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**Journal of
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*Official Journal of the Association for Communication Excellence
in Agriculture, Natural Resources, and Life and Human Sciences*

The Journal of Applied Communications

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A Review of Likeable Social Media: How to Delight Your Customers, Create an Irresistible Brand, and Be Generally Amazing on Facebook (and Other Social Networks)

Courtney D. Gibson

Book Title

Likeable Social Media: How to Delight Your Customers, Create an Irresistible Brand, and Be Generally Amazing on Facebook (and Other Social Networks)

Author

D. Kerpen

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New York, NY: McGraw-Hill

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Summary

“Delight your customers, create an irresistible brand, and be generally amazing on Facebook.” Sounds like any company’s dream come true, but how does a company achieve such highly sought after accolades in today’s competitive markets? Dave Kerpen, CEO of Likeable Media, a social media and word-of-mouth marketing firm based in New York City, seeks to help companies achieve just that in his book *Likeable Social Media*.

Likeable Social Media guides readers through 18 concepts Kerpen says will “guide you in your conceptualization, creation, and implementation of a social media plan” (p. 221). These 18 concepts are detailed individually in each of the book’s chapters and are centered around four key principles: listen, be transparent, be responsive, and be likeable.

Social media connects to basic human nature in many ways, and Kerpen often relates his concepts to those human instincts. As humans, we simply want to be heard and be listened to. Social media provides people, who are consumers of numerous products, with an avenue of voicing their opinions, beliefs, and thoughts with the world. Many of the concepts Kerpen discusses in his book relate to listening to your consumers, because as he points out, “companies can no longer afford to ignore their customers’ specific needs or complaints when the conversation can so easily be made public” (p. 14).

Throughout the book, Kerpen provides a variety of strategies on how to make customers of your product or service more than just customers. Engaging users, asking questions, telling and sharing stories, responding to comments, and inviting people to become your fans are just a few of the strategies companies can use to draw consumers into their social media experience. Companies should also be honest in their use of social media, and transparency can help customers establish trust. Creating a likeable vibe for your company is important and helps consumers connect to your company and products.

Review

I found *Likeable Social Media* to be a very worthwhile read. It was well-written in an easy-to-read manner and provides a thorough overview of social media marketing that anyone can understand and apply. Even though I consider myself to be a fairly avid user of social media, I learned a lot of new things about Facebook and how it can be used as a marketing tool (for example, I didn't know that Facebook had a "text-to-like" feature).

Kerpen does a nice job of introducing readers to each of the 18 concepts in his book. He often uses relatable analogies to make the world of social media less intimidating to readers, which I found to be a helpful way to make connections to the information being presented. One of the first analogies he uses refers to social media as the world's largest cocktail party, where "anyone can listen to others talking and join the conversation with anyone else about any topic of their choice" (p. 6). He says the qualities that would make you popular and likeable at a party – listening carefully, being transparent, being responsive, being authentic, and telling great stories – will also make your organization likeable on social networks. The analogies helped me view social media in a new way and helped me visualize the points he was trying to make.

Each chapter is also supported by several real-world examples of companies who have displayed that particular concept being used effectively (and in some cases, not so effectively). These examples helped me recognize how that concept should look in action, and put the concept into a tangible context. Many of the examples were from well-known companies such as Oreo, Omaha Steaks, Guinness, 1-800-Flowers, The Gap, and Dominos Pizza, so it was easy to connect to the examples, and some of them I was even familiar with from my own social media use.

Some of the concepts Kerpen discusses seem like they should be fairly intuitive, but many are things I – and I'm sure many others – have never thought about. Many times he asks readers to stop and think like a consumer, which I thought was helpful in understanding the impact of many of the concepts. Again, the examples and easy-to-read nature of the book drive these points home and make them very relatable to the reader.

While much of the book focuses on Facebook marketing, Kerpen often discusses how other social media outlets such as Twitter, YouTube and LinkedIn, can all be utilized, as well, making this a great resource for many people. Kerpen offers more of a best practices type approach to social media, like other notable social media resources, but the examples and writing style set this book apart from others I have read. I liked that this book was more relatable than some of the strategy-based social media resources that are commonly seen and offered a light-hearted, yet effective message about social media use. I didn't see many weaknesses with this book, as I thoroughly enjoyed the read and learned a lot in the process.

Who Should Read This Book

I think Kerpen's book would be a valuable tool to many readers. The concepts discussed in the book are applicable to any organization in any field. From small business owners who will be conducting their own social media marketing plan with one or two individuals to larger organizations who will have an entire office dedicated to social media marketing, *Likeable Social Media* has something to offer everyone, no matter what their level of experience with social media. For those with little experience using social media, Kerpen even includes an appendix called "A Refresher Guide to the Social Networks That Matter Most" to give them the basics of some of the more popular social media channels available.

For the field of agricultural communications, *Likeable Social Media* would be a great resource when developing social media marketing plans for agricultural businesses and companies, as well as for helping them implement those plans. Marketing agricultural products can be a challenge, but using the basic principles detailed in Kerpen's book, social media can be a useful tool for the agricultural industry.

Visual Communications: An Analysis of University Students' Perceptions of Rural America Based on Select Photographs

Catherine "Dru" Glaze, Leslie D. Edgar,
Emily Rhoades-Buck, and Tracy Rutherford

Abstract

Urban populations have been outgrowing rural populations since the 1920s. Studies exploring the shift in rural residents have noted items such as the job market, economy, and conveniences as factors of this change. However, few studies have been completed to examine mass media's role in this trend. The purpose of this study was to explore college students' perceptions about rural America, based on images selected from newspapers. This qualitative study consisted of five focus groups: two focus groups conducted at the 2009 Agricultural Communicators of Tomorrow's (ACT) Professional Development Conference in Stillwater, Oklahoma (agricultural student focus), and three conducted at Texas A&M University (non-agricultural student focus). The focus groups followed Krueger's (1998a, 1998b) method of questioning. Focus groups were recorded, and data was transcribed and analyzed. Common themes such as culture / values, efficiency / conservation, experience from environment, experience through observation, lack of technology, lack of accurate information, media impact / framing, occupation, proximity, relationship / ties, and stereotypes were found in both groups; however, the agricultural group indicated stronger ties to rural America. This study noted further research must be conducted to understand the total effects visual media has on rural America perceptions.

Keywords

rural America, visual communications, perceptions, college students, photographs

Introduction

While perceptions of rural America tend to be positive (Kellogg, 2001; 2005), rural areas are experiencing a decline in population (ERS, 2008; Whitener & McGranahan, 2003). Isserman (2001) noted "much of what we consider rural America today will be urban America in 2050" (p. 128). Research shows a decrease in farming is not the reason for this rural population loss, but a lack of natural amenities, resources, and services (Rogers, 2002; Whitener & McGranahan 2003). Many geographic areas including the East, Mid-Atlantic, and South have seen an increase in suburbs growing out of cities (Kellogg, 2005), known as urban sprawl. Where agricultural land is being replaced with luxury homes, resulting in increased land prices and the inability of rural residents to afford to stay in their communities (Kellogg, 2005).

Previously, this research was presented at the Southern Region American Association of Agricultural Education (AAAE), the National AAAE, and the Association for Communication Excellence in Agriculture, Natural Resources, and Life and Human Sciences conferences as three different manuscripts.

While the literature indicates both young and old people are moving to areas with more resources and amenities (Rogers, 2002; Whitener & McGranahan, 2003), the largest percentage of people moving out of rural areas in the mid-1990s were college graduates (Cromarite, 2001). Isserman (2001) explains this phenomenon by describing the primary economic source in rural areas as farms, ranches, forest, and mines. Additionally, Isserman (2001) noted careers in farming, ranching, forestry, and mining are avoided by many college graduates.

A 2001 Kellogg Foundation study surveyed 242 rural, suburban, and urban Americans about their perceptions of rural America. Both the rural and non-rural participants perceived that agriculture was the largest contributor to economies in rural areas; however, only 11.7% of jobs in rural areas are actually in agriculture. This study also noted that nearly half of the respondents living in rural areas had considered moving because of low pay and limited opportunity for advancements in their current location. While respondents had some negative views of rural America, they also had positive views. Of the respondents, 75% indicated rural area residents have stronger families, and 53% believe rural residents work harder than people living in cities (Kellogg, 2001).

Research has found when settling down young people tend to avoid remote, sparsely settled, typically rural, areas that do not have the conveniences of urban areas (Rogers, 2002; Whitener & McGranahan, 2003). Children living in these areas are more likely to live in households that fall below the poverty line, causing higher mortality rates than children in non-rural areas (ERS, 2008). In 2005, 95% of the 100 counties with the highest poverty rate were rural (O'Hare & Mather, 2008). Other concerns identified in rural areas included health care and a lack of other services (Kellogg, 2005).

Residents of rural areas tend to have a lower education level, lower income level, and higher probability of being unemployed than urban residents (Marans et al., 1980; Whitener & McGranahan, 2003; Williams & Mann, 2011). This results in young people leaving rural areas in search of higher education and job opportunities (Kellogg, 2005), and these individuals are increasingly less likely to return to a rural setting. But, not everything is negative about living in rural areas. Isserman (2001) noted rural towns and cities can be described as places where “the pace is a bit slower, the crimes are fewer, and the children are above average” (p. 128).

Research priority area (RPA) #2 in the *National Research Agenda (NRA): Agricultural Education and Communication, 2007-2010* noted the explicit need to aid the public in effectively participating in decision making related to agriculture (Osborne, n.d.). The most recent National Research Agenda also promotes this area and adds to it with the need to focus on informed policy makers and improving agricultural literacy and messages associated with building citizens “capable of making agriculture-related informed decisions” (Doerfert, 2011, p. 8). Research should focus on the mass media’s role in influencing young people’s decisions whether or not to live in a rural area.

Mass Media’s Role

Research conducted before the 1980s on mass media effects showed that mass media did not tell audiences what to think, but what to think about. More recent research has shown that mass media has a more significant role in influencing audiences than originally found in previous years (Entman, 1989; Patton, McKim, Cummings, & Rutherford, 2011; Rhoades & Aue, 2010; Wanta, Golan, & Lee, 2004). Many studies have explored the traditional definitions of mass media, but few have looked at these effects in terms of media images (Entman, 1989; Lester 2006).

“Visual images are very powerful in their occupation of the public’s time and the shaping of how we process our surrounding environments” (Sadler-Trainor, 2005, p. 9). Additionally, visual images

play an important role in society because of the messages these images can portray, both positive and negative, regarding social class, cultures, etc. (Rhoades & Irani, 2008). “It is imperative as communicators that we continue to study how rural cultures are portrayed in the media” (Rhoades & Irani, 2008, p. 24). “Photographs and images on video are typically seen as direct copies of reality” (Messaris, 1997, p. vi). However, even images seen daily such as street signs, graphic designs, and music notes cause people to think about what the image represents, and they interpret its meaning differently based on personal perspective and experience (Lewis, 1995). People see several images a day, and images in newspapers are often looked at prior to reading the text (McLellan & Steele, 2001; Rosen, 2007). Not all images are positive; many can negatively affect perceptions of certain people and programs (Singletary & Lamb, 1984; Smith & Price, 2005; Sotirovic, 2001).

Guiding Theories

The Interpreter Model, the theory of omnihasism, and semiotics guided this study. The Interpreter Model was developed by David K. Berlo (The Association for Educational Communications and Technology, 2004). This model denotes that whenever humans communicate there is a stimulus present. A stimulus is anything that can be perceived by one of the five senses (touch, sight, voice, smell, and taste), and every stimulus has a response. Once an individual receives a stimulus, the response is the action taken (for example an individual smells smoke and, therefore, runs out of the house). Denoted in the model, an individual has the ability to both decode and interpret the stimulus.

Philosopher and photographer Rick Williams developed the theory of omnihasism. The theory combines rational and gut reaction thoughts into balanced and equal attributes used to analyze an image (Lester, 2006). Williams uses an eight-step approach. He has viewers look at the image then lists primary words. The viewer is then to write associative words with the primary words. The process continues with one of the most significant associative words being picked. Viewers continue this process until use of the primary and significant word are paired to create meaning with things in the viewers’ own life.

Barthes developed a theory of semiotics in regards to photographs in newspapers and their logico-semantic relationship to surrounding texts (as cited in Barr, 2007). The theory notes photographs represent the reprint of an actual event and an implied meaning, which viewers make according to their own interactions, experiences, and understandings of culture codes. Barr (2007) explained photograph meanings are fusions between the viewer’s personal experiences and the cultural codes (personal and decoded by the viewer). Researchers like Saussure and Locke furthered such ideas with their work in semiotics (Craig & Muller, 2007; Moriarty, 2005). The philosophers indicated images are expressed through the relationship of the signifier (or the image) and the signified (or the concept the sign stands for). For example, a tent would be a signifier and camping would be the signified concept for a particular viewer. Thus, each image may bring to mind a different meaning in the viewer’s mind based on experience and culture. Ronald Barthes and Stuart Hall expanded this semiotic definition to further examine non-language-like signs through connotative (implied meaning understood by similar viewers) and denotative (specific or direct meaning assigned by the individual viewers) meanings (Moriarty, 2005).

Purpose and Research Questions

The purpose of this study was to determine if selected images of rural America taken from popular newspapers affected college students’ perceptions of rural America; and if the images affected the

desire for students to return to or move to a rural area after completing their degrees. The research questions for this study were:

- 1) What are college students' perceptions of selected newspaper images of rural America?
- 2) What are college students' perceptions of how students with different backgrounds perceive rural America?
- 3) What are college students' perceptions of factors inhibiting movement to rural areas?
- 4) Do college students believe media images affect the desire to live in a rural area?

Methods and Procedures

In this qualitative study, five focus groups were conducted: two at the National Agricultural Communicators of Tomorrow (ACT) 2009 Professional Development Conference in Stillwater, Oklahoma (agricultural-related college students), and three at Texas A&M University (non-agricultural related college students). Participants in the agricultural-related focus groups were selected by reference. One week prior to the beginning of the ACT conference, advisers at each participating university received an email requesting that two students participate in the study. The advisers were asked to provide student names to the researchers. Of the 11 universities in attendance at the conference, students from 10 universities participated in the study. One student from each of the participating universities was randomly placed into one of two groups. For the non-agricultural focus groups, students enrolled in a general communications course at Texas A&M University were targeted to participate. An email offering bonus points was sent to enrolled students one week prior to the focus groups. Participants were asked to log on to a website and sign-up for a specific focus group time. Upon registering for a focus group, the room location was provided.

A researcher searched the Internet for images printed in newspapers depicting what the researcher believed to be rural America. Using the theoretical framework of semiotics to categorize photographs, the researchers studied the denotative and connotative aspects of each image to determine meaning and, via negotiations, categorized each image as positive, negative, or neutral. The researchers classified two images as negative, two images as neutral, and one image as positive by using semiotics to assess the entire image. The researchers used all aspects of the image to create an overall classification of each image. Faculty members from three universities assisted the researcher in assessing the images, categorizing them, and selecting five images to be used during the focus groups.

A moderator guide was developed to guide the focus groups, which was reviewed by faculty members from the University of Arkansas, Texas A&M University, and The Ohio State University and adjustments were made. All facilitators had received prior training on leading focus group moderation, discussion, and observation techniques. When designing a focus group, it is important to ask the correct types of questions. This study followed Krueger's (1998a, 1998b) method for questioning. Krueger (1998a) expressed that during focus groups, some questions are more important than others. Questions are assigned different levels of importance. This determines how much time is spent discussing the question and at what level the question is analyzed. There are five types of questions that affect the flow of the focus group: opening, introductory, transition, key, and ending (Krueger, 1998b). This study followed these questioning techniques. Additionally, to understand the differing backgrounds of each participant, a demographic survey was administered immediately following each focus group.

During the ACT focus groups, participants met in one room and divided into two groups. One group moved to another location. Four tables were placed in as close to a circle shape as possible.

Two audio recorders were placed in the middle of the group and on opposite sides. The moderator and an observer were seated at a table at one end of the focus group. A scribe was seated outside the focus group circle and to one side. The screen for the images was on one end of the room and opposite the moderator and observer.

For the urban focus groups, participants reported to a specified location. There were five tables placed together making one long table. Four recorders were set in the center of the tables. The scribe was seated outside the group. The moderator and an observer set at one end of the participants with the screen projecting the images behind the moderator. The observer kept time and observed participants' facial expressions and body language. The scribe recorded the conversation between each participant and moderator during the focus group.

After participants answered a series of questions about rural America, the participants were shown the five images previously selected. Participants were asked to write down their initial thoughts and reactions regarding each image on an index card (following the omniphase approach) (Lester, 2006). Participants used five different colored index cards; each color was assigned to a specific image. After the participants recorded their initial reactions, the moderator asked questions to initiate discussion regarding each image.

The study maintained peer debriefing and member checks. At the end of each focus group, the moderator summarized participants' responses from the session and asked for confirmation; participants were also asked to clarify anything the moderator had misinterpreted. Transferability in this study is limited to the focus group participants. Though generalization does not exceed that of the groups, it gives future researchers insight into how similar groups could react in future studies. Dependability was met by audio recording each focus group and initial reactions to images were recorded on index cards. This study maintained triangulation. In each of the focus groups three different sets of notes were taken by the scribe, moderator, and observer. The moderator took notes of major themes emerging from each image. The observer watched and recorded body language and facial expressions. The scribe kept notes of the focus group conversation. Following each focus group the audio recordings, note cards, and moderator notes were transcribed and analyzed to identify emergent research themes in the study. A researcher reiteratively read through the data in order to identify recurring specific ideas or themes. These themes were identified as important and supported with details such as quotations, passages, and field notes taken from interviews and observations (Creswell, 1998).

Limitations of the study included participants at the 2009 Agricultural Communicators of Tomorrow (ACT) Regional Conference in Stillwater, Oklahoma (primarily agricultural audience), involved in the study may have had previous knowledge of analyzing media images. Also, participant selection bias may have been introduced due to bonus points being issued to the non-agriculture student group for participation.

Participants at Texas A&M University in College Station, Texas (primarily urban audience), used in the focus groups received bonus points for participating, causing some to attend, but not engage in the discussion. For all focus groups (at College Station and Stillwater) many of the participants did not realize there was a section located on the back of the instrument for demographics and, therefore, did not complete the instrument. A final limitation of this study was the number of observers (2-3) present in each room. Krueger (1998) explained that participants are less comfortable when more observers are present. Due to random sampling, the researcher could not control if students from an urban background were eliminated from the agricultural groups and students with a rural background were eliminated from the urban groups.

Results and Findings

Agricultural Student Demographics

Of the 20 participants, 18 were female and all of the participants classified themselves as Caucasian. Between the two focus groups, there was one freshman, one sophomore, eight juniors, and 10 seniors. Participants in the study represented 10 universities: California Polytechnic State University, Kansas State University, The Ohio State University, Oklahoma State University, Texas A&M University, Tarleton State University, Texas Tech University, University of Arkansas, University of Florida, and University of Nebraska-Lincoln. For both focus groups, 60% ($n = 12$) of respondents indicated that they had grown-up on a farm. Ninety percent ($n = 9$) of participants in one group, and 80% ($n = 8$) in the second group had grown-up in a rural community. Of the participants, 80% ($n = 8$) in one focus group and 50% ($n = 5$) in the other group had grown up in a community of less than 25,000 residents. The mean age of participants was 20.5 and 20.9 years, respectively.

When asked if their parents or a close relative had ever owned or operated a farm or ranch, one focus group had a 100% ($n = 10$) “yes” response rate; the other focus group had an 80% ($n = 8$) “yes” response. Of the 18 participants who answered the question “what economic status level would you say you came from?”, eight participants responded \$50,000 to \$74,999 annually. The second largest response was \$100,000 to \$149,999 annually. Two participants reported levels less than these numbers and two reported higher figures. One respondent did not know their families’ economic level, and two did not respond. When responding to the question “do you plan to live in a rural area in the future?”, one focus group had 80% ($n = 8$) of the respondents note “yes”, and the second group had 90% ($n = 9$) respond “yes.”

