

Introduction

Keen audience analysis is a benchmark of effective communications. Audience analysis can be utilized to describe a variety of characteristics including age, gender, education, location, values, attitudes, lifestyles, information sources, channels, aptitudes, and experiences among audience members (Telg & Irani, 2012). Without a *frame of reference* (Telg & Irani, 2012), senders and receivers of information lack the human element of shared thoughts, feelings, and behaviors. Communicators who place importance on human elements are better able to cultivate relationships, and thereby, achieve the greatest level of understanding with audience members (Agunda, 1989; Center for Food Integrity, 2014; Kurtzo, Hansen, Rucker, & Edgar, 2016). Today's communicators are challenged to connect with diverse members of a growing population, as well as an ever-changing landscape of media outlets (Kurtzo et al., 2016; Mulhern, 2009).

The Cooperative Extension Service does not escape modern communication challenges as professionals strive to effectively deliver relevant, impactful knowledge (Argabright, McGuire, & King, 2012; Borden, Perkins, & Hawkey, 2014; Haas, Mincemoyer, & Perkins, 2015; West, Drake, & Londo, 2009). In addition to diverse audiences with exhaustive interests, Extension programming is threatened by funding and staffing reductions (Merten, Williams, Carter, & Lehman, 2014; West et al., 2009). West and colleagues (2009) noted, "Extension now faces the same problem that threatened, and ultimately led to the demise of the Pony Express: survival in changing times" (para. 1.).

Extension services are founded on elaborate levels of social interaction as information flows from communities to institutions, and science-based resolutions are provided back to communities in the form of programming (Seevers & Graham, 2012). Therefore, communication practices have been discussed in elements of Extension program collaboration (Esslinger & McCorkle, 1986), dissemination (Licht & Martin, 2007), adoption (Amend, 1984), and preservation (Berlo, 1975; Payne 1983). Recent research has highlighted communication practices (West, Drake, & Londo, 2009), audience analysis (Curtis, Veroff, Rizzo, & Beaudoin, 2012; Hughes, Johnson, Edgar, Miller, & Cox, 2016; Kurtzo et al., 2016; Ray, Baker, & Settle, 2015; Rodriguez & Evans, 2016; Takle, Haynes, & Schrock, 2017), and messaging (Holt, Rumble, Telg, & Lamm, 2015; Lundy, 2007; Telg et al., 2018). Furthermore, in an assessment of Kansas Extension audiences, it was noted internal and external audiences varied in understanding when assessed for branding efforts. They concluded:

Employees mentioned Extension communication professionals should work with Extension employees to make sure they communicate the entire brand to external audiences, including all information, and programming provided. There is no value in being the 'best kept secret,' as this puts Extension in danger of continued funding cuts, and lack of recognition at the state and national levels. (Ray et al., 2015, p. 72).

The intricate system of elements involved with communication as information travels from a source to a receiver as outlined in Berlo's Source-Message-Channel-Receiver (SMCR) Model of Communication (1960); illustrated in Figure 1. Berlo (1960) indicated a communication source determines a message and its success can be impacted by communication skills, attitudes, knowledge level, and position within a social-cultural system. Likewise, the decoder-receiver is impacted by the same factors. Furthermore, Berlo offered the physical component of communication, the message, can impact the reception ability of the receiver. The structure and

elements of the message are crucial. Finally, the channel (all of the components of message delivery) is needed to ensure a successful reception. Berlo's communication factors are an elemental aspect of comprehending programming (Borden et al., 2014).

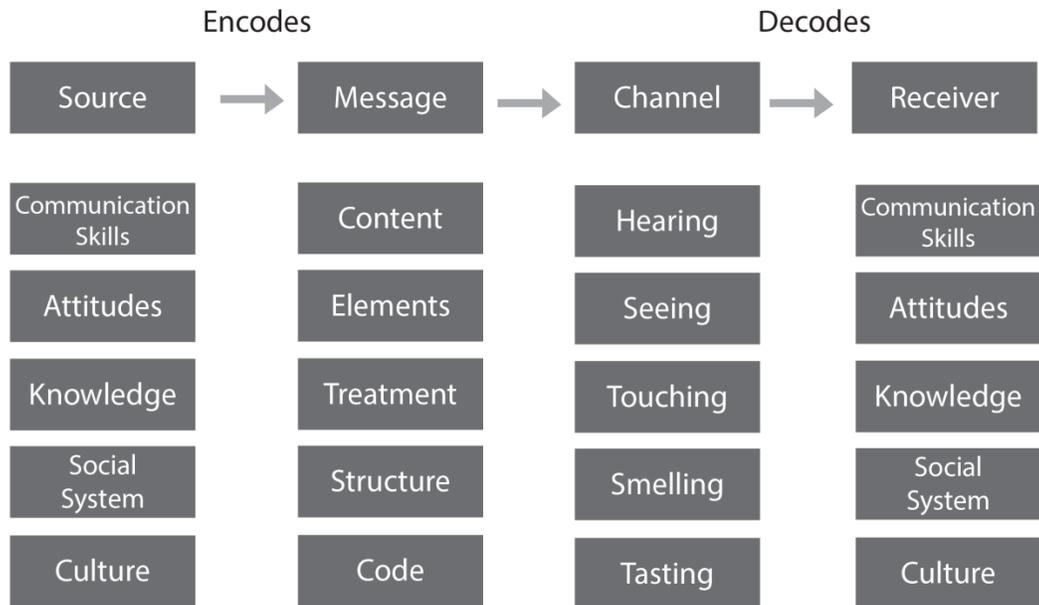


Figure 1. Berlo's (1960) Source-Message-Channel-Receiver Model of Communication. Developed from Process of communication: An introduction to theory and practice.

