How transparent should animal agriculture be? Attitudes and message framing surrounding livestock slaughter

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Abstract: The animal agriculture industry is faced with a dilemma not easily solvable via traditional strategic communication methods. In demands for transparency in livestock production, how should it deal with the delicate topic of slaughter? While a necessary means to meat and other animal products, consumers actively repress the ideas of the animal source and slaughter to consume meat with less dissonance. This study examined the different effects of livestock slaughter transparency (via video of the process) on slaughter and transparency attitudes based on people's core animal attitude and the effects on the clarity and comfort of euphemisms (slaughter vs. harvest). The research was done with a convenience sample of college students. Results showed information about slaughter only increased acceptance of the general concept of slaughter for people with high affinity for animals. None of the groups' attitude toward the specifics of the process changed. All of the groups expected a high level of transparency from the industry regardless of the video. With respect to frames, while slaughter was considered clearer, harvest was more comfortable. In sum, a slaughter paradox exists: people expect the industry to be forthcoming about slaughter, but to be reasonably transparent, details that they explicitly do not want to think much about must be shared. To ease the communication of those details, language mechanisms seem to offer a reasonable solution to meeting the transparency expectations while helping people cope with the facts.

Keywords: slaughter, meat, animal attitudes, transparency, values, euphemisms

Introduction

Increasing physical and mental distances between consumers and producers have important consequences on people's perception toward food (Herzog & Burghardt, 1988; Frans, 1999). Combined with disease outbreaks (Bovine spongiform encephalopathy (BSE), Avian Influenza, H3N2v/H1N1 ("swine flu"), *E. coli*, Salmonella, etc.), rapidly changing technology, and limited transparency, consumers' attitudes and trust towards the food industry have been altered. Korthals (2001) details that the fast pace of modern technology and the complexity of its major developments do not foster transparency, and as a consequence, consumers may feel that important concerns are not properly brought to public scrutiny.

In the case of the livestock industry, current consumer concerns include a variety of dilemmas related to food safety, health, environmental impacts, animal welfare and other moral objections, such as the use of new technologies (Harrington, 1994; Frans, 1999; Korthals, 2001; Grunert 2005). Eighteen years have passed since Harrington (1994) discussed the intersection of consumer fears of safety and livestock/meat industry practices, and since then, concerns about the effectiveness of controls and inspection procedures are still considerably high (NPR, 2010; NPR, 2011; Deloitte, 2011; Food Insight, 2012).

The focus area of this study relates to consumers' concerns about animal welfare, which involve questions about human-animal relationships (e.g., human dominance over animals versus the intrinsic value of animals), intensive production systems, and also their slaughter as a necessary means to provide food (Harrington, 1994). As the livestock industry faces increasing pressure to be more transparent, questions arise whether consumers' concerns are a result of information asymmetry and to what level of transparency the industry should be headed.

Transparency: An Attempt to Regain Consumer Trust

In the food system, trust is inversely related to consumer concerns and risk perception (Frans, 1999; Gellynck et al., 2006). In an attempt to regain consumer trust, a frequently proposed solution is to make the food industry more transparent by disclosing more information to and having improved communication with consumers and other stakeholder groups, like journalists (see for example: U.S. Farmers & Ranchers Alliance, 2012; Riley, 2012). Such action may also force the industry to change certain practices that would allow consumers to make more informed choices (Hoogland, de Boer, & Boersema, 2005).

Market failure due to asymmetrical information has been discussed for a long time and within many markets (Akerlof, 1970; Golan, 2001; Verbeke, 2005). It is important to recognize, however, that being more transparent does not mean organizations should share all information. Primarily, it means this information should be useful to its audience and in accordance to their needs. Within this consideration, Rawlins (2009) defines transparency as:

> [T]he 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)

Verbeke (2005) also emphasizes that just providing more information is not an effective solution to reduce asymmetry. Instead, information should address certain needs and expectations and be properly processed and used by its intended audience. Ultimately, the decisions about providing more information need to emerge from a consumer perspective. In reaction to worldwide food scares within the meat industry, governments posed new legislation, such as traceability and compulsory labeling, in an attempt to disclose more information and enhance transparency (Kees-Jan van, 2003). What has been noticed, however, is that although more information is available as a result of these requirements, it did not necessarily translate into more confidence among consumers (Beulens et al., 2005).

Transparency as a tool to develop a shared understanding among industry and stakeholder groups raises more complex questions for those in the food supply chain, and, in particular, the livestock industry. A shared understanding can mean two different things regarding any product (meat) or production methods (farming/ranching/processing): it could mean that all stakeholders possess the same information or it could mean that they possess the same attitudes or interpret that information the same. It likely is intended to mean both, but it is not often the case that people approach science or technological processes (particularly those applied to living beings like animals, therefore involving emotion) from the same worldview. Rarely is it an easy case of disagreements about ‘the facts’ when it comes to scientific, ergo agricultural disagreements or pressure from consumer concerns, but instead more fundamental disagreements on how those inside the livestock industry versus those outside the industry view non-human entities (Bovenkerk, 2006).

Beliefs, Values, and Attitudes toward Animals and Meat

Research aiming to understand consumer behavior and communication needs regarding animals and their meat commonly analyzes values, beliefs and attitudes underpinning those behaviors. This is in accordance with the theory of planned behavior that explains and predicts a person’s behavioral intention from attitudes toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991).

In a study conducted with non-activists (sample of students) and animal activists, Galvin and Herzog (1992) applied two instruments to understand the ethical ideology of these groups and if this would have an impact in their attitudes toward animals. The authors used a similar version of the Animal Attitude Scale developed by Herzog et al. (1991) and a specific instrument called Ethics Position Questionnaire (EPQ), which measured an individual ethical ideology by assessing its two main dimensions (idealism and relativism[1]). The results showed that activists were more likely than non-activists to hold an "absolutist" ethical orientation (the belief that moral principles are universal and that adhering to these principles will lead to positive consequences/general welfare). The authors also found that the EPQ dimension of idealism and gender were positively related to attitudes toward animal use, which means that individuals with higher idealism scores and females showed greater concern for the welfare of other species (Galvin & Herzog, 1992).

Values relating to animals and their meat are also commonly studied in the context of vegetarianism. In an online ethnographic study among new vegetarians from U.S., Canada, and UK, Fox and Ward (2008) identified two groups with different motivations: "health vegetarians" and "ethical vegetarians". While the first group adopted the vegetarian diet mainly by personal reasons (health concerns), the group of ethical vegetarians expressed more altruistic concerns, such as animal welfare. A common concern between these two groups was environmental issues, but these concerns were not taken into major consideration while deciding for the adoption of the vegetarian diet until later.

In a survey conducted in a Washington DC suburb, Dietz et al. (1995) also assessed individuals' values influencing the choice of a vegetarian diet. The authors used a modification of the value scales developed by Rokeach (1968) and Schwartz (1992) and initially worked with

[1] "Relativism is the degree to which individuals accept the belief that moral decisions should be based on universal principles. Idealism refers to the extent to which individuals believe that ethical behavior will always leas to positive consequences" (p.142).

four "value clusters": altruism, traditional, openness to change and self-enhancement[2]. In this study, none of the demographic variables (gender, education and age) had significant effect. However, when assessing values, individuals holding altruistic values were more likely to be vegetarians, while traditional values reduce the chances of adopting a vegetarian diet.

Through an overview of literature, Ruby (2012) identified that people who adopt a meat-free/reduce meat diet tend to be more liberal in their political view, altruists, caring about animal welfare, with higher level of empathy for animal suffering, opposed to hierarchy and authoritarianism and attentive to social and environmental issues.

The repeated finding that environmental issues are foundational in meat consumption and animal protectionism is notable. Research on people's environmental protectionism has focused on altruism and self-interest values as a basis for environmentalism (Dietz et al., 2005). These values were also identified (directly or indirectly) in this literature review regarding beliefs, values and attitudes towards animal and their meat showing an overlap of those themes. Altruist people tend to assign intrinsic values to other species, arguing that their need extends beyond human uses (Dietz et al., 2005).

Beliefs, Values, and Attitudes toward Slaughter

Few studies have directly examined people's values, beliefs, and attitudes specific to livestock slaughter, meat fabrication and processing. Studies regarding animal attitudes tend to focus in aspects regarding pre- and post-slaughter aspects. Meile and Evans (2010) confirmed that, nowadays, ethical concerns about eating animals are predominantly linked with the

[2] Altruism (unity with nature, protecting the environment, preventing pollution, respecting the earth, a world at peace, equality, social justice, helpful, a world of beauty, sense of belonging); Self-enhancement (authority, social power, wealth, influential); Openness to change (an exciting life, a varied life, curious, enjoying life); Tradition (honoring parents and elders, honest, family security, self-discipline, obedient, clean, politeness, social order, loyal)

conditions of animals during their lives in factory farming (animal welfare) and to the impacts of this production system.

The only study found about slaughter perception was conducted by Herzog and McGee in 1983, and for this reason, a more detailed synopsis of it is presented.

The authors examined college students' psychological reaction to slaughtering cattle and swine. These were students who worked in their university's livestock slaughter and meat fabrication and processing facility (meat lab). Through a survey, most of these students reported they felt that practicing slaughter had been a valuable and significant experience in their lives, helping to clarify their attitudes about eating animals. More experienced students at slaughtering even admitted they felt accomplishment in doing it (Herzog & McGee, 1983).

Many reported they had felt nauseous during the slaughter process and many had felt guilty about being involved in the killing. Inexperienced students were more likely to avoid eating meat after slaughtering and the aspects students felt particularly repugnant about slaughtering related to the actual killing of the animal and in cutting off hooves and head, skinning and removal of the viscera (Herzog & McGee, 1983).

The authors also presented to the students a list of ten uses of animals from which they had to express their approval or not. From all those ten items, the one with the greatest frequency of approval (93%) was the activity of eating meat. Later, in individual interviews, many students justified the slaughtering practice as necessary to feed people. In concluding remarks about the work, these authors warned that the human and animals relationship involves emotions and values, and therefore, the research in this field should always expect self-deception and socially approved answers (Herzog & McGee, 1983).

Handling Animals Concerns in an Omnivorous Diet

While consumers express multiple concerns toward animals, an inevitable question arises: how do consumers hold so many strong feelings about them and, still, are able to consume meat? Also, of special interest for this research, would increasing industry transparency by providing more information be worthwhile?

Research shows that increasing concerns toward the livestock industry—especially those in animal welfare—combined with consumers' detachment from the production process, allow people to consume in ways that essentially conflict with their values. That is, as a result of the dissociation of the animal from the food, people unintentionally end up supporting practices they actually dislike, such as the killing of animals and factory faming (Hoogland et al., 2005).

Plous (1993) discusses a number of psychological mechanisms that serve to dissociate consumption from animal suffering, such as language, appearance and socialization. With respect to language, many terms have been used to depersonalize animals (e.g., harvest, crops) or to name animals differently from their live form (cows as beef, pigs as pork) (Plous, 1993; Croney, 2008). The appearance may be another mechanism to distance animal products from their live forms and so they are sold without heads and feet, for example. The way people are socialized to think about animals (as loving and happy creatures, but necessary for a balanced diet) also contributes to this dissociation (Plous, 1993).

Loughnan, Haslam, and Bastian (2010) term this phenomenon the "meat paradox". Through an experiment conducted with students from the United Kingdom, the authors support the hypothesis that consuming meat leads to a reduction of moral concerns for both animals in general and for the animal being eaten. That is, by diminishing moral concerns from animals, consumers apparently are able to solve the conflict between liking meat while simultaneously caring about animals (Loughnan et al., 2010).

An important pondering about this issue is that although part of these dissociation mechanisms may be deeply rooted in our society, and thus, unintentionally practiced by consumers, there is also clear evidence that the industry has purposely reinforced them. Lerner and Kalof (1999) examined animals' portrayal on television commercials from NBC in the U.S. One of the most commons themes identified was the representation of animals as tools (for human use or consumption), conveying the message that it is acceptable to eat them. The researchers also noticed that one of the strategies to eliminate any discomfort in the eating of animals was the absence of anthropomorphism, which helped to maintain detachment from the animal and the fact that it would be eaten.

To better understand this disassociation, Hoogland et al. (2005) studied if Dutch consumers were sensitive to differences in transparency (reminders) of meat's animal origin. To accomplish this, the authors associated consumer's values (measured in the first step of the research) with awareness of meat's animal origin after they had been stimulated to think about associations between animals and meat. The authors selected 15 items of the Portrait Values Questionnaire (PVQ) from Schwartz et al. (2001) within four value types: Universalism, Power, Hedonism and Security. The results showed that values correlated with awareness of animal origin mainly among those with universalistic values, which tended to give more thought about the fact that meat comes from an animal. Oppositely, consumers with a hedonistic value orientation tended to give less thought to the fact that meat comes from an animal. In both cases, this pattern was disturbed by enhanced transparency (Hoogland et al., 2005). Values were also associated with feelings of ease and feelings of unease after being exposed to the reminders with the objective to look for changes in behavior. The results indicated that those who prioritize universalistic values had more unease when reminded of the association between meat and animal. As a consequence, the results made the authors question the use of transparency as policy tool (Hoogland et al., 2005).

The results presented throughout this literature review show that despite the increasing pressure for transparency and more information, in the case of the livestock industry, this should possibly be addressed more carefully. Meat consumption can be classified as paradox in its nature, because at the same time consumers care about living animals and hold strong values toward it, there are mechanisms that allow them to cope with the taboo of slaughter. Before deciding for a simply disclosure of more information, it is important to study the possible reactions and outcomes in consumer attitude.

Purpose and Objectives

The literature leads to several questions that this study sought to address. The first one conjures up the age-old question of knowledge-deficit model (information asymmetry) as a contributor to attitude formation and change: would consumers be more accepting of certain livestock/meat production practices with more communication/information (transparency) about them? Second, how exactly would consumers react to necessary parts of this system, such as slaughter, that they (meat eaters) actively and subconsciously repress? Third, are the ways this taboo topic is communicated using euphemisms (e.g., “harvest” as opposed to “slaughter”) offering greater understanding or willingness to think or about it and/or simply blurring clarity to achieve greater acceptance or comfort with these practices? The purpose of this study was to examine the effects of information about slaughter and meat fabrication and processing on people’s attitudes and information framing interpretations and preferences. The objectives were:

(1) to assess whether core animal attitude (closer to values) or communication about livestock slaughter is a better predictor of acceptance/attitudes toward slaughter and slaughter transparency, and (2) to determine the effectiveness of the harvest versus slaughter frames before and after communication about livestock slaughter. This research fits with the American Association for Agricultural Education research priority two in the practices and products adoption decisions area, which calls for research to "address the new challenges and opportunities brought about by rapidly advancing technologies and evolving consumer demands and needs" (Doerfert, 2011, p. 2). Although the agricultural process (livestock slaughter) dealt with in this study is not necessarily new, it is an area that is open to public scrutiny and one that has been inadequately explored empirically, yet has critical implications for agricultural communication.

Methods

To address the research objectives, a one group pre-post design was used. A video showing the entire slaughter and meat fabrication process of cattle, swine, and sheep was developed. The video only showed the process and contained no other variables (narration, music, text, etc.) than the audio-visual of the process. The people in the video doing the slaughtering and processing worked in a meat science lab on a university campus. Only the cattle and swine segments were used in the treatment. A convenience sample of college students (n = 70) enrolled in a general education credit animal science for non-meat science majors class was used. The study was conducted on their first day of class.

The instrument consisted of a combination of researcher-developed and established scales. Measures were directed toward cattle and swine together (referred to as livestock on the instrument) as one. The instrument was administered on paper, and the data were entered into SPSS version 20 for analysis.

A core animal attitude scale was created based on Wuensch, Jenkins, and Poteat (2002) Animal Rights Scale and Herzog, Betchart, and Pittman (1991) Animal Attitudes Scale. The Likert scale ranged from 1-strongly disagree to 5-strongly agree (higher means indicating greater affinity for animals' protection). The scale measured core attitude toward animals that would be connected with values, and was therefore treated as a stable, underlying attitude that may predict livestock slaughter attitude. The scale as a whole had the strongest reliability (Chronbach's α = 0.90, grand mean of 2.66 and *SD* =.55). The respondents answered these questions only one time, before watching the slaughter video, because it was unlikely for core animal attitude based in animal values would change.

A general slaughter attitude scale consisted of 7 items with a Likert scale ranging from 1-strongly disagree to 5-strongly agree (higher means indicating greater negative attitudes toward the general concept of slaughter). An example of one of the questions: "The slaughtering process for livestock is humane." This scale had a reliability of $\alpha = 0.88$ in the pre-test (before watching the video) and $\alpha = 0.87$ in the post-test (after the video).

The slaughter transparency attitude scale was made of 4 items with a Likert scale ranging from 1-strongly disagree to 5-strongly agree (higher means indicating greater positive attitudes toward transparency of slaughter). This scale had a reliability of $\alpha = 0.71$ in the pre-test and $\alpha = 0.54$ in the post-test.

The slaughter process attitude scale comprised 8 items whose Likert scale ranged from 1-very negative to 5-very positive (higher means indicating greater positive attitudes toward the process of slaughter and processing). Items measured attitude toward moving livestock into the slaughtering facility, killing/slaughter (or “stunning”), cutting the animal’s throat to allow it to bleed, skinning, removal of head, removal of feet, removal of internal organs, and splitting the carcass. This scale had a reliability of $\alpha = 0.97$ in the pre-test (before watching the video) and $\alpha = 0.96$ in the post-test (after the video). Overall, responses indicated that the students held neutral attitudes toward the process of slaughter and processing.

Preferences for different frames of livestock slaughter were measured using three different constructs as they applied to “slaughter” and “harvest”: comfort, clarity, and communication role (sender or receiver). Comfort was measured with a single, 5 item semantic differential scale ranging from 1-very uncomfortable to 5-very comfortable. Clarity was measured with a single, 5-item semantic differential scale where 1-very confusing and 5-very clear. Communication role was measured with two, dichotomous choice questions that asked them to indicate their frame preference as the sender (“if you have to explain to someone else how livestock are killed for meat”) and receiver (“if you had to listen or read about how livestock are killed for meat”).

Results

Sample Characteristics

The demographic characteristics included in the survey referred to age, gender, rural-urban background, meat consumption frequency, and major of study. The respondents’ age ranged from 19 to 25 years old, with a mean of 21 years old (SD =1.89). Males accounted for 38.7% (n = 24) and females for 61.3% (n =38) of the valid answers. Most of the respondents described the community in which they spent the most part of their lives as suburban (n =21, 34.4%) or suburban outside of a major metropolitan city (n =19, 31.1%), followed by an urban community (n = 8, 13.1%), rural not a farm (n = 7, 11.5%) and rural on a farm (n = 6, 9.8%).

Most people consumed meat on a regular basis, 28.6% (*n* = 18) between 4-7 times in a week, 27% (*n* = 17) between 8-14 times in a week, 23.8% (*n* = 15) between 1-3 times in a week, 11.1% (*n* = 7) more than 14 times in a week and the rest less than once a week (*n* = 4, 6.3%) or never (*n* = 2, 3.2%). The majority of the students were majoring in animal sciences (*n* = 28, 45.2%), followed by social sciences (*n* = 23, 37.1%).

To analyze the role that core animal attitude played in slaughter-specific attitudes, a hierarchical cluster analysis using the squared Euclidean distance and the Ward's method was conducted to group respondents with similar responses in the core animal attitude scale. This analysis returned three groups of people with different levels of animal values (high animal affinity (HAA): *n* = 32, *M* =3.24, moderate animal affinity (MAA): *n* = 21, *M* = 2.57), and low animal affinity (LAA): *n* =15, *M* =1.96. A Discriminant Analysis using the Wilks' lambda method was also executed to check for this classification, revealing that 97% of the original grouped cases were correctly classified. Descriptive analysis of those groups also showed that HAA was 83% females, while the other two groups had males as the majority. Overall, females scored 3.03 in the core animal attitude scale and men 2.30. General means for each item for the entire sample (*n* = 70) are in Table 1.

Table 1
Average Item Statistics in Core Animal Attitude Scale

	M	*SD*
In general, I think than human economic gain is more important than setting aside more land for wildlife.*	4.09	0.99
Livestock have a different purpose than pets and therefore, do not require the same welfare standards.*	3.76	1.15
The production of inexpensive meat, eggs, and dairy products justifies maintaining animals under crowded conditions.*	3.40	1.12
Too much fuss is made over animal welfare these days when there are many human problems that need to be solved.*	3.35	1.13
Wild animals, such as mink and raccoons, should not be trapped and their skins made into fur coats.	3.34	1.07
Basically, humans have the right to use animals as we see fit.*	3.28	1.18

Breeding animals for their skins is a legitimate use of animals. *	3.21	1.13
God put animals on Earth for man to use.*	3.04	1.32
It is morally wrong to hunt wild animals just for sport.	2.98	1.25
I sometimes get upset when I see wild animals in cages at zoos.	2.90	1.17
I do not think that there is anything wrong with using animals in medical research.*	2.72	1.08
I think people who object to raising animals for meat are too sentimental.*	2.69	1.16
Much of the scientific research done with animals is unnecessary and cruel.	2.63	0.99
Continued research with animals will be necessary if we are ever to conquer diseases such as cancer, AIDS, and heart disease.*	2.16	0.80
Some aspects of biology can only be learned through dissecting preserved animals such as cats.*	2.13	1.01
I have seriously considered becoming a vegetarian in an effort to save animal lives.	2.07	1.35
I think it is perfectly acceptable for cattle and hogs to be raised for human consumption.*	1.74	0.79
There is nothing morally wrong with hunting wild animals for food.*	1.59	0.74
It is morally wrong to eat beef and other "red" meat.	1.50	0.56
It is morally wrong to eat chicken and fish.	1.41	0.53

Note. Measured on a Likert scale of agreement from 1—5. *Reverse-coded. Higher means indicate greater affinity for the protection of animals and animal rights.

Objective 1

General slaughter attitude. When comparing the means of the general slaughter attitudes scale between the three groups by executing a one-way between-groups analysis of variance, there was a statistically significant difference between them, $F(2,59) = 14.03$, $p = .00$. Post-hoc comparisons using Tukey HSD test indicated that the mean score for HAA ($n = 30$, $M = 2.99$, $SD = .76$) was statistically different from LAA ($n = 15$, $M = 1.93$, $SD = .51$) and MAA ($n = 17$, $M = 2.29$, $SD = .62$). However, there were no significant differences between MAA and LAA. The changes in this scale were also analyzed for each group before and after the video, showing that only HAA presented a significant change: HAA before ($n = 28$, $M = 3.00$, $SD = .77$) and after the video ($M = 2.75$, $SD = .86$), $t(27) = 2.71$, $p = .01$ (two-tailed) / LAA before ($n =$

15, $M = 1.93$, $SD = .51$) and after the video ($M = 1.81$, $SD = .53$), $t(14) = 1.04$, $p = .32$ / MAA before ($n = 17$, $M = 2.29$, $SD = .62$) and after the video ($M = 2.13$, $SD = .69$), $t(16) = 2.10$, $p = .052$.

Slaughter process attitude. When comparing the means of the slaughter process attitude scale between the three groups by executing a one-way between-groups analysis of variance, there was a statistically significant difference between them, $F(2,59) = 8.8$, $p = .00$. Post-hoc comparisons using Tukey HSD test indicated that the mean score for HAA ($n = 30$, $M = 2.54$, $SD = .78$) was statistically different from LAA ($n = 15$, $M = 3.56$, $SD = .86$) and MAA ($n = 17$, $M = 3.13$, $SD = .77$). However, there were no significant differences between LAA and MAA. The changes in this scale were also analyzed for each group, but none of them presented significant alterations before and after the video: HAA before ($n = 29$, $M = 2.53$, $SD = .79$) and after the video ($M = 2.60$, $SD = .90$), $t(28) = -.61$, $p = .55$ (two-tailed) / LAA before ($n = 15$, $M = 3.56$, $SD = .86$) and after the video ($M = 3.61$, $SD = .74$), $t(14) = -.506$, $p = .62$ / MAA before ($n = 17$, $M = 3.13$, $SD = .77$) and after the video ($M = 3.22$, $SD = .78$), $t(16) = -1.07$, $p = .30$.

Slaughter transparency attitude. When comparing the means of the slaughter transparency attitude scale between the three groups by executing a one-way between-groups analysis of variance, there was no statistically significant difference between them, $F(2,59) = .67$, $p = .52$. The changes in this scale were also analyzed for each group, but none of them presented significant alterations before or after the video: HAA before ($n = 29$, $M = 4.05$, $SD = .67$) and after the video ($M = 3.89$, $SD = .61$), $t(28) = 1.84$, $p = .08$ (two-tailed) / LAA before ($n = 15$, $M = 4.03$, $SD = .44$) and after the video ($M = 3.88$, $SD = .58$), $t(14) = 1.19$, $p = .26$ / MAA before ($n = 17$, $M = 3.85$, $SD = .61$) and after the video ($M = 3.68$, $SD = .58$), $t(16) = 1.77$, $p = .10$.

Objective 2

In examining whether comfort or clarity changed for either frame after watching the video, clarity of slaughter was the only one that showed a statistically significant change from the pre-test (M = 3.61, SD = .85) to the post-test (M = 3.85, SD = .85), $t(60) = -2.21$, $p = .03$. The effect size was $\eta^2 = .08$, which is a moderate effect size. While comfort and clarity generally increased after watching the video, only the clarity of the slaughter frame significantly increased.

In examining the differences between the two frames, slaughter was the frame students found clearer, while harvest was the frame they felt more comfortable with both before seeing the video and after.

When acting as the sender in communication, 41% (n = 25) indicated preference for the slaughter frame before seeing the video and 47.5% (n = 29) after. When acting as the receiver in communication, 44.3% (n = 27) indicated preference for the slaughter frame before seeing the video and 50.8% (n = 31) after. Paired samples t-tests with the frame preferences dummy coded as slaughter=1 and harvested=2 were conducted to determine whether 1) the video had an effect on students' frame preference depending on whether they were the sender or receiver, and 2) which frame students tended to prefer depending on whether they were the sender or receiver. Results indicated the video did not affect their preference for slaughter or harvest whether acting as the sender, $t(59) = 1.43$, $p = .16$, or receiver, $t(59) = 1.27$, $p = .21$. Furthermore, the communication role also did not matter, meaning students equally preferred either frame whether acting as sender or receiver.

Conclusions and Discussion

In seeking to address questions about the transparency of livestock slaughter and the effectiveness of communication, this study revealed several implications for agricultural communication. The video only had an effect on those who had high affinity for animals (core animal attitude) and only on positively increasing their general slaughter attitude (acceptance). This means that communication/information about livestock slaughter only has potential influence for those who have attitudes indicative of animal protectionism values. Prior to watching the video, this group was neutral on their attitude toward livestock slaughter, but after it was more positive/accepting of it. Perhaps this was because the video revealed the process to not be as bad as originally thought. This finding is opposite from what Hoogland et al. (2005) found with people who have stronger universalistic values, thus, stronger animal protectionism values. A possible explanation for this relates back to the type of people who are most likely to have high affinity for animals (strong core animal attitude). Recall that Galvin and Herzog (1992) found that females tended to score higher on the idealism value. Individuals with higher idealism scores and females showed greater concern for the welfare of other species. The HAA group was 83% female, which may be why they are more likely to be influenced/changed by information. In general, their high affinity for animals causes them to have a stronger attitude (albeit originally negative) toward slaughter and bigger changes, whereas the other two groups simply do not have enough affinity for the attitude needle to move. For people with low or moderate animal affinity, their attitude toward livestock slaughter remained positive; therefore, communication about it is unlikely to enhance their acceptance.

With respect to slaughter process attitude, which assessed attitude toward each specific part of the process, the video had no effect on any of the groups. The HAA group maintained a negative slaughter process attitude and the LAA and MAA groups maintained their positive slaughter process attitude. One possible explanation for these results is that people generally avoid thinking deeply or specifically about the steps involved in livestock slaughter (Hoogland et al., 2005; Plous, 1993). When forced to think about these steps, there is greater resistance to changing their attitude.

For slaughter transparency attitude, none of the groups changed after seeing the video. Their expectation about the industry's level of transparency was already high. This means they expect the industry to be transparent and active in communicating about livestock slaughter so receiving the information about it via video only confirmed what they already expected. Transparency is a mechanism that enhances the accountability relationship between publics and organizations; therefore, this research shows publics will expect organizations to communicate with them about livestock slaughter so they can hold the industry accountable (Rawlins, 2009). Furthermore, the present study shows that once livestock slaughter information is received, the industry should not expect to affect all people's acceptance. In fact, only those with a negative attitude toward it are likely to change. As Beulens et al. (2005) noted and this work empirically demonstrates, more information does not necessarily translate into more confidence among all consumers; however, it is indeed expected.

