ISSN 1051-0834©
Volume 100 • No. 2 • 2016

Journal of Applied Communications

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

Journal of Applied Communications

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Book Review

Research

Book Review

A Review of Spreadable Media: Creating Value and Meaning in a Networked Culture

Laura M. Gorham

Book Title

Spreadable Media: Creating Value and Meaning in a Networked Culture

Author

Henry Jenkins, Sam Ford, and Joshua Green

Publisher

New York University Press: New York

Additional Information

Hardback, 350 pages, $21.74, ISBN: 978-0-817-4350-8

Key Words

Online Media, Media Content, Participatory Culture, Emerging Media

Introduction

"If it doesn't spread, it's dead" (Jenkins, Ford, & Green, 2013, p. 1). As we all are aware, technology has caused the media landscape to change: no longer are the days of direct communication to the consumer and content creators the only gatekeepers of information. Instead, media has been shaped through content that may be spread by or engaged with by various audiences.The goal of the book is to help readers understand the media culture's change into a style of audience participation. The authors examine the history and development of audience engagement in media flow, the implication of this engagement, as well as the challenges and opportunities faced by media creators in a world of spreadable media.

Summary

In the introduction, the authors propose the idea of "if it doesn't spread, it's dead" (p. 1) and begin an examination of an "emerging hybrid model of circulation, where a mix of top-down and bottom-up forces determine how material is shared across and among cultures in far more participatory (and messier) ways" (p. 1). Basically, media "nowadays" are spreadable. One of my favorite quotes from this chapter is, "The decisions that each of us makes about whether to pass along media texts – are reshaping the media landscape itself" (p. 33). The idea of spreadable media helps to put media content into the hands of the consumer who are "receptacles for mass-produced and mass-distributed content: as eyeballs in front of a screen (in television terms), butts in seats (in film or sports terms), or whatever other body parts media companies and brands hope to grab next" (p. 32). This key idea suggests the public is no longer a consumer of media; instead, the public is

responsible for the creation of media and is involved in a participatory culture. Through technology, communication, and networks the public is able to share, create, reframe, or rather, participate in all types of media and messages.

Spreadable Media uses each of its seven chapters to support the argument that media are spreadable. In the first chapter, "Where Web 2.0 Went Wrong," the authors explain the Web 2.0 structure allows users, consumers, and audiences to become co-creators of content. However, it also argues this structure has led to a fragmented digital culture where not all media is created equal and suggested those involved in the spread of media have a different perception of value and/or worth.

In the second chapter, "Reappraising the Residual," an in-depth description of appraising media is discussed. The authors have described media appraisal to be measurements used to determine the media object's value. Media may be appraised when someone decides whether or not media is valuable by spreading, and what is not valuable by not spreading the information. Further, the chapter discussed how media may be appraised in a residual form, or materials from the past, and residual content may become a "prime candidate for spreadability" (p. 97). For example, a residual piece of information may be an Extension document discussing Avian flu. The media may come back to life in a residual form when a case of avian flu is known in the present. People may search and spread this information to provide details and facts about the avian flu.

The idea of value and worth continues in the third chapter, "The Value of Media Engagement," where previous styles of engagement measurement are discussed. In the past, the process of appraisal or measurement has been based on the appointment-based viewing (where viewers fit a television program into their schedule); however, our culture has shifted into a form of engagement-based viewing (where audiences have the ability to view content at any time from multiple devices and participate in the conversation). The authors explained while survey data and amount of views may have been satisfactory to evaluate how much the program was valued by audience members, the new engagement-based model allows users to view, share, and circulate information about the television program. Therefore, "such changes require a rethinking of popular models of consumerism" where measurement is based upon how a media program may "contribute to the cultural value (sentimental, symbolic) of media products by passing along content and making material valuable within their social networks" (p. 123). The authors suggested a better way to measure the way an audience interacts with media is through the use of the term "multiplier" by Grant McCracken. A multiplier describes the interaction a person has with the media content. Scholars should survey multipliers to determine the amount of engagement or interaction with a particular media.

Chapter 4, "What Constitutes Meaningful Participation," provides insight into the changing relationship between media content producers and audiences. While audience interaction is necessary to consume media in a participatory manner, not all audience members are participatory to the point where feedback or content is created. A user may participate from simply viewing the media, interacting with the media, to providing new content.

In Chapter 5, the authors discussed "Designing for Spreadability." Successful creators must understand the strategic and technical aspects they need to master in order to create content that is more likely to be spread. They must think about what motivates participants to seek out information and then share the information. To increase motivation to spread media, Jenkins et al. discuss how spreadable media should be created based on the five following factors: the media must be available when and where audiences want it; portable; easily reusable in a variety of ways; relevant to multiple audiences; and part of a steady stream of material. Content creators must

also be aware of the audience needs as well as patterns and motivations of media circulation and emerging tools. Finally, the authors explained seven types of content (shared fantasies, humor, parody and references, unfinished content, mystery, timely controversy, and rumors) that may allow readers to view content through their own experiences and then share the content.

The sixth chapter, titled "Courting Supporters of Independent Media," explains how people find your information. The authors describe how there is not one single way for an audience to find your information and provide examples of how many different organizations have targeted media to their audience. While the media market share might be dominated by large organizations such as Apple, Microsoft, or Sony, there is a place for smaller organizations to build shareable media content. The chapter touches on the idea of Chris Anderson's long tail theory, which describes how organizations need to target niche markets to spread content. Low budget and small resource organizations may increase their spreadability when targeting a niche group because "niche media content may accrue value at a different pace, on a different scale, through different infrastructure, and on the basis of different appeals than the highest-grossing commercial texts do" (p. 238). As agricultural communicators look at this chapter, they may find value in learning how to build a niche market and target media toward it.

The text finishes its argument, in the seventh chapter, of the use of spreadable media in international contexts. The chapter touches on the idea of how spreadability has increased the diversity of ideas; however, not everyone may have access to the information. While spreadable media may not be used in some third world countries or countries with political restrictions, the use of spreadable media transnationally has the opportunity for various cultural perspectives on topics.

Critique

While the text does focus on mainstream media, agricultural communicators can learn how to spread information to their clients or audiences from the various information, examples, and case studies in the text. The text provides a historical foundation of the development of Web 2.0, emerging media, and participatory media. The authors use examples and case studies to document how audiences and the public interact with media platforms and content.

Agricultural communicators must be aware of how an audience appraises or values media. Audience analysis and audience interaction is crucial in telling the story of agricultural communications. By becoming aware of audience appraisal of media content, communicators will be able to understand how different audiences value the messages placed on Web 2.0. Addressing various audience segments and creating media to meet the needs of each audience member is crucial to the spread of agricultural information. In addition, the book lays the groundwork for how communicators should design these spreadable communication messages to meet the needs of audiences on multiple platforms. Jenkins et al. explained how communicators must make their content accessible through multiple places and easily discoverable:

> Rather than passively waiting for content to be delivered as in the broadcast days, users are actively seeking out and comparing media on important issues, through search engines, recommendations, video on demand, interactive program guides, news feeds, and niche sites. This is placing pressure on many makers to convert their content so that it's not only accessible across an array of platforms and devices, but properly formatted and tagged so that it is more likely to be discovered. (p. 170)

For agricultural communications students and scholars, this book proves to be valuable. Not only are numerous authors cited, but the case studies presented of how spreadable media is used on and across different platforms and media provide models for media analysis. Further, it shows multiple opinions and arguments where scholars and students may begin a conversation of the use of spreadable media in a field. In addition to the book, the website, www.spreadablemedia.org, provides an area for discussion and a blog discussing case studies, research opportunities, and articles.

Who Should Read the Book

This book is unique as it was designed to be read by multiple readers: "media scholars, communication professionals, and people actively creating and sharing media content who are interested in how the media industries-and our culture(s)-are changing as a result" (p. ix). By writing the text to fit the needs of various readers, the book provides a unique perspective that allows each audience (scholars, students, and professionals) to learn the importance of developing spreadable media in their communications plans. While specific sections of the book may speak more closely to a specific audience, the book was written to provide an area of common ground of information for each of the audiences and their perspectives. Each type of reader will learn the history and development of our emerging media landscape, the nature of audience engagement, and the elements necessary to create engaging participatory or spreadable media.

For the field of agricultural communication, *Spreadable Media* would be a great resource when developing informational content, creating content that has the ability to converge over multiple platforms, and understanding how to more deeply engage the participatory audience. This book may also be used in agricultural media courses to address how students should incorporate spreadable media into communication campaigns to spread the story of agriculture.

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Research

A Content and Visual Analysis of Promotional Pieces Used in a Communication Campaign for the Arkansas [Commodity] Promotion Board

Amy Hughes, Tara L. Johnson, Leslie D. Edgar, Jefferson D. Miller and Casandra Cox

Abstract

This study analyzed a communications campaign developed by a third-party communications group (TPCG) for a prominent commodity promotion board in Arkansas. The campaign included numerous promotional pieces targeted to three audience segments: general public, [commodity] producers, and animal agriculture producers. A systematic, content-driven assessment examined message content and visuals used in these creative pieces, comparing the actual messages with intended messages from TPCG's original communications campaign plan. A total of 53 pieces were evaluated, and 27 different communicative themes emerged. Many of the creative pieces used in the campaign displayed multiple messages in a single piece. Celebrity endorsements of [commodity] were the most saturated theme, accounting for 21.01% of messaging in the general public creative pieces. Promotion of the [commodity] board was the most prominent theme (16.38%) in the [commodity] producer pieces. Benefits to the Arkansas economy was the most prominent theme (10.73%) in the animal agriculture creative pieces. Although TPCG predominantly achieved consistency through messages that aligned with its campaign plan, a portion of the promotional pieces across all audiences did not contain messages that were a part of the original plan. Therefore, more than one-third (38.1%) of the messages found in the creative pieces were deemed inconsistent or inconclusive. The researchers recommend utilizing a needs assessment to aid in identifying appropriate messaging, and testing those messages through standard evaluation procedures.

Key Words

Agricultural Communications, Communication Campaigns, Content and Visual Analysis, Messages, Target Audiences

Literature Review

With the average consumer being more than three generations removed from the farm (Arkansas Farm Bureau, n.d.), the need for agricultural literacy is evident (Igo & Frick, 1999; Ryan & Lockaby, 1996). While consumer influence on agricultural production continues to grow, consumer perception of marketing and agriculture is poor. A Delphi study completed by Frick, Birkenholz, and Machtmes (1995) found that both rural and urban adults' perceptions regarding marketing and plant science were less positive than their perceptions of other agricultural topics. Consumers need to be "agriculturally literate" in order to respond appropriately as issues

Some content in this article was purposely left without identifiers. Namely, the commodity under study and the Third Party Communications Group. This was necessary due to the nature of funding that supported this research.

arise (Frick et al., 1995, p. 44). Individuals who respond to agricultural issues without a basic understanding of all sides are more likely to react without reason. A better understanding of agriculture and its practices is needed to create "more effective educational and informational messages that increase the public's understanding of these complex agricultural issues" (Doerfert, 2011, p. 13). As a result, several agricultural commodity groups have developed communications campaigns to promote their products (Arkansas [Commodity] Promotion Board [ACPB], 2011a; California Milk Advisory Board [CMAB], 2013; Cotton Incorporated, 2013). Agriculture companies must effectively communicate with their current and potential customers and evaluate the impact and effect their communications and marketing campaigns have on a targeted audience (Weinreich, 2010). In addition, evaluation is essential in establishing campaign effectiveness.

In an effort to meet demands, new relationships between food producers, processors, and retailers have been established through improved marketing communications (MacDonald et al., 2004). The primary role of marketing communications is to engage audiences, and promote the organization through a variety of communication tools (Hanstén, 2009). Integrated Marketing Communications (IMC) is a popular approach to engaging audiences while communicating key marketing messages. IMC is described as a "strategic approach to communicating the brand and its message to targeted audiences in ways that are clear, concise, and consistent" (Marshall & Johnston, 2010, p. 9). For the purposes of this study, the definition of *message* is an "explicit reference to attributes via verbal or visual content" (Laczniak & Muehling, 1993, p. 328).

Public figures or celebrities are often used in marketing campaigns to establish credibility (Weinreich, 2011) with an audience. An association with a celebrity achieves a higher degree of responsiveness and recollection (Schlecht, 2003); and increases awareness of a company's advertising by forming positive feelings toward brand attitude and purchase intentions (Agrawal & Kamakura, 1995; Kamins, Brand, Hoeke, & Moe, 1989; Khatri, 2006; Knapp, 1994). To achieve a higher impact, celebrities should appeal to the targeted consumers. The goal of employing endorsers should be to increase marginal value and "enhance brand equity by means of 'second association' of a celebrity with a brand" (Agrawal & Kamakura, 1995, p. 56).

Typically, a communication campaign is "an organized communication activity, directed at a particular audience, for a particular period of time, to achieve a particular goal" (Snyder, 2003, p. 167). Communication campaigns have existed for hundreds of years, but agriculture, over the past several decades, has focused on improving and expanding campaign development and use. Telg and Irani (2012) described a communications campaign as "a strategic, structured plan consisting of a mix of media and message strategies and tactics with a consistent, unified theme" (p. 306). Successful campaigns are normally preceded by a planning phase. The plan should outline tasks via clear steps based on carefully developed strategies and tactics to achieve objectives and should conclude with plans for evaluation. Telg and Irani (2012) outlined specific steps to campaign development: (1) client profile, (2) audience analysis, (3) campaign objectives, (4) situational analysis, (5) SWOT analysis, (6) strategies, (7) tactics, and (8) media objectives, strategies, and tactics.

Telg and Irani's (2012) steps provide agricultural marketing communications professionals with a structure to aid in campaign evaluation. Campaign evaluation, or assessment, is an important portion of the IMC model, because assessments provide evidence of success and failure, allowing communicators to make adjustments to the campaign (or to future campaigns) to improve effectiveness. Campaign assessments are systematic collections and analyses of information

about the activities, outcomes, and impacts to specific target audiences in an effort to improve effectiveness (Patton, 1982; Rice & Atkin, 2013). In the IMC process, it is necessary to evaluate the impact and effect that a campaign has on specific target audiences, or "people whose behavior you wish to affect" (Weinreich, 2010, p. 9). The overall success of the campaign is determined by the effect on a specified target audience, and assessments should compare the outlined campaign goals with the achieved campaign goals (Hanstén, 2009; Rice & Atkin, 2013).

Theoretical and Conceptual Framework

Mass communications, as implied by the name, are designed to reach the mass, potential audiences, which are difficult to reach because of their relative vagueness. "Potential audiences are viewed as large aggregates of anonymous consumers, and the relationship between the sender and receiver is affected accordingly" (McQuail, 2005, p. 55). Mass communication messages are often repurposed in identical forms, resulting in oversaturation in the media and loss of uniqueness (McQuail, 2005). In the typical mass communication model, the audience (the general public) is widely dispersed. Usually, a mass media campaign's "primary purpose is to advance an interest or opinion and to achieve a change" among this widely dispersed audience (McQuail, 2005, p. 56).

Content analysis is a common approach to evaluating mass communication campaigns and methods. Content analysis is a systematic, replicable technique where many words of text are compressed into fewer content categories based on rules of coding (Edgar & Rutherford, 2012). Content analysis works especially well in evaluations involving images as well as textual content. When the combination of words and images is used effectively, it becomes one of the strongest forms of communication (Lester, 2011). Therefore, analyzing both text and images in a campaign should result in a comprehensive evaluation.

Images are often an important part of marketing campaigns, and content analysis using semiotic theory is a logical part of evaluating an IMC (Lester, 2011; Wimmer & Dominick, 2003). Perceptions and meanings of images often depend on how individual audience members interpret elements in the image and on what emotions the image elicits (Manghani, 2013). Semiology is the study of images and the signs and symbols within them (Tolbert & Rutherford, 2009).The categorization of images in communications campaigns provides a conceptual framework for interpreting connotative and denotative values, an approach that can be attributed to semiotics theorist Roland Barthes (Caywood & Langrehr, 1995; Edgar & Rutherford, 2012). Denotation, the first layer of analysis, is an individual's first reaction when looking at the image (Lester, 2011). The second layer of analysis, connotation, is what the objects in the image represent. Barthes' concepts of connotation and denotation provided the basis for much of the visual analyses within this study. Understanding both content and visual content in campaign materials is the only way to determine how messaging may be impacting audience members. Agricultural communication campaign evaluations are critical to understand campaign breadth and depth, and their results lead to the necessary steps for message improvement.

Need for the Study

The need for this study was supported by two research priority areas outlined in the National Research Agenda (NRA): (1) aiding the public in participating in decision making related to agriculture, and (2) improving public and policy maker understanding of agriculture and natural resources (Doerfert, 2011). Within these priority areas, the NRA defined a need to increase

understanding of the effectiveness of messaging and educational programs within agriculture. As generations become further removed from the farm, outlets that provide agricultural knowledge or increase agricultural literacy are imperative (Reidel, Wilson, Flowers, & Moore, 2007). Some of this agricultural literacy is being delivered to the public in the form of communication campaigns focused on branding products or services.

Agricultural commodity group marketing communications campaigns often focus on improving audiences' agricultural knowledge and literacy, and these efforts must be evaluated to determine the success of the commodity groups' investments. The commodity group that underwrote this study recognized the need for its marketing campaign to be evaluated and commissioned the researchers to conduct an independent evaluation of its recent marketing communications efforts. As a part of this research, the organization has asked to remain anonymous.

Purpose and Objectives

The purpose of this study was to evaluate promotional pieces used in a communications campaign developed for the Arkansas [Commodity] Promotion Board (ACPB) through content and visual analyses. The promotional pieces were produced and disseminated by a third-party communications group (TPCG) to reach three target audiences, namely the general public, [commodity] producers, and animal agriculture producers. Promotional pieces included (a) website, (b) booth display, (c) educational videos, (d) electronic newsletters, (e) radio & television segments, (f) press releases and event programs, (g) print and banner advertisements, and (h) logos.

The following objectives guided the study:

1. Determine the written content used in promotional pieces targeting the three outlined audience groups.
2. Determine the visual content used in promotional pieces targeting the three outlined audience groups.
3. Compare the content and visual messages used in promotional pieces targeting the three outlined audience groups.

Methodology

Study Design and Content Analysis Methods

This study used a content and visual analysis based on semiotic theory to analyze communications campaign promotional pieces developed for a large state commodity board. The general public, animal agriculture producers, and [commodity] producers were identified in the third-party communication group's (TPCG) 2012 campaign as target audience groups. With these intended audiences in mind, the campaign was evaluated in a systematic, content-driven approach to assess the potential impact on perceptions of individuals (Edgar & Rutherford, 2012).

Per the agreement reached by the commodity board and the marketing communications firm, TPCG, the firm provided 53 promotional pieces to be evaluated. Each promotional piece was not targeted to all audiences; however, some promotional pieces were targeted to promote to multiple audiences. Of the total promotional pieces created ($N = 53$), 42 were used to target the general public audience, 33 to target the [commodity] producers, and 11 to target animal agriculture producers who purchase the commodity as a feed ingredient.

The researchers in this study (evaluation team) performed a comprehensive qualitative evaluation of the campaign deliverables produced by TPCG. Qualitative data analysis is "primarily an inductive process of organizing data into categories and identifying patterns and relationships among the categories" (McMillan & Schumacher, 2010, p. 367). The researchers in this study used inductive analysis to synthesize and make meaning from the data in the campaign deliverables by identifying categories and patterns (McMillan & Schumacher, 2010).

For textual messages, a code sheet, created by the researchers, was used to analyze creative materials that contained copy. Video transcripts were also analyzed by the same method. Through a systematic and replicable process (Edgar & Rutherford, 2012), the textual materials were analyzed for keywords in context, and emergent themes were identified and then compressed into categories based on specific coding rules (Edgar & Rutherford, 2012; Gall, Gall, & Borg, 2006; Lincoln & Guba, 1985; Gibbs, 2007). Words and passages were coded in their original context (Creswell, 1998), and key themes emerged that characterized the promotional pieces and their corresponding intended messages used to target the general public, [commodity] producers, and animal agriculture producers. These three audience groups were the specific audiences targeted in the TPCG communication plan, not ones noted by the researchers of this study. Emergent themes were compressed based on peer debriefing between the student researchers and a panel of experts. This was used to reinforce the data's accuracy and reach intercoder agreement (Creswell, 2009; Gibbs, 2007).

A visual coding sheet, created by the researchers, was used to assess promotional materials that used images or visual elements (e.g., print advertisements, photos, and videos). The visual materials were analyzed denotatively. The contents of the images were broken down by what the researchers' immediately saw when looking at the image. Next, the objects in the images were analyzed for connotation to determine associative value of the photo (Edgar & Rutherford, 2012). "For example, an image of a tropical island would have a basic denotative reading of a tropical location, and a possible connotative reading of a vacation or relaxation" (Rhoades & Irani, 2008, p. 36). This approach created an account of how the meanings within images from the campaign were perceived (Rose, 2012). Lutz and Collins (1993) suggested that, if the images are coded carefully, a content analysis could be used to interpret the cultural meanings of images. Similarly, the video code sheet guided the researchers through identifying the denotative and connotative values of the visual representations in each video.

Emergent themes were combined to produce an outlined message that the audience could have interpreted from the piece. Emergent thematic messages, identified by the researchers for each creative piece, were then compared with the intended message outlined by TPCG in its 2102 campaign plan document. This process was used to determine message consistency for each promotional piece. Message consistency was categorized into three evaluative characteristics: (a) content message consistency, (b) visual message consistency, and (c) content versus visual message consistency. For content consistency, the message identified from the content analysis, or implied message, was compared to the original message outlined by TPCG. The visual message consistency was determined by comparing the identified message from the visual analysis to the original intended message outlined by TPCG. It was possible that one creative piece fell into both content and visual for analyses. Content versus visual message consistency was evaluated by comparing the implied content analysis to the implied visual analysis message. This process was used to determine if the print and visual message complemented each other as opposed based on comparison to the original message outlined by TPCG.

Coder Training and Reliability

Before proceeding with the content evaluation of the campaign, the researchers independently assessed four creative pieces: a print ad, logo, press release, and event sign. Then the researchers compared their individual analyses, checked their agreement, and established a percentage of reliability. This process was repeated until the researchers' consistently averaged more than 70% agreement in their interpretations (McMillan & Schumacher, 2010). Usually, there is a level of consensus between qualitative researchers, but, often, the way the researchers individually identify themes was different (Armstrong, Gosling, Weinman, & Marteau, 1997). The student researchers, in this study, originally identified similar themes in different ways, but after discussion and repeated analyses, agreement and like-mindedness were achieved. Through this process, assessment criteria were defined and redefined to increase consistency and aid in replication of this study. Doing so, according to Rose (2011), ensured that two coders using the same set of codes could produce the same results from the same set of images. Ultimately, because the researchers found a high level of agreement, with an inter-rater reliability of 87.5%, they established consistency in their evaluation (McMillan & Schumacher, 2010). A panel of faculty advisors consisting of two agricultural communications professors and one instructor oversaw this process.

Results and Findings

Content Analysis

Four television spots, one educational video, five radio spots, two webisodes, four public service radio spots, three print advertisements, two banners, two e-News documents, five blogs, one infographic, one booth display, six recipes, four signs, one flyer, and one press release were used to target the general public. Promotional pieces used to target [commodity] producers, included four television spots, one educational video, five radio spots, two webisodes, three print advertisements, three banners, three e-News documents, five blogs, one infographic, one booth display, six recipes, three signs, one press release, website, table top signage, and five giveaways. There were two television spots, one educational video, two radio spots, one print advertisement, one display, two signs, and two webisodes targeting animal agriculture producers.

General public.

Twenty-seven unique themes with 771 themes occurrences emerged from the analysis of content pieces within the general public group. All emergent themes are listed in Table 1 by frequency order. *Celebrity endorsements* was the most saturated theme with 21.01% in the general public target audience.

Table 1

Emergent Content Themes and Occurrences Identified in the General Public Promotional Pieces (n = *33)*

Content Themes	*N*	%
Celebrity endorsements	162	21.01
Promotion of board	102	13.23
For use in food products	66	8.56
How [commodity]s are produced	63	8.17
[Commodity]s contribute to Arkansas agriculture	50	6.49
Diversity of [commodity]s	38	4.93
General benefits to Arkansas	26	3.37
Benefits to Arkansas economy	25	3.24
Value of educating about [commodity]s	23	2.98
For use in common household products	22	2.85
Economic value to consumers	20	2.59
Promotion/Use of slogan	19	2.46
[Commodity]s are grown in Arkansas	18	2.33
For use in energy products	18	2.33
For use in animal products	18	2.33
[Commodity]s are healthy for consumers	18	2.33
[Commodity]s are environmentally sustainable	18	2.33
[Commodity]s contribute to animal agriculture	16	2.08
Human benefits	10	1.30
Research is valuable to production	9	1.17
Partnerships are important	8	1.04
[Commodity]s are delicious to consumer tastes	7	0.91
Technology improved production	7	0.91
Bean2Blog is an educational event	3	0.39
For use in industrial products	2	0.26
ACPB funds post-secondary education	2	0.26
United [commodity] Board Check-off program	1	0.13
Total	771	100.00

[Commodity] producers.

Twenty-four unique themes and 348 theme occurrences emerged from the analysis of the [commodity] producers' group print materials (Table 2). The most identified theme for this audience was *promotion of [commodity] board* with 16.38% saturation of the theme in all promotional pieces used to target this audience.

Table 2

Emergent Content Themes and Occurrences Identified in the [Commodity] Producers Promotional Pieces (n = 19)

Content Themes	*N*	%
Promotion of [Commodity] board	57	16.38
How [commodity]s are produced	35	10.06
Diversity of [commodity]s	29	8.33
For use in food products	26	7.47
[Commodity]s are grown in Arkansas	23	6.61
Benefits to Arkansas economy	23	6.61
General benefits to Arkansas	18	5.17
Human benefits	18	5.17
For use in energy products	16	4.60
For use in animal products	16	4.60
Promotion/Use of slogan	14	4.02
[Commodity]s contribute to Arkansas agriculture	12	3.45
Technology improves production	11	3.16
Research is valuable to production	10	2.87
[Commodity]s contribute to animal agriculture	8	2.30
For use in common household products	6	1.72
Value of educating about [commodity]s	5	1.44
[Commodity]s are environmentally sustainable	5	1.44
Economic value to consumers	5	1.44
Partnerships are important	3	0.86
For use in industrial products	3	0.86
Celebrity endorsements	3	0.86
ACPB funds post-secondary education	1	0.29
United [Commodity] Board Check-off	1	0.29
Total	348	100.00

Animal agriculture producers.

Twenty emergent themes with 177 theme occurrences were identified within the animal producers' group promotional material assessments (Table 3). The most commonly identified theme in the promotional pieces for the animal agriculture audience, *benefits Arkansas economy* had a 10.73% saturation rate across all print promotional pieces used to target this group.

Table 3

Emergent Content Themes and Occurrences Identified in the Animal Agriculture Promotional Pieces (n = *11)*

Content Themes	*N*	%
Benefits Arkansas economy	19	10.73
Promotion of [commodity] board	15	8.47
For use in food products	15	8.47
Diversity of [commodity]s	14	7.91
For use in animal feed products	13	7.34
For use in energy products	13	7.34
Human benefits	12	6.78
General benefits to Arkansas	12	6.78
[Commodity]s are grown in Arkansas	12	6.78
How [commodity]s are produced	9	5.08
Promotion/Use of slogan	9	5.08
[Commodity] contribute to Arkansas agriculture	8	4.52
[Commodity]s contribute to animal agriculture	6	3.39
For use in common household products	5	2.82
Economic value to consumers	5	2.82
[Commodity]s are environmentally sustainable	4	2.26
Research is valuable to production	2	1.13
For use in industrial products	2	1.13
Technology improved production	1	0.56
United [Commodity] Board Check-off	1	0.56
Total	177	100.00

Visual Analysis

General public.

Twenty-one unique themes with 232 themes occurrences emerged from the analysis of the visual pieces targeting the general public group. All emergent themes are listed in Table 4 by order of frequency. How [commodity]s are produced was the most saturated theme with 30.17%.

Table 4

Emergent Visual Themes and Occurrences Identified in the General Public Promotional Pieces (n = 23)

Visual Themes	*N*	%
How [commodity]s are produced	70	30.17
[Commodity]s are grown in Arkansas	30	12.93
Promotion of [commodity] board	24	10.34
[Commodity]s contribute to animal agriculture	17	7.33
For use in food products	15	6.47
For use in energy products	11	4.74
For use in industrial products	11	4.74
For use in animal products	9	3.88
[Commodity]s contribute to Arkansas agriculture	7	3.02
Celebrity endorsements	6	2.59
Research is valuable to production	6	2.59
Value of educating about [commodity]s	5	2.16
Economic value to consumers	5	2.16
For use in common household products	4	1.72
Diversity of [commodity]s	3	1.29
Bean2Blog is an educational event	3	1.29
[Commodity]s are environmentally sustainable	2	0.86
Partnerships are important	2	0.86
Benefits to Arkansas economy	1	0.43
United [Commodity] Board Check-off program	1	0.43
Total	232	100.00

[Commodity] producers.

There were 19 different themes and 185 theme occurrences identified within the producers group visual materials (Table 5). The most frequently identified theme in the promotional pieces targeting the [commodity] producers was, *how [commodity]s are produced*, with 17.30% saturation across all visual promotional pieces used to target this group.

Table 5

Emergent Visual Themes and Occurrences Identified in the [Commodity] Producers Promotional Pieces (n = *23)*

Visual Themes	*N*	%
How [commodity]s are produced	32	17.30
[Commodity]s are grown in Arkansas	24	12.97
Promotion of [commodity] board	21	11.35
Promotion/Use of slogan	21	11.35
For use in food products	14	7.57
[Commodity]s contribute to animal agriculture	13	7.03
For use in industrial products	10	5.41
For use in energy products	9	4.86
For use in animal products	9	4.86
[Commodity]s contribute to Arkansas agriculture	9	4.86
Research is valuable to production	7	3.78
Diversity of [commodity]s	5	2.70
For use in common household products	3	1.62
Benefits to Arkansas economy	2	1.08
General benefits to Arkansas	2	1.08
Value of educating about [commodity]s	1	0.54
[Commodity]s are environmentally sustainable	1	0.54
Partnerships are important	1	0.54
United [Commodity] Board Check-off	1	0.54
Total	185	100.00

Animal agriculture producers.

Sixteen unique themes with 160 theme occurrences were identified in the creative pieces targeting animal agriculture producers (Table 6). The most common emergent theme was *how [commodity]s are produced*, with 21.58% saturation of the theme in all visual promotional pieces for this audience.

Table 6

Emergent Visual Themes and Occurrences Identified in the Animal Agriculture Promotional Pieces (n = *9)*

Visual Themes	*N*	%
How [commodity]s are produced	41	21.58
[Commodity]s are grown in Arkansas	19	10.00
[Commodity]s contribute to animal agriculture	17	8.95
Promotion of [commodity] board	16	8.42
For use in food products	12	6.32
For use in animal feed products	12	6.32
For use in industrial products	11	5.79
For use in energy products	8	4.21
Research is valuable to production	7	3.68
Human benefits	5	2.63
[Commodity] contribute to Arkansas agriculture	4	2.11
For use in common household products	3	1.58
[Commodity]s are environmentally sustainable	2	1.05
Benefits Arkansas economy	1	0.53
Diversity of [Commodity]s	1	0.53
United [Commodity] Board Check-off	1	0.53
Total	160	100.00

Content and Visual Message Consistency

To evaluate the consistency of the content message compared to the visual message, researchers compared the implied content and visual message. In the communications pieces targeted to the general public, 22 of the 32 analyzed promotional pieces consistently communicated the message intended by TPCG as stated in its outlined communications plan (Table 7). Nine of the 19 promotional pieces targeting the [commodity] producers consistently communicated the intended message outlined by TPCG. Four of the eight promotional pieces targeting animal agriculture consistently communicated the message outlined by TPCG.

