   Female   Male   Prefer Not to Specify

2. What is your age range?
   18-30   31-49   50-65   65-80   80+

3. What is the population of the town/city in which you currently reside?

   50,000 or more

   2,500 to 49,999

   Less than 2,500

4. Please indicate your employment status:

   Part-Time Student   Full-Time Student

   Employed Part-Time   Employed Full-Time

   Do Not Work (Seeking Employment)

   Do Not Work (Not Seeking Employment)

5. Please indicate your level of agreement to each of the items below.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) I have a comprehensive understanding of the services and programs that Texas AgriLife Extension Offers.	1	2	3	4	5
b) I have previous experience with Texas AgriLife Extension.	1	2	3	4	5
c) I can recall seeing or hearing promotional materials previously distributed by Texas AgriLife Extension.	1	2	3	4	5
d) I have strong opinions about the work Texas AgriLife Extension does.	1	2	3	4	5

Section Two
Preference Questionnaire

1. Rank the following communication methods based on how you prefer to receive entertainment-driven information. (Ranking of "1" being the most preferred and raking of "9" being the least preferred.) (Click and drag to change the rank.)
    Print – text (newspaper)
    Print – mixed (magazine)
    Digital – text (online article)
    Digital – mixed (online magazine or most social media)
    Digital – graphic (online photographs)
    Digital – video (YouTube)
    Audio (radio)
    Video (TV commercial)

2. Rank the following communication methods based on how you prefer to receive research/data-driven information. (Ranking of "1" being the most preferred and raking of "9" being the least preferred.) (Click and drag to change the rank.)
    Print – text (newspaper)
    Print – mixed (magazine)
    Digital – text (online article)
    Digital – mixed (online magazine or most social media)
    Digital – graphic (online photographs)
    Digital – video (YouTube)
    Audio (radio)
    Video (TV commercial)

3. Rank the following communication methods based on how you prefer to receive information regarding news and current events. (Ranking of "1" being the most preferred and raking of "9" being the least preferred.) (Click and drag to change the rank.)
    Print – text (newspaper)
    Print – mixed (magazine)
    Digital – text (online article)
    Digital – mixed (online magazine or most social media)
    Digital – graphic (online photographs)
    Digital – video (YouTube)
    Audio (radio)
    Video (TV commercial)

Digital Text:
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).

1. What age group participates in 4-H projects?
   a. Youth
   b. Middle-Aged Adults
   c. Elderly Adults
2. Which of the following is not a focus area within the 4-H project list?
   a. Technology & Engineering
   b. Animals
   c. Sports & Athletic Sciences
3. Please complete this statement: "4-H …."
   a. Educates
   b. Cares
   c. Grows

Digital Mixed:
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).

1. What is the focus of the program District 1 4-H is offering?
   a. Scholarships
   b. Grants
   c. College Acceptance
2. For more information you should contact:
   a. Tanner Robertson
   b. Brandon Dukes
   c. Shawnte Clawson
3. Please complete this statement: "_____ the Youth of Texas"
   a. Serving
   b. Funding
   c. Supporting

Digital Graphic:
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).

1. What is being advertised?
   a. Texas 4-H
   b. Texas FFA
   c. Texas IFYE
2. What color were the eyes of the person in the image?
   a. Brown
   b. Green
   c. Blue
3. Please complete this sentence: "See the World as a _____ Does."
   a. Child
   b. 4-H Member
   c. FFA Member

Print Text:
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).
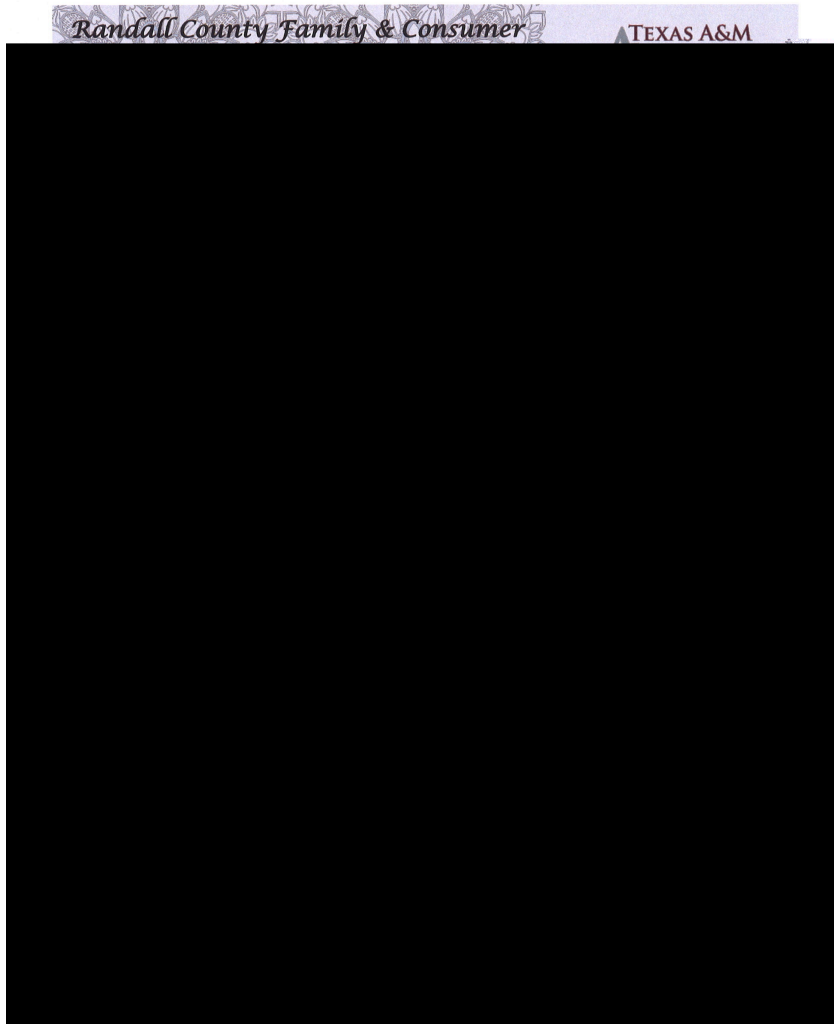
1. Which of the following is not a Family & Consumer Science Program for 2017?
   a. Walk Across Texas
   b. Cooking and Craft Events
   c. Eating with Etiquette
2. Who is the contact person for these programs?
   a. Amy Wagner
   b. Brandon Dukes
   c. Shawnte Clawson
3. What organization is hosting these programs?
   a. Texas A&M AgriLife Extension – Randall County
   b. Texas A&M University
   c. Texas 4-H Council – Texas A&M AgriLife Extension

Print Mixed:
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).