As Extension is challenged to keep time with highly expedited issues, researchers encourage professionals to seek evaluations to remain irreplaceable (Jayaratne, 2016a). The use of formative evaluations to refine program delivery is arguably the principal purpose of evaluation processes (Wholey, Hatry, & Newcomer, 2010). Formative evaluations heighten program effectiveness by identifying audience needs (Skelly, Hill, & Singletary, 2014), program implementation practices (Abell, Cummings, Duke, & Marshall, 2015), and needs of program facilitators (Culp, Edwards, & Jordan, 2015). Moreover, formative evaluation efforts can improve new educators' program awareness (Jayaratne, 2016b).

Actual application of programming can be impacted by a multitude of social factors (Abell et al., 2015). Abell and colleagues (2015) described layers of social impact on program implementation including participants, program staff, organizational climate, and community. For example, program participants' circumstances; program staffs' background; condition of work environment; and community resources are potential implementation factors highlighted by the Implementation Issues Framework (Abell et al., 2015).

The importance of deep connections to audiences through effective communications and supportive social factors in program delivery heightened concern for the Arkansas horse 4-H program. In 2010, the Arkansas horse 4-H program hired a new specialist, whose awareness of horse-related interest among Arkansas youth and adults was limited to participation in competitions and personal communications (blinded, personal communication, Feb. 2, 2016). At the time of this study, primary research data for Arkansas horse 4-H audiences was limited to efforts conducted 20 years prior.

Like many Extension programs, the horse 4-H program is comprised of multiple stakeholders, including state staff, county agents, volunteer leaders, parents, and youth members, who disseminate information, opportunities, and needs to local and statewide audiences. Opportunities and information associated with the horse 4-H program are supported at the state level and replicated throughout multiple counties within the state. Diversity was known to be present among geographic location, horse-related interests, club involvement, and social-economic status of 4-H constituents (blinded, personal communications, April 11, 2016). Field research regarding horse-related Extension program development and delivery is limited (Martinson et al., 2006). Therefore, a formative evaluation was conducted to provide basic insights to the Arkansas horse 4-H programs' internal audiences.

Purpose of the Study

The purpose of this formative study was to gain insight about communication factors associated with Extension staff and volunteer leaders (program facilitators) of the Arkansas horse 4-H program. The following objectives guided the study:

- 1) Identify demographic characteristics of program facilitators.
- 2) Describe sources of horse-related information utilized by program facilitators.
- 3) Describe messages shared by program facilitators.
- 4) Describe channels utilized by program facilitators.

Methods

This descriptive study used information gathered from purposive interviews with stakeholders ($N = 14$) in the Arkansas horse 4-H community to create an instrument. Previous interviews, which provided the basis for the instrument used in this study, consisted of stakeholders who were purposively selected to represent all districts of the state, as well as ensure multiple audiences, including county agents, volunteer leaders, and parents were represented. Data from the interviews were analyzed, and the researchers worked with a panel of five Extension experts and one communication expert to develop an instrument with face and content validity. In the instrument, audience-specific questions were tailored to Extension staff and volunteer leaders of horse-related 4-H clubs in Arkansas and both audiences received a set of universal questions.

Participants were identified and recruited through a state-wide qualification questionnaire received by staff chairs, county agents with 4-H appointments, and 4-H program assistants of each county in Arkansas ($N = 75$). Of identified program facilitators, 61 were successfully recruited and responses were gathered from participants ($n = 54$) resulting in a response rate of 72%. The electronic questionnaire (Qualtrics™, Provo, UT), provided an opportunity to describe the level of equine interest among 4-H members in the county. According to selected descriptions, counties were categorized as “none,” having no youth participating in equine-related activities; “independent,” youth with horse projects or participating in horse-related activities without the presence of a club; “community clubs,” as multi-project clubs with an equine-specific component; and “horse clubs,” as single-project clubs focusing on horse projects, as illustrated in Figure 2. Three counties possessed both horse-related community and project clubs.

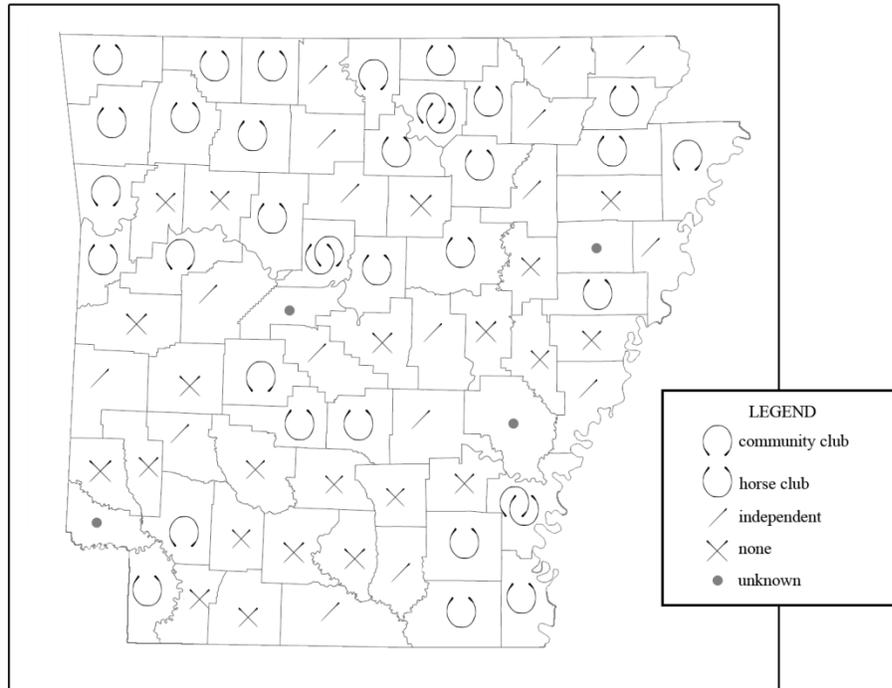


Figure 2. Reported levels of equine interest among 4-H members, according to Extension staff of each county in Arkansas.