To help facilitate transparency and shared understanding, different frames for the concept of livestock slaughter were compared on the dimensions of comfort and clarity. While slaughter was the frame they felt was clearer (and even more so after the video), harvest was the frame they felt more comfortable with, regardless of the video. Students equally preferred the slaughter or harvest frame whether acting as sender or receiver in a communication context. This could because clarity and comfort equalize one another; although slaughter is clearer, harvest is more comfortable thereby making no significant differences in whether one is used over the other. People are aware that animals must be killed/slaughtered in order for them to eat meat, but they actively repress that part to simultaneously appreciate the lives of animals and their well-being while consuming meat (Hoogland et al., 2005). The harvest frame offers more comfort because it is a language mechanism to reduce the cognitive dissonance of liking animals while liking meat (Plous, 1993).

In summary, not all people may be affected by information (greater transparency) about livestock slaughter. Transparency is a useful strategic communication tools for the industry insofar as to meet publics' expectations for accountability in the livestock slaughter process. Information has potential to make the greatest impact toward acceptance (general slaughter attitude) on those who have values and attitudes indicative of animal protectionism, but whether that acceptance is actually sustained or affects behaviors, like meat consumption and other activities that would pressure industry changes is another matter. Being reminded of the animal and process through clear terminology, like slaughter, and focusing on the specifics of it may not be useful in garnering acceptance. Similar to Loughnan et al. (2010) concept of the meat paradox, a slaughter paradox also seems to exist: people expect the industry to be forthcoming about slaughter, but to be reasonably transparent, details that they explicitly do not want to think much about must be shared. To ease the communication of those details, language mechanisms seem to offer a reasonable solution to meeting the transparency expectations while helping people cope with the facts.

Limitations and Recommendations

The convenience sample of college students taking an animal science class has inherent limitations for generalizability given the nature of this study. Because college students maintain the same neural networks into later adulthood (Peterson, 2001) and the study was run on the first day of class, the findings are still useful. Of course, other adult populations should be tested and a true experiment using a control group should be designed. It would also be interesting to conduct the study with a younger demographic to understand how they cope with livestock slaughter and whether it is different from adults. Doing additional attitudinal assessments 30 and 60 days out would show whether those with high animal affinity in particular revert back to their original attitude toward slaughter. Those in the industry may find it useful to conduct polls to determine what proportion of the population falls into the high animal affinity group and is therefore more likely to be changed by transparency about slaughter. Furthermore, it would be beneficial to determine which of these groups might have strong opinion leadership or contain more opinion leaders on the matter of livestock slaughter or animal agriculture in general.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior & Human Decision Processes*, *50*(2), 179.

Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *Quarterly Journal of Economics, 84*(3), 488-500.

Beulens, A. M., Broens, D., Folstar, P., & Hofstede, G. (2005). Food safety and transparency in food chains and networks Relationships and challenges. *Food Control*, *16*(6), 481-486.

Bovenkerk, B. (2006). Biotechnology, disagreement and the limitations of public debate. In M. Kaiser & M. E. Lien (Eds.). *Ethics and the Politics of Food*, (pp. 97-102). The Netherlands: Wageningen Academic Publishers.

Croney, C. C. (2008). The ethics of semantics: Do we clarify or obfuscate reality to influence perceptions of farm animal production?. *Poultry Science, 87*(2), 387-391.

Dietz, T., Frisch, A., Kalof, L., Stern, P. C., & Guagnano, G. A. (1995). Values and vegetarianism: An exploratory analysis. *Rural Sociology*, *60*(3), 533-542.

Dietz, T., Fitzgerald, A., & Shwom, R. (2005). Environmental values. *Annual Review of Environment & Resources*, *30*(1), 335-372.

Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.

Food Insight Survey Research (2012, May 23). *2012 Food & Health Survey: Consumer Attitudes Toward Food Safety, Nutrition and Health.* Retrieved September 14, 2012 from http://www.foodinsight.org/Content/3848/FINAL%202012%20Food%20and%20Health%20Exec%20Summary.pdf

Fox, N., & Ward, K. (2008). Health, ethics and environment: A qualitative study of vegetarian motivations. *Appetite*, *50*(2/3), 422-429.

Frans W. A., B. (1999). Food, consumer concerns, and trust: Food ethics for a globalizing market. *Journal of Agricultural & Environmental Ethics*, *12*(2), 127-139.

Galvin, S. L., & Herzog Jr., H. A. (1992). Ethical ideology, animal rights activism, and attitudes toward the treatment of animals. *Ethics & Behavior*, *2*(3), 141.

Gellynck, X., Verbeke, W., & Vermeire, B. (2006). Pathways to increase consumer trust in meat as a safe and wholesome food. *Meat science, 74*(1), 161.

Golan, E., Kuchler, F., Mitchell, L., Greene, C., & Jessup, A. (2001). Economics of food labeling. *Journal of Consumer Policy*, *24*(2), 117-184.

Grunert, K. G. (2005). Food quality and safety: Consumer perception and demand. *European Review of Agricultural Economics, 32*(3), 369-391.

Harrington, G. (1994). Consumer demands: Major problems facing industry in a consumer-driven society. *Meat science, 36*(1-2), 5-18.

Herzog, H. A., & Burghardt, G. M. (1988). Attitudes toward animals: Origins and diversity. *Anthrozoos, 1*(4), 214-222.

Herzog, H. A., & Mcgee, S. (1983). Psychological-aspects of slaughter: Reactions of college-students to killing and butchering cattle and hogs. *International Journal for the Study of Animal Problems, 4*(2), 124-132.

Hoogland, C. T., de Boer, J., & Boersema, J. J. (2005). Transparency of the meat chain in the light of food culture and history. *Appetite, 45*(1), 15-23.

Kalof, L., Dietz, T., Stern, P. C., & Guagnano, G. A. (1999). Social psychological and structural influences on vegetarian beliefs. *Rural Sociology*, *64*(3), 500-511.

Kees-Jan van, D. (2003). Beef labelling: The emergence of transparency. *Supply Chain Management*, *8*(1), 32-40.

Korthals, M. M. (2001). Ethical dilemmas in sustainable agriculture. *International Journal of Food Science & Technology*, *36*(8), 813-820.

Lerner, J. E., & Kalof, L. (1999). The animal text: Message and meaning in television advertisements. *Sociological Quarterly*, *40*(4), 565.

Loughnan, S., Haslam, N., & Bastian, B. (2010). The role of meat consumption in the denial of moral status and mind to meat animals. *Appetite*, *55*(1), 156-159.

NPR. NPR-Thomson Reuters Health Poll. (2010, July 27). *Most Americans worry about safety of food supply*. Retrieved from http://www.npr.org/blogs/health/2011/06/07/128794927/most-americans-worry-about-safety-of-food-supply

NPR. NPR-Thomson Reuters Health Poll. (2011, September 12). *Poll: Americans' concern about food safety drops*. Retrieved from http://www.npr.org/blogs/health/2011/09/08/140291032/poll-americans-concern-about-food-safety-drops

Peterson, R. A. (2001). On the use of college students in social science research: Insights from a second-order meta-analysis. *Journal of Consumer Research, 28.* doi: 10.1086/323732

Plous, S. S. (1993). Psychological mechanisms in the human use of animals. *Journal of Social Issues*, *49*(1), 11-52.

Rawlins, B. (2009). Give the emperor a mirror: Toward developing a stakeholder measurement of organizational transparency. *Journal of Public Relations Research, 21*(1), 71–99.

Riley, J. (2012, August 24). Glass walls: A look inside a typical large beef plant. [Web log]. Retrieved from http://blog.meatami.com/2012/08/glass-walls-a-look-inside-a-typical-large-beef-plant/

Ruby, M. B. (2012). Vegetarianism: A blossoming field of study. *Appetite, 58*(1), 141-150.

U.S. Farmers & Ranchers Alliance. *About USFRA*. Retrieved from http://usfraonline.org/about/what-are-the-food-dialogues

Verbeke, W. (2005). Agriculture and the food industry in the information age. *European Review of Agricultural Economics*, *32*(3), 347-368.

Wuensch, K. L., Jenkins, K. W., & Poteat, G. M. (2002). Misanthropy, idealism and attitudes towards animals. *Anthrozoös*, *15*(2), 139-149.

Communication Strategies: Maximize the Effectiveness of Your Communication by Using Short Form, Medium Form, and Long Form Methods

Professional Paper

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Abstract

The responsibility to communicate research has not changed since the Morrill Act passed in 1862, but the methods have. We are left trying to determine the best way to reach our audiences and advance our legacy. Extension educators, in particular, are struggling to communicate with target audiences as communication channels change and devices proliferate. Incorporating new communication tools into everyday work is often seen as an overwhelming challenge rather than an opportunity to streamline and repurpose traditional communication methods.

At the 2012 K-State Research and Extension Annual Conference, communicators at Kansas State University unveiled a three-part session to introduce experiment station researchers and extension educators to communication strategy basics. In the sessions, presenters identified appropriate short-form, medium-form, and long-form communications, with examples from successful organizational communicators. These forms included both traditional and contemporary communication methods, with examples of different strategies — from news releases and publications to Twitter and blogs — for communicating a timely issue. Participants learned to emphasize sharable visuals in social media. The presentation included hands-on activities along with tips and techniques. Participants left the sessions with communication strategies they developed individually for a specific plan of work.

Keywords: social media, land-grant educators, communication strategy, communication methods, traditional communications, contemporary communications

Communication Strategies: Maximize the Effectiveness of Your Communication by Using Short Form, Medium Form, and Long Form Methods

Introduction

Staff members in the Department of Communications and Agricultural Education at Kansas State University support the communications and technology needs of the land-grant educators within K-State Research and Extension. In recent months, extension educators frequently have requested social media training in areas from learning to set up Facebook pages to support their units or program areas to using Twitter, Pinterest, and YouTube. When hired, all new extension agents participate in two days of communication development that includes traditional methods — such as writing for newsletters, news columns or news articles, radio production, and newsletter design suggestions — as well as an overview of best practices for social media. The communication sessions are open to all agents, but experienced agents rarely attend, and many struggle as they learn to integrate new communication technologies into their work.

Each agent and specialist in Kansas completes up to three plans of work that include strategies for meeting annual goals and objectives. Most agents identify key messages, inputs, and outcomes but do not think about developing communication strategies as part of these plans. This problem is not unique to K-State Research and Extension. In the October 2010 issue of the Journal of Extension, Kinsey wrote, “Unfortunately, due to time constraints and other barriers, many educators continue to use existing methods of disseminating information rather than adopting new outreach methods.” She concluded that social media tools may extend extension's educational reach and that educators will find social media tools easy to use, readily available, free, and an interesting addition to dissemination strategies (Kinsey, 2010). “To make the most of social media tools,” Kinsey continued, “Extension educators should consider a variety of outreach methods and choose those that will provide the widest outreach for the time they have available to produce educational content.”

Other researchers have come to the same conclusion. Cornelisse et al. wrote, “Collectively termed ‘social media,’ these new communication tools have created vast opportunities for extension professionals in how they perform their work and how businesses interact with consumers.” The authors further stated the new tools are a source for news, events, market updates, and conversations.

A panel presentation on social media at the 2011 K-State Research and Extension Annual Conference addressed extension’s need to adopt new tools to fulfill its mission. Eli Sagor, an extension forester at the University of Minnesota, said the land-grant educator’s role today is “to help people think critically, interpret, analyze, and apply information they gather from all of the different platforms.” He suggested using available free tools, which helps make content from land-grant educators more discoverable.

Approaching these tools without a strategy, however, presents difficulties. Robideau and Santl’s Strengthening 4-H Communication through Technology project in Northwest Minnesota concluded that “jumping into” social media tools “without established interest and strategy” would not be successful (2011). A survey of social media use among extension family economics educators revealed that respondents were fairly comfortable with Facebook but were more unsure about other tools; furthermore, these educators were unsure how to report their work in this area of communication on annual reports and evaluations or how to interpret analytics and metrics (O'Neill, Zumwalt, and Bechman, 2011).

Extension professionals clearly need guidance in developing a communication strategy, implementing the strategy, then maintaining communication channels and defining and reporting success. As communicators as well as trainers and supporters of extension educators, we aimed to provide a framework for extension professionals to use to simplify the process of planning and executing effective communication.

Procedures

We presented a three-part track at the 2012 K-State Research and Extension Annual Conference to introduce experiment station researchers and extension educators to communication strategy basics. Communicators helped the educators consider and outline strategies for their plans of work. They learned to categorize communication tools, both traditional and contemporary, into three forms: short, medium, and long, with each form offering specific advantages in communicating with segments of the extension audience. A poster session entry supplemented the presentation sessions (Figure 1).

Figure 1. We used a 4-ft by 4-ft poster to summarize our strategy for a poster session and provide a visual summary and reference throughout all three sessions.

The first session introduced the concept of categorizing communications as short form, medium form, and long form. We chose these categories because they were easy to understand, and although some forms of communication could fall into more than one category, we encouraged participants to identify how the audience views and interacts with the communication and what time investment each category requires. For example, reading a tweet or viewing a photo takes only a few seconds, whereas reading a blog entry of more than a paragraph takes several minutes. Participants learned to identify the communication forms and think about how different audiences may be reached with each form. We presented examples from successful K-State Research and Extension communicators, along with other Kansas groups such as the Kansas State Fair and the Kansas Department of Agriculture. The examples reflected topics the participants were familiar with, either through work or location (Kansas) and clearly demonstrated how different strategies helped communicate a timely issue to different audiences.

In the short-form area, we emphasized using sharable images and resources and making the most of brief posts for audience members with mobile devices who prefer quick information, particularly through Twitter. In the medium-form portion of the presentation, we discussed updating websites, developing good Facebook posts, and using handouts, newsletters, news releases, audio, and other traditional forms of communication effectively and linking them together by, for example, posting audio to websites and Tweeting links to electronic versions of newsletters. In considering long-form, in-depth communication, we discussed the advantages of blogs, social media series (posts that build on each other to provide information through a time period such as a themed week or a certain season), videos, and conventional publications and the necessity of building an audience that seeks extension's authoritative, research-based information. Throughout the presentation, we used PowerPoint and referred to our poster and supporting handouts to explain the strategy.

The second session was a hands-on workshop to help participants immediately apply what they learned using an example from their own work locations or areas of expertise. Individuals completed worksheets (Figure 2) to outline their plans and then formed groups of three or four to discuss and compare their ideas. Communications staff assisted as questions arose, and one member of our team shared his worksheet detailing a communication strategy for K-State Research and Extension Information Technology (IT) Support in the event of a computer virus outbreak (Figure 3). A large group discussion of ideas shared by participants completed the session.

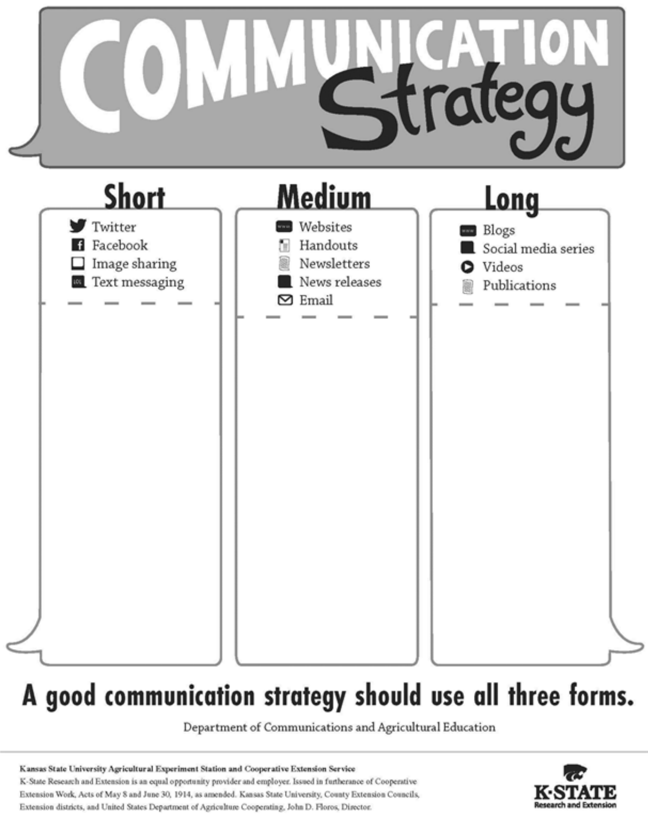

Figure 2. Participants completed a worksheet during the hands-on workshop portion of the three-part conference session.

COMMUNICATION Strategy

Short

- Twitter
- Facebook
- Image sharing
- Text messaging

Twitter:
* Initial posts to let people know what's going on
* Updates while the the virus is in the wild and infecting users
* Drive traffic to other outlets for more information

Facebook:
* Post much of the same content as Twitter
* Encourage comments and discussion, ask questions and get feedback

Images:
* Infographic about prevalence of viruses on the internet

Text Messaging
* Sign up for alerts from our office
* Alert users immediately when urgent action is needed

Medium

- Websites
- Handouts
- Newsletters
- News releases
- Email

Website:
* Post information about current happenings
* Link to all other content
* Create a library of good content for when viruses

Handouts:
* How to keep your computer safe
* What to do when you get a virus

News Releases:
* Let the general public know if it affects them
* Share information for everyone

Email:
* Create digest of information from other outlets
* Reach more people quickly
* Encourage conversation to build one-on-one relationships

Long

- Blogs
- Social media series
- Videos
- Publications

Blogs:
* Long post with in depth info about the virus and what to do about it
* Direct traffic to other outlets for most recent information
* Invite comments and respond to build a wealth of info

Videos:
* Demonstrate some of the usual symptoms of a virus program
* Show quick steps users can take before calling support

Social Media Series:
* Offer training in short, easy to follow segments

Publications:
* Computer maintenance guide and glossary

A good communication strategy should use all three forms.

Department of Communications and Agricultural Education

Kansas State University Agricultural Experiment Station and Cooperative Extension Service
K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension districts, and United States Department of Agriculture Cooperating, John D. Floros, Director.

K-STATE Research and Extension

Figure 3. A member of our team provided participants with a sample strategy worksheet for K-State Research and Extension Support in the event of a computer virus outbreak.

The third session opened with a short PowerPoint to reexamine the concept of using short, medium, and long forms of communication as well as ways to integrate the forms and channels to communicate key messages to more audiences. The remainder of the session provided tips and techniques for using social media, the K-State Research and Extension style guide, and other resources to answer technical questions and provide help with writing and editing. Participants provided direction for the final session through inquiry-led discussion.

Results

Participants left the conference with a communications strategy to consider, along with practical tips to accomplish the goal of using a variety of methods to reach audience channels to communicate research-based information.

One participant planned to start posting audio files to the local unit website. Several others planned to start blogging and linking the blog content via Twitter and Facebook (an example of a new blog is “Easy, Cheap, and Healthy” at https://blogs.ksre.ksu.edu/easy-cheap-and-healthy/). Attendees also discussed ways to interact with audiences and generate news stories.

Some participants requested follow-up sessions to learn additional tips and techniques. Many attendees have additional technical questions about adding Facebook and Twitter buttons to websites and developing cover images and logos for use in social media, and some are ready to strategize about how to build audiences on social media and avoid self-promotion that may drive audience members away. Participants are also interested in measuring and reporting results within extension’s existing framework. Most are already good writers and communicators, but some need help distilling content or generating ideas communicating across communication forms without seeming repetitious.

Discussion

The communications team determined that presenting the information as short, medium, and long-form communication tools made sense to the participants. Based on conversations and follow-up discussion, the hands-on workshop was well received and useful. The tips and techniques session generated additional questions and discussion, because many struggle to keep up with frequent changes in social media tools.

Overall, the workshop evaluations were fairly good. Of those attending the breakout sessions, 111 responded, with the following rankings:

Excellent – 13 percent
Very Good – 47 percent
Good – 36 percent
Fair – 2 percent
Poor – 2 percent

Comments received from the introductory session included:

“Good to see the tools and ideas on communicating to the populace. The session was very helpful and provided a lot of good resources on short, medium and long form communication strategies.” Another said it was a great preview on the breakdown of communications and social media.

One person suggested we include research on educational reach and the ability to change behaviors. Another said we need in-depth, hands-on training in this area because this will be the way we (extension) get our messages out rather than public meetings. The sessions only gave the “tip of the iceberg.”

Another said, “staying current with communications is difficult. This would be great for the entire system.”

In reference to the second hands-on session, one participant said, “It was good to spend time making a plan for my communication strategy.”

Another said, “Good information in a format I hadn’t seen.”

A third recommended that we offer more communication trainings.

For the last session on tips and techniques, one of the participants felt information was too elementary. “Most of the information was presented that I already knew. I’m sure it was helpful for people who didn’t have any experience with social media.”

Another contradicted and said, “I am way behind on this, and I don’t even know what they were talking about most of the time.”

The third session “did not stand alone,” according to another participant.

Because the format of the K-State Research and Extension annual conference is to offer breakout sessions in tracks, people often choose to come and go depending on what they prefer to or are required to attend. Because of this, we did not have the same people attending all three of the communications strategy breakout sessions. This resulted in not having a natural flow between the three sessions, as was intended. If offered again, we need to have all people attend all sessions or reformat each session so they can stand alone. We also need to consider offering a “beginner track” as well as a track for researchers and communicators who are more tech-savvy or experienced users of social media. Those who are communicating successfully using multiple forms and tools need to build on their experience by learning to use analytics and metrics to understand and report impact.

The communications team has determined this information could be delivered in other ways:

- Develop an infographic to explain communications strategy concepts.

- Record online video segments to highlight portions of the first and third sessions.
- Present the methods to communication colleagues outside the organization (Association of Communications Excellence (ACE), Southern Association of Agricultural Scientists, AGCOMM Section (SAAS), or others.
- Develop more modules to train "advanced" communicators who are already using the strategies we described. These modules could be delivered at in-person training sessions, future conferences, or online through webinars or videos.

One of the goals of the communications team is to be more closely aligned with the program planning process at K-State Research and Extension for identifying goals and outcomes. Staff trained in communication strategy basics will be better able to have measurable results and meet the needs of target audiences. Incorporating levels of this training into the current system, rather than as an add-on for only a few staff, can make the difference for an engaged K-State Research and Extension.

Our team also looks forward to building on the foundation this session provided by developing more training on the topics recommended by participants. Those who successfully adopt all three forms of communication need assistance building audiences, measuring and reporting impact, and keeping content fresh. Our land-grant legacy depends on successful communication, and we are eager to help our staff meet our audience's needs as communication methods continue to evolve.

References

Corneliesse, S., Hyde, J., Raines, C., Kelley, K., & Ollendyke, D. (2011) Entrepreneurial Extension conducted via social media, *Journal of Extension, volume 49(6).* Retrieved from http://www.joe.org/joe/2011december/tt1.php

Kinsey, J. (2010) Five social media tools for the Extension toolbox. *Journal of Extension. volume 48(5).* Retrieved from http://www.joe.org/joe/2010october/tt7.php

O'Neill, B., Zumwalt, A., & Bechman, J. (2011) Social Media Use of Cooperative Extension Family Economics Educators: Online Survey Results and Implications, *Journal of Extension, volume 49(6).* Retrieved from http://www.joe.org/joe/2011december/tt1.php

Sagor, E., Caldwell, J., Toland, D., & Langcuster, J. (Panel). (2011, October 19). From the outside looking in: Four external perspectives of social media possibilities for an engaged land-grant university. K-State Research and Extension Annual Conference. Podcast from http://www.ksre.ksu.edu/Seminars/p.aspx?tabid=231

Robideau, K., & Santl, K. (2011) Strengthening 4-H Programming Communication Through Technology, *Journal of Extension, volume 49(6).* Retrieved from http://www.joe.org/joe/2011december/tt1.php

The Power of Words: Exploring Consumers' Perceptions of Agricultural Words

Research Paper

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The Power of Words: Exploring Consumers' Perceptions of Agricultural Words

Abstract

Words are interpreted differently by individuals according to the experiences that have shaped their lives. As agricultural communicators, it is important to understand how individuals perceive certain words and if these perceptions influence their attitudes toward the agricultural industry. In order to better understand consumers' perceptions, this study used focus group methodology to present common agricultural words to consumer participants. Four focus groups were conducted over a period of two weeks. A total of 36 individuals participated in the focus groups. The results indicated that some words caused participants to share their initial reactions and then their perceptions would deepen as the discussion progressed. For other words, participants were unable to reach a consensus and some words prompted bipolar discussions. In order for the agricultural industry to improve communications with the consumer audience, they must first understand consumers' perceptions of common agricultural words.

Keywords: Framing, individual frames, focus groups, perceptions, qualitative research

The Power of Words: Exploring Consumers' Perceptions of Agricultural Words

Introduction

Farm worker. Organic. When you hear these words, what do you think of? Are your thoughts positive or negative? Would your thoughts about these words be the same as your friends or family members? Would your thoughts match those of the majority of the public? Words can be linked to certain perceptions or preconceived ideas that an individual has for a specific word (Aldrich, 1980). This perception is based on the context in which the words were presented (Aldrich, 1980).

Consumers are inundated with words from a variety of sources. Advertising and marketing specialists have used a number of sources to try to push ideas or messages to consumers. "The primary function of advertising is…to support the free market economy, but this is not its only role; over the years it has become more and more involved in the manipulation of social values and attitudes" (Dyer, 1982, p. 1). As communicators, it is important to understand how individuals perceive certain words and if these perceptions influence their attitudes toward the agricultural industry. Words used to communicate to an audience may not be perceived by the audience as intended (Stevenson, 1997). "Today's consumers have a low level of understanding of the agricultural production process. We often fear what we do not know" (Cannon & Irani, 2011, p 18). Research that seeks to understand how these perceptions of the agricultural industry impact consumers' decisions and overall attitude toward the field as a whole is important for both communication researchers and practitioners. Focus groups are commonly used to understand consumer opinions about information, in order to increase communication effectiveness (Greenbaum, 1998). Thus, the purpose of this research was to understand consumers' perceptions of words commonly used to communicate about the agricultural industry. The following objective guided this study:

1. To understand focus group participants' perceptions of words commonly used to communicate about the agricultural industry.

Literature Review

Words often generate a visual representation within the mind. When individuals hear or see a word, they often visualize the word so it fits into a known context (Aldrich, 1980). Aldrich (1980) stated that when individuals hear a word they will create a pictorial representation of the word in their mind to better connect with the word and the concept it evokes. These representations of words may or may not be accurate in terms of understanding the word.

Words, within the agricultural industry, can have double meanings for consumers, based on their perceptions of the industry (Glen, 2004). These double meanings can lead to confusion among consumers, and can result in distrust (Croney, 2010). Croney (2010) advises those in the agricultural industry to be transparent in messages delivered to the public to maintain trust with consumers.

In a study about different frames, or context given to a situation (Severin & Tankard, 2001), used by the news to describe two separate U.S. military attacks on international soil, Entman (1991) reported that repetition of words created salience in the minds of the readers. This text, related to the event, also caused readers to use those words to identify and form generalities with that type of event (Entman, 1991).

When a topic is more salient, the chance of individuals seeing and digesting the information increases (Entman, 1993). Words and text can become highly salient when used repetitively, especially in the form of headlines and advertisements (Entman, 1993). Entman (1993) mentioned that if an individual already holds a belief linked to the specific word, then that individual may only need one exposure to the message before raising the level of salience for that individual. Also, the frame in which the word or phrase is presented, “determines whether most people notice and how they understand and remember a problem, as well as how they evaluate and choose to act upon it (Entman, 1993, p. 54). Individuals create frames of reference for issues relevant to their lives. These “issue-related frames of reference can have a significant impact on perceiving, organizing and interpreting incoming information and on drawing inferences from that information” (Scheufele, 1999, p. 107).

Goffman (1959) first introduced the idea of frames in his book, “The Presentation of Self in Everyday Life.” He fleshed out the idea of individuals organizing information about the world and the surrounding society to create their personal image and identity (Goffman, 1959).

> To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, more evaluation, and/or treatment recommendation for the item described (Entman, 1993, p. 52).

“Because frames have to be considered schemes for both presenting and comprehending information, two concepts of framing can be specified: media frames and individual frames” (Scheufele, 1999, p. 106). Based on an individual’s experience, frames can differ from one individual to the next, and those frames can affect the decision-making choices of an individual (Kahneman & Tversky, 1984). However, the way an issue is framed, based on its projected outcome, can often impact the decision of an individual.