Urban Student Demographics

Of the 28 participants, 19 were female and 77.8% ($n = 21$) of participants classified themselves as Caucasian, 14.8% ($n = 4$) as Hispanic, and 7.4% ($n = 2$) as Asian. Between the three focus groups, there were six freshman, two sophomores, 10 juniors, nine seniors, and one graduate student. All participants responded they had not grown-up on a farm, and only 10.7% ($n = 3$) of the participants had grown-up in a rural community. Of the participants who responded, 54.2% ($n = 12$) reported growing-up in a community of more than 250,000 residents, 25% ($n = 6$) grew-up in a community of 100,000-249,999 people, and 12.5% ($n = 2$) in a community of 25,000-99,999. One of the participants reported growing-up in a community with 3,500 or less residents. For these three focus groups, the mean age was 20.3 years, with the highest age reported being 28 years.

When asked if their parents or a close relative had ever owned or operated a farm or ranch, 54% ($n = 13$) responded “no”. Of the 23 participants who answered the question of “what economic status level would you say you came from?”, eight responded over \$150,000 annually. The second largest response was \$125,001 to \$150,000 annually. The third highest annual income level response was \$100,001 to \$125,000. All other respondents reported lower income levels. When responding to the question “do you plan to live in a rural area in the future?”, 87.5% ($n = 21$) said “no” and 12.5% ($n = 3$) said “yes” (of those that responded).

Emerging Theme Areas

All five focus groups were analyzed and themes were developed and compressed into key terms and phrases. There were 11 unique themes identified: *culture / values, efficiency / conservation, experience from environment, experience through observation, lack of technology, lack of accurate informa-*

tion, media impact / framing, occupation, proximity, relationship / ties, and stereotypes. Quotes denoted with “A” or “B” indicates a participant response from the agricultural focus groups. Quotes denoted with “C,” “D,” and “E” indicates a participant response from the urban groups. Themes are represented in *italics* and key terms associated with the themes are underlined in the discussion of results.



Figure 1. Photograph accompanying an August 2008 New York Times article, titled *In Rural New York, Windmills can Bring Whiff of Corruption*. Accessed online at http://www.nytimes.com/2008/08/18/nyregion/18windmills.html?_r=1&pagewanted=all

For image one, the agriculture based focus groups comprised eight major themes *advancement / technology, culture / values, efficiency / conservation, experience from environment, experience through observation, media impact / framing, relationship / ties, and stereotypes*. Seven themes were delineated from the non-agricultural focus groups *culture / values, efficiency / conservation, experience from environment, experience through observation, media impact / framing, proximity, and stereotypes*.

Terms used to describe the *efficiency / conservation* theme were saving money, wind turbines, and saving energy. One participant expressed this theme by saying, “It’s smart because she’s saving money and not using electricity” (B9). Words and phrases used to express the *culture / values* theme were work ethic, traditional, and simplicity of rural America. Most of the participants related the discussion involving this theme back to the lady hanging clothes. One participant said, “It kind of describes the simplicity of rural America” (C4). Words and phrases that emerged from the agricultural group’s theme *relationship / ties* theme had such terms as family, mom / grandmother does that, and relating to their farm. The wind turbines and lady hanging clothes were noted by participants while discussing the words and phrases used to create this theme. “My grandmother used to do that,” said one participant (B2). For the *stereotypes* theme participants used key terms, such as white trash, poor, and low-income. One participant expressed that belief with the statement, “My first thought is they’re poor and she’s got to hang her clothes on the line” (A2).

The majority of the agricultural group found this image to be a neutral representation of rural America. Agricultural participants used terms such as: white trash, old days, and stereotype to describe how someone from a non-agricultural background might describe the image. The urban group had a majority of neutral or positive responses. The urban group believed those from a rural background would be able to relate to the image, and believed this image would be more normal to them. In general, the urban group believed someone from a rural background would describe this image as normal, everyday life, and familiar. One participant from the urban group said, “I think this picture has a lot of what we assume and what we were taught was rural so we weren’t surprised that they don’t have a laundry machine, but maybe in a rural town it’s normal for them to have it” (E10).



Figure 2. Photograph accompanying an August 2007 New York Times article, *Ethanol is Feeding Hot Market for Farmland*. Accessed online at <http://www.nytimes.com/2007/08/08/us/08farmers.html>

For the second image, the themes that emerged for this image from the agricultural groups were *culture / values*, *experience from environment*, *experience through observation*, and *relationship / ties*. For the urban group themes that emerged were *culture / values*, *experience from environment*, *experience through observation*, *proximity* and *stereotypes*. A phrase used to describe the *experience from environment* theme in the urban group was my family has a farm and they do this. For this image participants focused their conversation on the man in the foreground, the calf being tagged, the man in the background, and the John Deere Gator. Participants in the agricultural group discussed my dad and I working cattle and family as words and phrases for the *relationship / ties* theme. For this theme, participants indicated the two men as the primarily object of discussion. One participant related the situation to their own life, “Seeing the two guys together, I thought, well they’re family like that’s my dad pushing the other cow away so I can take the calf” (A8). Participants in the urban group also discussed [image is rural] because you see lots of land, land goes on forever, and no buildings or flues as words and phrases placed in the *proximity* theme. For this theme the participants noted the cattle, the two men, the land, and the crops. “I just noticed how open it was and how much land they were on and again, you don’t really see any buildings” (C4). Participants from both the agricultural and urban groups mentioned PETA (People for the Ethical Treatment of Animals); this was the only organization either pro or against agricultural that was mentioned specifically in the research.

The agricultural participants felt the image was positive for people who understood what was going on, but negative for non-agricultural-related people or people who did not understand what was being done. Agricultural participants saw this image as him doing his job, the lifestyle of a rancher, and a normal day. The urban participants believed the image was negative because of the appearance of pain inflicted on the calf. They believed individuals from a rural background would note the image as nothing special, pride, and/or normal duty. One participant expressed, “This is what I would think of when I think of rural; what I picture people doing” (E11). Another urban participant said, “Maybe if you gave this picture to somebody that’s in PETA or something they would go crazy, but if you gave it to a farmer they’d say it’s a normal daily activity” (E7).



Figure 3. Photograph accompanying an April 2007 New York Times article, titled *Trailer-Park Sales Leave Residents with Single-Wides and Few Options*. Accessed at <http://www.nytimes.com/2007/04/18/nyregion/18trailer.html>

Discussion of the third image generated six themes from the agricultural participants: *culture / values, experience from environment, experience through observation, media impact / framing, relationship / ties, and stereotypes*. Participant comments in the urban groups were compressed into six themes: *culture / values, experience from environment, experience through observation, proximity, relationship / ties, and stereotypes*. Words used to describe the *media impact / framing* theme were movies depict trailer parks bad, 8 Mile, and Sweet Home Alabama. A comment illustrating this theme was, “I think in movies that they depict trailer communities as bad names such as white trash people fighting, beating their spouses and stuff are all in trailer parks” (A9). Want a house, don’t want to live like this was used to generate the *experience from environment* theme for the urban group. For this theme, participants noted the trailer park.

Most participants in both the agriculture and urban groups believed this image did not represent rural America. The agricultural participants viewed the image as positive because of the family, close-knit, love displayed. However, they also indicated it was negative because of how others might view this image. Agricultural participants said they believed someone from a different background than themselves would say things like “oh sick” (B7). The urban group had some participants say positive for the sense of family and love, but negative because it might not be the ideal image for a family. Participants in the urban group said they believed someone from a different background than themselves would be offended or think this was a “bad stereotype” (C7). Participants from two of three urban groups mentioned the image could not be a rural area because of the power lines and telephone poles in the background. Some participants believed these amenities would not be available in a rural setting or there would be greater separation in the power lines.



Figure 4. Photograph accompanying a February 2006 Arkansas Democrat-Gazette article, titled *Flea Markets Bring Income to Rural Areas*. Accessed online but story/ photograph is no longer available digitally.

The themes for this image from the agricultural group were *culture / values*, *experience from environment*, *experience through observation*, *relationships / ties* and *stereotypes*. Themes from the urban group were *culture / values*, *experience from environment*, *experience through observation*, *relationships / ties*, and *stereotypes*. For the urban group's *stereotypes* theme, words and phrases such as what a lot of stores look like in the country, no AC because they have fans, and looks like farmers were used. "Look at them all over, it's just like farmer to me" (E9). The *culture / values* theme for the agricultural group was summarized in words and phrases such as barber shop atmosphere, "home", and know everyone. "You can tell it's an antique store, because he has prices on stuff" (A5). Friends, grandfather, and chatting with each other were used to describe the *relationship / ties* theme in the urban group. A participant discussion that supports this theme was, "I mean, it looks like you'll go there and you'll see friends" (E6).

Some in the agricultural group, however, believed it could be negative, because of how others might see it, but also positive because of the friendliness. The agricultural participants believed someone from an urban background would think of a lack of technology, might think the men were arguing and would not envision themselves in that environment. One participant expressed this with the statement, "They'd probably never walk in" (B2). The urban group believed the image could be seen as negative for the clutter in the store and positive for the friendliness and community. The non-agricultural participants believed someone from a rural background would think this was normal, or that they could relate to the store.



Figure 5. Photograph accompanying an August 6, 2008 New York Times article, titled *Niche Farming Offers Way Back to the Land*. Accessed at <http://www.nytimes.com/2008/08/07/business/smallbusiness/07hunt.html>

The last image emergent themes in the agricultural group were *culture / values*, *experience from environment*, *experience through observation*, and *relationship / ties*. The urban group developed the following themes *culture / values*, *experience through observation*, *proximity*, and *stereotypes*. The agricultural group's theme of *culture / values* generated from such words as normal and hard-working. "That's just normal or they're goofing off," said one participant (B3). For the theme of *proximity*, words used to describe this theme were acreage, it's hot, and have a lot of land in the urban group. "The obvious acreage in the back," was one comment supporting this theme. In the urban group terms like this is what they do for fun since there is nothing to do and best or only way to travel together were used to describe the *stereotypes* theme. Most participants in both the agricultural and urban groups perceived the image was positive. Some participants in the agricultural group believed others from a differing background would think it was redneck. Some participants in the agricultural group said the perception of someone from a non-rural background would believe it looked like fun. Some participants in the urban group believed others from a different background from their own

would be able to relate because either they had done something similar or knew what they were planting.

Image Summary

The themes in both the primarily agricultural group and the primarily urban group are similar, but when analyzed deeper, the context behind the groups changes. In the *experience from environment* theme, participants in the agricultural group related to their own experiences working on the farm, while the primarily urban group discussed experiences such as “my family has a farm” or “you would not find this image in the city”.

The participants in the agricultural group had a more vivid, descriptive discussion of the image. These participants related the images back to their personal lives, while the primarily urban group did not. The primarily urban group believed rural America was lacking appliances, electricity, and telephones in the *stereotypes* theme. The agricultural group’s *stereotypes* theme was created from words and phrases about how someone not from a rural background would think negatively about rural America.

The research discovered the agricultural group could relate to the image from experience through environment, while the primarily urban group could only relate to the images by experience through observation. A complete list of research themes for each image can be found in Table 1.

Participants’ Thoughts Toward Living in Rural Area

A majority (85%) of the agricultural participants expressed a desire to return or move to a rural area after graduating from college; however, they were not sure if that would be possible. Several said while they are single, living in the city would be fine, but once they have a family they would prefer to live in a rural community. A majority of the non-agricultural participants expressed a desire to return or move to an urban area. A marginal percentage of participants had considered living in a rural area. One participant expressed that thought with this statement, “I think it’s a nice thought to have your own land and no one bothers you, but in reality I really wouldn’t want to become accustomed to having to do all that extra work, like driving out to go to the store or something when I’m use[d] to just going around the street to Wal-Mart or whatever” (E1). The urban group felt it might be easier for dating and meeting new people in urban areas.

Participants were asked to identify factors they believed kept people from moving to rural areas. Participants said *economics* was one factor; with several participants who mentioned *jobs* and *money* were located in larger cities. A participant example was, “I see myself as winding up living in a large city because [that is where] these big companies are being based” (A4). Another factor participants identified as keeping people from rural areas was *convenience*. Being close to things like doctors, schools, and restaurants were some key items mentioned by participants. “I think a lot of it has to do with how our generation wants things instantly. If you’re hungry you can go down the street and grab some fast food. If you were somewhere far away, you’d have to make dinner. If something happens you have to wait, like if your car breaks down you would have to wait to get a part and things would take a lot longer and we’re use[d] to getting things instantly” (E8). Another factor addressed by agricultural participants was the rising cost of land in rural areas. For example, one participant said, “In our area, land has gotten really expensive, like a lot of our farmers and stuff are having to cut off different sections of their land and sell it to city people, because that’s all that can afford it” (B5).

Table 1
A Comprehensive List of Themes for Each Image and Group

Image	Themes from Agricultural Group	Themes from Primarily Urban Group
One	Advancement / Technology Culture / Values Efficiency / Conservation Experience from Environment Experience through Observation Media impact / Framing Proximity Relationship / Ties Stereotypes	Culture / Values Efficiency / Conservation Experience from Environment Experience through Observation Media impact / framing Proximity Stereotypes
Two	Culture/ Values Experience from Environment Experience through Observation Proximity Relationship / Ties Stereotypes	Culture / Values Experience from Environment Experience through Observation Proximity Stereotypes
Three	Culture / Values Experience from Environment Experience through Observation Media impact / framing Relationship / Ties Stereotypes	Culture / Values Experience from Environment Experience through Observation Proximity Relationship / Ties Stereotypes
Four	Culture / Values Experience from Environment Experience through Observation Relationship / Ties Stereotypes	Culture / Values Experience from Environment Experience through Observation Relationship / Ties Stereotypes
Five	Culture / Values Experience from Environment Experience through Observation Relationship / Ties Stereotypes	Culture / Values Experience from Environment Experience through Observation Proximity Stereotypes

Participants’ Thoughts About Media Influence

Participants were asked if they felt mass media could influence decisions to live in a rural area. Some in the agricultural group indicated it depended on the viewer’s mindset, while others noted people moving to a rural area would do their research and that the images shown during the focus groups would not be a significant deterrent. Several of the participants in the urban group agreed mass media could influence decisions about where to live. “If that’s what the newspapers say, people who don’t know what it [rural] looks like are going to believe it,” was one participant’s view (E5). A few participants expressed that mass media did not really influence a person’s decision of where to live. “I don’t think an image really affects someone living out in the country. I think they would know if they wanted to live there in the first place,” said one participant (C5). Other participants indicated that mass media puts a negative connotation on rural America.

Conclusions

This research supports the Kellogg (2001, 2005) studies that indicated 75% of participants believed rural communities had stronger families than their city counterparts. The *relationships/ties* theme that associated the word family was included in the discussion of every image. The Kellogg (2001) study also found many consider rural Americans to be hard workers. Hard-working was a key word used to describe several of the images presented. Other factors keeping people from moving to rural areas discussed in the study were land prices, which is also discussed in the 2005 Kellogg study. Rogers (2002) discussed a lack of health care as a reason for a decrease in rural America, as well as, a lack of facilities and amenities. The participants in this study described similar things in these images as they discussed a lack of conveniences and services as a factor keeping people from returning to a rural area. Participants mentioned that for young people it was easier to date in urban areas, making them leave rural America. This supports Isserman's (2001) study stating a lack of peers for recent college graduates is a disadvantage to living in rural areas.

Participants in this study reinforced findings from the Kellogg (2001, 2005) studies noting that they believed rural America may be more aesthetically pleasing and build individuals with traditional values. The participants repeatedly commented on crops, landscape, greenery, and trees. It was also mentioned that the second image was rural because of the cows in the photograph. Many times participants noted that images with a lack of greenery could be an urban setting. Though the Housing Assistance Council (HAC) (2006) found 15% of rural housing was manufactured homes, the participants in this study felt the image of a trailer home did not depict rural America. Studies completed by O'Hare and Mather (2008) and the Economic Research Service (ERS) (2008) found rural areas have some of the highest poverty rates in the country. Most participants of this study felt rural America was not in fact low-income, but low-income was a stereotype placed on rural areas by urban residents, a contrast to the Kellogg (2001) study. This study also supported research by McGranahan and Beale (2002, 2003) noting that while participants felt job opportunities would be greater in larger cities, most would prefer to live in a rural area with some of the conveniences of living in a city.

This research supports the guiding theories and models outlined in the study. The research reinforced the Interpreter Model (TAECT, 2004) specifically through the reporting that a stimulus was received and created a specific reaction to media. Additionally, Barthes' (2010) theory was supported in this research. In this study participants were able to assign meaning to the images based on personal experiences and perspectives. The study also supports the omniphiasism theory, in which audiences use both gut reaction and rational thought to create a balanced idea and provide meaning to visual stimuli. In the study many participants made comments such as, "I thought this first, but the more I thought about it I believe this."

The research found while several factors such as how a person's background and lifestyle influence perceptions of rural America, mass media also influenced participants' perceptions. Messratis (1992) found photographs are usually seen as copies of reality. This study helped support this when, viewing specific images, participants expressed what came to their mind when they thought of rural America.

Recommendations

While this study supports some of the perceptions of rural America and factors keeping people from moving to a rural area, both groups had some misconceptions about rural America. The agricultural participants of this study believed a non-agricultural audience would view all of the images

as negative, which was not found to be true. The urban group felt someone from a rural background would be able to relate to the image, which was supported in this study; however, some in this group believed all people from rural areas worked on farms or in the agricultural field. Future research should be conducted with larger numbers of participants and with varying age groups. Additional research should continue to determine the impact photographs and visual images have on people's perceptions of rural America. Other mass media outlets should also be studied. It is important to look at the process of how rural images are selected by mass media outlets and how these outlets can be better used to correct some of the misconceptions of rural America. Furthermore, it is important to educate the public, as well as mass media outlets, on the realities of rural America.

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Usability Testing and Evaluation of Texas Tech Sorghum Research Initiative Website

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Abstract

Usability encompasses how easy something is to use. Usability testing is an integral part of user-centered design. The tests may be performed in a variety of ways including using a usability laboratory, a mixed-method data collection approach, and testing representative and non-representative users. Conducting usability tests on websites allows the site's developers to observe users' interaction with the site. If a website is not usable, users will go somewhere else to find the information they are looking for and the purpose of the site is lost when this happens.

The efficiency, error, learnability, and satisfaction of a representative and non-representative user groups were measured during a usability test of the Texas Tech SRI site that employed mixed-method data collection. The users were given a series of tasks to perform that related to the site's navigational scheme, layout, and content. The representative and non-representative groups efficiently navigated the site and were able to repeatedly utilize the site's functions. However, it was concluded that the representative user group committed less errors during their interaction with the site and that their overall satisfaction with the site was higher than the non-representative user group. Representative user groups may find a higher satisfaction level in this website than non-representative groups.

Keywords

MEELS, efficiency, website usability, learnability, satisfaction, sorghum, representative user group

Introduction

As with any agricultural industry, sorghum interest encompasses a diverse population. Researchers, scientists, producers, growers, and those simply interested in sorghum research and information need credible, accurate resources to further their studies. The Texas Tech Sorghum Research Initiative (Texas Tech SRI) website was established in 2006 in response to a need for adequate and up-to-date research information for the sorghum industry. The purpose of the TTSRI site is to provide current and archived research from sorghum-related organizations and individuals. Sorghum news and links to other helpful sites are also part of the site. The TTSRI satisfies Texas Tech's responsibilities as a part of the Great Plains Sorghum Improvement and Utilization Initiative. Researchers at Texas Tech are working in conjunction with researchers at Kansas State University (lead entity for the initiative) and Texas A&M University to improve the future of sorghum. Specifically, Texas Tech researchers are focusing on increasing profitability across all facets of the U.S. sorghum industry by developing educational programs relating to sorghum.

The demand for readily-available information has increased rapidly along with the growth and advancement of technology. Today, the Internet is most often how people choose to retrieve and receive information and those people assume the website has what they are looking for (Nielsen & Loranger, 2006). Usability testing is becoming more and more important as the use of websites increases. "Usability is a quality attribute relating to how easy something is to use. More specifically,

it refers to how quickly people can learn to use something, how efficient they are while using it, how memorable it is, how error-prone it is, and how much users like using it” (Nielsen & Loranger, 2006, p. xvi). If a site is not usable, users will simply stop using it and look somewhere else for the information they need. The initial purpose of the site is lost when this happens (Nielsen & Loranger, 2006).