Table 7

Content Message Consistency Based on Outlined Message as Compared to the Intended Message for the Target Audience Groups (N = *53)*

	General Public (*n* = 32)		[Commodity] Producers (*n* = 19)		Animal Agriculture Producers (*n* = 8)	
Message	*n*	%	*n*	%	*n*	%
Consistent	22	68.75	9	47.37	4	50.00
Inconclusive	9	28.13	9	47.37	4	20.00
Inconsistent	1	3.12	1	5.26	0	0.00
Total	32	100.00	19	100.00	8	100.00

Note. Inconclusive means there was no intended message for comparison.

In the general public analysis, 24 pieces utilized a visual message and 16 consistently communicated the message outlined by TPCG in their communications plan (Table 8). Fifteen of the 25 visual promotional pieces targeting [commodity] producers consistently communicated the message originally outlined. Seven of the nine promotional pieces targeting animal agriculture producers consistently communicated the message originally outlined by TPCG.

Table 8

*Visual Message Consistency Based on Outlined Message as Compared to the Intended Message for all Target Audiences (*N = *53)*

	General Public (n = 24)		*[Commodity] Producers* (n = 25)		Animal Agriculture Producers (n = 9)	
Message	*N*	*%*	*n*	*%*	*n*	*%*
Consistent	16	66.67	15	60.00	7	77.78
Inconclusive	4	16.67	7	28.00	2	18.18
Inconsistent	4	16.67	3	12.00	0	0.00
Total	24	100.00	25	100.00	9	100.00

Note. Inconclusive means there was no separate message for comparison.

Conclusions and Recommendations

The findings of this study showed that many of the promotional pieces analyzed displayed a multitude of marketing themes, and in some instances did not accurately represent the intended message according to the original communications plan. This general conclusion can be partially explained and by Caywood and Langrehr's (1995) notions that advertising is susceptible to communicating mixed signals or messages and that organizations cannot solely rely on third-party communications groups, working as a mediators, to interpret the message as would the audience. McQuail's (2005) view on message oversaturation was also supported by this study. That is, when mass communication messages are repurposed in identical forms, the result can be oversaturation in the media and loss of uniqueness.

The content analysis showed that among the creative pieces targeted toward the three audience segments, there were as many or more communicative themes present as there were creative pieces. In the case of the promotional pieces targeting animal agriculture producers, there were two communicative themes per promotional piece. With so many messages present, McQuail's (2005) oversaturation concept most certainly applied. However, unlike McQuail's explanation, the oversaturation problem in this campaign was not because of over-repetition of a few key messages, but instead the problem was the use of far too many messages, which may have contributed toward diluting the power of the campaign.

While the audience segments had differing demographics and, therefore, were purposefully targeted with different messages, there appeared to be little cohesion across the campaign as a whole. For example, the top five emergent themes in the communications pieces targeting the general public were predominantly different than the themes identified in the [commodity] and animal agriculture producers' audience. Only two themes were identified in all three audiences:

(1) *promotion of [commodity] board* and (2) *for use in food products*. The [commodity] producers and animal agriculture producers groups' top five emergent themes were almost identical, with only the fourth most saturated content theme differing. *[Commodity]s contribute to animal agriculture* was the fourth most saturated theme for [commodity] producers and *promotion/use of slogan* was fourth most saturated for the animal agriculture producers.

These findings logically lead to the recommendation to reduce the number of thematic messages in each promotional piece and the overall number of different themes in order to provide more focused, cohesive messaging based more closely on the campaign goals. According to Telg and Irani (2012), an effective and successful message is created based upon the goal of the promotional piece. In future promotional campaigns, more time should be spent developing simplified, audience-specific messages that represent only the most important campaign messages (Weinreich, 2011) rather than the broad plethora of messages observed in the 2012 campaign.

In this campaign, a local celebrity endorser was utilized to establish credibility (Weinreich, 2011) with the general public target audience. However, the celebrity's efforts may not have been effectively managed. Thus, the celebrity appears to have promoted his own image more than the ACPB or [commodity]. This conclusion is supported by the fact that the celebrity endorsement theme emerged 59% more than the second most saturated theme in pieces targeting the general public audience. It is also recommended that commodity groups develop a strategic plan to ensure greater saturation of messages about the organization and its beliefs in conjunction with celebrity endorsements.

Visual analysis is another tool for "understanding perceptions, media influence, and agricultural portrayal" (Tolbert & Rutherford, 2009, p. 18). Overall, the number of emergent themes and theme occurrences was lower in the visual analysis, most likely due to the difficulty of visually representing certain themes or messages. Still, the same issue of oversaturation via multiple message themes was present in the campaign's video pieces and images. Similar to the non-visual content, the visuals and videos included an average of one unique thematic message per creative promotional piece analyzed. However, the visual pieces did show more consistency across audience segments, with the top five emergent themes being similar across the visual pieces targeting the three audiences. Four emergent themes were identified in the three audiences: (1) *promotion of [commodity] board,* (2) *grown in Arkansas,* (3) *how [commodity]s are produced,* and (4) *for use in food products*. [Commodity]'s contribute to animal agriculture was a top-five emergent theme in the general public and animal agriculture producers audience and promotion/use of slogan was an emergent theme identified by the [commodity] producers audience. Another interesting observation was that only one reference was made to the national [commodity] checkoff in visual images targeted to each audience.

The campaign was able to integrate some level of consistency, judged by messages outlined in its original plan. However, several promotional pieces across all audiences lacked an outlined message in the original plan for comparison. This observation serves as a reminder to all communicators that not only should there be a clearly outlined communications plan (Snyder, 2003; Telg & Irani, 2012), but the plan needs to be followed. Without clearly outlined communications objectives, key messages, campaign efforts have no logical basis for evaluation.

Among the textual content of all the promotional pieces evaluated, 59.32% of the messages were consistent with the intended messages outlined in the plan, and only 3.39% of the messages were inconsistent. However, 37.29% of the messages were deemed as invalid and not

eligible for evaluation in terms of consistency because though they were clearly key messages in the promotional pieces, they were not outlined in the original plan. Among the visual images, 65.52% of the messages were consistent with the intended messages in the plan and only 12.07% were inconsistent. However, 22.41% of the messages were deemed as invalid and not eligible for comparison because there was no corresponding message or communications objective in the original plan. Finally, when the textual and visual messages were compared, only 48.39% of the messages were consistently complementary, which meant that 51.61% of those messages did not complement each other. In several promotional pieces, for example, one meaning was derived from the textual analysis, while a different message was derived from analysis of the visual message. For example, in a print advertisement, the textual message of the print advertisement was more focused on biodiesel and the economy, while the visual message was more focused on animal agriculture. Inconsistency between the two categories could be a result of the difficulty to support various messages through visual (e.g., benefits Arkansas' economy, economic value to consumers, and value of educating about [commodity]s). These conclusions strengthen the recommendations that (1) *future campaign plans should focus on consistent, integrated messaging across media—both textual and visual* and (2) *that all media efforts should be concretely linked to one or more of the communication objectives*.

To determine the effectiveness or success of a campaign, every aspect of a campaign should have a form of evaluation (Weinreich, 2011). Significant time should be spent developing simplified, audience specific messages that represent the most important theme (Weinreich, 2011). If an audience's demographics and psychographics can be determined, proper development of persuasive targeted messages can be achieved (Telg & Irani, 2012). The purposes and goals of promotional pieces should be the first considerations in the development process, and key campaign messages should (a) be developed from two or three key points that support message theme, (b) be presented in order of importance, with the most important information listed first, and (c) utilize visual devices such as logos, color, and others to gain and retain audience attention (Telg & Irani, 2012).

For some public communications efforts, an expert in the field is often used as a "gatekeeper" (Shoemaker, 1991; Telg & Irani, 2012; Weinreich, 2011) for technical information being communicated to the public. A gatekeeper should possess extensive knowledge of the subject matter or audience to ensure appropriateness of materials. This individual would be responsible for reviewing or testing any materials intended to target an audience to identify any errors before promotional materials are distributed to audience members (Weinreich, 2011). Shoemaker (1991) suggested utilizing more than one gatekeeper to avoid individualization of decision-making. The [commodity] board would benefit from a gatekeeper—someone with an understanding of [commodity] production and marketing as well as marketing communications—to review and approve all creative pieces disseminated by the TPCG.

Little research on visual analysis and more specifically visual analysis in marketing exists. This study was a first step in highlighting the importance of both image-based and marketing assessment research in agricultural communications. Evaluation through textual and visual analysis should continue to progress in the agricultural marketing sector (Tolbert & Rutherford, 2009).

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Research

Branding the Berries: Consumers' Strawberry Purchasing Intent and their Attitude toward Florida Strawberries

Taylor K. Ruth and Joy N. Rumble

Abstract

*Florida is the largest producer of strawberries in the United States during the winter months. Recently, Florida has faced competition from strawberries imported from Mexico during peak season. Studies have shown that using state branding can help promote local produce. Branding can create perceived differences between identical items, as well as strong positive associations with the product. This study examined consumers' strawberry purchasing intent and attitudes toward Florida strawberries to aid agricultural communicators in creating effective communication and branding strategies. An online survey was distributed throughout Florida (*n = *500). Results indicated that freshness and taste were the most important qualities of strawberries for purchasing decisions and that Florida strawberries were viewed more positively than Mexico strawberries. When respondents were given the option between labels with and without a Fresh from Florida brand logo, the majority preferred to purchase the package labeled Fresh from Florida. Consumers with a lower income were less likely to purchase state branded strawberries. Gender did not have an impact on purchasing intent for strawberries. Using the Fresh from Florida brand for Florida strawberries was a key recommendation from this study, along with using sensory words, like taste and freshness, when marketing strawberries. Also, developing outreach programs to inform lower- income families when produce is in season will help promote the sale of local products. These recommendations could be expanded to other states and commodities.*

Key Words

Branding, Competition, Imports, Local, Locally Grown, Strawberries

Introduction

The United States is the world's largest strawberry producer, accounting for 30% of the products sold globally (Boriss, Brunke, Kreith, & Morgan, 2012). In 2010, the United States grew more than one million metric tons of strawberries. Known to be high in vitamin C, potassium, and fiber, strawberries are the fifth most preferred fresh fruit in the United States, and demand has continued to grow. California has been the United States' largest producer of strawberries and yielded more than two billion pounds of strawberries during the 2012 season (United States Department of Agriculture-Economic Research Service [USDA-ERS], 2013). The USDA-ERS reported Florida as the second highest strawberry producer in the United States; Florida produced approximately 200 million pounds of strawberries in 2012. Due to the warm climate, Florida's strawberry season occurs during winter months from December until April, during California's off-season. Florida has been responsible for 100% of the fresh strawberry production in the United

Funding for this research was provided by the Florida Strawberry Research and Education Foundation. This article was presented at the Southern Association of Agricultural Scientists on February 1, 2015 in Atlanta, Georgia.

States during those winter months (Boriss et al., 2012). Florida agriculture contributed $8.3 billion to the state's economy in 2011 (Hodges & Stevens, 2013), and $300 million dollars came from strawberry sales alone in 2012 (Florida Department of Agriculture and Consumer Services [FDACS], 2013). Wu and Guan (2015) estimated that the overall economic contribution of the Florida strawberry industry to the state's economy to be one billion dollars in 2013. Florida has 8,700 acres of strawberry farms and produced 21,000 pounds of strawberries per acre in 2012 (USDA-ERS, 2013). Even though large volumes of product have been produced domestically, there has been a trend of increasing numbers of imported strawberries over the past decade (Wu, Guan, & Whidden, 2012).

The North American Free Trade Agreement (NAFTA) in 1993 caused an increase in imported vegetables and fruits into the United States, as well as direct competition with domestic produce (Tyson, Hochmuth, Lamb, Hochmuth, & Sweat, 2001). With strawberries in particular, the net trade has decreased dramatically from 120 million pounds in 2008 to 20 million pounds in 2011 (Wu et al., 2012). The United States has also increased imports from Mexico during Florida's strawberry season. In 2003, 88 million pounds of strawberries were imported from Mexico. By 2012, the volume had increased to 350 million pounds, which was almost twice the volume produced by Florida (Wu & Guan, 2015).

Imported strawberries have typically only been sold in United States stores when domestic strawberries were out of season (Boriss et al., 2012). However, the dramatic increase in strawberries imported from Mexico has led to more competition for local farmers (Shope, 2013). In 2011, 36% of the imported product arrived between March and April while Florida strawberries were still in season (Boriss et al., 2012). Plant City, Florida has been called the "winter strawberry capital of the world" (Florida Strawberry Growers Association, 2012, para. 2) and has harvested about 11,000 acres of strawberries a year. In early 2013, a supermarket chain began selling imported Mexico strawberries on shelves next to the locally grown, Plant City strawberries. Executive director for the Florida Strawberry Growers Association said, "I understand what they are trying to do, but this is just insulting to our community that depends so much on our local crop, and that's the point I am trying to make, that this is just inappropriate" (Shope, 2013, para. 3). Florida's market share has dropped due to Florida's increase in imports from Mexico (Ohlemeier, 2013). The recent rise in Mexico strawberries is due, in part, to their increase in strawberry acreage from 15,000 acres in 2010 to about 21,000 acres in 2012. The influx of imports caused more market competition, and Mexico farms use of inexpensive labor led to heightened competition with the local producers (Boriss et al., 2012; Ohlemeier, 2013). Even though Florida strawberries have been reported as "fresher since they grow 2,000 miles closer" (Campbell, 2013, para. 6), there is a valid threat from the imported Mexico strawberries due to the lowered price for grocery stores. In 2010, Florida strawberry growers earned $1.87 per pound of strawberries, and by 2012, the price dropped to $1.10 per pound. This price was lowest strawberry farmers earned in Florida since 2005 (USDA-ERS, 2013).

There is a need to better promote Florida grown strawberries considering the increase in imported strawberries has created direct competition with the local economy. Understanding consumers' attitudes toward a product is the first step for agricultural communicators to develop effective strategies to promote the sale of Florida strawberries. These strategies are in accordance with priority two of the national research agenda, New Technologies, Practices, and Products Adoption Decisions (Doerfert, 2011). The purpose of this study was to determine consumers' strawberry purchasing intent and attitudes toward Florida grown strawberries to develop Florida strawberry communication and brand strategies.

Literature Review

Brands, often attached to consumer goods, represent more than a product itself and carry social meaning (Loken, Ahluwalia, & Houston, 2010). These social constructs add value to organizations and the consumer (Settle, 2012). A brand represents value to the customer and reduces consumer' perceptions of risk and uncertainty (Franzen & Moriarty, 2009; Kornberger, 2010). Implementing and maintaining successful brands requires understanding how the brand is communicated to consumers and how consumers respond to the brand (McEnally & de Chernatony, 1999).

Brand positioning is the process of creating a mental image for the consumer to establish brand identity and value (Kotler & Keller, 2006). To determine the brand position, marketers first must understand who the product's consumers are, who the main competitors are, similarities between the brand and competitors, as well as differences among them. Proper positioning relies heavily on the points of parity and points of difference being established (Kravetz, 1977). The points of differences are positive attributes consumers associate with a product that they believe would not be found in products sold by a competitor's brand (Barwise & Meehan, 2004). Perceived uniqueness of the brand is often what leads a consumer to make final purchasing decisions (Keller, 1998). Points of differences can relate to performance of the product, as well as imagery associations. Points of parity differ from points of differences because they describe attributes that are shared with other brands. Competitive points of parity demonstrate how a brand is good enough when comparing a particular benefit to competitors. Once consumers feel the product is adequate, they can make purchasing decisions based on perceived differences and benefits of the product (Keller, 2008).

Product strategy is a subset of branding where marketers choose both tangible and intangible benefits the product will offer. Perceived quality is the perception of overall superiority of a product (Keller, 1998). Quality can include performance, reliability, and features of the product (Garvin, 1985; Kotler, 2000). The perceived quality can often influence the behavior and attitudes consumers have toward a brand (Keller). Product branding has been used by states for decades to differentiate agricultural commodities by their quality attributes (Adelaja, Brumfield, & Lininger, 1990).

State branding for agricultural products exists in all 50 states (Onken & Bernard, 2010), and there are a number of studies that have researched the effectiveness of the brands. The Jersey Fresh program is an example of a successful state branding program. For every one dollar fruit and vegetable growers invested into the program, they have received approximately a $32 return (Govindasamy et al., 2004). Adelaja, Brumfield, and Lininger (1990) found that consumers had positive associations with the Jersey Fresh brand and perceived branded tomatoes as having a higher quality than competitors. Many of the high quality attributes identified by the consumers were related to the fact the Jersey Fresh tomatoes had been locally grown. Settle and Rumble (2014) examined Florida consumers' perceptions of local strawberries. Consumers believed the Florida strawberries were fresher and a higher quality than imported strawberries. When given the choice between Fresh from Florida branded strawberries and a non-branded product, the consumers chose the package with Fresh from Florida because it was easy to see and recognizable. The participants from the study reported not always being able to locate the growing location on the label in the absence of the Fresh from Florida logo.

Consumers' preference for local and state-branded food has also increased their willingness to pay for these products. Nganje, Hughner, and Lee (2011) concluded that Arizona consumers were willing to pay more for state branded spinach due to a higher perception of safety associated with the product. Additionally, the study suggested that differentiating products by state brands would provide added value for the consumers. Carpio and Isengildina-Massa (2008) similarly found that South Carolina consumers were willing to pay a 27% premium on locally produced

food. The amount the consumers would pay for local products was greatly influenced by age, gender, and income. Willingness to pay for state-grown products increased with age and income, and women were willing to pay more than men for local animal products. Demographic differences in food purchases have been identified in other research as well. In a study of Indiana residents, females were found to have a higher probability to purchase locally grown food than men, and households with higher incomes were more susceptible to branding and less susceptible to price than lower income households (Jekanowski, Williams, & Schiek, 2000). Females have been reported as the primary shoppers for households (Bellows, Alcaraz, & Hallman, 2010). Females have also been found to hold stronger positive attitudes toward local food compared to males. Research has concluded that men and women likely assign different values and meaning to food, which leads to differences in preferences toward the products (Beardsworth et al., 2002; Wardle et al., 2004).

Local food preferences extend beyond tangible qualities, and consumers have felt that purchasing local food supported the social ideology of the small farmer or business (Darby, Batte, Ernst, & Roe, 2006). Additionally, buying local food has extended beyond the geographical origins of the product, and consumers have preferred purchasing local food due to personal interactions with farmers (Brown & Miller, 2008; Hunt, 2007). Gay, Rumble, and Lamm (2014) identified differences in how consumers perceived the Fresh from Florida brand differently than simply identifying a product as local. The results between the two were similar, except for more trust being placed in the Fresh from Florida brand. Even though consumers have reported preferences for locally grown food, a study by Liefeld (2004) found the majority of consumers do not use country of origin labelling when purchasing food. Out of the consumers who did use the label to find the growing location, less than one third reported making their purchasing decision based on the country of origin labeling.

Developing a brand image to differentiate produce by where it was grown is a way for states to create perceived product differences and create customer loyalty (Jekanowski et al., 2000). Branding products enable consumers to make purchasing decisions based not only on price, but on intangible quality attributes as well (Jekanowski et al., 2000). Agricultural communicators could use this type of state branding to better promote produce like Florida strawberries.

Purpose and Objectives

The purpose of this study was to identify Florida consumers' strawberry purchasing intent and their attitudes toward Florida grown strawberries to develop effective communication and brand strategies. The objectives of this study were to:

1. Describe Florida consumers' purchasing intent of strawberries based on the importance of different strawberry characteristics while making purchasing decisions.
2. Describe Florida consumers' purchasing intent of strawberries based on label use and preference of strawberry packages while making purchasing decisions.
3. Compare Florida consumer' attitudes toward Florida grown strawberries and Mexico grown strawberries.
4. Determine if there is an association between income level and label preference, label use, and importance of strawberry characteristics in relation to purchasing intent.
5. Determine if there is an association between gender and label preference, label use, and importance of strawberry characteristics in relation to purchasing intent.

Methods

An online survey was used to collect data for this study. The instrument was distributed in late February of 2014 and was active for 10 days. The survey was released during this time because it coincided with Florida's strawberry season (Boriss et al., 2012). The survey questions were guided by a previous qualitative study on consumer perceptions of Florida strawberries (Settle & Rumble, 2014). The instrument consisted of 36 questions, and six of the questions were analyzed for this study. Purchasing intent was explored by examining importance of strawberry characteristics, label use, and label preferences when Florida consumers purchase strawberries. Importance of strawberry characteristics was measured by a 7-item Likert-type scale with the following labels: *not at all important*, *slightly important*, *fairly important*, *highly important*, and *extremely important*. A scale is reliable if Cronbach's alpha falls between .70 and .80 (Field, 2013). The Cronbach's alpha for this scale was .70 and was not improved if an item was deleted. Since the scale used categorical data, and an index was not needed for analysis, a reliability measurement of .70 was acceptable.

Strawberry label use and preference was also analyzed to determine Florida consumers' strawberry purchasing intent through two Likert-type scales and one multiple choice question. The first scale used two items to measure the frequency consumers use the growing location on labels when shopping for strawberries. The labels for the scale were as follows: *never*, *rarely*, *sometimes*, *most of the time*, *always*. The second scale measured whether consumers could easily locate the growing location on labels and if they were loyal to specific brands of strawberries. The second Likert-type scale had the labels: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, 5 = *strongly agree*. One multiple-choice question was used to gather information about Florida consumers' label preference. The question showed two different strawberry packages, one with the Fresh from Florida logo on the label and the other one only identifying the growing location of Plant City, Florida.

Attitudes toward Mexico and Florida strawberries were measured through two questions that used the same 9-item bipolar semantic differential scale (same scale was use to collect attitudes about Florida and Mexico). Cronbach's alpha was .78 for the Florida attitude scale and .83 for the Mexico attitude scale. Reliability increased if an item asking if strawberries came from small or large farms was deleted. After deletion, the Florida scale had a Cronbach's alpha of .85 and the Mexico scale was increased to .88. Indexes for each scale was created by summating the average of each item and dividing by eight.

A panel of experts reviewed the survey before distribution to account for content and face validity (Ary, Jacobs, & Sorensen, 2010). The panel included an assistant professor in the Department of Agricultural Education and Communication (AEC) at the University of Florida (UF), an associate professor in the AEC department at UF, and the director of the Florida Strawberry Growers Association. A soft-launch of the survey was also distributed to ensure there were no issues with data collection. Appropriate edits were made after initial data were recorded before the survey was launched.

Respondents were recruited using non-probability sampling methods by an online survey company. Public opinion researchers have often used non-probability sampling (Baker et al., 2013), which has been proven through literature to be comparable to, if not better than, traditional probability samples (Twyman, 2008; Vavreck & Rivers, 2008). Quota sampling was used to reduce limitations, and the amount of bias, typically associated with non-probability sampling (Baker et al.). Respondents were matched for sex, race/ethnicity, and age to the 2010 Florida Census to increase the generalizability of the sample. The population of interest for this study was Florida residents 18 years of age and older who purchased strawberries. Because demographic questions for the quotas, and whether respondents purchased strawberries, were collected at the beginning of the survey, respondents would be dismissed from the survey if quotas for their demographic characteristics had already been met. As data was collected, not enough men, minorities, and young

respondents were answering yes to purchasing strawberries over the past year, and set quotas had to be adjusted. The quotas for white, middle-aged, and female respondents were increased to collect the appropriate data because the Florida demographics were not reflective of Florida strawberry purchasers.

The survey instrument was distributed to 1,812 respondents in the state of Florida and completed by 500 respondents (n = 500) who met the adjusted quota and were strawberry purchasers. The majority of respondents were female (n = 310, 62%) and white (n = 425, 85%). The annual income of respondents were as follows: less than $30,000 ($n$ = 155, 31%), $30,000 to $49,999 ($n$ = 135, 27%), $50,000 to $79,999 ($n$ = 139, 26%), and more than $80,000 ($n$ = 80, 16%). Thirty-seven percent of respondents were between the ages of 18 and 39, 49% were between 40 and 59, and 18% were over the age of 60.

Data analysis was done using SPSS® 21.0. Objective 1 was analyzed using descriptive statistics. Paired t-tests were used to compare attitudes toward Florida and Mexico strawberries as described in objective 2. Demographic differences in purchasing intent between income level and gender were measured in objectives three and four. These characteristics had been identified as predictors of differing values and preference related to food decisions (Beardsworth et al., 2002; Bellow et al., 2010; Carpio & Isengildina-Massa, 2008; Jekanowski et al., 2000; Wardle et al., 2004), and further information was needed for purchasing intent of Florida strawberries specifically. Objective 3 used a Pearson's chi-square test to determine if there was an association between consumers' income level and their purchasing intent for Florida strawberries. Descriptive statistics were used to further examine differences between the income levels. Chi-square tests and were also used to determine if there was an association between gender and purchasing intent for strawberries to satisfy the fourth, and final, objective.

Results

Objective 1: Describe Florida consumers' purchasing intent of strawberries based on the importance of different characteristics while making purchasing decisions.

Respondents were asked to rate how important different strawberry attributes were when making purchasing decisions (Table 1). The majority of respondents identified taste (70%, n = 349) and freshness (73%, n = 365) as *extremely important*. Respondents also indicated the strawberry season and nutrition were *highly* or *extremely important* (74%, n = 357 and 71%, n = 370 respectively).

Table 1

*Characteristics Consumers Believe to be Important when Purchasing Strawberries (*N = *500)*

Characteristic	Not at all Important		Slightly Important		Fairly Important		Highly Important		Extremely Important	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Freshness	1	0	1	0	18	4	115	23	365	73
Taste	2	0	0	0	13	3	136	27	349	70
Nutrition	10	2	31	6	89	18	181	36	189	38
In Season	15	3	31	6	97	19	189	38	168	34
Price	13	3	29	6	154	31	170	34	134	27
Support Local Farmers	32	6	56	11	134	27	152	30	126	25
Convenience	42	8	77	16	185	37	116	23	80	16

Objective 2: Describe Florida consumers' purchasing intent of strawberries based on label use and preference while making purchasing decisions.

Table 2 shows the strawberry purchasing intent of the respondents in regard to using packaging labels. A little over half of the respondents (55%, *n* = 272) reported that they looked on strawberry packages *most of the time* or *always* to find the growing location of the strawberries. However, only 37% (*n* = 186) of consumers said that they *most of the time* or *always* made their final purchasing decision based off of the growing location.

Table 2

*Florida Consumers' use of Strawberry Labels (*N = *500)*

Characteristic	Never		Rarely		Sometimes		Most of the Time		Always	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
I look on the label to see where strawberries are grown.	35	7	58	12	135	27	163	33	109	22
I make my purchase based on where the label says the strawberries are grown.	56	11	106	21	152	30	117	23	69	14

Respondents were asked further questions about their use of strawberry package labels when purchasing strawberries. The scale used for this construct was, *strongly disagree* = 1, *disagree* = 2, *neither agree nor disagree* = 3, *agree* = 4, and *strongly agree* = 5. When respondents were asked if they could easily locate the growing location of the strawberries on the label, the average agreed that they could (*M* = 3.74, *SD* = .92). Another question asked if the consumers were loyal to specific strawberry brands. The respondents tended to neither agree nor disagree with the statement (*M* = 2.76, *SD* = 1.07).

The survey also showed two identical images of a strawberry package with the same label indicating the product came from Plant City, Florida to determine label preference. The only difference was one package displayed the Fresh from Florida logo on the label while the other package did not. Before respondents were exposed to the two images, they were told to imagine they were in a supermarket and to take no more than 10 seconds to decide which package they would chose. The majority of the respondents chose the package labeled Fresh from Florida (76%, n = 381) and only 23% (n = 116) chose the package without the logo on it.

Objective 3: Compare Florida consumers' attitudes toward Florida grown strawberries and Mexico grown strawberries.

A semantic differential scale was used to measure attitudes toward Florida and Mexico strawberries; negative adjectives were assigned a 1 and positive adjectives were assigned a 5. The index created for attitudes toward Florida strawberries showed that respondents had an overall positive attitude toward local strawberries (M = 4.47, SD = .53). The attitudes toward Mexico strawberries were neutral; the mean for the index was 3.22 (SD = .76). The difference in the means was 1.25, which was significant at an alpha level 0.01 (p < .01).

Table 3 shows respondents' individual attitudes toward Florida grown strawberries and Mexico grown strawberries; adjectives marked with a "1" were reverse coded. There were significant differences in every individual attitude toward Florida and Mexico strawberries (p < 0.01). The largest differences were associated with Florida strawberries being safer (*mean difference* = 1.69) and fresher (*mean difference* = 1.69) than the Mexico strawberries. The smallest difference in attitude occurred when respondents were asked about the affordability of strawberries. Respondents believed Florida strawberries were more affordable than strawberries from Mexico.

Table 3

*Consumer Attitudes toward Florida and Mexico Strawberries (*N = *500)*

Attitude	Florida		Mexico		*Mean Difference*
	M	*SD*	*M*	*SD*	
Unsafe: safe	4.61	0.69	2.93	1.04	1.69*
Not fresh: fresh [a]	4.68	0.64	2.99	1.09	1.69*
Low quality: high quality [a]	4.49	0.76	3.00	1.02	1.49*
Inconvenient: convenient [a]	4.53	0.74	3.19	1.13	1.34*
Dirty: clean	4.33	0.85	3.03	1.00	1.29*
Unsweet: sweet [a]	4.47	0.75	3.48	1.02	0.99*
Not nutritious: nutritious [a]	4.57	0.66	3.68	1.00	0.89*
Not affordable: affordable [a]	4.10	0.91	3.46	0.94	0.64*

Note. 1 = negative adjective and 5 = positive adjective

[a] indicates the answers were reverse coded

* indicates significance at p < 0.01

Objective 4: Determine if there is an association between income level and label preference, label use, and importance of strawberry characteristics in relation to purchasing intent.

Pearson Chi-Square tests were used to determine if respondents' income level was associated with their use and preferences of labels on strawberry packages, as well as the importance of difference strawberry characteristics while shopping. A significant association between income level and label preference was identified (x^2= 15.83, p = .02). Descriptive statistics showed that 31% (n = 48) of respondents with an annual income below $30,000 chose the package *without* the Fresh from Florida logo compared to only 11% (n = 9) of respondents with an annual income above $80,000.

An association between income level and if respondents looked on labels for growing location was also identified. The Chi-square analysis was significant (x^2 = 15.57, p = .02), and results can be seen in Table 4. Descriptive measurements indicated that 28% (n = 43) of respondents who earned less than $30,000 a year never or rarely looked on label for the growing location of strawberries. This percentage was more than double that of respondents who earned between $50,000 and $79,999 and over $80,000 a year who reported never or rarely looking at the growing location for strawberries (11%, n = 15 and 12%, n = 10 respectively).

Table 4

Association between Income Level and Response to "I look on the label to see where strawberries were grown" (N = 500)

Annual Income	*n*	Never/Rarely	Sometimes	Most of the Time/ Always	x^2	*p*
Less than $30,000	153	28%	22%	50%	15.57	.02*
$30,000-$49,999	134	19%	28%	53%		
$50,000-$79,999	132	11%	32%	57%		
$80,000 or more	81	12%	27%	60%		

* indicates significance at a = 0.05

Table 5 shows that there was a significant association between income level and the frequency purchasing decisions were made based off of the growing location of the strawberries (x^2 = 12.69, p = .05). Respondents who earned less than $30,000 annually reported that 43% (n = 65) of the time they *never or rarely* made their purchasing decision based on the growing location of the strawberries. Respondents earning $50,000 to $79,999 annually and $80,000 or more annually were about half as likely to rarely or never make their purchases based on the growing location (27%, n = 35 and 25%, n = 20 respectively). Additionally, respondents with an annual income of $80,000 or more were about 10% more likely to make their purchasing decision based on the growing location (42%, n = 34) than those who made an annual income of $30,000 or less (33%, n = 50).