When and individual has repeated exposure to information, framed in a specific way, that individual will digest that information within the context of that frame, and in turn, this will impact how that individual views that information within society in general, not just within that frame (Hertog & McLeod, 2001). Media frames serve to inform society about events happening around and to them on a daily occurrence (Gamson & Modigliani, 1989; Entman, 1991). News reporters may, consciously or unconsciously, include their thoughts about the information being presented to the individuals (Gameson & Modigliani, 1989; Scheufele, 1999). The media are responsible for defining and creating the way in which social issues and events are perceived by the public (Tuchman, 1978). The media have the ability to, "frame issues in ways that favor a particular side without showing an explicit bias" (Tankard, 2001, p. 96).

Methods

Qualitative research, by nature, focuses on the understanding qualities of the studied materials, and how those qualities come together in reality (Denzin & Lincoln, 2011). Critics of qualitative research offer that no researcher can be completely objective in their observations for data collection; therefore, researchers should take measures to record objective data (Denzin & Lincoln, 2011). To ensure the robustness, the researchers referred to Tong, Sainsbury, and Craig's (2007) Consolidated Criteria for Reporting Qualitative Studies (COREQ).

Focus groups are a form of qualitative research that relies on group interaction during a group interview (Morgan, 1988). "Focus groups are fundamentally a way of listening to people and learning from them" (Morgan, 1998, p. 9). Group discussions allow researchers insight into group dynamics and opinions on topics presented to them (Greenbaum, 1998). Since the intent of this research was to understand consumers' perceptions of certain words used in the agricultural industry, focus groups were a viable option for collecting data.

An external marketing group was hired to recruit participants for the focus groups. The marketing firm utilized Computer Assisted Telephone Interviewing (CATI) telephone random digit dialing (RDD) sampling to establish potential participants. Using demographic variables, a sampling frame was established to determine the probability samples. The marketing group was directed to obtain eight to 10 participants for each focus group as suggested by Greenbaum (1998).

As Krueger (1998) advised a protocol was designed to stimulate conversation among the focus group participants in a clear, organized, and consistent manner. The protocol for this study used five different sets of words used in the agricultural industry. The five sets of words presented to the participants were: 1) farmer and farm worker; 2) agri-business and agriculture; 3) animal welfare and animal rights; 4) family-owned, locally grown, and food safety; 5) green industry, sustainable agriculture, and organic. The protocol was consistent for each set of words. The moderator presented the first set of words, then asked participants if they had ever heard the word(s) before, where they heard the word(s), how the word(s) made them feel, and if they had positive or negative feelings about the word(s). The same questions were asked in relation to each set of words.

The words and the questioning route used in the protocol were reviewed by a panel of researchers. The protocol was also pilot tested for validity at a southeastern university with graduate students in the Agricultural Education and Communication Department. The pilot test was administered via an online survey hosted by the survey software Qualtrics. Using the results from the pilot test, the researchers were able to edit the protocol to increase understanding and conciseness. The pilot test also helped to improve the methodology of research and the validity of the protocol (Krueger, 1998). After making the needed adjustments to the protocol from the results of the pilot test, the protocol was reviewed by a panel of researchers and professionals to ensure face and content validity.

Three different validation strategies were employed throughout the research to ensure validity; including, triangulation, peer review, and recognizing and clarifying bias among researchers (Creswell, 2007). “Triangulation is the combination of two or more data sources, investigators, methodologic approaches, theoretical perspectives, or analytical methods within the same study" (Thurmond, 2001, p. 253). For this study, two or more data sources were used, in that the data was collected from four focus groups in two different locations to obtain triangulation. The two different locations allowed the researchers to gather data from different types of individuals with different backgrounds and experiences (Guba & Lincoln, 1982; Guion, Diehl, & McDonald, 2009). Peer reviewing or debriefing encourages the researchers to question the analysis and place their research before a body of peers for review and questions (Creswell, 2007; Guba & Lincoln, 1982). For this research, a co-researcher questioned the lead researcher about the interpretations drawn from the data. Identifying and clarifying researcher bias provides readers with an understanding of how the analysis interpretations may have been influenced by the researchers (Creswell, 2007; Guba & Lincoln, 1982). For this research, the primary researcher was a graduate student with a background in animal science and agricultural communication. The co-researcher, who served as the peer reviewer, was a professor with a background in public relations and agricultural communications.

Four focus groups were conducted for this research during a two-week period to help mitigate the threat of history effect (Ary, Jacobs, Razavieh, & Sorenson, 2006). Two focus groups were conducted in one location, and another two focus groups were conducted in another location, within [state]. Each focus group was approximately 90 minutes in length, and directed by the same experienced moderator. The four focus groups had a total of 36 participants, with seven to 10 participants within each focus group. For each focus group, the moderator was accompanied by an assistant moderator and two note takers. Each focus group was recorded for both audio and video to be used in the transcription process. As part of the protocol for the research, the focus group participants were given clarification if needed, and a summary of the group conversation was verified by all participants upon the conclusion of each focus group.

These combined efforts of the protocol, validation strategies, and pilot test ensure the results are valid, credible, and trustworthy (Creswell, 2007; Guba & Lincoln, 1982; Krueger, 1998).

Upon the completion of all of the focus groups, the data from the groups was transcribed by an external marketing firm. Once the data was transcribed, it was uploaded and reviewed using Weft-QDA for qualitative data analysis. Using the constant comparative method, themes were identified within the data (Glaser, 1965). Similar themes were collapsed to create overarching themes that appeared within the data. To ensure accuracy, the co-researcher reviewed and analyzed the results found by the lead researcher (Creswell, 2007).

Results

The participants in the focus groups included stay-at-home moms, educators, health professionals, manufacturing personnel, administrative personnel, and business professionals. A third of the participants had a bachelor’s degree and most participants reported an annual household income of $60,000 - $80,000. The participants primarily represented Caucasian and African American ethnicities, 18 of the participants were female and 18 were male.

Objective 1: To understand focus group participants’ perceptions of words commonly used to communicate about the agriculture industry.

Farmer and Farm Worker

When discussing the words farmer and farm worker focus group participants began the discussion by indicating that a farmer was the owner of a farm, and a farm worker was someone employed on a farm. One participant said: “Farmer to me means the main person, the guy, the person, the man or woman who owns the actual land and the farm. And the farm workers are just those that he employs, or she employs to help out.” Another participant shared similar thoughts and said:

> Well for me the difference in my mind would be that the farmer could cover the owner of the business, the farm, and/or be a worker. A farm worker implies that he's not the owner but he is a worker.

The discussion of farmer and farm worker also included several personal stories from the participants about their experiences visiting, working, or living on a farm. For example, one participant shared a story about growing up on a farm and said:

> I just remember that my father owned all the big machinery and we would go around to all of the neighbors with threshing rigs and all these other things, and everybody would pitch in. He'd do everybody's, but it was up to me to feed all these people and all the farm workers that we had. So it took me years before I could fix potatoes that weren't in the big kettle. So to this day, I don't like to cook.

Farmer.

After identifying the initial distinction between a farmer and farm worker the participants began to discuss each word separately. Farmers were discussed as also being farm workers and different than farmers seen throughout history. Although participants referred to a farmer as the one who owns a farm, they also discussed that farmers could also be farm workers. "I think they're one and the same because if you own a farm, and you are a farmer, you would be working it as well," said one participant. Another participant added: "The farm worker can be the same person as the farmer, but the farmer is the one to make the decisions as to how the farm runs."

Participants discussed that today's farmer may look different than what they traditionally think of as a farmer. For example, a participant said:

> I think we have to consider change here. What farmer and farm worker were then and now, then in the past and now is different. Because of mechanization I think we're looking at a very different farmer now than we did in the past.

Farm worker.

Participants discussed farm worker as being associated with migrant labor, hard work, and work for little pay. A participant discussed his or her perception of farm worker and said:

“Yeah, I was just going to say that the farm worker to me is basically like a migrant, someone who does the picking of grapes, cotton, oranges, and just subsistence existence.” Another participant said: “I think of farm workers, a lot of our farm workers are migrant workers, at the bigger farms.” Farm workers were recognized for their hard work by the focus group participants. One participant, speaking in regard to farm workers, said: “And they work very hard, very very hard work!” Several participants also discussed their perception that farm workers get paid very little. A participant said: “I always thing of someone not from this country perhaps who’s working below minimum wage, even and having a tough time of it.” Another participant shared similar thoughts and said: “There’s a lot of hype or talk about migrant workers and a lot of times they are underpaid.”

Agribusiness and Agriculture

When discussing the words agribusiness and agriculture participants first discussed that agriculture was the growing and/or raising of crops and livestock, while agribusiness was the business side of agriculture including the finances and management. One participant discussed agriculture and said: “The agriculture itself, I assume is the growing or how you grow just anything that’s grown. Wouldn’t that be considered agriculture?” Another participant said: “Agriculture is the crops, the animals, and whatever is involved.” When discussing agribusiness two participants conversed about the business side of agriculture. The first participant said: “The business is probably the business part of agriculture like financial or…[second participant interrupts]” “Yeah the money” added a second participant. Another participant said: “I would say that the agribusiness would be where you’re looking at the financial aspects endemic with agriculture.”

Agribusiness.

After the initial discussion of agribusiness and agriculture, the participants began to focus on and discuss agribusiness further. Agribusiness was discussed as being associated with corporate farming and genetic alterations. One participant said: “Agri-business, when I think of that I think of Monsanto, Cargill, Dupont. I don’t think of a farmer. I think of controlling conglomerates that are controlling our agriculture.” Another participant said: “When I see agribusiness, I have to admit the first thing I think of is the factory farm. You know mass production at whatever cost.” The discussion of corporate farms also led participants to discuss genetic alterations. A participant said: “I think of agribusiness, I think of companies like Cargill, the big, multinational that are involved in not just food production, crop production, and also genetic development of seeds, seed corn and stuff like that.” Similarly, another participant said:

> Yeah, I would say that it conjures up images of genetic engineering and all sorts of reasons to produce food for anything other than the money, the value of it, and also the connotation of pushing out the small farmer at their expense because they’re so big.

Animal Rights and Animal Welfare

During the discussion of animal rights and animal welfare, the participants primarily discussed the terms together. When discussing animal rights and animal welfare, the participants shared many thoughts about their perceptions of the words. However, an overall consensus of the meaning of the words was not reached. When discussing animal welfare some participants discussed that animal welfare referred to the safety and health of animals, while others discussed that animal welfare was appropriate care that varied as a result of the person caring for the animals. For example, a participant said in reference to animal care: “I mean it can be positive, I guess it depends on who’s taking care of the animals, who owns them, or who is in charge?”

When discussing animal rights some participants discussed animal’s right to exist, live well, be healthy, and be protected. Other participants questioned whether or not animals had rights, while other participants indicated that animals needed more rights. The discussion of animal rights also included discussion of laws and ordinances, issues such as fur trade and the killing of seals, and animal rights activists. During this discussion one participant said:

> Animals have a right to exist. I'm not really an animal person; I'm not really in tune with your pets or anything like that. But I, they have a right to live well, have health. If you choose a pet, then I think that you should donate the time to treat it correctly.

Another participant asked: "Do they [animals] really have rights?"

The participants did come to a consensus when discussing organizations that they perceived as being associated with animal rights and animal welfare. The American Society for the Prevention of Cruelty to Animals (ASPCA) was discussed as being associated with animal welfare and People for the Ethical Treatment of Animals (PETA) was discussed as being associated with animal rights. A participant said: "The first word that comes to my mind when I think of animal rights is PETA [general agreement from other participants]. And for animal welfare I think of the ASPCA [general agreement from other participants]."

Participants discussed that animal rights and animal welfare were related. For example, a participant stated: "Animal welfare, animal rights is a facet of animal welfare. Animal rights is necessary for animal welfare." Another participant discussed the relationship between animal rights and welfare and said: "Yeah, without animal rights, then there would be a lot of suffering and that would affect their welfare."

The discussion of animal rights and animal welfare included the influence of media on the participants' perceptions of these words. One participant said:

> There was something years ago on TV about one of the big beef and pork suppliers. And what they would do, how they would kill them and they weren't dead by this part. What they would do is they would shoot them in the head. It's like I'm not going to buy your beef.

Sadness (as seen in the quote above) as well as other feelings and emotions were demonstrated in the discussion of animal rights and animal welfare. Unhappiness, empathy, fear, and distrust were some of the emotions and feelings that were most prevalent in the discussion. A participant demonstrated several emotions, and said:

> It’s really funny, the other day I did some grocery shopping at Wal-Mart this weekend, and as I was walking down the aisle, I guess I was feeling very sensitive that day. Anyway and I started looking at every product in a multidimensional way. I looked at the packaging and saw how unsustainable the packaging was. And then I thought about the animal and how the animal was treated, and the hormones and then I thought can I really buy this for my children? And I’m like, well I’ve got to feed them something. And then by the time I got home, I just felt so unhappy with myself for contributing to all this really bad stuff. I called the local food co-op and joined so now I can, because they have all the animals that are treated well, free range chickens, things like that. And I can feel good about that, it costs a little bit more money, but I can sleep well at night and not go, OMG, what am I doing? What am I feeding my kids, what am I contributing to? I think it’s really scary when you think about chickens and what’s going on there with our food.

A lot of the discussion surrounding animal rights and animal welfare focused on the mistreatment and abuse of animals. Participants gave examples of what they perceived to be mistreatment including cock fighting, dog fighting, chicken debeaking, farm animal confinement, inhumane slaughter, the use of animals for entertainment, and the captivity of animals. Some participants indicated that because of animal abuse, animal rights and animal welfare has become important. A participant discussing the mistreatment of circus animals said: “When you think about it, growing up my mom used to take us to the circus. And you see, only now do I see, that they were totally mistreated.”

Another participant who was discussing farm animal treatment said:

> I don’t know about animal rights because I’ve heard and I’ve seen a lot of abuse with animals. But the domestic and the farming type of animals. And they’re used, they’re caged, like what you were saying [Name], in the house. And often overfed or they’re fed the wrong things.

Although the participants discussed animal rights and animal welfare as being important, several of the participants discussed situations where they would set limits on animal rights and animal welfare. These included instances of animals harming humans, spending a lot of money on pets, and being supplied with good tasting meat products. One participant said:

> Once you start fighting and maiming people, then you lose your rights to exist. Just like prisoners, when you do a crime, you lose your freedom, you lose your right, you go to jail, so the same thing with dogs or animals that cause problems. Or even the type that kill people, then you've lost the right to exist. You're gone, boom. But other than that, you know the animal should live. You know, welfare, part of it.

A common element of the focus group discussions about animal rights and animal welfare was the sharing of personal stories about animals. Some participants shared their experiences growing up on a farm with livestock, volunteering at pet shelters, being a pet owner, or having a relationship with someone that was very involved in animal rights or animal welfare. Several of these participants described themselves as "animal lovers."

Locally Grown, Family Owned, and Food Safety

The terms locally grown, family owned, and food safety were discussed separately by the participants.

Locally grown.

When discussing the term locally grown, many participants discussed their perceived attributes of local foods. Some of these attributes included safety, price, health, cleanliness, freshness, organic, and environmentally friendly. When discussing the environmental benefits of locally grown foods a participant discussed the decreased environmental impact from shipping and said:

> And then the environment piece comes in there because you don't have to pay for the gas, the trucker to bring it across country or fly them over or however they get here. Transport, because we know they're transporting here some type of way. You don't have to pay for that so you can cut down on fuel costs and stuff like that.

Another participant discussed the likelihood that locally grown foods were organic and said: “Locally grown at least, my impression is. It may or may not be true, but generally you think this is going to be a more organically (general agreement) produced food. Usually it is, I guess.”

The attributes of price, safety, and health were debated among the participants. Some participants indicated that locally grown foods were less expensive, safer, and healthier than non-local foods; however, other participants debated that this may not be true. For example a participant discussed a local food festival to be held in their town said: “It sounds good and healthy, wholesome.” Another participant discussed the health benefits of beef from a local grass fed beef operation and said:

> And they’re supposed to have organic grass fed kosher beef, which is just as good for you as salmon. It’s got as much as omega 3 oils as salmon does. It’s entirely different beef than what we are used to.

Conversely, a participant questioned the health benefits of local food and said: “I think in advertising, a lot of times, they apply the words "family owned", "locally grown" to promote the food as healthy and that’s not always the case.”

Family owned.

Similar to the discussion of local food, the participants also discussed the attributes of the food products produced on family owned farms. These attributes included safety, health, quality, and organic. The participants debated whether or not family owned would produce a healthier and safer product.

In addition to the attributes of the products produced on family owned farms, the participants also discussed the characteristics of the family owned farms. They discussed that family owned farms were responsible, proud, old-fashioned, part of the community, complied with laws, had better environmental practices, and were respectable. A participant discussed how proud family owned farms must be of their products. This participant said:

> And you know people who are like home growing and stuff like that, they're probably so proud of their work. They know whatever they put out, it's going to be like slammin' good. They're not going to give nothing, like you know slapped together, fake meat patties, or chicken, but that's the sort of thing that they took pride, they took time, that's part of who they are. So now when it comes out, it represents them.

Another participant discussed that family owned farms were more likely to comply with laws and have better environmental practices. This participant said:

> And food safety, a lot of them do make sure they comply with the laws. They may not use all the chemicals, but they'll use natural insects to take care of the problems that they might have. Which is better for the environment.

Some participants discussed that good attributes and characteristics discussed in relation to family owned farms may not be accurate depending on the family who owns the farm. One participant discussed personal experiences with good and bad family owned farms and said:

> I've spent some time covering farm worker issues in Immokalee and some of those commissions out there are family owned. But you sure wouldn't want to work for that family. Again, kind of a neutral term for me, it can be good. That wonderful Rockwell painting, family oriented farm thing, or it can be awful in near slavery like conditions.

Another participant cautioned that family owned is not always as good as it seems. This participant said: "Family owned that's an ideal, that situation. A lot of people think family owned, the family is going to be more concerned with what they're producing. It's just not always the case." The participants also discussed skepticism around the term family owned and indicated that they thought some corporate farms may be titled as family owned. A participant said:

> I think family owned could be used deceptively. I don't know if the Purdue company could call themselves family owned. But I have a feeling that there are some large owned corporations that could legally say that they're family owned. But that would be somewhat deceptive.

Food safety.

When discussing food safety, the participants initially discussed the meaning of food safety. The participants discussed that food safety was the handling and testing of food. In addition, they indicated that the Food and Drug Administration (FDA) was associated with food safety. A participant said: “Food safety to me means testing for the quality and the ingredients that are in there, if it’s safe for human consumption.”

Several participants indicated that food safety was important, while others did not express favorable thoughts toward food safety. A participant discussing the importance of food safety said:

> Requirement, I think you have to have food safety. There has to be, you can only do so much yourself. To buy local you’re still taking a risk, unless you know, you’ve watched the plants grow, most of us don’t have time and have never had time to do. But I think we all place faith in a system that does protect us. The likelihood that any of us sitting at this table getting sick from what we eat is relatively small. Certainly, compared to any other country in the world.

Another participant discussed his or her dislike toward food safety by sharing a story about his or her preference for raw products. This participant said:

> When I think of food safety, I think politely, I would say it’s malarkey. Because I really love raw dairy, I like real cheese. I like food that hasn’t been pasteurized to the point where there’s no nutrients left in it. And you can’t buy raw dairy products because it’s not safe. But that’s where all the vitamins and nutrition is, is in your raw cheese, your raw dairy, fresh stuff. But the big business can’t keep it going that way so they put all these limits on the small business. There’s a story the other day about this Amish farmer. They woke him up at 3 in the morning and raided his farm because he was selling raw dairy. And I buy raw dairy and it’s funny because when you go to buy it, it’s like you’re buying drugs. Can I get some of that raw milk for my pets? And they’re like, you know it’s for pets only and you’re like, yeah, I know. And it’s like you’re doing something really wrong because you just want some raw, fresh milk. So when I hear food safety, I think that it’s crap, for the most part.

Perceived issues with food safety were also discussed. These issues included pesticides, harmful pathogens, animal hormones, animals raised in poor conditions, and the effects of food on human health. One participant said:

> Well, I think food safety has two levels. In the long term, which ok is pesticides and so on which will get you in 20 or 30 years. And of course, and then there’s things like E Coli and salmonella. They get you right now. So I think that’s there two things going on there in food safety [Other participants agreeing].

Discussing concerns with the use of hormones and poor living conditions for animals a participant said:

> Also food safety can be the animals, you know the ones that go to market, like the chickens. And making sure that the hormones, not the hormones, Lord have mercy. What they give, do they give them hormone shots or something because they're small anyways. [General talking] So they could be safe because eventually we're going to have to consume them and so I think that's a big safety issue there.

Green Industry, Sustainable Agriculture, and Organic

The last set of words presented to the participants was discussed by the participants by focusing on one word at a time.

Green industry.

The participants discussed that green industry was a term that could be applied outside of agriculture to things such as light bulbs and recycling. A participant said: "But I think when you think about green industry, it's beyond agriculture and food, it goes further than that for a lot of things like changing light bulbs."

Additionally, the participants discussed that green industry was a term that referred to bettering the environment and reversing damages that bad practices have caused in the past. A participant said: "This green to me is their shaping up their industry so that it's better for everything." Another participant discussed green industry as reversing damages and said:

> You'd actually save the world. We've done so much damage to it already with all the chemicals and our advancement. The fact that we want to advance so fast is leading to our destruction and now it's time to go back. To start at the very beginning where everything was green [Agreement heard].

The discussion of green industry also included participants sharing that the term green industry was not favorable to them because of the incorrect use of the term or bad experience with green products. A participant shared the idea "green washing" and said:

> It's what people these days are calling green washing. It's when you try to make a big deal out of a little tiny thing that you do. It's ideal and hopefully, everybody would like to

> have a green industry and be sustainable. But there’re people who are taking it and just like having better light bulbs in their offices and saying they’re green.

Another participant discussed frustrations with “green” cleaning supplies and said:

> I have a little jab about “green.” We live in a green building, supposedly. And so they want us to use all green products, to clean, to do everything. They’re just awful. It’s a shame because if someone really wants to do something about green, then make some good products, some vinegar does more than these bottled nothings that you’re supposed to use in your house that are so healthy. They’re terrible.

Sustainable agriculture.

When discussing sustainable agriculture, several participants indicated that they had never heard of the term, or were unsure what it meant. For example, a participant said: “I’ve never heard of sustainable in agriculture.” Another participant was unsure about the meaning of sustainable agriculture, but offered a guess and said: “Sustainable agriculture, I’m not sure exactly what that is, sustainable agriculture. I think it’s something that just in terms of the land, the quality of the dirt, and being able to sustain growing products.”

The participants who indicated that they were familiar with sustainable agriculture offered suggestions about the term’s meaning. A participant said:

> Agriculture by its very definition is self sustaining. You plant, you harvest and you go back and plant and harvest, plant and harvest, you can’t be more sustainable. So that’s a very null term for me or redundancy if you will. Agriculture by its nature has to be sustainable.

Another participant said: “Sustainable agriculture to me has nothing either positive or negative, if you can keep the land enriched, keep the farmers working, it’s better than not.”

Organic.

Organic was discussed by the participants as having several attributes including healthy, more natural, not processed, expensive, and similar to home-grown food. A participant discussed the health and expense attributes of organic food and said: “It’s good quality food but it’s expensive. But I did hear on the radio that John Tesh guy, that organic is better, as far as health is concerned. But it is expensive." Another participant discussed several attributes and said: "Organic is something like home grown. It hasn't been processed with the things that they shouldn't be processed with. And the things that will cause [sentence trails off]. It's just more natural, more expensive too."

In addition to discussing the attributes of organic food, the participants also discussed the over-use of the term organic. A participant discussed this concern and said:

> Well, when I see organic…it's being used everywhere, probably in a week or so, there'll be an organic Coca-Cola. They're overusing it to the point that I'm wondering who really is monitoring to make sure they're really organic. I'm not sure about that.

Another participant shared similar thoughts and said:

> Organic is a term that's been overused. It's just like when you see so many products that say, reduced fat, or less fat or low fat. What's the criteria for this, what type of fat is it? What are you basing it on? It's just, it's been a sales gimmick advertising to a certain point, the organic.

Conclusions/Discussion

The results of the focus groups showed that for some agricultural words, such as farmer, farm worker, agriculture, and agribusiness, participants would share their initial reactions and then their perceptions would deepen as the discussion progressed. In addition, the results indicated that participants were unable to reach a consensus on the words animal rights and animal welfare and several of the participants were unsure of the meaning of sustainable agriculture. For words like locally grown, family owned, food safety, green industry, and organic several participants discussed favorability toward these words while other participants would debate the characteristics identified as favorable.

The variation in meaning and favorability of words is likely due to the different exposures the participants have had previously to the words and the different individual frames that the individuals have developed with respect to those words (Hertog & McLeod, 2001). In addition, the words such as agriculture, agribusiness, farmer, and farmer worker may have had more general agreement among the participants' discussion because they are words that the participants have likely been exposed to repeatedly throughout their lives, creating salience, and increasing cognitive digestion of the words (Entman, 1991; Entman,1993); whereas words such as organic and green industry, for example, are newer words that participants may not have been exposed to as repeatedly throughout their lives, thus being less salient. Additionally, words such as organic and green industry, for example, may have had double meanings to the participants as exhibited by some participants in the discussion, who may have been confused by the terms and therefore have come to distrust their use (Croney, 2010).

This study has allowed the researchers to have a clearer understanding of how consumers perceive agricultural words and how the individual frames of participants impact their perceptions. It is important for agricultural communicators to understand consumers' perceptions of agricultural words so that they are better able to communicate effectively with consumers. It is recommended that further research be done to test consumers' perceptions of agricultural words. Research should be done with alternative populations, methodology, and words. By continuing to study perceptions of agricultural words the agricultural industry can continue to improve their communications. In addition, it is recommended that communicators consider the familiarity of words to their target audiences when developing industry communications. The findings of this are not generalizable beyond those who participated in these focus groups. In addition, this research is limited by the words tested with the participants and the interpretations of the results by the researchers, both of which are common in qualitative research (Pauly, 1991).

References

Aldrich, V. C. (1980). Mirrors, pictures, words, perceptions. *Philosophy, 55*(211), 39-56. Retrieved from http://www.jstor.org/stable/10.2307/3750974

Ary. D, Jacobs L.C., Razavieh, A., & Sorensen C. (2006). *Introduction to research in education* (7th ed.). Belmont, CA: Thomson Wadsworth.

Cannon, K. J., & Irani, T. A. (2011). Fear and loathing in Britain: A framing analysis of news coverage during the foot and mouth disease outbreaks in the United Kingdom. *Journal of Applied Communications, 95*(1), 6-21. Retrieved from http://journalofappliedcommunications.org/2011/10-volume-95-no-1.html

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Croney, C. C. (2010). Words matter: Implications of semantics and imagery in framing animal-welfare issues. *Animal Welfare in Education Research, 37*(1), 101-106. doi: 10.3138/jvme.37.1.101

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research.* Thousand Oaks, CA: SAGE Publications, Ltd.

Dyer, G. (1982). *Advertising as communication.* London: Methuen & Co. Ldt.

Entman, R. M. (1991). Framing U.S. coverage of international news: Contrasts in narratives of the KAL and Iran air incidents. *Journal of Communication, 41*(4), 6-27.

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication, 43*(4), p 51-58. doi: 10.111/j.1460-2466.1993.tb01304.x

Gamson, W. A., & Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *American Journal of Sociology, 95*(1), 1-37. Retrieved from: http://www.jstor.org/stable/10.2307/2780405

Glaser, B.G. (1965). The constant comparative method of qualitative analysis. *Social Problems, 12*(4), 436-445. Retrieved from http://www.sssp1.org/.

Glen, C. B. (2004). Constructing consumables and consent: A critical analysis of factory farm industry discourse. *Journal of Communication Inquiry, 28*(1), 63-81. doi: 10.1177/196859903258573.

Goffman, E. (1959). *The presentation of self in everyday life.* Garden City, NY: Doubleday & Company, Inc.

Greenbaum, T. L. (1998). *The handbook for focus group research* (2nd ed). Thousand Oaks, CA: SAGE Publications, Inc.

Guba, E. G., & Lincoln, Y. S. (1982). Epistemological and methodological bases of naturalist inquiry. *Educational Technological Research and Development*, *30*(4), 233-252. doi: 10.1007BF02765185

Guion, L. A., Diehl, D. C., & McDonald, D. (2009). *Triangulation: Establishing the Validity of Qualitative Studies.* Retrieved from http://edis.ifas.ufl.edu/fy394

Hertog, J. K., & McLeod, D. M. (2001). A multiperspectival approach to framing analysis: A field guide. In Reese, S. D., Gandy, O. H., & Grant, A. E. (Eds.), *Framing public life: Perspectives on media and our understanding of the social world* (pp. 139-161). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist, 39*(4), 341-350. doi: 10.1037/0003-066X.39.4.341

Krueger, R. A. (1998). *Focus groups: A practical guide for applied research* (4th ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Morgan, D. L. (1988). *Focus groups as qualitative research.* Newbury Park, CA: SAGE Publications, Inc.