Researchers found 49 Arkansas' counties (65.3%) housed 4-H members with equine interests including the following: 26 counties with horse project clubs, nine counties with a horse component in community clubs, and 17 counties with independent youth who participate in horse-related 4-H activities or upheld horse projects without the support of a 4-H club. Three counties contained *both* horse project clubs and community clubs with horse components. Twenty-two counties reported having no youth in horse-related 4-H activities and after three attempts to establish contact with Extension staff, four counties (5%) remained uncategorized.

Extension staff who described having horse-related 4-H clubs (community and project clubs) in each county were provided the opportunity to participate in the statewide instrument developed by researchers and thereby recruited. Volunteer leaders of horse-related 4-H clubs were identified by chain-referral of Extension staff. Researchers utilized the chain-referral method to identify and recruit all volunteer leaders (Krathwohl, 2009) in January 2017. Researchers aimed to conduct a census study to gain input from all identified Arkansas horse 4-H program facilitators.

All county agents ($n = 30$) and most volunteer leaders ($n = 25$) preferred the online format while 21% of volunteer leaders ($n = 7$) requested mailed instruments. One leader requested both formats due to fear of computer issues. Overall, Extension staff ($n = 30$) and volunteer leaders ($n = 31$) were successfully recruited from 29 counties in Arkansas, which represented 90.63% of identified counties with community clubs and project clubs, collectively referred to as "horse-related 4-H clubs" ($n = 32$).

Dillman's 5-step approach was followed to request completion of online and mailed instruments ($N = 61$) during six weeks of early spring 2017 (Dillman, Smyth, & Christian, 2009). Online instruments ($n = 55$) were provided through Qualtrics™ with mobile and desktop compatibility, and mailed instruments ($n = 7$) were sent directly to participants in large clasp

folders with stamped and addressed return envelopes. Researchers aimed to maintain conformity through unified mode presentation (Dillman et al., 2009).

During analysis, alphabetic and numerical codes were assigned to participants to maintain autonomy while preserving audience type. County agents were noted with “A,” program assistants with “P,” volunteer leaders with “V,” and numbered according to chronological order of each audience member’s response. Descriptive statistics were calculated through the Statistical Package for the Social Sciences© (SPSS) version 23.0. Cronbach’s alpha, a measure of reliability, for the Extension staff instrument and the volunteer leader instrument were .96 and .77, respectively (Krahtwohl, 2009). Researchers conducted a *t*-test to determine if there were any differences between responses (online vs. mailed) and no differences were found.

Moreover, open-ended responses were assessed using initial open coding to produce emergent themes, followed by axial coding to produce sub-themes (Creswell, 2014). Codes and keywords remained in context throughout node creation and inter-coder agreements were established among two researchers (Creswell, 2014). Syntax is constructed to identify themes throughout the article.

Results

As illustrated in Figure 3, participants represented all districts of Arkansas, including Delta (25.9%, $n = 14$), Ouachita (25.9%, $n = 14$), and Ozark (35.2%, $n = 19$). Seven participants did not report a district (13%). The sample population of the study was all Arkansas program facilitators. Through the qualification questionnaire, researchers identified 43 Extension staff associated with horse-related 4-H clubs and 41 associated volunteer leaders. Therefore, the Arkansas horse 4-H program was assumed to total 84 program facilitators.

Volunteer leaders represented the majority of respondents ($n = 28$), followed closely by Extension county agents ($n = 23$), and 4-H program assistants (Extension staff) ($n = 3$). Although the majority of participants (92.45%, $n = 49$) completed the instrument, not all participants fully answered each instrument item. Four instruments were less than 40% complete. Results are displayed through frequencies and percentages to promote transparency among participants’ responses.

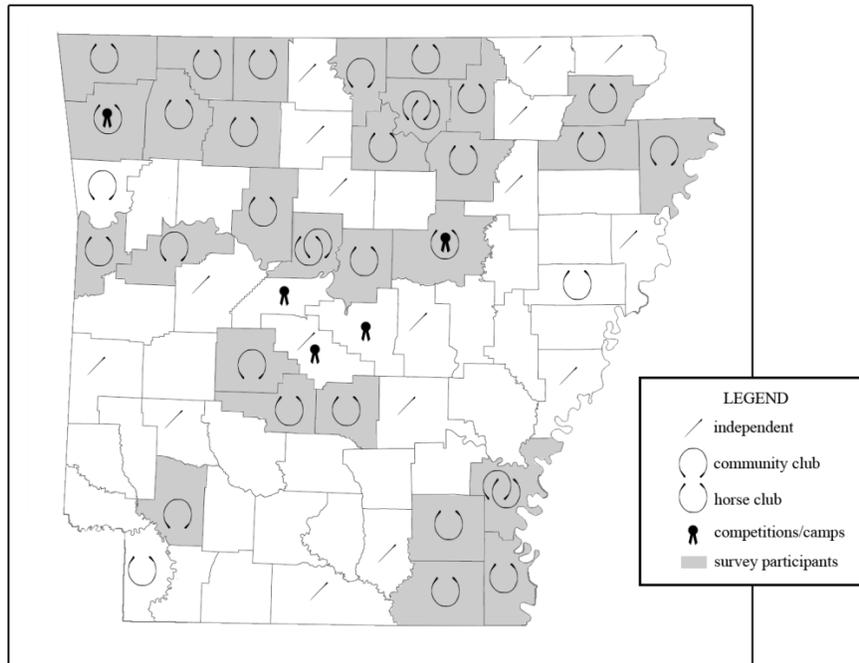


Figure 3. Arkansas counties home to youth with horse-related interests and corresponding survey participants.