Multiple usability researchers including Nielsen (2004), Krug (2006), and Still (personal communication, January 27, 2009) recommend testing a site numerous times from the moment it is created. Ayers (2008) conducted a general usability study on the Texas Tech SRI site. Her findings encompassed multiple usability variables such as credibility, efficiency, effectiveness, and utility. The findings indicated overall satisfaction relating to the usability of the Texas Tech SRI site. She stated a different kind of usability test should be completed in order to gain further perspective on the site.

Quesenbery (2013) described five characteristics of interface usability: effective, efficient, engaging, error tolerant, and easy to learn. Barnum, Henderson, Hood, and Jordan (2004) employed these five characteristics in their usability study titled “Index Versus Full-Text Search: A Usability Study of User Preference and Performance.” The steps of their testing included heuristic evaluation, participant profile and recruitment, test scenarios, testing methodology, and information gathering. In order to retrieve as much information as possible from the study, the researchers gathered quantitative and qualitative data. This method allowed them to administer a pre-tasks, post-tasks, and satisfaction questionnaire and observe the users’ comments and facial expressions. A similar test plan was carried out for this study.

“Users must be able to use a website successfully, in a short amount of time, without any prior training or documentation” (Lazar, 2006, p. 7). It has been determined, through a quantitative study, that the information available on the TTTSRI website is organized in a usable fashion (Ayers, 2008). However, to fully determine the interface usability of the site, a mixed-methods study must be performed. Through these methods, the researcher was able to accurately determine the changes that must be made to the site after analyzing the comments and facial expressions of the users testing the TTTSRI site, therefore, making the site as usable as possible for sorghum researchers, producers, and others interested in obtaining information about the sorghum industry.

Conceptual Framework

The conceptual framework used to guide this study was MEELS (Texas Tech University English Department, 2012). MEELS focuses on:

- Memorability: If a user has used the system before, can he or she remember enough to use it effectively the next time or does the user have to start over again learning everything?
- Efficiency: Once an experienced user has learned to use the system, how fast can he or she accomplish tasks?
- Errors: How often do users make errors while using the system, how serious are these errors, and how do users recover from these errors?
- Learnability: How fast can a user who has never seen the user interface before learn it sufficiently well to accomplish basic tasks?
- Satisfaction: How fast can a user who has never seen the user interface before learn it sufficiently well to accomplish basic tasks? (Texas Tech English Department, 2012)

Purpose and Objectives

Usability is an important aspect of any information on the Web. The purpose of this study was to test and evaluate the usability of the Texas Tech SRI Website. The following objectives were investigated throughout the course of this study:

1. Determine the efficiency of the Texas Tech SRI Website as perceived by representative users and non-representative users.
2. Determine how error tolerant (to see how the design continued to function in the presence of faults) the Texas Tech SRI Website is as perceived by representative users and non-representative users.
3. Determine the learnability of the Texas Tech SRI Website as perceived by representative users and non-representative users.
4. Determine the satisfaction rate of the Texas Tech SRI Website as perceived by representative users and non-representative users.

Methodology

One method used to conduct usability testing is in a laboratory type setting. The Usability Research Laboratory at Texas Tech is an example of a usability testing lab. The lab is divided into two rooms—an observing room and a room in which the test is conducted. The two rooms are divided by a one-way mirror. Cameras and microphones are set up to record the users' actions while the observer watches from behind the mirror. In some instances, usability software such as Morae may be utilized. This software allows the observer to note observations while watching video of the user in real time. Morae also allows pre-tasks, post-tasks, and System Usability Scale (SUS) surveys to be sent to the user via the computer (Brooke, 1996).

In addition to the observer, a facilitator is needed to assist with testing procedures. He or she is responsible for all communication to the users including the introduction and explanation of scenario, user tasks and task completion, pre-tasks and post-tasks questionnaires, keeping the user on topic, and giving answers to the user(s) should the question fit the pre-defined criteria of what can be answered. Think-aloud protocol is an important part of usability testing (Lazar, 2006). With think-aloud protocol, the users are asked to talk out loud and reveal their thoughts while they navigate through the website and complete tasks. User tasks are formulated prior to testing. The tasks should encompass various areas of the website and encourage the user to make use of the site's navigational scheme and layout and should be arranged from simple to complex (Barnum, 2002). For the purpose of this study, both user groups were assigned seven tasks that ranged in difficulty.

A mixed-methods, or qualitative and quantitative, approach may be applied in usability testing (Nielsen, 2013). Data collected for this particular study included direct quotes from the users, basic demographics, computer and Internet usage, open-ended responses to the post-tasks questions, mouse clicks, error rates, and SUS survey answers and ratings. One or more of these data sources was used in analyzing the findings for each of the four objectives. The data collection process was conducted at the time of the test using Morae Recorder and Observer software. In order to prevent researcher-bias, further, in-depth analysis took place after all the testing was completed when a pair of researchers evaluated each video using Morae Manager. The two researchers went through the scripts identifying the ease and difficulty of the tasks. The tasks were coded based on the following scale by Dumas and Redish (1999): 0 = subtle or no problem; 1 = has minor effect on usability; 2 =

creates significant delay or frustration; 3 = prevents completion of task. The coding scale was decided upon prior to the testing and the researchers discussed how they felt each task should be rated. The researchers discussed each task score until a 100% consensus was reached. When differences arose, the researchers discussed until consensus was reached.

Establishing trustworthiness through transferability, dependability, triangulation and conformability were important aspects in this study. Establishing validity and reliability for the qualitative aspects were fairly simple. Verbatim transcription has been cited as being central to the reliability, validity, and veracity of qualitative data collection (Davidson, 2006). Trustworthiness is essential to the study because it gives the study credibility. Following are the four aspects of trustworthiness used to evaluate this study:

Transferability is the extent to which the study is able to make general claims about the world (Halldórsson & Aastrup, 2003). “The conventional term of this world would be external validity, generally described as a measure for generalizability of a question” (Guba & Lincoln, 1989). Dependability is conventionally termed reliability, which concerns the stability of the data over time. Dependability is achieved when replication of the same or similar instruments of the same phenomenon results in a similar measurement (Guba & Lincoln, 1989).

“Triangulation is a term originally more common in surveying activities, map making, navigation, and military practices” (Berg, 2009, p. 4). However, when used in social sciences, it was used to describe multiple data-collection methods used to evaluate a concept or construct (Berg, 2009). Conformability is seen as being parallel to the conventional views on objectivity, meaning that the findings represent the results of the inquiry and are not influenced by the researcher’s biases (Halldórsson & Aastrup, 2003).

Several drawbacks of usability testing are time, budget, and access. These issues go hand-in-hand when choosing which user group to test. Each user group chosen for testing was justified because they represent real users of the website. Contrarily, one non-representative group was chosen to further test the usability of the website. The researchers were interested in comparing representative and non-representative users and how they carried out the tasks given to them. It was important to keep in mind the accessibility of the user groups. The usability testing took place on campus. Therefore, emphasis was placed on the chosen users’ accessibility along with their ability to provide accurate and representative test results.

Of the pre-determined user groups, three groups were selected for participation in the study. Senior students enrolled in the Spring 2009 semester in the Department of Agricultural Education and Communications were recruited for the pilot test. For the actual testing, graduate students enrolled in the Fall 2009 semester in the Department of Plant and Soil Sciences and undergraduate students enrolled in the Fall 2009 semester in the College of Mass Communications were recruited. The plant and soil science students were identified as representative users, while the mass communications students were recognized as non-representative users of the website. The number of users tested depends on the complexity of the system being tested. Head (1999) pointed out that it does not take a large number of users to point out the navigational problems of a site. Complex websites consist of more complicated functions such as purchasing and in-depth searches. “The range of tests one can conduct is considerable, from true classical experiments with large sample sizes and complex test designs to very informal qualitative studies with only a single participant” (Rubin & Chisnell, 2008, p. 21). The ideal number of users for each round is three to four participants (Krug, 2006). Nielsen (2013) suggested five users for each round of testing. Lazar (2006) acknowledged that budget, time-

line, and access may limit testing. He stated testing with only five users is better than no testing at all.

Due to a low response from the plant and soil science user group, several follow-up e-mails were sent requesting participation. In order to ensure five users from each group, extra participants were recruited. Although the testing and users were on-campus, it was understood some participants may not show up or cancel on short notice. Testing was carried out in the usability lab during two different afternoon sessions. Five plant and soil science graduate students and five mass communications undergraduate students were tested.

Findings

Table 1 showcases age, gender, and classification by user group. The majority, 60.0% ($n = 3$), of PSS users were 20-24 years of age, one user was 25-29 years of age, and one user was 40-44 years of age; there was no mode for age within the PSS user group. All five, 100.0%, of the PSS users were male and classified as graduate students. All, 100.0%, of MCOM users were 20-24 years of age. The recorded mode for MCOM users was 22 years of age. The majority, 80.0% ($n = 4$), were female and one user was male. Also, 100.0% were classified as senior-level students.

Table 1

Demographic Characteristics of Texas Tech SRI User Groups (N = 10)						
Characteristic	PSS ($n = 5$)			MCOM ($n = 5$)		
	<i>f</i>	<i>f%</i>	Mode	<i>F</i>	<i>f%</i>	Mode
Age			20-24			20-24
20-24	3	60.0		5	100.0	
25-29	1	20.0		0	0.0	
30-34	0	0.0		0	0.0	
35-39	0	0.0		0	0.0	
40-44	1	20.0		0	0.0	
Gender			Male			Female
Female	0	0.0		4	80.0	
Male	5	100.0		1	20.0	
Classification			Graduate			Senior
Graduate	5	100.0		0	0.0	
Senior	0	0.0		5	100.0	
Junior	0	0.0		0	0.0	
Sophomore	0	0.0		0	0.0	
Freshman	0	0.0		0	0.0	

Table 2 reports the users' description of their computer skills and the hours per day they spend on the Internet. Prior to the beginning of the study it was assumed that all users would have basic computer and Internet skills. Table 2 validates that assumption. In regard to the description of their computer skills 60.0% ($n = 3$) of PSS users described themselves as skilled, one user described himself as slightly skilled, and one user, described himself as very skilled. Two PS3 users, 40.0%, spent 1-2 hours per day on the Internet while one user spent 1 hour per day, one user spent 4-5 hours per day, and one user spent five or more hours per day on the Internet.

The majority, 80.0% ($n = 4$), of MCOM users described themselves as skilled computer users. Only one MCOM user described herself as slightly skilled. The majority of the MCOM users, 60.0% ($n = 3$), spent 1-2 hours per day on the Internet. One user spent one hour per day and one user spent 4-5 hours per day on the Internet. The mode for perceived computer skills and hours per day spent on the Internet was the same for both user groups—skilled and 1-2 hours.

Table 2

Perceived Computer Skills and Hours Per Day Spent on Internet of Texas Tech SRI User Groups (N = 10)

Statement	PSS ($n = 5$)			MCOM ($n = 5$)		
	<i>f</i>	<i>f</i> %	Mode	<i>f</i>	<i>f</i> %	Mode
Describe your computer skills			Skilled			Skilled
Not very skilled	0	0.0		0	0.0	
Slightly skilled	1	20.0		1	20.0	
Skilled	3	60.0		4	80.0	
Very skilled	1	20.0		0	0.0	
Time per day spent on Internet			1-2 hours			1-2 hours
1 hour	1	20.0		1	20.0	
1-2 hours	2	40.0		3	60.0	
2-3 hours	0	0.0		0	0.0	
3-4 hours	0	0.0		0	0.0	
4-5 hours	1	20.0		1	20.0	
5 or more hours	1	20.0		0	0.0	

Objective one examined the efficiency of the Texas Tech SRI site as perceived by representative and non-representative users. In the context of usability, efficiency relates to the intuitiveness of the site. The site should allow users to quickly find the information they are seeking and should enable them to do so repeatedly.

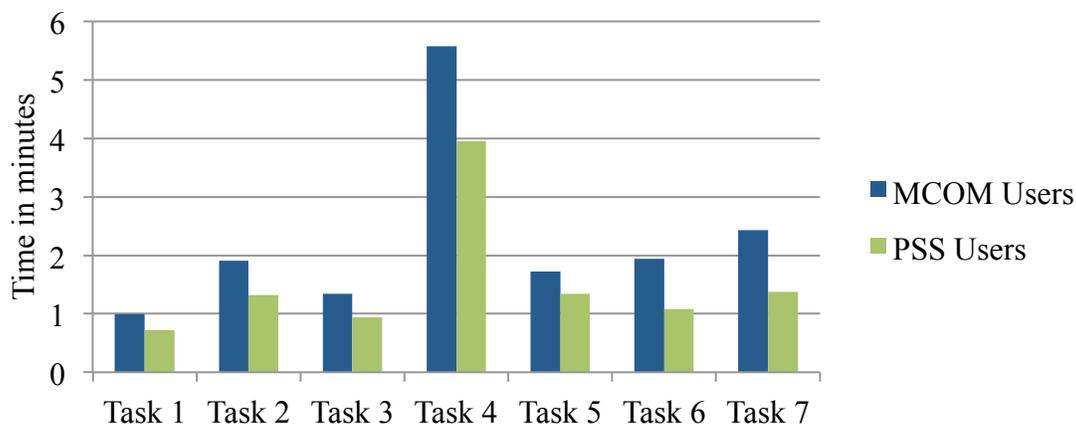
In order to determine the efficiency of the Texas Tech SRI site, the average time both groups spent on each task was recorded and the number of mouse clicks the users used to accomplish the tasks were compared to the number of mouse clicks required for task completion as established a priori. PSS users had a lower average of mouse clicks per task than MCOM users. Throughout the study, the researcher observed that MCOM users were more likely to quickly click and scan through pages of the site without taking much time to read the information located on the pages.

MCOM User 1: I'll click on some of these. I guess I can click on these links to see if that's what I need to find.

MCOM User 3: I'm just going to click one and see what it gets me. I'm just looking at these links and seeing if anything applies because I'm pretty sure I've been to all of them.

The time users spent on each task was also factored in to determine the efficiency of the site. Figure 1 shows the time MCOM and PSS users spent on each task.

Figure 1. MCOM and PSS users average time on task.



As illustrated in Figure 1, on average MCOM users spent more time on each task than the PSS users. As mentioned, the PSS users were chosen as representative users due to their familiarity with research and agriculture and the MCOM users were chosen due to their unfamiliarity in these areas. The difference in knowledge was noticeable various times during the usability testing. The following quotes help confirm these differences.

MCOM User 5: I have no idea how to even try to find that stuff. If I don't even know where to go, do I have to find it?

PSS User 5: It looks like it's going to give you a scholarly article but it doesn't. I think it's this

search over here, but what's coming up is not technically a scholarly article.

Knowledge of research, sorghum, and agricultural-related terminology seemed to help the PSS users complete the assigned tasks. For example, they tended to know exactly what a scholarly article was; whereas MCOM users had trouble identifying scholarly articles. Additionally, the average time on task for Tasks 4, 6, and 7 required the users to utilize the Research and Links tabs. These tasks had the greatest difference in average time between the PSS and MCOM users.

Objective two determined the relation of errors made during the usability testing by representative and non-representative users. In the context of usability, errors are defined as any action that does not accomplish the desired goal (Nielsen & Hackos, 1993). Errors were initially marked when a user began a task by clicking on the wrong page or chose a path other than the optimal one to complete a task. However, those errors were regarded as minor as long as the user completed the task successfully. Referring back to the definition of error in relation to usability, the researcher reported the number of errors that led to incompleteness of tasks. These errors may also be referred to as catastrophic. The tasks were scored on a scale of zero to three. A score of zero indicated the task was completed with subtle or no error. A score of one indicated a minor effect on usability occurred. Significant delay or frustration with a task received a score of two. Most severely, a score of three identified a failed or incomplete task.

The tasks that were more complex received a higher number of incomplete scores. Task 4, the most complex task, received the highest number of incomplete scores. This task asked the users to locate three research resources on sorghum improvement. The focus was to lead the users to the three areas of the research tab—ongoing research, archived research, and Texas Tech research. Almost half, 40% ($n = 4$), of the users did not complete this task. Three of the four incompleteness came from MCOM users who seemed frustrated and unsure of what Task 4 was asking them. They had the following responses in relation to what they would change about the site's research database:

MCOM User 2: Have the database grouped into categories based on date, location, context, etc.

MCOM User 3: I would definitely make the article link more noticeable. I would have given up on finding it if I were at home.

On several occasions throughout the test, users from both groups could not remain on their navigational path due to links that were not functioning correctly or pages that could not be found. Most often the "page cannot be found" error arose when users incorrectly used the search box at the top of the page, which will be discussed later. The broken link error on the site occurred when users tried to click directly on the "Research and Information Links" tab that was discussed earlier in this objective. PSS users were the only ones to comment on their experience with the broken links.

PSS User 2: Make sure the links are working.

PSS User 3: There were a couple of links that I found that were not found or not available. This was the only problem that I could find with the site navigation.

As mentioned earlier, users would occasionally encounter a “page not found error.” This error was due to improper use of the search function located on the site. The site features a database search box at the upper left-hand side of the page above the “Page Resources.” The search box allows users to enter keywords relating to sorghum from the home page instead of trying to find the database search nestled at the bottom of the archived research page. The text above the box reads “Sorghum Database Search.” The researcher noticed a trend regarding how users operated the search box throughout the testing. Many website, including the main Texas Tech site, offer a search function that allows users to type in any inquiry, specific or broad, and the entire site is searched for this information. The same is true with popular search engines. The search box only searches text located within the research database. Potential keywords users could search for are genetics, food, improvement, breeding, and sorghum.

On numerous occasions, users tried to repeatedly use the database search box as they would use a search function that explores the entire website. For example, when asked to find a keyword search area on the site for scholarly articles, several users typed in “scholarly articles” in the search box and received a “page not found error.” MCOM users employed the database search box more often than PSS users. When asked what they would change about the site’s navigation, the majority of MCOM users suggested making changes related to the search box and its functions.

MCOM User 2: I would change the link for people to find a place to search for scholarly articles. I would make it easier to locate broad categories such as: affiliated organizations, submitting a suggestion, and how to determine which types of research are being done (nationally and locally).

Errors regarding the usability of the Texas Tech SRI occurred in several different ways. The researcher felt it was important to distinguish between the errors of the website itself and the errors of the user navigating through the site. Both of these errors can have an effect on the overall usability of the site. Although errors did exist, the users were still able to complete the assigned tasks in a timely manner.

Objective three assessed the learnability of the Texas Tech SRI site as perceived by the same users. Users should be able to quickly understand the navigational layout and perform similar actions throughout the duration of the test. Simply put, learnability focuses on how easy the system is to learn.

In general, the navigational layouts of most websites consist of one or more of the following: a left-hand toolbar, a right-hand toolbar, or a toolbar at the top of the page (Nielsen, 2004). Due to their Internet use and computer experience, the users for this study had an existing familiarity with the navigational layout of websites. Prior knowledge was evident when users said, “I’m assuming,” “That’s where I think it should be,” and “Usually,” in relation to where certain information was located on the site. The main navigation for the Texas Tech SRI site is located down the left-hand side of the interface and is referred to as “Page Resources.” The navigational toolbar at the top of the site is not related to the Texas Tech SRI site, but offers choices associated with the university and the main campus website. Direct quotes from the users during testing and responses to post-tasks questions indicate familiarity with navigational layouts and the navigational layout of the Texas Tech SRI. These quotes also demonstrate the users’ learnability of the site:

MCOM User 3: First I'm going to look for links. I usually look on the top and then I go to the left side. Usually it's toward the bottom of the left-hand side. There's usually a bunch of contact info at the bottom.

PSS User 2: That's generally found under links on most web pages.