Morgan, D. L. (1998). *The focus group guidebook.* Thousand Oaks, CA: SAGE Publications, Ltd.

Pauly, J. J. (1991). A beginner's guide to doing qualitative research in mass communication. *Journalism Monographs,*125. Retrieved from http://www.aejmc.org/home/publications/jc-monographs/

Scheufele, D. A. (1999). Framing as a theory of media effects. *Journal of Communications, 49*(1), 103-122. doi: 10.111/j.1460-2466.1999.tb02784.x

Severin, W. J., & Tankard, J. W., Jr. (2001). *Communication theories: Origins, methods, and uses in the mass media.* NY: Addison Wesley Longman, Inc.

Stevenson, N. (1997). Critical perspectives within audience research. In T. O'Sullivan & Y. Jewkes (Eds.), *The media studies reader* (pp.231-248). New York, NY: St. Martin's.

Tankard, J. W., Jr. (2001). The empirical approach to the study of media framing. In Reese, S. D., Gandy, O. H., & Grant, A. E. (Eds.), *Framing public life: Perspectives on media and our understanding of the social world* (pp. 95-106). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Thurmond, V. A. (2001). The point of triangulation. *Journal of Nursing Scholarship, 33*(3), 253-258. doi: 10.1111/j.1547-5069.2001.00253.x

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (coreq): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care, 19*(6), 349-356. doi: 10.1093/intqhc/mzm042

Tuchman, G. (1978). *Making news.* New York, NY: The Freedom Press.

Students' Reflections of Service-Learning in Agricultural Communications

Research Paper

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Students’ Reflections of Service-Learning in Agricultural Communications

Abstract

University faculty and instructors continuously search for teaching methods that will enrich student learning and critical thinking skills, spark creativity, refine technical abilities, and provide a greater understanding of the subject matter being taught. One approach to doing this is the use of service-learning to provide opportunities for experiential learning. Within agricultural communications, service-learning has been utilized as a pedagogical tool, but little research has been conducted to evaluate the use of service-learning in the agricultural communications curriculum. The purpose of this study was to examine the perceptions of students who completed service-learning projects in two agricultural communications courses during two separate semesters (Fall 2010 and Spring 2011) at a southwestern university. A qualitative case study design was used to collect data from 79 students related to their opinions of the service-learning experience and interactions with their clients. Students reported a positive attitude about the service-learning experience; improved upon their communication skills, and enjoyed the hands-on experience that is applicable to their future in communications. Service-learning can be an effective and enjoyable pedagogy for students to gain communication competencies. Future research is needed to further evaluate the use of service-learning in the agricultural communications classroom.

Keywords: service-learning, community partners, clients, qualitative research, curriculum, agricultural communications, case study

Introduction/Theoretical Framework

University faculty and instructors continuously search for teaching methods that will enrich student learning and critical thinking skills, spark creativity, refine technical abilities, and provide a greater understanding of the subject matter being taught (Adams, Irlbeck, Meyers, & Hefley, 2011). Troubled by a scarcity of civic engagement on college campuses, frustrated by the style of teaching and learning that pushes information absorption (Coleman, 1976), and inspired by Dewey's (1938) ideas of experiential learning, educators have searched for more realistic forms of education, "wherein students might more readily see, act on and learn from connections between academic content and problems of real life" (Strange, 2000, p. 5). One pedagogical tool that has gained popularity during the past decade is service-learning due to its pragmatic approach to encourage student learning and civic engagement (Campus Compact, 2003).

Service-learning is "a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development" (Jacoby & Associates, 1996, p. 5). Through service-learning, young people are using what they learn in the classroom to solve real-life problems, to learn the practical applications of their studies, and become more actively contributing citizens and community members through the service they perform (National Service Learning Clearinghouse, 2001). Students are also benefiting from service-learning experiences by "enhancing communication skills, strengthening critical thinking abilities, developing civic responsibility, and fostering a sense of caring for others" (Sedlack, Doheny, Panthofer, & Anaya, 2003, p. 99).

Bringle and Hatcher (2002) found the service-learning relationship to be directly beneficial to the community partners as well. Through students' service, an identified need by the client is being met, as well as the development of healthy relationships among college campuses and their local communities. The service-learning relationships are enriching the workplace as the clients are reflecting more on organizational practices, focusing on becoming more professional, and are better equipped to achieve organizational goals (Sandy & Holland, 2006; Klink & Athaide, 2004).

A service-learning course can use a wide variety of partnership styles and types, including partnerships within a single institution of higher education; with schools, neighborhoods and the community; national and regional associations; and with both governmental and nongovernmental organizations, both domestically and abroad (Jacoby & Associates, 2003). The partnership should reflect the objectives of the course, as well as regional challenges and issues (Campus Compact, 2003), and the partner must have a need that can be addressed through the curriculum, making the partnership beneficial to both the partner and student (Furco, 1996).

To emphasize the importance of their work, instructors often have students use the term "client" in place of "partner" (Waldner & Hunter, 2008). Clients are used in client-based courses, a variation of service-learning in which the course is designed to produce a useable product (Perkins, 1994), and the "clients' issue becomes a focal tool for delivering course materials and integrating theories and practice" (Waldner & Hunter, 2008, p. 219). Clients are typically public agencies, nonprofit organizations, and even for-profit groups.

Sprecker and Rudd (1997) found that alumni of agricultural communications programs said students needed to refine their communication skills by taking courses that require students to engage in a project “from inception to completion” (p. 9). Kelemen, Cartmell, and Sitton (2009) said “allowing students to gain real-world experience makes a service-learning course in agricultural communications truly beneficial” (p. 6). Within agricultural communications, service-learning has been utilized as a pedagogical tool, but little research has been conducted to evaluate the use of service-learning in the agricultural communications curriculum. Vaught, Meyers, Irlbeck, and Ulmer (2011) explored service-learning in agricultural communications from the client’s perspective, but did not research the student’s opinions of this pedagogy. By gaining a better understanding of the students’ reactions to participating in service-learning, faculty members can determine if this pedagogy should be integrated in their classrooms.

This research was guided by Kolb’s (1984) model of experiential learning, 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 implies that concrete experiences help learners grasp information when they can reflect on those experiences and experiment actively with the concepts they are learning (Scales, Roehlkepartain, Neal, Kielsmeier, & Benson, 2006; Healey & Jenkins, 2000). Robinson and Torres (2007) said that experiential education can “provide greater depth of information processing, and thus a greater potential impact on learning, than less active methods” (p. 2).

Kolb’s (1984) model (Figure 1) portrays two related concepts of grasping experience—concrete experience and abstract conceptualization—and two related concepts of transforming experience—reflective observation and active experimentation. According to Kolb’s (1984) four-stage learning cycle, reflective work is based upon concrete experiences and used to form abstract concepts. From these concepts, hypotheses can be drawn and then tested to help form new experiences (Campus Compact, 2003). Maynard, Ward, Gable, and Giles (2011) stated the structure of Kolb's theory allows it to be "directly applicable to the community service outreach mission of higher education" (p. 21).

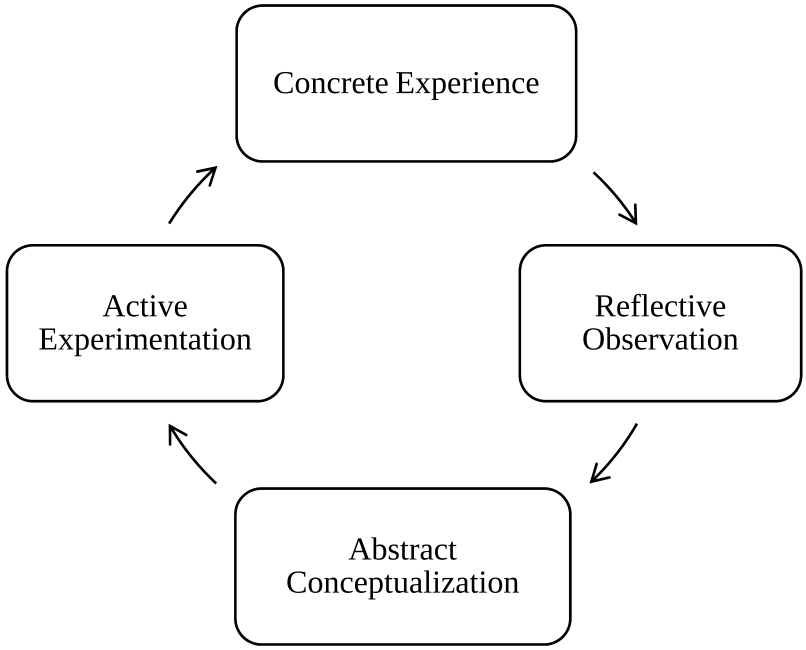

Figure 1. Kolb's (1984) model of experiential learning

Purpose and Objectives

Past research in the field of service-learning has been conducted in the academic disciples of education, communications, philosophy, and agriculture. The review of literature indicated a limited amount of research in service-learning in agricultural communications courses. As the *National Research Agenda: American Association for Agricultural Education's Research Priority Areas for 2011-2015* (Doerfert, 2011) recognized in Priority 4, researchers should assess learning environments to determine if they are meeting the desired educational outcomes. The purpose of this study was to examine the integration of service-learning in two agricultural communications courses at a southwestern university.

This research was guided by two questions:

1. What were students’ opinions of the service-learning experience in agricultural communications?
2. How did students describe their interactions with the clients in the service-learning courses?

Methods & Procedures

To address the research questions, a qualitative, single-case study research approach was implemented using reflection papers from undergraduate students enrolled in two agricultural communications courses. Qualitative research is the “collection, analysis, and interpretation of comprehensive narrative and visual data in order to gain insights into a particular phenomenon of interest” (Gay, Mills, & Airasian, 2006, p. 9), with the underlying belief that “all meaning is situated in a particular perspective or context” (p. 9). Qualitative studies require researchers to look at and understand the perspectives of the participants and the meanings they make from a situation (Merriam, 2002). This qualitative, single-case design allows for deeper insight and understanding of the bounded system—students’ perceptions of service-learning in an agricultural communications curriculum. The boundary of this case included two, three-credit hour agricultural communications courses, each conducted for two semesters.

The unit of analysis for this case study was reflection papers submitted by 79 students in the two agricultural communications courses. Reflection is “essential to the process of service-learning” (Kelemen et al., p. 11) and is the “intentional consideration of an experience in light of particular learning objectives” (Hatcher & Bringle, 1997, p. 153). Reflection is the key component to bridging the gap between service and course concepts, and provides the means to allow students to discern their role within the service activities (Campus Compact, 2003).

One of the agricultural communications courses is a public relations writing course for agricultural communications majors. Students in this course worked with clients to develop items for a media kit. The clients could be an agricultural business/organization or a non-profit organization outside of agriculture. Students reflected on the service-learning experience and completed two reflection papers – one half-way through the project and another after completion of the media kit. This course had 54 students who agreed to allow their reflection papers to be analyzed for this study.

The other course in this case study was a senior-level agricultural communications campaigns course. The goal of this course was to provide students with an authentic leadership experience through service-learning in which they addressed a communication issue for a local agricultural client and created a plan of action. The final assignment required all students to gain experience with course content through the creation of a communication campaign for the client then formally present the plan to the client at the end of the semester. Students completed four reflection papers at different points in the semester to assess the learning outcomes of the service-learning project. Twenty-five students allowed their reflection papers to be analyzed for this study.

In both classes, the reflection papers also allowed students to share their opinions, feelings, rewards, and challenges of working with clients. They discussed the frequency and nature of the interactions with their clients, and suggested changes to improve this interaction in the future. Students also provided suggestions about how to improve the courses in the future; these suggestions are provided in another research manuscript.

Students were assigned pseudonyms to protect their identity before data analysis began. For the data analysis process, the lead researcher used open, axial, and selective coding (Benner,

1985) to organize the collected data and organize the abundance of information into themes. Students' reflections from the Fall 2010 semester of the public relations writing course were imported into NVivo 8.0 first and emergent themes were coded. The researcher then imported student reflections from the Fall 2010 agricultural communications campaigns course into NVivo. As the researcher coded the data, the emerging themes were compared to the first course analyzed, and one additional theme was added. After these courses were coded, the final reflections from both courses in the Spring 2011 semester were coded. The emergent themes from the Fall 2010 reflections were adequate for the next semester's data.

Findings

RQ1: What were students' opinions of the service-learning experience in agricultural communications?

The majority of students in both classes expressed positive feelings about the service-learning experience. Overall, participants said they really enjoyed how they actively participated in the service-learning projects and working with a client. Jenny said:

> I loved how hands-on this class was! I really felt like it was real firm that I worked for. It was a huge amount of time and work, but I learned a lot through doing this and it seems like something I really would enjoy pursuing and achieving in the "real world."

The majority of students found at least one aspect, if not more, of the service-learning experience to be rewarding, especially as they recognized they were helping the organization and giving back to the community. Josie said her most rewarding part of the project was "working with the client and helping make an impact on such a great organization. I genuinely want to help others develop their professional skills so that they can prosper within the agriculture industry."

Other students mentioned their greatest reward was educating their clients on the components of a media kit and the benefits it can have on their organization. Belle said she was able to teach her client something new. "The owners of the company I chose did not even know what a media kit was so I got to teach them about public relations and what all a media kit consists of."

Students also said their rewards came from the valuable real-life experience they received, including interviewing, job simulation, learning deadline pressure, and persistence. Lauren said, "It's nice being able to physically go interview a client who is treating you as an adult." David said, "I like that I am getting firsthand experience of what it is like to be a PR [public relations] professional."

Another theme was that the service-learning experience taught students practical skills. Students in the campaigns course worked in groups for their assignment and reported the group environment was a positive learning experience that gave them a perspective for the future beyond college. Abby said: "I learned that event planning is not for me. However, I also learned that I liked the campaign aspect. If I were part of a team, I think I would thrive in the environment." Josie said, "I like the idea of having to work with partners because it helps prepare us for how it's going to be in the real world."

Other students recognized the importance of research and details required to develop a communications campaign, and Kay said it was the most valuable she lesson learned. She said:

> I didn't realize how much research is required to discover your target audience and its media habits, and once that information is discovered, you still have to create an appealing message. I also didn't know how much time and effort went into actually putting the event on paper. There are so many details that must be taken into consideration, and a lot can go wrong throughout the event.

Students also indicated the service-learning experience exposed them to concepts that will be beneficial to their future careers. The majority of students recognized the impact of course assignments for job interviews and portfolio materials. Danielle said she enjoyed the planning aspect emphasized in the campaigns course:

> The most rewarding part of this class has been putting an entire event plan and marketing plan together. Both of these are things that I can put in my portfolio to show a future employer all that I have accomplished in classes at [university].

Several students said learning about social media benefits and incorporating the lessons into their planning was beneficial for their future careers, as many of them lacked skills in using social media tools and now understand the benefits they can bring to an organization's communication efforts. Bailey said, "The stress of the importance of social media is what will benefit me the most in my career." Maddie echoed these sentiments when she said, "Social media and social marketing are becoming more and more prevalent as a marketing tool in companies. I never was very good at using Twitter and other social media sites, so this lesson helped tremendously in learning the basics of these networks."

Another theme that emerged was that students took the service-learning projects seriously. Many students said their enjoyment of the experience was attributed to gaining a better understanding of who their clients are and what they do, and the impact they made for the betterment of the organization while increasing their awareness of the clients' needs. Jayme said, "I have enjoyed getting to know more about my client and her business." Cassidy said the experience was "highly positive." She went on to add: "[The client] is only as good as its volunteers. I feel I am making a positive difference by helping the group in this way." Jeff said: "I'm glad I'm working with [my client].

Everyone has been really nice, from the volunteers to the program director, and I'm glad to do the best I can to help them."

RQ2: How did students describe their interactions with the clients in the service-learning courses?

Overall, students appreciated being able to work with their clients and indicated positive opinions of partnering with them on the service-learning projects. Students said their clients were cooperative, informative, friendly, and helpful throughout the whole process. Glenn said his overall experience of working with his client was very good, "[My client] was very easy to work with and very helpful throughout the whole process." Some students said they were uncertain about working with a client early on, but enjoyed the interaction. Natalie said: "I really enjoy my client. I was hesitant at first, but after I spoke more with him he was very helpful."

The majority of students discussed communication with their clients as a positive, professional, and educational experience, while others described the interactions as friendly, laid-back, fun, and relaxed. Kelsey said the interactions with her client began as "constructive and professional," but as time went on it "became personal. I got to know the couple very well." Other students had a different experience because they knew their clients prior to partnering with them for the service-learning project. Beth said: "I did work with a family member so we were already comfortable working with each other. However, I was able to work and communicate with them in a professional manner like we never had before."

Although the majority of students said they enjoyed the service-learning experience, most found it a challenge to work with their clients. Trying to make contact with their client was the most difficult aspect for the students. Reasons such as distance, not being able to make contact when needed, and finding time away from the farm to talk were listed as difficulties. Nicole said contacting her client was the hardest part because "he is very busy and it's hard to find a time that fits his schedule."

A few students found challenges in not being able to meet face-to-face with their clients due to busy schedules and living in different cities. David said, "Because they were so far away, it was more difficult to interview over the phone." Charlie said, "Although it was a very unique and educational experience, I feel my client (due to his career) was entirely too busy for me. I never even got to meet him face-to-face."

Other students faced the challenge of conducting interviews and gathering usable information from their clients. Garrett said, "Sometimes it was hard to stay on topic during interviews." Lauren said she found "face-to-face was easier to relate to my client, but she is somewhat difficult to interview — only yes and no answers." Sydney said finding an interview time was a challenge: "Between my classes and job and her multiple obligations, finding a time when we can sit down and talk has been difficult." Students also said clients lacked basic business materials that made completing assignments more difficult. Brody said, "They are an up-and-coming business and have not established some of the necessary requirements I needed for class."

Although students struggled to make contact with their clients or obtain necessary information from interviews, others said they faced the challenge of trying to meet the client's expectations. Lori said her client was "scatter-brained and doesn't understand that I have certain assignments that I need to turn in. She acts like I'm a PR [public relations] representative for her organization and has a list of things she wants me to do."

During the duration of the two communications courses, students and clients communicated frequently through multiple communication channels. Students and clients communicated three main ways—email, telephone, and face-to-face meetings—that ranged from two times each semester to nearly every night. Ann said, “I was in contact with my client about two to four times,” and Austin said, “I talked on the phone with my client almost every night and saw them almost every weekend.” Many students said contact with their clients tapered off during the semester. Karson said she was in contact with her client “at least once a week for the first media kit. For the second kit I didn’t talk to them as much, mainly just for small details and interviews.”

Participants were asked to describe the changes they made in interacting with their clients in an attempt to improve communication efforts throughout the service-learning experience. Participants said they devoted more time to working with their clients, attempted more face-to-face interactions as they saw better results from those interactions, took better notes during interviews, and asked better questions throughout the interviews. To improve his client interactions, Austin said, “I will devote more time to working with them.” Brenna said could improve by “asking better questions while interviewing and to be more organized.”

Conclusions, Implications, & Recommendations

Service-learning as a pedagogical tool has gained popularity in the past decade in a number of academic areas (Campus Compact, 2003). Although service-learning has been applied in agricultural communications courses (Kelemen et al., 2011; Vaught et al., 2011), more research is needed to explore the topic from the students’ perspectives. Using a case study, this research explored the use service-learning in two agricultural communications courses.

The majority of students expressed a positive opinion about the service-learning projects in both courses. They said the integration of service-learning was a good experience and beneficial to their communication skills. Prior research also found that students reported service-learning courses were worthwhile and appreciated the hands-on communication skills they gained (Kelemen et al., 2011; Klink & Athaide, 2004). One of the most frequently reported rewards was the benefit the clients would receive from the service-learning projects. More specifically, students understood that the work they completed through the service-learning projects could be instrumental in changing the outlook of their client's organization, should they choose to implement the project.

A few students mentioned that they would not find the service-learning experience rewarding if their work was not beneficial for their clients. This is a clear demonstration of reciprocity in service-learning. To be an effective partnership, each partner must have a need that can be addressed through the curriculum, and the partners work together with the goal of shaping each other to obtain their fullest potential and accomplish the goals of each (Campus Compact, 2003).

Other students said the service-learning project was worthwhile because of the valuable, real-life experience they received, specifically refining their interviewing skills, experiencing job simulation of public relations professionals, and working under pressure to meet deadlines. Often, many students only receive these benefits if they complete an internship outside of the classroom. By working with real-life clients through the service-learning project, students gained a deeper understanding of the agricultural communications industry and the skills required for the workplace. Keleman et al. (2011) also found incorporating service-learning into the agriculture curriculum to be beneficial for students' development in preparation for the real-world while building their confidence for the future.

Robinson and Torres (2007) reported that service-learning projects are an excellent form of experiential learning that encourages students to apply their leadership knowledge and skills. To complete the service-learning project, students in the campaigns course worked in groups, which was a positive learning experience. Students said they learned how to be respectful of each other's opinions, improve their leadership skills, and work in a group environment. Overall, students recognized the positive impact service-learning can have on their career. Preparing media materials and communications campaigns provided actual experience for job interviews and portfolio materials, and required students to think critically and creatively.

Students in the agricultural communications courses acknowledged the service-learning experience gave them a heightened sense of awareness of the struggles their clients face, and the service they provided to their client's organization was the best part of their service-learning experience. This implies that working with clients helps students better understand the issues that impact community organizations, and is consistent with Klink and Athaide (2004) who found students felt they "actually made a difference" (p.151) with their work.

In these agricultural communications courses, working with clients was a positive experience for students. Students said they enjoyed working with their clients because they were very helpful throughout the entire process. Some students were hesitant early on about working with a client for their projects, but after several interactions, they gained confidence and enjoyed the experience. This finding is in agreement with Keleman et al. (2011) who found that service-learning fostered a real-world experience for students, which aids in building confidence.

Although working with clients was a positive experience for students, they did mention several obstacles they had to overcome. Many students said it was difficult to make initial client contact and maintain consistency in the interactions throughout the semester, which resulted in frustrations from the students. Vaught et al. (2011) also found a clear lack of communication early in the student-client partnerships and emphasized the need to improve upon this in future partnerships.

Students reported that face-to-face interactions with their clients were very beneficial, but said it was difficult to find times to meet due to distance and busy schedules. Those who did meet with their clients were challenged to obtain useable, quality information from their interviews. Students also struggled with newly established businesses that lacked basic materials required for assignments, forcing additional work on the students. Keleman et al. (2011) found similar results—the workload of the service-learning project required a lot of time outside of class.

A small number of students said they enjoyed the concept of working with a client, but if they had the opportunity to do it over, they would have picked a different client. These students said the clients had expectations of what items should be completed, and when they discovered the students' assignments did not match what the clients needed, some lost interest in the partnership. Vaught et al. (2011) examined clients' perceptions of the public relations course used in this study and these clients reported a "clear lack of communication in the beginning of the partnership" (p. 109). This implied the students were not clear about the service-learning project at the beginning of the partnership, leading to miscommunication about the benefit of the project to their client's organization (Vaught et al., 2011). Service-learning scholars emphasize that clear expectations and a mutual understanding of goals are essential when establishing partnerships (Bringle & Hatcher, 2002; Keleman et al., 2011; Sandy & Holland, 2006) because sustainability in the partnership is dependent on a sense of reciprocity associated to the exchange of knowledge (Campus Compact, 2003).

Most students described their interactions with clients as positive, professional, educational, laid-back, fun, and friendly. Students who did not know their clients prior to the experience said relationships grew to become more personal as time progressed. Students who did know their clients prior to the service-learning project had already established rapport and were able to maintain professional working relationships.

Some students struggled to communicate with their client and said interactions were quick, wasted, very few, and at times non-existent. Students said it was hard to relate to their clients and get enough detailed information; this led to student insecurities about being able to meet the client’s expectations. Before allowing a student to use a client, students should ensure the client is available, willing to participate, and understands the students' assignment.

Students who were having trouble contacting their clients for information said they had to be more persistent in getting a response. To improve the service-learning experience, students said they had to modify their interactions with clients. Students devoted more time to working with their clients, attempting more face-to-face interactions because they had better results from those interactions, took more thorough notes during interactions, and asked better questions during the interviews. This implies students recognized the importance of communicating with their client for the success of their project, as well as providing the client with tangible materials that could be integrated into their current communication strategy.

Bringle and Hatcher (2002) said student-client relationships are successful when the interaction is frequent and diverse. Students and clients in this study communicated more often in the beginning of the partnerships, and maintained some contact throughout the semester using a variety of communication channels. While students overall had positive opinions of working with clients to complete the service-learning projects, they reported a large variation in the number of times they interacted, as well as the consistency of communication within the interactions. Future research should determine if the frequency and quality of communication between students and clients influences both parties' satisfaction with the service-learning experience.

Vaught et al. (2011) found that clients reported enjoyment in working with the students and expressed their desire to provide students with an opportunity to learn in a real-world setting. Some clients even wanted to learn themselves (Vaught et al., 2011). Students in this study said they gained a deeper understanding of the work their clients were doing and the responsibility they had to create communication materials that could be instrumental in changing the outlook of their client's organization. The results of the current study and Vaught et al. (2011) illustrate the positive aspect service-learning had for both the students and the clients, creating reciprocity and meeting valuable needs on both sides that could not be meet with the traditional curriculum or volunteer activities alone.

Although few studies have explored the integration of service-learning into agricultural communications curriculum, even fewer studies have applied Kolb's (1984) theory and model of experiential learning as a framework in this field. Kolb's model of experiential learning provides a powerful theoretical and practical framework for service-learning efforts across many educational disciples (Robinson & Torres, 2007), and proves to be applicable to agricultural communications as well. The cyclical nature of the model enabled a connection to form between the direct learning experience and the abstract generalization, with reflection as the linking function. Kolb's theory emphasizes the central role that experience plays in the learning process, and the importance of reflection to grasp the experience. Using the data collected in this study, Figure 3 depicts Kolb's model of experiential education as applied to service-learning in agricultural communications.

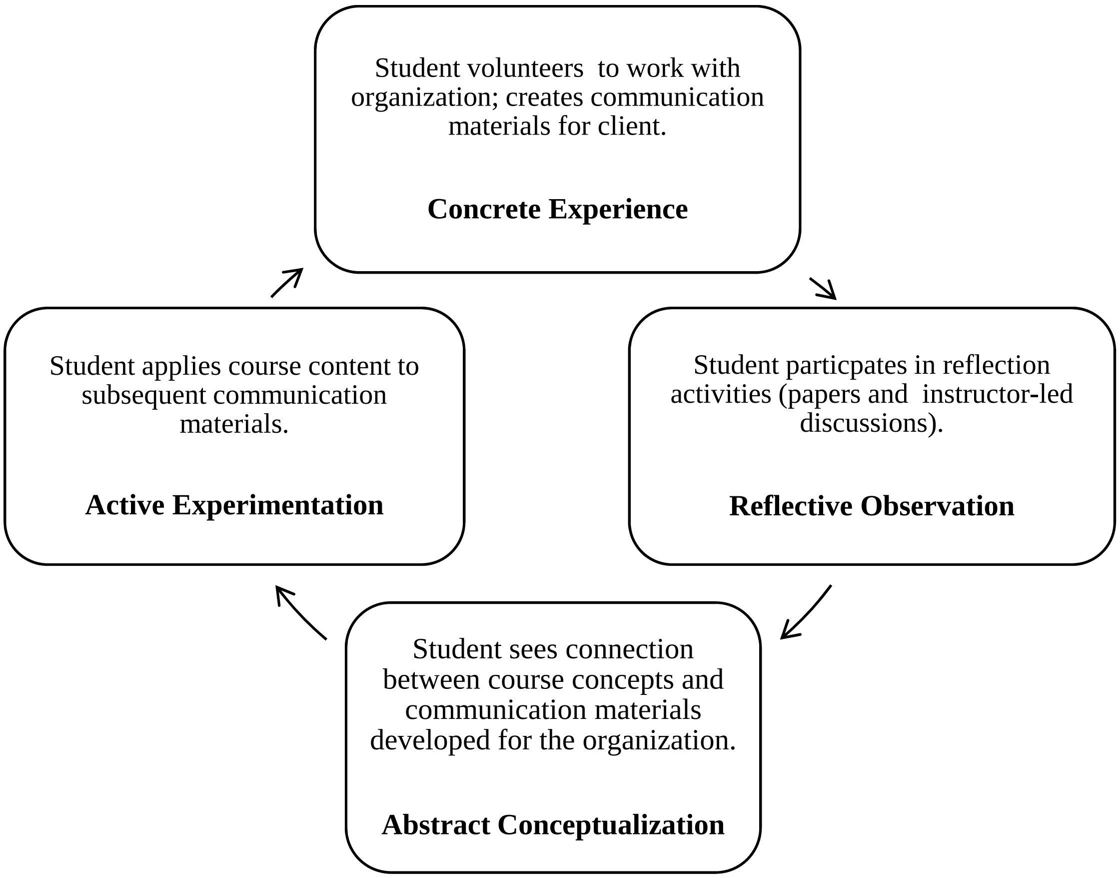

Figure 3. Model of service-learning as experiential education in agricultural communications

When students from the agricultural communications courses engaged in service by creating communication materials for a client, they participated in concrete experience. Reflective observation occurred when students participated in reflection activities that required them to express their opinions and perceptions of the overall service-learning experience, their interactions with the clients, and the content of the course. These reflections could be in the required written reflections or more informal discussions in class. In the stage of abstract conceptualization, students merged their reflections with the service experience and course concepts to gain a deeper understanding of how the concepts directly related to their service-learning projects. Active experimentation occurred when students edited and revised communication materials to meet the client's needs, and when they applied the course concepts and skills gained from the service-learning project(s) in future experiences.