Table 5

Association between Income Level and Response to "I make my purchase based off of where the label says strawberries are grown" (N = 500)

Annual Income	*n*	Never/Rarely	Sometimes	Most of the Time/ Always	x^2	*p*
Less than $30,000	153	43%	25%	33%	12.69	.05*
$30,000-$49,999	134	31%	29%	40%		
$50,000-$79,999	132	27%	36%	37%		
$80,000 or more	81	25%	33%	42%		

* indicates significance at $a = 0.05$

A Chi-square analysis was used to determine if there was an association between income level and the importance of the strawberry characteristics described in Table 1. The only significant association was concerned with how important respondents believed the convenience of purchasing strawberries was while shopping ($x^2 = 13.59$, $p = .04$). The descriptive statistics for the income levels and importance of convenience can be seen in Table 6. The only difference was that 31% ($n = 42$) of respondents who earned between $30,000 and $49,999 reported that convenience was highly or extremely important, which was 10% less than the other income levels. No other significant associations were found between income level and importance of strawberry characteristics or label use.

Table 6

Association between Income Level and Importance of Convenience (N = 500)

Annual Income	*n*	Not at all/ Slightly	Somewhat	Highly/Extremely	x^2	*p*
Less than $30,000	153	20%	38%	42%	13.59	.04*
$30,000-$49,999	134	35%	34%	31%		
$50,000-$79,999	132	20%	38%	42%		
$80,000 or more	81	20%	38%	42%		

* indicates significance at $a = 0.05$

Objective 5: Determine if there was an association between gender and label preference, label use, and importance of strawberry characteristics in relation to purchasing intent.

One significant association was found between gender and the importance of taste while making strawberry purchasing decisions. However, assumptions for a Chi-square test were not met, and conclusions could not be made. There were no significant associations between gender and purchasing intent.

Conclusions

The "average" Florida consumer, as described by the 2010 Florida Census, was not necessarily purchasing strawberries on a regular basis, which was concluded from the fact the original demographic quotas had to be adjusted. Instead, it appeared that white females, between

the ages of 30 and 50, were the primary strawberry shoppers in this population. This finding was consistent with previous literature that concluded females were the primary food shoppers for the household (Bellows et al., 2000).

The most important characteristics consumers looked at when making their strawberry purchasing decisions were the freshness and taste of the fruit. This supports previous research by Adelaja et al. (1990) and Settle and Rumble (2014). These qualities are tangible characteristics of the strawberries. Intangible attributes, such as supporting local farmers, did not appear as important to the respondents. Tangible attributes may offer more value to the consumers compared to intangible attributes and have greater influence on their purchasing decisions.

More than half of the respondents reported that they looked at the strawberries' label for the growing location most, if not all, of the time. Studies have shown that purchasing local food has been used to meet the social needs of consumers (Brown & Miller, 2008; Hunt, 2007), and this likely influenced how the respondents read food labels. However, less people actually made their purchases based off the growing location, which was consistent with prior research (Liefeld, 2004). This finding may be because even though people wanted to purchase local food, if another product looked like a higher quality or was cheaper, they might pick that option instead. Another possible explanation is that consumers were looking to see if the strawberries were simply domestically produced. If the strawberries were grown in Florida or California, the growing location may not have meant as much, which led to consumers making their final purchasing decisions based off other attributes. Consumers also reported that they could easily find the growing location of the strawberries on the products' labels, which contradicted previous studies that indicated consumers did not always know where their food was from (Liefeld, 2004; Settle & Rumble, 2014). The growing location appeared to be more important than individual strawberry brands. There may not be enough recognizable strawberry brands offering differentiable qualities for consumers to have a brand preference.

When respondents were asked if they would prefer to purchase strawberries labeled Fresh from Florida or identical strawberries without the logo, an overwhelming majority chose to purchase the package labeled Fresh from Florida. These results supported similar research (Adelaja et al, 1990; Gay et al., 2014; Nganje et al., 2011; Settle & Rumble, 2014) that indicated state agriculture brands were preferred by consumers over only providing the growing location on a label, and was associated with high quality products that were produced locally. This choice of the Fresh from Florida logo may have been the result of respondents assigning value or meaning to the brand (Loken et al., 2010). The logo likely provided a visual representation for the growing location and represented the positive qualities respondents associated with Florida strawberries (Keller, 1998). Respondents could easily see the brand and associate the strawberries with Florida without having to read over the label for the growing location.

Overall, consumers had a much more positive attitude toward strawberries grown in Florida than strawberries grown in Mexico. The biggest difference in attitudes was the safety associated with the two location origins, which aligned with previous research (Nganje et al., 2011). Freshness accounted for the second biggest difference. Consumers likely realized that local strawberries did not have to travel as many food miles before they reached the supermarket shelves. The respondents may have also associated a higher perception of safety related to Florida strawberries because they were produced domestically.

Income level was found to be associated with purchasing intent of strawberries. Lower income respondents were less likely to select the branded strawberries. This finding was likely because higher income consumers were more susceptible to brands and were not as influenced by price compared to lower income consumers (Jekanowski, et al., 2000). Similarly, lower income

respondents said they rarely purchased strawberries based off of where the label says they were grown or even looked for the growing location on strawberry packages. These results supported literature that concluded lower income families may not have felt they could afford the locally grown food and perceived it to be more expensive. Overall, the association between income and strawberry purchasing intent supported literature that higher income consumers were more likely to purchase local food (Jekanowski et al., 2000). Differences in the importance placed on convenience may be attributed to the lower income respondents viewing other attributes, like price, as more important. However, respondents who earned less than $30,000 a year reported convenience to be as important as respondents in the higher income levels. More research will be needed to interpret these results.

Differences in attitudes toward food between men and women has been attributed to values assigned to the product by the sexes (Beardsworth et al., 2002; Wardle et al., 2004). However, this study found no significant associations between gender and purchasing intent. Carpio and Isengildina-Massa (2008) did identify differences for locally raised animal products, but not produce. A commodity like strawberries may not provide different values to the genders, which could explain the findings.

Recommendations

The respondents' selection of the Fresh from Florida labeled package indicated that the brand represented the positive perceptions consumers had toward Florida strawberries (Franzen & Moriarty, 2009). Agricultural communicators need to capitalize on this knowledge by using the Fresh from Florida logo on strawberry packages to reinforce the positive attitudes toward local strawberries that consumers already have and highlight the presence of characteristics consumers believe to be important. Emphasizing freshness, quality, and taste will reinforce the consumers' perception that Florida strawberries are superior to Mexico strawberries, strengthening the brand's position (Kotler & Keller, 2006) and creating a perceived difference between otherwise identical products (Barwise & Meehan, 2004). These results could be expanded to other commodities both in Florida and in other states because residents likely have positive perceptions of their state's produce (Brown & Miller, 2008).

Even though there were no significant associations between gender and purchasing intent, women should still be a target audience for marketing since they were identified as the primary strawberry purchaser. Freshness and taste should be the focus of messages. The attributes could also be promoted to women by taste tests in grocery stores, cooking demonstrations at state fairs, and providing information on where families could pick their own strawberries. This research indicated that people in lower income households either do not prioritize purchasing local food or do not realize it can be an affordable option. Agricultural communicators should work alongside producers to help support or develop programs to promote local food to lower income families. Extension services could also be used to help educate lower income consumers about when local food is in season and typically sold at a lower price to encourage that audience to purchase locally. Facilitating personal interactions between consumers and Florida strawberries will help reinforce positive associations with the product (Brown & Miller, 2008; Hunt, 2007).

Because Florida is the primary producer of strawberries during winter months (Boriss et al., 2012), how non-Florida consumers view Florida strawberries will be important research as well. Similarly, communicators should determine if use of the Fresh from Florida brand would resonate as strongly with people outside of the state. Point of purchase research would also help to strengthen the findings in this study. Additional messaging research using different frames about freshness, taste, seasonality, and safety of strawberries, or other commodities, should be examined for effective communication and brand strategies as well.

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Research

Managing Extension's Internal Brand: Employees' Perceptions of the Functions and Descriptors of Extension

Quisto Settle, Lauri M. Baker and Scott Stebner

Abstract

Employees of UF/IFAS Extension were surveyed to determine their perceptions of the brand's core identity. More specifically, they evaluated the importance of various functions the organization provides and the effectiveness of various terms for describing Extension work. Respondents included county faculty, county non-faculty, state faculty, and state non-faculty to gain perspectives of groups representing Extension's brand in Florida. Results indicated employees perceived the core functions were providing research-based information, helping solve problems, providing training for clientele, and providing expertise. Education, training, and providing solutions were perceived to be the most effective terms for describing Extension work to the public. Given that these terms are viewed as most effective internally, these terms should also be used in external communications to provide consistency. "Extension" as a term was not viewed as particularly effective for representing to the public what Extension does. When comparing groups of Extension personnel, there were statistically significant differences, indicating Extension lacks a shared identity across the organization, which could be harmful. State-level faculty, in particular, had less positive viewpoints compared to other respondent groups. It was recommended that interactions be increased between state-level and county-level employees to help mitigate potential issues that would arise because of the organization being geographically distributed in the state and to help build shared identity. Future research was recommended to address the public's views of functions and descriptors of Extension, as well as replications of the current study in other states for the benefit of Extension nationally.

Key Words

Branding, Employees, Extension, Identity, Survey

Literature Review

Brands and Employees

"A brand is a complex, interrelated system of management decisions and consumer reactions that identifies a product (goods, services, or ideas), builds awareness of it, and creates meaning for it" (Franzen & Moriarty, 2009, p. 6). A key aspect of this definition of branding is the interrelated components of brands, including internal and external components. The parts of a brand that are seen (e.g., logos, names, advertisements, etc.) receive the most attention, but the success of a brand is anchored by internal components not typically seen by the public (e.g., culture, values, shared identity).

This research was funded by The University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) Communications.

Traditional definitions of branding have focused on external branding, but in recent years, the importance of internal branding aimed at employees has increased (Corley, Cochran, & Comstock, 2000). Internal brand management is important to fulfill the brand promise of an organization or business through enhancing employees' brand performance (Punjaisri, Evanchitzky, & Wilson, 2009). In a service organization, like the Cooperative Extension Service, the employees' performance of the brand is a major contributor to how the brand is interpreted by external audiences (Kimpakorn & Tocquer, 2010). As such, it is important for employees to identify with the brand and convey brand meaning in all their interactions.

Employees play a "crucial role in living the brand by delivering on brand promise" (Punjaisri & Wilson, 2007, p. 67). The brand promise is what the brand says it will deliver, such as a product, service, or way it treats its customers and other stakeholders. Management should help employees understand how living the brand can translate to daily work activities and model the brand in their own work activities (Punjaisri & Wilson, 2007). While management plays an important role, internal communication and brand training have a significant impact on whether employees maintain the brand promise (Punjaisri et al., 2009; Punjaisri & Wilson, 2007). Additionally, brand identification has a significant impact on employees' commitment to the brand. This commitment has a positive influence on employees' loyalty to the brand (Punjaisri et al., 2009). Research indicates it is important for employees at all levels to identify with the organizational brand; however, there remains a need to empirically understand how employees at different levels perceive and communicate the brand (Punjaisri & Wilson, 2007). This study specifically addresses the functions personnel believe are the most important for the organization and what terms personnel believe are the most effective for representing the organization and its brand to members of the public.

Public Organizations

This paper focuses on Extension, which is a public organization. Before discussing Extension, it is important to understand public organizations and how private-sector marketing strategies, such as branding, are impacted by the nature of public organizations. There are three basic complications for public organizations that can inhibit the use of private-sector strategies. First, public organizations need approval from all members of the public, not just those who directly interact with the organization, because the organizations depend on funds contributed from the public as a whole (Hoggett, 2006; Moore, 1995). Second, public organizations often have multiple roles and identities that need to be represented to maintain their integrity (Hoggett, 2006; Wæraas, 2008, 2010). A key component of branding success is representing a consistent identity (de Chernatony, 2001), which is complicated by the need to represent multiple identities and roles. Third, public organizations differ from private organizations in their roles and purposes (Laing, 2003; Walsh, 1994; Wæraas, 2008). Public organizations like Extension that provide services are in a difficult position because services are more difficult to brand than products (Kornberger, 2010).

While public organizations have been increasingly using private-sector marketing techniques over the past three decades, the application is not always well understood (Butler & Collins, 1995; Laing, 2003; Moore, 1995; Walsh, 1994; Wæraas, 2010; Whelan, Davies, Walsh, & Bourke, 2010). Work in this area continues, though, because of the potential for success. More specifically for branding, public organizations have the opportunity to go beyond merely demonstrating public value and instead reach a point of building relationships with the public through effective branding (Whelan et al., 2010).

Literature on public-sector branding exists, particularly in Europe, but it is not extensive. One example is place branding, which involves treating a location such as a city or country as a brand (Kavaratzis, 2004). Place branding requires treating the entire location as one entity,

requiring a sense of sameness among its members. Primarily, discussions of public-sector marketing and branding have dealt with the unique characteristics of public organizations and how private-sector strategies can be adapted for public organizations, as discussed earlier in this section.

Extension and Branding

Extension stems from the 1914 Smith-Lever Act with the intention of taking research being conducted by land-grant universities and extending those results to those practicing agriculture to improve the industry's success, though the breadth of Extension work has expanded over the past century (Campbell, 1998). As with any organization, time and environment affects what the organization does and how it views itself. The core values and functions of Extension have been discussed over the past 30 years. This discussion has included explicitly referring to branding Extension, but much of the discussion has only been implicitly related to branding of Extension, such as work related to the identity of Extension. Commentary and articles have appeared focusing on leadership (Buchanan, 1986b), engagement of individuals working in Extension (Buchanan, 1986a), reinventing how Extension reaches its audiences (King & Boehlje, 2000), how Extension is perceived (Verma & Burns, 1995; Warner & Christenson, 1983), and promoting a unified identity of Extension through all employees (Bloir & King, 2010; Boldt, 1988).

Specific references to branding are relatively new to Extension, but these branding techniques have been effectively utilized for quite some time in other service/knowledge-based organizations (Abrams, Meyers, Irani, & Baker, 2010). Maddy and Kealy mention branding and Extension together as early as 1998, but this is relatively recent given that Extension began in 1914 and branding has been around since the 19th century (Franzen & Moriarty, 2009). Maddy and Kealy (1998) discussed how Extension could use private-sector marketing techniques, focusing on branding. Maddy and Kealy stated an integrated approach to communications through branding would be needed for Extension to reach a wider portion of the general population.

Three empirical works have also discussed branding and Extension. Abrams et al. (2010) assessed brand awareness, finding that external stakeholders' perceptions of what Extension did were positive, but the stakeholders were not associating Extension's functions with the brand of the organization, indicating a lack of brand awareness. Irani, Ruth, Telg, and Lundy (2006) conducted focus groups with members of the public to address preferences for communications from Extension. Irani et al. found the public favored two-way symmetrical communications that focused on improving the relationship between the brand and the public, which is in line with prior public organization branding research and Excellence Theory in public relations (Grunig, 1989; Whelan et al., 2010). Telg, Irani, Hurst, and Kistler (2007) surveyed Extension agents for their perceptions of marketing Extension. Telg et al. found Extension agents used word-of-mouth communications the most and found it to be the most useful by far. This result is in line with the notion that employees act as the face of a brand through their interactions with the public (de Chernatony, 2001; Kornberger, 2010; Tybout & Calkins, 2005), and is particularly important for public organizations that cannot utilize external communications in the same manner as private-sector organizations (Whelan et al., 2010).

Branding research specific to Extension indicates a continued need for developing a body of knowledge to help Extension understand how to uniquely market itself through branding strategies (Abrams et al., 2010). While these studies of branding and Extension provided key contributions, they did not address internal perceptions of what Extension is and what it should be doing. Given the relationship between internal and external components of the brand, this prevents a full understanding of Extension's brand (de Chernatony, 2001). For instance, the lack of brand awareness in the Abrams et al. (2010) study could stem from a lack of consistent sense of what Extension's identity is to employees in the organization. To be successful as a public organization with limited opportunities for mass communication, which is due to negative perceptions of public

organizations spending money to advertise (Settle et al., 2012; Whelan et al., 2010), Extension's external communications will be driven by its employees and their interactions with the public. The organization needs to build a shared identity among its employees (de Chernatony, 2001). To do so, the organization needs to understand employees' perceptions of Extension's brand. Building shared identity becomes particularly important because Extension is a geographically distributed organization, which makes it more susceptible to conflict than organizations where employees are centrally located (Hinds & Mortenson, 2005). Building a shared identity has been shown to mitigate conflicts in geographically distributed organizations (Hinds & Mortenson, 2005). As a public organization, Extension not only depends on its employees to build the value of the brand but also depends on them to build relationships between Extension's brand and the public (Whelan et al., 2010).

Purpose and Objectives

Extension at the University of Florida's (UF) Institute of Food and Agricultural Sciences (IFAS) went through a rebranding process in 2013 to improve marketing of the organization within the state. This included updating the organization's branding materials, as well as trying to communicate consistently about the organization across the state. As a part of this effort, The UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources conducted research to assess the opinions of UF/IFAS Extension employees related to branding and communication of the organization. The purpose of this study was to understand employees' perceptions of UF/IFAS Extension's core identity through their perceptions of the functions the organization performs and descriptors used to explain Extension work to the public. The objectives guiding this study were to:

1. Describe employee perceptions of UF/IFAS Extension's functions and descriptors of Extension work, and
2. Compare employee perceptions of UF/IFAS Extension's functions and descriptors by employment status.

Methods

This study consisted of a quantitative online survey of individuals working for Extension at the state and county levels. There is not a comprehensive list of Extension personnel in Florida. Different sources were used to determine the population for this survey. From the UF, lists were available for state Extension staff members and Extension faculty, including county agents, county directors, district directors, and state specialists. Every county's Extension page was searched to determine county staff members. The population consisted of 829 Extension faculty and staff. Members of the population were sent successive waves of emails soliciting participation, per Dillman, Smyth, and Christian's (2009) recommendations. Participants were sent a pre-notice from the UF/IFAS dean of Extension and the UF/IFAS assistant vice president for communications to help solicit participation. After the initial invitation, three more e-mail reminders were sent. IRB approval was obtained to conduct this study through the university.

After removal of incomplete surveys, 435 respondents were included in the study (52.5%). There were 224 county-level faculty respondents, 41 county-level non-faculty respondents, 151 state-level faculty respondents, 18 state-level non-faculty respondents, and one respondent who declined to answer the question. To check for non-response error, results for early respondents were compared to late respondents' results (Lindner, Murphy, & Briers, 2001). There were no statistically significant differences for any of the descriptors of Extension work. For the functions Extension performs, there were statistically significant differences for the functions of youth education,

community development, and leadership development. As such, the results of those three functions cannot be considered representative of the opinions of nonrespondents.

The questions in this survey addressed employee perceptions of the core functions of Extension and their perceptions of words to describe the work they do in Extension. A panel of experts including Extension agents, Extension administration, and survey experts reviewed the instrument to help ensure its validity. For core functions, respondents evaluated 19 different functions for their importance for UF/IFAS Extension. For the descriptors, respondents evaluated 12 terms for their effectiveness for describing Extension work. To develop the bank of functions and descriptors to be evaluated, the expert panel provided input to ensure the list was reflective of UF/IFAS Extension. The two sets of questions were evaluated for reliability, with the descriptors having a Cronbach's alpha of .85, while the functions of Extension was at .88. A score of at least .80 is considered ideal (Norcini, 1999). The results in this study were part of a larger questionnaire that addressed communications of UF/IFAS Extension. The questions for this instrument were researcher-developed to address the needs of UF/IFAS Extension.

To meet the aims of this study, data were analyzed using descriptive statistics to address the first objective of the study. To address the second objective of the study, respondents were split based on their employment status (i.e., county faculty, county non-faculty, state faculty, & state non-faculty) and the means of their responses were compared using a one-way ANOVA. For items where the one-way ANOVA was statistically significant, follow-up comparisons were made between each employment status group using Hochberg's GT2. This follow-up procedure was chosen because of differences in response size between the different employment status groups (Field, 2005).

Results

Objective 1: Describe employee perceptions of UF/IFAS Extension's functions and descriptors of Extension work.

Respondents rated the majority of Extension functions as important (Table 1). The functions rated as the most important were providing research-based information (M = 4.9), helping to solve problems (M = 4.9), providing training for clientele (M = 4.9), and providing expertise (M = 4.8). All of the functions were rated as at least slightly important by the majority of respondents, though the lowest-rated functions were staff management (M = 4.1), leadership development (M = 4.3), community development (M = 4.3), and serving as community leaders (M = 4.3).

Table 1

Personnel Perceptions of UF/IFAS Extension Functions

	Percent response per label						
Function	1	2	3	4	5	*M*	*SD*
Research-based Information	0.0	0.0	1.2	7.6	91.2	4.9	0.3
Helping to Solve Problems	0.0	0.0	1.9	9.3	88.9	4.9	0.4
Providing Training for Clientele	0.0	0.0	1.6	10.0	88.4	4.9	0.4
Expertise	0.0	0.0	1.8	12.0	86.1	4.8	0.4
Creating Informational Materials	0.2	0.2	2.6	16.5	80.5	4.8	0.5
Connection to University	0.0	1.2	2.1	15.0	81.8	4.8	0.5
Adult Education	0.2	0.9	3.9	16.6	78.3	4.7	0.6
Showing Value of Extension Programs	0.0	1.4	3.7	17.0	77.9	4.7	0.6
Youth Education[a]	0.0	1.4	4.6	17.8	76.2	4.7	0.6
Marketing Extension Programs	0.2	1.4	5.1	18.0	75.3	4.7	0.7
Providing Technical Assistance	0.2	0.5	5.1	21.8	72.5	4.7	0.6
Planning of Extension Programs	0.7	0.7	3.9	22.0	72.6	4.7	0.7
Management of Extension Activities	0.5	2.3	8.4	29.5	59.3	4.5	0.8
Initiative for Change	0.9	2.1	9.0	28.1	59.9	4.4	0.8
Conducting Research	1.2	5.3	8.3	25.9	59.3	4.4	1.0
Serving as Community Leaders	0.2	3.7	12.6	32.3	51.2	4.3	0.8
Community Development[a]	0.9	4.0	10.7	33.7	50.7	4.3	0.9
Leadership Development[a]	0.5	4.2	12.3	33.6	49.4	4.3	0.9
Staff Management	1.6	3.3	17.8	34.3	43.0	4.1	0.9

Note. Labels coded as 1 = *Unimportant*, 2 = *Slightly Unimportant*, 3 = *Neither*, 4 = *Slightly Important*, 5 = *Important*.

[a]Results of comparison between late and early respondents indicates responses for this item cannot be extended beyond respondents.

Employees' beliefs of the effectiveness of descriptors for describing Extension work are displayed in Table 2. Only education (77.9%, *M* = 4.7), training (64.1%, *M* = 4.5), and providing solutions (64.6%, *M* = 4.5) were terms considered by the majority of respondents as effective for explaining Extension work. Only 43.1% (*M* = 3.9) of respondents considered the term Extension to be effective for describing Extension work. The lowest-rated descriptors were civic engagement (*M* = 3.1), capacity building (*M* = 2.9), and intervention (*M* = 2.7).

Table 2

Employee Perceptions of the Effectiveness Terms Used to Describe Extension Work to the Public

	Percent response per label						
Descriptor	1	2	3	4	5	*M*	*SD*
Education	0.2	0.5	4.9	16.6	77.9	4.7	0.6
Training	0.2	3.3	7.2	25.2	64.1	4.5	0.8
Providing Solutions	2.8	1.6	6.6	24.4	64.6	4.5	0.9
Outreach	2.8	4.9	13.5	31.0	47.8	4.2	1.0
Assistance	3.3	5.4	12.9	28.7	49.8	4.2	1.0
Communication	2.3	6.3	14.7	34.1	42.5	4.1	1.0
Extension	6.3	8.4	16.8	25.4	43.1	3.9	1.2
Leadership Development	5.9	10.4	25.0	35.4	23.3	3.6	1.1
Engagement	9.5	11.4	28.2	26.8	24.2	3.5	1.2
Civic Engagement	13.2	16.2	33.9	22.1	14.6	3.1	1.2
Capacity Building	18.8	15.3	34.4	18.6	12.9	2.9	1.3
Intervention	24.2	16.8	32.7	19.2	7.1	2.7	1.2

Note. Labels coded as 1 = *Ineffective*, 2 = *Slightly Ineffective*, 3 = *Neutral*, 4 = *Slightly Effective*, 5 = *Effective*.

Objective 2: Compare employee perceptions of UF/IFAS Extension's functions and potential descriptors by employment status

Table 3 shows the results of perceptions of Extension functions split by employment status. The differences in employment status affect the scope and location of employees. County faculty and staff are distributed throughout the state and deal directly with local-level issues. State-level faculty and staff are located centrally in the state and deal directly with state-level issues.

These split results were compared using one-way ANOVA, followed by post-hoc tests for any statistically significant differences between each personnel group. There were statistically significant differences for 12 of the 17 functions. Only statistically significant ANOVAs and post-hoc assessments are shown in-text, but all mean scores are shown in the Table 3. In general, state faculty respondents tended to attribute less importance to the functions than the other respondent groups.

For providing training for clientele [$F(3, 427) = 12.8, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.9$) and state faculty ($M = 4.8$), county faculty ($M = 4.9$) and state non-faculty ($M = 4.5$), county non-faculty ($M = 5.0$) and state faculty($M = 4.8$), and county non-faculty ($M = 5.0$) and state non-faculty ($M = 4.5$). For expertise [$F(3, 426) = 6.1, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.9$) and state faculty ($M = 4.8$), county faculty ($M = 4.9$) and state non-faculty ($M = 4.6$), county non-faculty ($M = 5.0$) and state faculty ($M = 4.8$), and county non-faculty ($M = 5.0$) and state non-faculty ($M = 4.6$).

For adult education [$F(3, 428) = 17.5, p < .05$], the post-hoc analysis showed significant differences between state faculty ($M = 4.5$) and county faculty ($M = 4.9$), and county non-faculty ($M = 4.9$) and state faculty ($M = 4.5$). For youth education [$F(3, 427) = 10.5, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.8$) and state faculty ($M = 4.5$), and county non-faculty ($M = 4.9$) and state faculty ($M = 4.5$). For showing the vale

of Extension programming, [$F(3, 428) = 6.5, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.8$) and state faculty ($M = 4.6$), and county non-faculty ($M = 4.9$) and state faculty ($M = 4.6$). For planning Extension programs [$F(3, 426) = 7.8, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.8$) and state faculty ($M = 4.5$), and county non-faculty ($M = 4.8$) and state faculty ($M = 4.5$).

For marketing Extension programs [$F(3, 428) = 6.8, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.7$) and state faculty ($M = 4.5$), and county non-faculty ($M = 4.9$) and state faculty ($M = 4.5$). For management of Extension activities [$F(3, 525) = 8.3, p < .05$), the post-hoc analysis showed a significant difference between state faculty ($M = 4.2$) and county faculty ($M = 4.6$). For conducting research [$F(3, 423) = 7.3, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.5$) and state faculty ($M = 4.1$), and county non-faculty ($M = 4.8$) and state faculty ($M = 4.1$).

For leadership development [$F(3, 426) = 3.0, p < .05$], the post-hoc analysis showed a significant difference between county non-faculty ($M = 4.5$) and state faculty ($M = 4.1$). For community development [$F(3, 425) = 3.6, p < .05$], the post-hoc analysis showed a significant difference between county non-faculty ($M = 4.7$) and state faculty ($M = 4.2$). For staff management [$F(3, 423) = 13.8, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.3$) and state faculty ($M = 3.8$), county non-faculty ($M = 4.5$) and state faculty ($M = 3.8$), and state faculty ($M = 3.8$) and state non-faculty ($M = 4.5$).

Table 3

Comparison of Employee Perceptions of UF/IFAS Extension's Functions

Function	Mean response by employment status			
	County Faculty (*SD*)	County Non-Faculty (*SD*)	State Faculty (*SD*)	State Non-Faculty (*SD*)
Providing Training for Clientele*	4.9 (0.3)	5.0 (0.2)	4.8 (0.5)	4.5 (0.6)
Research-Based Information	4.9 (0.3)	4.9 (0.3)	4.9 (0.4)	4.9 (0.5)
Expertise*	4.9 (0.3)	5.0 (0.2)	4.8 (0.5)	4.6 (0.7)
Helping to Solve Problems	4.9 (0.3)	4.9 (0.4)	4.9 (0.4)	4.7 (0.6)
Adult Education*	4.9 (0.4)	4.9 (0.3)	4.5 (0.8)	4.8 (0.5)
Youth Education[a]*	4.8 (0.5)	4.9 (0.4)	4.5 (0.8)	4.7 (0.6)
Creating Informational Materials	4.8 (0.5)	4.9 (0.3)	4.7 (0.6)	4.7 (0.6)
Connection to University	4.8 (0.5)	4.7 (0.6)	4.8 (0.5)	4.5 (0.7)
Showing Value of Extension Programming*	4.8 (0.5)	4.9 (0.3)	4.6 (0.8)	4.8 (0.5)
Planning of Extension Programs*	4.8 (0.5)	4.8 (0.6)	4.5 (0.8)	4.5 (0.7)
Marketing Extension Programs*	4.7 (0.6)	4.9 (0.4)	4.5 (0.8)	4.7 (0.6)
Providing Technical Assistance	4.7 (0.6)	4.7 (0.76)	4.6 (0.7)	4.4 (0.7)
Management of Extension Activities*	4.6 (0.6)	4.5 (0.8)	4.2 (0.9)	4.3 (0.7)
Initiative for Change	4.5 (0.8)	4.6 (0.7)	4.4 (0.9)	4.2 (1.0)
Conducting Research*	4.5 (0.9)	4.8 (0.4)	4.1 (1.1)	4.4 (0.8)
Serving as Community Leaders	4.4 (0.8)	4.5 (0.8)	4.2 (0.9)	4.3 (0.7)
Leadership Development[a]*	4.3 (0.8)	4.5 (0.8)	4.1 (0.9)	4.1 (0.8)
Community Development[a]*	4.3 (0.9)	4.7 (0.7)	4.2 (0.9)	4.5 (0.7)
Staff Management*	4.3 (0.9)	4.5 (0.8)	3.8 (1.0)	4.5 (0.7)

Note. Labels coded as 1 = *Unimportant*, 2 = *Slightly Unimportant*, 3 = *Neutral*, 4 = *Slightly Important*, 5 = *Important*.

[a]Results of comparison between late and early respondents indicates responses for this item cannot be extended beyond the respondents.

*$p < .05$ for ANOVA

Table 4 shows perceptions of different terms' effectiveness for describing Extension work split by employment status. These split results were compared using one-way ANOVA, followed by post-hoc tests for any statistically significant differences between employment groups. There were statistically significant differences for five of the 12 descriptors. Only statistically significant ANOVAs and post-hoc assessments will be shown in-text, but all mean scores will be shown in Table 4. State faculty respondents tended to view all of the terms as less effective for explaining Extension work than the other respondent groups did. For education [$F(3, 424) = 9.4, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 4.8$) and state faculty ($M = 4.5$), and county non-faculty ($M = 4.9$) and state faculty ($M = 4.5$). For outreach [$F(3, 424) = 3.2, p < .05$], the post-hoc analysis showed a significant difference between county non-faculty ($M = 4.6$) and state faculty ($M = 4.1$). For assistance [$F(3,423) = 3.6, p < .05$], the post-hoc analysis showed a significant difference between county non-faculty ($M = 4.5$) and state faculty ($M = 4.0$). For communications [$F(3,423) = 4.3, p < .05$], the post-hoc analysis showed a significant difference between county non-faculty ($M = 4.5$) and state faculty ($M = 3.9$). For leadership development [$F(3,423) = 5.4, p < .05$], the post-hoc analysis showed significant differences between county faculty ($M = 3.7$) and state faculty ($M = 3.3$), and county non-faculty ($M = 3.9$) and state faculty ($M = 3.3$).