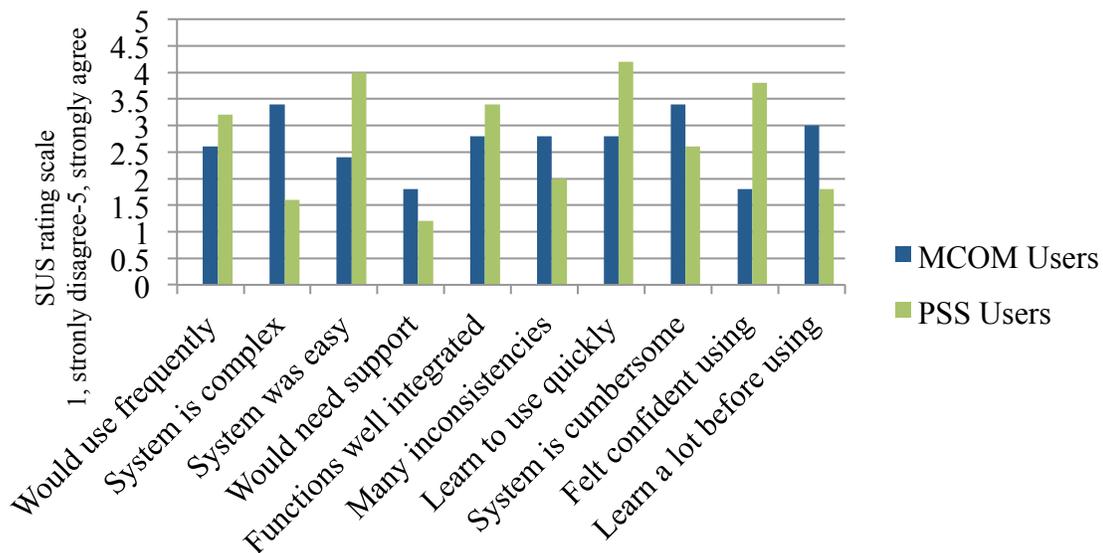
PSS User 3: I'll go back over to the page resources.

Throughout the tests, the users adopted the use of the "Page Resources" as the primary location for the beginning of each task. The only time this was not the case was in relation to the second task in which users were asked to find specific contact information. For this task, the users employed the top toolbar. Although this was not the optimal path, nine of the 10 users still completed the task.

In regard to learnability, overall, both the representative and non-representative users exhibited the skills necessary to navigate their way through the usability test. They were able to use the navigation scheme and layout available to continuously guide themselves through the Texas Tech SRI site.

Objective four determined the satisfaction of the representative and non-representative users during their interaction with the Texas Tech SRI site. Satisfaction refers to how pleasant the system is to use. Simply put, do users like using the system? User satisfaction with the Texas Tech SRI site was measured by using the results from the SUS survey taken by each user at the end of their test. This 10 question survey is used to measure the users' opinions of the site. The results from the SUS survey are shown in Figure 2.

Figure 2. Average SUS survey results by question.



Noticeable differences existed between the MCOM and PSS responses. The biggest differences in agreement related to questions regarding users' feelings about their use of the site. Case in point, MCOM users felt the system was more complex and PSS users felt that they system was easier to use. Also, PSS users disagreed with the question asking if they felt they would have to learn a lot before using the system. MCOM users responses were neutral in regard to the same question. Ac-

According to the survey, one of the biggest differences in MCOM and PSS users was their confidence level in using the site. PSS users indicated they felt confident using the system. An important area of the survey to note is the first question: I would use this system frequently. Only a small difference existed between MCOM and PSS users' response to this question. The average SUS score from each user group was also collected. MCOM users gave the site an average satisfaction rating of 45%, while PSS users gave the site a 73.5% satisfaction rating.

MCOM and PSS users gave the following responses when asked about their overall experience with the Texas Tech SRI site:

MCOM User 4: Well I have never been on this particular website so it was a little bit confusing at first glance but overall I feel that the page resources which are located on the left hand side of the screen helped me during my navigation.

PSS User 5: The website was easy to navigate. The panel on the left side of the page made everything easy to find. Contact info was the hardest to find because it was not under the link at the top of the page that said 'Contact.'

Conclusions/Implications/Recommendations

Overall, the findings indicated the representative user group, plant and soil science graduate students (PSS), had a more general understanding of the Texas Tech SRI site than non-representative group of mass communications undergraduates (MCOM). The PSS users' knowledge of research and agriculture likely helped them relate to the site more than MCOM users. This conclusion is supported by the following observations.

Objective one sought to determine efficiency: when users experienced the system, how fast could they accomplish the tasks? To determine efficiency, the average time both groups spent on each task was recorded and the number of mouse clicks the users used were compared. PSS users had a lower average number of mouse clicks per task than MCOM users. While the study shows that overall, MCOM users had a higher number of incomplete tasks than PSS users, the PSS users were not error free. However, because of PSS users familiarity with research articles and libraries, their efficiency may have been improved. This shows that once an experienced user has learned to use the system, he or she is more efficient when accomplishing tasks (MEELS efficiency).

MEELS considers objective two errors to be another part of usability testing. Looking at the error rate in objective two, errors were regarded as minor as long as the user completed the task. Users were able to complete the task even with errors, so the website is still able to function with the errors. The researcher reported the number of errors that led to incompleteness of tasks, and the tasks were scored on a scale of zero to three. The tasks that were more complex received a higher number of incomplete scores. Almost half of the users did not complete task 4. The researcher realizes that the question could have been phrased differently, and there may have been a potentially higher number of completion scores.

Objective three assessed the learnability (MEELS learnability) of the Texas Tech SRI site as perceived by the same users. Learnability was easy to establish because none of the users had ever seen the TTSRI website before. Most websites are set up similarly: header, left or top navigation, and more information at the bottom of the page. Users were able to navigate the website based on prior website experience; the site was learnable.

Continuing with objective three, both groups quickly learned and continuously used the "Page Resources" navigation to help guide them through the site. However, the average time PSS users

spent on each task was less than MCOM users. In regard to errors, both groups did have frustrations with several tasks or failed to complete a task. Overall, MCOM users received more incomplete task scores than PSS users. The SUS survey results indicated a higher, overall satisfaction (objective four) rate among PSS users than MCOM users. When looking at MEELS as a conceptual framework, PSS likely received more satisfaction from the TTTSRI website, because the content was relevant to the user.

These findings confirm that the Texas Tech SRI site is beneficial to representative users—those with knowledge of research and agriculture (objective four). There was a significant difference in MCOM users and PSS users. According to MEELS principles, it is low on the satisfaction scale because users who had never seen the website struggled to accomplish some of the basic tasks. Representative users will find a higher level of satisfaction, higher efficiency, and less errors. Other industry professionals wishing to conduct a usability test need to ensure that the audience is representative; however, non-representative groups could ensure that your website is easy to use for the representative user group. If you can only select one group, it is good to use the target audience for your representative users.

After the conclusion of this study, several recommendations are provided for future testing of the Texas Tech SRI site. First and foremost, before future research is conducted, adjustments should be made to the site based on the findings and recommendations from this study. The mixed-methods approach employed for this study provided adequate and accurate data. The qualitative information gathered from direct quotes and post-tasks questions was beneficial in showcasing the users' feelings, positive and negative, during testing. Quantitative information retrieved from the recruitment form, pre-tasks, and SUS surveys gathered important information such as the users' demographics, computer skills, familiarity and use of databases, use of agricultural and sorghum-related websites, and feelings related to the overall usability of the Texas Tech SRI site. The data gathered from both methods of collection was instrumental in presenting the findings of the usability study. Applying both methods to future studies will help provide solid and informative results. Additionally, future researchers should follow usability recommendations for field testing or site visits.

This study highlights the importance how essential it is to test on representative user groups. The Internet is full of websites, loaded with vast amounts of information. If the site is difficult to use or understand, the user will search elsewhere for the information (Krug, 2006). Knowing that each site is competing for users means that each design flaw ultimately means a loss of business. Equally important are the users we are testing. If they will not be the ones ultimately be using the product, how will the researchers know how to better adapt for the intended audience? Usability testing will become more relevant as the number of sites online increases.

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A Case Study of the Risk and Crisis Communications Used in the 2008 Salmonella Outbreak

Ashley Palmer, Erica Irlbeck, Courtney Myers, and Todd Chambers

Abstract

The *Salmonella* outbreak of 2008 was one of the largest foodborne illness outbreaks in the last 20 years. Tomatoes were initially pinpointed as the source of the outbreak, and the tomato industry suffered losses of \$100 million in 2008. Eventually the FDA was able to trace the outbreak to imported jalapeño peppers, but this discovery was too late to recover losses for the tomato industry. The purpose of this study was to examine the risk and crisis communication efforts taken by public relations practitioners in the produce industry during the 2008 *Salmonella* outbreak to determine which efforts were successful and which were ineffective. This qualitative case study used the interviews of nine public relations practitioners in the tomato industry to collect the information needed to fully explore the research objectives of the study. The study found that all of the public relations practitioners attempted to communicate effectively with their audiences despite the negative nature of the 2008 *Salmonella* crisis. Additionally, the practitioners revealed their thoughts and perceptions about the outbreak, the media, and the communications used during the outbreak, which provided valuable insight into the communication efforts of an organization during a crisis.

Keywords

risk & crisis, foodborne illness, *Salmonella*, Excellence theory

Introduction and Theoretical Framework

The 2008 *Salmonella* outbreak in jalapeno peppers was the largest of its kind in the past 20 years. The *Salmonella* Saintpaul strain sickened more than 1,400 people in 43 states between April 16 and August 11, 2008 (Centers for Disease Control and Prevention, 2008). While the outbreak was originally linked to certain types of raw tomatoes, it was later determined that the outbreak was caused by imported jalapeño and Serrano peppers from Mexico tainted by contaminated irrigation water (CDC, 2008). According to the CDC website, at least 40,000 cases of *Salmonella* are reported annually, but the actual number of cases may be up to 30 times greater than those reported, with an estimated 400 deaths a year caused by *Salmonella*.

Consumers are more concerned about the safety of their food than ever before, especially with the increase in news stories about contamination and foodborne illness outbreaks (Tucker, Whaley, & Sharp, 2006). The 2008 *Salmonella* outbreak heightened consumer fears about fresh produce and caused consumers to avoid tomatoes (Bensen, 2008). These actions led to the loss of millions of dollars in the tomato industry, despite industry-wide efforts to calm consumer fears. However, research on the 2008 outbreak found many consumers were confused about the FDA's messages as the warnings instructed consumers to avoid certain types of tomatoes, but consumers ultimately avoided tomatoes altogether, costing the tomato industry millions (Cuite et al., 2009).

According to Thompson (2008), losses to the tomato industry from the impact of the 2008 *Salmonella* outbreak were estimated at \$100 million. While the CDC maintains that tomatoes may

have been an initial source in the outbreak, evidence of contamination in tomatoes was never found (Thompson, 2008). Reggie Brown, vice president of the Florida Tomato Growers Exchange, said he felt the blame on tomatoes would have been lifted sooner had the FDA utilized tomato growers, shippers, and packers to collect information (Thompson, 2008).

Taylor, Kastner, and Renter (2009) reported that consumer fears and confusion about tainted tomatoes led to the loss of thousands of acres of fruit in Florida just as they were about to be harvested. Many tomato farmers were unable to sell or harvest their tomatoes due to lack of demand. Although California and Georgia farmers suffered from this lack of demand, they had already harvested their tomatoes and did not have thousands of tomatoes still in the field as Florida farmers did (Blake, 2008). In addition to the financial loss, farmers were also concerned that consumers had lost confidence in the tomato industry and tomato farmers alike (Blake, 2008). The length of the outbreak and the lack of being able to pinpoint the source of the outbreak hurt the tomato industry, as consumers stopped purchasing tomatoes during the outbreak and were slow to return to purchasing them after the warning on tomatoes was lifted (Taylor et al., 2009).

Risk and Crisis Communications

The role of crisis communications is to deliver information to various audiences to recover from a crisis, prevent a future crisis, or uphold a certain reputation (Ferrante, 2010). An organization should always be prepared for a crisis, even if they have never had to face one. Tench and Yeomans (2006) identified three crucial steps in crisis preparation: conducting a crisis audit, preparing a crisis management plan or manual, and practicing crisis training.

In doing a crisis audit, an organization should determine its strengths, weaknesses, and vulnerabilities while also identifying key stakeholders, a crisis management team, and potential crisis situations (Heath & Coombs, 2006). According to Tench and Yeomans (2006), a crisis manual or crisis communication plan will include contacts for key stakeholders, media contacts, key audience messages, crisis team members and responsibilities, and brief lists of tasks to be performed in the face of a crisis (Henry, 2000).

Ferrante (2010) listed seven steps for developing an effective and appropriate risk and crisis plan: involve the public; plan and evaluate efforts; listen to public concerns; be honest and open; collaborate with other credible sources; meet media needs; and speak clearly and with compassion. Additionally, an audience must feel that the organization cares, especially if death or destruction is involved. Having a risk and crisis communication plan in place is especially important for all agricultural communications practitioners given the technical nature of the industry, frequent misunderstanding of the industry by the general public, and past instances of agricultural crises (Fry, 2012).

During a crisis, a public relations practitioner's primary responsibility is communications. Although many in agriculture tend to avoid the media (Eyck, 2000), it is important to communicate with both the media and the organization's stakeholders (Coombs, 2007). Ulmer, Sellnow, and Seeger (2007) proposed 10 lessons to communicate during unintentional crises—events that create a great degree of uncertainty amongst stakeholders as well as the public. Foodborne illness outbreaks fall into this category: 1) accept that a crisis is unexpected and can occur rapidly; 2) the response of an organization to a crisis should be unique to the crisis at hand; 3) the threat of a crisis is perceptual; 4) communicate immediately and often throughout the crisis, even if the organization does not have critical information; 5) do not withhold or alter any information to the public in an attempt to be ambiguous; 6) prepare to defend evidence or facts presented during the crisis; 7) operate with

good intentions, otherwise recovery from the crisis is nearly impossible; 8) believe that the crisis responsibility relies with the company; 9) a case should be presented as to who should take the crisis responsibility and why; 10) examine business practices during and after the crisis.

A crisis communication plan enables an organization to be proactive which, in turn, puts the organization in a position to be in control when a crisis strikes, as an organization moves along in a crisis situation, the plan should allow it to adapt to any and all changes while also protecting itself (Leighton & Shelton, 2008).

Excellence Theory

This study was guided by the concepts put forth by two-way symmetrical communications, or the excellence theory (Grunig & Hunt, 1984). According to Grunig, Grunig, and Dozier (2002), public relations is a function of management that describes how organizations and stakeholders interact with one another during the decision making process. Grunig (1992) explained that the effectiveness of an organization is determined in part by the organization's ability to identify key stakeholders, and develop and maintain a mutually beneficial relationship with said stakeholders. Stakeholders can affect the organization's ability to achieve its goals and in turn, an organization can have the same affect on stakeholder goals (Grunig et al., 2002).

Symmetrical communications between an organization and its stakeholders is key when developing organization relationships (Grunig et al., 2002). Symmetrical communication is a two-way process that "practices equal communication between the organization and the audiences" (Baldwin, Perry, & Moffitt, 2004, p. 319) where an organization is willing to alter its practices based upon audience research to benefit both the organization and its audiences.

Purpose and Objectives

The purpose of this study was to examine the risk and crisis communication efforts taken by public relations practitioners in the produce industry during the 2008 *Salmonella* outbreak and determine which efforts were successful and which were not.

The following research objectives were used to guide this case study:

1. Determine public relations practitioners' opinions of the effectiveness of their organization's communication efforts during the 2008 *Salmonella* outbreak.
2. Explore the lessons public relations practitioners' learned as a result of their involvement in the 2008 *Salmonella* outbreak.
3. Describe public relations practitioners' perceptions of mass media coverage during the 2008 *Salmonella* outbreak.
4. Understand risk and crisis communication actions taken by companies impacted by the 2008 *Salmonella* outbreak.

Method

This research employed case study methodology "to gain an in-depth understanding of the situation and meaning for those involved," (Merriam, 1998, p. 19). Yin (2003) explained that qualitative data cannot be described through numerical data, but should be described by events, perceptions, attitudes, and categorical data. Miles and Huberman (1994) found that in defining a case study, a researcher must have clearly defined boundaries that state what will and will not be studied.

The case for this study was the 2008 *Salmonella* outbreak and the public relations practitioners

who were directly involved with communication efforts during the outbreak on behalf of a company or organization in the tomato industry. Practitioners who were not involved in communication efforts related to the tomato industry during the 2008 outbreak or companies not directly impacted by the outbreak were excluded from this study, as were other foodborne illness crises.

The produce industry is relatively small, and in the search for contact information, the researcher found that only a few regional grower organizations publish any contact information. This made it difficult for the researchers to find names and contact information for the tomato growers or their grower organizations. Participants were located through the Google search engine and various databases available through the university library, using these search terms: 2008 *Salmonella* outbreak, tomato growers, tomato associations, produce associations, and tomato group. Potential interview participants were contacted by e-mail or telephone to build rapport, provide study information, and request a telephone interview. Subjects who agreed to participate in an interview were then sent a consent form by e-mail. In all, nine public relations practitioners or company executives that served as the public relations officer during the 2008 outbreak were interviewed for this study. In addition, the researchers asked each participant if they would suggest anyone else to interview for the study. After five interviews, the participants were naming the same people; therefore, the researchers were confident that most of the public relations practitioners in the tomato industry were reached.

This study utilized a semi-standardized interview (Berg, 2009), where the interview questions were composed ahead of time based upon the research objectives of the study. During the interviews, the researcher asked additional, non-scripted questions where probing was needed to better suit the interviewee. The interview guide was categorized by demographic questions, 2008 *Salmonella* outbreak questions, media questions, and risk and crisis communication questions.

Telephone interviews are more practical, allow greater uniformity in interview delivery, and allow researchers to contact individuals in other areas when travel to the interviewee is not possible (Charmaz, 2003). The interviews for this study were conducted by telephone because travel was not funded for this study, nor would time allow for travel to the various locations of interviewees across the United States.

Interviews averaged 30 minutes in length, and all were recorded. The researcher transcribed each interview as soon as possible after the interview, and in keeping with the confidentiality guidelines proposed by Berg (2009); only one researcher transcribed data. The data were then coded using NVivo qualitative data analysis software. Each of the nine participants were assigned a pseudonym to protect anonymity.

To achieve trustworthiness, the researcher triangulated data with findings from a previous study on the *Salmonella* outbreak. The researcher also employed member checks, addressed bias, and kept an audit trail to ensure transferability (Merriam, 1998; Niekerk & Savin-Baden, 2010). The researcher has a background in both agriculture and communications, and tended to sympathize with agricultural producers. While the researcher has no direct ties to the produce industry, the researcher has strong feelings about the agricultural industry and its role in supplying food to the United States and other countries.

Findings

Nine individuals were interviewed for this study. Four worked in public relations or issues management for trade organizations; two were food safety experts at distributions facilities; one was a CEO of a packing, growing and distribution company; one was a public relations practitioner at a non-profit organization; and one was the director of communications for a grocery chain in the South.

Findings in Relation to Research Objective One

Research Objective One sought to determine public relations practitioners' opinions of the effectiveness of their organization's communication efforts during the 2008 *Salmonella* outbreak. Four main themes emerged from the data in relation to Objective 1: communication goals, effective communication, ineffective communication, and organization success during the 2008 *Salmonella* outbreak.

Many of the subjects reflected their concern for both public health as well as stakeholder well being in their communication goals for their message platforms used while mitigating the 2008 *Salmonella* outbreak. Many of the participants emphasized the need of the organization to get information out quickly to consumers, stakeholders, and industry counterparts, so that all concerned would be able to make educated decisions.

MAUREEN (Director of communications for trade organization): People do have a right to know certain things, and as a public relations person, the best you can do in a crisis is to deliver good, accurate, timely, correct information to the media so they will get their story right.

Brianne touched on relationships with media, but also stated that positive relationships with regulators and the FDA aided in her company's ability to effectively communicate with their audiences.

BRIANNE (Issues management at nonprofit): I think our constant engagement with the media, the constant availability to Congress, working and having good relationships with FDA so we got separated out quickly. So we were part of the wave, but we were able to separate ourselves out. I think those efforts were successful, yes.

Participants were asked what communication efforts were ineffective or were not as successful as the company or organization had hoped. Many of the subjects had similar responses to Brianne's, their organization did the best possible, given the enormity of the crisis.