In this study, students in the public relations writing course used one-on-one relationships with their clients, independent of other students in the class. In the campaigns class, all the students worked in groups to help address the communication needs of one client. Additional research should explore the students' satisfaction of one-on-one partnerships versus a group of students all using the same client.

An important feature of experiential learning is the distinct learning styles associated with each stage of the cycle (Healey & Jenkins, 2000). To better understand students' assessment of the experience, researchers could conduct a learning styles assessment to determine what relationship, if any, there is between learning styles and students' enjoyment of the service-learning experience.

References

Adams, S., Irlbeck, E., Meyers, C. A., & Hefley, M. (2011. May). *Implementing service learning into an agricultural communications classroom.* Poster presented at the national meeting of the American Association of Agricultural Education in Coeur d'Alene.

Benner, P. (1985). Quality of life: A phenomenological perspective on explanation, prediction, and understanding in nursing science. *Advances in Nursing Science, 8,* 1-14.

Bringle, R. G., & Hatcher, J. A. (2002). Campus-community partnerships: The terms of engagement. *Journal of Social Issues, 58,* 503-517.

Campus Compact. (2003). *Introduction to service-learning toolkit: Readings and resources for faculty* (2nd ed.). Providence, RI: Brown University.

Coleman, J. (1976). Differences between experiential and classroom learning. In M Keeton (Ed.) *Experiential learning: Rationale, characteristics and assessment,* p. 49-61). San Francisco: Jossey-Bass.

Dewey, J. (1938). *Experience and education.* New York: Collier.

Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.

Gay, L. R., Mills, G. E., & Airasian, P. (2006). *Educational research: Competencies for analysis and applications* (8th ed.). Upper Saddle River, NJ: Pearson Education.

Hatcher, J. A., & Bringle, R. G. (1997). Reflections: Bridging the gap between service and learning: *Journal of College Teaching, 45,* 153.

Healey, M., & Jenkins, A. (2000). Kolb's experiential learning theory and its application in geography in higher education. *Journal of Geography, 99*(5), 185-195.

Jacoby, B., & Associates. (1996). *Service-learning in higher education: Concepts and practices.* San Francisco, CA: Jossey-Bass.

Kelemen, D. B., Cartmell, D. D., & Sitton, S. P. (2011). Service learning: A case study in an agricultural communications course. *Journal of Applied Communications, 93*(3 & 4), 6-14.

Klink, R. R., & Athaide, G. A. (2004). Implementing service learning in the principles of marketing course. *Journal of Marketing Education, 26*(2), 145-153.

Kolb, D. A. (1984). *Experiential learning: Experience as a source of learning and* *development.* Inglewood Cliffs, NJ: Prentice-Hall.

Maynard, T. J., Ward, C. V. L., Gable, R., & Giles, D. E. (2011). *The relationship of undergraduate community service to alumni community involvement and leadership.* (Doctoral Dissertation, Rhode Island, Johnson & Wales University). Retrieved from: http://gradworks.umi.com/34/56/3456399.html.

Merriam, S. B. (2002). *Qualitative research in practice: Examples for discussion and analysis.* San Francisco: Jossey-Bass.

National Service-Learning Clearinghouse. (2011). What is service-learning? Retrieved from http://www.servicelearning.org/what_is_service-learning/service-learning_is.

Robinson, J. S., & Torres, R. M. (2007). A case study for service-learning: What students learn when given the opportunity. *NACTA Journal, 51(4),* 2-8.

Sandy, M., & Holland, B. A. (2006). Different worlds and common ground: Community partner perspectives on campus-community partnerships. *Michigan Journal of Community Service Learning, 13,* 30-43.

Scales, P. C., Roehlkepartain, E. C., Neal, M., Kielsmeier, J. C., & Benson, P. L. (2006). Reducing academic achievement gaps: The role of community service and service-learning. *NACTA Journal, 29*(1), 38-60.

Sedlack, C. A., Doheny, M. O., Panthofer, N., & Anaya, E. (2003). Critical thinking in students' service-learning experiences. *College Teaching, 51*(3), 99-104.

Sprecker, K. J., & Rudd, R. D. (1997). Opinions of instructors, practitioners, and alumni concerning curricular requirements of agricultural communication students at the University of Florida. *Journal of Agricultural Education, 38*(1), 6-13.

Strange, A. A. (2000). Service-learning: Enhancing student learning outcomes in a college-level lecture course. *Michigan Journal of Community Service Learning, 7,* 5-13.

Vaught, L. L., Meyers, C., Irlbeck, E., & Ulmer, J. (2011). *Development of a client satisfaction instrument for service-learning based projects in agricultural communications.* (Master's Thesis, Texas, Texas Tech University).

Exploring U.S. Agricultural Commodity Organizations' Use of Blogs as a Communications Tool

Research Paper

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Exploring U.S. Agricultural Commodity Organization's Use of Blogs as a Communications Tool

Abstract

Current communications trends and social media have given individuals and organizations new means to foster relationships while stimulating new thoughts and creations. One particular form of social media is blogging, which allows people to connect with a community, as does all social media, but blogs have the opportunity to share a wider variety of information than other forms of social media. The purpose of this study was to explore how agricultural commodity organizations use blogs as a communication tool. The researcher purposively selected nine U.S. agricultural commodity groups that had an organizational blog and collected data through in-depth interviews. The results indicated that the organizations started blogging to accomplish a number of goals and to reach new and traditional audiences. The U.S. agricultural commodity organizations used some online analytics and mentions on other social media outlets to measure blog success, but did not establish goals for their blog prior to launching the blog. The results for this study provide an understanding of how agricultural commodity organizations are utilizing blogs, which provides insight for others in the agricultural industry who may decide to use this technology.

Keywords

Blogs, online communication, agricultural commodity organizations, qualitative, in-depth interviews

Introduction/Literature Review

Current communications trends and social media have given individuals and organizations new means to foster relationships while stimulating new thoughts and creations (Anderson-Wilk, 2009; Eichmann, 2009). Social media technologies are changing how people communicate with each other (Eichmann, 2009) because media consumers are no longer passive audience members; instead, they seek to create the messages for the media to present (Laurie, 2010). Social media sites are varied, thus providing options for just about everyone to participate in online social media activities (Boyd & Ellison, 2007) from professional networking and mass communication sites to real-time location specific communications (Kietzman, Hermkens, McCarthy, & Silvestre, 2011).

One particular form of social media is blogging, which allows people to connect with a community, as does all social media, but blogs have the opportunity to share a wider variety of information than other forms of social media (Kelleher & Miller, 2006; Kent, 2008). Blogs and other forms of communication allow people to be involved in the communication process including asking questions, processing the information in an active environment, discussing the subject matter, and applying the information presented (Brown & Adler, 2008).

Blogs are Web pages that are frequently modified with dated entries or posts listed in reverse chronological order. Postings can also include pictures, audio, and video (Herring, Scheidt, Bonus, & Wright, 2004). In 2005, a Pew Internet study found that eight million American adults had created blog sites, 58% of adults were reading blogs, and 27% of Internet use was related to blogs (Rainie, 2005). People are using blogs to track celebrities, post opinions, learn the latest gossip, investigate political matters, and share information about their lives (Boyd & Ellison, 2007; Colliander & Dahlén, 2011). Organizations are using blogs for extreme marketing campaigns and targeted attacks on the competition to draw customers into a brand or to a product (Barbaro, 2006; Lyons, 2005). Blogs have been suggested as a useful tool to engage in dialogue and feedback with readers or targeted publics (Yang & Lim, 2009).

Organizational blogging has been able to create an online community among various publics (Jackson, Yates, & Orlikowski, 2007). As a blogging community's strength grows, the ability of members of a community to seek more useful answers and more in-depth information gathering increases. Also, members of the audience who participate in the blog expand their level of knowledge sharing among the other members of the organization's blog (Jackson et al., 2007).

The tone organizations use when blogging can impact the effectiveness of the information shared through the blogs (Kelleher & Miller, 2006; Levine, Locke, Searls, & Weinberger, 2001). Kelleher and Miller (2006) found that organizational blogs that used a conversational tone throughout the blog postings appeared to be a more effective in communicating than traditional organizational newsletter-type material that was available online. Levine et al. (2001) found that traditional corporate or organizational communication does not contain a human-like voice or tone. However, blogs do allow for organizations to communicate with characteristics such as humor, admitting mistakes, treating others as humans, and providing links to competitors (Weinberger, 2002). Seltzer and Mitrook (2007) concluded that blogs would be more beneficial in creating online relationships with publics as compared to traditional websites, but continual effort needs to be made to create and establish these relationships through this form of online communications (Seltzer & Mitrook, 2007).

Public relations practitioners have described blogs as a tool that can influence individuals and publics (Edelman & Intelliseek, 2005; Kent, 2008). Porter, Sweetser Trammell, Chung, &

Kim (2007) found that practitioners who were utilizing blogs felt they had more power in the sense of expertise and prestige than those who were not blogging. Kent (2008) said the single greatest strength of blogs and the most important trait to public relations practitioners is the ability for publics to participate in the framing of online news and other information. The ability of blog authors to influence publics through social media and blogs is greater than other mediums because publics read blogs with developed opinions and prior knowledge (Kent, 2008).

Pawlick (2001) said agriculture and science information impacts people around the world, but traditional media outlets do not report on these developments. Those in charge of communicating scientific and applied research information through various media outlets have realized the need for agriculture to stay current and active with the latest advancements in communications technologies (Roth, Vogt, & Weinheimer, 2002; West, 2006). In fact, the continual improvements in the U.S. and international agricultural industries can be related to the ability to communicate those advancements effectively (Rhoades & Hall, 2007). As new technologies evolve, those within agriculture are dedicated to helping others utilize these technologies while sharing their discoveries to advance the industry as a whole. Improvements in communication practices could improve relationships and industry practices with various publics by bringing people together to become better educated on various aspects of the agricultural industry (Roth et al., 2002).

People involved in the agricultural industry want more options to share, discuss, and interact with each other (Successful Farming Re-Engineers, Re-Launches Agriculture.com, 2010). The opinion that agriculture is behind the times with modern communications tools is incorrect; in reality those involved with agriculture are some of the most advanced users of communication technology (Williamson, 2012). Currently, agriculturalists are using social media tools to share stories of production agriculture to educate and disprove misconceptions that public and policy makers may have about production agriculture (Livestock Marketing Association, 2010; Williamson, 2012). Agricultural producers are continually being encouraged to use social media because the opportunities to interact with consumer and clients are endless (May, 2011; Williamson, 2012). Others are using this technology to sell products, find or establish resources for solutions, promote their businesses, build a news network, and take the opportunity to interact with experts in the field (Agriculture.com, 2010). Some producers and industry experts have developed blogs and other forms of social media to combat misinformation (Anderson-Wilk, 2009; Truitt, 2010). Graybill (2010) found agricultural communicators where using Facebook to share information and create social movements.

Within agriculture, industry organizations are using blogs to interact with consumers by sharing recipes, marketing campaigns, educational information, industry resources (My Checkoff News, 2009), and producer stories (California Agricultural Communications Coalition, 2010). Some organizations have created blogging sites that allow for a personalized feel to an online forum (National Corn Growers Association, 2007). Industry groups have also launched blogs to have a place where producers can discuss industry trends in U.S. agriculture (United States Grain Council, 2009). Other organizations and individuals want to create a united front for agriculture, so they are working to create a community of “agvocates” through social media, which has been a focus of Syngenta’s “Growing Digital” blog (Syngenta, 2011).

Despite the increase in blog popularity and use in agriculture, limited research has been conducted on blogs or blogging in agricultural industries. Fannin and Chenault (2005) examined how blogs could be utilized in agriculture to attract and disseminate information to journalists and non-media consumers. Rhoades and Hall (2007) conducted the first agriculture-focused blog content analysis, which analyzed the characteristics of blogs in agriculture and what information the blogs contained pertaining to the industry. This content analysis found agricultural blogs at the time were very young, ranged in subject matter, and were not updated as often as other studies had found about blogs focused on other subjects. The most recent study that has been done related to blogs and agriculture focused on agricultural editors' and broadcasters' use of Web 2.0 and social media technologies (Rhoades & Aue, 2010). The researchers found that those involved with agricultural communications understood the need to constantly adopt new technology, but had a hard time maintaining a blog.

Theoretical Framework

The theoretical framework used in this study combined the theory of relationship management, contingency theory of accommodation, and interactivity theory. Other studies in public relations have used these theories to research blogs, how people blog, and how stakeholders use websites (Grunig, 2009; Kelleher, 2008; Kelleher & Miller, 2006; Kent, 2008; Rhoades & Hall, 2007; Sweetser & Metzgar, 2007).

The theory of relationship management is used in many fields – public relations, interpersonal relations, family relations, organizational studies, group dynamics, and more – as a central concept of managing the relationships between organizations and its key publics (Ledingham, 2000). The theory is built around Grunig and Hunt's (1984) definition of public relations, and this theory should encourage the study and practice of public relations into nurturing and maintaining relationships with key publics rather than manipulating the publics (Ledingham, 2000).

The theory of interactivity states that dialogue and interaction can develop between an organization and its publics (Scuncio, 2010). This theory has changed with the advent and growth of the Internet, as interaction with the other individuals or organizations through social media, websites, or blogs has become a common practice (Smuts, 2009). Establishing how interactivity actually happens is important for organizations or public relations professionals to understand when disseminating information via blogs (Kent, 2008; Smuts, 2009).

Contingency theory of accommodation focuses on the continuum from pure accommodation to pure advocacy (Cancel, Cameron, Sallot & Mitrook, 1999). The theory provides an explanation for the decisions public relations practitioners make in establishing and maintaining relationships between organizations and their publics (Kelleher, 2008; Cancel et al., 1999). In public relations, practitioners choose to represent an organization to its publics from a variety of positions, which can range from pure accommodation to pure advocacy (Cancel et al., 1999). Kelleher (2008) said this theory can be applied when practitioners are willing to enter into a dialogue with a public, rather than simply advocating. In studies that researched organizational use of blogging, this theory has been used to determine the voice and willingness of practitioners to participate in a dialogue with their publics (Kelleher, 2008).

Purpose/Research Objectives

The purpose of this study was to explore why and how U.S. agricultural commodity organizations are using blogs as a communication tool. The following objectives were formed to achieve the research purpose:

1. Describe why U.S. agricultural commodity organizations established blogs.
2. Describe how U.S. agricultural commodity organizations manage their blog content.
3. Describe how U.S. agricultural commodity organizations use blogs as part of a strategic communication plan.

Methodology

This study used a descriptive, qualitative research design consisting of in-depth interviews with blog authors of selected U.S. agricultural commodity groups. Qualitative research uses in-depth information from a small sample to understand how and why people think, behave, feel, develop meaning, and experience a situation (Thomas & Magilvy, 2011). The researcher purposively selected U.S. agricultural commodity groups from two agricultural associations – the National Association of Farm Broadcasters (NAFB) and the American Agricultural Editors' Associations (AAEA). These associations both have members who represent a variety of agricultural industries, commodities, and audiences.

The AAEA membership list contained three U.S. agricultural commodity organizations. From the NAFB membership list, potential participants were selected from the Allied Industry Council, which includes commodity organizations. The list of Allied Industry Council members had 15 U.S. agricultural commodity groups. Once the industry groups were identified, the organizations' websites were reviewed to identify the presence of an official organizational blog. Fifteen of the commodity organizations had blogs hosted on the website or hosted through an external website. The lead researcher then contacted each blog's administrator to seek participation in the study; nine agreed. These individuals were purposively selected because they were employees of the commodity organization and were the primary individuals who handle the blog content and management.

A questioning guide was used to collect data to address the research objectives. The questions addressed the organization's motivation to start a blog; how the organization is utilizing the blog; the organization opinions, attitudes, and beliefs of the use of the blog; and how the organization measured success of the blog. This questioning guide was reviewed by a panel of experts and pilot tested prior to conducting the interviews for this study.

The researcher collected the qualitative data using in-depth telephone interviews between December 9, 2011, and January 5, 2012, with nine respondents across the United States. The respondents represented five “crop” organizations, two “food,” and two “livestock.” The telephone interviews were recorded with a digital recording device, and the lead researcher took additional notes to record additional thoughts and concepts. Each interview was conducted using the same questioning guide and lasted approximately 45 minutes. The recorded interviews were then transcribed into separate Microsoft Word files.

Participants were assigned pseudonyms prior to analyzing the data. After the lead researcher transcribed each interview, the results were analyzed using the constant comparative method (Glaser & Strauss, 1967). Using this method, the researcher looked for common themes, similarities, and differences. The data were analyzed in multiple steps. First, the lead researcher individually read the nine interviews. Then, using NVivo 8.0 to help store, manage, and code the data, the interview transcripts were coded into themes based on the researcher’s interpretation and classification of the data. As themes emerged, they were compared to other data and categories to determine common relationships around the information collected.

Results

Demographic questions (age, gender, geographic location) were asked to gain a better understanding of the participants. The mean age was 33; the median age was 29; and the mode age was 27 (n = 2) and 29 (n = 2). Three males and six females participated in the study. All participants were employees of an U.S. agricultural commodity organization. The commodity organizations represented in this study include both state and national commodity organizations. Table 1 provides the respondents’ pseudonyms, a brief job description, the location of the organization’s headquarters, the year the blog started, and the classification for the blog. Most of the participants had continuously worked on their organization's blog since their launch. All were the main editors of the blog or worked closely with another employee to edit the blog.

Table 1
Characteristics of Selected U.S. Agricultural Commodity Organization Representatives and Corresponding Blogs (N=9)

Pseudonym	Job Description	Geographic Location	Blog Launch Year	Commodity Classification
Katie	member of marketing team for a food organization	Midwest	2011	Food
Michelle	communications manager for a crop organization	Midwest	2011	Crop
Matt	director of communications for a crop association	Midwest	2012	Crop
Stacy	online content manager for a livestock organization	Midwest	2009	Livestock
Hannah	communications coordinator for a crop association	Southwest	2010	Crop
Shelia	director of communications for a crop association	Midwest	2010	Crop
Tyler	communications director for a crop association	Midwest	2006	Crop
Trent	direct of communications for a livestock association	Northeast	2010	Livestock
Lindsay	communication specialist for a food organization	Midwest	2010	Food

RO 1: Describe why U.S. agricultural commodity organizations established blogs.

Data analysis identified two themes for this objective: 1) to meet a variety of goals and 2) to reach traditional and new audience segments.

To Meet a Variety of Goals

U.S. agricultural commodity organizations are largely responsible for communicating with their members and supporting publics. Although the organizations all use the blogs to disseminate messages to their publics, the establishment of the blog was done to meet several goals. One reason the organizations started blogs was to find a new way to share information from travels, events, and messages that may or may not be used in a printed publication.

Participants mentioned that one reason they established blogs was that blogging was the latest online communication tool. Tyler said the new trend in communication was to use blogs, so his organization wanted to find out what people were talking about.

> TYLER: We were looking for new ways to communicate with our members and the public other than just news stories and press releases. We wanted to find a way to put a more interesting spin on things that we are involved in and so we first began to experiment with blogging.

Participants said the blogs fit the commodity organizations' need for a communication tool that allowed them to post in-depth information and provided a way to save information for future use. Shelia said her organization's blog "creates an archive of information on our website."

Another reason for establishing the blog was the ease of publishing information during international travel. Michelle said that a blog allowed her organization to "communicate with the media, board members families, and other farmers that might be interested in our organization's travels."

Additionally, participants said their organization's blog was established to provide a constant stream of content from the organization to its membership. Blog followers can be alerted to the latest developments with an organization faster and easier with the blogging technology's ability to send instant emails and give readers the ability to choose which information they will read. Trent said, "We have tons of news that goes to our members through email, and instead of getting lost, the blog allows people to choose where their information is coming from."

The purpose of the organizations' blogs differed, but all the participants said they wanted to embrace a different online communication tool to disseminate messages to their audience members. These messages included information about consumer and producer education, outreach, marketing, public relations, and media relations. Several of the participants said they wanted to start a dialogue on the blog about topics that the organization had previously put in a printed publication.

> HANNAH: One of our biggest things that we have done to get a conversation started is to repurpose an article, and use it on our blog from our organizations newsletter or magazine. We then broadcast that on Twitter or Facebook and followers will click on those links and go back to our blog. It is a way to increase traffic back to our blog and website.

The participants all said that blogs were a form of social media that could work to promote a message for a specific purpose or cause. Katie said her organization desired an outlet that would help provide information to benefit the organization's reputation. She said, "We have found that through research, any time that you can get a message out there and start a dialogue you can create trust and share our organization's mission."

One participant mentioned the blog was used to address misinformation during the 2009 H1N1crisis that affected the United States, but had no direct impact on the actual American swine industry. The casual use of "swine flu" hurt the consumers' confidence in the safety of consuming pork products. Stacy said the blog was an excellent resource during the H1N1 crisis to reassure people that pork was safe. She said: "The blog is another resource we use to promote our product and ensure consumer confidence."

To Reach Traditional and New Audience Segments

U.S. agricultural commodity organizations started blogging to communicate with producers, consumers, and media. Participants said their organizations saw blogs as a way to contact different target audiences including wanting to reach members, the general public, and the media. Trent said, “We wanted to reach a younger audience.” Katie said that her organization’s blog was “directly targeted toward early adopters, people who are seeking information about food, and agricultural industries.” Lindsay associated the establishment of her organization’s blog with the expansion of consumers’ social media use: “Social media was growing. The use of blogs, Twitter and Facebook by consumers was evident, so it seemed like the right time to start blogging.” Hannah said her organization used the blog to help reach a different audience: “We wanted to target those who are more likely to gather news information from social media or a blog versus a newsletter that we mailed out.”

U.S. agricultural commodity organizations have found that their blogs work to draw in the media. Reaching the media allows the organizations to provide information about events, education, and legislation. The participants said media representatives enjoy being able to read about an event or issue within a specific industry and have a story idea pitched to them. Trent, Shelia, and Michelle all said that these story pitches would not have been as easily available or successful without their commodity organization’s blog. Michelle said: “One of the purposes of our blog is to share information with various audiences, especially media. By giving the media information that they need so they can follow us and generate stories about our organization and our members.”

Shelia stated that many major U.S. media outlets are keeping a watchful eye on her organization’s blog and the added media attention has helped provide information about agriculture and her organization’s work within the crop industry. Stacy said: “When major media is checking our blog for stories, I know they must be checking other organizational blogs, and this is helping American agriculture share its story."

RO2: Describe how U.S. agricultural commodity organizations manage their blog content.

Three themes emerged to address this research objective: 1) hosting services for blogs, 2) blog topics and posting frequency, and 3) encouraging participation from blog followers.

Hosting Services for Blogs

The U.S. agricultural commodity organizations used either a pre-existing website or external blogging website to host the organizational blog. Externally, five commodity organizations used Wordpress and two used Blogger. Participants said the external blogging websites offered the commodity organizations the opportunity to easily construct a blog that fit their initial and evolving needs as a communication tool.

> TRENT: I didn't see any reason to reinvent the wheel; there are free services that are easy to use. These major blogging sites have most of the quirks worked out of them. Instead of developing something internally where we would have to work out bugs, we decided that to take the easy path.

Two commodity organizations chose to host their blog through their organization's preexisting website because it was less of a hassle and worry than to have to direct potential readers to another website. Katie added that her organization chose to keep the blog on their website so "people have a central location to search for information pertaining to the organization." They also said they enjoyed being able to link all of their organization's supplemental websites and blogs together under one umbrella website.

Blog Topics and Posting Frequency

Participants said blog topics were focused around the organization's commodity, but also included supporting topics. To determine the subject matter for the blog posts, three organizations focused on a yearly calendar, and based blog posts on national nutrition month, national dairy month, and major U.S. holidays, such as Easter and Thanksgiving. Katie said: "We follow the calendar year. At Thanksgiving people talk about turkeys and ham, at Easter people talk about eggs, so we use those type of things as well to bring more consumer type things into the blog." While some organizations had a plan for the subject matter of the blog posts, other participants said the posts could vary if they supported the organization's commodity.

Participants said the blog's subject matter is a way for their organizations to draw media attention to a certain subject that is affecting the organization's membership and operations. For particular events or industry-related issues, blogs were used to gain attention from major media outlets. Many of the organizations' blogs also provided legislative and political information about industry issues that affects producers.

All the participants said their organization enlisted the assistance of more than one person to write blog posts. One participant said her organization pays outside bloggers to produce content for the organization's blog, while two organizations had volunteer bloggers. In both cases, the bloggers were allowed to determine their own blog posting content as long as is it related to the mission of the commodity organization and the predetermined target audience.

> LINDSAY: Subject matter is left open to the blogger. On the communications side of things, I try to stay up on what is going on, like June is dairy month and to talk about things related to dairy month or March is national nutrition month, some of those timely things, but really I don't dictate a lot of what we are blogging about.

Some of the organizations have goals of posting to their blogs three to five times a week, but said they are more concerned with producing quality content as compared to just posting blogs. Shelia said: "Blogging takes time. It is not a shortage of topics; it's just the time it takes to do it."

Encouraging Participation from Blog Followers

Participants said their commodity organizations have struggled to encourage comments and conversations from readers. Multiple organizations have tried to pose questions to start a conversation between blog followers and the blog author. Stacy said: "We do a couple of promotions that they have to sign up in the comments. It takes them one step further than just visiting or reading."

Some organizations used comments as a measurement of a successful post. Tyler said: "I wish readers would comment more. You can measure the success of a blog in some ways by number of comments that are posted." Tyler also his organization has not figured out the perfect way to initiate a conversation with their blog followers. Lindsay, Trent, and Katie all said they would like the blog followers to create a conversation among themselves without assistance from the organization's blog authors or supporting members. Others said their organizations did not care if they received comments on the blog posts because they knew people were reading them. Hannah said the level of comments that they receive on their national crop blog is related to a post's level of controversy. She explained: "Sometimes I am leery of the comments from the general public. We have not had any situations yet [in] dealing with individuals who may be offended or unhappy about a blog post."

Each organization had a different process for moderating comments on blog posts. Some organizations allowed every comment to be posted, while others thoroughly read the comments before they were allowed to be posted, and others removed comments if they contained profanities. Stacy said her organization had a strict set of organizational blogging policies and each comment was held to those policies. She said the comments her organization were most concerned about monitoring were from people who were concerned or frustrated and she said they aimed to help those people. Trent said his organization's policy to handle comments was not to remove comments from the blog unless they contained references to violent actions or profanities.

RO 3: Describe how U.S. agricultural commodity organizations use blogs as part of a strategic communication plan.

Two major themes were identified to address this objective: 1) measuring blog success, and 2) determining target publics and strategic planning.

Measuring Blog Success

Each organization considered success differently, but no organization had directly conducted research to determine their blog's success. The commodity groups used the built-in blogging analytics as the main way they monitored success of the blog, although some did use Google Analytics. Trent mentioned it was difficult to directly measure the success of his organization's blog, but "Google Analytics tells us a lot of information and from there, we can measure the amount of time a visitor stayed, how many times a blog is mentioned on Twitter or Facebook." Many commodity organizations also tracked how many times a blog post was "retweeted" on Twitter or "shared" on Facebook to help measure success.

> KATIE: We use social media as a way to monitor success. If we have a tweet about our blog post and it gets retweeted seven times, we think that is pretty cool. We monitor based upon the number of shares and retweets we get via social media.