Receivers

In the cyclic nature of Extension programming, facilitators uphold the role of liaison and, as such, serve as both senders and receivers of information. From the perception of Arkansas horse 4-H program administrators, program facilitators can be viewed as receivers of communication. Therefore, participants were asked to describe demographic characteristics to provide insight for *senders* at the administrative level.

Researchers sought to identify program facilitators' demographic characteristics, including gender, age, involvement with the horse industry, involvement with 4-H, and years of experience in their current role. The largest percentage of participants ($n = 50$) identified as female volunteer leaders (46.3%), followed by female Extension staff (35.2%), and male Extension staff (11.1%). No participants identified as male volunteer leaders and four participants did not mark a gender (7.4%). Participants ages ranged 31-40 years (38.3%), 41-50 (27.6%), 30 or less (12.8%), 51-60 (12.7%), and over 60 years (8.5%). The majority of participants self-reported involvement with the horse industry "since childhood" (66.7%), while some "do not consider myself involved with the horse industry" (16.7%), and others reported less than five years' experience (6.3%), 11-20 years' experience (6.3%), and five to 10 years' experience (4.2%). Participants self-reported involvement with 4-H "since childhood" (39.6%), for six to 10 years (20.8%), one to five years (18.8%), 11-20 years (12.5%), and less than one year (8.3%).

Participants were asked to describe their source of motivation to continue being involved with 4-H. Program facilitators most frequently discussed children as a source of motivation to continue working with 4-H ($n = 43$). More specifically, program facilitators discussed the impact 4-H makes on youth ($n = 11$), including life skills ($n = 7$), provided opportunities ($n = 5$), and growth ($n = 4$). One volunteer leader described:

It is an awesome program that promotes many life skills and provides many opportunities for members. My daughter loves being involved in the 4-H horse project. She has learned about responsibility, and dedication as well as gained confidence speaking in front of others. (V8).

Program facilitators also discussed their motivation to continue involvement with 4-H from their career ($n = 6$), as one agent stated, "It's my job!" (A12). Passion for horses ($n = 4$), passion for 4-H ($n = 1$), enjoyment ($n = 2$), and education ($n = 1$) were also sources of motivation among participants.

Sources of Information

Program facilitators of the Arkansas horse 4-H program were asked to describe personal levels of reliance among a variety of sources for horse-related information. Of all instrument item responses ($N = 806$), data reflected program facilitators most often (31.39%) or sometimes (29.16%) sought all 17 sources of horse-related information. Few responses reflected program facilitators always (16.87%), never (11.41%), or rarely (11.17%), utilized all 17 sources listed as instrument items. For a complete list of instrument items and responses, see Table 1. Bolded items in Tables 1 and 2 represent highest responses between sometimes and always.

The greatest number of respondents reported sometimes, often, or always seeking horse-related information from horse people in their communities (95.65%, $n = 44$). At least 80% of respondents reported sometimes, often, or always utilizing the following sources for horse-related information: personal research online ($n = 42$); veterinarians in the community ($n = 42$); personal knowledge ($n = 40$); county Extension agents ($n = 39$); seminars, clinics, or shows ($n = 39$); magazines, books, or other paper sources ($n = 39$); volunteer leaders ($n = 39$); parents of club members ($n = 38$); and farriers in the community ($n = 37$).

Less than 70% of participants reported sometimes, often, or always seeking horse-related information from the following sources: videos or TV shows (69%, $n = 33$); other equine Extension programs (68%, $n = 32$); Arkansas Extension website (65%, $n = 31$); and other universities (57%, $n = 26$).

Table 1

Horse-Related 4-H Club Program Facilitators' Self-Reported Sources of Horse-Related Knowledge

Item	<i>n</i>	N	R	S	O	A
Personal research online	47	3	2	6	22	14
Personal knowledge	47	3	4	5	17	18
“Horse people” in the community	46	2	0	14	18	12
County Extension agents	48	4	5	12	13	14
Vets in the community	48	3	3	15	17	10
Farriers in the community	46	5	4	13	15	9
Seminars, clinics or shows	48	4	5	15	19	5
Magazines, books or other paper sources	48	4	5	16	15	8
State Extension equine specialist	49	7	7	12	17	6
Trainers in the community	47	8	6	11	11	11
Parent(s) of club members	47	3	6	18	13	7
Volunteer leader(s)	48	2	7	20	13	6
American Quarter Horse Association	48	10	3	18	12	5
Videos or TV shows	48	6	9	21	8	4
Other equine Extension programs	47	8	7	11	19	2
Arkansas Extension website	48	6	11	16	12	3
Other universities	46	14	6	12	12	2

Note. Likert scale data reported in frequencies. N = never; R = rarely; S = sometimes; O = often, A = always. Items **bolded** represent the highest responses.