BRIANNE (Issues management at nonprofit): In a crisis nothing ever goes as planned. There's nothing that I would say didn't work, because of what we were up against, you know, we were up against this huge tide.

Overall, the practitioners interviewed said their company or organization handled the crisis "as well as conditions would permit," said ORSON, given the complexity and nature of the 2008 *Salmonella* outbreak.

Findings in Relation to Research Objective Two

Research Objective Two sought to explore the lessons learned by public relations practitioners as a result of their involvement in the 2008 *Salmonella* outbreak. Two themes emerged: be proactive and be willing to make changes.

An organization must be willing to communicate with its publics. If not, the organization will sustain even more damage.

SHELDON (Director of communications for grocery chain): Don't ever try to hide. No matter

how much you would like to, and how much you would like to say no comment that's the worst possible thing you can do. The best possible thing you can do is to get out and be public with the situation and be open and honest with the communication as quickly as possible with as much accurate information as you can provide.

BILL (Food safety vice president at distribution company): You cannot be intimidated by the media. You have to be on the offensive if there are issues that are pertaining to the products that you are producing. It is your image out there, and you have to do image control.

About half of the interviewees reported that no changes were made to their respective organizations in light of the crisis, but policies and procedures were reviewed to determine the effectiveness of the measures taken by the organization during the 2008 crisis. One change that some of the interviewees also said they intended to make was to improve communication with the FDA. The majority of the subjects stated that this crisis highlighted the need for improved communications with the agency, especially since, as ORSON stated “nothing we said in the public arena was going to be accepted as factual,” meaning that the public believed information from the FDA, but not always from the produce associations. However, MAUREEN said the FDA and CDC could work on their communications strategies as well, “I think we felt that we were being framed negatively by the government, by the FDA. The FDA and CDC have some ways to go when it comes to a crisis like this.”

Findings in Relation to Research Objective Three

Research Objective Three sought to describe public relations practitioners' perceptions of mass media coverage during the 2008 *Salmonella* outbreak. Two themes emerged: perceptions of media coverage and consumer interpretation of media messages.

The perceptions of practitioners about the national media coverage during the 2008 *Salmonella* outbreak varied greatly. Some participants praised the quality of the media coverage, while others, like Bill, found the coverage to be equivalent to “a feeding frenzy,” based upon inaccurate information and facts. The participants who praised the media coverage found the coverage to be fair even though the subject matter was negative by nature.

MAUREEN (Director of communications for trade organization): The media played an integral role in the investigation and in public health; they did their job. I don't think we have any complaints about how the media reported this story because we spoke with them.

On the other hand, some of the interviewees were very angry at the national media coverage of the outbreak and expressed strong opinions about the information they felt was falsely portrayed in the media coverage.

TIM (director of food safety at a re-packing facility): I have to hold back on some profanity here, I think it was just bizarre. It was just awful. Again, anybody who had any produce experience would have known that there was no way that [those] tomatoes had anything to do with the outbreak. It would have just been common sense.

When interview participants were asked how they thought consumers interpreted the messages

put out by the national media, the overwhelming response dealt with consumer confusion.

BRIANNE (Issues management at nonprofit): There was confusion at a lot of different levels from FDA's trace back and the way they communicated with consumers on the outbreak was extremely confusing. FDA had maps, blue and red maps, that showed where outbreaks were, there are numerous varieties of tomatoes so they would list the varieties that weren't involved, could be involved, and the consumer just threw up their hands and said forget it, I won't purchase anything right now.

Findings in Relation to Research Objective Four

Research Objective Four sought to understand the risk and crisis communication actions taken by companies impacted by the 2008 *Salmonella* outbreak. Three themes emerged from the data: communication actions, crisis communication plan, and advice to others.

With the onset of a crisis, organizations are required to immediately jump into a crisis in order to mitigate damages and get their messages out. Many of the practitioners stated that they immediately activated their crisis communication plans and teams. Maintaining communication with all pertinent audiences and stakeholders was top priority for all of the participants and many used a variety of methods to maintain these communications.

Of the nine public relations practitioners interviewed, only two reported not having or using a crisis communication plan. The other seven practitioners all had a plan for their organization that was in place before the crisis and was used to guide each through the 2008 *Salmonella* outbreak.

Participants shared their opinions on important components in their organization's plan. Many of the practitioners indicated that an organization should be proactive in looking for signs of risk, and should be ready to act on those risk factors.

BRIANNE (Issues management at nonprofit): I always hope for the best but we are always prepared for the absolute worst...putting systems in place if the worst happens so you are ready to execute.

SUSANNE (vice president of communications at trade organization): Know where your potential weaknesses are, plan for those weaknesses to mitigate them from happening. Create a crisis team, create a crisis plan. Make a living document, don't sit it on the shelf and say, oh we did that job and move on to 87 different things.

Conclusions

When examining the responses of all of the interviewees, all participants felt their organization handled the 2008 *Salmonella* crisis in the most efficient and effective way to the best of their capabilities. None of the interviewees reported any large-scale mismanagement on the part of their organization. Although all of the organizations and companies represented by practitioners in this study were negatively impacted by the crisis, none of interviewees solely faulted the media for the losses sustained during the 2008 *Salmonella* outbreak. The media coverage was acknowledged as a contributing factor, but not all of the practitioners found the media coverage to have a negative impact on their organization.

Grunig et al. (2002) stated that an organization must be able to engage in two-way sym-

metric communications with stakeholders. An organization that incorporates this communication style and is able to maintain a beneficial relationship with stakeholders is practicing excellent communications (Grunig & Hunt, 1984). Many of the goals discussed by the participants incorporated two-way symmetrical communications in order for the organization to be effective and successful in their efforts. All of the participants in this study did this through communicating with stakeholders, and then adjusting messages based on stakeholder influence (Grunig and Hunt, 1984).

Ferrante (2010) found that an effective crisis communication message must be clear and concise, especially if the audience is expected to take certain actions. Many consumers became frustrated with the mixed messages they received, and stopped purchasing and eating tomatoes, or ignored the messages all together (Cuite et al., 2009). Based upon the findings and the literature, many participants believed some of the messages communicated by the FDA during the 2008 *Salmonella* outbreak lacked of clarity, which may have contributed to some of the losses suffered by the tomato industry. However, most of the participants felt their communication efforts with their stakeholders were effective.

Ulmer et al., (2007) defined a foodborne illness outbreak as an unforeseeable, unavoidable crisis that creates high levels of uncertainty. Due to the nature of the *Salmonella* outbreak, all but one of the participants said they abided by most of the lessons outlined by Ulmer et al., (2007) (communicate immediately and often, do not withhold information, prepare to defend facts, operate with good intentions, examine business practices during and after the crisis) to reduce uncertainty in a foodborne illness outbreak.

Additionally, all of the practitioners said their organizations communicated as effectively as possible given the nature of a crisis, which is supported by the findings of Grunig et al., (2002). Although the outcomes of the 2008 *Salmonella* outbreak were unfavorable for the tomato industry, these outcomes were unpredictable and were not the result of failed communication efforts on the part of the tomato industry. Many of the participants said they used their existing media contacts and answered any questions from reporters.

Ulmer et al., (2007) found that organizations can only be successful in a foodborne illness outbreak if it examines its practices and communication efforts after the crisis. The majority of the practitioners reported going over their practices and procedures after the 2008 *Salmonella* outbreak, which was important in determining effective and ineffective communication efforts.

The perceptions of the participants about the mass media coverage were mixed. Some said the media coverage was extremely negative while others found the media coverage was fair to the tomato industry even though the message was negative, as evidenced by MAUREEN:

“The media played an integral role in the investigation and in public health, they did their job. I don’t think we have any complaints about how the media reported this story because we spoke with them.”

The researcher observed that those practitioners who said the national media coverage was fair and accurate had positive interactions and communications with the media, whereas those practitioners who had limited or no contact with the media generally had negative perceptions of the media coverage. All of the participants concluded that consumer interpretation of the mass media messages was that of mass confusion. Consumers were confused about which tomatoes were safe to eat, and which were not, and when faced with this confusion, consumers either stopped consuming tomatoes or completely disregarded the messages (Cuite et al., 2009). Due to those actions taken by consumers, the tomato industry suffered losses both in and out of the field.

Tench and Yeomans (2006) described crisis management as the preparation of an organization before a crisis, the management of the crisis, and the re-establishment of the organization after the crisis. The subjects outlined the communication actions taken by their organizations that were developed to meet their organization's needs and communicate effectively. Almost all of the subjects referenced the following communication actions, which fit with Tench and Yeomans' (2006) recommendations:

- Information gathering
- Notification of stakeholders
- Activation of crisis communication plan and or crisis communication team
- Dissemination of messages
- Maintenance of communications with stakeholders, especially the media

Recommendations

For practitioners

Each of the participants were asked what advice they would give to other public relations practitioners who might face a similar crisis based upon experience with the 2008 outbreak. The findings to this response, as well as those of research objective two, allowed the researcher to develop an easy-to-use list of do's and don'ts pertaining to communication during a foodborne illness outbreaks and possibly other food related crises (see Table 1). This list can easily be utilized by practitioners when developing a risk and crisis communications plan.

Table 1

Do's and Don't's of crisis communications during a foodborne illness outbreak

Do	Don't
Have a crisis communication plan	Think it can't happen
Monitor for potential risks	Ignore the warning signs
Practice two-way communications	Be ambiguous
Provide timely and accurate information	Lie or be dishonest
Collaborate with industry counterparts	Chastise government agencies
Develop and maintain governmental relationships	Ignore key audiences or stakeholders
Conduct a crisis audit/mock drill	Hide from the media
Reach out and utilize the media	Stay silent
Keep up with important contacts	Downplay public health

Some of the proposed guidelines are applicable to crisis situations in any industry, but due to the unique nature of a foodborne illness outbreak, the researcher believes these guidelines as a whole are especially pertinent to the food industry. Many of the participants mentioned the unusual nature of the 2008 *Salmonella* outbreak, in part because of the length of the outbreak, but also because tomatoes were never cleared as a possible source of contamination. These findings make it imperative for those in the food industry seek out media outlets to provide consumers with their messages. Although it is the tendency of those in the food and agriculture industry to shy away from media sources, getting out their messages and information will aid in reducing the damages suffered by an industry during a foodborne illness outbreak.

Perhaps the most important recommendation that could easily be implemented into any risk and crisis communications plan is for practitioners to develop contacts with the media. Practitioners who had positive impressions of the media during the 2008 crisis tended to have an established relationship with reporters.

In addition to developing contacts with the media, the researchers recommend creating better lines of communication with governmental agencies. Although this study did not probe into industry relations with the FDA and CDC, the researcher could not ignore the resentment and anger many of the interview subjects portrayed in their interviews toward the FDA especially, regarding the 2008 *Salmonella* outbreak. ORSON expressed his feelings concerning the FDA.

ORSON: You have the public stakeholders, which is our customers and our customer's customers. Then you have the governmental stakeholders. Well the public stakeholders and the and the media that provides information to them, or the mediums, only listen to the government, and the government was providing inaccurate, untimely, information. So we had to focus our efforts on the governmental agencies because nothing we said in the public arena was going to be accepted as factual.

This research study found that practitioners were also frustrated with the confusion surrounding the messages put out by the FDA. Irlbeck (2009) found that the FDA lost some credibility due to its communication efforts and the length of time it took them find the true source of the contamination during the 2008 outbreak. A study conducted by the Rutgers Food Policy Institute found that consumers were confused by the FDA's messages, and the confusion led to additional losses in the tomato industry (Cuite et al., 2009).

The food and agriculture industries tend to shy away from the media, and often the media look outside of the industry for interviews and information (Eyck, 2000). If practitioners are able to improve communication efforts with governmental agencies, it could aid both parties in disseminating united messages to consumers and could also aid investigative efforts in future possible crises. In doing this, produce industry officials would hopefully be able to prevent some of the unnecessary losses sustained by the tomato industry during the 2008 *Salmonella* crisis.

Based upon previous literature and the findings from this study, the researcher suggests using the guidelines presented in this case study to guide practitioners in planning for a future crisis. Given the information garnered from the literature review and the suggestions of the participants, the researcher suggests following these steps in developing a plan:

1. Identify a crisis communication team and duties of each member of the team should the orga-

- nization become involved in a crisis (Ulmer et al., 2007).
2. List all stakeholders and audiences that the organization communicates with
 3. Gather contact information for stakeholders, board of directors, media sources, and any other contacts that may be a valuable resource during a crisis (Ferrante, 2010).
 4. Develop key messages to disseminate to stakeholders and goals of the communication efforts to be used. Also determine how these messages will be dispersed.
 5. Identify trustworthy media sources to be contacted at the beginning of a crisis to tell the organization's side (Coombs, 2007).
 6. Conduct a crisis audit or mock drill at least once a year to test all of the materials and methods and to check for possible updates.
 7. Be on the offensive, be monitoring for a crisis and be ready to respond at the beginning of a crisis with timely and accurate information to all stakeholders, including the media.

Based upon the findings of this study, these steps, and the provided guidelines are important to communicate effectively with all stakeholders and may aid an organization in mitigating the damages suffered during a crisis, such as profit losses.

For Future Research

This case study researched the risk and crisis communications taken by public relations practitioners during the 2008 *Salmonella* crisis. To gain a more thorough understanding of the depth of the damages sustained by the tomato industry during the 2008 *Salmonella* outbreak, a study is needed to determine the long term impacts the 2008 outbreak had on the tomato industry. A study of this nature would possibly provide information that would aid in the creation of a model for practitioners to use during a food related crisis that took into account long-term effects on an industry.

To further understand the risk and crisis communications utilized during a crisis, further research needs to be conducted pertaining to other food related crises in order to generalize these findings beyond this study. Additional research would be especially pertinent to this issue when examining more recent cases of foodborne illness outbreaks, such as the 2010 *Salmonella* outbreak in eggs or the 2009 peanut butter recall, also due to *Salmonella*.

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Competencies Needed by Agricultural Communication Undergraduates: An Academic Perspective

A. Christian Morgan and K. Jill Rucker

Abstract

Communication competencies and skills needed by agricultural communication graduates are constantly changing because of the dynamic nature of the technology used by communication professionals. Although several studies have been conducted in recent years that engaged alumni and industry professionals to determine agricultural communication program graduate competencies, no studies were found which sought out these competencies from the perspective of faculty. Determining the communication competencies faculty deem important will help identify gaps between industry needs and academic perceptions. This Delphi study was conducted to determine the competencies agricultural communication faculty believe are needed for agricultural communication program graduates. Nineteen participants from 14 universities came to consensus on 79 statements. The ten statements receiving the highest level of agreement were “Ability to communicate in writing,” “Ability to write clearly, concisely, tersely, and to get to the point,” “Highly developed writing skills,” “Good writing skills,” “Professional competence - able to practice effective communication - write / speak correctly, clearly in a style and form that is expected of the audience, profession they will serve,” “Critical thinking,” “Grammar,” “Ability to communicate, both orally and in writing, ability to understand conceptual thinking and how it relates to communication,” “Ability to find and use information sources both on and off the internet,” and “Ethics.” This study provides additional information to help address Agricultural Communications National Research Priority Area 4: “What are the skills, competencies, and resources necessary to prepare professional agricultural communicators for success in various aspects of agricultural knowledge management?”

Keywords

Curriculum, Delphi, undergraduate, faculty, communication

Introduction

Agricultural communication professionals are defined as “individuals who spend the majority of their professional time engaged in communication-related activities related to food or agriculture” (Mullett, 2006, p. 21). This profession has a long and rich history, and over the years it has witnessed communication mediums change and diversify. Print was the standard communication medium at the beginning of the last century. However, the introduction of the radio allowed nearly instant broadcast of verbal information, closely followed by television, which added moving images to audio. As electronic technology advanced, digital forms of information storage became available: magnetic tapes, floppy disks, and CD-ROMs, which were subsequently used to convey knowledge and data. The advent of personal computers helped to launch the present era, in which near instantaneous transfer of information across the world is possible via the Internet through portals such as instant messaging, blogs, Twitter, Facebook, Wikis, and an ever increasing variety of new and varied technologies (Doerfert et al., 2004; Doerfert & Miller, 2006; Kaplan & Haenlein, 2010, Smith, Salaway,

& Caruso, 2009).

As communication technology has changed over time, so have the communication needs and preferences of agricultural industry professionals (DiStaso, Stacks, & Botan, 2009; Doerfert & Miller, 2006). Because of the rapidly changing nature of the technology used in this profession, frequent evaluation of the curriculum is necessary to properly prepare students for careers (Doerfert & Miller, 2006; Ettredge & Bellah, 2008).

Industry professionals have cited the need for curriculum focused on the development of communication skills. Specifically, the University of Georgia's Center for Agribusiness and Economic Development (2008) conducted a study with employers in the state of Georgia. This study revealed that graduates had obtained the technical knowledge needed in the workplace, but were lacking in soft skill development, specifically communication. More recently, Crawford, Lang, Fink, and Dalton (2011) conducted a nationwide study with 282 employers and 900 faculty members. Communication skills were ranked as the number one desired skill in college graduates by both industry professionals and faculty members. Furthermore, the study found a growing need for curriculum focused on reinforcing the students' ability to listen effectively, communicate concisely and accurately, and practice both effective oral and written communication skills.

The need for curriculum evaluation is not a new concept. The agricultural industry recommends a review of agricultural curriculum every two to five years to evaluate the effectiveness of preparing students to enter the work force (Terry et al., 1994). In 1994, Terry et al. conducted an extensive study to obtain input from representatives of seven selected agricultural communication organizations who rated 100-plus concepts graduates should possess. The concepts receiving 100% agreement from the participants included communicating agriculture to the public, agricultural policy, geography, word processing, creative strategies, campaign planning, graphic design, news writing, reporting, editing, ethics, design/layout, problem solving, speech writing, oral communications, script writing, and applying concepts during an internship.

Sprecker and Rudd (1997) conducted interviews with agricultural communication instructors, practitioners, and alumni to determine undergraduate curriculum requirements. Four themes emerged: students need a broad understanding of agriculture, communication skills are more important than agricultural knowledge, students need to be proficient in a variety of communication tasks, and networking is a vital component of an agricultural communicator. The researchers concluded being a communicator extended far beyond writing to include verbal and video communication, and opportunities for students to network with industry professionals should be built into the curriculum.

Furthermore, a study by Sitton, Cartmell and Sargent (2005) investigated the curriculum needs for undergraduate agricultural public relations curriculum. Using the instrument developed by Terry et al. (1994), agricultural public relations professionals were surveyed and indicated general communication and public relations skills were more important than agricultural proficiencies. Skills used most frequently by public relations professionals included computer skills, human relation skills, time management, writing, and editing. An understanding of government and legislative policy topped the list of agriculture proficiencies, followed by interpreting data to make good business decisions, defining conservation, and identifying government regulatory agencies. General communication proficiencies included using appropriate style, describing the principles of journalism, applying writing and reporting skills, interviewing, and editing. The most popular public relations proficiencies were effective writing, identifying problems and solutions, business knowledge, designing a marketing plan, and publicizing events.

