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The Communication Preferences of University of Idaho Extension Professionals and their Constituents

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Abstract

As Cooperative Extension Services (CES) grow, agriculture evolves, and urbanization increases, Extension professionals are challenged to continue meeting the needs of their constituents by providing reliable, research-backed information to their communities. This includes utilizing appropriate communication means to reach their constituents. Therefore, the purpose of this study was to examine the communication preferences of University of Idaho CES professionals and their constituents and the communication types and channels most used. We used a cross-sectional descriptive census survey design and administered the survey to all University of Idaho CES faculty and educators. We analyzed the data via descriptive statistics, Wilcoxon signed rank tests, and paired sample t-tests. University of Idaho CES professionals ranked mainly individual communication channels as their preferred method of communication. However, they felt their constituents may prefer mass or group communication channels more than they do. CES professionals should utilize audience segmentation to serve their constituents better. COVID-19 also significantly increased the time spent preparing communications and utilizing mass communications. While technological-based communication increased during COVID-19, it is important to consider access and availability to constituents. Understanding what resources constituents have available and how they prefer to receive their information, can help CES professionals maintain relationships with their audiences.

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Introduction and Problem Statement

The Cooperative Extension Service (CES) provides reliable, research-backed information from land-grant universities to people, communities, and businesses (Seevers & Graham, 2012). Although CES was designed to communicate with the public, it has been referred to as the "best kept secret" and needs to be promoted to remain relevant (Ray et al., 2015). CES was founded for agricultural and rural constituents' needs. However, today only 17% of the U.S. population resides in rural areas (National Institute of Food and Agriculture [NIFA], 2021), and 10.9% of adults are employed in agriculture with 1.3% working on farms (Economic Research Service [ERS], 2020). This can pose a gap in communication strategies in urban-based programs because communication needs and norms might differ (Webster & Ingram, 2007). CES has broadened and adapted programming to encompass an increasingly urban audience, but to ensure longevity, CES needs to continue evolving to meet the needs of urban audiences (Ray et al., 2015).

CES professionals act as communicators and liaisons of research-backed information and help to assist in the cyclical nature of communication (Kurtzo et al., 2019). These individuals must rely on new media channels and social trends to determine how to broadcast their messages widely. CES professionals utilize many communication channels to send messages to their constituents, including electronic sources, face-to-face, phone, print, etc. (Kurtzo et al., 2019). CES professionals suggested that understanding how to communicate effectively is an important aspect of their job and specifically included listening to constituents and reciprocating effective communication (McDowell & Mizuno, 1987). For example, age and gender have been shown to have an impact on communication preferences (Lamm et al., 2016). Understanding constituents' needs, characteristics, and demographics can help CES professionals tailor their communication efforts specifically and increase the likelihood of understanding and acceptance (Agunda, 1998).

Theoretical and Conceptual Framework

Diffusion of innovation (DOI) and framing theories served as the theoretical foundation for this study. DOI theory describes the process of spreading and eventual acceptance or rejection of new innovations through a social system (Rogers, 2003). DOI theory can be initiated by the presentation of research-based information from CES professionals, who often serve as change agents and influence the decision to accept or reject new information. Those who understand their roles and identify as communicators and change agents can utilize the innovation-decision process to effectively share information on new research and innovations (Rogers, 2003).