Messages

In addition to identifying sources of information, researchers also sought to gain insight on messages shared by Arkansas horse 4-H program facilitators. Participants reported sharing a variety of messages from deadlines, to community outreach, and recruitment. Nearly all responses (90%, $n = 44$) reflected program facilitators often or always share messages about registration and deadlines. Similarly, over 75% of participants indicated often or always sharing the following topics: meetings (88%, $n = 42$); clinics or seminars (82%, $n = 40$); calendar of events (79%, $n = 38$); and positive community outreach (76%, $n = 37$).

On the other hand, messages about fundraisers (58%, $n = 28$), member recruitment (57%, $n = 28$), and volunteer recruitment (50%, $n = 24$) were less frequent. Although all messages were not shared on an equally frequent level, few participants never (.78%, $n = 3$) or rarely (5.45%, $n = 21$) shared messages provided on the instrument. A complete list of response items are identified in Table 2.

Table 2

Messages Shared by Horse-Related 4-H Club Program Facilitators

Item	<i>n</i>	N	R	S	O	A
Registration and deadlines	49	0	3	2	14	30
Meetings	48	0	1	5	16	26
Clinics/seminars	49	0	2	7	17	23
Calendar of events	48	2	0	8	15	23
Positive community outreach	49	0	2	10	15	22
Fundraisers	48	0	3	14	10	18
Recruiting members	49	0	4	17	18	10
Recruiting volunteers	48	1	6	17	15	9

Note. Likert scale data reported in frequencies. N = never; R = rarely; S = sometimes; O = often, A = always. Items **bolded** represent the highest responses.

Channels**Outgoing channels.**

In addition to seeking understanding of program facilitators' messages, researchers sought to gain insight on channels program facilitators utilize. Program facilitators self-reported utilizing a wide array of communication channels to share messages, including electronic, in-person, cellular phones, print, and broadcast. Although several channels were listed to share information, word-of-mouth was often or always preferred by the majority of program facilitators (83%, $n = 40$). Data reflected 70% of participants utilized Facebook often or always to share messages about club success ($n = 33$). In person communications (63%, $n = 30$), text messages (60%, $n = 28$), email (58%, $n = 28$), mailed 4-H newsletter (58%, $n = 28$), and phone calls (53%, $n = 24$) were channels utilized often or always by over half of program facilitators.

Less than 30% of program facilitators often or always sought the electronic 4-H newsletter (26%, $n = 12$), website (16%, $n = 7$), radio (15%, $n = 7$), Instagram (13%, $n = 6$), Twitter (7%, $n = 3$), and magazines (4%, $n = 2$). The least reported channel used by program facilitators to share information was Television. All identified channels and responses are noted in Table 3. Bolded items in Tables 3 and 4 represent highest responses between often and always.

Table 3

Outgoing Channels Utilized by Horse-Related 4-H Club Program Facilitators

Item	<i>n</i>	N	R	S	O	A
Word of mouth	48	0	1	7	19	21
(Social Media) Facebook	47	7	1	6	14	19
Walk in/in person	48	2	1	15	24	6
Text	47	8	2	9	14	14
Email	48	4	3	13	20	8
Mailed 4-H newsletter	48	10	5	5	13	15
Phone call	45	3	6	12	20	4
Newspaper	46	8	5	17	13	3
Electronic 4-H newsletter	46	18	8	8	7	5
Website	45	19	7	12	4	3
Magazine	46	27	9	8	1	1
Radio	47	20	11	9	5	2
(Social Media) Instagram	45	32	1	6	4	2
(Social Media) Twitter	45	37	1	4	2	1
Television	45	39	5	1	0	0

Note. Likert scale data reported in frequencies. N = never; R = rarely; S = sometimes; O = often, A = always. Items **bolded** represent the highest responses.

Incoming channels.

Although program facilitators self-reported utilizing diverse communication channels for sending messages, incoming channels were restricted to electronic, print, and cellular phones. Over one-half of the program facilitator respondents noted often or always gaining information through emails (51%, $n = 24$). All other channels were utilized less frequently than email. Less than half of the participants often or always received information through: Facebook (49%, $n = 23$); mailed monthly newsletter (40%, $n = 19$); text messages (32%, $n = 14$); emailed monthly newsletter (25%, $n = 12$); Instagram (11%, $n = 5$); and Twitter (5%, $n = 2$). All question items and responses are displayed in Table 4.

Participants were provided the opportunity to write in additional communication channels utilized to receive information about club opportunities. Additional channels included often receiving information through “other volunteer leaders” (V27) and “going to extension office, talk to agent, get them to look up information on their computer” (V22).

Table 4

Horse-Related 4-H Club Program Facilitators' Self-Reported Channels for Receiving Information about Club Opportunities

Item	<i>n</i>	N	R	S	O	A
Email notice	47	4	2	17	16	8
Facebook	47	8	2	14	14	9
Mailed monthly newsletter	47	15	5	8	11	8
Text message	44	16	1	13	9	5
Emailed monthly newsletter	48	15	7	14	10	2
Instagram	44	27	6	6	4	1
Twitter	43	28	7	6	2	0

Note. Likert scale data reported in frequencies. N = never; R = rarely; S = sometimes; O = often, A = always. Items **bolded** represent the highest responses.