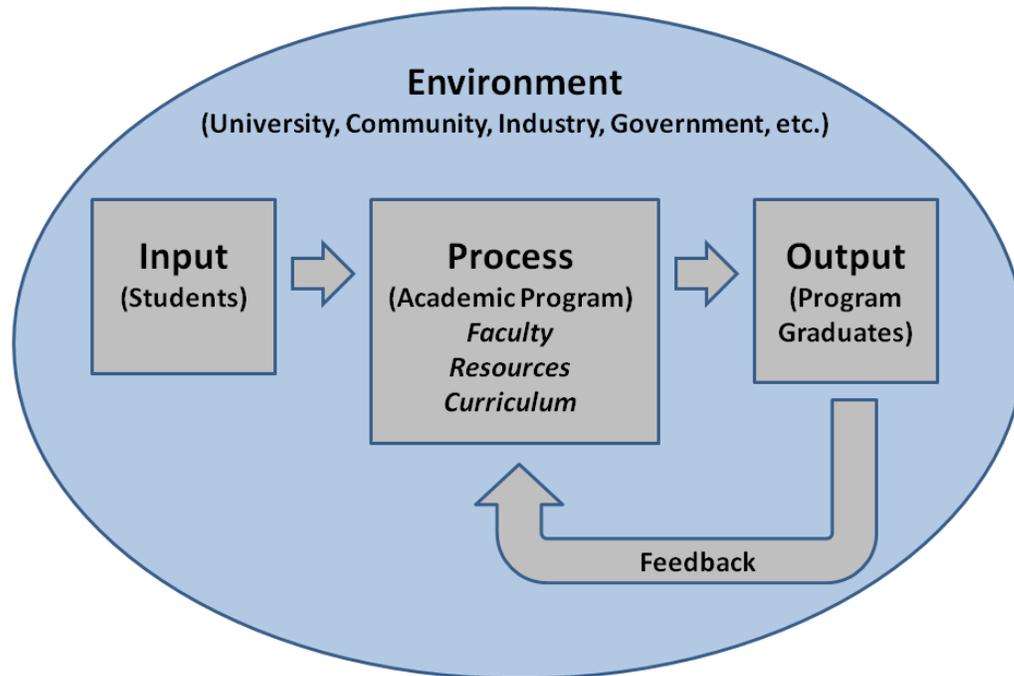
A Delphi study by Morgan (2009) asked industry professionals to determine the competencies needed by graduates of agricultural communication undergraduate programs. The study found the majority of the competencies receiving the greatest level of consensus could be considered as general workplace skills desired of any graduate: meeting deadlines, ethics, dependability, work ethic, oral communication skills, enthusiasm about agriculture, reliability, ability to multi-task, proper use of grammar, and business etiquette. Using the categories established by Terry, Lockaby, and Bailey-Evans (1995), the communication competencies receiving the highest levels of agreement included verbal communication, understanding the “media mix,” identifying barriers to communication, editing, and effective interviewing and reporting skills. Within the general education competencies, desired skills included grammar usage, writing, spelling, networking, and punctuation.

The previous literature illustrates the review of agricultural communication curricula, but the question remains: are agricultural communication programs properly preparing students for employer expectations? Irlbeck and Akers (2009) sought to answer this question by asking employers to “determine which workplace habits and communication skills are satisfactory and which need improvements” (p. 1). In this study, employers rated recent graduates’ “workplace habits” as good to excellent in the skills of trustworthiness, easy to work with, and reliability; while the skills of organization, common sense, and creativity were rated as fair to good. Graduates’ “communication skills” receiving the highest ratings were TV production, photo editing, page layout, and public relations, while the skills of news editing, web design, and sales were ranked lowest as fair to good. Moreover, the essential skills of writing and web writing were ranked just below the level of good.

Previous studies have stressed the importance of many communication and workplace skills; indeed, in many studies writing was the highest ranked skill by employers, along with an emphasis on public relations (Ettredge & Bellah, 2008). Yet the research completed by Irlbeck and Akers (2009) indicated students were not arriving at the workplace with highly ranked writing skills. This is a bit confounding, in that the literature is replete with studies that identify communication skills employers desire and yet, in some cases, students seem to be lacking an appropriate level of these critical skills upon graduation. This disparity could be caused by variations among individual students. Additionally, it could also be influenced by the importance educators place on some competencies, while placing less importance on others. Having a greater understanding of the skills faculty believe are important for graduates to possess would provide beneficial knowledge to help determine if the “gap” between employer expectations and graduate competencies is related to the agricultural communication curriculum.

The curriculum model posited by Finch and Crunkilton (1999) provides an adequate framework to address this question (Figure 1). This model illustrates a “system” in which students enter an academic program (input), enroll in courses established by program curriculum (process), and graduate (output), at which time they begin their careers. The academic program, which consists of faculty, resources, and curriculum, is affected by environmental forces: the university or college, community, industry, government, and possibly the economy. The model includes a feedback loop where opinions are sought from graduates, which allows for program modifications to be made to meet graduate needs.

Figure 1. Program System Model. From Finch and Crunkilton, 1999, *Curriculum development in vocational education and technical education: Planning, content, and implementation* (p. 27), Boston: Allyn and Bacon.



Within this model, faculty are at the core of the academic program (Finch & Crunkilton, 1999). First, they are integral to the development of the curriculum by determining the knowledge and skills students are required to learn to earn a degree. Second, and perhaps more importantly, they control the delivery of the curriculum, determining how the agreed upon knowledge and skills are cultivated within students in classrooms and through activities. A study that determines the communication and professional competencies faculty members believe are important for graduates to possess would help curriculum researchers better understand how faculty influence the curriculum model and may provide insight about the disparity that exists between graduate competencies and employer expectations.

Purpose and Objectives

The purpose of this study was to determine the competencies needed by agricultural communication graduates as perceived by agricultural communication faculty. This helps address the 2007-2010 American Association of Agricultural Education National Research Agenda Agricultural Communications Research Priority Area 4, to determine “What are the skills, competencies, and resources necessary to prepare professional agricultural communicators for success in various aspects of agricultural knowledge management?” (Osborne, 2007, p. 11). Additionally, this study also address the 2011-2015 American Association of Agricultural Education National Research Agenda Priority Area 3, to aid in the “creation of programs that develop the skills and competencies necessary to improve the communications and knowledge sharing effectiveness of all in the agriculture-related workforces of societies” (Doerfert, 2011, p. 9). Therefore, this study had two objectives:

1. To identify the agricultural communication competencies with the greatest level of consensus, as determined by agricultural communication faculty; and
2. To determine if a “gap” between employer expectations and graduate competencies is related to the agricultural communication program.

The results of this research may provide baseline data of faculty perceptions beneficial to future curriculum studies.

Methods

A consensus of opinion among agricultural communication faculty was needed to accomplish the study objective. The Delphi method is an efficient method to gather the opinion of experts and facilitate consensus among the experts (Dalkey, 1969; Stitt-Gohdes & Crews, 2004) and has been used in previous curriculum studies (Frick, 1993; Simon, Haygood, Akers, Doerfert, & Davis, 2005). This method uses purposive sampling, seeking experts to provide knowledgeable, informed opinions. To determine the participant list, a national search was conducted to ascertain which universities offered agricultural communication or agricultural journalism undergraduate majors, housed in the college of agriculture (or the college in which other agricultural departments were located), with a faculty member assigned to the major. A preliminary search was conducted using the American Association for Agricultural Education (AAAE) online directory (2008), sorting the members by the research area of “agricultural communications.” This search yielded 18 graduate students and faculty, 15 of which were faculty representing 13 unique agricultural communication programs.

To attempt to have an inclusive pool of experts, the search engine Google was then utilized to search for “agricultural communication” and the first 100 results were evaluated. Six websites were found which listed universities offering college degree programs (CampusExplorer.com, 2009; CollegeBoard.com, 2009; CollegeToolkit.com, 2009; Ed-reference.us, 2009; MatchCollege.com, 2009; The Princeton Review, 2009). Searches for agricultural communication and agricultural journalism programs were conducted within each of these websites, which yielded an additional 10 unique programs. Further evaluation of the first 100 Google search results revealed three more unique programs. From this list of 26 programs, each was evaluated based on the previously stated criteria, which resulted in 17 unique agricultural communication programs consisting of 15 Land-Grant and two state non-Land-Grant universities. Some of these programs contained multiple faculty members, which had the potential to induce bias. To limit the number of participants from multi-faculty programs, two faculty members were randomly selected from each of these programs. This yielded a total of 25 invited participants.

Using the Tailored Design Method (Dillman, 2000) the chosen faculty ($n = 25$) were invited, via email, to participate as the expert panel for this study. Five days later an email containing the open-ended question “What competencies are needed for agricultural communication bachelor of science graduates?” was sent to the participants. No further explanation of the question was included, so each participant interpreted the question from a personal perspective and provided as many competencies as they desired. In addition, the following demographic questions were presented: gender, age, number of years employed in communications field, number of years in academia, and number of years in current position. Two additional emails were sent at seven day intervals reminding participants to respond to the question. Of the 25 contacted, 19 (76%) responded to the first round of the study, in which participants answered the question, and provided demographic information.

The participant statements from the open-ended question in Round 1 were analyzed using the constant comparative method (Glaser & Strauss, 1967), yielding 144 statements. For Round 2, an email was sent to the 19 participants who responded in Round 1 and contained a link to a website where the 144 statements were presented. Once at the website the participants were then asked to provide their level of agreement to each statement using five point Likert-type items (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). Two reminder emails were sent to participants at seven day intervals. All 19 participants replied, yielding a response rate of 100%. An 80% level of agreement for each competency statement was established a priori as the level of agreement needed for statements to move from Round 2 to Round 3, and for Round 3 statements to attain consensus (Moreno-Casbas, Martin-Arribas, Orts-Cortes, & Coment-Cortes, 2001; Morgan, Rudd, & Kaufmann, 2004; Simon et al., 2005; Stitt-Gohdes & Crews, 2004).

Means of Round 2 responses were calculated and statements receiving an 80% or higher level of agreement ($M \geq 4.00$) moved to Round 3 ($n = 98$). Statements were sorted by level of agreement, from high to low, and an email containing a link to a website presenting the statements, was sent to the 19 participants from Round 2, who were asked to provide their level of agreement to each one using four point Likert-type items (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree) to force a positive or negative response to each statement. Two reminder emails were sent to participants at seven day intervals. Seventeen participants replied (89.5%), which provided a reliability of .80 (Dalkey, 1969). Seventy-nine statements received an 80% or greater level of agreement ($M \geq 3.20$) and were categorized using the criteria established by Terry et al. (1995).

Findings

The participants consisted of nine females and 10 males, with ages ranging from 28 to 83 years and a mean of 46.3 years. Further analysis revealed most respondents were between 30–59 years of age ($n = 11$), with one being less than 30 years of age and one greater than 80. The mean number of years in the communication field was 15.8, with a range of 2 to 53, and over half ($n = 10$) less than 10 years. Similarly, the average time in academia was 15.6 years, with a range of 2 to 36, and over 40% ($n = 8$) with less than 10 years. The number of years in their current position ranged from 1 to 25 years, with a mean of 9.3. This panel represented 12 land-grant and two non-landgrant universities.

The statements on which participants came to consensus ($n = 79$) were categorized using the criteria established by Terry et al. (1995), which consisted of three Core Areas of study: Agriculture, Communication, and General Education. Within these Core Areas are Disciplines and within Disciplines are Competencies; statements that could not be properly categorized using this system were labeled Miscellaneous. Numbers in parentheses after the statements indicate the level of agreement for the statement.

Of the 79 statements, 28 were categorized as being within the Core Area of Agriculture (see Table 1). The first statement “Professional competence—able to practice effective communication—write / speak correctly, clearly in a style and form that is expected of the audience, profession they will serve” (95.3%) illustrates the need for students to be graduated having utilized the skills they have learned in a career environment. Similarly, statements such as “Critical thinking” (95.3%), “Ability to communicate, both orally and in writing, ability to understand conceptual thinking and how it relates to communication” (93.8%), “Ethics” (93.3%), “Organized thinking skills” (89.1%), “Problem solving skills” (89.0%), “Analytical skills” (85.9%), “Critical analysis” (85.9%), “Ability to work in teams” (85.9%), “Interpersonal communication skills” (84.4%), “Project planning and management”

(81.3%), “Grasp of how to develop and manage a project timeline” (81.3%), and “Civility” (81.3%) illustrate the need for skills needed in a professional environment.

Other Agriculture Core statements relate directly to agricultural science and knowledge, such as “Ability to understand the agricultural industry” (89.1%), “Basic understanding of the food system” (82.8%), “Basic understanding of agricultural production” (81.3%), “An overview and general background in agricultural topics and issues” (79.%), “Basic economics (ag finance, government relations, media management)” (79.%), and “Practical knowledge or coursework in an area of agriculture” (79.%). Other skills that may be considered as general workplace or communication abilities were “Interpersonal communication skills” (85.9%), “How to work in journalism settings, or in the areas of public relations or advertising (contingent on the area of focus for the individual student)” (82.8%), and “Marketing skills” (79.7%).

Computer skills specifically related to agricultural communication were categorized in the Agriculture Core, while general computer skills were placed in the General Education Core. These include software competencies, such as “Communication specific software skills (image manipulation, illustration creation, document design/layout, web creation; e.g. CS4)” (89.1%) and “Working knowledge of Adobe InDesign” (79.7%).

The second Core Area was Communication, containing 23 statements on which the participants came to consensus (see Table 2). This includes the Competencies related to journalism, such as “Editing” (89.1%), “Audience analysis” (89.1%), “Journalism ethic” (85.9%), “AP Style” (84.4%), and “Layout and Design skills” (84.4%). The statement with the highest level of agreement was “Ability to organize a set of facts or a collection of pieces of information into a coherent message” (92.2%).

Statements such as “Questioning skills” (85.9%), “Interviewing” (84.4%), and “They need to be able to ask questions that go beyond the narrow focus of a source who may try to restrict the conversation” (84.4%) indicate the importance of graduates possessing reporting skills so they can effectively procure and analyze facts. In addition to reporting, the specific forms of writing, “Persuasive communications (writing and verbal)” (89.1%), “News writing” (85.9%), and “Feature writing” (79.7%), were found important as well.

In addition to journalist communication, more traditional skills, such as oral communication and creativity were favored also. “Confidence in presenting in front of others” (89.1%) and “Oral communication” (89.1%) were found possessing consensus, as well as “Intellectual prowess - sound ability to think creatively and independently” (90.6%) and “Creativity” (89.1%).

Beyond basic writing and speaking, being able to utilize current media to effectively communicate a message to an audience garnered a high level of agreement. Participants agreed that “Basic skills in multimedia. Knowing how to put words and pictures together in a Soundslides [sic] show, creating a podcast, Web site, video ... these skills would certainly make a graduate more marketable” (84.4%) and “Knowing how to write stories for a Web-based publication (understanding how to “chunk” information into bite-sized pieces, for instance, and knowing how Web users scan a page) is important” (79.7%).

General Education, the final Core Area, contained 28 statements that represented a wide spectrum of skills, including basic communication skills, which relate directly to communication professionals (see Table 3). The statement receiving the greatest level of agreement in the study was “Ability to communicate in writing” (100%), and was closely followed by “Ability to write clearly, concisely, tersely and to get to the point” (98.4%), “Highly developed writing skills” (96.9%), “Good writing skills” (96.9%), “Professional (business) writing” (85.9%), “They need to appreciate language

Table 1

Statement	Discipline	Competency	Level of Agreement
Professional competence - able to practice effective communication - write / speak correctly, clearly in a style and form that is expected of the audience, profession they will serve	Internships	Development of Personal Skills	95.3
Critical thinking	Internships	Problem Solving	95.3
Ability to communicate, both orally and in writing, ability to understand conceptual thinking and how it relates to communication	Internships	Development of Personal Skills	93.8
Ethics	Agricultural Leadership	Ethics	93.3
Listening skills	Internships	Development of Personal Skills	92.2
Ability to understand the agricultural industry	Agricultural Communications	Communicating Ag to the public	89.1
Organized thinking skills	Internships	Problem Solving	89.1
Problem solving skills	Internships	Problem Solving	89.1
Communication specific software skills (image manipulation, illustration creation, document design/layout, web creation; e.g. CS4)	Agricultural Communications	Agricultural Publications	89.1
Interpersonal communication skills	Internships	Interpersonal Relations	85.9
Analytical skills	Internships	Problem Solving	85.9
Critical analysis	Internships	Problem Solving	85.9
Internship or other experiential learning opportunity	Internships	Miscellaneous	85.9
Ability to work in teams	Internships	Interpersonal Relation	85.9
Interpersonal communication skills	Internships	Interpersonal Relations	84.4
How to work in journalism settings, or in the areas of public relations or advertising (contingent on the area of focus for the individual student)	Internships	Application of AGCM Concepts	82.8

Table 2

Communication Core Area Disciplines and Competencies

Statement	Discipline	Competency	Level of Agreement
Ability to organize a set of facts or a collection of pieces of information into a coherent message	Journalism	Reporting	92.2
Intellectual prowess - sound ability to think creatively and independently	Advertising	Creative strategies	90.6
Editing	Journalism	Editing	89.1
Confidence in presenting in front of others	Public speaking	Oral communication	89.1
Oral communication	Public speaking	Oral communication	89.1
Persuasive communication (writing and verbal)	Advertising	Campaign Planning	89.1
Creativity	Advertising	Creative strategies	89.1
Audience analysis	Miscellaneous	Miscellaneous	89.1
Journalism ethic	Journalism	Ethics in Journalism	85.9
Questioning skills	Journalism	Reporting	85.9
News writing	Journalism	News Writing	85.9
AP Style	Journalism	Miscellaneous	84.4
Interviewing	Journalism	Reporting	84.4
Familiarity with mainstream media	Miscellaneous	Miscellaneous	84.4
Communication campaign planning	Public Relations	Campaign Planning	84.4
Basic skills in multimedia. Knowing how to put words and pictures together in a Soundslides [sic] show, creating a podcast, Web site, video ... these skills would certainly make a graduate more marketable	Journalism	Dissemination Systems	84.4
Layout and Design skills	Journalism	Design and Layout	84.4
They need to be able to ask questions that go beyond the narrow focus of a source who may try to restrict the conversation	Journalism	Reporting	84.4
Digital photography	Photography	Camera Functions	81.7
Public relation foundations	Public	Campaign	81.3

Table 3

Statement	Discipline	Competency	Level of Agreement
Ability to communicate in writing	English	Miscellaneous	100.0
Ability to write clearly, concisely, tersely and to get to the point	English	Miscellaneous	98.4
Highly developed writing skills	English	Miscellaneous	96.9
Good writing skills	English	Miscellaneous	96.9
Grammar	English	Grammar	93.8
Ability to find and use information sources both on and off the internet	English	Technical Writing	93.8
Punctuation	English	Grammar	92.2
Openness to the unfamiliar	Miscellaneous	Miscellaneous	89.1
Reading	English	Miscellaneous	87.5
Professional (business) writing	English	Technical Writing	85.9
Technical - ability to literally use technology	Computer Applications	Electronic Communications /Networking	85.9
They need to appreciate language and precision with words	English	Miscellaneous	85.9
Tolerance of others' attitudes, values and beliefs	Miscellaneous	Miscellaneous	85.9
New & emerging media -- its impact and use (e.g. creation of Web 2.0 and the resulting emergence of social networking like Facebook, Twitter, and other social media)	Computer Applications	Electronic Communications /Networking	85.9
Strategic thinking	Miscellaneous	Miscellaneous	85.9
Research skills	English	Technical Writing	85.9
Ability to integrate information from a broad array of sources to provide a well rounded analysis and plan of action	English	Technical Writing	84.4
General office word processing skills	Computer Applications	Word Processing	84.4
Working knowledge of Microsoft Word	Computer Applications	Word Processing	84.4
Be adaptive to contemporary technologies and able to expand a currently solid expertise in technology	Miscellaneous	Miscellaneous	84.4
Lifelong learning	Miscellaneous	Miscellaneous	82.8
Working knowledge of Microsoft	Computer	Presentation	82.8

and precision with words” (85.9%), “Grammar” (93.8%), and “Punctuation” (92.2).

Similar to findings in the Communication Area, the ability to seek out and synthesize information was discovered in this area also. “Ability to find and use information sources both on and off the internet” (93.8%), “Reading” (87.5%), “Research skills” (85.9%), and “Ability to integrate information from a broad array of sources to provide a well rounded analysis and plan of action” (84.4%).

The ability to efficiently utilize current technology was made clear. Consensus was found in the statements “Technical - ability to literally use technology” (85.9%), “New and emerging media -- its impact and use (e.g. creation of Web 2.0 and the resulting emergence of social networking like Facebook, Twitter, and other social media)” (85.9%), “General office word processing skills” (84.4%), “Working knowledge of Microsoft Word” (84.4%), “Be adaptive to contemporary technologies and able to expand a currently solid expertise in technology” (84.4%), “Working knowledge of Microsoft PowerPoint” (82.8%), “General office presentation software skills” (79.7%), and “Web design” (79.7%).