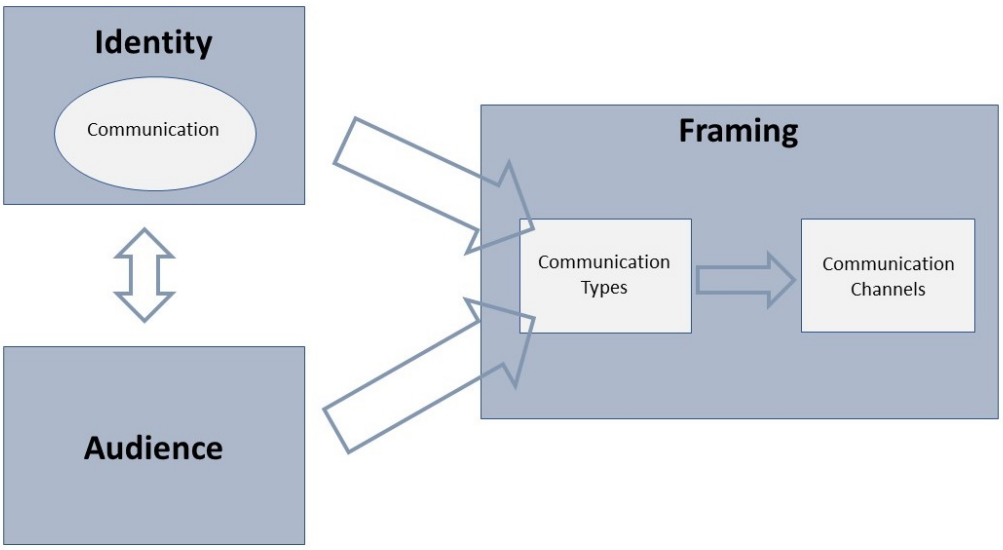
Extension professionals rely on constituents to be receptive and accept the information they are providing. Rogers (2003) defines the process of diffusion, "by which an innovation is communicated through certain channels over time among the members of a social system" (p. 11). It is believed communication channels and the social system in which the information is being spread have an impact on how the information travels and how constituents perceive it

(Rogers, 2003). Mass media can provide the most efficient channel for communicating new information with large groups of people. However, interpersonal channels can increase the likelihood of audience reception and acceptance of information—especially if those involved in the communication have similarities or personal links (Rogers, 2003).

The concepts of framing theory can help to increase the effectiveness of a CES professional's communication (Daamen et al., 2001). Framing theory postulates messages that are specifically designed for a selected audience are more easily understood and accepted (Robinson, 2013). Understanding and utilizing the concepts of framing theory can help CES professionals modify their messages and programming to fit their constituents and aid in laying a better foundation for the message to be used (Robinson, 2013). Framing and DOI theories together can allow information to be specifically tailored for the selected audience and effectively presented to increase the likelihood of it being accepted.

Figure 1

Conceptual Model of the Relationships between Identity and Communication Preferences



In the conceptual model guiding this study, the framing of the information, as impacted by the extension professional's identity and the audience, will then have an influence on the communication types and channels utilized. Communication types, individual, group, or mass communication, dictate which communication channels are then utilized for the diffusion of information (Rogers, 2003). Utilizing the correct communication type is important to communicate with constituents efficiently and effectively (Rumble et al., 2022). Additionally, it was essential to consider how COVID-19 restrictions impacted the communication usage of CES professionals to both minimize the limitations of the study and assess potential long-term changes related to communication and program delivery.

Purpose

The purpose of this research was to examine the communication preferences of University of Idaho CES professionals and their constituents and the communication types and channels used most commonly. Further, we examined the impact of COVID-19 on communication type and channel usage. The objectives for this study were:

Objective 1: Examine differences in personal and constituent communication channel preferences of University of Idaho CES educators and faculty.

Objective 2: Examine differences in communication channel usage before and during COVID-19 of University of Idaho CES educators and faculty.

Objective 3: Examine differences in time spent communicating and communication type usage before and during COVID-19 of University of Idaho CES educators and faculty.

Methods

We used a cross-sectional descriptive census survey design. We administered the survey through Qualtrics and recruited via email from March 1 to 16, 2021. Our target population consisted of University of Idaho CES faculty and educators who all have obtained a master's or doctorate degree and work at a county office, University of Idaho campus, or research and experiment station. We sent the survey to 139 individuals and received 72 full responses for a response rate of 52%. To handle non-response bias, we compared early and late respondents using Mann-Whitney and t-tests (Lindner et al., 2001). There were no significant differences in responses.