1. What organization is hosting this service project?
   a. Texas A&M AgriLife Extension – Randall County
   b. Texas A&M University
   c. Texas 4-H Council – Texas A&M AgriLife Extension
2. When does this fundraiser conclude?
   a. November 2016
   b. June 2017
   c. July 2016
3. Which of the following is a way to donate to this cause?
   a. 4-H Clubs collecting donations
   b. Donation buckets outside your local grocer
   c. Donations made directly to local Fire station

Digital Video:
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).

https://www.facebook.com/pg/PanhandleDistrict14H/videos/

1. When is the last day to register for this event?
   a. November 9th
   b. November 1st
   c. November 31st
2. What is this video advertising?
   a. WT Buffalo Sports Challenge
   b. 4-H Fitness Challenge Kick-Off
   c. WTAMU Athletics
3. What is the registration fee for this event?
   a. $9.00
   b. $20.00
   c. $15.00

Audio:
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).

Audio mp3 clip retrieved from Ochiltree County 4-H and embedded into survey.

1. What county 4-H program is being promoted?
   a. Larimer
   b. Ochiltree
   c. Potter
2. What are you being invited to attend?
   a. Junior Livestock Show
   b. 4-H Meeting
   c. Junior Rodeo
3. What day is this event happening?
   a. Friday, January 27th
   b. Saturday, January 28th
   c. Friday, February 17th

Video (Commercial):
Please examine the following advertisement and answer the questions that follow to the best of your ability (without re-examining the advertisement).

https://www.dropbox.com/sh/jxx6l6ucckub8vs/AABwpREmRufhMScBvMsTmFhva/PRORES/60?dl=0

1. What is this commercial promoting?
   a. FFA
   b. 4-H
   c. Boy and Girl Scouts of America
2. Which were mentioned in the video?
   a. Engineering Skills
   b. Water Sciences
   c. Leadership Skills
   d. All of the Above
3. What color is associated with the focus program?
   a. Green
   b. Blue
   c. Yellow

APPENDIX C

CORRECT ANSWERS FOR COMPREHENSION ASSESSMENT

Digital Text:
1. A
2. C
3. C
Digital Mixed:
1. A
2. C
3. A
Digital Graphic:
1. A
2. B
3. B
Print Text:
1. C
2. A
3. A
Print Mixed:
1. C
2. B
3. A
Digital Video:
1. B
2. B
3. B
Audio:
1. B
2. A
3. A
Video:
1. B
2. D
3. A

APPENDIX D

IRB APPROVAL LETTER

West Texas A&M University

Academic Research Environmental Health and Safety

WTAMU Box 60217 Canyon, Tx 79016
806.651.2270

INSTITUTIONAL REVIEW BOARD FOR HUMAN SUBJECTS
Letter of Approval

April 24, 2017

Mallory J. Leach
WTAMU Box 60998
Canyon, TX 79015

The West Texas A&M University Institutional Review Board is pleased to inform you that upon review, proposal **#04-04-17** for your study titled, **"Determining Effective Communication Strategies Used by Texas AgriLife Extension to Educate the Uninformed, Uninvolved Public"** meets the requirements of the WTAMU Standard Operating Procedure (SOP) No. 15.99.05.W1.01AR Institutional Review Board (Human Subject Research). Approval is granted for one calendar year. This approval expires on **April 24, 2018**.

Principal investigators assume the following responsibilities:
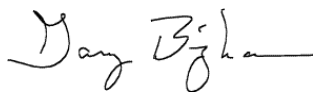
1. **Continuing Review:** The protocol must be renewed on or before the expiration date if the research project requires more than one year for completion. A Continuing Review form along with required documents must be submitted on or before the stated deadline. Failure to do so will result in study termination and/or loss of funding.
2. **Completion Report:** At the conclusion of the research project (including data analysis and final written papers), a Close out form must be submitted to AR-EHS.
3. **Unanticipated Problems and Adverse Events:** Pursuant to SOP No. 15.99.05.W1.13AR, unanticipated problems and serious adverse events must be reported to AR-EHS.
4. **Reports of Potential Non-Compliance:** Pursuant to SOP No. 15.99.05.W1.05AR, potential non-compliance, including deviations from the protocol and violations, must be reported to the IRB office immediately.
5. **Amendments:** Changes to the protocol must be requested by submitting an Amendment form to AR-EHS for review by the IRB. The Amendment must be approved by the IRB before being implemented. Amendments do not extend time granted on the initial approval
6. **Consent Forms:** When using a consent form, only the IRB approved form is allowed.
7. **Audit:** Any proposal may be subject to audit by the IRB Administrator during the life of the study. Investigators are responsible for maintaining complete and accurate records for five years and making them available for inspection upon request.

8. **Recruitment**: All recruitment materials must be approved by the IRB. Recruitment materials distributed to potential participants must use the approved text and include the study's IRB number, approval date, and expiration dates in the following format: WTAMU IRB##-##-## Approved: ##/##/#### Expiration Date: ##/##/####.

9. **FERPA and PPRA:** Investigators conducting research with students must have appropriate approvals from the Family Education Rights and Privacy Act (FERPA) administrator at the institution where the research will be conducted in accordance with the Family Education Rights and Privacy Act (FERPA) if applicable to the research being proposed. The Protection of Pupil Rights Amendment (PPRA) protects the rights of parents in students ensuring that written parental consent is required for participation in surveys, analysis, or evaluation that ask questions falling into categories of protected information.

Sixty days prior to the expiration of this proposal, you will receive a notification of the approaching expiration date at which time you will need to submit an Amendment/Continuation/Close out form.

Thank you for your cooperation with the IRB and we wish you well with your research project.