Table 4

Comparison of Employee Perceptions of Descriptors of UF/IFAS Extension

	Mean responses by employment status			
Descriptor	County Faculty (*SD*)	County Non-Faculty (*SD*)	State Faculty (*SD*)	State Non-Faculty (*SD*)
Education*	4.8 (0.5)	4.9 (0.4)	4.5 (0.7)	4.9 (0.3)
Training	4.5 (0.8)	4.7 (0.6)	4.4 (0.8)	4.4 (0.8)
Providing Solutions	4.5 (0.9)	4.8 (0.5)	4.4 (1.0)	4.7 (0.5)
Outreach*	4.1 (1.0)	4.6 (0.7)	4.1 (1.1)	4.3 (0.7)
Assistance*	4.2 (1.0)	4.5 (0.8)	4.0 (1.1)	4.3 (0.8)
Communication*	4.1 (1.0)	4.5 (0.7)	3.9 (1.1)	4.4 (0.6)
Extension	3.9 (1.3)	4.2 (1.0)	3.8 (1.2)	4.2 (0.9)
Leadership Development*	3.7 (1.1)	3.9 (1.1)	3.3 (1.2)	3.8 (0.8)
Engagement	3.5 (1.2)	3.7 (1.2)	3.3 (1.3)	3.4 (1.0)
Civic Engagement	3.1 (1.2)	3.4 (1.0)	2.9 (1.3)	3.2 (1.0)
Capacity Building	2.8 (1.2)	3.0 (1.1)	3.0 (1.3)	3.2 (1.3)
Intervention	2.6 (1.3)	3.1 (0.9)	2.6 (1.3)	2.8 (1.0)

Note. Labels coded as 1 = *Ineffective*, 2 = *Slightly Ineffective*, 3 = *Neutral*, 4 = *Slightly Effective*, 5 = *Effective*.

*$p < .05$ for ANOVA

Conclusions and Recommendations

This study contributes to the literature base of branding public organizations, where research in branding is limited and where the application of private-sector communications strategies is not well understood (Butler & Collins, 1995; Laing, 2003; Moore, 1995; Walsh, 1994; Wæraas, 2010; Whelan et al., 2010). This study also contributes to the literature of applying

branding concepts to Extension, which includes literature explicitly addressing branding (Abrams et al., 2010; Irani et al., 2006; Maddy & Kealy, 1998; Telg et al., 2007) and literature that addresses related concepts that do not explicitly mention branding (Bloir & King, 2010; Boldt, 1988; Buchanan, 1986a, 1986b; King & Boehlje, 2000; Verma & Burns, 1995; Warner & Christenson, 1983). More specifically, this research addresses what internal audiences view as the brand's core identity, as assessed by their perceptions of functions and descriptors of the organization.

Based on the perceptions of the respondents, UF/IFAS Extension's brand managers (i.e., all employees of the organization) are representing the following as the core functions of the organization: providing research-based information, helping to solve problems, providing training for clientele, and providing expertise. Provided these are the actual core functions the brand wants to represent, the organization should ensure that its external communications materials match the functions being represented by the internal brand. If these are not the core functions the organization wants represented, the organization needs to work on building the shared brand identity it wants represented among its internal stakeholders (de Chernatony, 2001; Kornberger, 2010; Tybout & Calkins, 2005).

Another finding that emerged from respondents' opinions of the brand's functions was the general focus of the organization providing information (e.g., research-based information, expertise, etc.), while respondents had lesser opinions of functions related to leadership, development, and management. Paired with the indication of what the employees believe to be the organization's core functions, the employees' perception of the brand of UF/IFAS Extension is that of an organization that acts as an information source to help enact change. This understanding is important because it provides a picture of what employees believe the organization's brand identity should be. As the Extension navigates its future brand, Extension should focus its activities and communications on being a purveyor of information in order to elicit positive perceptions from employees. It is particularly important for employees to be on board with activities represented by the brand given that the majority of a brand's success relies on internal structures of the brand, including employees (de Chernatony, 2001).

As it relates to terms being used to describe Extension work, employees viewed education, training, and providing solutions as the most effective. In Extension's external communications, it would be advantageous to use these terms so that the verbiage being used to represent the brand externally matches what internal members of the brand are likely to be using when describing Extension given the results of this study. Consistent representation is necessary for brand success (Thorson & Moore, 1996). The actual term "extension," though, was not viewed as particularly effective for describing Extension. While the name of the organization is highly unlikely to change, using "extension" as a term describing the work being done by the organization could cause confusion, further muddling the brand's identity. More work should be done to educate the public on the term "extension" if it is to be used in external branding.

On a broader level, there were differences between the different respondents based on their employment status (i.e., county faculty, county non-faculty, state faculty, and state non-faculty). There were consistent differences between the responses of county-level and state-level respondents, especially state-level faculty. This indicates there is a lack of shared identity amongst the different internal members of the Extension brand, which could hurt the brand's success (de Chernatony, 2001). This is not surprising given that Extension is a geographically distributed organization (Hinds & Mortenson, 2005). However, this is detrimental to the organization's ability to succeed. Public organizations rely on employees to represent the brand due to limitations on the amount of external communications public organizations can use compared to private-sector organizations (Settle et al., 2012; Whelan et al., 2010). The organization needs to work to build a stronger shared identity (i.e., members across the organization have the same vision for what the

organization is and what it should be doing) across its different components. One way to do this is to increase interactions between different components of the organization (Hinds & Mortenson, 2005), specifically between state-level and county-level employees given the disparities found in this study.

Application to Extension in Other States

This research only assessed the perceptions of Extension personnel in one state, which limits the generalizability of the results. While it would be unwise to assume that results apply perfectly to Extension in all states, there are commonalities across Extension systems that are worth noting. The diversity of employees in terms of their scope of work (i.e., their role in Extension) and location within the state is likely to occur in other states. Given the disparities in perceptions between the different types of personnel based on their roles and geographic location, this could be an issue in other states as well. The other area to note is the multitude of roles and functions that Extension can serve, which is typical of public organizations (Hoggett, 2006; Wæraas, 2008, 2010). Public organizations need to represent their multiple roles, such as the functions addressed in this study, to avoid losing credibility (Wæraas, 2010), so this is a potential issue that Extension systems in other states should also be aware of. Both of these issues complicate the ability of a public organization like Extension to foster a shared identity among its employees, which can hurt the brand's success (de Chernatony, 2001; Hinds & Mortenson, 2005; Hoggett, 2006; Wæraas, 2008, 2010). Extension systems in all states should be mindful of fostering shared identity to mitigate problems of geographic distribution, differences in personnel roles within the organization, and performing multiple functions within a single organization.

Future Research

Future research should assess external stakeholders' views of the functions Extension performs and the best ways to describe UF/IFAS Extension work. This would allow for an accurate understanding of the public's viewpoints, thus providing an opportunity to improve the relationship between the public and the brand of Extension (Whelan et al., 2010). Fostering this relationship is particularly important for Extension as a public organization that is subject to scrutiny by all members of the public, even those not interacting directly with the organization (Hoggett, 2006; Moore, 1995).

As follow-up to the current study, research could also address more in-depth aspects of branding in the organization. One such route would be qualitative research addressing how leadership in the organizations makes decisions impacting the internal brand of the organization, including any efforts to foster shared identity.

Another research opportunity that should be pursued is replicating this study in other states. There exists the potential for the Extension system in different states to learn from each other. Future studies can address the perceptions of different functions and descriptors of Extension work within the different states' Extension systems to determine commonalities nationally. If there is a stronger sense of shared identity in other states Extension systems, then researchers would need address what is different between the state Extension systems that fosters or inhibits shared identity.

A limitation of this research is that demographics were not measured for respondents beyond role in the organization and if they were county- or state-level employees. Future research should also assess if there are differences between other demographic characteristics. Characteristics that could be addressed include but are not limited to length of employment with Extension, region in respective states, and program area. These other demographic characteristics could provide more explanation of the differences in employee perceptions of Extension.

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Research

Opening the Doors to Agriculture: The Effect of Transparent Communication on Attitude

Joy N. Rumble and Tracy Irani

Abstract

As consumers have become further disconnected from the agricultural industry, their concerns about agriculture have increased. Effective communication with consumers about agriculture has been identified as a potential solution to minimizing this disconnect. Transparent communication has been offered as a strategy to increase the effectiveness of industry communication. Therefore, this study sought to assess the effects of transparent communication and personal relevance, in a livestock production context, on the attitudes of college students. Elaboration Likelihood Model (ELM) and transparency served as the theoretical framework for this study. To fulfill the purpose of the research, an experimental design was used. The experimental treatments were tested with 688 college students through an online survey format. The results of the study found that both transparent communication and perceived transparency had a significant impact on attitude toward the communication, while personal relevance was not found to be significant. Further research examining transparent communication in ELM was recommended. In addition, it was recommended that practitioners implement transparent communication when communicating about the industry with those in the Millennial generation.

Key Words

Attitude, Elaboration Likelihood Model, Personal Relevance, Transparent Communication

Literature Review

As the industrialization of agriculture has advanced and consumers have become further removed from the farm, farmers and consumers have become disconnected with each other (Duncan & Broyles, 2006; Zimbelman, Wilson, Bennett, & Curtis, 1995). Scholars have suggested this disconnect and the resulting decrease in agricultural literacy among consumers threatens the future success of US agriculture (Igo & Frick, 1999). The agricultural industry has tried to address this disconnect by shifting from communicating with those in the industry to those not involved in the industry (Telg & Irani, 2012). However, communicating effectively with consumers has proven to be difficult. The limited agricultural experience and knowledge of today's consumer coupled with their concerns regarding industrialized agricultural practices (Weatherell, Tregear, & Allinson, 2003; Zimbelman, et al., 1995) has complicated the conversation between producers and consumers. When discussing the disconnect between farmers and consumers, Higgins (1991) explained that farmers and consumers come from "different cultural information systems" that influence how their "behaviors are constructed, coordinated, and interpreted" (p. 217). As a

The authors would like to acknowledge Glenn Israel, Alexa Lamm, Ricky Telg, and Debbie Treise for their assistance and support during this research. This manuscript is based on data from a doctoral dissertation and was presented at the Southern Association of Agricultural Scientists Conference in February of 2014.

result, there continues to be a need to communicate effectively with consumers about agriculture, and specifically livestock production (Graves, 2005). A suggested solution to improving the effectiveness of communication about livestock production has been to increase the transparency of the industry (Garner, 2009; Roybal, 2012). However, not everyone within the industry has felt that increased exposure and transparency is a good idea (Potter, 2011).

On one side of the transparency debate, within the livestock industry, there are slaughterhouses implementing video surveillance systems (Raines, 2009) and farms opening their doors for consumers to visit (Fair Oaks Farms, 2012; Hastings, 2012). However, others within the livestock industry oppose increased transparency (Potter, 2011). Much of the opposition to transparency has resulted from the damaging effects producers and the industry have experienced as a result of undercover videos capturing alleged abuse on livestock farms (Lancaster & Boyd, 2015). In response, several states have proposed and a handful of states have passed legislation popularly known as "Ag Gag" laws that ban photography and videography on farms (Flynn, 2012; Mitchell, 2011; Potter, 2011). "Ag Gag" legislation has been discussed as a "major step in the wrong direction for transparency in the food system" (Mitchell, 2011, para. 11). A need exists to understand how transparency, or a lack of transparency, may impact the communication gap between producers and consumers, and ultimately the livestock industry as a whole.

Social media has become vehicle for transparency and has increased the spread of information (Qualman, 2009). Social media provide opportunities for livestock producers to communicate with the public, but also make producers more vulnerable because the social media culture creates an environment where information is shared quickly and it impossible to keep information and events secret (Qualman, 2009; Veil, Sellnow, & Petrun, 2012). A growing consumer group, the Millennial Generation, is known to demand transparency and have become high frequency users of social media (Red McGregor, 2012; Shore, 2011). Facebook has become a popular social media platform among Millennials, with 72% reporting that they use Facebook (Neilsen, 2014). Within this generation, college students are particularly known to have unsolidified attitudes (Sears, 1986; Taylor & Ketter, 2010).

Communicating effectively about livestock production is essential to the future of the industry. Current communication practices within the industry have not been proven to inform and resonate with consumers in a manner that provides long-lasting impacts (Goodwin, 2012; Graves, 2005; Whitaker & Dyer, 2000; Zimbelman et al., 1995). Additionally, the effect of transparent communication within the livestock industry has not been assessed. Higgins (1991) called for researchers to study and practice applied methods to close the communication gap between producers and consumers. Targeting the Millennial generation with communication is important as they are estimated to make up around 27 percent of the US population and have 11 percent more buying power than generations that have come before them (Hais & Winograd, 2011). Further assessment of effective communication methods and transparency in the livestock industry has the potential to impact many. The industry, agricultural communicators, educators, extension agents, consumers, and politicians would find value in this type of assessment because it will ultimately lead to a better understanding of how to create an informed citizenry, ensuring the future sustainability of food and the industry needed to support human life (Doerfert, 2011).

The purpose of this study was to assess the effects of transparent communication and personal relevance, in a livestock production context, on the attitudes of college students, who are an important segment of the Millennial Generation.

Elaboration Likelihood Model

Social psychologists have studied communication messages and the effects messages have had on attitudes and behavior since the discipline began (Allport, 1935; Petty & Cacioppo, 1986; Ross, 1908). To examine attitude change as a result of persuasion and cognitive processing, Petty and Cacioppo developed the Elaboration Likelihood Model (ELM) (McQuail, 2010; Petty & Cacioppo, 1986; Petty & Cacioppo, 1996).

ELM explains the process individuals go through when exposed to persuasive communication (Petty & Cacioppo, 1986). The model explains this process through two cognitive routes, the central and peripheral route. An individual's motivation, ability to process, processing nature, and cognitive structure determine the resulting processing route (Petty, Brinol, & Priester, 2009). Both motivation and ability must be present for elaboration to occur (Petty & Cacioppo, 1996). The central route includes a detailed thought process and careful consideration of the information presented. The peripheral route does not include careful thought and consideration; rather it includes the attraction to and influence of simple cues (Petty & Cacioppo, 1986).

Personal relevance has been described as the most influential motivational factor in determining if an individual will have the motivation to process a message (Petty & Cacioppo, 1986). Personal relevance refers to the importance and meaning a message has to an individual. As personal relevance increases, motivation to process increases. However, high personal relevance can be cofounded with other factors such as prior knowledge, making personal relevance a difficult factor to interpret (Petty & Cacioppo, 1986). Several experimental studies have manipulated personal relevance to test it within ELM (Petty & Cacioppo, 1979; Petty, Cacioppo, & Goldman, 1981; Petty, Cacioppo, & Schumann, 1983). In these studies, researchers have assigned participants to either high or low personal relevance groups.

In 2005, Verbeke conducted a literature review to look at how information about agriculture and food is communicated in the Information Age and the challenges associated with communicating about food. Food was identified as a low-involvement good (Beharrell & Denison, 1995). An examination of previous research found that because of consumer uncertainty regarding food, information and decisions about food have been commonly based on simple cues and processed through the peripheral route (Frewer, Howard, Hedderley, & Shepherd, 1997; Verbeke, 2005). The prevalence of peripheral processing suggests that individuals may not have the motivation and ability to process information about food topics and agriculture.

Transparency

The concept of transparency can be traced back to the1890s with the work of Henry Carter Adams, a public finance academic who discussed the role of publicity in the case of corporate abuses (Bigelow, Sharfman, & Wenley, 1922; Stoker & Rawlins, 2004). Despite the discussions of transparency over time, very little academic research has tested the effects of transparency, due to the challenges involved with defining and measuring the construct (Rawlins, 2008b). A review of the literature revealed several qualitative assessments of transparency (Barling, Sharpe, & Lang, 2009; Fairbanks, Plowman, & Rawlins 2007; Jahansoozi, 2006; Meijer, 2009). A quantitative measure of communicative transparency was developed in 2008 (Rawlins, 2008a) and tested in two subsequent studies (Auger, 2011; Rawlins, 2008b).

Rawlins (2008a) offered a comprehensive definition of transparency, which was used for this research.

> Transparency is the deliberate attempt to make available all legally releasable information – whether positive or negative in nature – in a manner that is accurate, timely, balanced, and unequivocal, for the purpose of enhancing the reasoning ability of publics and holding organizations accountable for their actions, policies, and practices. (p. 75).

The body of literature surrounding transparency includes focus on communicative transparency and indicates that stakeholders must perceive information to be transparent (Gower, 2006). Communicative transparency includes the variables of substantial information, participation, and accountability (Rawlins, 2008a).

Substantial information has been discussed as the amount and type of information needed by individuals. The relevance, clarity, completeness, accuracy, reliability, timeliness, and comparability of information impact whether or not the information is substantial (Rawlins, 2008b). Without adequate knowledge of the information wanted and needed by the stakeholders, organizations cannot guarantee they are achieving transparency through substantial information (Rawlins, 2008b).

Participation includes the interaction and feedback between organizations and stakeholders (Auger, 2011). This trait of communicative transparency includes involvement, feedback, detailed information, the ease of finding information, and the initiative by the organization to understand and ask for stakeholder opinions (Rawlins, 2008b). Additionally, organizations must invite stakeholders to participate in a conversation, and organizations must provide responses when stakeholders participate. The participation variable of communicative transparency highlights the "active participation in acquiring, distributing and creating knowledge" (p. 419), a requirement of transparency identified by Cotterrell (1999).

Accountability in communicative transparency includes "information that covers more than one side of controversial issues, might be damaging to the organization, admitting mistakes, and that can be compared to industry standards" (Rawlins, 2008b, p. 431). Additionally, accountability includes an organization being open to criticism and being forthcoming (Rawlins, 2008a). Those organizations that are transparent have been identified as being accountable for their words, actions, and decisions (Rawlins, 2008b).

Several studies of agricultural transparency have addressed transparency through discussion of tracing, tracking, and labeling of food products (Barling et al., 2009; Beulens, Broens, Folstar, & Hofstede 2005; Opara & Mazaud, 2001; van Dorp, 2003; Wognum, Bremmers, Trienekens, van der Vorst, & Bloemhof, 2011); however, a need exists to examine transparency in agricultural production. Opara and Mazaud (2001) suggested "consumers and other stakeholders in agroindustry now demand transparency in the way food is grown and handled throughout the supply chain, resulting in the emergence of 'traceability' as an important policy issue in food quality and safety" (p. 239). Barriers to transparency in the agricultural industry have been identified as gaining buy-in from the whole industry and cost (Barling et al., 2009). Additionally, Buelens et al. (2005) identified that organizational and psychological threats could inhibit the implementation of transparency in the agricultural industry. Some of these threats included unauthorized use of information, the cost to implement transparency, and the unknown profit driven benefits (Buelens et al., 2005). In addition to the barriers, there are also benefits to transparency. The information and knowledge that transparency provides individuals enables them to increase their reasoning ability and make informed decisions (Fagotto & Graham, 2007; Rawlins, 2008a). Additionally, transparency has been discussed as promoting accountability, commitment, collaboration, and cooperation among organizations (Jahansoozi, 2006). In a study by Hoogland, do Boer, and Boersema (2005) increased transparency encouraged more sustainable food choices among the participants.

The review of literature revealed the majority of studies surrounding the topic of agriculture and transparency were conducted in European countries. Additionally, many of the studies approached transparency from a qualitative perspective. Many of the studies examining agricultural transparency discussed transparency as the tracing, tracking, and labeling of food products, rather than a communication tactic as suggested by Rawlins (2008a).

Purpose and Hypotheses

The purpose of this study was to assess the effects of transparent communication and personal relevance, in a livestock production context, on the attitudes of college students. The findings of this research will help guide the future of effective communication within the livestock industry, ultimately leading to a citizenry informed on agricultural topics and issues (Doerfert, 2011).

> H1: Subjects exposed to high transparent communication and high personal relevance will have more positive attitudes toward the communication than those exposed to low transparent communication and low personal relevance.

> H2: When controlling for transparent communication and personal relevance, perceived transparency will have a positive effect on attitude toward the communication.

Methods

This study included a 2 (personal relevance: high and low) x 2 (transparent communication: high and low) between-subjects factorial experimental design. In a between-subjects design each subject is exposed to only one treatment condition (Keppel & Wickens, 2004). For this study, subjects were randomly assigned to receive both a high or low transparent communication and high or low personal relevance treatment through an online survey. The low transparent communication, low personal relevance treatment served as the control group.

The transparent communication manipulations were presented in a Facebook page for a fictitious poultry farm called Clucking Farms and Hatchery. These manipulations were based on the elements of communicative transparency identified by Rawlins (2008a) and included manipulations of substantial information, accountability, and participation. An example of one of the manipulations can be seen in Figure 1. A poultry farm was chosen for the focus of the Facebook page because the transparency debate in the agriculture industry has commonly been focused on animal agriculture segments of the industry. The personal relevance manipulations were presented in a description of the farm and on the farm's Facebook page (Figure 2). Personal relevance was manipulated by changing the location (both in words and image) where the farm was going to be built, just outside of Gainesville, Florida versus Iowa City, Iowa. The personal relevance manipulations used in this study were modeled off of personal relevance manipulations used in previous research (Petty & Cacioppo, 1979; Petty et al., 1981; Petty et al., 1983). The treatment manipulations were pre-tested with college students, not part of the final study, on three occasions. The first two pretests showed insufficiencies in the manipulations; therefore, adjustments were made after the first two pretests to further enhance the manipulations. The third pretest resulted in a satisfactory manipulation check and the manipulations were verified through cognitive interviews with three college students who participated in the third pretest. Changes were made to the instrument as a result of the pretest and cognitive interviews.

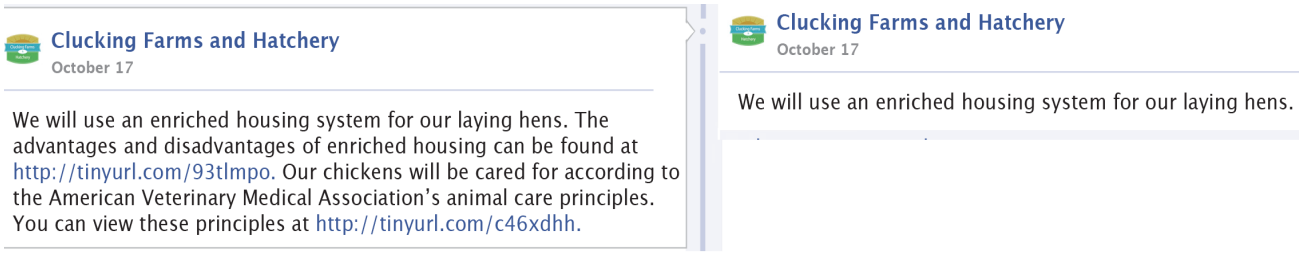

Figure 1. Transparent communication manipulation example. The high transparent communication manipulation example is seen on the left, and the low transparent communication manipulation example is seen on the right.

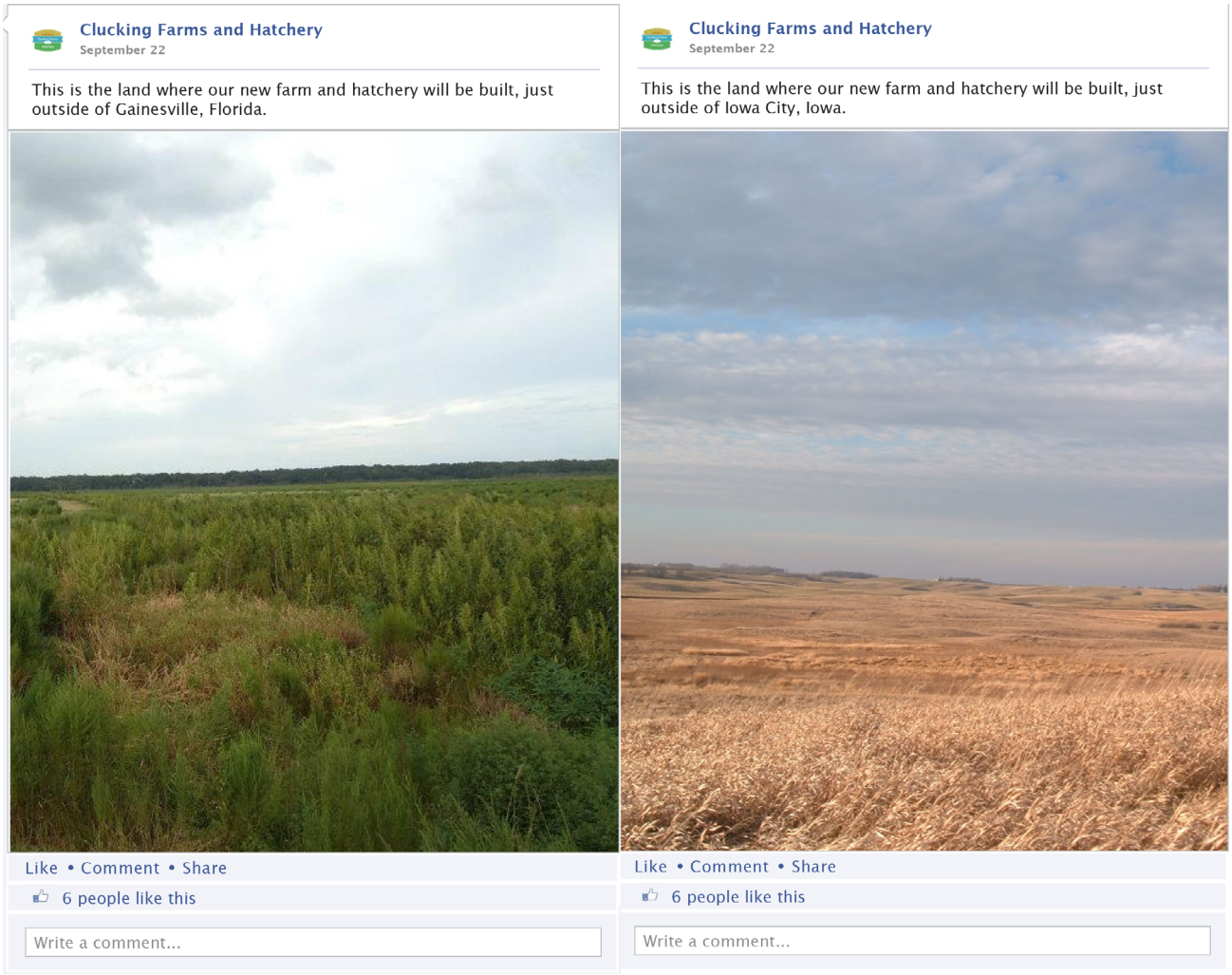

Figure 2. Personal relevance manipulation example. The high personal relevance manipulation example is seen on the left, and the low personal relevance manipulation example is seen on the right.

Although this research was part of a larger study, two sections of the survey instrument were relevant to these research findings: attitudes toward the communication on the Facebook page and perceived transparency of the communication. The instrument was presented in an online format and respondents were first presented with a description of the fictitious farm, followed

by a link to the Facebook page with randomly assigned experimental treatments embedded, and a question to verify that they were able to view the Facebook page. After the presentation of the Facebook page, respondents were asked to list their thoughts about what they saw, followed by questions about the variables of interest (attitude, trust, perceived transparency), demographics, and manipulations checks. To measure attitude an 18-item semantic differential scale was used. The scale was adapted from the bipolar adjectives suggested by Osgood, Suci, and Tannenbaum (1978). Additionally, the scale was also adapted from the scales used by Meyers (2008) and Rhoades (2006). The alpha reliability of this attitude measurement was .90. The attitude index response items were categorized to the real limits standard of: 1.00 to 2.33 = *Least Favorable*, 2.34 to 3.66 = *Neutral* and 3.67 to 5.00 = *Most Favorable*. The perceived transparency variable was created from a four-item scale, which had an alpha reliability of .86. These items were based on the overall transparency segment from Rawlins's (2008b) transparency instrument. The responses for perceived transparency scale ranged from 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree nor Disagree*, 4 = *Agree*, to 5 = *Strongly Agree*. The perceived transparency index response items were categorized to the real limits standard of: 1.00 to 1.49 = *Strongly Disagree*, 1.50 to 2.49 = *Disagree*, 2.50 to 3.49 = *Neither Agree nor Disagree*, 3.50 to 4.49 = *Agree*, and 4.50 to 5.00 = *Strongly Agree*.

A panel of experts reviewed the instrument for face and content validity. The panel of experts included four professors with specializations in agricultural communication, evaluation, and mass communication as well as an assistant professor specializing in extension education. In addition, the instrument was pilot tested with 31 college students and the alpha reliabilities found in the pilot test were found to be adequate.

A convenience sample was used to sample students from the population of University of Florida students. Both qualitative and quantitative researchers commonly use convenience samples to address practical constraints, efficiency, and accessibility, (McMillan & Schumacher, 2010). Additionally, convenience samples have been commonly used in psychology and consumer research studies with college student subjects (Peterson, 2001). Although data from studies using convenience samples are not generalizable to the larger population, the findings are still useful and can provide valuable insight to better understanding relationships (McMillan & Schumacher, 2010).

The limitations associated with external validity should be recognized during interpretation of the results of this study. Because a convenience sample was used the population threat to external validity does exist, thus indicating that the results cannot be determined to be representative of the greater University of Florida undergraduate population or national undergraduate student population. Additionally, since multiple treatments were used the generalizability of the results is limited to similar multi-treatment situations (McMillan & Schumacher, 2010).

The sample included 989 subjects from eight university courses. The courses included in the sample were from the College of Agriculture and Life Sciences as well as the College of Journalism and Mass Communications. These courses included students from a variety of majors and class rank. Subjects were offered 5 points extra credit in their course as incentive to participate in the study. Data were assessed for class effect and no effect was found. Administration of the survey followed the procedures for web survey distribution outlined by Dillman, Smyth, and Christian (2009) and the subjects were sent an email with the link to the survey. A total of 793 subjects responded to the survey. However, only 688 of these responses were usable. Responses were removed from the sample because the subjects indicated that they could not see the Facebook page (n = 78), subjects took the survey twice (n = 11), subjects were not part of the millennial generation (n = 10), and subject data was missing for the majority of variables (n = 6). The resulting response rate based on the accessible population was 69.6% (n = 688); however, the overall response rate was 80.2% (n = 793).

To ensure that the experimental manipulations functioned properly, a series of manipulation checks were conducted. The manipulation checks included an assessment of attentiveness to the stimuli, comparisons between high and low transparent communication groups and high and low personal relevance groups, and respondent identification of the high transparent communication treatment at the end of the survey. All manipulation checks showed that the manipulations were functioning as intended.

SPSS® 20.0 was used to analyze the data from this study. A factorial analysis of variance was used to analyze hypothesis one. The second hypothesis was analyzed using multiple linear regression. The assumptions of both analyses were checked and no violations were found. The demographic analysis of the subjects can be found in Table 1.

Table 1

Demographics of Respondents

Characteristic	*n*	%
Gender		
Female	465	67.6
Male	221	32.1
Self-reported area of residence while growing up		
Subdivision in a town or city	306	44.5
Urban or suburban area outside of city limits	220	32.0
Rural area (not a farm)	100	14.5
Downtown area in a city or town	39	5.7
Farm	22	3.2
Employment in the livestock industry		
No	563	81.8
Yes, in the past	61	8.9
Yes, currently	50	7.3
I or someone in my immediate family plans to in the next 4 years	11	1.6
Class rank		
Junior	263	38.2
Sophomore	163	23.7
Freshman	51	7.4
Graduate student	4	0.6

Results

H1: Subjects exposed to high transparent communication and high personal relevance will have more positive attitudes toward the communication than those exposed to low transparent communication and low personal relevance.

A two-way between groups analysis of variance was conducted to determine the effect of the different transparent communication and personal relevance treatments on attitude toward the communication. The independent variables were transparent communication (high, low) and personal relevance (high, low). The dependent variable was attitude toward the communication.

This hypothesis was partially supported. The interaction of personal relevance and transparent communication was not significant, $F(1,686) = .001$, $p < .980$. However, the two-way between

groups analysis of variance did reveal a main effect for transparent communication, $F(1,686) = 6.090$, $p = .014$ (Table 2). Those receiving high transparent communication had a slightly more favorable attitude ($M = 3.92$, $SD = .52$), than those receiving low transparent communication ($M = 3.82$, $SD = .53$). The means can be found in Table 3. A main effect for personal relevance was not found, $F(1,686) = .417$, $p = .519$.