Conclusions

This study sought to identify the undergraduate agricultural communication competencies with the greatest level of consensus among faculty, and determine if a gap between employer expectations and graduate competencies is related to the agricultural communication program. The study noted the faculty participants in agricultural communication had been in academia for an average of 15.6 years, spending an average of 9.3 years in their current position. This indicates the participants had a substantial amount of experience in agricultural communication.

Through the course of this study several competencies achieved a high level of consensus among agricultural communication faculty. The highest rated competencies included basic communication skills with a specific focus on written communication. One might conclude that the competencies focused on writing should be categorized within the Core Area of Communication; however, this set of competencies was placed in General Education. This categorization is based on the findings established by Terry et al. (1995) which stated the fact that excellent writing skills are an expectation for all university graduates, not just those who major in communication. Moreover, it is interesting to note that the highest faculty rated competencies were related to written communication. This finding is in opposition of the study conducted by Crawford et al. (2011) which found that faculty and professionals placed more emphasis on the importance of oral communication skills.

In this study, faculty also cited the need to integrate curriculum which would encourage students to assimilate and apply the technical skills learned in the classroom. These competencies included professional competence, critical thinking, ethics, problem solving skills, analytical skills, critical analysis, ability to work in teams, interpersonal communication skills, project planning and management, grasp of how to develop and manage a project timeline, and civility. These competencies are worthy of attention because they are not competencies specific to only agricultural communication majors, but rather competencies that would be expected of all university graduates. This finding is consistent with the study by Sitton et al. (2005) that found agricultural public relations professions also place emphasis on similar competencies such as time management and human relations skills (working in teams), which are competencies specific to a variety of careers.

Additionally, faculty cited the importance of competencies focusing on the need for a broad understanding of agriculture and current agricultural topics such as the ability to understand the agricultural industry, a basic understanding of the food system, and the basic understanding of agricul-

tural production. In contrast, other studies cited the importance of technical knowledge and placed a higher emphasis on the importance of communication and soft skills. For example, Sprecker and Rudd (1997) stated that communication skills were more important than agricultural knowledge. Moreover, the study conducted by Crawford et al. (2011) found that students were entering the work force with enough technical knowledge in their specified discipline (such as agriculture), but were lacking soft skills such as communication.

Beyond determining the faculty perspectives of competencies needed by agricultural communication graduates, a question posited at the outset of this study was to determine if a “gap” between employer expectations and graduate competencies is related to the agricultural communication program. When comparing competencies identified by faculty in this study to those identified by industry professionals (Morgan, 2010), faculty placed the highest levels of agreement on statements relating to writing, critical thinking, communication, and “intellectual prowess,” while industry placed the highest levels of agreement on workplace skills such as ethics, responsibility, professionalism, and organizational skills. When compared to those identified by industry professionals, only two communication related skills received a 90% or higher level of agreement: oral communication and the correct use of grammar; the competency of writing garnered only 88.6%.

Further comparisons yielded similar results: faculty showed higher levels of agreement to statements related to specific communication skills (e.g., “Ability to organize a set of facts or a collection of pieces of information into a coherent message”) and students’ ability to think (e.g., “sound ability to think creatively and independently”). Whereas, industry tended to be more global, perhaps pragmatic, by focusing on an individual’s ability to accomplish a task (e.g., “Ability to meet deadlines”, Morgan, 2010, p. 24).

When looking at the specific Core Areas, within the area of agricultural competencies faculty provided higher levels of agreement on specific thinking skills: analysis, problem solving, and critical thinking, along with specific software and communication skills. By comparison, industry professionals provided higher levels of agreement on general workplace skills they perceived as competencies: attitude, work ethic, and ability to “think on their feet.” It seems while faculty desire to develop a student’s mind, professionals place more value on having graduates who are ready to effectively enter a career environment. Perhaps faculty believed students inherently possessed these general workplace skills and, therefore, did not state them. Regardless for the reason of discrepancy, this appears to be a gap between faculty and industry perceptions of graduate competencies. Therefore, to bridge the gap, faculty should focus on developing these competencies in their coursework. While some of these general workplace skills can be taught in the classroom, it seems a more appropriate environment to develop these skills is outside of the classroom through experiential learning opportunities such as structured internships, career shadowing, or volunteer work related to agricultural communication. This supports the findings of Crawford et al. (2011) who found that guided, active learning environments such as internships, co-curricular activities, and experiential learning activities were highly valued by industry professionals, faculty, and students. Moreover, incorporating internships and career shadowing would support the findings of Sprecker and Rudd (1997), who advocated for providing students with the opportunity to meet with industry professionals.

In regard to the Communication Core Area competencies, the skill sets identified by both groups were very similar, with faculty tending to be specific and academic, whereas competencies identified by industry were more general and applied or career oriented. Oral communication, editing, creativity, and writing were in the “top ten” of each group’s lists and, although the level of agreement dif-

ferred, all statements received agreement within an 85%–92% range, revealing no apparent gap existed between faculty and industry communication expectations.

When comparing the General Education Core, competencies identified were similar for both faculty and industry, with a focus on writing, effective use of technology, the ability to learn beyond the formal classroom, and solid research skills. Interestingly, industry also included many business related competencies faculty did not identify, such as budgeting, accounting, and understanding business models. With this gap discovered, it is recommended programs include business based courses in their curriculum that address these competencies.

Based on the overall results of this study, faculty and industry have similar views about the competencies needed for agricultural communication program graduates. Faculty tended to focus on the mental capabilities of the students, by stating a desire for them to possess analytical and critical thinking abilities, as compared to industry who articulated similar skills, but used language that was more pragmatic in nature. The biggest gap found between the two studies was what was described as “general workplace skills,” which industry identified as competencies and placed in high regard. Perhaps there are ways in which academicians can incorporate these competencies into their courses, but an internship seems a much more likely environment for these skills to be developed. Based on these findings, faculty should include assignments encouraging the application of knowledge and concepts learned, and include an internship or other practicum in agricultural communication programs.

Using the curriculum model as outlined by Finch and Crunkilton (1999), faculty members are placed in the role of controlling the quality of academic programs through the development of curriculum. Therefore, it is critical that a collaborative relationship is formed between faculty and industry professionals. In accordance with the curriculum model, industry professionals, who may be program graduates, should be given the opportunity to provide valuable feedback to faculty members. This could be accomplished through industry focus groups, a curriculum advisory panel containing industry professionals, and continuation of studies such as the study conducted by Morgan (2010) to determine competencies desired by industry professionals. The development of a strong relationship between faculty members and industry professionals will ensure that graduates are adequately prepared to enter the workforce.

Even as this study has exposed gaps and affirmed some previous research, it has revealed additional subjects that may be the topics for future inquiry. Future research should explore the level at which students are achieving these competencies cited in this study. Although students earn a passing grade in a course, a new research study could determine if the competency level achieved is appropriate to enable them to successfully enter the workforce. Similarly, it would be valuable to determine how students rate these competencies and determine how student perspectives relate to the perspectives of faculty and potentially industry professionals. Finally, a study should be conducted to reevaluate the competencies established by Terry et al. (1995). A new study would have the potential to update the current agricultural competencies to more closely represent the current state of agricultural communication.

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Agricultural issues on the ballot: A case study of the 2009 Ohio issue 2 campaign

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Abstract

This in-depth case study explored the marketing of the November 2009 ballot initiative that created the Ohio Livestock Care Standards board. Key individuals who were involved in communications campaigns dealing with the ballot initiative were interviewed and media coverage was closely analyzed. The interviews examined questions dealing with the origin of the initiative, the types of media used to promote it, the budget for the media campaign and which types of media were viewed as the most valuable and successful. The information obtained reveals which types of media are most effective in reaching consumers about agricultural issues according to campaign organizers. By examining a successful agricultural communications campaign, insight can be gained about how other groups can best reach the public and persuade them to support legislation benefiting the agricultural industry.

Keywords

ballot initiatives, media campaigns, legislation, case study

Introduction

Agricultural issues are appearing on state ballots with increasing frequency, and this poses a challenge to agricultural organizations as they try to reach out to the voting public. These organizations must design and implement media campaigns to encourage a favorable outcome from the election. As agricultural organizations and commodity groups are not typically well funded, it is key for them to understand the most cost-effective media strategies to utilize. In the early months of 2009, the Humane Society of the United States (HSUS) called for a meeting with Ohio livestock organizations, including the Ohio Farm Bureau Federation, Ohio Pork Producers Council and the Ohio Cattleman's Association. During this 'meeting of the minds' HSUS president and chief executive officer Wayne Pacelle announced HSUS' intention to come to Ohio with a ballot initiative similar to "The Prevention of Farm Animal Cruelty Act" also known as Proposition 2, which had recently been passed in California. That legislation "requires that calves raised for veal, egg-laying hens and pregnant pigs be confined only in ways that allow these animals to lie down, stand up, fully extend their limbs and turn around freely" (Anti-Cruelty: Related Statutes, 2010, pg. 6).

To be proactive in the face of this future legislation, these agricultural groups formed the Ohio for Livestock Care political action committee and formed the idea for the Ohio Livestock Care Standards Board (OLCSB), which would be an unbiased group of industry experts responsible for overseeing livestock care in Ohio. The measure resoundingly passed with 64% of the vote (Elections & Ballot Issues, 2009). Undoubtedly, the pro-Issue 2 media campaign can be categorized as a success. This study thus aimed to explore the initiative from inception to passage, with the major focus

on the media campaign conducted by the Ohio Farm Bureau Federation in its effort to promote the issue and other groups' campaigns to defeat the measure. This information should serve very useful to other state agricultural organizations as they look to pass similar legislation in their states, or to any group attempting to create a media campaign around an agricultural ballot initiative.

Significance and Purpose of the Study

The purpose of this study was thus to analyze the pro-Issue 2 media campaign during the 2009 Ohio general election. The study focused mainly on the activities of the Ohio for Livestock Care political action committee (PAC), the only PAC registered with the Ohio Department of State as spending funds for an Issue 2 campaign (Ohio Department of State, 2011). Through this study, important strategies for ballot initiative campaigns are revealed.

This study aligned with Research Priority 1 of the National Research Agenda for Agricultural Education and Communication, that aims to understand public and policy maker's understanding about agricultural and natural resources and ensuring consumers make informed choices (Doerfert, 2011). When the public is called upon to impact the future of agriculture by casting its vote on the ballot, it is crucial that it is fully armed with all of the tools to make an informed decision. Through this study, the best methods of reaching the public with information about agricultural ballot initiatives was determined, helping the industry to make wise choices regarding spending and investing in communication methods.

Objectives of the Study

After reviewing relevant literature, additional, specific goals were outlined. These objectives, listed below, helped guide the aim of the study and the collection and analysis of data.

1. To examine the financial report of the Ohio for Livestock Care PAC, including contributions and expenditures;
2. To determine the key messages of the media campaign and how key personnel rate their effectiveness;
3. To review media coverage of the campaign and examine shifts in tone.

Review of the Literature

History of the Animal Rights Movement in the United States

The origins of the animal rights movement are apparent even earlier than the United States itself. The 1641 "Body of Liberties" of the Massachusetts Bay Colony included two tenants relating to the care of animals: "92. No man shall exercise any Tyranny or Crueltie towards any brute Creature which are usuallie kept for man's use. 93. If any man shall have occasion to leade or drive Cattel from place to place that is far off, so that they be weary, or hungry, or fall sick, or lambe, it shall be lawful to rest or refresh them, for a competent time, in any open place that is not Corne, meadow, or inclosed for some peculiar use" (Beers, 2006). This was the earliest known law in this section of the world that dealt with the treatment of livestock (Beers, 2006). In England, articles appeared in newspapers denouncing cockfights and other bloodsports as early as 1749 (Beers, 2006).

Europe has been at the forefront of animal protection legislation, with the first law passing in 1822 (Radford, 1996). This legislation, titled 'An Act to Prevent the Cruel and Improper Treatment

of Cattle,' later becoming known as Martin's Act, protected cattle, horses, sheep, and mules from excessive cruelty (Beers, 2006). The roots of the animal protection movement in Europe can be seen in the writings of Jeremy Bentham, whose 1789 *An Introduction to the Principles of Morals and Legislation* directly applied the concept of rights to animals, in conflict with the traditional view of animals as lacking feeling or thought (Beers, 2006).

The legal protection of animals in Europe continued to increase over time, with the 1957 Treaty of Rome, which dealt with concerns for animal protections and the 1997 Treaty of Amsterdam, which provided revisions to the Treaty of Rome, including expanded animal protection measures (Sullivan, Vietzke, & Coyne, 2008). Other animal protection legislation included the Wild Mammals (Protection) Act, Animal Health Act, and Welfare of Animals (Slaughter or Killing) Regulations (Radford, 1996). More recently, politicians have banned veal crates (Sullivan et al., 2008). The success of animal care legislation in Europe has inspired similar movements around the world.

In 1828, New York passed legislation defining wanton cruelty toward a domesticated animal as a misdemeanor, and in 1835 Massachusetts followed suit (Beers, 2006). Throughout the 1830s-1850s, newspapers published an increasing number of articles reporting acts of cruelty and editorials denouncing them (Beers, 2006). The growing issues of animal welfare in the United States became organized in 1866 with the formation of the American Society for the Prevention of Cruelty to Animals, modeled after the British Royal Society for the Prevention of Cruelty to Animals (Jasper, 1996).

The two early primary federal regulations in place in the United States regarding animals were the Humane Methods of Slaughter Act of 1901 and the Federal Meat Inspection Act of 1906 (Becker, 2009). The Humane Methods of Slaughter Act regulated that "...livestock must be slaughtered in a humane manner to prevent needless suffering" and called for "research of humane methods of slaughter, the non-applicability of these statutes to religious or ritual slaughter, and the investigation into the care of non-ambulatory livestock" ("Humane Methods," 2009, pg. 1-3). The Federal Meat Inspection Act provided regulations dealing with ante mortem and post mortem inspections, humane methods of slaughter, meat inspections, labeling and other topics (Food Safety Inspection Service, 2009). Most of the early organizations and legislation focused on animal welfare, not animal rights (Francione, 1996).

The animal welfare view assumes that animals can be treated as a means to a human end, provided that standards of care are upheld, while the rights view demands the end of the use of animals for human benefit (Francione, 1996). In the past 30 years, the animal rights movement has come to the forefront and gained strength in American society (Garner, 1996). People for the Ethical Treatment of Animals (PETA), an animal rights organization, formed in the early 1980s (Jasper, 1996). PETA and fellow animal activist group the Animal Liberation Front (ALF) released videos and photographs from animal research laboratories to the news media throughout the 1980s (Jasper, 1996). The current organization at the center of the animal rights movement is HSUS, formed in 1954 (The Humane Society of the United States, 2009). HSUS, which claims to be backed by 11 million Americans, spent a combined total of almost \$40 million on "strategic communications" and "advocacy and public policy" in 2009 (The Humane Society of the United States, 2009).

Trends in Animal Care Legislative Policy

In a parallel to the escalating nature of the animal rights movement, legislation regarding animal care has increased in number and scope. The Animal Welfare Act, passed originally in 1966, was

intended to "...regulate the transportation, sale and handling of dogs, cats and certain other animals intended to be used for purposes of research or experimentation, and for other purposes" (United States Department of Agriculture, 2009a). The Act has been amended six times, most recently in 2007, and has been expanded to: include all warm-blooded animals being used for experimentation or exhibition set restrictions on animal rights established that an Institutional Care and Use Committee must be in place at institutions of animal experimentation to ensure humane care set requirements of health certifications by a veterinarian and created holding periods for shelter animals (United States Department of Agriculture, 2009a; United States Department of Agriculture, 2009b; United States Department of Agriculture, 2009d; United States Department of Agriculture, 2009f).

In recent years, federal legislation regarding the treatment of animals has given way to a trend of state legislation for animal protection. Many of these state laws have been proposed and supported by HSUS and other animal rights organizations. HSUS supported 121 successful pieces of state legislation in the year 2009 (The Humane Society of the United States, 2010). Recent pieces of legislation dealing with the treatment of animals included the Prevention of Equine Cruelty Act ("Horse Slaughter Ban"), passed in Texas and Illinois in 2007 (Becker, 2009).

A current trend in policy is legislation controlling livestock housing. Florida legislation banning gestation crates for sows passed in 2006, followed by similar laws in Arizona in 2006, Oregon in 2007, Colorado in 2008, California in 2008, and Maine and Michigan in 2009 (The Humane Society of the United States, 2009). California's "Proposition 2" was especially impactful, due to the size and scope of California's agricultural industry (Goodwin, 2010). In response to this trend of policy, Ohio took a step to be proactive in creating the OLCSB (The Ohio Ballot Board, 2009). The Board sets standards for the care of livestock, maintenance of farm safety, supports local food and protects Ohio farmers and families from out-of-state interest groups (The Ohio Ballot Board, 2009). The 13 members of the board, which are appointed by the Governor, the President of the Senate and the Speaker of the House of Representatives, must include the director of the Ohio Department of Agriculture, three family farmers, a food safety expert, two members from a statewide farming organization, two veterinarians, a dean of an Ohio college of agriculture, two consumers and one local humane society representative (The Ohio Ballot Board, 2009). "Issue 2", the legislation to establish the OLCSB, appeared on the November 2009 Ohio ballot. Issue 2 passed with 63.66% (n=1,959,669) of voters in favor and 36.4% (n=1,118,805) opposed (Ohio Secretary of State, 2009).

The Ballot Initiative Process and Campaign Spending

Ballot initiatives are a permanent part of the legislative process in 24 states, including Ohio (Ballot Initiative Strategy Center, 2011). In Ohio, initiatives exist in two forms: initiated statutes and initiated constitutional amendments, such as the establishment of the (S)LCSB (Ohio Secretary of State). To place a constitutional amendment on the ballot, a strict process must be followed. First, petitioners must create a committee of three to five individuals to represent them in all matters (Ohio Revised Code Section 3519.02). Second, an initial petition, signed by 1,000 qualified Ohio voters, must be filed with the Ohio Attorney General and Secretary of State (Ohio Revised Code Sections 3501.05; 3519.01; 3519.05; 3505.062). Once the Ballot Board has certified the petition, the petitioners may begin to collect signatures for the initiated constitutional amendment (Ohio Constitution: Article II, Section 1g). The number of valid signatures on the petition must equal at least 10% of the total number of votes cast for the office of governor at the last gubernatorial election, the signatures must have been obtained from at least 44 of the 88 counties in Ohio and each signer must be a quali-

fied Ohio voter. Once signatures have been filed and verified, the initiated constitutional amendment will proceed to the ballot Constitution, Article II Section 1a; Ohio Constitution, Article II, Section 1g).

Although HSUS and other outside groups would likely use the signature-gathering process to place an initiative on the ballot, the Ohio General Assembly instead initiated Issue 2. To begin this process, the people behind Issue 2 had to gain the support of members of the General Assembly to sponsor resolutions that would place the constitutional amendment to create the OLCBSB on the ballot. The resolutions were introduced on June 18, 2009, in both the house and senate. A three-fifths vote in the General Assembly is required for passage of a joint resolution. HJR 2 passed with 84 yeas and 13 nays on June 24, 2009, and SJR 6 passed with 31 yeas and 1 nay on July 6, 2009 (129th General Assembly of the State of Ohio, 2009).

Ballot initiatives are frequently costly affairs, with both supporting and opposing sides spending large amounts on their campaigns. In 2006, over \$325 million was spent by both sides of the 12 most expensive ballot initiatives in the United States, dealing with issues from renewable energy to cigarette taxes (Ballot Initiative Strategy Center, 2011). The amount of money spent during campaigns is also on the rise, as in 1992, \$117 million was spent in 21 states on campaigns supporting or opposing ballot measures, and in 1998 that figure jumped to \$400 million in 44 states (Stratmann, 2005). An increase in spending is predicted to result in a favorable election outcome, as an additional \$1 million spent in favor of a ballot initiative is predicted to increase its chances of passing by 1.4%; and an increase of \$1 million spent in opposition to a ballot initiative decreases its likelihood of passage by 1.90% (Figueiredo, 2010).