In addition to identifying incoming communication channels, participants were provided the opportunity to rank channel preference. Program facilitators were provided eight communication channels to rank most to least preferred. Nearly one-half of program facilitators identified email as their top choice for receiving information (47%, $n = 21$). Emailed monthly newsletter (45%, $n = 20$) and text message (36%, $n = 16$) were second and third, respectively. On the other hand, online presences were ranked least preferable. Seventy percent of program facilitators identified researching on the Arkansas Extension website the least preferred method of receiving information ($n = 30$) followed closely by researching 4-H Online (60%, $n = 26$). An open response opportunity allowed program facilitators to explain why certain channels were unfavorable. Popular emergent themes for least preferred channels included: channel does not reach secondary audiences ($n = 12$), channel requires too much time/effort ($n = 10$) and, more specifically, poor website navigation ($n = 7$).

Conclusions and Recommendations for Practice

The findings of this empirical study described communication factors associated with internal audiences of the Arkansas horse 4-H program with respect for Berlo's (1960) Source-Message-Channel-Receiver (SMCR) Model of Communications. Although results of this study are not generalizable beyond the audience of Arkansas horse 4-H program facilitators, this data does contribute to the limited research repertoire of horse 4-H program development and delivery (Martinson et al., 2006). Moreover, this study can provide evidence of formative evaluation efforts and baseline-level results for an Extension-based program.

Demographic Insight

Extension staff members play a unique role as liaisons of research-based knowledge from institutions of higher education to inform members of communities. In this role, staff function as both the receiver and sender of knowledge and support. Therefore, when viewed from an administrative perspective, demographic results of this study serve as insight to *receivers* of information in Berlo's (1960) Model of Communications. When viewed from the community (program target audience) position, staff members are *sources* of information. Demographic insights found, in this study, are considered in the following conclusions and practical applications.

This was a census study that identified Extension staff and volunteer leaders (program facilitators) of the Arkansas horse 4-H program in 32 counties and all regions. Further research should review opportunities and resources available to horse clubs at the county level with aim to diminish challenges associated with geographic location. Participants were nearly a balanced mixture of Extension staff (county agents and program assistants) and volunteer leaders for a total of 54 participants representing 90% of the Arkansas counties with youth enrolled in the horse 4-H program.

Results found Arkansas horse 4-H program facilitators to be primarily female and in their thirties. Therefore, administrators should place special consideration on the values of this gender and age group and work to diminish challenges (e.g., young working mothers with limited availability).

Most program facilitators have been involved with the horse industry their entire lives; however, some active program facilitators selected the following choice: I do not consider myself involved with the horse industry. Further research should explore why some program facilitators do not share value in the horse industry, yet remain active leaders of horse-related 4-H clubs. This may pose a threat to the quality of program implementation.

Similarly, most program facilitators had been involved with 4-H their entire lives, while a few had less than one year of experience. When specifically asked to describe the level of 4-H appointment among Extension staff responses ranged from full appointment (100%) to no appointment (0%). Youth, and the positive impact 4-H provides on youth, are the most prominent source of motivation for program facilitators to continue involvement with 4-H. Four program facilitators specifically stated their motivation stems from their passion for horses.

Therefore, program administrators are more apt to enable changes among program facilitators, if administrators forge relationships based on experiences and interests in the horse industry, 4-H priorities, and acknowledgement of youth impacts (Telg & Irani, 2012). By actively pursuing relationships with internal audiences, administrators are improving their ability to discuss challenging and controversial topics in the future (Telg et al., 2018).

Sources

Overall, Arkansas horse 4-H program facilitators reported seeking horse-related knowledge from a wide breadth of sources in personal, observational, reading, and auditory formats, from local and national areas. Nearly all program facilitators sought advice from *horse people* in their communities. In a time of great technological presence, facilitators of the Arkansas horse 4-H program primarily seek education from personal sources. Therefore, horse-related information provided to program facilitators is heavily affected by interpersonal abilities, such as the aptitude to speak and listen, attitude toward the receiver, familiarity with the subject, expressed values, and cultural background as noted in Berlo (1960) model.

Interpersonal skills and cultivated relationships are highly necessary to effectively communicate messages with this audience (Telg & Irani, 2012). Researchers recommend administrators of the Arkansas horse 4-H program spend dedicated time developing relationships with program facilitators and offer in-person trainings when sharing horse-related information. Researchers also recommend administrators consider community impacts on the implementation of horse-4-H programming at the county level. According to the IIF model, community impact effects organizational climate, program staff, and participants, thereby influencing program outcomes (Abell et al., 2015). Deeper understanding of horse-related knowledge and resources of program facilitators should be sought for the Arkansas horse 4-H program to provide equal

development opportunities to club members. In addition, administrators should enable and encourage program facilitators to share locally-sourced resources with the state-wide audience of club members.

Messages

Program facilitators share a variety of content including registrations, deadlines, meetings, clinics or seminars, calendar of events, and community outreach. Topics such as fundraisers and recruitment were less frequently communicated. Therefore, program facilitators primarily share content with active club members (and parents). If administrators seek to increase club member and volunteer leader participation, recruitment efforts may require communications support.

According to Berlo's Model of Communication (1960) messages contain more than content, they also contain body language, tone, structure, and format. Researchers recommend administrators consider the diverse demographics and communication skills of program facilitators when considering messages. Further research should be conducted to identify communication aptitudes of program facilitators and trainings provided for areas of weakness (Borden et al., 2014; West et al., 2009).

Channels

Outgoing Channels.

When referring to messages about club success, the majority of program facilitators preferred to share information through word-of-mouth. Information is most commonly shared by program facilitators through channels with personal context. Therefore, messages about club success are highly subjective to individual communicators' communication skills, attitudes, knowledge, culture, and senses (Berlo, 1960). Although less frequently, data also reflected program facilitators use a wide variety of technical channels, including internet, cellular phones, print, and broadcast. Overall, program facilitators prefer highly personal channels and are savvy to technical options.