Table 2

Effect of Transparent Communication and Personal Relevance on Attitude Toward Communication

Source	*SS*	*df*	*MS*	*F*	*p*
Personal relevance	.116	1	.116	.417	.519
Transparent communication	1.694	1	1.694	6.090	.014
Personal relevance*Transparent communication	.000	1	.000	.001	.980
Error	189.760	682	.278		
Total	3301.003	686			

Table 3

Attitude Means by Treatment Group

	High personal relevance *M (SD)*	Low personal relevance *M (SD)*	*Total*
High transparency	3.93 (.52)	3.91 (.53)	3.92 (.52)
Low transparency	3.83 (.55)	3.81 (.51)	3.82 (.53)
Total	3.88 (.54)	3.86 (.52)	

Note: The attitude categories were broken down as follows for interpretation 1.00 to 2.33 = *Least Favorable*, 2.34 to 3.66 = *Neutral* and 3.67 to 5.00 = *Most Favorable*.

H2: When controlling for transparent communication and personal relevance, perceived transparency will have a positive effect on attitude toward the communication.

Multiple linear regression was used to test this hypothesis. Transparent communication, personal relevance, and perceived transparency served as predictors of attitude toward the communication in this model. The perceived transparency index had a grand mean of 3.80 ($SD = .68$) (Table 4). The model was found to be significant, $F(3,684) = 99.035$, $p = .000$. Additionally, the predictors explained 30.4% of the variance in attitude toward the communication. Perceived transparency was the only predictor that was significant, $t = 16.965$, $p = .000$. This result indicated that a one-unit increase in perceived transparency would result in a .426 increase in attitude. The results of this hypothesis can be seen in Table 5.

Table 4

Perceived Transparency Grand Means among Treatment Groups

	n	*M*	*SD*
High personal relevance, high transparency	177	3.91	.66
High personal relevance, low transparency	173	3.73	.68
Low personal relevance, high transparency	166	3.85	.66
Low personal relevance, low transparency	171	3.71	.70
Total	687	3.80	.68

Note: The perceived transparency categories were broken down as follows for interpretation 1.00 to 1.49 = *Strongly Disagree*, 1.50 to 2.49 = *Disagree*, 2.50 to 3.49 = *Neither Agree nor Disagree*, 3.50 to 4.49 = *Agree*, and 4.50 to 5.00 = *Strongly Agree*

Table 5

Multiple Linear Regression Analysis for Variables Predicting Attitude toward the Communication

Variable	*B*	*t*	*p*
Constant	2.235	22.965	.000
Transparent communication	.010	.281	.779
Personal relevance	.027	.796	.426
Perceived transparency	.426	16.965	.000
R2	.304		
F	99.035		

Conclusions and Discussion

The first hypothesis, formed based on the theoretical framework of ELM and transparency, predicted that those receiving the high transparent communication and high personal relevance treatment would have a more positive attitude toward the communication than those who received low transparent and low personal relevance treatments. This hypothesis was partially supported. The interaction of personal relevance and transparent communication was not significant. However, the main effect for transparent communication was significant. This suggested that those who received high transparent communication would have higher mean attitude scores than those who received low transparent communication. Although the main effect of personal relevance was not significant, an inspection of the means table indicated that those who received high personal relevance treatments had slightly more favorable attitudes than those who received low personal relevance treatments.

The second hypothesis predicted that when controlling for transparent communication and personal relevance, perceived transparency would have a positive effect on attitude toward the communication. This hypothesis was supported. Perceived transparency was found to be a significant predictor of attitude toward the communication. This finding indicated that those with a higher perceived transparency score would have a higher attitude score than those with a lower perceived transparency score.

Theoretical Implications

Perceived transparency and manipulated transparent communication were found to have a significant impact on attitude toward the communication. The relationship between transparency and attitude had not been previously explored. The findings from this study suggest that attitude

toward the communication increases positively for each increase in perceived transparency. In addition, those receiving the high transparent communication manipulation had slightly more favorable attitudes than those who received the low transparent communication manipulations. This finding is important to understand because previous research has shown that attitudes are predictive of behavior (Petty & Cacioppo, 1996; Petty et al., 2009). Thus, the findings suggest that positive influences of transparency on attitude may also result in positive behavioral outcomes.

Using ELM, the design of the research suggested that the manipulation of personal relevance would impact the subject's motivation to process the communication. However, no significant differences were found between those who received high and low personal relevance treatments and personal relevance did not have a significant impact on attitude toward the communication. Transparent communication may have been more salient than personal relevance to the subjects participating in this study. The lack of significance may also be explained by previous identification of low involvement associations with food (or in this case food related information) (Beharrell & Denison, 1995) or the transient nature of college students. In addition, this lack of significance may be due to personal relevance cofounding with prior knowledge, a problem observed previously with personal relevance (Petty & Cacioppo, 1986). Since personal relevance serves as a motivational factor in ELM and was not significant in this study, it cannot be concluded that the subjects had the motivation to process the communication. Thus, it is likely that the attitudes formed were based on the peripheral processing route. In this case, perceived transparency likely served as a peripheral cue that led to further peripheral processing. Previous research has also found a prevalence of peripheral processing in studies of ELM and agriculture (Frewer et al., 1997; Veberke, 2005).

However, the effects of transparent communication and personal relevance on attitude toward the communication may have been different if respondents had been exposed to the message stimuli multiple times. In addition, the static nature of the Facebook page may have influenced respondents' attitudes differently than if the Facebook page was live and subjects were able to interact with it. The static nature of the Facebook page was necessary to control the message stimuli for all respondents.

Practical Implications

A need existed to understand how transparency could impact the livestock industry, in order to bring together those who support (Garner, 2009; Roybal, 2012) transparency in the industry and those who oppose it (Potter, 2011). The results of this study indicate the use of transparent communication, specifically when communicating with those in the Millennial Generation, would be beneficial to the livestock industry. Transparent communication is likely to result in more favorable attitudes among the Millennial Generation. Literature indicates that Millennials find confidence in companies that communicate transparently (Red McGregor, 2012) and this study suggests that Millennials will have more favorable attitudes toward those who communicate in a transparent manner. Additionally, the findings suggest that transparent communication in the agricultural industry should go beyond the tracking and tracing (Barling et al., 2009; Beulens et al., 2005; Opara & Mazaud, 2001; van Dorp, 2003; Wognum et al., 2011) of food products and should encompass transparent communication practices throughout the entirety of the production process.

However, practitioners should be cautioned that communicating in a transparent manner does not ensure improved attitudes. The target audience of the communication must first access and attend to the communication (Fagotto & Graham, 2007). In addition, the target audience must perceive the communication to be transparent (Gower, 2006). In this study, the subjects were incentivized with extra credit to participate in the study and read the message stimuli. Outside the experimental setting, the transparent communication must be presented in a manner that the target audience would attend to. Strategies, such as the use of consumer or audience testimonials, may be effective in attracting a broader target audience to attend the communication. If targeting

Millennials, it may be appropriate to use a social media interface such as Facebook because this is a media channel that the Millennial Generation is motivated to use (Nielsen, 2014). Practitioners should assess the needs of their target audience and the media that they commonly use. This assessment will allow practitioners to determine the best channel to communicate through in order to reach their target audience before implementing transparent practices.

Practitioners should also explore ways to make communication about the livestock industry more personally relevant to their target audience. Identifying shared values of the target audience and the industry may allow for practitioners to provide communication that motivates the audience to process the information. Identifying overlapping values in their differing cultural systems is essential to narrowing the communication gap between producers and consumers (Higgins, 1991).

Practitioners should plan for the additional challenges associated with the implementation of transparent communication. The literature suggests that the exposure of weaknesses, unauthorized use of information, loss of independence, a proactive management style, and additional costs are all challenges associated with transparency (Barling et al., 2009; Buelens et al., 2005; Rawlins, 2008a; Rawlins, 2008b). Practitioners should be prepared to deal with each of these challenges and address them as they arise.

Direction for Future Research

As this study found that transparency has a significant effect on attitude toward the communication, further research should be done to connect transparency to ELM. It was concluded that the attitudes observed in this study resulted from peripheral processing. However, it cannot be concluded that the same results would be present if central processing were to occur. A follow-up study should be done to determine if central processing of transparent communication would lead to the same effects on attitudes. Additionally, further research examining transparency in ELM should measure elaboration to provide further insight to the processing route, as well as the strength and endurance of the resulting attitudes.

Since personal relevance was not found to be significant, further research should be done to determine if high personal relevance on the topics of food or livestock production can be achieved with the Millennial Generation. Additionally, alternative manipulations of personal relevance in this context should be assessed. Exploration of values among this generation and framing communication around these values to increase personal relevance should be pursued. Interest and willingness to access and attend to agricultural information on social media should also be explored among the Millennial generation. Future research should include the effect of transparent communication in a face-to-face setting as well as in other agricultural contexts. Additionally, future studies should utilize a general population audience to determine if the results found among college students are similar among the general population.

The future of US agriculture depends on the industry's ability to narrow the communication gap between those who produce and consume food (Igo & Frick, 1999). This research provides preliminary indications that transparent communication can positively impact attitudes toward communication from the livestock industry. However, further applied communications research is needed to re-connect the communication between producers and consumers (Higgins, 1991).

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Research

Reaching Millennials: Implications for Advertisers of Competitive Sporting Events that Use Animals

Jackie Hill, Mallory Mobly and Billy R. McKim

Abstract

The purpose of this mixed method, multi-modal case study was to identify the most acceptable video images of animals to use when advertising competitive sporting events. Data were collected from college students at Arizona State University, California State University-Fresno, Texas A&M University, University of California-Berkeley, University of California-San Diego, and University of Texas. We investigated which sporting events are most acceptable among members of the Millennial generation, if there were differences in responses based on Millennials' gender, and if perceptions differed among rodeo and non-rodeo events. Based on our results, gender did not influence Millennials' perceptions of the use and treatment of animals in the 16 competitive sporting events presented in this study. However, non-rodeo events were perceived more positively than rodeo events. Of the eight rodeo events, respondents perceived barrel racing as most acceptable and the event in which the animal was treated most kindly. Respondents perceived team roping as least acceptable and the event in which the animals were treated least kindly. The results of this study include strategies that may improve advertising rodeo and non-rodeo events to Millennials by selecting images that are most acceptable to Millennials and considerations for reaching target audiences.

Key Words

Advertising, Animal Welfare, Rodeo, Social Cognitive Theory, Sports

Literature Review

Animal Welfare

Coleman (2008) suggested there are various levels of animal welfare. However, the literature is void of studies investigating Millennials' perceptions of animal welfare in competitive sporting events. A thorough understanding of animal welfare and how animals are treated in competitive sporting events could lead to improved marketing and advertising strategies for rodeo and non-rodeo events.

"Animal welfare is ensuring that an animal's physical state, mental state, and ability to fulfill natural needs and desires are considered and attended to" (Bousfield & Brown, 2010, p. 1). According to Coleman (2008), there is a widespread belief across all of the animal sectors in which there is data that animal welfare is important. Additionally, animal use has been the subject of many empirical studies. Research exists for animals used in research and food production, but little is known about the perceptions of animals used for competitive sporting events. For example, Driscoll (1992) concluded that pet owners considered animal research as less acceptable than those who did not own pets. Although previous studies have focused on various issues of animal welfare, none have solely described the public's perceptions of animals being used in rodeo events and how these perceptions may influence advertising, specifically image selection, in the rodeo industry.

According to the International Finance Corporation (2006), higher animal welfare standards are considered a prerequisite for enhancing business efficiency and profitability, satisfying internal markets, and meeting consumer expectations in regard to animal-related businesses. Animal welfare policies are implemented in the rodeo industry as recommended by the American Veterinary Medical Association (Professional Rodeo Cowboy Association, 2000). Therefore, cowboys cannot achieve high scores without peak performance from their "animal athlete" counterparts (PRCA, n.d.). Additionally, the PRCA has an Animal Welfare Committee to review all PRCA animal-related policies and issues (PRCA, 2000).

Rodeo Advertising

The literature lacks studies investigating rodeo advertising or consumer relationship-building. The advertising of rodeos is a potentially difficult task, and failure is possible. Advertising failure can be associated with one or more of the following reasons: 1) lack of interest in or understanding of customers; 2) improper blending of product, place, price, and promotion; 3) lack of understanding of or adjustment to the marketing environment (Perreault, Cannon, & McCarthy, 2009).

A thorough understanding of customers allows companies to more effectively communicate with them (Injazz & Popovich, 2003). Better communication will improve retention rates and, therefore, allow a company to build a relationship with its customers (Injazz & Popovich, 2003). Studying perceptions of animal use in competitive sporting events may allow companies and marketers to better target audiences.

In addition to understanding customers, marketers must consider the Four Ps: product, place, price, and promotion (Perreault et al., 2009). Marketers must produce products desired by consumers, make them available at a place that is easily accessible at an attractive price, and use promotion to communicate the advantages of the product over the competition (Yudelson, 1999). Marketers may use the Four Ps as a basic framework to market the entertainment derived from sports and to decrease the risk of business failure.

Lastly, to prevent business failure, marketers should strive to understand and adjust to the marketing environment. In recent years, the marketing environment has adapted to include members of the Millennial generation. According to Nielsen (2014), the Millennial generation makes up 24% of the U.S. population and is projected to make up 46% of the U.S. workforce in 2020 (Lynch, 2008). Millennials are technologically connected and will often endorse brands to which they can personally relate (Nielsen, 2014). Little research investigating Millennials' perceptions of animals in competitive sporting events exists. Therefore, there is a void in understanding the most effective strategies in the rodeo industry for targeting Millennials.

In addition to targeting the Millennial generation, marketers should also consider consumers' gender. Reportedly, gender plays a role in attitudes toward animal use. Mathews and Herzog (1997) studied the personalities of 99 undergraduates and reported that women generally had more positive attitudes toward animals than men did. Herzog (2007) conducted further research on gender differences in human-animal interactions and found in 31 cases that women were more sympathetic to animals than men. Women clearly represent a substantial grouping in the community with regard to attitudes about animal welfare and show more empathy to animals (Karniol, Gabay, Ochion, & Harari, 1998).

Moreover, women make up about 51% of the nearly four million people who attend PRCA-sanctioned rodeos across the United States (PRCA, n.d.). Each year, more than 600 rodeos

are sanctioned by the PRCA (PRCA, n.d.), most of which are held in the Western United States (Daneshvary, Schwer, & Rickman, 1993). PRCA's broad audience includes several generations and, as a group, is demographically similar to NASCAR fans (PRCA, n.d.). As NASCAR has grown in popularity, its fan demographic has become diverse, and although formerly concentrated in the Southeastern United States, NASCAR has spread to different areas of the country (Hugenberg & Hugenberg, 2008). Although NASCAR fans are similar to and lend insight into rodeo fans, the regional differences should be considered.

Purpose and Objectives

The purpose of this mixed method, multi-modal case study was to describe Millennial college students' perceptions of acceptable animal images in advertising for competitive sporting events. Developing an empirical understanding of Millennials' perception of animals in competitive sporting events will fill a void in literature and may lead to a more comprehensive understanding of rodeo perceptions. Moreover, an investigation of what Millennials consider to be acceptable images may lead to improvements in rodeo advertising.

RQ1: Does gender affect how Millennials perceive the use of animals in competitive sporting events?

RO1.1: Describe Millennials' perceptions of the use of animals in competitive sporting events by gender.

RO1.2: Compare Millennials' perceptions of the use of animals in competitive sporting events by gender.

RQ2: Do Millennials' perceptions of the use of animals differ among various competitive sporting events?

RO2.1: Describe Millennials' perceptions of the use of animals in rodeo events and non-rodeo events.

RO2.2: Compare Millennials' perceptions of use of animals in rodeo events and non-rodeo events.

Methods

Participant Characteristics

According to Nielsen (2014), the Millennial generation makes up 24% of the U.S. population. "And [although] many are still climbing the income ladder, this group's size and age range highlights its long-term purchase power" (Nielsen, 2014). For this reason, we chose the Millennial generation as the sample for this study. A sample of 177 participants was included in this study (51% male, 49% female) and was derived from intercept data collection. The target population for this study included students from Arizona State University, California State University-Fresno, Texas A&M University, University of California-Berkeley, University of California-San Diego, and University of Texas. A breakdown of the sample population by gender for each university is presented in Table 1. Male and female participants were similarly represented at each university.

Table 1

Description of Subjects by Campus and Sex

	Male		Female		Total*	
	f	%	*f*	%	*f*	%
University of Texas	26	29.0	24	27.6	50	28.4
Texas A&M University	20	22.2	18	20.7	38	21.5
Arizona State University	12	13.3	13	14.9	25	14.1
University of California, San Diego	10	11.1	12	13.8	22	12.4
California State University, Fresno	4	4.4	8	9.2	12	6.8
University of California, Berkeley	18	20.0	12	13.8	30	16.9
Total**	90	100.0	87	100.0	177	100.0

Note. * Column totals are noted for each university. **Row totals are noted for gender and total.

Design

We used a cross-sectional, case study design to describe Millennials' perceptions of the use and treatment of animals in competitive sporting events. Data were collected using a mixed method (qualitative and quantitative), multimodal (iPad video and paper questionnaire) approach. This study was based on two independent variables (gender and event type).
The dependent variables for this study were 1) acceptability for animals to be used in sporting events, and 2) belief that animals are being treated kindly in sporting events.

Instrumentation

As part of a larger mixed-method, multimodal case study, this study focused on the quantitative strand. Data for this study were collected using paper questionnaires and electronic media (video clips). The parts of the questionnaire applicable to this study included the following sections:

Section 1

In the first section of the questionnaire, a series of 5-point Likert scales (1 = Strongly Disagree to 5 = Strongly Agree) were used to measure participant reactions when shown a series of rodeo and non-rodeo video clips. Each video clip contained a different competitive sporting event involving an animal (e.g., bull riding, mutton bustin', and dock dogs). For each video clip, participants selected the option (1 = Strongly Disagree to 5 = Strongly Agree) that best described their beliefs toward the following statements:

1. I believe it is completely acceptable for animals to be used in this event.
2. Animals in this event are being treated kindly.

Section 2

The last section of the questionnaire consisted of six demographic questions asking each participant's classification (freshman, sophomore, junior, senior, graduate student), age, zip code, gender, race, and annual family household income.

To estimate the reliability of the questionnaire, we pilot tested the instrument on the Texas A&M University campus (n = 48). The questionnaire used in the pilot test was double-sided and consisted of the scales participants used to measure their reaction to the video clips (section one). The demographic section of the questionnaire (section two) was not added until after the pilot testing of the instrument because the questions were not considered to be summative items.

Validity and reliability.

For this study, inter-rater agreement (reliability) was assessed using kappa (k) statistics. To test the causal impact of the independent variables on the dependent variables, we created a questionnaire consisting of 20 items with corresponding 5-point Likert scales (1 = Strongly Disagree to 5 = Strongly Agree). Pilot test data were entered into Microsoft Excel and then imported into IBM® SPSS® Statistics version 21.0 for analysis. Based on the guidelines from Altman (1999), and adapted from Landis and Koch (1977), a k of 0.74 represented a substantial strength of agreement. Furthermore, because $p < .001$, the k coefficient is statistically significantly different from zero.

Video selection.

Another component of the larger study involved a content analysis to select videos depicting the use of animals in competitive sporting events. Because of the number of competitive sporting events that include the use of animals, only widely recognized events by the general public were included in this study (e.g., bull riding, horse racing, and dog sledding). It should be noted that the events "calf roping" and "tie-down roping" are the same event and were both included in this study. This event's name changed from "calf roping" to "tie-down roping" after a PRCA board decision in 2005 (C. Schonholtz, personal communication, May 5, 2015). This change was enacted to more accurately describe the event (C. Schonholtz, personal communication, May 5, 2015). After choosing the events, we searched publically accessible video clips on YouTube. We selected video clips that depicted each sporting event as it would normally happen, absent of any extreme circumstances. We were concerned that depictions of extreme circumstances of an event could potentially cause error in participant responses. Once the videos clips were selected, we used Adobe® Premier Pro CS6, a video editing software, to continuously stream the four to eight second video clips in one video. Each video clip demonstrated the basic concept of each sporting event under typical conditions.

As each clip played, the video number was displayed on the bottom of the iPad screen and corresponded to the video number on the questionnaire to prevent confusion. Following each video clip, a screen noting "Please answer the questions for video (number)" appeared for 15 seconds, allowing the participant time to respond to the two corresponding questions listed on the paper questionnaire. Participants who were familiar with iPads were allowed the opportunity to skip the 15-second pause. Therefore, in some cases the participant did not use the entire 15-second pause and proceeded to the next question.

In the pilot study, 16 video clips were tested. Based on feedback from the participants, we decided to reduce the number of video clips included in the questionnaire by dividing it into two series with 10 video clips each. Of the 10 clips, four remained constant in both video series for a basis of comparison. Based on the results of the pilot study data, we selected two clips that were perceived as most negative (bull riding and calf roping) and two clips that were perceived as most positive (dock dogs and pig racing). We randomly assigned the remaining videos to one of the

two series (see Table 2) with the assumption that the middle range events would have comparable reactions if the most extreme events do. To test this assumption, we used t-tests to compare the mean scores of four videos common to both series (bull riding, calf roping, dock dogs, and pig racing). A Bonferroni correction was used to adjust the alpha value for multiple comparisons (inflated alpha). Subsequently, there were no significant differences ($p < 0.01$).

Table 2

Video Series Breakdown

	Video Series 1	Video Series 2
Clip 1	Bull riding	Bull riding
Clip 2	Horse racing	Dog racing
Clip 3	Bareback riding	Saddle bronc
Clip 4	Dock dogs	Dock dogs
Clip 5	Mutton bustin'	Steer wrestling
Clip 6	Dog agility	Dog sledding
Clip 7	Calf roping	Calf roping
Clip 8	Barrel racing	Cross country eventing
Clip 9	Team roping	Tie-down roping
Clip 10	Pig racing	Pig racing

Results

Data Analyses

We analyzed the data using IBM® SPSS® Statistics version 21.0 and followed the multivariate analysis procedures noted by Tabachnick and Fidell (2013). Descriptive statistics (Min, Max, *M*, SD) were calculated for the dependent variables in RO1.1 and RO1.2. MANOVA, or multivariate analysis of variance, was used to address RO1.1 and RO1.2 by comparing the summated means (acceptability and treatment) by Millennial gender. For the MANOVA, the Hotelling's trace statistic (*T2*) was used because it is considered the most robust when comparing two equal groups (Field, 2009). Two paired-samples t-tests were used to address RO2.1 and RO2.2 by comparing the summated means (acceptability and treatment) by event type (rodeo events vs. non-rodeo events). Bonferroni correction was used to adjust the alpha value for multiple comparisons (inflated alpha). Subsequently, there were no significant differences ($p < 0.03$). Cohen's *d* was calculated and reported as an indicator of effect size.

Research Objective 1.1

The purpose of the first research objective was to describe how each gender perceived the use of animals in competitive sporting events. As depicted in Tables 3 and 4, both males and females displayed a somewhat neutral reaction to the events depicted in the study. The sport of cross country eventing was the most positively perceived event for female participants. For the questions based on acceptability and treatment, female participants responded more positively than male participants.

Results for individual events are listed in Table 3, by question. When interpreting mean scores, it is important to note the Likert value 3 is a neutral or I am indifferent score, whereas 1 was the most negative reaction and 5 was the most positive reaction.

Table 3

Perceived Levels of Acceptability of Animal Use in Sports Events by Sex

	Male				Female			
Event	Min	Max	*M*	*SD*	Min	Max	*M*	*SD*
Bareback riding	1	5	2.23	1.14	1	5	2.38	1.22
Barrel racing	1	5	3.34	1.00	1	5	3.84	1.14
Bull riding	1	5	2.59	1.26	1	5	2.57	1.20
Dock dogs	1	5	3.78	1.11	1	5	3.86	1.13
Dog agility	1	5	3.74	1.07	1	5	3.62	1.31
Dog racing	1	5	3.39	1.02	1	5	3.37	1.30
Dog sledding	1	5	3.60	1.04	1	5	3.55	1.34
Eventing	1	5	3.57	1.01	1	5	4.05	1.10
Horse racing	1	5	3.45	1.12	1	5	3.39	1.24
Mutton bustin'	1	5	2.63	1.22	1	5	2.11	1.37
Pig racing	1	5	1.90	1.15	1	5	1.63	1.04
Saddle bronc	1	5	2.42	1.24	1	5	2.33	1.21
Steer wrestling	1	5	2.51	1.13	1	5	1.81	1.20
Team roping	1	5	1.76	1.04	1	5	1.71	1.16
Tie-down roping	1	5	1.94	1.17	1	5	1.82	1.15

Note. Scale: 1 = Strongly Disagree to 5 = Strongly Agree

Table 4

Perceived Levels of Treatment of Animals Used in Sports Events by Sex

	Male				Female			
Event	Min	Max	*M*	*SD*	Min	Max	*M*	*SD*
Bareback riding	1	5	2.14	1.06	1	5	2.20	1.06
Barrel racing	1	5	3.26	1.09	1	5	3.73	1.20
Bull riding	1	5	2.29	1.18	1	5	2.25	1.16
Dock dogs	1	5	3.70	1.16	1	5	3.83	1.15
Dog agility	1	5	3.59	1.14	1	5	3.58	1.34
Dog racing	1	5	3.29	1.07	1	5	3.28	1.32
Dog sledding	1	5	3.39	1.08	1	5	3.48	1.36
Eventing	1	5	3.48	1.05	1	5	3.95	1.23
Horse racing	1	5	3.28	1.14	1	5	3.24	1.25
Mutton bustin'	1	5	2.48	1.12	1	5	1.97	1.24
Pig racing	1	5	1.74	0.97	1	4	1.43	0.74
Saddle bronc	1	5	2.19	1.11	1	5	2.22	1.11
Steer wrestling	1	5	2.25	1.11	1	5	1.64	0.97
Team roping	1	5	1.66	0.89	1	4	1.46	0.83
Tie-down roping	1	5	1.73	1.08	1	5	1.58	0.92

Note. Scale: 1 = Strongly Disagree to 5 = Strongly Agree

Research Objective 1.2

The purpose of RO1.2 was to compare the differences between each gender's perceptions of the use of animals in competitive sporting events. A MANOVA was used compare the summated means (acceptability and treatment) by gender. Box's test of equality of covariance was not significant (p = .146), which was an indicator that the assumption of equality of covariance was violated. Results of the MANOVA indicated no significant effect of gender on individuals' perception of the use of animals in competitive sporting events: $T2$ = 0.007; F (2, 191) = 0.625; p = 0.536; 1 – B = 0.154).

Research Objective 2.1

The purpose of RO2.1 was to describe the perceptions of animals used in rodeo and non-rodeo events. As depicted in Tables 5 and 6, the sporting events were divided into two groups: 1) rodeo events, and 2) non-rodeo events. On average, participants perceived animals competing in rodeo events as less acceptable than animals competing in non-rodeo events (see Tables 5 and 6). Looking at the individual events, several points stand out. For example, barrel racing was the rodeo event most positively perceived, based on its acceptability and treatment ratings. Although the mean scores associated with acceptability (M = 3.65; SD = 1.10) and treatment (M = 3.54; SD = 1.17) were considered neutral, when compared to the mean scores of other rodeo events, barrel racing was the most widely accepted. Additionally, team roping had an associated mean of 1.80 (SD = 1.15) and was perceived by participants as least acceptable of all the rodeo events. Participants, on average, did not believe the animals involved in team roping were treated kindly, which was indicated by the event's mean score. Based on the mean scores for both questions, team roping was categorized as the event participants perceived most negatively.

When analyzing data for non-rodeo events, participants, on average, did not have particularly negative or positive reactions. However, it should be noted that when comparing the mean scores for treatment and acceptability of non-rodeo events to rodeo events, non-rodeo events were viewed positively. However, participants did not indicate that they considered non-rodeo events positive but rather more positive than rodeo events.

Table 5

Perceived Levels of Acceptability of Animal Use in Sports Events

Event	*n*	Min	Max	*M*	*SD*
Rodeo Events (summated)	196	1	5	2.45	1.07
Barrel racing	142	1	5	3.65	1.10
Mutton bustin'	143	1	5	2.47	1.38
Bull riding	194	1	5	2.63	1.23
Bareback riding	143	1	5	2.38	1.22
Saddle bronc	145	1	5	2.39	1.23
Steer wrestling	145	1	5	2.20	1.23
Tie-down roping	194	1	5	1.94	1.21
Team roping	143	1	5	1.80	1.15
Non-Rodeo Events (summated)	196	1	5	3.68	0.94
Dog agility	194	1	5	3.86	1.11
Dock dogs	144	1	5	3.80	1.08
Dog sledding	143	1	5	3.74	1.20
Eventing	145	1	5	3.59	1.19
Horse racing	143	1	5	3.45	1.16
Dog racing	145	1	5	3.38	1.15
Pig racing	194	1	5	3.40	1.23

Note. Scale: 1 = Strongly Agree to 5 = Strongly Agree

Table 6

Perceived Levels of Treatment of Animals Used in Sports Events

Event	*n*	Min	Max	*M*	*SD*
Rodeo Events (summated)	195	1	5	2.20	0.91
Barrel racing	142	1	5	3.54	1.17
Mutton bustin'	143	1	5	2.33	1.29
Bull riding	19	1	5	2.31	1.19
Bareback riding	143	1	5	2.24	1.09
Saddle bronc	145	1	5	2.21	1.11
Steer wrestling	145	1	5	1.99	1.11
Tie-down roping	194	1	5	1.69	1.03
Team roping	142	1	5	1.59	0.92
Non-Rodeo Events (summated)	196	1	5	3.55	0.95
Dog agility	194	1	5	3.81	1.16
Dock dogs	144	1	5	3.71	1.16
Dog sledding	142	1	5	3.65	1.25
Eventing	145	1	5	3.44	1.21
Horse racing	143	1	5	3.29	1.18
Dog racing	145	1	5	3.28	1.19
Pig racing	194	1	5	3.23	1.26

Note. Scale: 1 = Strongly Agree to 5 = Strongly Agree

Research Objective 2.2

The purpose of RO2.2 was to compare perceptions of the use of animals in rodeo and non-rodeo events. Two paired-samples t-tests were used to compare the summated means (acceptability and treatment) by event type (rodeo events vs. non-rodeo events). Based on the results of the t- tests, individuals' perceptions of the acceptability for animals to be used in sporting events significantly differed ($p < 0.03$) between rodeo events ($M = 2.45$; $SD = 1.07$) and non-rodeo events ($M = 3.68$; $SD = 0.94$), $t = -21.98$; $df = 196$; $p < 0.01$). Further, Cohen's effect size value ($d = 1.22$) indicated a large practical significance. Individuals' perceptions that animals are being treated kindly in sporting events significantly differed ($p < 0.03$) between rodeo events ($M = 2.20$; $SD = 0.91$) and non-rodeo events ($M = 3.55$; $SD = 0.95$, $t = -25.45$; $df = 195$; $p < 0.01$). Further, Cohen's effect size value ($d = 1.45$) suggested a large practical significance.

Discussion

Research Objectives 1.1 and 1.2

According to Mathews and Herzog (1997), a person's gender reportedly influences how he or she perceives animal use. Studies have found that women are generally more sympathetic to the use of animals (Mathews & Herzog, 1997) and the treatment of animals (Herzog, 2007) than men. However, in this study, Millennials' gender did not significantly influence how participants perceived each competitive sporting event. Each gender's mean scores for acceptability and treatment indicated an indifferent attitude for each sporting event. It is not until the sample is analyzed as a whole that significant differences existed. Practitioners should make note of the

findings of this study; particularly, gender does not always influence Millennials' perceptions of animal use. Ultimately, marketing strategies should be focused on the sporting event, whether it be a rodeo or non-rodeo event.

Research Objectives 2.1 and 2.2

For this study, barrel racing was the rodeo event in which study participants perceived most positively. Conversely, rodeo events that involved calves, including steer wrestling, tie-down roping, and team roping, were perceived most negatively. Practitioners would be well served to not solely focus on these events that involve calves in their marketing strategies. Objectionable events may entail negative consequences for advertisers because the public may not be familiar with the sport being advertised.