Sincerely,

Dr. Gary Bigham
Chair, WTAMU IRB

Dr. Angela Spaulding,
Vice President of Research and Compliance

APPENDIX E

PROMOTIONAL PREFERENCE BOX PLOTS

Box Plot 1:

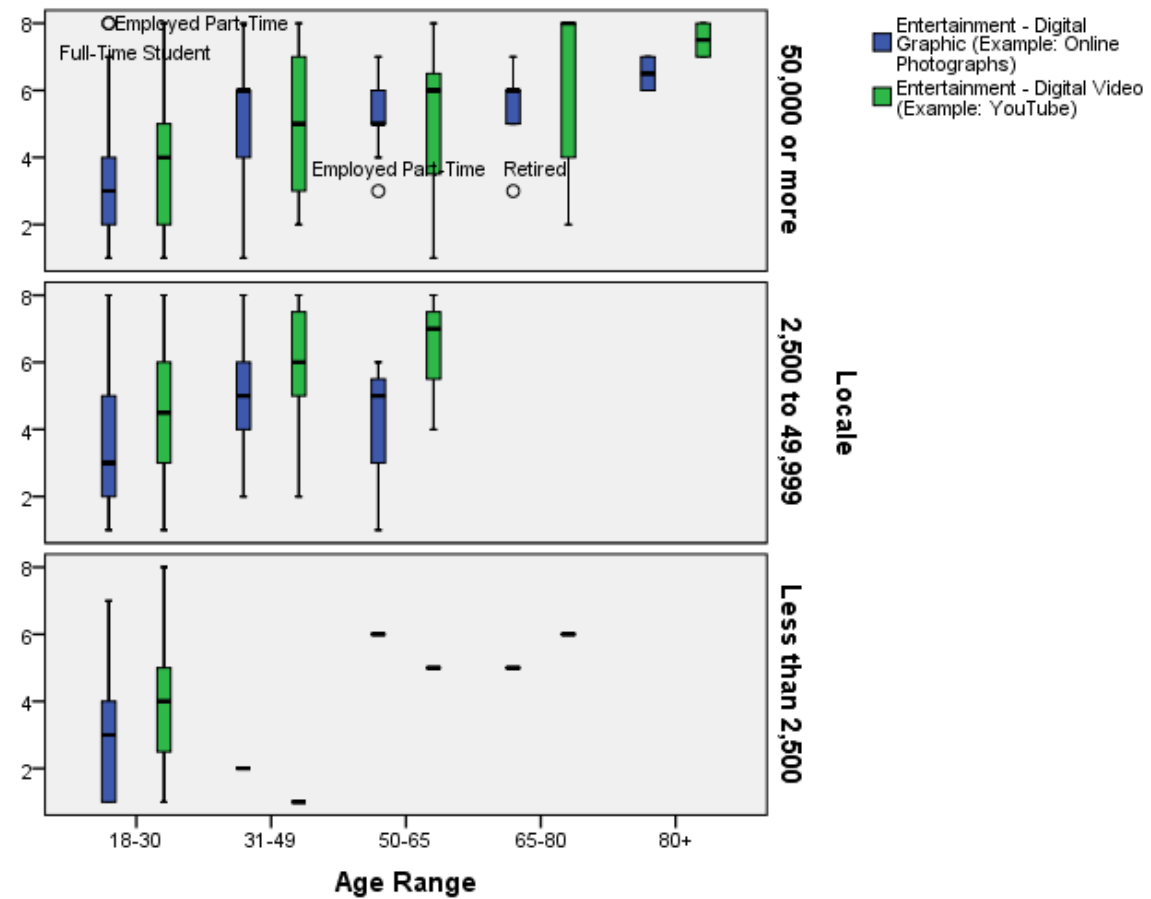Entertainment Print Text and Print Mixed Rankings by Age Range and Locale.
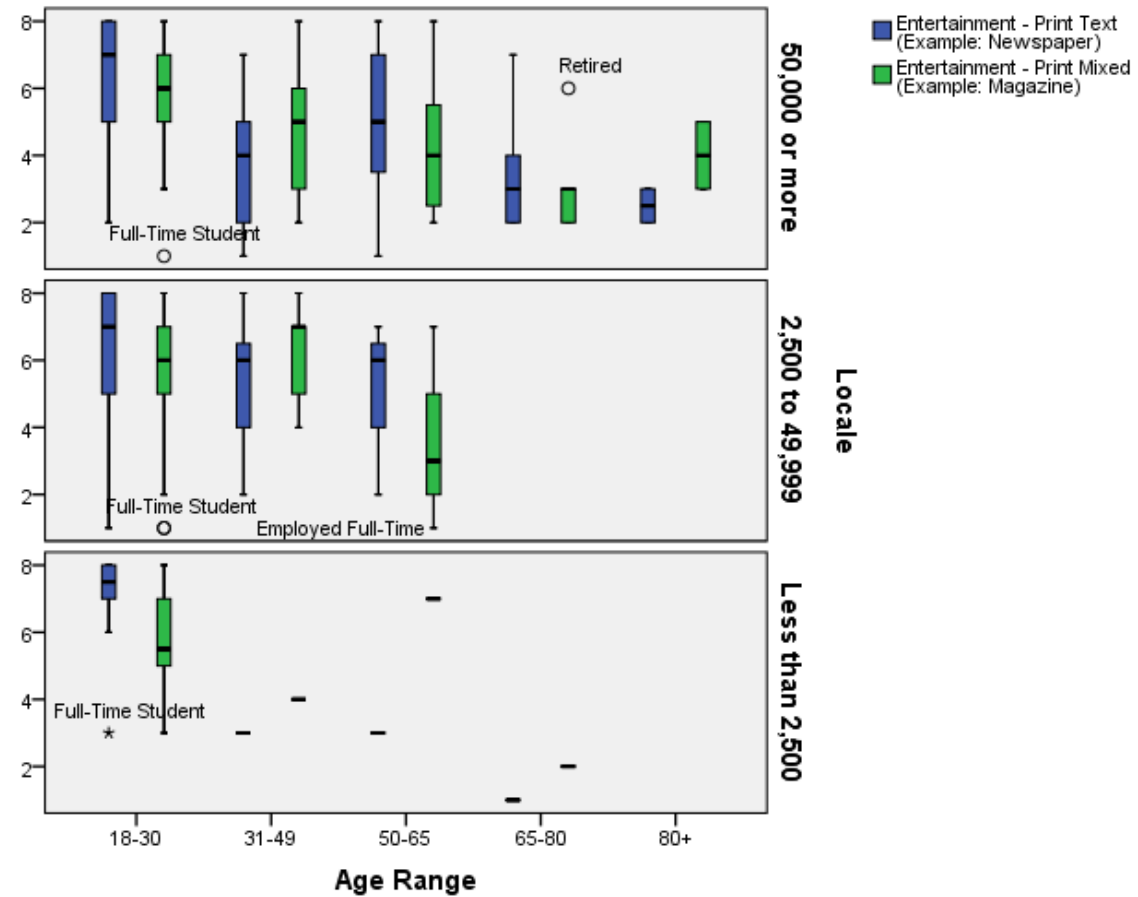
Box Plot 2:

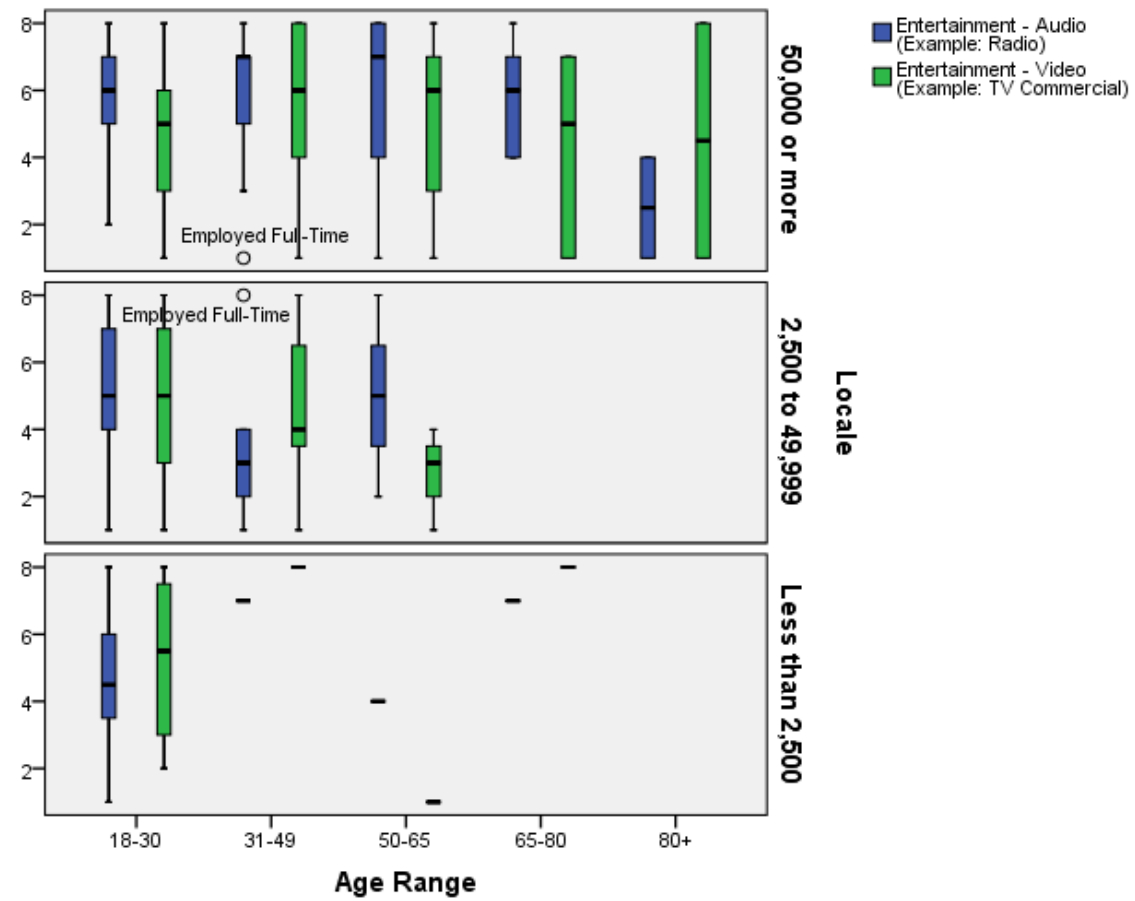Entertainment Digital Text and Digital Mixed Rankings by Age Range and Locale.
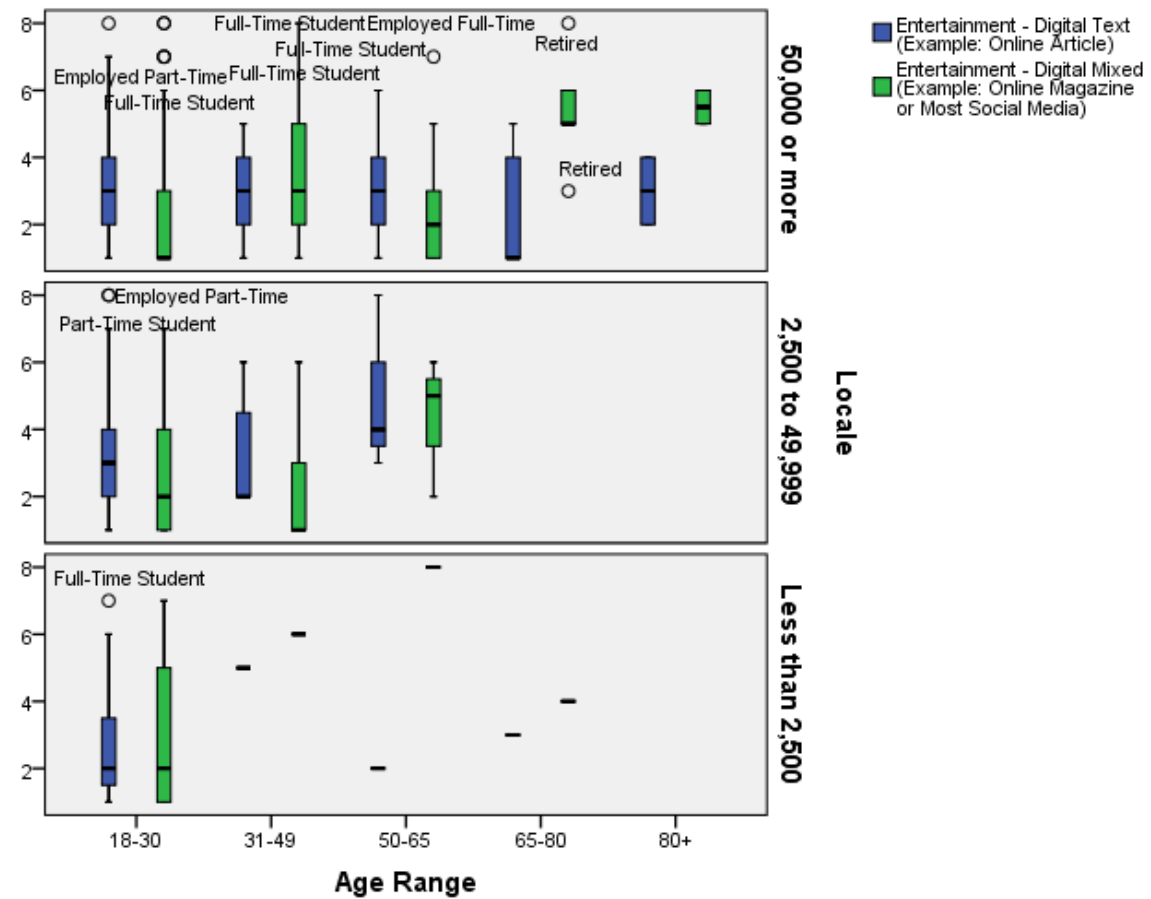
Box Plot 3:

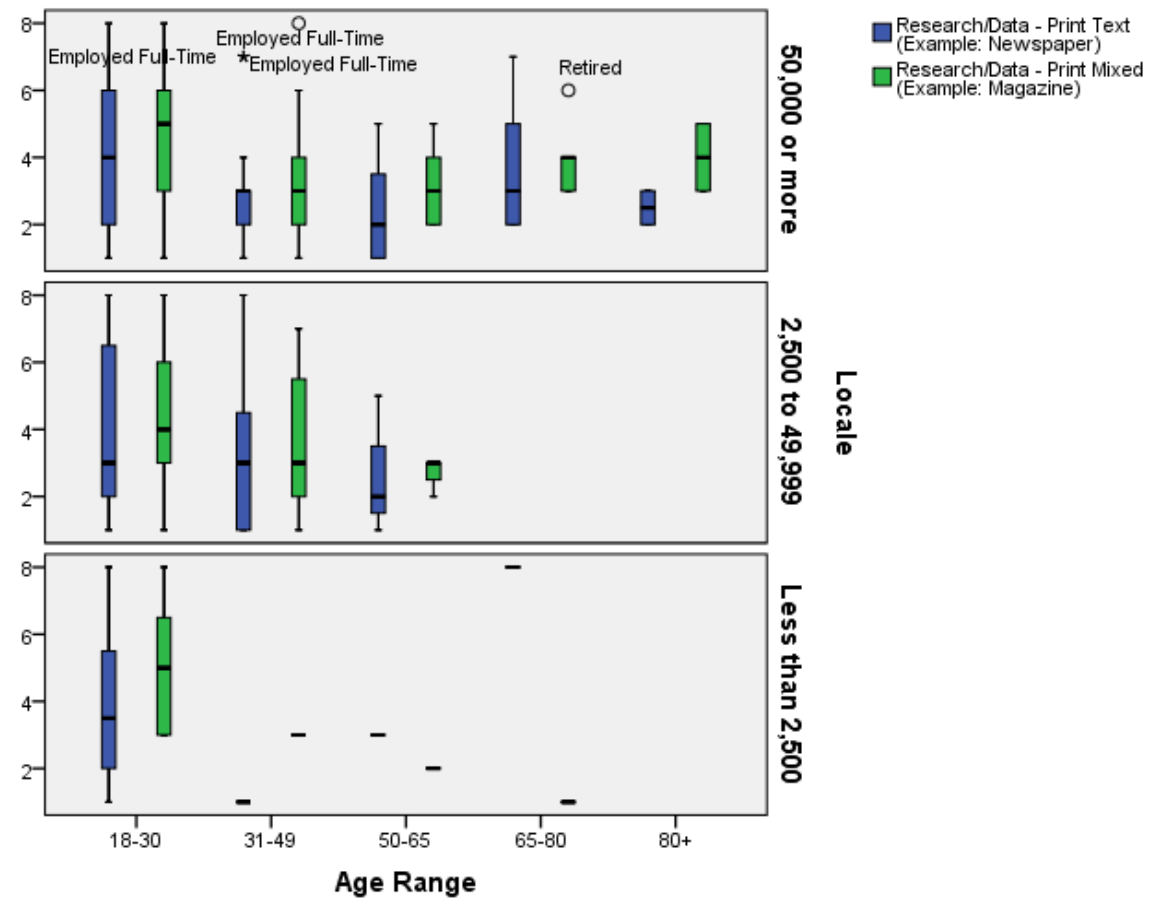Entertainment Digital Graphic and Digital Video Rankings by Age Range and Locale.

Box Plot 4:

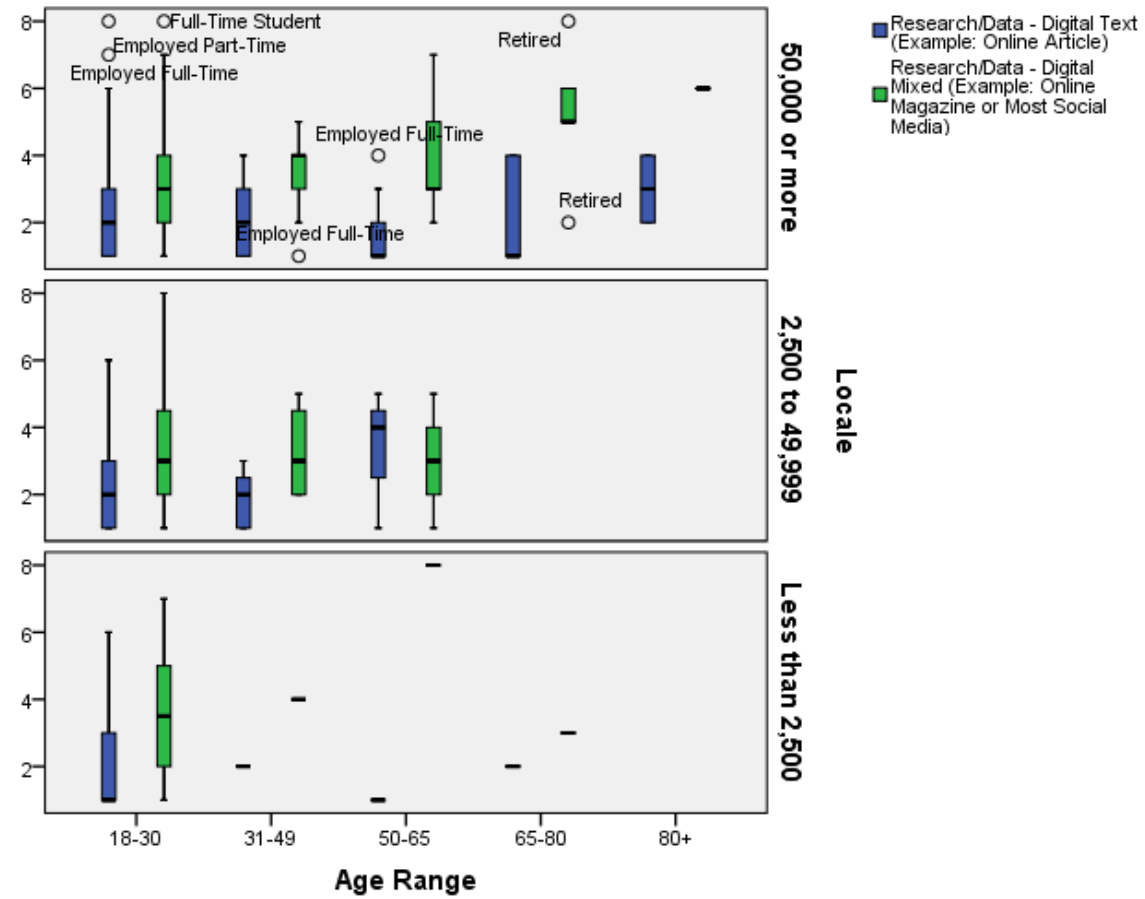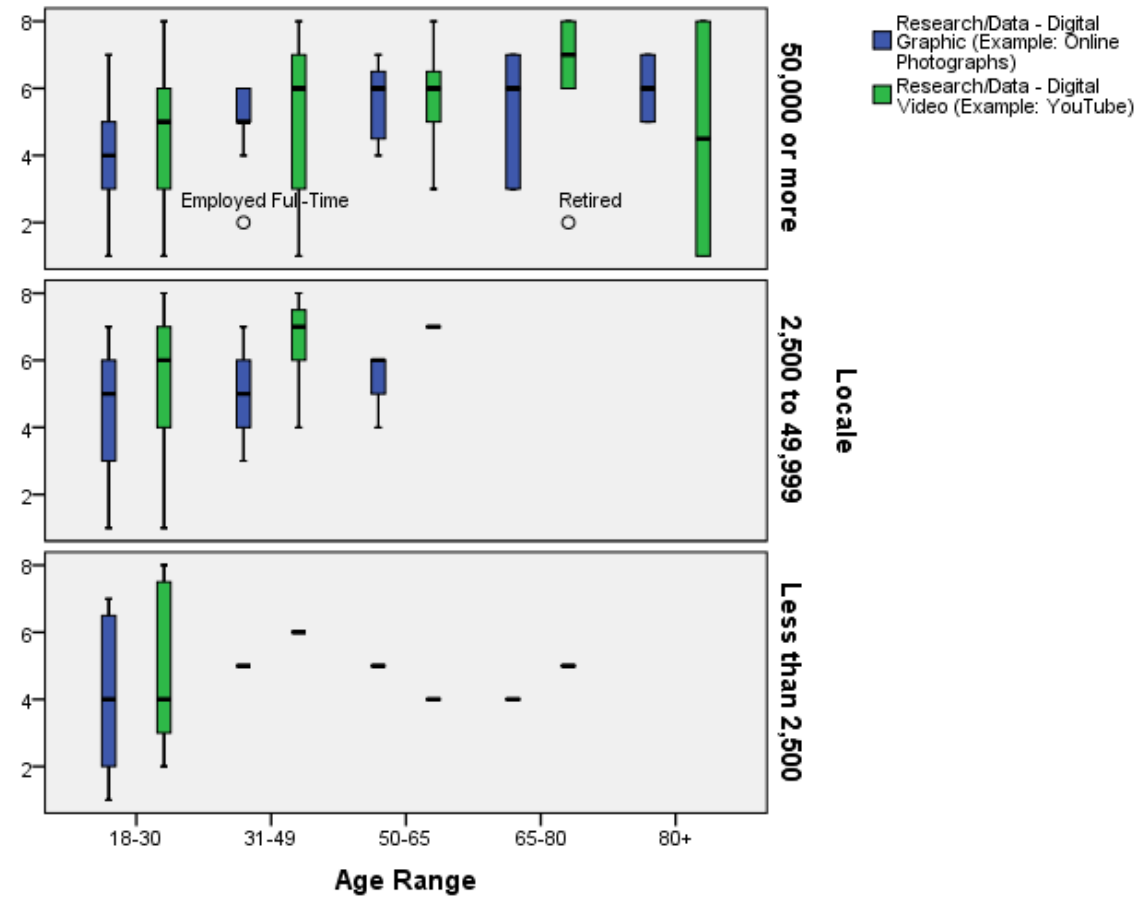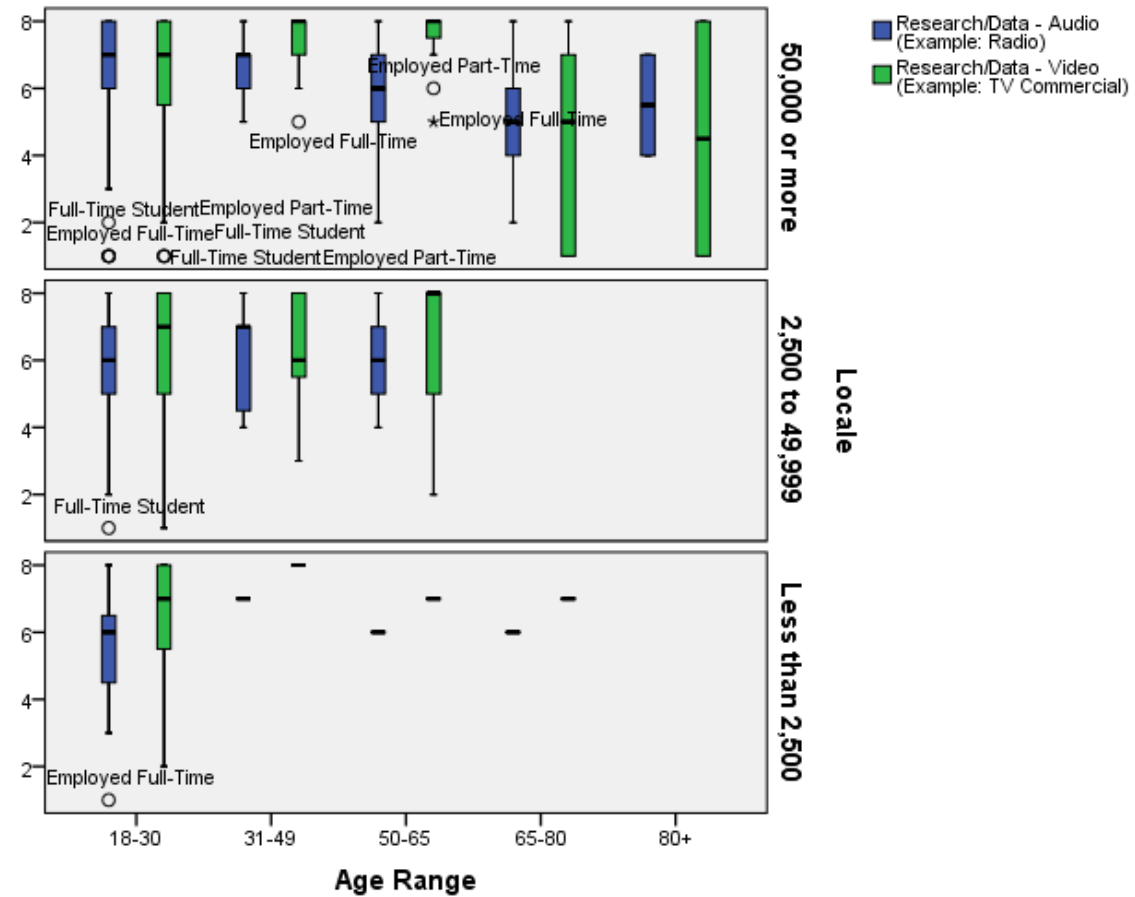