Program facilitators act as liaisons of research-based information from institutions of higher learning to communities. Data reflects the local nature of county programming and personal approach to diffusion of information. Researchers recommend administrators consider the variety of channels utilized by program facilitators to share messages. Practical application of this knowledge renders the importance of understanding the method program facilitators intend to use when mediating messages to local audiences. All communication channels do not provide equal opportunities for interaction, nor message structure; therefore, special consideration should be utilized when constructing messages for multiple channels (Berlo, 1960).

Incoming Channels.

Unlike outgoing communications, which occur through multiple channels, program facilitators primarily receive information through email. According to respondents, channel preference to receive information included email and text message. These channels provided recipients with immediacy, accessibility, and the ability to share the message with additional audiences. Program facilitators reported least preference for online sources. Open responses reflected frustration with incoming channels that do not reach the appropriate audience and the degree of time or effort associated with locating or decoding a message. Therefore, researchers advise administrators to consider outgoing channels utilized by program facilitators and provide messages in an easily share-able format to reach secondary audiences (club members, community,

etc.). Further research should be conducted to review the communication aptitudes of program facilitators, to ensure branding and messaging is consistent across a variety of channels (Ray et al., 2015).

Discussion and Recommendations for Future Research

Although assessments of Extension communication needs have not been prevalent in Arkansas and many other states, researchers have noted the importance of assessments in multiple communication areas including dissemination, adoption, and preservation (Amend, 1984; Berlo, 1975; Licht & Martin, 2007). Recently, the importance of Extension better understanding its audiences have been highlighted (Curtis et al., 2012; Hughes et al., 2016; Kurtzo et al., 2016; Ray et al., 2015; Rodriguez & Evans, 2016; Takle et al., 2017). As a direct call from Ray and colleagues (2015), this research is an initial step to understanding communication practices with effort to identify areas of focus and improvement. Researchers recommend communicators encourage, support, and assist program administrators to conduct primary research on internal and external audiences to develop more cognizant awareness (Ray et al., 2015; Payne, 1983). As stated by the editors of the *Handbook of Practical Program Evaluation*, "...it is better to be roughly right than to remain ignorant" (Wholey et al., 2010, p. 697). Recommendations for future research include replicating the recruitment and instrumentation of this study to capture the communication tendencies and preferences of horse 4-H programs in additional states.

References

- Abell, E., Cummings, R., Duke, A. M., & Marshall, J. W. (2015). A framework for identifying implementation issues affecting extension human sciences programming. *Journal of Extension*, 53(5). Retrieved from <http://www.joe.org/joe/2015october/a2.php>
- Agunda, R. (1989). Communicating with the audience in mind. *Journal of Applied Communications*, 73(2). Retrieved from <https://newprairiepress.org/cgi/viewcontent.cgi?article=1532&context=jac>
- Amend, E. H. (1984). Communication strategies. *Journal of Extension*, 22(2). Retrieved from <https://joe.org/joe/1984march/tt2.php>
- Argabright, K., McGuire, J., & King, J. (2012). Extension through a new lens: Creativity and innovation now and for the future. *Journal of Extension*, 50(2). Retrieved from <https://www.joe.org/jow/2012april/comm2.php>
- Berlo, D. K. (1960). *Process of Communication: An Introduction to Theory and Practice*. New York: Holt, Rinehart and Winston.
- Berlo, D. K. (1975). *Information and Communication*. New York: Holt, Rinehart and Winston.
- Borden, L. M., Perkins, D. F., & Hawkey, K. (2014). 4-H youth development: The past, the present, and the future. *Journal of Extension*, 52(4). Retrieved from <http://www.joe.org/joe/2014august/comm1.php>
- Center for Food Integrity. (2014). Cracking the code on food issues: Insights from moms, millennials, and foodies. Retrieved from <http://s3.amazonaws.com/www.foodintegrity.org/wp-content/uploads/2015/08/CFI2014ResearchBook.pdf> on September 8, 2015.
- Culp, K., Edwards, H. C., & Jordan, J. W. (2015). Using an advisory group to obtain volunteer perspective for regional programming. *Journal of Extension*, 53(5). Retrieved from <https://www.joe.org/joe/2015october/a9.php>