We developed a census survey following the concepts of Dillman's Tailored Design Method (Dillman et al., 2014). To establish content and face validity, we used previous literature (Kurtzo et al., 2019; Narine & Meier, 2020; Seevers & Graham, 2012) to develop items that were evaluated by three faculty members from the University of Idaho. The survey included 10 questions regarding the individual's communication behavior and preferences and nine demographic questions. Respondents indicated how often they utilized communication channels during a normal year, before COVID-19 pandemic restrictions, and during the COVID-19 pandemic. They then ranked the communication channels that they most preferred to those they least preferred, followed by ranking the communication channels from most preferred by constituents to least preferred by constituents. The communication channels listed were Facebook, Instagram, Twitter, YouTube, other social media, walk-in/in-person, text, phone call, email, mailed newsletter, emailed/online newsletter, website, magazine, radio, television, or other. Respondents ranked their usage of each of these channels based on a 6-point Likert scale: never, monthly, biweekly, weekly, daily, or more than daily. Respondents indicated what percent of their time communicating was spent in each of the communication types: individual, group, and mass (Seevers & Graham, 2012). Respondents categorized their time by entering the appropriate percentage for each communication type in a typical year. Respondents were again prompted to answer the two questions regarding which communication methods were used the most and what percentage of their time was spent communicating via each communication

type in reflection of the year spent adhering to COVID-19 restrictions. Respondents were then asked to enter a numerical value that represented what percentage of their time during a typical week they spend communicating with their constituents and what percentage of their time they spend preparing communication materials both prior to and during COVID-19. We conducted 12 follow-up interviews where participants confirmed their item responses to assist in establishing reliability.

With a 52% response rate, it was also important to examine the representation of the extension educators and faculty across the state based on demographics. Responses based gender, race, county type, tenure track, rank, and position title were comparable to University of Idaho statistics with <4% difference for all. Respondents' age ranged from 25 to 68 with a mean of 47.55 years (*SD* = 12.07). Time working in extension ranged from .5 years to 39 years with an average of 12.19 years (*SD* = 10.12). Respondents represented 14 extension program areas.

We analyzed the data via descriptive statistics, Wilcoxon signed rank tests, and paired samples t-tests. We used descriptive statistics to describe the respondents' preferred communication types and channels. We conducted Wilcoxon signed rank tests to compare personal and constituent preferences for communication channels and changes in channel usage based on the COVID-19 pandemic. We implemented paired samples t-tests to examine differences in the time spent communicating and preparing communication materials and usage of communication types before and during COVID-19.

Findings

We utilized Wilcoxon signed rank tests to compare the respondents' personal communication channel preferences with what they indicated as their constituents' preferred communication channel preferences (Table 1). Constituent preferences were ranked statistically significantly higher than personal for social media (Z = -2.76, p = .01) and mailed newsletters (Z = -2.37, p = .02). The effect size for social media was -.33 indicating a medium effect. For mailed newsletters, the effect size was -.28 meaning a small effect. Personal preferences were ranked statistically significantly higher than constituents for walk-in (Z = -2.72, p = .02), phone calls (Z = -2.55, p = .01), and radio (Z = -2.56, p = .01). The effect size for walk-ins (r = -.32), phone calls (r = -.30), and radio (r = -.30) indicated medium effects. The differences between rankings for personal and constituent preference for text, emails, online newsletters, website, magazines, television, and other communication channels were not statistically significant.