Six of the research participants considered a blog post successful if it received comments from followers and readers. Participants said they wanted to have interaction with the blog followers through blog comments and other readers who started a dialogue. Additionally, the participants said the media was an audience they wanted to reach with their blogs, and the mass media's level of attention to their blogs was used as a measurement of success. Trent mentioned that receiving phone calls from the media about a blog topic or post was a rewarding feeling: “Based upon the phone calls that we get for testimony and questions about issues that affect policy makers, we feel our blog is successful.”

Determining Target Publics and Strategic Planning

The participants shared varying opinions regarding if they had established a blog with specific publics in mind. Several of the organizations had not included social media communications in the organizational strategic communication plan; therefore, they had not been able to compare who they wanted read their blog to who actually was. Lindsay said she was aware of how her organization was using social media to interact with Internet users and those who they wanted to target, but she was unsure of who was really using their social media resources.

> LINDSAY: We are also using social media to engage with people about dairy; it’s kind of a wide audience. Obviously, the dairy farmers use social media, but it’s also the general consumer who eats dairy, health professionals; it’s a wide range of people, but we haven’t got down to specific audiences.

None of the organizations had directly conducted research to determine which publics or audiences were representative of their followers other than through what information the blogging site provides for analytic support. Katie said, “It is the early adopters, just from our comments and things like that we can tell.” Tyler said, “Our organization is not trying to target anyone in particular with this blog, it just gives people a look at what we are doing and what we are thinking.”

Other organizations have a defined communications strategy and modes of communication with their target audiences, such as print media for one target public and social media to communicate with another. These modes of communication include utilizing informational displays at industry events to promote the blog, trade publications, mass media outlets, organization publications, organization presentations, commenting on specific blogs, and being hyperlinked to other state, regional, or national blogs or websites that support the commodity. Trent's organization uses instant email-blasts to the members to provide blog post updates: "We have also added each one of our members' email addresses to our blog so they get instantly sent an update to their email account." Tyler said his organization promotes their blog through organizational presentations: "Any chance that we can get in front of a farm audience presentation; our blog is one thing that is listed as an address on the last PowerPoint slide. We talk about it a lot."

Organizations that still focus on print media efforts to reach a predetermined audience will include blog information, or links for more information in print publications, with the hopes of directing print media readers to the blog to read other information. Hannah said her organization announces the blog in the weekly newsletter: "It's where we generate the majority of hits because the majority of members see an interesting title and they want to see what else the blog has to say about it."

Conclusions/Implications/Recommendations

All the organizations represented in the study had established their blogs between 2006 and 2012. The participants in this study were very familiar with the blogging procedures for their organization and most had been with the organization when the blogs were launched. The participants said their organizations started blogs to meet a variety of goals and to reach traditional and new audience segments. The blogs allowed the organizations to share information about activities, travel, events, and news specific to their organization's purpose. In addition, the blogs allowed the organizations to interact with more audience members using this online format. Seltzer and Mitrook (2007) said blogs offer a unique communications outlet that allows organizations and publics to interact. Relationships formed through blogs between the organization and publics can benefit both parties based on the information shared (Seltzer & Mitrook, 2007). Eight organizations mentioned the ability to draw media attention from blog posts. The ability to attract major mass media attention met the organizations' goal of creating awareness and promoting the organization. The participants said they felt a sense of accomplishment when the media used information provided in their organization's blog.

The organizations varied on how they designed and posted content to their blogs, with most using an external blog service such as Wordpress and Blogger. The participants said they enjoyed receiving comments and participation from their readers, but struggled more than others to encourage reader feedback. While most of the organizations did not follow a set schedule for blog post topics, they all emphasized the need to keep the information current and frequent. Using a set schedule for blog posting represents the organization's attempt to create relationships and maintain existing relationships based on consistency and accountability (Porter et al., 2006; Kelleher, 2008). The participants said their organizations focused their blog posts and other content matter to the subject of the commodity or other information that impacts the organization. According to the accommodation theory (Cancel et al., 1999), it appears the participants recognized the need to provide content that advocated their organization while also responding to readers' comments.

Many of the participants said they considered a blog successful if readers participate on the blog about a post or another subject pertaining to the organization, commodity, or agriculture. Yang and Lim (2009) found that when blog content is written with a higher level of staged interactivity, the public judged the particular website to be more transparent and credible.

It was rewarding to the blog authors when readers commented on blog posts or shared the link to the blog through email and social media.

Only two of the nine organizations had written the blog into their organization's strategic communications plan. One aspect of strategic planning is to establish goals to measure success, which the organizations in the current study had not set prior to launching their blogs. Participants said their organizations do use the analytics from the blogging host websites or Google Analtics to track how many people are visiting their blogs. However, these analytics do provide information about why certain people are visiting or the blog or how it could be improved to better meet audience members' needs. One measurement of blog success the commodity organizations used was the number of media mentions that resulted from blog content. Blogging can draw attention from mass media outlets, which allows the organizations to disseminate information about their organization, commodity, and production agriculture to an even broader audience.

This research provides a better understanding of how U.S. agricultural commodity organizations are utilizing blogs, but more research is needed to further explore and examine how this industry is utilizing social media. Based on this study's findings, agricultural communicators should utilize blogs and other forms of social media to communicate about agricultural events, news, issues, and crisis situations. Blogs offer an effective and inexpensive communication outlet for organizations to reach individuals both in production agriculture and those who are not such as consumers. Although blogging takes time, energy, and effort, the time spent developing relationships has shown to be a successful way to extend the reach of an organization.

References

Anderson-Wilk, M. (2009). Changing the engines of change: Natural resource conservation in the era of social media. *Journal of Soil and Water Conservation*, *64*(4), 129A-131A.

Agriculture.com. (2010, February, 2). 5 Ways to network. General format. Retrieved from http://www.agriculture.com/successful-farming/business/5-ways-to-network_121-ar6140Anderson-Wilk, M. (2009). Changing the engines of change: Natural resource conservation in the era of social media. *Journal of Soil and Water Conservation*, *64*(4), 129A-131A

Barbaro, M. (2006, March 7). Wal-Mart Enlists Bloggers in its public relations campaign. New York Times. Retrieved from http://www.nytimes.com/2006/03/07/technology/07blog.html?pagewanted=all

Boyd, D., & Ellison, N. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*(1), 210-230. doi:10.1111/j.1083-6101.2007.00393.x

Brown, J., & Adler, R. (2008). Minds on fire. Open education, the long tail, and learning 2.0. *Educause*, *43*, 17-32.

California Agricultural Communications Coalition. (2010, September 1). CA Ag coalition says" Like Farmville? May it's time to know a real California farmer. General format. Retrieved from http://www.agprofessional.com/news/ca_ag_coalition_says_like_farmville_maybe_its_time_to_know_a_real_california_farmer_120028104.html

Cancel, A., Mitrook, M., & Cameron, G. (1999). Testing the contingency theory of accommodation in public relations. *Public Relations Review*, *25*, 171–197.

Colliander, J., & Dahlén, M. (2011). Following the fashionable friend: The Power of social media, weighing the publicity effectiveness of blogs versus online magazines. *Journal of Advertising Research*, *51*(1), 313-320. doi:10.2501/JAR-51-1-313-320

Edelman & Intelliseek (2005). Trust "MEdia": How real people are finally being heard: The 1.0 guide to the blogosphere for marketers & company stakeholders. Retrieved from http://www.edelman.com/image/insights/content/iswp_trustmedia_final.pdf

Eichmann, L. (2009, November 13). How social media is changing communication. Retrieved from http://www.walkersands.com/Blog/how-social-media-is-changing-communication/

Fannin, B., & Chenault, E. (2005). Blogging agricultural news: A new technology to distribute news real-time. *Journal of Applied Communications*, *89*(2), 51-57.

Glaser, B. & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine.

Grunig, J. (2009). Paradigms of global public relations in an age of digitalization. *PRism*, *6*(2), 1-19.

Grunig, J., & Hunt, T. (1984). *Managing public relations.* New York: Holt, Rinehart, & Winston.

Graybill, M. (2010). *Exploring the use of Facebook as a communication tool in agricultural-related social movements.* (Master's thesis). Texas Tech University). Retrieved from http://thinktech.lib.ttu.edu

Herring, S., Bonus, S., Scheidt, L., & Wright, E. (Eds.). (2004). Proceedings of 37th Hawaii International Conference on System Sciences: *Hawaii International Conference on System Sciences*. Mona, Hawaii.

Jackson, A., Yates, J., & Orlikowski, W. (2007). *Corporate blogging: Building community through persistent digital talk.* Proceedings of 40th Hawaii International Conference on System Sciences: Hawaii International Conference on System Sciences. Mona, Hawaii.

Kelleher, T. (2008). Organizational contingencies, organizational blogs and public relations practitioner stance toward publics. *Public Relations Review, 34*(3), 300-302.

Kelleher, T., & Miller, B. (2006). Organizational blogs and the human voice: Relational strategies and relational outcomes. *Journal of Computer-Mediated Communication*, *11*(2), 395-414. doi:10.1111/j.1083-6101.2006.00019.x

Kent, M. (2008). Critical analysis of blogging in public relations. *Public Relations Review*, *34*(1), 32-40. doi:10.1016/j.pubrev.2007.12.001

Laurie, M. (2010, January 7). How social media has changed us. Retrieved from http://mashable.com/2010/01/07/social-media-changed-us/

Livestock Marketing Association. (2010, May 4). Rural Wyoming citizens, agriculturalists tell their stories. Retrieved from http://beefmagazine.com/people/0504-wyoming-shares-ag-stories/index.html

Ledingham, J. (2000). *Public relations as relationship management: A relational approach to the study and practice of public relations*. Mahwah, New Jersey: Lawrence Erlbraum Associates.

Levine, R., Locke, C., Searls, D., & Weinberger, D. (2001). *The cluetrain manifesto: The end of business as usual.* New York: Perseus Publishing.

Lyons, D. (2005). Attack of the blogs. *Forbes Magazine*, *176*(10), 128.

May, J. (2011, March 3). Social Media can be for you, too. Retrieved from http://beefmagazine.com/cowcalfweekly/0304-social-media-for-you/index.html

My Checkoff News. (2009, April 22). Checkoff helps drive consumer interest in beef middle meats. Retrieved from http://beefmagazine.com/sectors/retail/0423-beef-middle-meats/index.html

National Corn Growers Association. (2007, August 6). NCGA launches new ‘Corn Commentary’ blog. Retrieved from http://www.agprofessional.com/news/ncga_launches_new_corn_commentary_blog_120125299.html

Pawlick, T.F. (2001). *The invisible farm.* Chicago, Ill.: Burnham.

Porter, L. V., Sweetser Trammell, K., Chung, D., & Kim, E. (2007). Blog power: Examining the effects of practitioner blog use on power in public relations. *Public Relations Review*, *33*(1), 92-95. doi:10.1016/j.pubrev.2006.11.018

Rainie, L. (2005, January). The state of blogging. Retrieved from http://www.pewinternet.org/~/media//Files/Reports/2005/PIP_blogging_data.pdf.pdf

Rhoades, E. & Hall, K. (2007). The agricultural blogosphere: A snapshot of new agricultural communicators online. *Journal of Applied Communications*, *91*(3&4), 37-55.

Rhoades, E., & Aue, K. (2010, February). *Social agriculture: Adoption of social media by agricultural editors and broadcasters.* Paper presented at the Southern Association of Agricultural Scientists, Orlando, Florida

Roth, C., Vogt, W., & Weinheimer, L. (2002). Joint effort boosts APS’ benefits. *AgriMarketing*, *40*(7), 4-5.

Scuncio, J. (2010). *A content analysis of consumer technology corporate blogs as interactive public relations yools*. (Senior project). California Polytechnic State University, San Luis Obispo.

Seltzer, T., & Mitrook, M. A. (2007). Public relations the dialogic potential of weblogs in relationship building. *Public Relations Review*, *33*(1), 227-229.

Smuts, A. (2009). What is interactivity? *Journal of Aesthetic Education*, *43*(4), 53-73. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1948-7169.1997.tb00169.x/abstract

Successful Farming Re-Engineers, Re-Launches Agriculture.com. (2010, August 6). Retrieved from http://www.agrimarketing.com/s/61937

Sweetser, K., & Metzgar, E. (2007). Communicating during crisis: Use of blogs as a relationship management tool. *Public Relations Review*, *33*(1), 340-342. doi:10.1016/j.pubrev.2007.05.016

Syngenta. (2011, August 18). Syngenta releases new blog to assist “agvocates” use social media. Retrieved from http://www.agprofessional.com/news/Syngenta-relesaes-new-blog-to-assist-agvocates-use-social-media-127998973.html

Thomas, E., & Magilvy, J. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing*, *16*(2), 151-155. doi:10.1111/j.1744-6155.2011.00283.x

Truitt, G. (2010, February 5). Social media: The new battleground for American agriculture. General format. Retrieved from http://beefmagazine.com/products/0215-social-media-agriculture-battleground/

United States Grain Council. (2009, May 6). Grain Group launches blog. General format. Retrieved from http://www.agprofessional.com/newsletters/agpro-weekly/grain_group_launches_blog_121208333.html

Weinberger, D. (2002). *Small pieces loosely joined: A unified theory of the web*. Cambridge, Mass.: Perseus Books.

West, L. (2006). *Evaluation of the professional development status of agricultural media summit-sponsoring organizations’ active members.* (Master’s thesis, Texas Tech University). Retrieved from http://thinktech.lib.ttu.edu/ttu-ir/bitstream/handle/2346/18867/West_Lindsay_Thesis.pdf?sequence=1

Williamson, A. (2012, January 21) Rancher blogs of home on the range. *The Topeka Captial-Journal-Online.* Retrieved from http://cjonline.com/news/2012-01-21/rancher-blogs-home-range

Yang, S., & Lim, J. (2009). The effects of blog-mediated public relations (BMPR) on relational trust. *Journal of Public Relations Research*, *21*(3), 341-359. doi:10.1080/10627260802640773

Building Trust with Hispanic Farmers and State Extension in Agriculture

Professional Paper

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Building Trust with Hispanic Farmers and State Extension in Agriculture

Professional Development Paper #3

Abstact

With higher concentrations of Hispanic farmers throughout the over 3 million farm operators nationwide, there is a need for the Cooperative Extension System and other agencies to improve their relationships with Hispanic farmers to establish a better connection and serve their needs. Building trust among Hispanic farmers on the part of those Extension agents is one of the solutions to this problem. This paper examines how trust can be built, by reviewing a personal Peace Corps experience of a volunteer in Guatemala in referencing a Latino, focus groups study completed by Oregon State University.

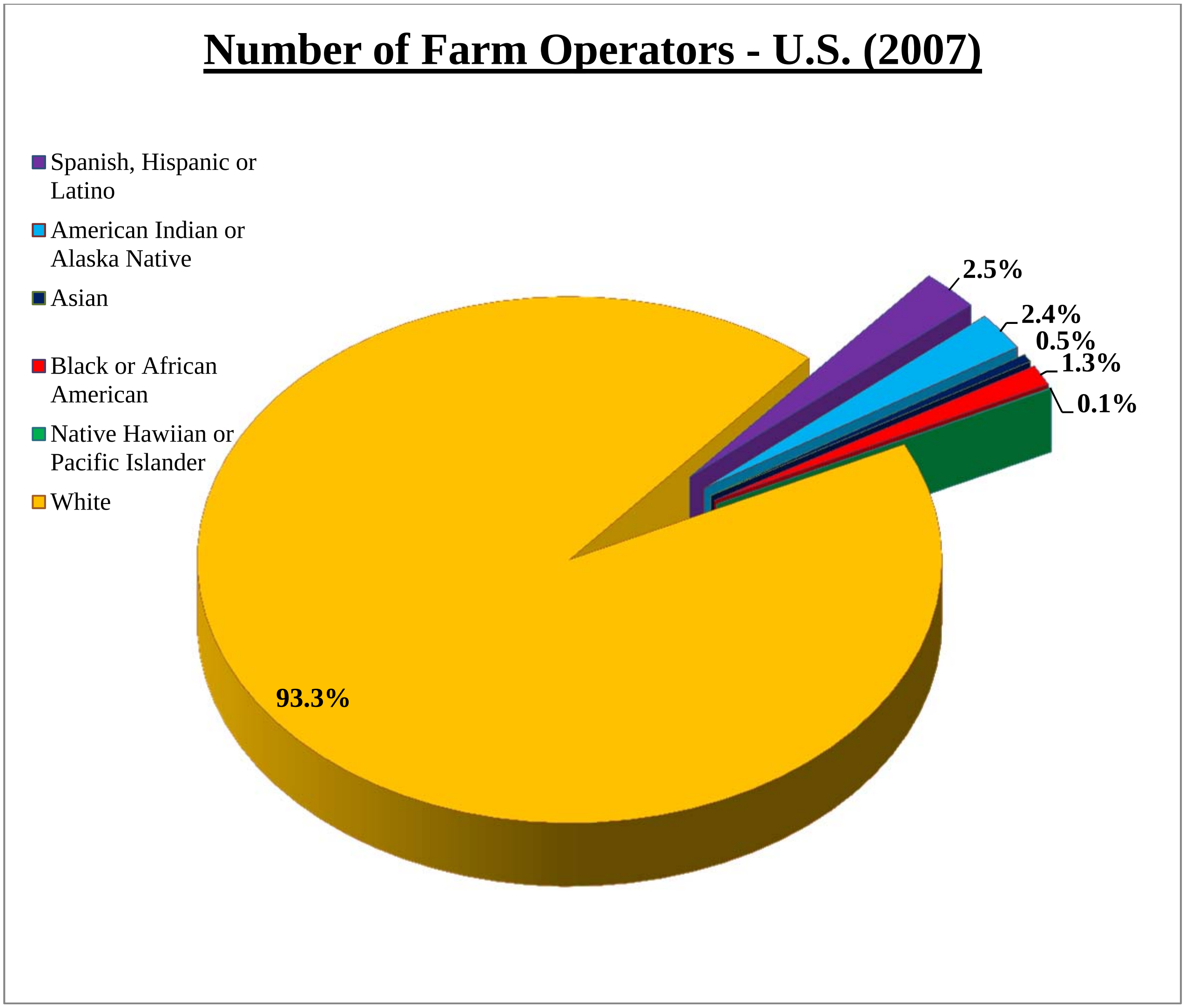
Keywords: *Hispanic farmers, Latino farmers, Spanish farmers, intercultural Extension, trust, social capital, institutional trust*

Introduction

The agricultural industry has been a fixed component of the United States since its inception, but agriculture has gradually changed through the years in areas of production choice, labor usage, biochemical make-up, industrialization, and demographic composition. From 2000 to 2010, the United States has seen an increase in population by almost 10%, and in the same context, an increase in the Hispanic population by four times as much at 43% (U.S. Census Bureau, 2011). This rise in Latino population can be seen in all industries, and agriculture is no exception.

According to the National Agricultural Statistics Service (NASS) of the United States Department of Agriculture (USDA), in 2007, there were over 3 million farm operators in the nation. Of those 3 million, over 82,000 were of Spanish, Hispanic or Latino origin, which is roughly 3% of the farm operator population. In the United States, Hispanic farm workers make up 28.5% of Hispanic farm operators in New Mexico, 11.2% in California, 7.9% in Texas, and 6.8% in Florida. These results provide further evidence that an increase in the Hispanic population is possibly translating into an increase in the number of Hispanic Farmers. In Iowa, for example, the traditional farming population is dwindling, and displaced Mexican farmers have been repopulating Iowa's rural communities (Lewis, 2009). One possible design the USDA can use to service and reach the ever growing, varying farmer demographics is the continued use of the Cooperative Extension Service.

The Cooperative Extension System was created in the early 1900s to assist in agricultural issues for the mostly rural population at the time. Today, there are around 3000 extension offices throughout the United States (AgCensus, 2011). The demographic breakdown of those farm operators are White (62,673), and non-White (9,042) of which almost 7% is of Spanish, Hispanic, or Latin origin. The Cooperative Extension System should consider adapting to the needs of these farmers, as Hispanic farmers help continue the long history of agriculture in the United States.



Source: 2007 Census of Agriculture, National Agricultural Statistics Service, Unites States Department of Agriculture

Interestingly enough, the relationship between the Cooperative Extension System and Hispanic farmers is currently not significantly beneficial to either group. According to Martinez and Gardner (2011), agencies, including Extension, have been slow to acknowledge Latino farmers' needs, leading to a conclusion that ethnic minorities continue, as in the past, to have limited access to available resources. These agencies also lack the capacity of knowledge and cultural competence to adapt their programs to Latinos' unique needs (Martinez & Gardner, 2011). The Center for Organic Agriculture found that extension agents believed Hispanic farmers were not only ineligible for many of their programs, but that Hispanic farmers were also unaware of the services provided by the agency (Swisher, Brennan, & Shah, 2007). In addition, extension agents expressed that lack of communication, time, and funds did not make it economically feasible to promote programs to Hispanic farmers (Swisher et al., 2007). Meanwhile, the USDA has a long history of being known as "the last plantation" of which, Pearlie S. Reed, USDA's Assistant Secretary for Administration, has declared an official effort to reshape the department's institutional culture of discrimination (Lee, 2012). This viewpoint has left a rift between the minority clientele and the agricultural government agencies that serve them. In an instance reported by Lewis (2009), three Hispanic farmers in Iowa had never used the Iowa State University Extension, the Farm Service Agency, or other public agriculture agencies. The Hispanic farmers later reported that they were unfamiliar with the organizations, lacked knowledge of the services offered by the organizations, and were concerned about language differences (Lewis, 2009). There is a need for the Cooperative Extension System and other agencies to improve their relationships with all minority groups, including Hispanic farmers, to establish a better connection and serve their needs.

One solution to this problem is to establish trust, which can substantially reduce the inefficiencies of agencies' relationships with farmers (Hill & O'Hara, 2006). Extension agents have, typically, not been viewed as trustworthy among minority groups in the past, but in the case of Hispanic farmers this has not always been true. In the 1970's, Guzman (1970) and Garcia (1973) discovered that Latinos had some levels of trust in the U.S. government, which was more than African Americans and other minority groups. Over the past few decades, these feelings have changed as immigration and population density have been used as negative, political devices to divide the masses. The immigration reform acts of 1986 (Immigration Reform and Control Act), 1990 (Immigration Act), and 1996 (Illegal Immigration Reform & Immigrant Responsibility Act) have increased levels of distrust between "Nativists" and the Hispanic population due to high levels of unauthorized aliens, and a more visible presence of Latinos in non-traditional states like North Carolina, Virginia, Kansas, etc.

In the agriculture industry, there has been some level of distrust since before the days of the Bracero program, when more than 4 million hard-working, skilled Mexican farm laborers cyclically migrated to the U.S. to work on farms. In part due to the United States' long history with Mexico, including the Treaty of Guadalupe Hidalgo ($15 million purchase of Texas, California, Arizona, Nevada, New Mexico, Utah, and parts of Oklahoma, Wyoming, Kansas, and Colorado), Mexicans have served in the agriculture industry mostly as labor hands. This long generational knowledge and practice of agriculture gives way to the conclusion that Hispanic farmers would eventually progress in the industry from labor hand, to farm operator, and to land owner. Since trust is not a behavior or a choice, but a state of mind that enables one to make oneself vulnerable to another (Hill & O'Hara, 2006), a conscious effort of building trust on behalf of both parties is needed to bridge the gap between Extension agents and Hispanic farmers.

Methods

To examine how trust can be built, a review of a personal Peace Corps experience in Guatemala will be analyzed in reference to a Latino study completed by Dr. Beverly B. Hobbs at Oregon State University. The Peace Corps volunteer served in Guatemala from 2009-2011 as a sustainable agricultural business specialist working with a coffee cooperative, Flor de Café, nestled in the mountainous region of the department of Chimaltenango. Dr. Hobbs (2007) conducted a study based on 1999 focus groups in order to understand more about Latino culture, as it related to working with Latino adults in community-based organizations. Dr. Hobbs stated that the focus groups emphasized the importance of building trust with the Latino community (2007). For the extension staff to facilitate the process of gaining trust, several steps must be achieved.

First, Extension agents must be visible in the target community and participate in local events (Hobbs, 2007). This is very important to the establishment of trust. During the first few months in the town of San Martín Jilotepéque, Chimaltenango, the Peace Corps volunteer spent most of her days visiting with family members of the cooperative she was working with, and meeting local vendors in the town's market. At first, some locals were afraid of the volunteer and didn't want to talk to her. She was gossiped about and she felt isolated, but she knew she had to continue making a presence if she wanted to be able to accomplish her goals. Despite their current views of the volunteer as a foreigner, she knew it was imperative that she establish her status as a semi-permanent member of their community. She followed custom norms by speaking to everyone she met with including asking how they were doing, how their families were doing, and using the local idioms. The volunteer attended Catholic and Evangelical church services when she was invited by locals. The volunteer even participated in local soccer games to which she wasn't very good. By month three, the Peace Corps volunteer built strong relationships with her favorite vendors, and she knew several locals on a first name basis. This translated into trust with the group of coffee farmers she worked alongside. Those coffee farmers saw how important it was to the volunteer to be a part of not just the organization, but the community as well.

Second, extension agents must spend time learning about the individuals and the community they will work with, in order to understand the cultural context and differences that exist (Hobbs, 2007). Fundamentally understanding the culture is the key to setting the framework for all actions to come. The Peace Corps volunteer spent three months before she moved to her town, learning and understanding Guatemalan culture. She learned how Guatemalans were traditional in respect to gender roles in their homes, which gave the volunteer some insight to strategically address how she would be beneficial to the Guatemalan coffee farmers' progress, seeing as she was a woman working outside of the home. As the only woman working with 56 men aging between 33 and 75, the Peace Corps volunteer spent six months proving her capabilities in their labor force. This equated to completing tasks such as digging a well, cutting grass with a machete, lifting full coffee bags, tree removal, etc. The volunteer proved that as a woman, she could physically do what they could, and eventually she was accepted as part of the coffee cooperative as a member and not as foreign support.

Third, extension agents need to enlist the help and support of local elders and other community leaders in the Hispanic community. Acknowledging the leaders of the community and creating a relationship with them is a way to prove trustworthiness to others in the community. Even though the coffee cooperative the she worked with had a president, Don Santiago, the Peace Corps volunteer found that majority of the men listened to Don Miguel, whom was older and had a lot of experience with coffee. Not only was he older, but he was still very active in the community and willing to travel to learn new techniques for the cooperative to incorporate into practice. Therefore, when the volunteer was ready to suggest changes within the organization like implementing a new land terracing process to help defend against mud slides, she went to Don Miguel first to gauge his reactions to her ideas. The volunteer knew that if she had his support, her ideas could be implemented with more ease than if she went to the president; and in the end, several farmers started implementing the process to protect their soil from erosion.

Finally, Extension agents need to be patient with Hispanic farmers and respect their culture (Hobbs, 2007). Building relationships with people, in general, takes time, and the same rules apply to building trust. During the volunteer's 2-year Peace Corps experience, she realized that time is an integral factor in accomplishing her desired objectives. It took three months for the volunteer to "start" being accepted by the local community. It was six months before she was able to make her first real project suggestion to the cooperative. It took the Peace Corps volunteer another three months to start getting farmers to actually implement her plan, and another three months after that before the Guatemalan farmers thought it was a great idea. Had the volunteer just given up after the first week of no farmers implementing the terracing process, she would have felt defeated, and she would not have wanted to continue working with the group. It is important for extension agents to understand that culturally, the Hispanic population takes time before they trust anyone 100%. Extension agents have to be willing to put in the effort to make the change.

Outcomes

From the analysis of both the experience of a Peace Corps volunteer in Guatemala and Dr. Hobbs's study from the 1999 focus groups, some generalizations can be made for building trust with Hispanic farmers.

(1) Extension agents need to be in the community and know the community they will be working with, including the children, spouses, opinion leaders, etc. This means learning who to approach and when to approach them, what materials will be relevant for them,

and what tools they are more comfortable with for the learning process. For example, the Peace Corps volunteer knew that some of the older men she worked with did not speak Spanish very well, so she learned some of the local Mayan language to better explain some of the technical things. As an extension agent, it would be beneficial to learn some Spanish, or, at the very least, find someone within the community who has a high level of proficiency in both to translate. Aubrecht and Eames-Sheavly (2012) found that "bilingual educators who conducted programs in Spanish indicated an 'intangible sense of trust' that created a level of comfort for facilitating future interactions".

(2) Extension agents need to be patient and respectful of the Latino culture. This means not making someone feel uncomfortable by singling them out, laughing at their accent, expecting them to know how to use certain materials like computers, etc. The process of building trust may take several months, but an agent's commitment to the process should pay off in the end. If an Extension agent has a program coming up in several months, the earlier that agent starts getting to know the community the better the turnout may be for the program. The agent should not assume that everyone may speak English, there they should prepare for that possibility, which may include a translator if the information is really technical. This may take more time than the agent may want, but patience and understanding will go a long way. In the end, the community should eventually bring down their walls of defense and slowly take heed to the information Extension agents are trying to pass along.