Recommendations

Future researchers may gain a better understanding of animal welfare in competitive sporting events by collecting qualitative data on this topic. Qualitative insight would provide researchers and industry professionals an opportunity to better understand why the sample population in this study reacted to the videos the way they did. Gaining insight as to why the sample perceived some events more negatively than others would assist marketers in targeting messages to the appropriate audiences. Furthermore, additional research on video images could lead to a better understanding of the best still images to use in multi-media advertisements.

As previously mentioned in this study, marketers should consider the Four *P*s (Perreault et al., 2009) when communicating their product to consumers. For marketers to make the best decision regarding their product, place, price, and promotion, they must first have a basic understanding of their customers and/or target audience. Referring to the characteristics of advertising failure stated by Perreault et al. (2009), this study has identified the importance of marketers understanding their customers. A thorough understanding of customers and the market environment will allow marketers to blend rodeo advertising with the proper product, place, price, and promotion.

Marketers should advise rodeo organizations on which video images are best for advertising purposes. In addition, marketers should assist rodeo organizations in choosing the least negative image for each rodeo event. For example, if a rodeo organization chooses to advertise a roping event, Millennials would likely perceive roping events as the least acceptable, based on the results of this study. Similarly, Millennials would likely not perceive using animals in roping events as kind treatment of animals. The results of this study suggest participants perceived roping events as the least acceptable. Participants also perceived that the animals used in roping events were not being treated kindly. Therefore, if rodeos use video images of the rope being pulled tightly on the calf, it may leave consumers with a negative perception of the event. Marketers may use these findings to provide more value to their rodeo clients by suggesting video images that will provide the most positive consumer reaction. The results of this study should be used to expand the limited research for competitive sports involving animals and to develop visual rhetoric frameworks for the rodeo industry.

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Research

Student Expectations and Reflections of a Study Away Course Experience to Washington, D.C.

Courtney Meyers and Shannon Arnold

Abstract

Active, out-of-the-class learning experiences have proven to provide students with a variety of benefits. One way to offer these valuable experiential education opportunities this is through study away to international or domestic destinations. The purpose of this study was to explore students' perceptions of a study away course experience to Washington, D.C. This course was a collaborative effort between two universities. Twenty-two students participated in the study away experience and 21 completed pre- and post-trip questionnaires to determine their expectations and reflections of the experience. Through qualitative analysis of students' open-ended responses, emergent themes were identified. Students expected to gain a new experience, network with others, and have an enjoyable trip. Post-trip reflections revealed students gained a great deal more than they anticipated, both personally and academically. Recommendations for practice and research are provided.

Key Words

Content Analysis, Expectations, Experiential Learning, Qualitative, Study Away, Reflection, Washington, D.C.

Literature Review

According to the National Association of State Universities and Land-Grant Colleges (NASULGC, 2000), "the United States needs its higher education sector to provide leaders who can understand and guide the economic, political, and social forces that will control or influence the path of the international community in the 21st century" (p. 3). Study abroad programs assist in accomplishing this need by developing students' cultural awareness, broadening the academic experience, and building personal skills (Bobbitt & Akers, 2012; Northfell & Edgar, 2014). Although they may realize the importance of studying abroad, many college students are unable to take advantage of that opportunity due to limitations on time, finances, or lack of opportunity. An Institute of International Education (2011) study found college representatives said "more affordable opportunities for students to gain international experience" are needed (para. 6). One way students can gain a more global perspective is to participate in a "study away" experience. Sobania and Braskamp (2009) suggested the term "study away" be used as both a "concept and educational strategy that integrates study abroad programs with domestic programs" (p. 23). While study abroad opportunities are valuable in developing personal and professional skills, domestic-based programs can also encourage positive learning outcomes. "As both a concept and strategy, study away recognizes that students can have experiences that open their minds, hearts, and behaviors to difference and allows them to experience such difference firsthand, either internationally or domestically" (Sobania & Braskamp, 2009, p. 24).

This paper was presented at the 2015 Southern Association of Agricultural Scientists Conference – Agricultural Communications section.

Previous research has found that active engagement in learning is an important concept of undergraduate education (Anderson & Adams, 1992; Chickering & Gamson, 1987; Johnson, Johnson, & Smith, 1991). Out-of-the class learning experiences are a significant part of the overall undergraduate experience and should be provided to enhance critical thinking, problem solving, teamwork, leadership skills, and personal development (Kuh, 1995; Seidman & Brown, 2006; Terenzini, Pascarella, & Bliming, 1996). Seidman and Brown (2006) discussed the need for college instructors to reevaluate delivery of classroom material to maximize outside experiences. Studies have found that these experiences are more valuable than those in the classroom (Kuh 1993, 1995; Nathan, 2005; Terenzini et al., 1996; Tinto, 1997). Nathan (2005) found that 65% of undergraduate students reported they learned more outside the classroom than within. Kuh (1993, 1996) reported that integrating outside experiences into a course creates a seamless learning experience for both students and faculty.

In a study to determine what skills and knowledge agricultural communications students should have, Sprecker and Rudd (1997) found students need to possess communication skills along with knowledge of agricultural topics and opportunities to network with industry representatives. These fundamental skills in communication and agricultural knowledge were also identified in a study of agricultural communications faculty members' opinions of agricultural communication curriculum needs (Morgan & Rucker, 2013). A national study of employers, faculty, alumni, and students ranked communications skills as the most important soft skill set for college graduates to possess (Crawford, Lang, Fink, Dalton, & Fielitz, 2011). Among the different types of respondents, the most effective learning environments were guided, active learning experiences such as internships, co-curricular activities, and experiential education opportunities (Crawford et al., 2011).

The purpose of this study was to explore students' perceptions of a study away course experience to Washington, D.C. Study away experiences are one of the many types of activities used to engage students in learning beyond the classroom. Exposing students to various cultures, environments, and activities assists in practical application of knowledge in different contexts (Buriak, McNurlen, & Harper, 1996; Phipps, Osborne, Dyer, & Ball, 2008; Townsend & Briers, 1990). The long-term impacts of study away experiences have been shown to improve students' links between personal, physical, and social contexts that assist in the application of prior knowledge to new experiences (Falk & Dierking, 1997). Beard and Wilson (2006) emphasized the importance of placing careful consideration on the experiential activity design and environment in order for the learning to be effective.

The study away course researched in this manuscript was a partnership between two universities designed to help students better understand how policy decisions regarding agricultural issues are made and communicated. Washington, D.C. was selected as the destination because it is home to federal agencies, lobbying firms, and special interest groups that all have significant roles in the development, integration, and distribution of agricultural knowledge that impacts people both nationwide and abroad. This course met one to two times monthly during the spring semester to prepare for the trip on May 26-June 1, 2013. Students were financially responsible for class tuition and certain travel costs; the majority of expenses were supplied through grant funding. The faculty collaborated on developing the same course for both universities with required enrollment in the semester prior to the trip. During the week in Washington, D.C., students visited 12 agricultural organizations – including the House Committee on Agriculture, a lobbying firm, and special interest groups – and took notes in a journal to encourage later reflection. The goal of this trip was to help students better understand how policy decisions are made regarding agricultural issues. Visiting a range of agricultural organizations assisted students in understanding how all these units work together to make major decisions for agriculture. At all points during this trip, the emphasis was on communication efforts and how they were employed to influence, persuade, educate and inform a diverse group of stakeholders. Students also met with university alumni

wherever possible to discuss how they were using their degrees and to gather advice from these former students. Finally, time was allotted during the trip for students to visit national monuments and explore historical sites on their own.

Theoretical Framework

The theoretical framework for this study was Kolb's Theory of Experiential Learning (1984), which is "the process whereby knowledge is created through the transformation of experience" (p.41). Kolb (1984) said knowledge was the result of both grasping and transforming experience. Experiential learning creates concrete experiences for learners to engage, apply, reflect, and experiment with concepts learned (Scales, Roehlkepartain, Neal, Kielsmeier, & Benson, 2006). Kolb's (1984) experiential learning cycle identifies four components: concrete experience, reflective observation, abstract conceptualization, and active experimentation. The concrete experience is described as an experience useful for testing and validating abstract concepts, ideas, and implications for personal application (Arnold, Warner, & Osborne, 2006; Kolb, 1984). The reflective observation component fosters critical thinking and self-directed learning that engages students both mentally and emotionally in the experience (Proudman, 1992; Zilbert & Leske, 1989). Abstract conceptualization forces learners to make generalizations about principles learned and discover new application methods. Active experimentation promotes the transfer of learning to a different context. Students engage in a "trial-and-error" process where the other components of the model are tested (Petkus, 2000). Overall, experiential education can "provide greater depth of information processing, and thus a greater potential impact on learning, than less active methods" (Robinson & Torres, 2007, p. 2).

Purpose & Research Questions

Prior studies have explored how to improve aspects of the agricultural communications curriculum such as developing students' writing identity (Leggette, Jarvis, & Walther, 2015), describing agricultural publication capstone courses (Hall, Rhoades, Agunga, 2009; Rushing, Miller, Edgar, & Cox, 2014), and integrating service learning (Kelemen, Cartmell, & Sitton, 2009). Morgan led several studies to develop agricultural communications curriculum based on feedback from industry (Morgan, 2010), alumni (Morgan, 2012), and faculty (Morgan & Rucker, 2013). Northfell and Edgar (2014) reported on agricultural communications students' perceptions to international experiences, but the current paper is the first to document the impact of a study away experience focused on agricultural communications. The purpose of this study was to explore students' perceptions of a study away course experience to Washington, D.C. The following research questions guided this study:

1. What were students' expectations regarding the study away experience in Washington, D.C.?
2. What were students' reflections upon completion of the study away experience in Washington, D.C.?

Methodology

The population for this study was 22 students enrolled in a required special problems course at each university in Spring 2013. Eleven students attended from each university with a total of six graduate students and 16 undergraduates. Twelve students were pursuing a degree in agricultural education and 10 students were agricultural communications majors. Students were required to complete a pre-trip and post-trip survey to discover any change in values, knowledge, attitudes, and aspirations. Questions were derived from previous literature on out-of-class and experiential learning important for undergraduate education (Anderson & Adams, 1992; Chickering & Gamson, 1987; Johnson, Johnson, & Smith, 1991; Kolb, 1984; Leggette, Black, McKim, &

Lawrence, 2013). Questions on the pre-trip questionnaire assessed students' expectations for the study-away trip, personal and professional goals related to the experience, perceptions of collaborating with another institution, and perceived connections of trip experiences to coursework. The post-trip questionnaire gauged satisfaction with the study away experience, knowledge gained, analysis of most valuable visits, opinions of collaboration with other university students, and the link of experiences to coursework and goals. Students were also asked to summarize what they learned at each agency; however, those findings are not reported here. The majority of survey questions were open-ended to allow student reflection before and after the experience.

The pre-and post-trip questionnaires were designed in SurveyMonkey. The pre-trip questionnaire was open for one month at the beginning of the spring course and the post-trip questionnaire was open for 10 days immediately following the study trip. Data collection procedures outlined by Dillman, Smyth, and Christian (2009) were followed for web survey implementation. The pre-trip survey consisted of 13 questions; the post-trip survey had 27 questions. Only questions that directly related to this manuscript's research questions were used in data analysis. One student did not complete the post-trip survey, so the final response rate was 95%.

To analyze open-ended responses, all data were entered into NVivo 8.0 qualitative software for content analysis. "Content analysis is a technique that enables researchers to study human behavior in an indirect way through an analysis of their communications" (Fraenkel & Wallen, 2009, p. 472). Content analysis is useful to identify, organize, code, and label themes found within the data (Patton, 2002). In NVivo, each student's pre- and post-trip questionnaire responses were entered as individual sources. Pseudonyms were assigned prior to coding to ensure confidentiality. For the coding process, the data were first categorized by topic and labeled with a descriptive term (Creswell, 2013). These codes were then organized into themes, which are "broad units of information that consist of several codes aggregated to form a common idea" (Creswell, 2013, p. 186). Data analysis debriefing sessions were conducted between the researchers to reduce bias (Guba, 1981). Credibility was established through peer examination of the data and use of direct participant quotes; trustworthiness measures included inter-rater comparisons and audit trails; transferability was accomplished through rich details of the context and situation; and confirmability was achieved with peer review and use of NVivo to analyze data (Ary et al., 2006; Guba, 1981). These evaluation criteria were implemented and applied to produce a reliable and valid qualitative research study.

Findings

Of the students who participated in the study away experience, 10 had never been to Washington, D.C. while the other 12 had been for class trips, work, vacation, or conferences.

Research Question 1: What were students' expectations regarding the study away experience in Washington, D.C.?

The analysis of students' open-ended responses on the pre-questionnaire indicated three major themes for their expectations of the study away experience: 1) Gain a new perspective on agriculture, 2) Expand personal and professional networks, and 3) Have an enjoyable experience.

Gain a new perspective on agriculture.

Students said they anticipated this trip would broaden their understanding of a variety of agricultural issues, policies, and organizations. Hillary said, "I think this trip will help to give the full spectrum of the industry and how it is affecting us at the grass-roots level." Students commented that they expected the study away experience would give them exposure to the specifics of agricultural policy and how those policies impact agriculture nationally. Jane said: "I want to

reach my goal of having ag policy literacy. Government and policy has [sic] always bored me, but it is so vital for every aspect of my life." Richard said he hoped the trip would help him "broaden my perspective of agricultural policy and gain a better sense of my academic future." Grace said one of her goals is "to become a more active proponent of the industry. I believe that seeing agricultural politics first-hand will help me attain this by broadening my understanding of agriculture's stance in government and strengthening my personal ties."

Students were reported being excited to visit the headquarters of many agricultural organizations to gain first-hand insight in how they operate. Laurie said the course would allow her to "gain more experience within the agriculture industry on how decisions are made and become more familiar with the agriculture organizations." Robin also said she was eager to visit the agricultural organizations and how that experience could influence her future: "When on the trip, I hope to see that the officials within the organizations are sincere and truly care about the future of agriculture. I hope this experience will open my eyes to a mostly unfamiliar aspect of agriculture."

To gain this new perspective on agriculture, students recognized that being in D.C. and visiting with agricultural organization representatives would provide them with opportunities for experiential learning. Sophia said: "Thus far, the extent of my dealings with agriculture practices/laws/and standards have been from the perspective of what is already in place. This will allow a better understanding of the background for why laws/standards are the way they are." Students commented that they expected to see the topics they learn about in their collegiate classes actually in action while on this study away experience. Cara said, "I will finally be able to see the things I am taught being used in real life situations." Patricia further emphasized this:

> This experience will allow me to actually see for myself the concepts that I have been taught in my coursework. I am a visual learner, so I believe this trip will help me have a deeper understanding of what I have been lectured over in class. I also believe that talking to the ag businesses, lobbyists, etc. will help me gain understanding based on the face-to-face conversation I will be able to have.

Emma commented, "I believe a great deal of concepts that are taught in my coursework have been about promoting agriculture and this is a perfect way to learn about it and have a better understanding of it." Kelly said: "We are taught a lot about the importance of communication in agriculture. I am hoping by meeting with the different organizations, we will be able to see hands on how the things we are taught come into play." Robin also said she wanted to see how communication efforts are used in the organizations: "I believe this experience will take concepts I have been taught in ag comm courses and apply them to careers. I will be able to see the importance of the communications position within an organization rather than just being told."

Expand personal and professional network.

Another emergent theme regarding students' expectations was the desire to expand their personal and professional networks. Students said they anticipated learning from the students who attended from the partnering university. Kayla said she wanted to "come home with closer friends who I can connect with throughout my career as well as have a wider view of American agriculture." Emma said she was looking forward to "connecting with other agriculturalists and finding out what the other side of agriculture is."

Students also expected to network with professionals at the organizations they would visit. Hillary said she wanted "to network and talk with others about the direction the industry is going." Jacob echoed this sentiment: "I hope to gain network contacts within my current organizations on a national level." Katie said the study away experience sounded "like a good opportunity to meet some important people." Several students mentioned that they expected the study away experience

would provide them with more insight for potential careers. Robin said, "I also hope for clarity within my future career choice," and Patricia remarked, "I also hope to understand how I as a future communicator for the agricultural industry can make an impact and help make the best decisions for the future of the industry."

Have an enjoyable experience.

The final emergent theme for students' expectations was a general sense that the study away experience would be enjoyable. Many students were eager to visit D.C. for the first time or to go back now that they were older. Patricia said, "I wanted to be part of this experience because I have never been to Washington DC [sic] and this may be the only chance I ever have to go." Grace commented she thought going to D.C. "would be fun, of course, but also that it would be very beneficial to travel with a class." Several students mentioned that this may be their only opportunity to visit these agricultural organizations. Claire said, "I feel like it is going to be a laid back educational experience that won't come around again for myself." Sylvia noted the unique nature of the trip: "The opportunity was too good to pass up! The activities we have planned are once in a lifetime experiences, and I just couldn't miss out."

Research Question 2: What were students' reflections upon completion of the study away experience in Washington, D.C.?

Coding of the post-trip open-ended questions revealed six emergent themes: 1) Appreciated gaining behind-the-scenes view of agricultural organizations, 2) Provided more insight into future career options, 3) Study away experience extends the classroom, 4) Study away was an "eye-opening" experience, 5) Advocating for agriculture is a shared national effort, and 6) Enjoyed being in D.C.

Appreciated gaining behind-the-scenes view of agricultural organizations.

The primary purpose of this study away experience was to meet with representatives of a variety of agricultural organizations. Students commented that these visits were some of the most interesting aspects of their time in D.C. Students recognized that they were able to gain a better understanding of how these organizations work and the first-hand exposure clarified what the organizations do. Grace said, "It was incredible to be able to visit organizations and learn what they each do. Most of us have heard the names, and we know that they are supporters of agriculture, but they seem so far removed." Emily said she enjoyed "being able to gain a deeper understanding of the organizations involved in agriculture and how they operate at a national and even international level." Timothy said: "I must say that the most interesting aspect of the experience was our visits with the commodity groups. I found their jobs interesting, especially our visit with US Wheat since they were in crisis mode." Robin shared:

> I enjoyed seeing the behind the scenes people. I followed a lot of the organizations we met with on twitter [sic] and see all of the blogs and messages they post. On this trip I was able to see who they were and that they really care about agriculture and getting the facts to the people. I also enjoyed meeting with the organizations that you see often but really never know what they do.

Many students said they did not realize how much the organizations really do. John said, "I enjoyed meeting the people behind the organizations that I hear about on the news, and learning about the organizations I didn't know about, and all they do for the agricultural industry." Students said getting to listen to several organizations discuss agricultural issues gave them a broader understanding of the topic. Hillary said, "I think it was most interesting to have the opportunity to

hear several industry perspectives on the same topic (i.e. AFBF, US Grains Council and NCBA's view of the Farm Bill)." Kelly shared a similar comment, "I am satisfied with what I learned because I felt that we got an in depth knowledge of government within agriculture, but from several different views…we truly got an idea of how things go from beginning to end."

Students also said they gained a different perspective of what lobbying meant and its significant role in agricultural policy. Laurie said, "I didn't know so many organizations were based in Washington, D.C. or had a presence there, where lobbying is a big part of business operation." John said: "I understand better what these organizations do, more than just the big bad term 'lobbying'. I understood that lobbying was a good thing, but the national level was a little different story and how they operate."

Provided more insight into future career options.

After visiting with organization representatives, several students said they now had a better idea of what they might want to do in a future career. Cara said, "I wasn't completely sure what I wanted to do with my life before this trip, but now I know I want to work for farmer co-operatives. I am certain that I don't want to be in lobbying." The study away experience reaffirmed many students' goals for the future. Timothy commented: "I think the overall experience solidified my desire to be in the agricultural industry. Before going my career plans were pretty open, but now I feel more certain about my decision to enter agriculture." Kayla said, "This further drove my current goal of wanting to go to law school." Patricia said she had considered applying for an internship in D.C. but wasn't sure if she should before attending the study away experience. She said, "After actually being in D.C. and seeing how many students go on to work full time after their internships, I realized that I must not miss out on the opportunity to intern there." Grace said:

> This has strengthened my want to be an advocate for the agriculture industry, but it has also given me the idea that I truly think I would prefer to implement agricultural relations on a more localized level. I appreciate and respect all the work that these organizations do, and I could see myself working for one of them one day, but hopefully in a more rural area where I can bring new communications strategies to audiences that are less familiar with them.

Several students were already involved with the organizations they visited during the study away at a local or state level. Getting to go to the national headquarters seemed to further strengthen their desire to remain involved. Jacob said, "I want to become more active with advocacy and become even more involved in the organizations which I am a member of such as Farm Bureau, NCBA and CHS." John commented:

> I am a member of Farm Bureau and will always be, but this trip has made me think of how I want to be involved within organizations like Farm Bureau. Be on a local coop board, state committee on something, be a producer that goes testifies on bills when I need to. And also knowing that its people like me and my fellow classmates that are doing these jobs with everyone we met with in DC, that's us in 2-5 years.

Students also said being in D.C. made them realize they might want to work there. Kayla said, "I decided that if the opportunity arises, I would move to DC and work on Capitol Hill, or as a lobbyist." Timothy shared, "The idea of working in DC has always been floating around in my mind, now I really want to pursue this." Hillary said:

> This experience will impact me in the future because I have gained a lot of information about the orgs I could potentially work for. From a social and professional perspective, I think it helped me to network. I got a business card from every organization, I have connected with these people on Linkedin, and I plan to further my professional network with these contacts. I set a goal to apply for positions in D.C.

Study away experience extends the classroom.

Overall, students recognized that the study away experience was a unique learning opportunity. For example, Hillary said, "I think the education we got in D.C. was one that we could not have gotten in a classroom." Michelle said the experience showed her "that beyond the classroom the skills that we learn are relevant and useful for potential job opportunities." Timothy commented, "The experience certainly illuminated the real world applications of the numerous topics which were presented in my undergraduate and graduate experiences." Kelly said: "We are always taught that what we learn in the classroom can be real life. I learned that most of what I learn can really help me in a career."

Other students mentioned specific classes that were beneficial to what they heard in D.C. Linda said, "I could see lots of things from my leadership courses tying in and being very important in advancement in the workplace." Tracy commented: "I realized just how important my economics classes were. I wish I could understand econ better than I do because it is a huge, huge, huge part of our government." Kayla said, "I found it beneficial when the organizations would discuss the recession or the Dodd-Frank act because I have done so much work with those topics in econ classes. It was interesting to see how the recession affected these organizations first hand." Richard noted that being able to visit with lobbyists and policy makers gave him a better sense of agricultural policy. He said: "This trip transformed agricultural policy from something that seemed complicated and unapproachable to a process that I could participate in the future. I have a completely new perspective on politics after my experience in DC."

Many of the students were majoring in agricultural communications and were able to make connections of what they heard during the organization visits to their coursework. Robin said she "was amazed by the importance of the knowledge of news writing and blog writing and social media. I now see all of the possibilities within my major and what I am learning." Cara said she appreciated being "able to see communications efforts in real life rather than just hearing about them in the classroom." Claire said, "Targeting your audience is something that every single organization has to do on a daily basis and we thoroughly learn about audience segmentation." Grace said:

> While we have discussed, studied, investigated, and analyzed the communications practices of many agricultural organizations in so many of my classes, visiting these organizations and speaking with the people heading up these practices was such an insightful experience. They were able to explain why they use the methods they use, and the mission behind their communications practices.

Sylvia also made connections to her coursework, "At the U.S. Wheat Associates, I very much enjoyed learning about their crisis communication plans, and their monitoring techniques of social media…it was exciting to see that the concepts we discussed in class being applied."

Study away was an "eye-opening" experience.

For many students, getting to travel to D.C. and visit with many organizations was an experience that gave them a broader perspective on agriculture. Grace said: "I believe this experience has opened my eyes to the level of agriculture in the federal government. It is not the

'small town' industry that it so often appears to be – it impacts everyone, and legislators know that." Laurie commented: "I did not know there were so many organizations against animal agriculture and that people were not satisfied in hearing that agriculture provides them with food for life. They want more, they want a story to go with it."

Several students commented that this experience gave them exposure to a different aspect of agriculture. Kayla said: "I loved seeing the political side of Ag. That's something we don't see much of in [state] so it was great to see something different." Emma said she enjoyed "meeting the 'other side' of agriculture and putting faces with that other side. This experience allowed myself and others to see something that was completely different from [state] Agriculture."

For some students, leaving their comfort zone pushed their own perceptions of what they knew. Hillary said: "I think the trip made me more open-minded. I was not sure about re-visiting D.C. However, now I would consider working there, if given the opportunity." Kayla said, "In [state] we are very sheltered and conservative. I think it was good for us to get out and experience something different. It was a huge culture shock for many but I think it's a shock everyone needs to experience.

Advocating for agriculture is a shared national effort.

After visiting with the organizations, students said they realized advocating for agriculture is happening on an individual and organization level. Students said they appreciated knowing that the agricultural industry has support at the national level. Jacob said, "It was great to see some large Ag Advocacy groups out there petitioning and defending the nation's most important industry." Emily commented she "gained an overall deeper understanding of how agriculture is supported at a national level." Sylvia said, "The most interesting aspect of the trip for me was learning more about 'ag'vocacy at a level where actions and decisions directly influence the lives of our nation's agriculturalists." John said, "I have more faith in the people working for the agriculture industry in DC, I understand it's a tough battle, but meeting them made me have a better belief in the future of ag." Robin commented:

> The experience changed my beliefs in the sense that though these men and women in DC didn't grow up on a farm or directly in agriculture, they still fight for the small town farmers and ranchers. I saw the passion for agriculture within them, and know that though they may have never worked in the dirt, they want to see agriculture thrive just as I do.

Many of the students commented that this experience made them proud to be in the agricultural industry. Emma said, "It strengthened my beliefs and values in American agriculture and the American way of life." This experience made several say they are more passionate about representing the agricultural industry. Grace said, "I also feel I have been strengthened as an agriculturalist. I left these organizations feeling a sense of pride in the field I have chosen, and a want to promote the positive word of agriculture." Sylvia specifically mentioned how significant this experience was for her:

> The experience re-energized my passion for agriculture. School is difficult and it is easy to lose sight of what drives your decisions as a student. Recently, I found myself not really enjoying anything I am involved with anymore, but found after this trip I am refocused on what my love and passion is, which is agriculture. Through this experience, my voice and point of view as an agricultural communicator is forever changed for the better.

Michelle said what she learned during the experience influenced her goals "to be willing to learn all I need to, to be well equipped as an advocate of agriculture and communicate it properly." On the other hand, Kelly said, "I learned I do not have enough passion for any specific aspect of agriculture to be a lobbyist for their organization. You could tell that each one of the individuals really had a passion for what they were working for."

Enjoyed being in D.C.

Although students said they learned a great deal from visiting with agricultural organization representatives, they also commented on how much they enjoyed being in Washington, D.C. Overall, students enjoyed the variety of activities and attractions in D.C. Michelle said, "This was my first time to Washington D.C. so I liked seeing the whole city and everything it had to offer." For many, getting to visit the nation's capital helped them gain a stronger sense of patriotism. Emily said, "This experience greatly influenced my values and beliefs. I now have a much greater appreciation and understanding of the depth of those who have fought for our country…gave me more drive to get my equine therapy program running for veterans." Grace said:

> I feel I have been strengthened as a patriot. It may sound a little cheesy, but since I have returned from the trip, I have told everyone I know to make every effort to visit Washington, D.C. Every U.S. citizen should have the opportunity to see where our nation as we know it really began. To read about it and see pictures and postcards is one thing, but to see and experience the city in-person is truly incredible.

Several students specifically mentioned the significance of visiting historical sites. Richard said, "Getting to see national landmarks and museums added historical depth to the experience." Linda said "getting to see the history first hand" was something she enjoyed. Tracy said, "I really liked that we were in DC on Memorial Day. Being in Arlington on that day was really awesome." Patricia said, "For me, the most interesting aspect of the trip was being in Arlington National Cemetery on Memorial Day. It was an amazing experience."

Conclusions, Implications, and Recommendations

As NASULGC (2000) pointed out, higher education needs to prepare students who can think critically about economic, political, and societal factors that will influence future actions. Study abroad can provide these opportunities (Bobbitt & Akers, 2012), but not all college students will be able to participate in these experiences. In these cases, domestic study away experiences can still provide students with opportunities to broaden their understanding and perception of the world (Sobania & Braskcamp, 2009). For those college students who cannot study abroad due to financial or time limitations, visiting Washington, D.C. provides an experiential opportunity to learn more about our nation's capital and how many decisions that impact agriculture nationally and internationally are made. This study attempted to assess the experiential learning opportunity of a study away course to Washington, D.C.

An analysis of the students' pre-trip expectations for the study away experience revealed three major themes: To gain a new perspective on agriculture, expand personal and professional networks, and have an enjoyable experience. Students stated they expected to learn more about the agricultural organizations they would visit and the issues those organizations address. They also said they looked forward to meeting students from the partnering university and representatives from the organizations. Finally, they were excited to visit Washington, D.C. for either the first time or again in a different context.

A comparison of students' expectations before the trip and their reflections after demonstrated they gained more from the experience than anticipated. The reflections provided rich details and thorough explanations of what they learned during the study away experience. Analysis of their reflections revealed six emergent themes: Appreciated gaining behind-the-scenes view of agricultural organizations; Provided more insight into future career options; Study away experience extends the classroom; Study away was an "eye-opening" experience; Advocating for agriculture is a shared national effort; and Enjoyed being in D.C. These themes are similar to what other researchers have identified as benefits of out-of-class learning experience – critical thinking, leadership skills, and personal development (Kuh, 1995; Seidman & Brown, 2006; Terenzini et al., 1996). Students valued the opportunity to have first-hand exposure to organizations and discuss current agricultural issues. This allowed them to think more critically about agricultural topics from a variety of perspectives, which is an important skill for them to possess (Morgan, 2013; Sprecker & Rudd, 1997). By hearing differing organizational approaches to an issue, students were able to see and interact with agricultural problems in a realistic setting, thereby increasing their ability to analyze decision making processes.

Bobbitt and Akers (2012) found that study abroad programs helped agricultural science and natural resource students broaden their academic experience. Within agricultural communications, Northfell and Edgar (2014) reported that international programs provide students with unique opportunities to learn communication skills in real-world settings. These benefits of study abroad experiences can also be achieved in well-designed domestic study away opportunities. Students in the current study were able to connect concepts from prior courses to what they learned during the study away experience. The concrete experience of meeting with organization representatives clarified the lessons and allowed for personal application (Kolb, 1984). Zilbert and Leske (1989) said the reflective observation component of Kolb's model allows students to critically examine a concrete experience. Students demonstrated through the post-trip responses to open-ended questions that they thought critically about what they learned at each organization visit. During the abstract conceptualization stage (Kolb, 1984), students were able to make generalizations based on what they learned during the experience. Students commented that the visits helped them realize what they were learning in college could be applied in a future career. Many even said the study away experience helped them narrow in on what it is they want to do.

Visiting D.C. helped to build students' self-confidence and their world view related to living in a large city with diverse and varying viewpoints. Sobania and Braskamp (2009) stated that domestic experiences can provide students opportunities to "open their minds, hearts, and behaviors to difference" (p. 24). Several commented on how the experience exposed them to broader and different perspectives of agriculture, specifically on the political, business, and activist sides. Students realized that advocating for agriculture is a national initiative practiced by all to defend "the nation's most important industry" and lobbying influences decisions that are made.

Just being able to visit the many historical attractions in Washington, D.C. was impactful. Students reflected on the stronger sense of patriotism gained by being in the nation's capital. The majority felt they gained a greater appreciation and understanding of the history of our country during the experience. All agreed that the added value of collaboration between two universities enhanced the experience. Overall, the students were satisfied with the collaborative study away experience and its educational benefits. They recognized the experience was a unique learning opportunity and made many real-world applications to what they learned in the traditional classroom.