Table 1

Wilcoxon Signed Rank Tests of Communication Channel Preferences (n = 71)

	Constituent		*Personal*				
	M	*SD*	*M*	*SD*	*Z*	*p*	*r*
Social Media	4.66	2.67	5.66	2.84	-2.76	.01*	-.33
Walk-in	2.92	2.22	2.25	1.73	-2.72	.02*	-.32
Text	5.08	2.60	4.97	2.33	-0.31	.76	-.04
Phone Call	3.27	1.84	2.73	1.50	-2.55	.01*	-.30
Email	2.99	1.48	3.08	1.66	-0.24	.81	-.02
Mailed Newsletter	6.83	1.95	7.45	2.10	-2.37	.02*	-.28
Online Newsletter	5.83	2.06	6.15	1.87	-1.22	.22	-.14
Website	6.39	2.19	6.38	1.93	-0.69	.49	-.08
Magazine	8.83	1.51	8.65	1.75	-1.26	.21	-.15
Radio	9.85	0.91	9.48	1.07	-2.56	.01*	-.30
Television	10.73	0.99	10.62	1.03	-0.96	.34	-.11
Other	10.62	3.04	10.56	3.22	-0.59	.56	-.07

Note. Significance at the *p <.05 level, 2-Tailed. 1 is most preferred, 12 is least preferred.

We used Wilcoxon signed rank tests to compare the communication channels before and during COVID-19 restrictions (Table 2). The usage of the following communication channels were statistically significantly higher during COVID-19: Facebook (Z = -4.07, p = .00), Instagram (Z = -2.33, p = .02), YouTube (Z = -4.33, p = .00), and magazine (Z = -2.31, p = .02). The effect sizes for Instagram (r = -.28) and magazines (r = -.28) were a low effect. The effect size for Facebook usage was -.49 meaning a medium effect. YouTube had a large effect size at -.52. -The following communication channels usage were statistically significantly lower during COVID-19: walk-ins (Z = -6.16, p = .00) and radio (Z = -2.81, p = .01). The effect size for radio was -.34 meaning a medium effect. The effect size for walk-ins was -.74 indicating a large effect. There was no statistical significance for other communication channels.

Table 2

Before COVID and During COVID Communication Channel Usage (n = 69)

	Before COVID		*During COVID*				
	M	*SD*	*M*	*SD*	*Z*	*p*	*r*
Facebook	2.70	1.58	3.09	1.67	-4.07	.00*	-.49
Instagram	1.49	1.13	1.59	1.29	-2.33	.02*	-.28
Twitter	1.13	0.38	1.26	0.76	-1.63	.10	-.20
YouTube	1.72	1.21	2.28	1.42	-4.33	.00*	-.52
Other Social Media	1.46	1.12	1.62	1.24	-1.75	.08	-.21
Walk-in	4.07	1.40	2.43	1.28	-6.16	.00*	-.74
Text	3.83	1.79	3.90	1.76	-0.81	.42	-.10
Phone Call	4.77	1.23	4.71	1.24	-0.86	.39	-.10
Email	5.14	1.18	5.20	1.16	-0.23	.82	-.03
Mailed Newsletter	1.78	0.86	1.67	0.72	-0.89	.38	-.11
Website	2.83	1.63	2.88	1.53	-0.33	.74	-.04
Magazine	1.45	0.68	1.33	0.63	-2.31	.02*	-.28
Radio	1.51	1.13	1.32	0.95	-2.81	.01*	-.34
Television	1.23	0.94	1.25	1.01	-1.00	.32	-.12

Note. Significance at the *p <.05 level, 2-tailed. Likert scale: 1 = Never to 6 = more than daily.

We conducted paired sample t-tests to compare how participants spent their time communicating before and during COVID-19 restrictions (Table 3). There was a significant difference in time spent communicating with constituents through mass communication before COVID (M = 14.75, SD = 10.71) and during COVID (M = 23.40, SD = 19.15), $t(72)$ = -4.3, p = .00. The effect size for mass communication was -.530 indicating a moderate effect. There was also a significant difference in the percentage of time spent preparing communication material before COVID (M = 18.35, SD = 14.81) and during COVID (M = 28.39, SD = 19.40), $t(72)$ = -6.44, p = .00. The effect size was -.737 meaning a moderate effect. There was not a significant difference in the percentage of time spent communicating, individual communication, or group communication before and during COVID-19.