Conclusions

Cooperative Extension's non-discriminatory policy states that all of their programs are available to everyone regardless of their ethnicity, religion, age, sexual orientation, etc.;

therefore, they are responsible for disseminating their information to benefit all people (Hoorman, 2002). As mentioned earlier, the lack of focus on minority groups by the USDA has left people often referring to the USDA as the "last plantation". However, this intrinsic "last plantation" culture of the USDA has been in a process of change, and should continue progressing if it wants to be able to service the demographically-changing landscape of the agriculture industry. In an effort for extension agents to establish a better connection with and service the needs of Hispanic farmers, they must first build a reasonable level of trust with them. This means being respectful of the community, engaging in the community, being present at local events, connecting with local opinion leaders, and having patience. These are all attributes a Cooperative Extension agent should possess when working with the Hispanic community.

Further research into the arena of trust should be explored, as well as, a more current study via focus groups to see how time and institutional relationships have affected how Hispanic farmers feel in the realm of trust with not only Cooperative Extension agents, but with other state and federal institutions like the Farm Bureau or Farm Credit Agency. For further review, the following list of resources, in addition to resources referenced in this paper, should be pursued:

Calavita, K. (1992). Inside the state: The Bracero program, immigration, and the INS. New York, NY: Routledge.

de la Garza, R., Falcon, A., Garcia, F. C. & Garcia, J. A. (1998) Latino National Political Survey, 1989-1990. Ann Arbor, MI: Inter-university Consortium for Political and Social Research. doi: 10.3886/ICPSR06841.v3

Gallegos, H. & O'Neil, M. (1991). Hispanics and the nonprofit sector. New York, NY: The Foundation Center.

Garcia, J. (2006) Promoting sustainable agriculture among Latino farmers, final report to sustainable agriculture network. United States Department of Agriculture, Sustainable Agriculture Research and Education Program. Washinton, DC: SARE

Hobbs, B. (2004). Latino outreach programs: Why they need to be different. *Journal of Extension, 43*(6). Retrieved from www.joe.org/joe/2004august/comm1.php

Michaelson, M. R. (2007). All roads lead to rust: How acculturation erodes Latino immigrant trust in government. *Aztlán: A Journal of Chicano Studies, 32*(2), 21-46. Retrieved from http://aztlanjournal.metapress.com/media/3dpnnhqhxpg7dc7ggvrh/contributions/a/6/0/8/a608118604542t15.pdf

Nee, V. & Sanders, J. (2001). Trust in ethnic ties: Social capital and immigrants. In K. Cook, *Trust in society* (pp. 374-392). New York, NY: Russell Sage Foundation.

Schauber, A. & Castania, K. (2001). Facing issues of diversity: Rebirthing the Extension Service. *Journal of Extension, 41*(5). Retrieved from www.joe.org/joe/2001december/comm2.html

Swenson, C. A. (1990). How to speak to Hispanics. *American Demographics, 22*(2), 40-41.

Vasquez-León, M. (2009). Hispanic farmers and farmworkers: Social networks, institutional exclusion, and climate vulnerability in Southeastern Arizona. *American Anthropologist, 111*(3), 289-301.

Vélez-Ibañez, C. (1988). Networks of exchange among Mexicans in the U.S. and Mexico: Local-level mediating responses to national and international transformations. *Urban Anthropology, 17*(1), 27-51.

References

Aubrecht, A. & Eames-Sheavly, M. (2012). From Translation to cultural responsiveness: A Garden program's evolution in understanding educators' perceptions of Spanish-language resources. *Journal of Extension, 50*(4). Retrieved from www.joe.org/joe/2012august/rb3.php

Garcia, F. C. (1973). *Political socialization of Chicano children: A Comparative study with Anglos in California schools.* New York: Praeger.

Guzman, R. (1970). *The Political socialization of the Mexican American people*. (Doctoral dissertation). University of California, Los Angeles.

Hill, C. A. & O'Hara, E. A. (2006). A Cognitive Theory of Trust. *Washington Law Review, 84*, 1717-1796.

Hobbs, B. B. (2007). Culturally responsive practice: The Key to engaging Latinos as adult volunteers. *The International Journal of Volunteering Administration, 24*(6), 26-34.

Hoorman, J. J. (2002). Engaging minority and culturally diverse audiences. *Journal of Extension, 40(*6). Retrieved from www.joe.org/joe/2002december/tt2.php

Lee, M. S. (2012, February 24). USDA official speaks to conference attendees. *The Pine Bluff Commercial*. Retrieved from http://pbcommercial.com/sections/news/news/local/usda-official-speaks-conference-attendees.html

Lewis, H. (2009). From Mexico to Iowa: New immigrant farmers' pathways and potentials. *Community Development, 40*, 139-153. doi: 10.1080/15575330903011058

Martinez, R. & Garner, R. W. (2011). Latino farmers on the rise. *The Julian Samora Research Institute, 14*(2).

Characteristics of Quality Magazine Capstone Courses

(Research Paper)

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ABSTRACT

This study sought to characterize three exemplary agricultural communications magazine capstone courses at three different universities. The purpose of the research was to describe the characteristics leading to the courses' success. Following qualitative research approach, the investigator conducted personal interviews with students and instructors in each course, made field observations, and examined syllabi. The interviews were crafted after Andreasen's (2004) Five R's model for quality capstone courses. Important characteristics of the three exemplary magazine capstone courses included (1) student responsibility for the entire magazine production process, (2) high quality standards that were comparable to those expected in industry, (3) interaction with professionals in the publication and printing industry, and (4) the revisiting of previously fragmented knowledge through refresher lessons. Further, because capstone courses often serve as a rigorous "rite of passage" for agricultural communications students as they transition to their professional careers, students need positive reinforcement to make it through key moments in the course. These moments of positive reinforcement helped students gain confidence in their skills as professionals. The researchers concluded that providing students with a real-world experience and positive reinforcement was essential to the success of these courses. Students felt expectations for deadlines, quality of work, and attendance was similar to what they would expect in the workforce. In turn, they thought this would help them prepare to enter into their careers. Recommendations for practice include integrating these characteristics into new and existing magazine capstone courses. In addition to these practical recommendations, the results also lead to the recommendation of modifications to Andreasen's (2004) Five R's model with changes focusing on noise and feedback. KEYWORDS: Agricultural communications, capstone courses, curriculum development, experiential learning.

INTRODUCTION

As communicating with the public about issues related to agriculture, food, and the environment becomes more important in the agriculture industry, so does academe's ability to provide society-ready graduates who have advanced communications skills (Andelt, Barrett, & Bosshammer, 1997; Graham, 2001; Klein, 1990). Between 2011 and 2015 in the U.S. agriculture industry, the number of public relations specialists is predicted increase by 24%, technical writers by 18.2%, market research analysts by 28.1%, and sales managers by 14.9%. In 2010, there were more than 6,200 job openings available in education, communication, and government operations related to agriculture (USDA-NIFA, 2010). To continue providing students with the characteristics they will need to fill these jobs, faculty across the U.S. continue to develop and refine their courses that take an experiential approach to learning. Curriculum experts in agricultural education and communications identified "Build[ing] competitive societal knowledge and intellectual capabilities" as an area of focus in the academic discipline of agricultural communications (Osborne, 2007, p. 6). The discipline of agricultural communications has embraced the experiential learning approach, which is the cornerstone of the Land Grant institution and agricultural education (Kerr et al., 1931; Kolb, 1984; Parr & Trexler, 2011), and some very successful courses have been developed to provide students with the skills they need in order to compete for jobs in their field (Hall, 2009; Sitton, 2001).

One experiential teaching method—the capstone course—is essential to fulfilling students' experiential learning needs in an agricultural communications program (Edgar et al., 2011; Hall, 2009; Sitton, 2001). By definition, a successful capstone course is "a planned learning experience requiring students to synthesize previously learned subject matter and to integrate new information into their knowledge base for solving simulated or real world problems" (Crunkilton et al., 1997, as cited in Andreasen, 2004, p. 53). "As a rite of passage, this course provides an experience through which undergraduate students both look back over their undergraduate curriculum in an effort to make sense of that experience and look forward to a life by building on that experience" (Durel, 1993, p. 223). As such, Sitton (2001) recommended that core curriculum in agricultural communications should include at least one capstone experience.

Andreasen's Five R's of Capstone Courses

Andreasen (2004) proposed that successful capstone courses should incorporate the Five R's – receive, relate, reflect, refine, and reconstruct. Andreason's resarch found each of these components to be highly necessary and professionally beneficial according to student perceptions. The corresponding model was called the Model for the Integration of Experiential Learning into Capstone Courses (MMIELCC). The Five R's "are designed to spiral and funnel the required capstone components into a synthesis and lead to an integration of the subject matter content" (Andreasen, 2004, p. 56). According to the model, students must *receive* an activity or experience which is either contrived by the instructor or has occurred spontaneously. Learners must be able to *relate* their previously fragmented knowledge to the received activity or experience. Students should then be able to *reflect* upon what has been received and related in the experience for further understanding. Learners should then be able to *refine* the knowledge received and move toward a higher level of expertise. Lastly, a new knowledge base, or schema, should be be *reconstructed* by the learner. Rhodes et al. (2012) recommended further refinement of the Five R's model, suggesting the inclusion of the concept of noise and refinement of the concepts of feedback, communications, teamwork, critical thinking, problem solving, and decision-making (Figure 1).

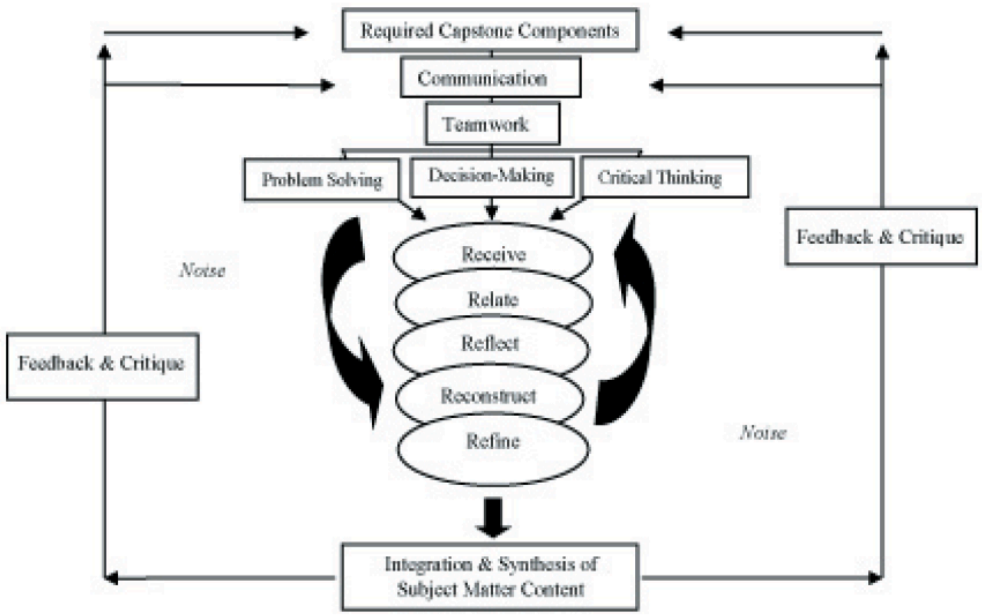

Figure 1. Rhodes et al. (2012) Modified model for integration of experimental learning into capstone courses (MMIELCC).

Purpose of the Study and Research Question

Research on this popular approach to experiential learning might be very beneficial to university-level agricultural communications faculty in at least two ways: (1) a research-based characterization of quality magazine capstone courses could guide the development of similar courses in new and developing programs; and (2) the research could guide the improvement of magazine courses that have existed for a long time—including those that are known to already be excellent courses. Both assertions are supported by Hall et al. (2009). Therefore, the purpose of this study was to examine magazine capstone courses and describe students' and instructors' perceptions of the courses in an effort to work toward developing a prototypical magazine capstone course that will serve as a model for instruction. To accomplish this purpose, this research was guided by the following question:

> RQ1: Based on examination of course syllabi, field observations, and instructor interviews, what are the common characteristics of exemplary magazine capstone courses in terms of curriculum, course objectives, and instructional methods?

METHODS

The methodology of this project included a descriptive, open-ended, online questionnaire and semi-structured interviews and followed the qualitative paradigm of investigation as described by Merriam (2009) and Lincoln and Guba (1985).

Subject Selection

Thirty-eight advisors from 25 U.S. colleges and universities with an active Agricultural Communicators of Tomorrow (ACT) chapter were e-mailed in September 2011 and were asked if a magazine capstone course was offered in their curricula. As a result of this initial data collection effort, three agricultural communications programs offering an exemplary magazine capstone course were selected for further observation. Their qualifications included the following: (1) having an active ACT chapter on campus; (2) having offered a magazine capstone course more than twenty-five semesters in a row; and (3) having received National ACT and/or other national awards associated with the course. Once the programs were identified, using the snowballing technique (Patton, 1990), the researchers asked the magazine class instructors to identify two students who played an editorial leadership role. The two students who served in an editorial leadership role were contacted via e-mail to set up interviews and also were asked to identify two undergraduate students who had a "typical experience" in the course.

Data Collection and Analysis

The data collection was completed on three university campuses during the first three weeks of November 2011. The survey and questioning route questions were developed around the Andreasen's (2004) Five R's model, with the intention of framing the findings within the existing paradigm, which is well-documented in agricultural education literature. To add depth and to triangulate findings, the contents of the syllabi were also analyzed as were the field notes taken by one researcher at each of the site visits. Researchers examined the data using a constant-comparative analysis as described by Wimmer and Dominick (2003), employing Nvivo 9 software to coordinate their analysis. Two coders employed open and axial coding techniques (Strauss & Corbin, 1998) on the questionnaire responses, interview transcripts, field notes, and course syllabi. Emergent themes were organized in in the form of nodes and sub-nodes (or themes and sub-themes), and a hierarchical structure of these nodes supported by excerpts from the data became the findings of this study. In this article, exemplary excerpts from the interview transcripts and questionnaire responses are included to help characterize the results.

RESULTS

Overview of Exemplary Courses

The agricultural communications program at University 1 prided itself on offering its first magazine capstone course in 1921 and winning its first national award for its magazine in 1953 from "Successful Farming." Over the past twenty years, the university had offered a magazine capstone course every semester and has won numerous awards in connection with the course. The three-credit-hour course was taught by one faculty member, who was a part-time, non-tenure-track instructor. Students in the course were required to purchase an *AP Stylebook.* The course was taught in a lecture-style classroom, but students also had access to a computer lab that was used only by magazine staff. Students holding editorial leadership positions controlled access to the lab and were responsible for setting up work times for the rest of the students to enter the lab to work on the computers. University 2 had offered a magazine capstone course 26 times. The course was offered every semester, and the program had won numerous national awards for its *magazine*, which was produced by students in the capstone course. The course was taught by a tenured professor. Students in the course were required to purchase an *AP Stylebook*.

The course met in a dedicated computer lab that was used primarily by students in the capstone course. The lab had an open layout, with computer stations around the walls, with a conference table set up in the center of the room for staff meetings. University 3 had offered a magazine capstone course more than fifty times since 1981. The program has won numerous awards for its magazine. The course was offered every semester and was taught by a tenured professor, who was assisted by a Master's level graduate assistant. Students were required to purchase an *AP Stylebook* and were required to own a personal laptop loaded with the latest version of the Adobe Creative Suite Design Premium software. Both lecture and lab sessions met in a computer lab, where there were 12 computers available. Though students were required to have their own laptops, upper-division students who were closest to their graduation dates had priority use of the lab computers.

Forty-five students were enrolled in the three magazine capstone courses, with a breakdown of 17 students from the course at University 1, 11 students from the course offered at University 2, and 16 students from the course at University 3. (One student refused all demographic questions.) Of the students enrolled in these courses, 90.9% of the students were female and 95.5% were seniors. On average, students were previously and/or currently enrolled in 10 communications-related courses before taking the magazine capstone course. Each course had one instructor, and one of the courses had a second-year teaching assistant. All three instructors were veteran faculty members, two of whom held the academic rank of professor. The other was a part-time instructor who was a communications coordinator for the university.

Syllabus Characteristics

Several thematic characteristics were apparent in all three course syllabi. The fact that the characteristics were evident in all three exemplary courses is undoubtedly meaningful in a qualitative sense. The syllabi had similarities in three categories: curriculum, course objectives, and instructional methods and techniques, all of which are summarized in Table 1.

Table 1.

Characteristics of Syllabi for Exemplary Magazine Capstone Courses

Course Elements	Characteristics

Curriculum	• Publication management
	  ○ Leadership positions were offered to students via an application and interview process
	• Sponsorship sales
	  ○ All students were required to make sales
	  ○ All students were required to design sponsorship layouts
	• Journalistic interviewing and feature story writing
	  ○ Students covered a beat
	  ○ Students coordinated and conducted interviews with feature story subjects
	  ○ Students wrote one to three feature stories of varying lengths
	• Editing
	  ○ Students were required to edit the work of their peers
	  ○ Students received editorial feedback from instructors
	  ○ Final stories had to be perfect in terms of AP style and grammar
	• Layout and design
	  ○ All students were responsible for turning in at least one to three packaged feature story layouts
	• Photography
	  ○ Students were required to use original photography in their feature story layouts
	  ○ Students were required to turn in a prospective cover photo

Course Objectives	• Learn the magazine production process • Employ previously learned writing, photography, and design skills • Gain experience working as a team

Instructional methods and techniques	• Guest speakers
	  ○ Printers
	  ○ Graphic Designers
	  ○ Editors
	• Field trips and practical observations
	  ○ Students visited a print shop
	• Collaborative learning assignments
	  ○ Staff meetings were held at the beginning of classes as needed
	• Problem-based approaches
	  ○ Deadlines were given and enforced
	  ○ All decisions regarding development of the magazine were made by the students
	  ○ Expectations for attendance were treated like a job
	• Refresher lessons (lecture and discussion)
	  ○ AP Style
	  ○ Feature writing
	  ○ Layout and Design
	  ○ Photography
	• Sponsorship Sales

Characteristics Relating Directly to the Five R's

The first question in both the surveys and the interviews related to the first of the Five R's, *receive*. Students reported that the following course characteristics made the course more realistic: contacting outside sources, having deadlines, and producing a university publication. Contacting outside sources to sell sponsorship space and to get interviews for stories appeared to add realism to the course. Students seemed to place a high priority on experiences in which they interacted face-to-face with the students and professionals they interviewed for stories as well as businessmen and women to whom they sold sponsorship spaces.

> Student: *When we had to sell advertising, it was stressful working with our clients to make deadlines, but I think that is what made the whole class seem like a real job.*

Deadlines associated with tasks in the course were also perceived as a "real world" element of these courses. Students considered having set deadlines for writing feature stories, taking photos, and designing layouts and sponsorship spaces to be realistic characteristics of the course.

> Student: *The stress of meeting deadlines is comparable to what I would think the 'real world' is like.*

Students in these courses were obviously proud of their magazines because they were publications that had an important public relations purpose and would be distributed to readers both on and off campus. The fact that the publications had targeted audiences and were actually distributed contributed to the real world aspect of the course.

> Student: *We take a lot of pride in this magazine just because it gets sent out to perspective student and you pass it out at new student orientation. We know that it is a recruitment tool as well as it showcases the quality of work that our students produce as seniors. So, I think we all know that we need to do our best and get it done but for those reasons because it is all over campus and [the agriculture building] too.*

> Student: *I would say the element that makes this course most realistic is definitely the fact that we are using real people, our own ideas, there is a finished product, and it is going*

> *out… The fact that this is going out to over 4,000 people makes me work that much harder, and it is the real deal.*

Two prominent themes that emerged from the instructor interviews were (1) the importance of the comprehensiveness of the magazine production project and (2) the importance of placing project responsibilities squarely on the students.

> Instructor: *In our class, the students do everything from start of finish, and I think that is a really great piece that we can offer students. Students are responsible for every piece of the magazine. They touch a lot of different parts of it: they plan the editorial, create and sell all the adverting, and design it all.*

Relate

Next, students were asked to discuss whether or not the course allowed them to use a variety of skills that had never been used together on the same project. This question focused on the second component of Andreasen's model, *relate*. Most of students reported putting together skills they developed previously in coursework focused on layout and design, photography and AP style.

> Student: *This class brings together all aspects of agricultural communications. Editing, design, writing, interviewing, and photography are all necessary skills to have during this course. It definitely brings it all together. This is positive because it really shows you how applicable your classes throughout the past years really are.*

Instructors for all three courses reported that their students used feature writing, design, and photography skills developed in previous courses – writing being the most important of these. Across all three courses, students were definitely expected to enter into the course with a strong understanding of feature writing.

> Instructor: *The most important skills for students to bring into a magazine course are good writing skills. By the time they reach the magazine course they should already know how to write a feature story and should be working to make their writing skills stronger.*

Realizing that some students may have forgotten important concepts or may not yet have picked up skills needed in the magazine course, each instructor taught refresher lessons focused on magazine production skills. These lessons included refreshers on layout and design, feature writing, AP Style, photography, and advertising sales.

Reflect

Students were asked to discuss times throughout the semester that the magazine production process became clearer. This question related to *reflect*, the third of Andreasen's Five R's. In this component, students should be able to think back on what has been learned and how the process came together. Students noted reflecting about the magazine production process at two major times during the course: after major deadlines and after the final project was put together.

In each of the courses, students were required to turn in two packaged story layouts. Students reported that during these major deadlines the magazine production process became more real to them.

> Student: *After creating layouts, I have a better understanding of how a magazine is produced and how critical it is to manage my time effectively.*

The courses were still underway at the time of the interviews and surveys, and some students felt that the magazine production process would become clear after the magazine was finally put together as a final product.

> Student: *The process of producing a magazine, I feel, comes more and more clear as the semester comes to an end. I do not think it will be fully clear until the class is completely over, because I know I have so much more to learn about the process up to this point.*

Instructors reported noticing students thinking back on what has been learned and how the magazine came together towards the end of the course or even after the course is completed. Toward the end of the course, students begin to lay out the final magazine. During this activity, the magazine process as a whole "comes alive" for students, and students are able to think back on lessons about the magazine production process that were taught in the first half of the course or that were taught in previous courses.

> Instructor: *During the first half of the semester, we lecture on everything from writing to design principles to advertising sales. The students are listening to these lectures and learning about the magazine industry as a whole. The second half of the semester is really when they take all of that knowledge and put it into practice. This is when the students are writing their stories, editing, creating layouts, and taking pictures, all of those sorts of things. That is when they really bring in everything together to create their spreads for the magazine. Not every story goes into the magazine and from then and there it is very competitive. The best stories are the ones that make the book, and the students that have excelled in writing, layout design, and photography really see the big picture when it is decided if they made the book or not.*

One instructor reported using techniques from service learning pedagogy, celebrating the groups' accomplishments at the end of the semester. During this celebration, students were given a hard copy of their magazine. Seeing the hard copy of the magazine allowed students to think back on the process while examining the final product.

> Instructor: *We always come back and put everything together during finals week. We go out to eat as a class and celebrate the fact that we survived and finished. We reflect back on the fact that we did make it and usually I am able to give students their magazine printed back from the printers. At our celebration during finals, when that happens is really pulls everything together like 'oh gosh we did this.'*

Refine

Regarding the fourth of the Five R's, *refine*, students were next asked to discuss if and when they had used any of the skills developed in the course in outside projects or jobs. Students reported using skills outside of their magazine capstone course in school-related projects, outside jobs, and internships. Students reported using skills gained in the magazine capstone course for projects in other classes and for promoting clubs and events on campus. Important skills used to complete these projects included design software skills using Adobe Photoshop, Illustrator, InDesign, and writing and interview skills acquired in previous courses. Students also reported using writing, design, and layout skills in their jobs and internships.

> Student: *I currently work with an ag organization as their communications intern, where I regularly use my writing and design skills. This class has really honed my skills with focus, flow, and balance in design, as well as focused my writing style. The skills I use with my internship and with this class are interchangeable.*

It is also important to note that some students had not yet had the opportunity to use skills developed in their magazine capstone course, but they were still able to identify skills that applicable to future career paths.

> Student: *I hope to use the skills I have gained in this course in a future stock show magazine internship I am applying for.*

Instructors mentioned that several of the graduates who had come through their magazine capstone courses now work in the magazine industry. Several of their former students had gone on to work for various commodity groups or start their own communications companies.

> Instructor: *We see our students in a number of different trade publications. We also see them work for a number of different commodity groups where they are taking their basic principals and sometimes creating a monthly newsletter.*

Reconstruct

In the *reconstruct* portion of the Five R's model, students should develop a new way of looking at similar experiences through a new knowledge base or schema (Andreasen, 2004). Students reported perception changes dealing with the overall production process as a whole, their understanding of the printing process, their understanding of the team aspect of publication production. Also, in some cases, students realized that they did *not* want to work for a magazine.

Students felt that their perceptions of the magazine production process as a whole would change more toward the completion of the course. Students were better able to understand the detail and planning that went into creating a magazine and realize the amount of work it took to finish the publication.

> Student: *My perception of the magazine production process was changed, because I had no idea how much work actually goes into publishing a magazine. From writing stories*

to selling ads and creating layouts, there are so many small details that have such an impact on the publication as a whole. Learning this made me appreciate the industry and gain respect towards those who work in it, especially in the smaller publications where there is not a separate department for each section.

Through these courses, students were better able to understand the printing process as a whole. Some students attributed reconstructing their understanding of the printing process to visits made to local printers.

> Student: *I guess I didn't realize how much goes into printing … There is so much more to it …*

> Student: *I think that the best way to understand producing a magazine happened when we toured the printing plant. We saw why we needed bleeds, how CMYK looks in print, and how the pages were ordered.*

Some students reported coming to the realization of the importance of teamwork in the magazine production process. These students may have entered the course with the perception that creating a magazine was a group effort, but they did not understand the importance of everyone working together and moving at the same pace. Students also realized the impact of group dynamics as problems with the magazine project were faced as a group.

> Student: *I always knew it was a group effort, but this course really made me realize just how important it is that everyone is on the same page. It's really important to have a good group of people that work well together so we are all moving in the same direction. If one piece isn't as good or efficient it just doesn't work.*

Another important impact the course had on individual students is that a few of them realized that they did not want to work for a magazine when entering the workforce.

> Student: *My perceptions have changed a lot. I thought before I started the class that working for a magazine would be a good job in the future for me. After making my way though the class, I have learned that building a magazine is not what I want to do at all. None of my skills are worthy of being published in any magazine.*

When students come into the magazine capstone course, it is the perception of instructors that students know little about the magazine production process. In these courses, students learn all the little details that go into creating a magazine and learn to appreciate the process from idea to print.

> Instructor: *I do think or at least I hope the student's perceptions change, otherwise I am probably not doing my job. I don't think the students realize all the steps that go into that final product. This is not just a course in writing. We touch on all these different topics and how that all fits together to see it come off the printing press. My perception is that they don't really hear that at other places, and so I think that is how this course helps students have an appreciation for the magazine production process.*

Other Important Characteristics

In addition to Anderson's (2004) Five Rs, which are the central elements of Rhodes et al.'s (2012) modified model of capstone courses, several other important characteristics of successful capstone courses exist. Observations of the three exemplary courses supported that the following elements are a part of quality courses. It should be noted that that it is not the mere presence of these characteristics that makes a course high-quality, but how the instructor integrates and deals with these elements. These elements included teamwork, critical thinking, communications, the presence of noise (potential distractions to learning), facilitator and student feedback, students feeling that they had sole responsibility for the final product, instructors' high expectations of professional conduct, opportunities for students to interact with professionals, and refresher lessons.

Teamwork

Working together as a team is an extremely important skill in the magazine production process. In these three courses, students reported an acute awareness of the importance of working as a team to overcome problems, brainstorm, and to create the magazine.

> Student: *When more than one of us has difficulties, we usually come together as a team and discuss how to fix current and future problems with the production of the paper. During this time, it's obvious how much teamwork goes into the production of the process.*

Student: *We all have diverse backgrounds, but where one of us is weak one of us is strong, which helps. We have really built a team motivation.*

Critical Thinking

As defined by Rudd et al. (2000), critical thinking is “a reasoned, purposive, and introspective approach to solving problems” (p. 5). Students enrolled in these courses were exposed to opportunities that allowed them to develop critical thinking skills through solving problems and making decisions.