- Curtis, K. J., Veroff, D., Rizzo, B., & Beaudoin, J. (2012). Making the case for demographic data in extension programming. *Journal of Extension*, 50(3). Retrieved from <https://joe.org/joe/2012june/tt5.php>
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, Mail and Mixed-Mode Surveys: The Tailored Design Method* (5th ed.). Hoboken, New Jersey: John Wiley & Sons, Inc.
- Esslinger, D. L., & McCorkle, C. M. (1986). Communications on agricultural research, development, and extension teams. *Journal of Applied Communications*, 69(4). Retrieved from <https://doi.org/10.4148/1051-0834.1624>
- Haas, B. E., Mincemoyer, C. G., & Perkins, D. F. (2015). The effects of age, gender, and 4-H involvement on life skill development. *Journal of Extension*, 53(3). Retrieved from <https://joe.org/joe/2015june/a8.php>
- Holt, J., Rumble, J. N., Telg, R. & Lamm, A. (2015). The message or the channel: An experimental design of consumers' perceptions of a local food message and media channels used to deliver the information. *Journal of Applied Communications*, 99(4). Retrieved from <https://doi.org/10.4148/1051-0834.1053>
- Hughes, A., Johnson, T. L., Edgar, L. D., Miller, J. D., & Cox, C. (2016). A content and visual analysis of promotional pieces used in a communication campaign for the Arkansas [Commodity] promotion board. *Journal of Applied Communications*, 100(2), 10-27. Retrieved from <https://dx.doi.org/10.4148/1051-0834.1027>
- Jayarathne, K. S. U. (2016a). Making evaluations work for you: Ideas for deriving multiple benefits from evaluation. *Journal of Extension*, 54(1). Retrieved from <https://www.joe.org/joe/2016february/iw1.php>
- Jayarathne, K. S. U. (2016b). Tools for formative evaluation: Gathering the information necessary for program improvement. *Journal of Extension*, 54(1). Retrieved from <https://www.joe.org/joe/2016february/tt2.php>
- Krathwohl, D. R. (2009). *Methods of Educational and Social Science Research*. (3rd ed.) Long Grove, IL: Waveland Press, Inc.
- Kurtzo, F., Hansen, M. J., Rucker, K. J., & Edgar, L. D. (2016). Agricultural communications: Perspectives from the experts. *Journal of Applied Communications*, 100(1), 17-28. Retrieved from <https://dx.doi.org/10.4148/1051-0834.1019>
- Licht, M. A. R., & Martin, R. A. (2007). Communication channel preferences of corn and soybean producers. *Journal of Extension*, 45(6). Retrieved from www.joe.org/joe/2007december/rb2.php
- Lundy, L. K. (2007). The effect of message frames on attitudes toward internationalizing agricultural extension, *Journal of Applied Communications*, 91(1). Retrieved from <https://doi.org/10.4148/1051-0834.1255>
- Martinson, K., Hathaway, M., Wilson, J. H., Gilkerson, B, Peterson, P. R., Vecchio, R. D. (2006). University of Minnesota horse owner survey: Building an equine extension program. *Journal of Extension*, 44(6). Retrieved from <https://www.joe.org/joe/2006december/rb4.php>
- Merten, K., Locke, D., Williams, M., Carter, M., & Lehman, K. (2014). Impact of 4-H on alumni's community involvement. *Journal of Extension*, 52(5). Retrieved from <https://joe.org/joe/2014october/rb8.php>

- Mulhern, F. (2009). Integrated marketing communications: From media channels to digital connectivity. *Journal of Marketing Communications*, 15(2-3). doi: 10.1080/13527260902757506
- Payne, D. L. (1983). The role of a county communications agent. *Journal of Applied Communications*, 66(1). Retrieved from: <https://doi.org/10.4148/1051-0834.1709>
- Ray, J., Baker, L. M., & Settle, Q. (2015). Ask the audience: Determining organizational identity of a state Extension agency. *Journal of Applied Communications*, 99(4), 62-75. Retrieved from <https://dx.doi.org/10.4148/1051-0834.1061>
- Rodriguez, L., & Evans, J. F. (2016). Coming of age: How JAC is reflecting a National Research Agenda for communications in agriculture, natural resources, and life human sciences. *Journal of Applied Communications*, 100(1), 29-50. Retrieved from <https://dx.doi.org/10.4148/1051-0834.1020>
- Schrock, J., & Kelsey, K. D. (2013). A phenomenological look at 4-H volunteer motives for service. *Journal of Extension*, 51(4). Retrieved from <https://joe.org/joe/2013april/rb1.php>
- Seevers, B., & Graham, D. (2012). *Education Through Cooperative Extension*. (3rd ed.). Fayetteville, Arkansas: University of Arkansas Bookstore.
- Skelly, J., Hill, G., & Singletary, L. (2014). Probing needs assessment data in depth to target programs more effectively. *Journal of Extension*, 52(2). Retrieved from <https://www.joe.org/joe/2014april/rb1.php>
- Takle, B., Haynes, C., & Schrock, D. (2017). Using demographic survey results to target master gardener volunteer recruitment. *Journal of Extension*, 55(3). Retrieved from <https://www.joe.org/joe/2017june/rb8.php>
- Telg, R. W., & Irani, T.A. (2012). *Agricultural Communications in Action: A hands-on Approach*. Clifton Park, NY: Delmar.
- Telg, R. W., Lundy, L., Wandersee, C., Mukhtar, S., Smith, D., & Stokes, P. (2018). Perceptions of trust: Communicating climate change to cattle producers. *Journal of Applied Communications*, 102(3). Retrieved from <https://doi.org/10.4148/1051-0834.2207>
- West, B. C., Drake, D., & Londo, A. (2009). Extension: A modern-day pony express? *Journal of Extension*, 47(2). Retrieved from <https://www.joe.org/joe/2009april/comm1.php>
- Wholey, J. S., Hatry, H. P., & Newcomer, K. E. (Eds.). (2010). *The Handbook of Practical Program Evaluation*. San Francisco, CA: Jossey-Bass.

Ms. Fawn Kurtzo is a former graduate assistant in the Department of Agricultural Education, Communications and Technology at the University of Arkansas. Kurtzo is a freelance communications and equine specialist.

Dr. Leslie D. Edgar is a professor and head of the Department of Agricultural Leadership, Education and Communication at the University of Georgia. She has been an ACE member since 2006.

Dr. Don Edgar is an associate professor at the University of Georgia in the Department of Agricultural Leadership, Education and Communication. His research focus includes agricultural education and social networks in educational settings.

Dr. Donna L. Graham is a professor at the University of Arkansas in the Department of Agricultural Education, Communications and Technology. Her research focus includes volunteer leadership and Extension.

Dr. Mark Russell is an associate professor of equine sciences at the University of Arkansas. He has served as the state equine specialist since 2010.