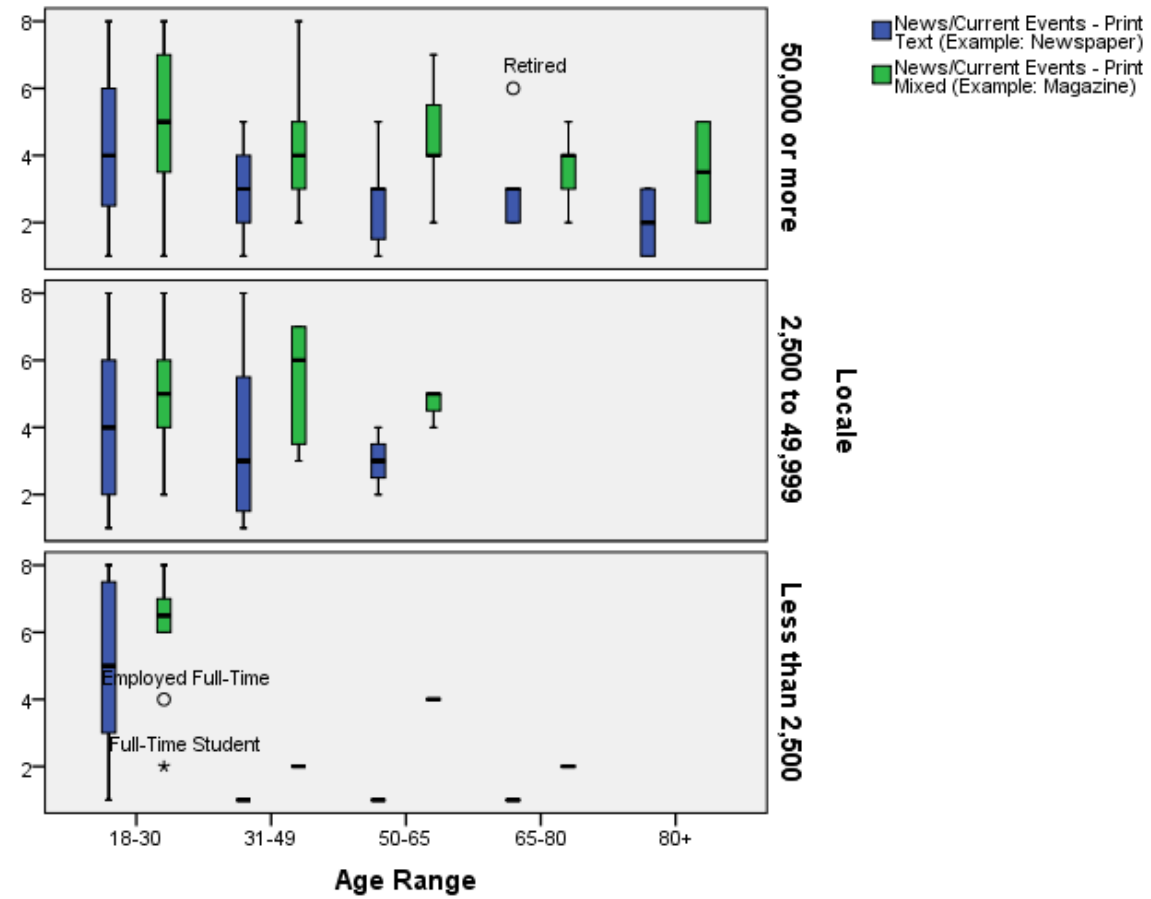Entertainment Audio and Video Rankings by Age Range and Locale.