Table 3

Differences in Participants' Time Spent Communicating Before and During COVID (n = 72)

	M	*SD*	*t*	*p*	*Cohen's d*
Pair 1					
Before COVID % Spent Communicating	28.89	17.87	-1.92	.060	-.190
During COVID % Spent Communicating	32.25	21.58			
Pair 2					
Before COVID % Preparing Communications	18.35	14.81	-6.44	.000*	-.737
During COVID % Preparing Communications	28.39	19.40			
Pair 3					
Before COVID % Individual Communication	36.53	19.91	1.01	.316	.119
During COVID % Individual Communication	34.22	22.75			
Pair 4					
Before COVID % Group Communication	39.56	19.31	1.86	.067	.244
During COVID % Group Communication	35.43	18.15			
Pair 5					
Before COVID % Mass Communication	14.75	10.71	-4.30	.000*	-.530
During COVID % Mass Communication	23.40	19.15			

Note. Significance at the *p <.05 level, 2-Tailed.

Conclusions, Discussion, and Recommendations

The highest-ranked communication channels of University of Idaho CES professionals were individual communication, with one channel falling under group. This finding was consistent with the most prevalent communication type usage and previous research that suggests constituents believe individual communication is more reliable and tailored to their specific needs (Licht & Martin, 2007; Rogers, 2003). Individual communication provides an opportunity for messages to be specifically framed for the individual (Jenkins et al., 2020), but lacks the reach of group and mass communication types, such as social media. Ranking of social media fell in the middle for both personal and constituents and indicated varied preferences based on high standard deviations and a range from 1 to 12 for both preferences. The variance may be based on the influence demographics and backgrounds have on preferences (Agunda, 1998).

The traditional foundation for communication in CES, based on rural needs (Henning et al., 2014), might explain why participants prefer individual communication more than their constituents. This lack of alignment can cause communication gaps. Understanding the audience's needs, preferences for communication, and access to resources aids in efficient communication and is essential due to University of Idaho CES professionals reporting they spend nearly 50% of their time before and 60% during COVID-19 restrictions communicating

and preparing communication. Once the audience's needs are understood, the concepts of framing theory can be applied to specifically target messages, which can increase the likelihood of adoption (Daamen et al., 2001). CES professionals can utilize audience segmentation to better serve their constituents through tailored research-based information (Lamm et al., 2016).

The COVID-19 pandemic required University of Idaho CES to rapidly adapt to regulations, which is consistent with their need to adjust to the changing times (Narine & Meier, 2020). University of Idaho CES professionals responded with an increase in time preparing materials and mass communication to combat the decreases in in-person and individual communication. Technology has become heavily relied upon during COVID-19 restrictions. However, not all Idahoans have access to reliable internet connection that allows constituents to access social media and other technology-based content. Understanding what resources constituents have available and how they prefer to receive their information can help maintain relationships with rural audiences. University of Idaho CES professionals face a unique challenge in meeting demographic needs due to Idaho's growing and urbanizing population. Understanding the audience's demographics can help to better tailor programming and communication materials (Curtis et al., 2012).

There were several limitations in this study. We did not survey constituents, but rather assumed they would agree with the rankings provided by the respondents. We recommend future research be adapted to understand the constituent's perspective. Responses may have differed if respondents were asked to segment their audiences based on demographic groups. Further research about how constituents prefer to communicate with CES would help uncover this phenomenon. There were limited respondents who indicated they used mass communication most often. While we compared early and late respondents and confirmed the sample was comparable to demographics across the state, it is still possible that more individuals use mass communication efforts. Further research could reveal if or why more CES professionals do not use mass communication more often. Due to time constraints, we were unable to use test retest to establish reliability and we acknowledge this as a limitation. Additionally, we collected survey data during the spring of 2021 when COVID-19 restrictions varied across Idaho. This most likely impacted feelings regarding restrictions and a replication of this study could reveal different responses. We recommend continued research to learn more about the long-term impacts of COVID-19 on the communication efforts of CES professionals.

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