While study away experiences are not a new concept (Kuh, 1993, 1995, 1996; Leggette et al., 2013; Sobania & Braskamp, 2009), this study demonstrates that faculty members can provide valuable active learning opportunities for students in a domestic setting. Several recommendations can be offered for educators to consider when planning these educational experiences. The students'

feedback provides valuable insight that can guide decisions when planning, organizing, and implementing study away experiences. To make the experience enjoyable, educators should strive to create a balance of social and educational activities. Students desired opportunities to broaden their overall understanding of agricultural issues, policies, organizations, and careers; therefore, a variety of experiences should be incorporated to increase exposure to governmental, public, and private institutions from both sides of agriculture. Organizational representatives must be strategically selected and prepared to offer advice and lead discussion on topics that connect with students' academic interests. In order for experiential learning to be meaningful, a daily reflection period should be built into the schedule to allow time for mental and emotional engagement in the recent experience (Kolb, 1984; Proudman, 1992). Reflective journaling can encourage students to make generalizations about the learning that can then be transferred and applied to their own lives (Petkus, 2000).

Additional research could be conducted with these students to determine how they were able to actively experiment with what they learned to transfer and apply the concepts to new situations (Kolb, 1984). Future research should also analyze students' perceptions of each agency visited and develop a quantitative instrument to measure change in knowledge, attitudes, and perceptions.

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Research

Teaching Convergence in 21st Century Undergraduate Agricultural Communication: A Pilot Study of Backpack Multimedia Kits in a Blended, Project-Based Learning Course

Jamie Loizzo, Abigail Borron, Amanda Gee and Peggy A. Ertmer

Abstract

Twenty-first century agricultural communication students are expected to have an increasingly diverse set of skills when they graduate. Expertise is expected in: writing, editing, design, marketing, media relations, event planning, interpersonal communication, digital development, e-publications, online video, mobile applications, podcasting, and social media. This expansion of needed skills is due in no small part to the proliferation of communication channels and convergence of media platforms today. In order to continue preparing students for professions in agricultural communication, it is imperative that the curricula reflect current industry needs and available technology. In this article, one approach for expanding curricula to incorporate these newer technologies by implementing backpack multimedia journalism kits for science communication is discussed. The kits were developed to address these criteria: 1) students needed opportunities to gain a variety of broad technological skills, 2) the technology had to be mobile and cost effective, and 3) the technology needed to be able to produce a variety of content across a variety of platforms. The mobile multimedia kits included iPad-minis and video accessories. Through an agricultural communication blended-learning, project-based undergraduate course, the authors tested the effectiveness of the kits, as well as researched students' perceptions and experiences with the course design and mobile communication technologies. The results of the study showed students valued the selected technology and gained targeted video production skills. Although students' liked the course design, they experienced challenges with course requirements, time management, and using the technological audio recording components.

Key Words

Agriculture Communication, Backpack Journalism, Convergence, iPad, Multimedia, Project Based Learning, Undergraduate

Literature Review

Picture this: A well-known agriculture company has posted a position for a 'Communications Specialist.' The job description is posted online and circulated to agricultural communication undergraduate programs across the country. The position is described as following:

> The Communications Specialist should be a motivated individual with a passion for agriculture and should work well alone or in teams. The job duties include writing, public speaking, media relations, crisis communication, branding and marketing, event planning, web design, video production, e-publication development and design, as well

as producing podcasts and maintaining messaging efforts through social media channels. The Communications Specialist should have background knowledge of agriculture science concepts and current issues facing the industry nationally and internationally. A bachelor's of science in agricultural communication is required, along with examples of the candidate's writing and multimedia work.

While the presented description is hypothetical, it is rooted in what is becoming the reality of a 21st century agricultural communication career. In the education literature, 21st century skills are defined as the competencies students need in order to be successful in a fast-paced, technologically rich, global society (Tucker, 2012). The Partnership for 21st Century Learning (2015) outlined the 'Four C's' of 'Learning and Innovation Skills' to include: (1) critical thinking, (2) communication, (3) collaboration, and (4) creativity. These competencies relate to the context of our growing global society, technology, and connectivity. While discussions of 21st century skills are often focused on PK-12 education, the framework can also be applied in undergraduate education programs, including agricultural communication. Within the discipline, it is important to determine and identify proficiencies agricultural communication students need to master on their paths to becoming agricultural communication professionals in what is often called 'The Information Age' (Castells, 2010). Thanks to the Internet and emerging mobile multimedia technologies, communication today is fast paced, in real time, and at consumers' fingertips.

Specifically in the communication literature, Morgan (2010) recommended that curricula be updated every two to five years to stay relevant and that, in order to adequately prepare students for the workforce, communication programs need to incorporate convergence as it relates to specialized knowledge areas and media platforms (Lowrey, Daniels, & Becker, 2005) Taking an instructional design (ID) approach to developing an agricultural communication curriculum, the first step is to complete a needs assessment (Molenda, 2013). This comprises asking questions such as: What do the various agricultural communication stakeholders believe to be the core competencies of the discipline and profession? What should be included in a curriculum to foster the development of 21st century agricultural communication skills? Required competencies can be identified by examining current job descriptions and internships, as well as considering the positions of various stakeholders such as the agriculture industry, academic leaders, and students. From these viewpoints, relevant 21st century agricultural communication skills can be identified.

To assist in compiling needs assessment data, recent studies can be drawn upon that have examined industry, faculty, and student perceptions of agricultural communication curricula and skills needed in today's profession. In a Delphi study of industry participants (n = 37), Morgan (2013) reported that within the 'Core Area of Communication' 91.7% agreed with the statement that agricultural communicators should be able to "effectively communicate verbally" and 87.5% agreed agricultural communicators should understand "the media mix and how to use them [media] effectively and efficiently" (p. 23). In an additional Delphi study of academic stakeholders, faculty (n = 19) from 14 different universities agreed professional skills such as writing, speaking, and critical thinking are foundational competencies for agricultural communication students to master. Faculty also acknowledged the growing need for technology-based skills such as those involved in podcasting, web design, and video production (84.4%) (Morgan & Rucker, 2013, p. 56).

On the student side, Watson and Robertson (2011) surveyed agricultural communications freshmen at Oklahoma State University, Texas Tech University, and Texas A&M University (n = 100) and found half of them "expected to take an equal amount of agricultural and communication

courses" and 70.6% "expected to learn a broad set of communication skills such as public relations, writing, and web design." Students also "expected to enroll in a least one communications-based writing course" (94%) and "to complete at least one agricultural communications internship" (92.6%) (p. 10-11).

As indicated in the outlined studies, it appears many of the traditional and foundational agricultural communication competencies, expectations, and professional skills remain the same: writing, editing, public speaking, design, marketing, media relations, event planning, interpersonal communication, and ethics. Concurrently, references to skills tied to 21st century competencies are becoming more frequent in the literature and professional job descriptions. Agricultural communicators are expected to have experience with: digital development, web design, e-publications, virtual events, online video, mobile applications, podcasting, and social media (Boers, Ercan, Rinsdorf, & Vaagan 2012; Tucker, 2014). Many of these 21st century, digitally-focused professional skills have emerged, at least in part, from the convergence of communication technologies, media platforms, professional communication roles, and audience information consumption (Kolodzy, Grant, DeMars, & Wilkinson, 2014).

Convergence of Technologies, Roles, and Information Consumption

Media convergence is often described as "technical convergence of print media to electronic media and telecommunications" (Gundelsweiler & Filk, 2012, p. 47). Convergence is predominantly discussed as the result of print, television, and radio media platforms coming together online (Boers, Ercan, Rinsdorf, & Vaagan, 2012). Newspapers, magazines, television news, and radio are increasingly developing content not only for their originally intended platforms, but also for websites, YouTube, blogs, and social media sites. Boers et al. (2012) advise media producers to "consider the multi-channel perspective from the beginning" (p. 54). In agricultural communication, this is also relevant as agricultural audiences are receiving and interacting with messages through a variety of communication platforms.

The 2013 'State of Journalism' report by the Poynter Institute for Media Studies provided insight into educators' and practicing journalists' (n = 1,800) views on whether or not journalism education programs are "keeping up with industry changes." The report noted that 39% of educators and 48% of newsroom leaders responded, "the academy is not keeping up with changes in the field" (Poynter, 2013, p. 2). Sarachan (2011) pointed out a need for communication programs to consider a "convergence curriculum" to prepare budding communicators for journalism and public relations jobs that require the use of mobile and interactive technologies for message delivery. Sarachan surveyed communication departments (n = 110) across the country and found that programs were either currently or planning to teach a variety of convergence courses with titles such as "Beginning Web Design," "Digital Storytelling for Convergent Journalism," and "Communications in the Virtual World" (p. 165). The research also showed that communication educators (68%) were teaching courses based on communication theory with practical digital convergence skills being integrated.

Another way communication practices are converging is within professional roles. For instance, going back to the hypothetical 'Communications Specialist' position described at the beginning, it is apparent that one person is expected to carry out the responsibilities of public relations, marketing, photographer, designer, programmer, and journalist. Therefore, these once-segmented jobs and duties are converging into a small number of professional communication positions within agricultural companies, media, government agencies, and non-profits.

Consider the following current examples of the convergence of technology platforms and professional skills in an agricultural communications context:

- Beck's Hybrids 'Why I Farm' marketing and sales campaign (http://www.whyifarm.com). Communication specialists developed websites, blogs, photos, videos, and social media sites. Journalism, public relations, and technical skills were involved in the development of this campaign. Required skills included interviewing, writing, and developing features about farmers' personal stories.
- Monsanto's 'America's Farmers' campaign (http://www.americasfarmers.com). This effort also required the communications specialists to employ a combination of communication and technology skills across a variety of platforms.
- Harvest Public Media (http://www.harvestpublicmedia.org). This site comprises a collaboration of National Public Radio (NPR) stations and reporters covering agricultural news. In addition to delivering the stories via radio airwaves, online photos, videos, and social media were used.
- National Geographic. Traditionally, National Geographic was a print publication only, but it now presents cross-platform content. Their recent focus on 'The Future of Food: How to Feed Our Growing Planet' (http://food.nationalgeographic.com) included hard copy magazine editions, as well as a website with interactive content, such as articles, videos, and social media posts.

These examples provide concrete evidence of how agricultural communication skills and careers are evolving in the 21st century. From the outlined examples and with an eye toward developing future agricultural communicators, the following questions are posed: What technology best enables the development of 21st century skills among undergraduate agricultural communication majors? What technology is the most cost effective? How can agricultural communication programs get the most out of the purchased technology across classes, internships, study abroad experiences, and college and extension programs?

The authors' response to these questions has been to develop, implement, and research the use of multimedia 'backpack journalism' kits intended for developing Internet-based communication projects via mobile technologies. In the following section, backpack journalism technology and the authors' approach to assembling mobile, multimedia agricultural communication kits are discussed.

Mobile Agricultural Communication

As noted earlier, current and future agricultural communicators need not only to write, but also to develop digital storytelling proficiencies, using photo slide shows, YouTube videos, websites, podcasts, and social media messages. In order to achieve these multi-platform communication goals, mobile technologies are becoming more crucial for both writing and capturing sound and images, as well as producing content and posting it to the web. A review of the literature regarding digital journalism trends showed that news media, public relations and communications companies, and the public have quickly adapted to using mobile devices, such as smartphones and tablets, for producing and distributing content on the Web (Westlund, 2013). Given this, there is no longer a need to carry large, bulky equipment into the field to take photos and record audio and video. Mobile technologies can now produce content at a high enough quality that is sufficient for online viewing.

It is important for agricultural communication educators to notice this trend toward mobile content production and design and to implement courses preparing students for mobile communication. Keeping this in mind, a plan was developed to implement and research the use of "multimedia kits for science communication," otherwise known as backpack journalism kits, in the agricultural communication undergraduate program at a large Midwestern university.

Backpack multimedia communication refers, specifically, to mobile technology carried in a light, portable bag for in-the-field recording, writing, and web content production. As the authors considered which technologies to purchase, these criteria were kept in mind: 1) students needed opportunities to gain a variety of broad technological skills, 2) the technology had to be mobile and cost effective, and 3) the technology needed to be able to produce a variety of content for the web across a variety of contexts. After considering these criteria, the cost of purchasing and implementing effective mobile multimedia kits was investigated.

Research Questions

There is a need for agricultural communication programs to update their curricula to incorporate mobile technologies and innovative teaching designs, in order to prepare undergraduates for 21st century careers. This study represents a first step toward integrating and researching iPad multimedia science communication kits in an agricultural communication undergraduate program. More specifically, we implemented a blended project-based learning (PjBL) design, with mobile communication kits, in an agricultural communication course. There were multiple research questions focused on the design of the multimedia course, as well as the implementation and use of the mobile technology for science communication. The research questions were:

1. What are students' perspectives of the blended, PjBL format?
2. What are students' perceptions of learning about agricultural science concepts through the process of developing an online video?
3. How do students describe their experiences using iPad-minis for video production?

The following section describes the research context and data collection methods.

Methods

Technology Selection and Implementation

We reviewed digital video camera and audio gear options, but decided against investing in a specific camera with limited functionality. Instead, we ultimately arrived at implementing iPad-minis, with video accessories, for agricultural communication. With the addition of a bluetooth keyboard, mobile case, wireless microphone, mini-top light, lenses, and applications, such as Filmic Pro and iMovie, the iPad-mini operates as a tablet for writing, video production, photography, and uploading content to the Internet. Through various grant funding, we purchased ten multimedia kits. Each kit cost approximately $1,400 and included: Logitech Bluetooth keyboard, iOgrapher (http://www.iographer.com/) iPad-mini case, Polaroid lenses, Sennheiser shotgun microphone, Sony Bluetooth wireless microphone, audio mic cable for iPad, Manfrotto LED light-mini, and Ravelli lightweight aluminum tripod. Figures 1 and 2 show the multimedia technology selected for the backpack kits.

Figure 1. An agricultural communication undergraduate student uses an iPad-mini and video accessories to record a video interview.

Figure 2. An agricultural communication undergraduate student uses an iPad-mini and video accessories to record footage of veterinary scientists conducting a horse respiratory test.

We believed the iPad-minis, coupled with the video gear, had the potential to serve a variety of communication purposes from writing and multimedia content creation to online and social media connectivity.

Research Context

We developed, facilitated, and piloted a course during the spring semesters of 2013 and 2014, titled "Multimedia in Agricultural Communication" based on a blended, PjBL design. In the first iteration of the course, students produced videos for an Extension small farms team using traditional video cameras and edited their footage in a cloud-based online program called WeVideo (Loizzo & Lillard, 2015). Based on the first pilot of the course, and the need to integrate mobile efficiency, we quickly realized the need to implement the multimedia backpack kits for the 2014 iteration.

The blended learning instructional design approach for the 2014 course was similar to what is popularly called the "flipped classroom" model (Kim, Kim, Khera & Getman, 2014). That is, our course met face-to-face once a week for hands-on work such as learning how to use the multimedia technology and editing final project videos, while the course instruction, readings, and discussion were conducted online via a learning management system (LMS). The majority of students' time was spent online and in the field developing the final projects.

PjBL involves complex projects "based on challenging questions or problems that involve students in design, problem-solving, decision making, or investigative activities" (Thomas, 2000, p. 1). According to the Buck Institute for Education (2015) the PjBL course design involves the following: 1) in-depth inquiry, 2) a driving question, 3) a focus on what students need to know, 4) student voice and choice, 5) revising and reflection, and 6) a public viewing of the final project. Table 1 demonstrates how the multimedia agricultural communication course addressed the key components of the PjBL framework:

Table 1

Project-based Learning Design of "Multimedia in Agricultural Communication" Course

PjBL Framework	Agricultural Communication Multimedia Course
In-depth inquiry	Agricultural science topic Mobile device usage Video production
Driving question	How can we, as multimedia communicators, use mobile technologies to develop science communication videos for our college's Office of Agricultural Research?
Need to know	Digital storytelling Interview technique Video treatment Video terms Video shooting and editing Video parameters: 1 scientist, 1 grad student, visual topic
Student voice and choice	Select and research topic Class time usage Discussions
Revision and reflection	Journals Peer Review
Public audience	Senior Associate Dean Scientists Instructors Peers Online viewers

Students in the 2014 course were required to develop a video project featuring an agricultural science topic of their choice for the Research Programs Office of the College of Agriculture and for the college's YouTube channel. The students not only had to learn how to use the multimedia kits, but also the basics of digital storytelling and mobile technology, as well as research their video topic. Table 2 highlights the learning objectives and formative and summative evaluation plans for the course.

Table 2

Learning Objectives, Formative Assessment, and Summative Assessment Design for "Multimedia in Agricultural Communication" Course.

Objective	Formative Assessment	Summative Assessment
1) Describe and apply digital storytelling and interviewing techniques	Topical and target audience analysis Video planning document and timeline Online discussions and reflective journals	End of semester presentation to the College of Agriculture
2) Develop a video outline and script	Video planning document and timeline	Final assignment feedback and grade by instructor
3) Conduct an on-camera interview	Interview question development Shoot on-camera interviews Shoot footage to be used with interviews	Final video project Peer review Instructor review Final presentation
4) Edit and upload an online video	Reflective journals Peer-review of one another's 'rough cut' videos based on same rubric instructor used for final grading Search Engine Optimization blog	Final video project Rubric for assessment Instructor review and final grade Presentation to the College of Agriculture
5) Develop a social media plan to share the final project	Social media communication plan assignment Online class discussion Reflective journals	Instructor feedback and final grade of social media communication plan assignment

Research Participants

Ten students enrolled in the "Multimedia in Agricultural Communication" course in the pilot semester (spring 2014). Seven (5 females and 2 males) of the 10 consented to participate in this research study. Pseudonyms were used to protect the students' identities.

Table 3

Research Participants

Pseudonym	School classification	Selected research video topic
Annie	Junior	Invasive Asian carp
Justin	Senior	Agriculture education
Morgan	Junior	Foodborne illness
Rachel	Sophomore	Rabbit tracking
Rianne	Sophomore	Swine nutrition
Taylor	Freshman	Agribusiness
William	Graduate/Master's	Orange corn

One of the students, William, was a graduate student from Malawi, Africa visiting as part of an international exchange program through USAID. Prior to this course William had never used an iPad-mini.

Qualitative Research Methods

Case-based qualitative methods were used to answer our research questions (Yin, 2013). A case is an event, time, place, or phenomena in which multiple perspectives are researched through multiple methods (Thomas, 2011). In the context of this study, the case was the multimedia course, including the phenomena of the course design and technology implementation, as experienced by the students. Yin (2015) recommended collecting multiple sources of data in a case study, so as to triangulate the data and build a trail of evidence for validity measures. Therefore, multiple data sources were collected, including: participant online reflection journals, assignments, final videos, and in-depth semi-structured one-on-one interviews with participants. Student online reflection journals were incorporated into the course throughout the semester. Each week, students answered writing prompts in their online journals to reflect on their progress and use of the new technology.

In an effort to mitigate researcher biases, an agricultural communication graduate student who did not design, teach, or participate in the course was trained to use the interview protocol. She then interviewed the research participants, after final grades were given. The interview questions focused on student perceptions of: 1) project development and learning about the video topic, 2) the course design, 3) and the iPad multimedia kits. The interviews were 30-45 minutes in length, video recorded, and transcribed. The researchers then coded and triangulated the interview transcripts, reflection journals, and course artifacts (e.g., assignments and final video projects) to identify and confirm recurring codes which led the development of categories and themes. Coding procedures, as described by Saldaña (2009) for use in a variety of qualitative studies, included open-coding, grouping open-codes into categories, re-categorizing, and establishing finalized themes. In order to ensure trustworthiness and validity of the findings, the categories were presented to the research participants and graduate student interviewer for member and reliability checking. The participants and interviewer approved the categories with no changes. Given the qualitative nature of this study, results are not intended to be generalizable. However, by providing rich description of our context and results, readers may find aspects of the study that transfer, or apply to, their own contexts. The Institutional Review Board approved the design of and implementation details for the study.

Results

Five themes were identified from the data analysis. Specifically, excerpts from course artifacts and post-interviews are highlighted to support themes found across the data and to answer the research questions. Table 4 demonstrates how the themes address the research questions.

Table 4

Research Questions Connected to Themes

Research question	Theme
1. What are students' perspectives of the blended PjBL format?	1. Hands-on with online rigor 2. Freedom vs. Responsibility 3. Making connections with classmates and scientists
2. What are students' perceptions of learning about agricultural science concepts through the process of developing an online video?	4. Perceptions of learning agricultural science through video production
3. How do students describe their experiences using iPad-minis for video production?	5. Experiences using iPad-minis for video production

Theme 1: Hands-on with Online Rigor

Overall, the students expressed favorable views of the PjBL blended learning course design. Each student was asked to describe the course design in his/her own words. Most often, they would explain that face-to-face class time was used for hands-on work, while the online work consisted of reading and assignments. For instance, Rianne described a typical class as follows: "We would partner up and do small videos that portrayed the chapters we had read about those topics. And then, we would come back together and review what was difficult, what was easy, what we liked, what we didn't like about different things – and that would be the wrap up." In her journal, Rachel wrote, "I like how the course is laid back. I like how it's really hands-on. I like how we are interactive with the College of Ag." William said, "It was more practical oriented that remains in your life for a longer time than just to concentrate on theory."

The students also discussed how the online portions of the course were more rigorous, demanding, and challenging than they had expected. Rachel said "We wrote journals, blogs; we had the discussions, I think, as well. Those were kind of hard. I'm bad about remembering to keep doing it." Justin described, "I would say the online part was a little confusing, at first, because we had different things. We had a journal. We had a discussion. We had a blog. There for a while, I think some of us didn't even know about it. So, it was like, oh, we had to do that." Morgan mentioned that she found the online discussions to be too time-consuming and not as meaningful as an in-class discussion, "We read topics and we discussed them, but there's only so much discussion that you can do in an online sense, and so, it was kind of hard to get a feel for exactly what people were thinking just because it was typed in an electronic device."

Theme 2: Freedom vs. Responsibility

Another theme that emerged related to students' perspectives of the PjBL course design was the tension between freedom and responsibility. Students discussed how they enjoyed the real-world context, freedom to choose their topics, and self-paced nature of the course. In contrast, they found that with the freedom came the responsibilities of managing their time to effectively contact scientists, conduct interviews, and edit their videos according to course milestones and deadlines. Justin said, "I liked it because it gave me [the] creativity to do what I wanted with my project." Morgan explained, "You kind of had to be a self-starter and self-motivated to get that done. So, I liked that. I think that taught us a lot. It's just mirroring what we have to do, you know in the professional world, and things like that." Rianne said, "I liked the freedom that we had, but in the same respect, I didn't [like it] because it was really frustrating at times when there were deadlines that were coming up and you couldn't meet them because you were relying on someone else, like the researcher."

Half of the students expressed difficulties in working with scientists for their videos, as the scientists were very busy and not always responsive to the student's video production schedule. Taylor proposed:

> I don't know if we need to have a definite cut-off date or, if your scientist isn't cooperating, just move on and get a new scientist, or something. So that way, maybe, the class is more structured exactly how it says it will be in the syllabus, look into it, or what we could really do to improve it. It's something that's really hard to work with because the class is so dependent upon other people outside of the classroom.

Half of the students recommended that a 'bank of scientists' be developed for the course. Then, the scientists would have already agreed ahead of time to participate in the students' video projects, and the students could select their topics based on the available and participating scientists.

Theme 3: Making Connections with Classmates and Scientists

Student interviews and journals showed that another perceived outcome of the course design was that students were able to make valuable connections with classmates, as well as scientists. As this was the first time for many of the students to engage in the video production process, it was recommended that students work with one another to shoot the interviews for their respective videos. The students worked it out amongst themselves in and outside of class as to how to work together effectively. Annie said:

> When I wanted to have an interview, I could just inform the whole group to say that on such and such a date, I would do a, b, c, d, and someone would volunteer to camera assist. That was a great thing in a course to say that students could help each other accomplish their goals.

In addition to developing relationships with classmates and supporting one another, the students expressed an excitement for establishing connections with real-world scientists working in the College of Agriculture. Rachel worked with an assistant professor of wildlife ecology and habitat management and said, "Once I met her, she was really good, and she wanted to work with me. So, I wanted to work with her." Rianne vividly described establishing a connection with the swine researcher who she featured in her video:

> My researcher is really cool, and so, making that extra connection was awesome. You know, whether I ever need to contact him again, I don't know, but he's there, and I've got his email. I saw him on the street the other day and was like, "Oh hey, (Scientist's Name)!, and he was like, "Hey, how's it going, Rianne?" So, that was a really big building point as well.

Theme 4: Perceptions of Learning Agricultural Science through Video Production

As mentioned, each student chose his/her video topic as one way to incorporate the 'voice and choice' component of the PjBL framework in the course. Each student's prior knowledge, interest, and motivation appeared to play a role in the agricultural topic they pursued, and they ultimately learned more about their agricultural science topic through the development of the videos. Justin selected his video topic because, "I'm very involved with 4-H and youth development, and he [the scientist] works a lot with students. So, I thought that kind of fit with what I am interested in as a career." Taylor chose her topic because it related to her background and future interests: "Growing up on my family farm, I thought that I could apply what I learned to our family farm, as well as this summer I have an internship with Farm Credit, and so, I thought I could learn something that would help me prepare for that internship, as well."

Many of the students described learning more specific details about the topics they selected, as well as gaining a deeper understanding of the nature of science and research. This occurred through the process of students researching their video topics and interviewing scientists. Previously, some students had never been exposed to either the video message development process or the scientific research process. The following excerpt from Morgan's interview with a food scientist demonstrates how student engagement in and video production of real-world agricultural science topics expanded their views of research and deepened their understanding of their chosen topics:

> I've never really been in a research lab before at [the university]. So, that was a fun experience. And then, I just learned a lot about the basics of listeria, and how it can affect the consumer, and how it is contracted, and where it's found, and what [the university] is doing to stop listeria outbreaks – which is really neat.

Another similarity across student experiences was the development of what is often called "soft skills." For communication professionals, these soft skills include time management, content organization, design, working with clients, and interviewing. Rianne said, "I had never conducted a video interview before, so that was a whole learning experience." Several of the students described being nervous about the video interviews, but they valued the opportunity to develop and gain more confidence in their skills through the project format.

Theme 5: Experiences using iPad-minis for Video Production

In general, the students enjoyed using and learning with the iPads. Multiple students mentioned that they liked how easy it was to use the devices that the technology was portable, versatile, and easy to troubleshoot, and that they could foresee using mobile technology in future agricultural communication careers. Justin said:

> A lot of people have an iPad, and it's kind of neat to see that you can make a video with something that's more user-friendly than a video camera, which is specifically made for making a video. I thought it was easy to transport, kind of take on the go with you and… what really helped is the editing with iMovie on the actual iPad. You don't have to upload it to a computer or anything. It's all right there in your hands.

In contrast, some of the students did not like editing on the mobile devices. For instance, Taylor discussed how it was difficult to make detailed edits using her fingertips. She explained, "I think that it was such a small workspace that it was hard to get at right where you needed to, where maybe if we would have been on an actual Mac with an actual screen that it might have been easier."

It also turned out that the Sony Bluetooth microphones and mini-plug connectors did not work consistently with the iPads and many of the students then recorded their audio using the built-in iPad microphone, causing the audio to be somewhat hollow sounding. Some of the students also reported glitches with the FilmicPro app, where the app would sometimes pause or freeze during recording. Therefore, most of the students switched to using the standard iPad camera application.

By the end of the semester, each student successfully produced a video project using the iPad-minis and accessories. They debuted their videos to a public audience including the senior associate dean of research and the scientists who participated in the projects. The videos (Figure 3) were posted to the college's YouTube channel for public audiences.

Figure 3. Screen capture of Rianne's final swine research video.

Many of the students described a sense of pride in completing their videos and acknowledged that they learned video storytelling techniques. However, they also described room for improvement in future video production efforts. Taylor said,

> I think that my final video turned out pretty well, for it being my first video. I have never done any video editing, so it was a learning process for me, and like I know some of my video wasn't the clearest and the shots could have been set up a little better, but I think the strong point of my video is the organization of it and just how things flow very logically.

The students also liked that they were a part of a program that was trying out a new, mobile, cutting-edge way to produce communications materials. Some of them described the perceived prestige that came with using the technology. Rachel described how she and a fellow student used the gear at a conference where others asked about how it works. Similarly, Rianne shot video at a college event and was excited to show the technology off to the dean. She said, "He was super intrigued and asked me all kinds of questions about how this worked and how the attachments worked, and so, it was cool to be able to not only learn how to use it myself, but also to educate others while I was still learning."

Immediately following the PjBL multimedia course, several of the participating students took part in a service-learning study abroad program in Romania. While overseas, the students used the multimedia kits to develop video narratives of Heifer Romania project beneficiaries (Figure 4).

Figure 4. The iPad-mini and video accessories were used on a service-learning study abroad program to Romania, to create video narratives of Heifer Romania project beneficiaries.

Limitations

This case study examined the results of the pilot blended PjBL course design and iPad-mini technology. Although data was collected from multiple sources—such as course artifacts, student reflection journals, and post-interviews to triangulate data for sound findings—one of the major limitations of the study was the sample size (n = 7). Another limitation relates to the possibility of researcher bias, as one of the members of our research team was also the course developer and instructor for the course. The use of multiple researchers, however, helped mitigate this potential.

Discussion and Conclusion

Professional communication roles, approaches, and communication technologies are converging (Boers et al., 2012; Gundelswiler & Filk, 2012). There is a need for agricultural communication undergraduate degree programs to develop new teaching methods and implement mobile technologies into curricula to effectively prepare students for 21st century careers (Koldzy, 2014; Tucker, 2014). While the literature identifies writing, speaking, editing, and multimedia

development as crucial skills for agricultural communicators (Morgan, 2010; Morgan & Rucker, 2013; Watson & Robertson, 2011), it is critical for today's programs to address convergence as it relates to media and education. Of course, training students how to strategically navigate through the ever-changing world of media technology and strategy is imperative to keep them competitive in their chosen career field. But, integration of training and application of communication theory into a blended PjBL environment challenges students to apply their knowledge through real-world projects based on communicating complex agricultural science topics via interactive, mobile technologies.

In this study, the blended PjBL course design aimed to meet these goals with students collaborating to learn digital storytelling theory via online activities and working hands-on in class to produce real-world agriculture communication videos with backpack multimedia kits. The results showed students were able to learn about agricultural science issues and research, form relationships with scientists, as well develop communication and technology skills by utilizing the multimedia kits. The students did express difficulty in tackling the real-world project and faced challenges, such as working around scientists' schedules. While the students recommended having a pre-determined bank of scientists to work with them, that would go against the PjBL design and instructional intent for students to function in a real-world situation (Buck, 2015). The students also found the online portions of the course to be complicated and rigorous. This could be because this particular group of students had never participated in a blended learning course before and were not familiar with online learning tools such as blogs, wikis, discussion boards, and journals.

This study has implications for agricultural communication programs and research in regard to implementing similar blended PjBL designs, as well as incorporating multimedia technologies into courses for teaching convergence communication. The iPad backpack kits could be incorporated into a variety of skills-based courses in agricultural communication, which include work in video production, photo essays, blogs, social media campaigns, and more. There is also the potential to use the technology for Extension and 4-H workshops where educators and students could develop multimedia communication projects within contexts of interest.

There is a substantial amount of opportunity for future research resulting from this study. The blended PjBL instructional design could be applied and examined across multiple agricultural communication programs at land grant institutions, as well as Extension workshops and programs. Potential research could include investigating the tension of student freedom versus responsibility in a PjBL design, as well as student experiences and learning within different agricultural science subjects. For instance, if the driving question focuses on climate change or genetically modified organisms, what do students learn about these controversial agricultural communication issues during the development of their project, as well as professional approaches for communicating controversial issues? On the flip side, what are scientists' perceptions of and experiences with participating in the students' projects? And, if students were to use this technology to produce content during an agricultural communication service-learning study abroad trip, how does this correlate to teaching effective cross-cultural communication strategies?

As the Poynter Institute noted (2013), the media industry perceives communication education programs to be out of touch with industry standards. During a time when communication roles and technologies are rapidly converging, it is incumbent upon agricultural communication programs to respond with convergence courses and mobile technology implementation so that students are in touch with the demands of continually evolving 21st century

communication careers. Utilizing a blended PjBL course design with mobile technologies has the potential to update and create a cutting edge agricultural communication program that equips students with convergence experiences and skills needed to be successful professionals. This study is a small part of the overall critical need for agricultural communication programs to advance and evolve with innovative teaching techniques and communication technologies in order to push students to develop critical thinking skills for ethically communicating controversial global issues in agriculture, food, and the environment via a variety of platforms and outlets.