Box Plot 5:

Research/Data Print Text and Print Mixed Rankings by Age Range and Locale.

Box Plot 6:

Research/Data Digital Text and Digital Mixed Rankings by Age Range and Locale.

Box Plot 7:

Research/Data Digital Graphic and Digital Video Rankings by Age Range and Locale.

Box Plot 8:

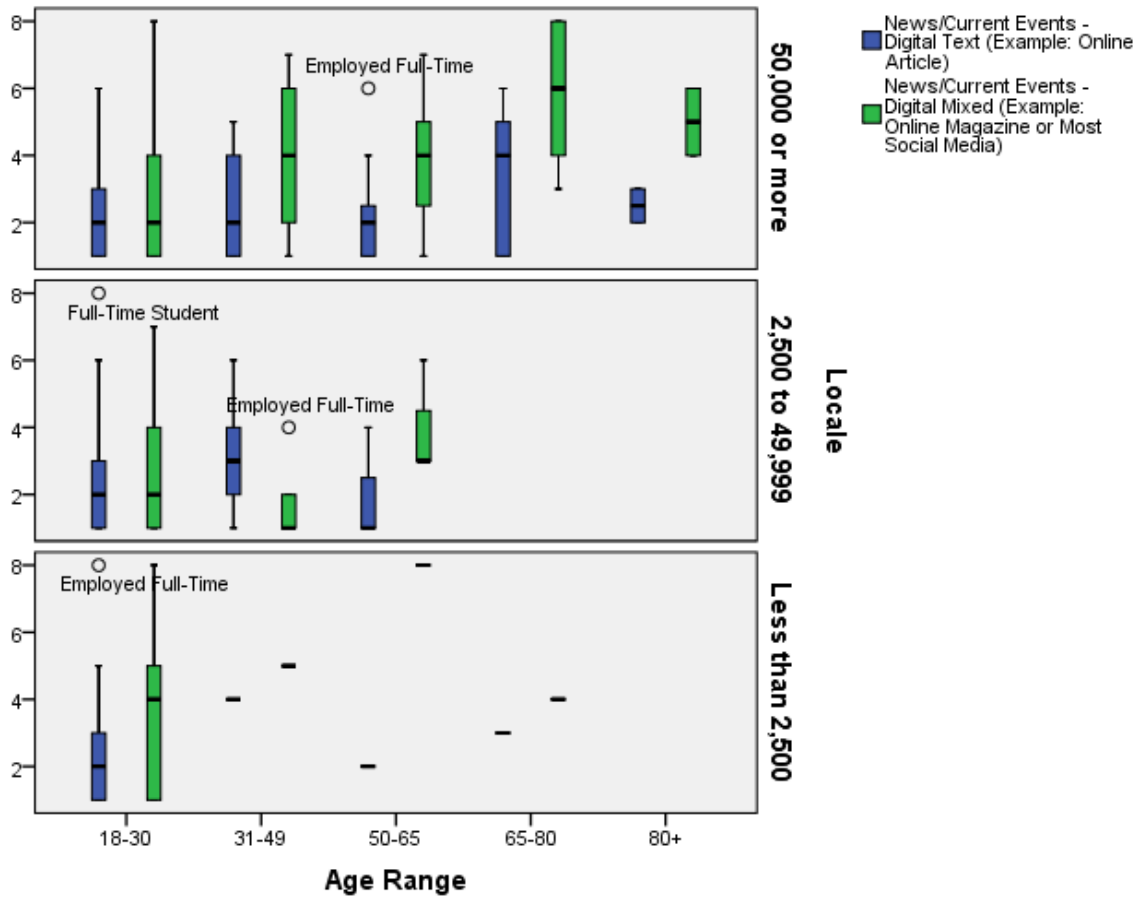Research/Data Audio and Video Rankings by Age Range and Locale.

Box Plot 9

News/Current Events Print Text and Print Mixed Rankings by Age Range and Locale.
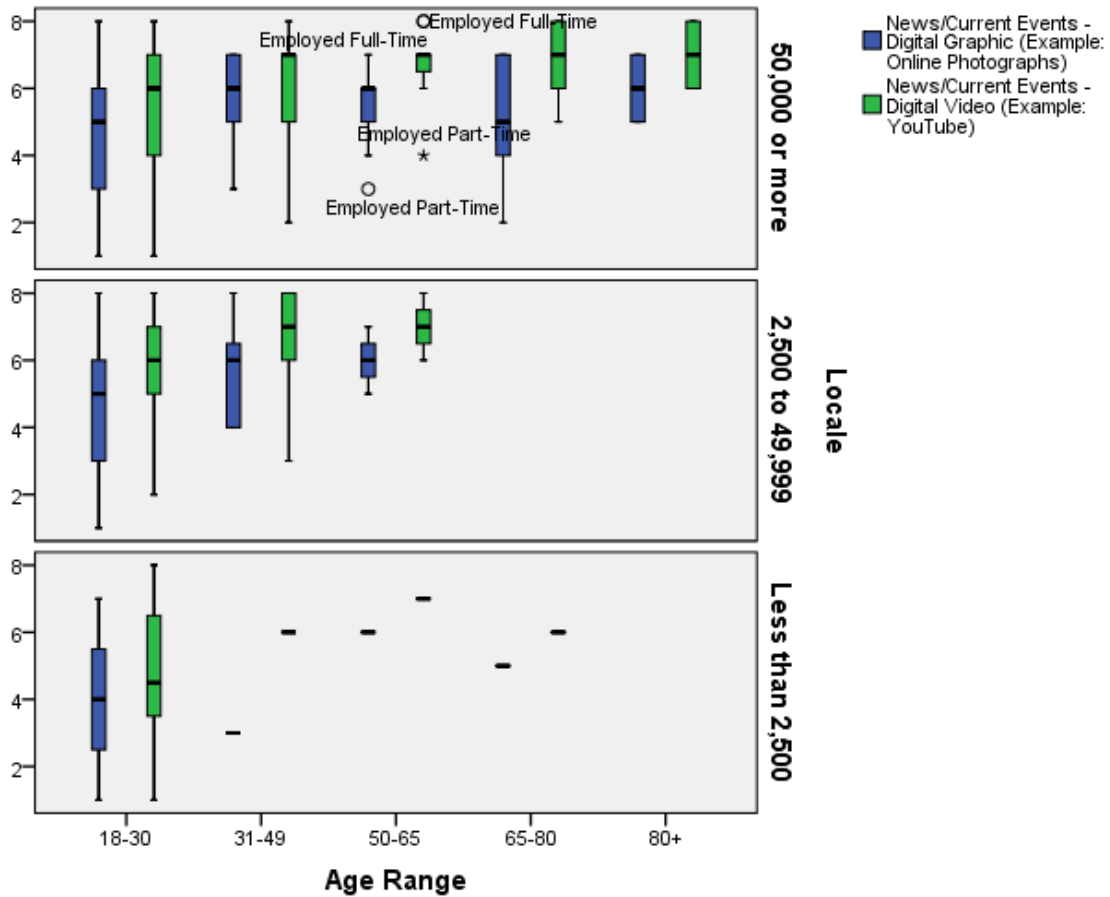
Box Plot 10

News/Current Events Digital Text and Digital Mixed Rankings by Age Range and

Locale.

Box Plot 11

News/Current Events Digital Graphic and Digital Video Rankings by Age Range and

Locale.

Box Plot 12

News/Current Events Audio and Video Rankings by Age Range and Locale.