A recent study in California revealed a large disparity in spending on legislative propositions from 1982-2006, which must pass through both houses of the state Congress to make it onto the ballot, and initiatives, which are placed on the ballot through a signature gathering process (Figueiredo, 2010). An average of \$478,406 was spent in support of propositions and \$220,273 in opposition; in contrast to an average of \$3.6 million in support of initiatives and \$2.4 million in opposition (adjusted for inflation, in 1982-1984 dollars) (Figueiredo, 2010).

Much of this spending is on mass media advertising, proven to impact the passage of an issue. Research has demonstrated that 100 extra advocacy advertisements increase the probability of the passage of an initiative by 1.2%, and 100 extra opposition advertisements decrease the probability of the passage by 1.8% (Stratmann, 2005). Trends are also apparent in the types of advertising effective in political campaigns. Almost half of all adults used the internet, email or phone text messaging for political purposes during the 2008 campaign cycle (Smith & Lee, 2008). The two fastest-growing sources for political information are social media sites and online videos (Smith & Lee, 2008).

Cognitive Dissonance

The cognitive dissonance theory states that when one is faced with conflicting ideas, one will be driven to complete cognitive work that will reduce the inconsistency (Dillard, 2002). Four research paradigms have repeatedly appeared in the research of dissonance processes: Free Choice Paradigm, Induced Compliance Paradigm, Belief Disconfirmation Paradigm and the Hypocrisy Paradigm (Dillard, 2002). These four paradigms drive the logic behind persuasion attempts. The Free Choice Paradigm assumes that once a decision is made, dissonance may arise (Dillard, 2002). Dissonance can be lessened by viewing the selected alternative as more desirable and the rejected alternative as less desirable, an effect called spreading of the alternatives (Dillard, 2002). The Induced Compli-

ance Paradigm assumes that dissonance arises when a person does or says something in contrast to a previously held belief or attitude (Dillard, 2002). The Belief Disconfirmation Paradigm assumes that dissonance arises when people are exposed to information which conflicts with their beliefs (Dillard, 2002). Finally, the Hypocrisy Paradigm states that when faced with dissonance, people will attempt to reduce it by acting in accord with their pro-attitudinal statement or changing their attitudes to be more consistent with their past behavior (Dillard, 2002). Research has supported the notion that dissonance is a motivational theory and produces lasting attitude, belief, and behavior changes (Dillard, 2002). Cognitive inconsistency arouses motivation to change behavior and thought processes, therefore the cognitive dissonance theory is key in persuasion and motivation efforts, such as the media campaign being examined in this study.

New research in the field supports the idea of vicarious dissonance, in which people experience dissonance and attitude change through the experiences of others (Cooper, 2010). This concept combines cognitive dissonance with the theory of social identity (Cooper & Hogg, 2007), suggesting that people experience dissonance vicariously when they view a member of their social group behave in a manner at odds with that group member's attitude. This ability to be motivated to alter one's one attitude by viewing attitude changes in another makes the theory of vicarious dissonance very useful in instigating attitude and behavior changes on a broad scale (Cooper, 2010). This theory is directly related to the planning of media campaigns surrounding ballot initiatives, as they are aimed to reach and persuade the broadest audience possible.

Recently, cognitive dissonance has been conceptualized in an action-based model (Harmon-Jones, Amodio, & Harmon-Jones, 2010). This model assumes that perceptions and cognitions activate action tendencies automatically, suggesting that when cognitions with action implications come into conflict, dissonance is aroused (Harmon-Jones, Amodio, & Harmon-Jones, 2010). Once an individual makes a decision to resolve that dissonance, they are motivated toward enacting the decision and behaviors which support it (Harmon-Jones, Amodio, & Harmon-Jones, 2010). This modern perception of cognitive dissonance suggests that once individuals are presented with information, such as the media materials in this study, and make a decision, they will take action to enact that decision, such as researching more about the ballot initiative and casting a certain vote. This action will also produce lasting changes in their attitude toward agriculture and public policy.

Because this study focuses on a media campaign aimed at persuasion, the cognitive dissonance theory is an important framework to consider. Voters were presented with information that may cause dissonance in their thought processes, and were hopefully then motivated to resolve that dissonance by forming a new, positive opinion on the farming industry and casting a "yes" vote on the issue at hand. Based on prior research, the cognitive dissonance persuasion theory will cause lasting changes in behavior and thought processes, therefore the new perspective gained by voters will alter their mindset toward farmers and animal-rights interest groups.

Methodology

The purpose of this study was to examine a successful marketing campaign focused on a ballot initiative, the "Yes on Issue 2" campaign in Ohio.

Research Design

Researchers used case study methodology to evaluate the communications campaigns surrounding Issue 2. Case studies, commonly used in the social sciences, involve studying all of the intricacies

of a single case (Stake, 1995), such as the media campaign. Stake defines a case study as “the study of the peculiarity and complexity of a single case, coming to understand its activity within important circumstances” (1995, pg. xi). In this research, the case is the media campaigns, and the important circumstances are the current state of public affairs in agriculture.

Interviews were a key part of the research conducted. The researchers interviewed three individuals involved with the media campaign, including a consultant at a consulting firm and two individuals in communications at Ohio Farm Bureau Federation who played large roles in selecting and overseeing the materials and tactics used. Within 6 months after the campaign these individual interviews were held using a scripted interview guide. Questions consisted of opinions on success and failures of the campaign. Through these interviews and secondary source research, researchers were able to study the timeline, budget, and reasoning behind the campaign. Additionally, researchers were able to gauge how Ohio Farm Bureau Federation rates the success of their campaign, and changes they may make in future campaigns.

Key areas examined were the impact of social media, as it is a “free” media to use, and grassroots/word of mouth communication. According to the Pew Institute, the two fastest growing sources for election information are social media sites and online videos (Smith & Lee, 2008). As these sources are free to create, it is interesting to determine how the advertisers would rate their effectiveness in terms of effort and money spent.

Data Collection

Using a case study, the data collection process for this study was threefold: primary research through interviews, secondary research through news media analysis, and secondary research through campaign finance reports. The subjects for the interviews were chosen based on their first-hand involvement in the campaign and intimate knowledge of the methodology of the decision-making process for media purchases.

The newspapers used, The Cleveland Plain Dealer (267,888 readers) (The Cleveland Plain Dealer, 2007); The Columbus Dispatch (210,000 readers) (The Columbus Dispatch, 2008); The Toledo Blade (139,346 readers) (The Toledo Blade, 2010); The Cincinnati Enquirer (161,858 readers) (The Cincinnati Enquirer, 2011); and The Dayton Daily News (116,200 readers) (Dayton Daily News, 2008) represent the largest media markets in the state. A search of LexisNexis Academic database was conducted for each newspaper for the time frame of January 1-November 4, 2009. Search terms included “Issue 2 Ohio,” “Ohio Livestock Care Standards Board,” and “Livestock care”. Only news articles that focused primarily on Issue 2 were considered in this study. Endorsements of the initiative were considered separately. A total of 27 news articles were collected, along with nine opinion editorial/endorsement pieces.

The Ohio for Livestock Care PAC expenses for the year 2009 were analyzed. Only the income and expenses for 2009 were considered, as this was the year of the election. The expense report was accessed through the Ohio Secretary of State. The Top 10 contributors were compared, along with their total contributions. The expense breakdown of the PAC was also considered.

Findings

Objective 1. Campaign Spending

The campaign spending report filed by Ohio for Livestock Care provided valuable information to the study. A total of \$5,448,226 was donated to the pro-Issue 2 campaign. The main source of

funding was the Ohio Farm Bureau Federation, who donated \$606,930, or 11.15% of the total contributions. A considerable portion of the campaign funding came from outside of the state of Ohio, with the largest out of state contributors being the National Pork Producers Council (\$249,500) and United Egg Producers (\$200,000). In total, \$1,793,359, or 33.0% of total contributions, came from outside of Ohio. The vast majority of campaign funding came from the agricultural industry. Within agriculture, the top donors came from the following industry segments: Farm Bureau (\$1,314,853), poultry and eggs (\$1,048,262), livestock (\$910,559), agricultural services and products (\$698,860), and crop production and basic processing (\$431,910) (See Table 1).

Table 1.

Top 10 Contributions to Ohio for Livestock Care Political Action Committee

Contributor	Amount	Percent of Total
Ohio Farm Bureau Federation	\$606,930	11.15%
National Pork Producers Council	\$249,500	4.59%
United Egg Producers	\$200,000	3.68%
Cooper Farms Feed & Animal Prod.	\$144,495	2.66%
Ohio Fresh Eggs LLC	\$144,000	2.65%
Ohio Poultry Association	\$125,273	2.30%
Ohio Soybean Association	\$110,500	2.03%
Ohio Pork Producers Council	\$107,922	1.98%
Weaver Bros, Inc.	\$105,073	1.93%
Fort Recovery Equity Inc.	\$100,576	1.85%
Total Contributed to OLC	\$5,448,226.08	

The top expenses for the campaign were in advertising. The most costly form of advertising utilized was television, costing \$1,633,158, or 36.90% of total spending. Other forms of advertising used were mailed advertisements, radio spots, billboards, automated calls, and yard signs. Besides advertising, considerable expenses were consulting, website, legal, and market research. In all, the PAC spent \$4,426,779 on the pro-Issue 2 campaign (See Table 2).

The key personnel interviewed were asked to provide insight on the central elements of the campaign and their effectiveness. Their responses can be summarized into three categories: social media, unity, and proactivity.

Social media was a key tool used in the pro-Issue 2 campaign, especially by the Ohio Farm Bureau Federation. Subject 1 stated: “People aren’t going to OFBF.org, they aren’t going to OhioansForLivestockCare.com, they’re going to Facebook and Twitter to spend their time. That’s where they’re discovering news and information, that’s where like-minded people are sharing news and information, that’s where they trust people more than they trust messages.” Facebook, Twitter, and YouTube were all used in the campaign. Facebook was used as a rallying point for campaign supporters, where they could post photographs, links, and other content. Twitter was used to reach a broader audience and to broadcast events as they occurred, such as the hearings in the Senate and the House about the ballot initiative, which were live-tweeted using a hash tag. “Our logic for using social media was to show who we are, to build trust in Ohio farmers and our members, to build those connections

and those relationships so that when we do need them, they're already established," said Subject 1.

Table 2. 2009
Expenses for OLC PAC

Expense	Amount	Percent of Total
Television Advertising	\$1,633,158.57	36.90%
Mailers (Printing/postage/design)	\$784,204.87	17.72%
Advertising (General)	\$682,953.59	15.43%
Consulting	\$449,763.97	10.16%
Automated Calls	\$250,875.25	5.67%
Radio Advertising	\$161,930.23	3.66%
Website	\$113,220.60	2.56%
Legal	\$108,741.48	2.46%
Billboard Advertising	\$76,245.07	1.72%
Market Research	\$62,594.24	1.41%
Yard Signs	\$55,925.87	1.26%
Misc.	\$47,166.07	1.07%
Total Spending	\$4,426,779.81	

Additionally, unity was a recurring topic during the interviews. Unifying to establish the Ohioans for Livestock Care organization allowed Ohio agriculture to present a united front and to pool their resources for the campaign. Subject 2 referenced unity as an important element to the campaign's success, stating, "One of the crucial decisions both on the political action side and the communications' side was that this was going to be a collaborative effort. The Pork Producers weren't going to go out and fight this battle on their own, and the poultry people on their own, and the dairy people on their own, and Farm Bureau separately. It was decided that agricultural unity was a must."

Unity was also crucial in the different elements of the campaign, as harmony had to exist between the paid forms of media and grassroots efforts. Subject 3 noted room for improvement in this area, stating, "We did a lot of farmer engagement, I think we could have started that sooner and made more tools available to them. Potentially, we could have focused on more local events, really trying to bring people out in local communities."

Lastly, the interviewees emphasized the importance of being proactive. Proactivity allowed the OLCSB to be invented and implemented. After the February meeting with HSUS, Ohio's agricultural leaders chose to be proactive by pursuing the establishment of the OLCSB instead of mounting a defensive campaign against an HSUS-supported ballot initiative. Being on the offensive allowed the Issue 2 campaign to focus on the positive aspects of both the OLCSB and Ohio agriculture, as opposed to being in a reactionary mode to statements made by HSUS. Subject 3 stated, "As a general principle, animal care issues win, whether it's our side bringing it or the activist side bringing it... which is part of why we won, which is part of why HSUS wins."

Being proactive with establishing a social media presence was also a contributing factor to its success, as Subject 1 stated: "With Issue 2, we had already built up a really nice group of followers [on Twitter], we had a lot of fans on Facebook, there were a lot of people that we interacted with on a daily basis that enjoyed getting messages from Ohio Farm Bureau and talking with Ohio Farm

Bureau...it was a natural thing for us to do.”

Objective 3. Media Coverage

Media coverage of Issue 2 appeared in each of the five newspapers included in the study. The Columbus Dispatch printed the most articles on the subject, with a total of 10. The Cincinnati Enquirer and Cleveland Plain Dealer published the least, with each printing only two articles dealing with Issue 2 appearing during the study period. These articles were all straight news pieces dealing with the issue and arguments surrounding it; opinion-editorial pieces and letters to the editor were considered separately. Each newspaper that printed an editorial or endorsement on the issue, The Cleveland Plain Dealer, The Columbus Dispatch, The Dayton Daily News and The Toledo Blade, endorsed a “No” vote, usually citing opposition to the board being included in the Ohio Constitution. A total of 27 news articles were collected, along with nine opinion editorial/endorsement pieces.

The Cleveland Plain Dealer, who referred to the initiative as “Farm fresh foolery” in a July 6 editorial, shifted in tone by the end of the campaign to state: “Ohioans who vote “no” on Issue 2 on Nov. 3 should be prepared to vote “no” again, should the Humane Society seek its own ballot measure in a future election,” in their October 18th endorsement of a “no” vote. The Columbus Dispatch also cited constitutional issues in their opposition, stating “Creating a well-balanced board to set standards for the care of livestock in Ohio is a good idea, but using the Ohio Constitution to do so is not. State Issue 2 would amend the constitution to create a 13-member Livestock Care Standards Board. Such a board could easily be created by legislation,” in their November 2 editorial.

Key Findings and Implications

Limitations of the Study

The case study conducted focused on the campaign promoting a “Yes” vote on the issue, as there were no registered PACs in opposition. Although an opposition campaign did exist, the lack of organization and filed spending reports made it difficult to analyze. Additionally, the social media aspect of the study poses issues. As statistics regarding the Facebook and Twitter posts of the Issue 2 campaign were not logged, it is impossible to track how many times they were viewed or shared, and therefore gauge their effectiveness. It is also difficult to quantify the value of social media in the campaign, as it is a “free medium” to use and therefore does not have a fixed cost.

Objective 1: Campaign Spending

A total of \$5,448,226.08 was donated to the pro-Issue 2 campaign. In total, 33.0% of total contributions came from outside of Ohio. This is interesting to note, as it emphasizes the importance of unity within the agricultural industry. The Issue 2 campaign in Ohio was very much a ‘trial run’ for other states with agricultural industries that may face a similar campaign in the future.

Within agriculture, the top donators came from the following industry segments: Farm Bureau, poultry and eggs, livestock, agricultural services and products, and crop production and basic processing. This is important to note, as industries outside of livestock production supported the issue, although it did not impact them directly. Industries outside of livestock, such as crops, insurance, and other services, must recognize that their futures go hand-in-hand with that of the livestock industry.

The top expenses for the campaign were in advertising. The most costly form of advertising utilized was television. Other forms of advertising used were mailed advertisements, radio spots, billboards, automated calls, and yard signs. Besides advertising, considerable expenses were consulting,

website, legal and market research. In all, the PAC spent \$4,426,779.81 on the pro-Issue 2 campaign. This seems to be a high amount for a campaign with little organized opposition, but it was crucial to spread a positive, unified face of Ohio agriculture, as supported by the cognitive dissonance theory of persuasion. If people are motivated to change their thought processes, the impact will be lasting and carry over to other decisions.

Objective 2: Central Messages and Key Personnel

According to campaign personnel, social media was a key tool used in the pro-Issue 2 campaign, especially by the Ohio Farm Bureau Federation. Facebook was used as a rallying point for campaign supporters, as one must “Like” the page to view the information, while Twitter was used to reach a broader, more general audience, as posts are open to public view. Social media was an important component due to its free nature and wide audience. Personnel indicated that in a future campaign, they would dedicate even more time and resources to their social media sites. This information implies that agricultural organizations should establish a presence online and familiarize themselves with social media websites and tools before facing such situations.

Unity was also a recurring topic during the interviews. Unifying to establish the PAC allowed Ohio agriculture to present a united front and to pool their resources for the campaign. Additionally, those interviewed emphasized the notion that the portion of the industry with the most to lose should not be at the forefront of the campaign. This implies that agricultural groups must join together to display a united front in the face of outside threats, instead of dividing and avoiding issues that do not directly impact them. Unity was also crucial in the different elements of the campaign, as harmony had to exist between the paid forms of media and grassroots efforts. It was suggested that in future campaigns, the personnel would work to strengthen this relationship by surveying grassroots campaign members about what materials they would find most effective, and then hiring paid media firms to create these materials.

Lastly, the interviewees emphasized the importance of being proactive. Proactivity allowed the OLCSB to be invented and implemented. Organizations should be proactive before faced with a crisis by becoming a trusted source of information and creating an open forum of discussion with the public. Having a well-established social media following made Ohio Farm Bureau’s campaign much easier and successful. Agricultural organizations should establish a presence online and in public as soon as possible in order to become a familiar source for information for the public.

Objective 3: Media Coverage

The five major Ohio newspapers, The Cincinnati Enquirer, The Cleveland Plain Dealer, The Columbus Dispatch, The Dayton Daily News and the Toledo Blade, covered the debate over Issue 2 with 27 total news stories between May 26, 2009 and November 4, 2009. Additionally, nine opinion editorial/endorsement pieces were published during this same time frame, with the four papers that offered an opinion supporting a “No” vote on the issue.

While the number of negative endorsements and editorials implies an uphill battle with the media, many of these pieces focused on the constitutional aspect of the issue rather than the OLCSB itself. This coverage implies that the agricultural community must maintain an open and honest dialogue with the media and constantly be available to provide information. The fact that the media’s criticism of the issue focused largely on constitutional issues as opposed to showing support for HSUS’ demands is promising for agriculture.

Implications

This campaign is an example of a piece of legislation that benefits agriculture successfully passing on the ballot, in contrast to the large numbers of initiatives that do not. It is apparent that agricultural organizations need to be proactive and communicate with the public at all times in order to be successful in the future with other ballot initiatives.

By being proactive after the original meeting with HSUS, Ohio agricultural organizations were able to move swiftly to set the initiated constitutional amendment in motion that would create the OLCSB. Instead of mounting a defensive campaign against an HSUS-supported ballot initiative, Ohio agriculture was able to be on the offensive. Additionally, Ohio Farm Bureau was proactive in their social media efforts. Because they were already an established presence on Facebook and Twitter, less effort was needed to reach a broader audience. Other state and national agricultural organizations should begin to establish a credible presence online, so they can be viewed as a trusted source of information in the future when they attempt to communicate about key issues.

The unified agricultural industry allowed the pro-Issue 2 campaign to receive considerable amounts of funding from both in and out of Ohio. Without this funding, the campaign would have been impossible to accomplish. Unity also allowed organizations to come together to establish the Ohio for Livestock Care PAC to present a united front. Grassroots advocacy was an important part of the campaign, as it is low-cost and allows a personal connection between the farmer and the public. Other campaigns, and communication professionals, should heed the advice regarding ensuring a strong and cohesive connection between the paid media materials and the grassroots campaign efforts.

Based on the outcomes of this study, agricultural communication educators need to ensure that they are educating their students on the wide range of communication methods available during media campaigns. Students must be aware of every communication outlet, from paid television advertising to grassroots volunteers, and how they can function cohesively in a media campaign. Additionally, it is important for educators to pass on information about the legislative process. The current and next generations of agriculturalists must know how the government functions in relation to agriculture and how to use the legislative process to their greatest advantage.

Further study of around specific message design used in the campaign and voters' perceptions of effectiveness would help lend more clarity to the case as well. Interviews with voters on the effectiveness of the campaign materials from their point of view would help researchers determine what other factors that swayed voters at the polls in this election.

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