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Research

The Role of Dissonance and Schema: An Exploration of Florida Public Perception after the DWH Oil Spill

Laura M. Gorham, Joy N. Rumble, Kacie L. Pounds, Angie B. Lindsey and Tracy Irani

Abstract

The agricultural and natural resources industries are no stranger to crises, particularly, large-scale crises such as the Deepwater Horizon (DWH) oil spill in 2010. Crises have an impact on how consumers view a product, and ultimately, can impact their decisions to buy or not buy products from an industry that has experienced a crisis. This qualitative study sought to evaluate consumer perceptions of Gulf seafood after the DWH oil spill, and explored the influence of schema and cognitive dissonance on consumers' intent to consume or purchase Gulf seafood after the DWH oil spill. Focus group discussion with seafood consumers revealed participants had a pre-existing schema associated with local seafood, seafood origin, health benefits of seafood, and the safety of seafood. Dissonance was observed when participants balanced their pre-existing schemas with knowledge of the DWH oil spill as the participants discussed buying seafood, not buying seafood, and buying seafood with fear. From the findings of this study, researchers and communicators may have a better understanding of the decision-making process associated with buying a product after a crisis. Recommendations were made for agricultural communicators to develop personal messages and stories to help consumers overcome any remaining fear or dissonance associated with Gulf seafood.

Key Words

Cognitive Dissonance, Consumer Perception of Food, Deep Water Horizon Oil Spill, Schema

Introduction

In a short moment in time, a crisis can occur. It is an unpredictable event that may cause a negative effect on an organization, industry, and stakeholders if handled improperly (Coombs, 1999; Irlbeck, Jennings, Meyers, Gibson, & Chambers, 2013). In the past, the events unfolding during a crisis have had an impact on an organization's or industry's reputation, causing consumers to have a lack of confidence in the organization, industry, or product (Coombs, 2012; Ulmer, Sellnow, & Seeger, 2011).

In April 2010, an explosion aboard the Deepwater Horizon (DWH), a drilling rig in the Gulf of Mexico owned by British Petroleum (BP), led to the largest accidental oil spill in history (Ylitalo et al., 2011). The 2010 BP DWH oil spill caused over 200 million gallons of oil and 1.8 million gallons of dispersants, intended to break down the oil into droplets, to be poured into the Gulf of Mexico (Rotkin-Ellman, Wong, & Solomon, 2011). The oil from this spill reached the shoreline of Alabama, Florida, Louisiana, Mississippi, and Texas, totaling more than 950 miles of

Funding for this study was provided by the Florida Department of Agriculture and Consumer Services (FDACS) who received funding from BP to conduct a marketing campaign aimed at restoring consumer confidence in Gulf-caught seafood.

Gulf coastline. Following the DWH oil spill, petroleum compounds and dispersants were detected in the Gulf of Mexico, which led to concerns about human health risks (Ylitalo et al., 2011). Due to the possible health risks, fishing was prohibited in affected areas until scientists and researchers determined that all polycyclic aromatic hydrocarbons (PAHs) and dispersant levels in seafood were below the limits of quantification (Upton, 2011; Ylitalo et al., 2011). Although many fishing bans were lifted and the seafood was determined to be safe, the public continued to perceive that Gulf seafood was unsafe and posed a risk if consumed (Upton, 2011; Ylitalo et al., 2011).

The Gulf seafood industry has traditionally contributed over $3 billion to the United States' economy, and provided over "one third of all seafood consumed in the United States" (Johnson, Clakins, & Fisk, 2012, para. 4). However, following the oil spill, harvest of shrimp and crabs from the Gulf decreased with Louisiana alone experiencing a decrease in 7 million pounds of shrimp and 2.7 million pounds of blue crab harvested (Burdeau & Reeves, 2012). The Gulf region suffered more than $16 million in lost seafood sales as a result of consumer concerns and high seafood prices following the oil spill (Burdeau & Reeves, 2012).

Hicks, Pivarnik, and Dermott (2008) stated that it is important to understand the basics of consumer decisions about seafood choices by evaluating the relationship between the consumers' attitudes and their decision to consume or purchase seafood. In the past, consumer perceptions and decision-making processes have affected who purchased seafood (Rasco, 2010). As an example, consumer concerns about high levels of mercury in fish have deterred pregnant women from eating an otherwise nutritious food (Rasco, 2010). If consumers have a negative perception of a specific food, then the consumer is not likely to purchase or consume the food (Rasco, 2010). Consumer confidence in the safety of Gulf seafood is vital to the restoration, sustainability, and livelihood of the Gulf Coast seafood industry (Upton, 2011). The purpose of this study was to determine the influence of pre-existing schema and cognitive dissonance on consumers' intent to consume or purchase Gulf seafood after the DWH oil spill. The results of this study will help explain the impact a crisis has on the purchasing decisions of an agricultural product such as Gulf seafood.

Literature Review

Consumer Perception of Food

The average American spends more than 15% of his or her household income on food (Crawford, Church, & Rippy, 2012). When making decisions about food purchasing, consumers have been influenced by their food-related concerns, many of which are related to food safety (Brewer & Rojas, 2008). Interest in and knowledge of the differences in food safety risks among food products has been recognized as a decision-making variable in consumer's food purchasing (Charanza & Naile, 2012).

Although consumers may encounter a food safety risk barrier when considering the purchase of a particular product, other product attributes may provide an incentive to purchase (Gorham, Rumble, & Holt, 2015). Researchers have found consumers favor buying healthy, high quality, local, and fresh products (Keeling-Bond, Thilmany, & Bond, 2009). While the idea of buying local has been viewed as a social incentive to purchasing, Gorham et al. (2015) found consumers tend to place more emphasis on the overall food quality and the availability of food. Consumers have been shown to consider local products; however, if the local products did not meet their expectations in regard to quality or safety, the consumer would choose to purchase an alternative product (Gorham et al., 2015).

Schema and Cognitive Dissonance

The review of the literature on consumer perceptions of food demonstrated consumers would choose a different product when their expectations were not met. It is important to understand the way in which a consumer processes information when making the decision to buy a particular food product. The theories of schema and cognitive dissonance informed this study to explain the thought process of consumers when purchasing a food product following a crisis.

Schema has been essential in determining how a person perceives a specific idea or forms an attitude (Fiske & Taylor, 1991). Bartlett developed the first definition of schema in 1932 and described schema as the mental response made by a person when he or she encounters a situation or experience seen in the past (Bartlett, 1932). Later, Axelrod (1974) developed schema theory and gave the definition of schema as "a pre-existing assumption about the way the world is organized" (p. 1248). Fiske and Taylor (1991) continued the definition to describe schema as a "cognitive structure that represents knowledge about a concept or type of stimulus including its attributes and the relations among the attributes" (p. 98).

Schema theory has been used in the communications field to show how previous ideas about information help individuals process new information (Cheong & Kim, 2011). When presented with a communications message, or a particular product such as Gulf seafood, an individual will be given more information than he or she can process (Tesser, Martin, & Mendolia, 1995). The individual's schema will "direct attention to what is relevant, helping the consumer process information efficiently" (Cheong & Kim, 2011, p. 56). For example, when presented with a food product, the schema an individual has for that food product is activated (Cheong & Kim, 2011). The individual's schema has been used as a reference point to bring to light the individuals' previous expectations of the food and the typical attributes found in the food (Cheong & Kim, 2011). Cognitively, the consumer will compare his or her previous expectations and perceived attributes with the food-product presented to form an attitude (Sujan & Bettman, 1989). If the new information does not fit within past experiences or reactions, a person will experience an internal conflict (Axelrod, 1974). Although schema theory describes how an individual processes information attempting to make sense of it, the theory does not describe how a decision is made (Axelrod, 1974); however, cognitive dissonance theory has provided an overview of the thought process a person undertakes when he or she thinks about a decision internally (Festinger, 1962).

Festinger (1962) concluded cognitive dissonance occurs when a person's attitudes and beliefs are challenged with a decision inconsistent with their attitudes and beliefs. Individuals tend to have a set opinion or attitude toward certain situations and will strive to maintain consistency within his or her self (Festinger, 1962). However, when an individual is met with a decision that is inconsistent with his or her previous ideas, psychological discomfort is experienced (Hunt, 2004). Festinger (1962) described two actions that may occur when an individual is met with unfavorable information or ideas and attempts to restore cognitive balance:

1. The existence of dissonance, being psychologically uncomfortable, will motivate the person to try to reduce the dissonance and achieve consonance.
2. When dissonance is present, in addition to trying to reduce it, the person will actively avoid situations and information, which would likely increase the dissonance. (Festinger, 1962, p. 3).

Thus, individuals have experienced dissonance (1) when choosing to make the decision that has negative attributes and (2) when choosing not to make the decision that has positive attributes (Aronson, 1969). Cognitive dissonance has been experienced during the product selection stage (Lindsey-Mullikin, 2003). A consumer may experience cognitive conflict when he or she decides to choose an alternative product. For example, in the example of Gulf seafood, the consumer may be interested in buying a local product; however, the consumer will be met with dissonance when deciding not to buy the local product based on knowledge of the oil spill and perceived safety concerns with the seafood.

While dissonance has occurred during the product selection stage, dissonance has been reduced when information meets an individual's current and prior beliefs (Lindsey-Mullikin, 2003). An individual's dissonance has been diminished by choosing an alternative product that meets his or her standards; or through messages, provided by communicators, to reduce negative attitude or cognitive change (Gorham et al., 2015; Lindsey-Mullikin, 2003). In each of these cases, the consumer re-evaluated his or her previous expectations about a product (Lindsey-Mullikin, 2003). When dissonance is diminished through a re-evaluation of ideas, the consumer purchases the product (Lindsey-Mullikin, 2013). Cognitive dissonance theory does not suggest a correct decision; but more rather, the theory provides a description of how individuals rationalize decisions psychologically within themselves (Goodwin, 2010).

Purpose and Research Questions

The purpose of this study was to determine the influence of pre-existing schema and cognitive dissonance on consumers' intent to consume or purchase Gulf seafood after the DWH oil spill. This study adds to research priority 1 of the *AAAE National Research Agenda* to understand how food safety plays a role in a consumer's perception of a product (Doerfert, 2011). To complete the purpose, the following research questions guided the researchers in this study:

1. How has pre-existing schema influenced participants' perception of Gulf seafood following the DWH oil spill?
2. How has cognitive dissonance influenced participants' perception of Gulf seafood following the DWH oil spill?

Methods

Public perceptions are complex, and when perceptions are examined within the scope of a given crisis, the complexity shifts and deepens. Qualitative research is often used to develop a comprehensive understanding of complex and social issues, and therefore was used in this study to understand how schema and cognitive dissonance influenced perceptions of and purchase decisions related to Gulf Seafood following the DWH oil spill (Ary, Jacobs, & Sorensen, 2010). One specialized form of qualitative research is focus groups, which allow for group interaction during a discussion (Morgan, 1988). During the group interaction, participants "talk to one another: asking questions, exchanging anecdotes and commenting on each others' experiences and points of view" (Kitzinger, 1995, p. 299). The conversations and discussions that occur as a result of the group interaction are recorded as data (Kitzinger, 1995). Often, researchers are able to gain insight into how and why participants think the way they do, as people will agree or disagree with different opinions, attitudes, and beliefs (Ary et al., 2010). Focus groups are used in many communication studies to understand participants' "knowledge and experiences and can be used to examine not only what people think but how and why they think that way" (Kitzinger, 1995, p.

299). Several previous studies have utilized focus groups to examine the influence of schema and cognitive dissonance on decisions and perceptions (Bray, Johns, & Kilburn, 2011; Gomez, Schieble, Curwood, & Hassett, 2010; Hares, Dickinson, & Wilkes, 2010; Woods-Giscombé, 2010).

For this study, the Florida Survey Research Center recruited participants for a series of focus groups in 2012. In accordance to Krueger's (1994) recommendations, participants were screened and selected as having a characteristic in common; in this case, participants were required to be a consumer of seafood and reside in one of the top five media markets in Florida (Daytona Beach, Jacksonville, Miami, Pensacola, and Tampa). Each focus group was composed of seven to 10 participants (Kreuger, 1994).

Ten focus groups were conducted for this research during a three-week period to help minimize the threat of history effect (Ary et al., 2010). Focus groups were conducted in five different locations corresponding to the top five Designated Market Areas (DMAs) in Florida. Two focus groups, each with a different group of people, were completed at each of the five locations. Each focus group was approximately two hours long and directed by the same moderator. Further, the use of five locations helped to ensure environmental triangulation, which aims to resolve the influence of environmental factors that may bias discussion (Guion, Diehl, & McDonald, 2011).

During each focus group, an assistant moderator and two note takers accompanied the moderator. Each focus group was audio recorded for use in the transcription process. A summarize-by-confirmation technique was used for member checking. The moderator verbally summarized the discussion at the end of the focus group. After the discussion was summarized, the participants were asked to verify the conversation (Kreuger, 2002). If information was missing from the summarized conversation, the participants were asked to identify the missing information or anything else they would like to add to the discussion.

Because much of the success of a focus group is dependent on the quality of questions and organization during the discussion, a moderator's guide was developed to guide the focus group discussion (Krueger, 1994). The moderator's guide was developed to fulfill the research questions. Questions were developed pertaining to understanding the participant' perceptions of seafood, experiences when purchasing or consuming seafood, and barriers and incentives to purchasing Gulf seafood after the DWH oil spill (i.e. Discuss why you purchase seafood; Describe the barriers/ benefits to purchasing seafood; When you go to a grocery store to buy seafood, describe the type of attributes you look for in your seafood product?). Focus group participants were provided with clarification of the questions asked by the moderator when needed.

After the focus groups were completed, an external researcher transcribed the data. The data were then prepared and organized into themes using Weft-QDA (Creswell, 2007). The primary and co-researchers who analyzed the data were graduate students studying agricultural communications, who had previously been trained in qualitative data collection and analysis. Themes were identified using the constant comparative method of qualitative analysis (Glaser, 1965). Similar themes were constructed from different phrases, patterns, and words presented in the data (Glaser, 1965). Credibility and accuracy were ensured in the data analysis, as two researchers analyzed the data individually. Afterwards, using the methods of peer debriefing, the two researchers compared and contrasted their results (Huberman & Miles, 1994).

Findings

The 79 participants in this study held various occupations, including working class, teachers and caregivers, medical professionals, and others. The majority of the participants held a bachelor's degree, graduate school degree, or professional degree. The majority of participants reported an annual household income of more than $45,000. The participants represented Caucasian, African American, Hispanic, and other races and ethnicities. Forty-five of the participants were female and 34 were male.

Research Question1: How has pre-existing schema influenced participants' perception of Gulf seafood following the DWH oil spill?

Research question one was used to determine consumers' pre-existing schema associated with buying and consuming seafood. When discussing seafood, and their preferences for seafood, it became clear that the participants had a pre-existing schema associated with the themes of local seafood, seafood origin, health benefits of seafood, and the safety of seafood.

Local seafood.

Participants discussed a preference for local seafood as they associated local seafood with a fresher and preservative free product. In Miami(b) a participant said,

> Well, I prefer local seafood as opposed to species that are flown in or shipped. Because I fear that they are not fresh, they have been frozen or [processed]. I have seen people add chemicals to preserve things. So I think fresh caught local fish is a preference for me.

Other participants in the location echoed this participant's preference for local seafood and further elaborated on the importance they put on having fresh seafood. What was considered local varied across the participants. Most referred to local as something that could be caught and eaten later that same day. However, some participants like those in Miami(a), related local seafood to coming from the United States or as close as possible. Many participants also discussed the accessibility of fresh-caught seafood in their area. One participant in Miami(b) said, "I would rather have something that a family caught when they were out fishing, or when we go down to the docks sometimes and get [seafood] right at the docks." Another participant added, "Yeah, that is what we are used to. [We are used to having] what everybody catches. Especially if you are native to here: everybody fishes. Fresh is the preference."

The discussion of personal experiences fishing was prevalent throughout the other focus groups as well and reinforced the participants' preference for local seafood. "If you can find somebody that's gone fishing that's like the best," said a participant in Jacksonville(b). Reminiscing about eating fresh sushi on a fishing trip the participant continued and said, "Or go fishing [yourself], yellow fin [tuna] on the deck and cut it open, now you got real sushi." A fellow participant also recounted personal experiences fishing, and the value found in eating fresh and locally caught fish. Similar accounts were seen in Daytona Beach(a) and Tampa(a). A participant in Tampa(a) discussed his or her preference for local fresh-caught seafood and said, "We are fortunate enough to eat fresh seafood because we have friends that go out fishing in the Gulf of Mexico. My husband and I have a fishing boat, so we fish for recreation and catch what we eat."

Seafood origin.

The origin of seafood was important to the participants, and they associated seafood from a farmed, fresh water, or foreign origin to be of lower quality and accompanied by safety hazards. As discussed in the local seafood schema, the participants preferred fresh, locally-sourced, seafood from the wild. Expressing concerns with the quality and safety of farm-raised foreign shrimp a participant in Daytona Beach(a) said, "Living conditions of farm raised shrimp. I know in certain countries, like China, where they farm raise their shrimp; they are put in these really small containers, really scrunched together, dirty, disgusting water. So, I'm very conscious about that." Another participant in the same focus group echoed these concerns and added that he or she was concerned with higher levels of mercury and antibiotic residue in farm-raised seafood. Participants in Jacksonville(b) discussed concerns with farm-raised seafood as well with one participant expressing specific concerns with farm-raised salmon. "Another thing I look at is whether salmon farm raised or wild. My dad always told me they put peach coloring in the farm raised so I look at that, when I'm looking at salmon." Concerns with farm-raised seafood were seen throughout the focus groups with participants discussing concerns with genetically modified salmon, unsanitary living conditions of farmed seafood, decreased personal health benefits, and environmental concerns.

Seafood originating from other countries was also a concern for some participants. A participant in Miami(a) said, "Can't eat anything imported anymore." This statement encouraged laughter from other participants in the group. In Jacksonville(b), a participant discussed looking to see where seafood was from before purchasing it because of concerns with the origin of the seafood. "Where it is from, I don't like to buy products from China and certain countries where I have heard that the water might be more contaminated. So, I look where it is from," said the participant. A participant in Miami(b) expressed concern with seafood from other countries and was greeted with agreement from other participants in the group. "Oh, I will also only buy from the American side. I tend to steer clear of international fish of any kind, food of any kind," said a participant in Orlando(a). However, in this group a participant who was raised outside of the United States expressed a preference for imported fish. This participant said,

> I am not going to say I am disagreeing, but I eat fish from South America. It comes from Guyana; that is where I am actually from. And we have a special type of fish out there that they usually bring here, so we usually cook it.

Another participant in Miami(a), with an international background, shared this preference for international fish.

Some participants also expressed concerns with seafood originating from fresh water. In Miami(b) a participant disliked seafood from fresh water because of the muck bottoms often found in fresh water bodies of water. Similarly, a participant in Tampa(a) said, "I won't eat freshwater fish. Most of the lakes are fairly polluted in the state of Florida, with runoff and everything."

Health benefits of seafood.

Nearly all of the focus groups discussed the health benefits associated with eating seafood. Health benefits commonly discussed included the presence of omega three fatty acids, protein, and low fat. Participants in three different focus groups discussed the ease of digestion seafood products. A participant in Daytona Beach(a) said, "It's very easily digested when you eat it late.

Digests faster than any other meat I can think of." Other participants noted that "it gives you a little better glow in your skin" (Daytona(b)), "helps your memory" Jacksonville(b), and "very good for cardiac sorts of things" Tampa(a). Throughout the focus groups, the participants discussed the health benefits as being a main reason they eat seafood.

Safety of seafood.

Many participants' concern with the origin of seafood was associated with safety or quality concerns with seafood, but the participants were generally concerned about the safety of seafood overall. The presence of mercury in seafood concerned many participants and they discussed being cautious about the seafood they consumed. In Miami(a), a participant said, "I'm always told to stay away from the big fish because of the mercury." Other participants in this focus group agreed and another participant added "I agree, we have a rule like that, too. Anything that's too big, like it's the grandpa that's been living and eating too long, we stay away from that." Mercury was also a concern of participants in Daytona Beach(a). Participants in Miami(a) also expressed safety concerns with seafood after recounting food poisioning incendents they were aware of. "My brother got really bad food poisoning from [a roadside fisherman] one time; I wouldn't buy it from them anymore." Another participant knew of a friend who also got food poising from a similar situation. Participants in Jacksonville(b) also discussed food poisoning concerns. A participant said,

> The closer you are to a beach, you would think, the fresher the fish, you think, are going to be. Sometimes you catch those little fishermen that are selling out of the back of their truck, but, you never know how long they've had that bucket of shrimp, so you have to be careful. Because, like I said, if you have ever been sick on seafood, it's not pleasant.

Food poisioning associated with bacteria, particularly in shellfish, was discussed by participants in Jacksonville(b) and Tampa(b). The participants in Jacksonville(b) debated on the rule associated with the "safe" months for bacteria in oysters. A participant said "Well, that's kind of like what I was saying like it used to be only in months with "R" and that doesn't apply anymore now." Another participant responded and said, "I still live by it. Are you sure about that? I thought the months without an "R" are too warm and so they have more bacteria."

Participants in Orlando(a) discussed food safety concerns with the packaging and preparation of seafood. Particularly these participants were concerned with the presence of lemons with their seafood. A participant said, "Yes, a lot of times they are served with lemons and the studies have shown that the lemons are really dirty, right? I try and avoid the lemons." This group was also concerned with the length of time seafood had been at a store or restaurant.

Research Question 2: How has cognitive dissonance influenced participants' perception of Gulf seafood following the DWH oil spill?

Research question two was used to determine consumers' decision process, and resulting cognitive dissonance, associated with buying and consuming seafood after the DWH oil spill. When discussing their willingness to purchase Gulf seafood, it became clear that the participants pre-existing schema associated with seafood were sometimes conflicting with their knowledge of the DWH oil spill. Three themes emerged: Will not buy, will buy with fear, and will buy.

Will not buy.

At least one participant in nine of the ten focus groups indicated that they would not buy Gulf seafood as a result of the DWH oil spill. Some participants were concerned about reports they had heard about the health of fish following the oil spill. A participant in Tampa(b) said,

> I have actually stopped eating a lot of the grouper and if it is marked as 'Gulf,' I won't, just because I have heard some stories about fish having lesions from the oil spill and that sort of thing. It can't be good.

Similarly, in Orlando(a), dying fish was a concern of a participant who said, "It is hard for me to think of it as clean and healthy when I have seen that the fish are actually dying there. If the fish are dying, how is it that the other seafood is clean and healthy?"

Uncertainty and the unknown effects of the oil spill caused some participants to discontinue buying Gulf seafood. A participant in Daytona Beach(b) said, "We don't know what the effect is on the environment and the fish that is there." Other participants in this group agreed and one participant said,

> I kind of agree with him. I try to avoid that as well because I don't really believe that it is all clean. And who knows what is going to happen in two or three years down the line? They will say that now they are finding that it caused cancer or something like that. That is normally what happens. (agreement heard) Three or four years down the line, they do some other research and then you hear about that. So, I do avoid [Gulf seafood].

Participants in Jacksonville(b) also agreed that they would prefer not to buy Gulf seafood until they could be certain of the long term and unknown impacts. A participant elicited much agreement when he or she said,

> If given the opportunity, I would prefer not to eat [Gulf seafood] right now. It's only been a few years since this happened, so nobody really knows to what extent that the damage is done, you know? And, they're not making that great of an effort to even say anything about it. They don't advertise Gulf seafood much, at least not that I've seen. So if they want you to buy it, they're not telling you to.

Many participants indicated that they were simply not willing to take the risk of eating Gulf seafood when they were not certain of what the outcome might be. A participant in Orlando(b) said, "I don't know if it's safe from the oil spill. I mean, it's not like I'm going to test it. You know?"

Will buy with fear.

About half of the focus groups had participants who discussed being willing to buy Gulf seafood after the DWH oil spill, despite their fears. In Miami(b), a participant tried to rationalize his or her willingness to purchase Gulf seafood. This participant said,

> I think in a weird way I want to believe that everything is okay. And I kind of just want to, you know, have that illusion, at least that all the fears didn't come true and everything is okay. But once again, I don't know how rational that is.

Another participant in this group recognized that his or her fears were not reflective of their seafood purchasing. "I know I worry about it when I am watching the news, but then when I go to a restaurant, I forget all about it," said the participant. Similarly, a participant in Tampa(a) said, "I was going to say, I do think about [the oil spill] when I eat Gulf shrimp. Wondering how much dispersants are on my shrimp. That is a concern, but it sure tastes good." A participant in Daytona Beach(a) was still leery about buying Gulf seafood, but thought he or she could maybe buy it now because a lot of the restaurants reopened on the Gulf.

Will buy.

Many of the focus groups included some participants who were willing to buy Gulf seafood. Some participants felt that it was really important to support and purchase Gulf seafood to help the industry recover from the DWH oil spill. In Jacksonville(b), a participant with a lot of experience fishing in the Gulf as well as experience on oilrigs expressed sentiment and desire to eat Gulf seafood. "That's a lot of good eating right there. So, yes, I eat from the Gulf." Participants in Orlando(a) and Tampa(a) also said they wanted to help the industry recover economically. A participant in Daytona Beach(a) discussed going on vacation in effected areas of the Gulf to help the economy recover, but the participant realized that he or she had not thought about buying Gulf seafood regularly to help in the recovery. This participant said,

> We did specifically plan a family vacation to that area afterwards, because of the economic impact. And we thought well, instead of going to [city] or the [city], which everyone goes to, let's go to a beach up there and hang out for a few days. But, I never really thought about purposely buying seafood from the Gulf to support the fishermen there.

One participant in Daytona Beach(b) and another in Jacksonville(b) referenced going to New Orleans and enjoying seafood. These participants had a preference for seafood prepared in New Orleans and did not let the oil spill deter their preference. The participant in Daytona Beach(b) said, "I went to New Orleans and ate everything, I didn't care. (laughter) Raw oysters, shrimp, whatever."

Some participants expressed confidence that the clean up efforts and monitoring of the seafood ensured that the seafood was safe to eat. These participants commonly also wanted to support the Gulf coast economies through their purchases. A participant in Miami(a) said,

> I believe that it's safe and I want to help build it back up. I'm not scared. In fact I believe, whatever they've done to clean it up, it's better now probably than it was, because they cleaned out all of the other garbage that no one complained about. (laughter)

The faith in the recovery of the Gulf expressed by this participant encouraged others in the group that maybe it was okay to once again eat Gulf seafood. Similarly, in Orlando(b) two participants told stories of eating Gulf seafood after the oil spill and having confidence in the safety. Another participant in the group responded to their stories and said, "you're not growing horns or anything." The personal accounts shared by these participants and evidence of their continued health seemed to assure other participants that the seafood was once again safe to eat.

Conclusions, Implications, and Recommendations

The purpose of this study was to determine the influence of pre-existing schema and cognitive dissonance on consumers' intent to consume or purchase Gulf seafood after the DWH oil spill. Through the focus groups discussion, it was discovered that participants had pre-existing schema associated with local seafood, seafood origin, health benefits of seafood, and the safety of seafood. When discussing whether or not they would buy Gulf seafood, it was evident that the pre-existing schema of the participants influenced the participants' decisions to not buy, buy, or buy with fear. In the discussions of the participants' decisions associated with buying Gulf seafood it was sometimes apparent that their pre-existing schema combined with their knowledge of the oil spill created cognitive dissonance.

Participants who indicated they would not buy Gulf seafood following the oil spill because they were uncertain or fearful of the safety and unknown effects of eating the seafood. This finding is consistent with previous research indicating that food safety risks impact food purchasing decisions (Brewer & Rojas, 2008), and consumers will abandon their preference for local food when expectation of quality or safety are not met (Gorham et al., 2015). Additionally, in the discussion participants seemed to reason through their decision not to buy Gulf seafood. It is likely that their pre-existing schema, perhaps related to concerns with the safety of seafood, aided them in processing information about Gulf seafood and making a decision not to purchase (Cheong & Kim, 2011). This is reflective of the process described by Sojan and Bettman (1989), which explained the process of comparing previous expectations with the product presented to form an opinion. It is also possible that the participants were experiencing dissonance during this reasoning process and were trying to balance their schema for local seafood and the health benefits of seafood with their concerns with seafood safety, particularly that of Gulf seafood. Thus, challenging existing thoughts and beliefs about local seafood and the health benefits of seafood (Festinger, 1962).

Those participants who would buy Gulf seafood, but still had fears or concerns seemed to also be experiencing dissonance when considering their wants and fears. For many, the participant's fears about Gulf seafood were originally on top of mind, but when at the store or given the opportunity to consume Gulf seafood they often made the decision to consume despite the potential associated negative outcomes. It is possible that this risk did not outweigh passing up seafood with good attributes, such as good taste (Aronson, 1969).

Those who indicated that they would buy Gulf seafood likely had strong pre-existing schema associated with local seafood. These participants valued the local economy and helping the industry recover from the DWH oil spill. Other participants believed the Gulf seafood was safe and had eaten it and not experienced any adverse effects. In these instances the participants' stories of eating gulf seafood gave other participants reassurance in Gulf seafood. It is likely that this communication helped reduce dissonance in the minds of other participants and helped them return to a place of cognitive balance and product selection based on strong pre-existing schema, such as that of local seafood and the health benefits of seafood (Lindsey-Mullikin, 2003).

While the participants' pre-existing schema did include concerns with seafood origin and seafood safety, these items were discussed in contexts outside of the DWH oil spill. The participants never once mentioned an adverse reaction to seafood of Gulf origin or being concerned about the safety of seafood coming from the Gulf when initially asked their perceptions.

It was not until participants were asked about buying Gulf seafood that concerns with Gulf seafood arose. Therefore, concerns of Gulf seafood are likely not a part of the participants' pre-existing schema, but rather thoughts that challenge their pre-existing schema and create dissonance (Festinger, 1962; Sujan & Bettman, 1989).

Recommendations

In order for the Gulf seafood industry to continue to recover from the Gulf oil spill and continue to remain economically viable it is critical that consumers purchase Gulf seafood. Those working to restore the reputation of the Gulf seafood should be encouraged that the pre-existing schema of these participants did not include negative associations with Gulf seafood. It is recommended that those associated with this crisis take advantage of the opportunity to reinforce the health benefits and local origin of Gulf seafood, both of which were found to be strong positive schema in this study. Other benefits to purchasing Gulf seafood, such as benefits to the economy, supporting local fisherman, and desirable tastes should continue to be reinforced as consumers are more likely to purchase a product if they are reminded of the positive attributes of their purchase (Rasco, 2010).

Additionally, communicators should use personal messages and stories to help consumers overcome any remaining fear or dissonance associated with Gulf seafood, as demonstrated by those willing to buy in this study (Lindsey-Mullikin, 2003). When participants shared their stories of buying, other participants' fears associated with the safety of Gulf seafood were eased, thus providing insight to the relationship between consumers' attitudes and their decision to purchase Gulf seafood (Hicks et al., 2008).

Future Research

It is recommended that further research be conducted to establish a full understanding of how the nation views Gulf caught seafood. Seafood from the Gulf of Mexico is a $3 billion industry providing the United States with over one-third of its seafood (Johnson et al., 2012). It is important to understand national perceptions of Gulf-caught seafood in order to effectively market and restore consumer confidence in Gulf caught seafood. In addition, a quantitative national study will allow for the results to be generalizable.

Further research should also examine the influence of communication strategies appealing to existing schema on consumers' intent to buy Gulf seafood. This could be tested through various communication channels and with different target audiences. Additionally, the effectiveness of messages aimed at reducing dissonance surrounding the purchase of Gulf seafood should also be examined.

The findings of this research are limited to the questions asked by the researchers, and how the researchers interpret participant discussion, both of which are common limitations in qualitative research (Pauly, 1991).

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Journal of Applied Communications

Volume 100 • No. 2 • 2016