Student: *I have used these skills in other classes, but this is the only course that has combined writing, technical design, and problem solving into one course.*

Student: *I definitely improved my decision-making skills (to make deadlines), communication skills (to contribute to class discussions), and writing and design skills (to complete my magazine layout). Overall, this class is crucial to the professional and creative development of agricultural communications seniors.*

Communications

Communications among coworkers and outside sources is crucial to the production of a magazine. In these courses, students reported realizing the importance of communicating with outside sources and peers to pull a project together. Students were responsible for contacting leading businesspeople in their sponsorship sales efforts. They also were required to communicate clearly with their feature story subjects in order to arrange interviews and photo opportunities. Some also reported bridging the gap between being a student to becoming a businessperson as a result of improving their ability communicating affectively with others.

Student: *I think in most classes that we’ve taken in the past few years you are really just working with people inside your course and the professor. In this course, we are reaching out and working with others and interviewing outside sources. When we were selling ads, we were working with different businesses and owners; you kind of learn that deadlines are really important, but that you also have to rely on outside sources as well. You have to make sure they understand that you are on a deadline. I know it was kind of an eye opener for all of us when we were selling ads. Communication was so important to making deadlines.*

> Student: *We had to learn how to speak to people in a very professional setting and speak to them as an equal and not necessarily like a little student. I've had to be very assertive, put away the student card, and get in the mindset that I'm a businessperson in this setting.*

Noise

Throughout each of these courses, environmental noise—disruptions in the learning environment—seemed to be an unavoidable occurrence. Rhodes et al. (2012) suggested that noise should be included throughout Andreasen's (2004) Five R's model and accounted for in actual instruction to overcome the disruptions. Students reported that situations which could have been disruptive did occur in the capstone courses, but rather than obstructing the learning process, the apparent distractions were often converted by the instructors into learning opportunities for students, who were able to gain valuable lessons from these experiences. For some students, experiencing these problems contributed to the realism of the course.

> Student: *There are also times though when things have been communicated, and people haven't completely understood it. I think most of the times when that happens [instructor] was like 'oh this is what we need to do.' For example, we were supposed to design an original advertisement, but when we do the advertisement contracts we just have notes from what that advertiser wants. So a lot of students thought we were supposed to use the same ad from last year, but just make these changes. What [instructor] really wanted was a completely original and completely new designing. Many people didn't quite understand that. So the first round of ads came in and there was a little bit of problem there, but I think that [instructor] gave them a couple more days to redo those ads and so that is how that one was resolved.*

Facilitator and Student Feedback

Andreasen (2004) noted that facilitator and student feedback are important components of any capstone course. Feedback "should enhance the students' ability to further integrate and synthesize subject matter content" (p. 14). Rhodes et al. (2012) added that opportunities for feedback should occur throughout a good capstone course. Students placed a high value on feedback from instructors and professionals in the magazine industry; however, one student did note that feedback from peers added a sense of realism to the course, comparing it to coworkers in the workforce editing each other's work. Two of the courses required all students to peer edit, while one course only required students on the leadership staff to edit the their peers' work. Students in all three courses received feedback from facilitators and professionals in the communications industry. Some students noted feeling as if their instructors were "obvious experts" when it came to the magazine production process, which appeared to give the students confidence in their own efforts. This feedback contributed to the students' sense that they were receiving a realistic experience through the course.

> Student: *Another thing is just having all of our work critiqued by professionals. The designs are critiqued both by [instructor] and also by a designer within the department, so we are getting real feedback from people that we might not get in some of our classes.*

> Student: *On my last article I submitted to [the instructor], [the instructor] wrote back saying "it was really nice seeing you grow and change." So it was nice to know that [the instructor] kind of has your back. It's nice that [the instructor] notices you're getting stressed and to pat your shoulder and be like "it's okay, it's almost done. It's okay." You're like, "Ok."*

While instructors clearly made an effort to provide students with feedback, they stopped short of solving problems for the students. Using problem-based learning approaches, instructors gave students the freedom to make their own decisions.

> Student: *[The instructor] is very relational during class, but if I was to come to [the instructor] with a problem, I don't think [the instructor] would do anything, which can be frustrating. But, I can also see how it helps cause then you are on your own and you have to figure it out. I think [the instructor] does it on purpose.*

Students Feeling They Have Sole Responsibility for the Final Product

In the three exemplary courses examined, students reported feeling that they were solely responsible for the entire publication process from initial conceptualization to printing and distribution. These responsibilities included sales, editing, design and layout, photography, and writing feature stories. This sense of project ownership allowed students to experience the process from the most realistic perspective. These kinds of concrete experiences are needed in undergraduate curriculum to allow students to test their perceptions and ideas (Lewin, 1957).

High Standards of Professional Conduct

The students in all three exemplary courses were responsible for maintaining high standards of professional conduct – standards that were much like those in the real world. Students were expected to meet all deadlines and attend every class. In all three courses, the consequences for late assignments were severe, involving either no grade or a reduced grade for the assignment. Requiring students to have real-world responsibilities like this helps the students achieve a sense of identity and step up their actions to their full potential (Collier, 2000). Giving students the opportunity to have real world responsibilities helps them transition into professionals and gain confidence. When students have self-belief, they are more apt to perform to their highest level and put their newfound knowledge to practice (Manz & Manz, 1991).

Opportunities for Students to Interact with Professionals

Students were given the opportunity to meet with veteran professionals in the publication production and printing industry. Guest speakers discussed their experiences with students, and students also had the opportunity to meet with staff at local print shops, where they could see the printing process firsthand. Since most of the students had little or no exposure to the printing industry and, therefore, their schemas related to this process had not yet been set, these encounters with professionals allowed students to form accurate, concrete perceptions of the processes they were studying. This concept of establishing accurate initial schemas through experiential learning is in line with Kolb's (1984) model of the experiential learning process.

Refresher Lessons and Review

In all three courses, students revisited previously learned skills through refresher lessons.

At the beginning of the semester, instructors taught lessons in feature writing, AP Style, layout and design, and photography. In the second half of the courses, students were given the opportunity to interconnect these skills with the magazine production process. Wagenaar (2000) noted that capstone courses should revisit the basics learned in all of the students' courses collectively and give students the opportunity to interconnect them.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study provide an overall depiction of the key characteristics of quality magazine capstone courses. Following the logic that other magazine capstone courses should seek to emulate the qualities of these three exemplary courses, the characteristics lead directly to some practical recommendations for magazine capstone course instructors (see Table 2).

Table 2. Key Course Characteristics and Recommendations for Practice

RQ1: Based on examination of course syllabi, field observations, and instructor interviews, what are the common characteristics of exemplary magazine capstone courses in terms of curriculum, course objectives, and instructional methods?	
Findings/Observations	Conclusions/Recommendations
1. Characteristics that related R's model were helpful in making the courses more realistic and more valuable for students.	1. Course objectives should lead students toward real-world responsibilities in a setting with high expectations of professional conduct and a sense of full responsibility for the final product.
2. The courses exhibited several ways in which the experience was made as realistic as possible.	2. Faculty developing new courses and re-designing existing courses should follow this model in preparation and practice.
3. The quality of the courses was enhanced by the use of guest speakers and field trips.	3. Guest speakers should be brought in to talk with students and the class should tour a local print shop.
4. Refresher lessons on a variety of topics were helpful for students.	4. Students should revisit previously fragmented knowledge through refresher lessons on various basics of writing, editing, and graphic design. Also, feature writing and layout and design courses should be pre-requisites for capstone courses.
5. The final products were real, printed publications distributed and used in actual university public relations efforts.	5. The final product should be printed professionally and should be promoted and publicized the final product, and students should be given a final copy in order for them to properly reconstruct their schemas as a result of seeing the project through.

(Table continues)

6. Students sometimes didn't see the "big picture" until late in the semester or even after the semester was over.	6. Instructors should create opportunities to provoke students to think about the applicability of skills developed in the course, while being patient as the students discover through their experiences.
7. Realization of the importance of teamwork was a key characteristic in all the courses.	7. Instructors should ensure that students are working as a team and not simply as individuals completing a few writing assignments on their own. Peer editing and using students as lead editors is recommended.
8. Students desired feedback and used it to combat uncertainty and lack of confidence in some situations in the courses.	8. Instructors should conscientiously provide students with positive reinforcements and feedback throughout the course.
9. Various types of disruptions and distractions threatened the learning environment but were often turned into learning opportunities by instructors.	9. Instructors should pay attention to problems as they arise to insure students gain a valuable learning experience, while being flexible and seeking the opportunity to turn noise into teachable moments.

Recommendations for Further Research

Though capstone courses have been providing agricultural communications students with the necessary skills to enter into the workforce (Edgar et al., 2011; Graham, 2001), further research is necessary to determine if and how these courses help students once they entered the workforce. Furthermore, a study is needed to expand on Manz and Manz's (1991) research on the relationship between having real world responsibilities in magazine capstone courses and students gaining self-belief. Also, this study identified noise that was occurring in the capstone course environments but showed that the experiential learning was actually enhanced by this noise; more research on this phenomenon is necessary, and modification to the Five R's model developed by Andreasen (2004) and further developed by Rhodes et al. (2012) is necessary to reflect this important aspect of teaching and learning through capstone courses.

REFERENCES

Andelt, L. L., Barrett, L. A., & Bosshamer, B.K. (1997). Employer assessment of the skill preparation of students from the college of agricultural sciences and natural resources. *NACTA Journal, 41*(4), 47-48.

Andreasen, R. J. (2004, March). Integrating experiential learning into college of agriculture capstone courses: Implications for practitioners. *NACTA Journal, 48*(1), 52-57.

Collier, P. J. (2000, October). The effects of completing a capstone course on student identity. *Sociology of Education, 73*(4), 285-299.

Crunkilton, J. R., Cepica, M.J., & Fluker, E.L. (1997). Portfolio of capstone courses in colleges of agriculture. (USDA award # 94-38411-016). Washington, DC: U.S. Department of Agriculture.

Durel, R. J. (1993, July). The capstone course: A rite of passage. *Teaching Sociology, 21*, 223-25.

Edgar, D. W., Edgar, L.D., & Miller, J. D. (2011). Putting it all together! Capstone experiences and projects. *The Agricultural Education Magazine, 83*(4), 21-22.

Graham, D. L. (2001). Are we preparing society ready graduates? *28th Annual National Agricultural Education Research Conference,* 269-281. Retrieved from American Association for Agricultural Education website: http://aaae.okstate.edu/proceedings/2001/grahamd.pdf

Hall, K., Rhoades, E., & Agunga, R. (2009). Student publications' place in agricultural communication curriculum. *Journal of Applied Communications, 93*(1&2), 35-44.

Kerr, W. J., Davenport, E., Bryan, E.A., & Thompson, W.O. (1931). The spirit of the land grant institution. Retrieved from the Asociation of Public and Land Grant Institutions website: http://www.aplu.org/NetCommunity/Documents.Doc?id=2395

Klein, M. L. (1990). Southern California food and agricultural firms. *NACTA Journal*, *34*(2), 30-34.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Upper Saddle River, NJ: Prentice Hall.

Lewin, K. (1957). Action research and minority problems. Lewin, G. W. & Allport, G. (eds). *Resolving social conflicts.* New York: Harper & Brothers, 201-216.

Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry.* Newbury Park, CA: Sage Publications, Inc.

Manz, C., & Manz, K. (1991). Strategies for facilitating self-directed learning: A process for enhancing human resource development. *Human Resource Development Quarterly, 2*(1), 3-12.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Osborne, E. W. (Ed.) (2007). *National research agenda: Agricultural education and communication, 2007-2010.* Gainesville: University of Florida, Department of Agricultural Education and Communication.

Parr, D. M., & Trexler, C. J. (2011). Students' experiential leraning and use of student farms in sustainable agriculture education. *Journal of Natural Resources and Life Sciences Education, 40*, 175-180.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage Publications.

Rhodes, T. N., Miller, J. D, & Edgar, L. D. (2012). Evaluating capstone courses: Employing the Five R's model to analyze an agricultural communications magazine class. *NACTA Journal, 56*(1), 8-16.

Rudd, R., Baker, M., & Hoover, T. (2000). Undergraduate agriculture student learning styles and critical thinking abilities: Is there a relationship? *Journal of Agricultural Education, 36*(4), 54-63.

Sitton, P.S. (2001). "Capstone Experience: The key to a successful agricultural communications program." *Journal of Southern Agricultural Education Research*, *51*,1-3. Retrieved from the Journal of Southern Agricultural Education Research website: http://pubs.aged.tamu.edu/jsaer/pdf/Vol51/P17.PDF

Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research: Grounded Theory, Procedures and Techniques*. Newbury Park, CA: Sage.

United States Department of Agriculture – National Institute of Food and Agriculture [USDA-NIFA]. (2010). *Employment opportunities for college graduates in food, renewable energy, and the environment.* (USDA award #2007-38837-18626). Retrieved from USDA website: http://www.abe.psu.edu/USDA_Employ_Op_2010_8_LREZ.pdf

Wagenaar, T. C. (1993). The capstone course. *Teaching Sociology, 21*(3), 209-214.

Wimmer, R. D., & Dominick, J. R. (2003). *Mass media research: An introduction.* (7th ed.). Belmont, CA: Wadsworth/Thomason Learning.

Employee Perceptions of the Brand Salience and Differentiation for a State Forestry Organization

Research Paper Submission

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Abstract:

A survey was conducted of employees of the Florida Forest Service (FFS) to determine their perceptions related to the brand's differentiation and salience, as well as what they believed public perceptions were. Employees' perceptions are important to the FFS brand. As a service-oriented organization, employees of FFS will largely affect public perceptions of the organization and its activities. Employees believed all FFS activities were important but that wildfire-related activities and functions were more salient and more important for differentiating the FFS brand from similar organizations. The employees believed that the public was not well informed of FFS's functions, with the exception of wildfire functions. Employees also believed that the public perceived wildfire activities were more important for brand differentiation that FFS's other activities. Because FFS is a public organization with a variety of functions and activities, it risks its credibility if it is not able to represent the full scope of its activities and functions to the public. It was recommended to make salience and differentiation a priority for the FFS brand. The FFS brand needs to increase the public's exposure to the FFS brand and represent the full scope of its activities and functions to ensure credible representation of the brand. For research, it was recommended to study tactics for affecting employee perceptions of the organization's activities and employees' perceptions of public opinion.

Keywords: branding, internal brands, brand differentiation, brand salience, public organization, forestry, employees

Introduction & Literature Review

Branding

"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). While they are not tangible entities, brands are social constructs that have increased in importance over the past 100 years (Loken et al., 2010). A specific exists temporarily until it is replaced or upgraded, but a strong brand continues beyond the lifespan of an individual product or service (Goodson, 2012). Branding does not happen by accident; communication professionals work to strengthen the brand and continue to demonstrate its value over time. Branding is "psychology and science brought together as a promise mark as opposed to a trademark" (Goodson, 2012, para 1). Successful branding occurs when a brand has the ability to endure over time by continually providing a quality product or service (Ehrenberg, Barnard, & Scriven, 1997).

Branding & Employees

While the external components of brands, such as logos and names, are the most visible, it is the members of the organization and their actions that create the largest component of the organization's brand (de Chernatony, 2001; Veloutsou, 2008). Through their interactions with members of the public, employees act as the face of an organization and affect the public's overall perceptions of the organization (Franzen & Moriarty, 2009). Branding of service organizations and businesses is an even more unique process in which the employees contribute significantly to the brand. Literature on service marketing indicates employees' exchanges and views of brand components can instill brand values and affect the overall brand while creating special meaning of the brand in the minds of the public (Bitner, Booms, & Mohr, 1994; Bitner, Booms, & Tetreault, 1990). Due to the need of a service-oriented brand to provide continued interaction with the public, branding models often include internal and external perceptions of the brand in an effort to strengthen the brand from the viewpoint of all stakeholder groups (de Chernatony & Harris, 2000; Schneider & Bowen, 1993).

Brand Differentiation

In order for an individual to make a choice of one brand over another, the brand must have differentiating characteristics. Brand differentiation is the extent to which a brand can separate itself from other brands in the perceptions of the public (Franzen & Moriarty, 2009). Differentiation can be physical or functional in that a product or service is distinctly different in form or what it delivers. The differences may also be smaller between two brands, such as one brand of bread differentiating itself by claiming it is made with more wholesome flour than another brand. These differences may be emotional or even inconsequential to the actual product like packaging differences (Ehrenberg et al., 1997). A goal of communication professionals is to differentiate through increased knowledge about the brand while eliminating confusion with similar brands (Baker, 2003). One strategy for increased differentiation is brand imprinting, which is the idea of strengthening memory and recall of a brand name through exposure of the brand name. Research indicates that exposure to a brand name prior to learning of a product or service offered by the brand aids in the public remembering the brand and the product or service provided (Baker, 2003). Thus, brand name and prominence can be a differentiating characteristic.

With service organizations and business, the employees play an important role in differentiation. Differentiating characteristics of a brand can be the employees' attitudes and behaviors (Kimpakorn & Tocquer, 2010). Thus, it is imperative that employees understand the brand, its value, and are committed to its success through every interaction with the public. In service organizations the brand is built internally with the employees as a foundation, so if brand differentiation is not clear to the employees, it will not be clear to the public (Kimpakorn & Tocquer, 2010), and the public will not be able to clearly identify one brand choice from another. In differentiating a service-oriented brand, trust is another essential component. The public needs to feel they can trust the brand to deliver the same quality experience time and time again (Kimpakorn & Tocquer, 2010). In addition to the employees, organizations can differentiate through their values and culture, their programs, and their assets and skills (Aaker, 1996).

Brand Salience

Salience refers to the overall accessibility of a brand in the minds of the public (Franzen & Moriarty, 2009). If a brand is salient in the minds of the public, the public can recall the brand easily and name products or services provided by the brand (Ehrenberg et al., 1997). If a brand reaches salience with an individual, the individual chooses the brand over another and has positive associations with the brand including the desire to use the brand again (Ehrenberg et al., 1997). Brand salience provides a sense of assurance for members of the public, reducing their uncertainty (de Chernatony, 2001; Franzen & Moriarty, 2009; Keller & Lehmann, 2006; Romaniuk & Sharp, 2006; Tybout & Cornelius, 2006). Success of a brand is determined by how many people have positive regard for the brand or see it as salient (Ehrenberg et al., 1997). When brands are extremely similar, communication efforts may be all that distinguish the brand and establish salience (Ehrenberg et al., 1997), making communication about the brands attributes, products, and services essential in increasing brand salience.

Salience and differentiation are related to each other. By improving its differentiation and standing apart from others, a brand can improve its salience with the public (Franzen &

Moriarty, 2009). At the same time, characteristics that help improve differentiation from other brands are often the same characteristics that are salient with members of the public (Franzen & Moriarty, 2009).

In service-oriented brands, relationships between employees and the public become important in brand salience (Garbarino & Johnson, 1999). For individuals who have a strong relationship with the brand through salience, trust is the most important factor for determining continued commitment (Garbarino & Johnson, 1999) and employees are often the driving factor in ensuring continued trust (Kimpakorn & Tocquer, 2010). In order for relationships to be strong, it is imperative that trust be built over time and partnerships established (Fournier, Dobscha, & Mick, 1998). It has been argued that services must market themselves differently because the public has a need for increased trust and are prone to loyalty and brand salience if successful relationships have been established (Leonard, 1995). The connection of relationships to brand salience indicates employees are a key factor in increasing brand salience in the long and short term.

Public Organizations

Public organizations are funded by the public and mandated through governmental and political processes (Moore, 1995). Public organizations are increasingly using marketing techniques due to increases in consumerism and competition in the public sector (Walsh, 1994). For public organizations to remain viable, they must have public value, which occurs when a public organization provides a service or product that cannot or is not reasonably met by private organizations and satisfies both the general citizenry and those who immediately benefit from the service or product (Hoggett, 2006; Moore, 1995). With increases in competition between public organizations and the current decline of public spending (Pillow, 2011), there is an increased need for public organizations to establish positive brands.

Branding offers the opportunity for public organizations to go beyond just having public value to a point of fostering relationships with the public, which can improve public satisfaction with the brand (Whelan, Davies, Walsh, & Bourke, 2010). It is the employees of the organization who foster these relationships with members of the public, shaping the public's perceptions of the organization and its brand (Bitner et al., 1994; Bitner et al., 1990; Franzen & Moriarty, 2009). Part of improving the brand's success through its employees is improving the sense of shared identity within the organization (de Chernatony, 2001).

While marketing in the public sector has received attention in recent decades, there is a lack of branding literature for public organizations (Wæraas, 2008). In general, the application of private-sector strategies, such as branding, is not well understood for public organizations (Butler & Collins, 1995; Laing, 2003; Moore, 1995; Walsh, 1994). Part of the reason application of private-sector strategies is not well understood is that public organizations are typically more complicated than private organizations. They must have approval from the general public, not just individuals who receive the service or product (Hoggett, 2006; Moore, 1995). Public organizations also have multiple roles and identities that need to represented to avoid hurting the brand's credibility (Hoggett, 2006; Wæraas, 2008, 2010).

Settle (2012) addressed public perceptions of the Florida Forest Service (FFS), which is the organization being addressed in this study. The results showed the FFS brand lacked salience and differentiation with the public. While the brand lacked salience, there were characteristics of the brand that were salient, particularly wildfire activities. While wildfire-related activities were particularly salient, the public wanted to know the full scope off FFS's activities because it is a public organization and depends on public funds. The public also wanted to be sure that FFS's activities and functions were distinct from those of other public organizations to avoid the misappropriation of public funds.

Purpose & Objectives

The purpose of this study was to assess FFS employees' perceptions of the organization's different activities and functions and their importance for to the FFS brand. To address the purpose of this study, the following objectives were used:

1. Determine employee perceptions of FFS activities and functions related to salience and the FFS brand.
2. Determine employee perceptions of FFS activities and functions related to differentiation and the FFS brand.

Methods

A survey was used to assess the perceptions of all full-time employees of the organization (N = 1175), which was the target population for the study. To solicit participation in the study, the director of FFS sent the employees an e-mail asking employees to participate, with a reminder e-mail being sent four days later. The final sample size was 593 (50.4%), which does not include incomplete responses. Because the e-mails soliciting participation were sent from the director of the organization, it was not possible to ensure contacts completely adhered to the recommendations of Dillman, Smyth, and Christian (2009) to send successive e-mail waves until the number of new responses was no longer great enough to warrant further contacts.

Early respondents were compared to late respondents to address the potential for non-response error (Lindner, Murphy, & Briers, 2001). Operationally, early respondents were those who completed the questionnaire before the reminder e-mail was sent, and late respondents were those who completed the questionnaire after the reminder e-mail was sent. There was not a statistically significant difference between responses of early and late respondents, indicating the results can be generalized beyond the sample to the entire sampling frame, which included all full-time employees of the organization.

The questionnaire was researcher-developed to address the purpose and objectives of the study. The questionnaire addressed employee perceptions of the importance of FFS activities, employee perceptions of differentiation, and what employees believe the public's perceptions are of FFS activities in terms of salience and differentiation. With the exception of a question asking for perceptions of the main function of FFS, five-point scales were used for all questions. The instrument was evaluated by researchers familiar with survey methodology and individuals within the organization for face and content validity. Reliability was assessed *post hoc* using Cronbach's alpha. Reliability scores were as follows: .77 for employees' perceptions of the importance of FFS activities, .86 for employees' perceptions of the importance of FFS activities for differentiation, .92 for employees' beliefs of the public's perceptions the importance of FFS activities for differentiation, and .87 for employees' beliefs of how informed the public is of FFS's functions. A .80 reliability score is more ideal (Norcini, 1999), but .70 is considered acceptable (Kline, 1998).

Results

Objective 1: Determine employee perceptions of FFS activities and functions related to salience and the FFS brand.

Employees perceived all of the listed FFS activities as being important (Table 1). The activities perceived as most important were wildfire protection (M = 4.88) and multiuse management of state forests (M = 4.71). While still considered important based on the scale, personalized urban and rural landowner assistance (*M* = 4.37) was considered least important compared to the other FFS activities, while opportunities for recreation (*M* =4.49), revenue generation (*M* = 4.48), and forest management for private landowners (*M* = 4.46) had similar levels of perceived importance.

Table 1

Employees' perceptions of the importance of FFS activities to the state.

	M
Wildfire Protection	4.88
Multiuse Management of State Forests	4.71
Opportunities for Recreation	4.49
Revenue Generation	4.48
Forest Management for Private Landowners	4.46
Personalized Urban and Rural Landowner Assistance	4.37

Note. Scale ranged from 1 = "Unimportant" to 5 = "Important."

FFS employees had relatively neutral evaluations of how informed the public was for most of the organization's various functions (Table 2). The exceptions were for the public being more informed of wildfire prevention and suppression (*M* = 3.92) and low for non-wildfire emergency response (*M* = 2.28). Responses for the other functions ranged from 2.86 for laws and regulations to 3.29 for forest management of state forests.

Table 2

Employee perceptions of how informed the public is of FFS's functions.

	M
Wildfire Prevention and Suppression	3.92
Forest Management of State Forests	3.29
Provide Outdoor Recreation Opportunities	3.19
Forest Management for Private Landowners	3.07
Laws and Regulations	2.86
Non-wildfire Emergency Response	2.28

Note. Scale ranged from 1 = "Uninformed" to 5 = "Informed."

Employees' believed wildfire prevention and suppression (70.9%) was the primary function of FFS and believed that public (59.6%) perceived it as the main function also (Table 3). Forest management of state forests was the second-highest response for employees (15.1%) and their beliefs of the public's perceptions (18.7%). For the other FFS functions, the employees' beliefs and the employees' perceptions of public beliefs were similar, except for providing outdoor recreation opportunities. While low in both categories, employees were more likely to believe the public (6.3%) perceived it as the main function of FFS than the employees (0.9%) were to perceive it as the main function.

Table 3

Comparison between what employees believe to be the main function of FFS and what the employees' believe the public views as the main function of FFS.

	Employees		Public	
	%	Rank	%	Rank
Wildfire Prevention and Suppression	70.9	1	59.6	1
Forest Management of State Forests	15.1	2	18.7	2
Forest Management for Private Landowners	2.2	3	3.7	4
Provide Outdoor Recreation Opportunities	0.9	4	6.3	3
Laws and Regulations	0.2	5	2.9	5
Non-wildfire Emergency Response	0.2	5	0.5	6

Objective 2: Determine employee perceptions of FFS activities and functions related to differentiation and the FFS brand.

Employees believed it was important (*M* = 4.44) for FFS to differentiate itself from similar organizations (Table 4). The employees had relatively neutral beliefs for the public's perception of the importance of differentiation for FFS (*M* = 3.32).

Table 4

Comparison between employee's perception of the importance of FFS differentiating itself from similar organizations and the employees' perceptions of the public's perceptions.

	M
Employees	4.44
Public	3.32

Note. Scale ranged from 1 = "Unimportant" to 5 = "Important."

Table 5 shows employees' beliefs of the importance of various FFS activities for differentiation, as well as employees' beliefs of public perceptions of the various activities for differentiation. For each activity, employees had higher levels of perceived importance for differentiation than they believed the public had. The employees believed all of the activities were important for differentiation, while they believed public perceptions would be somewhat neutral, with the exception of believing the public perceived wildfire protection as important for differentiation (M = 4.24). This was markedly higher than the other activities, which were all below means of 3.7. Employees believed wildfire protection was the most important activity for differentiation (M = 4.73), matching their beliefs of public perceptions for the activity's importance for differentiation compared to other FFS activities. Opportunities for recreation was least important to the employees, while employees believed the public perceived revenue generation as least important for differentiation.

Table 5

Comparison between employees' perceptions of the importance for FFS activities for differentiation and employees' perceptions of the public's beliefs of importance for differentiation.

	Employees		Public	
	M	Rank	*M*	Rank
Wildfire Protection	4.73	1	4.24	1
Multiuse Management of State Forests	4.41	2	3.68	3
Forest Management for Private Landowners	4.32	3	3.69	2
Revenue Generation	4.24	4	3.53	6
Personalized Urban and Rural Landowner Assistance	4.18	5	3.62	5
Opportunities for Recreation	4.12	6	3.67	4

Note. Scale ranged from 1 = "Unimportant" to 5 = "Important."

Conclusions

As indicated by the results of this study, wildfire activities of FFS were the most salient and considered most important for differentiation by the FFS employees, who also believed the same was true for the public's perceptions. These results are consistent with the results of Settle (2012) that showed that the wildfire functions of FFS were salient and aided FFS's differentiation for members of the Florida public. The next highest function in terms of salience and differentiation for the employees was for FFS's role in the management of forest land. This function was also something that was valued by members of the Florida public (Settle, 2012). While wildfire and forest management were important for salience and differentiation, the organization's other activities and functions were not perceived as highly. Because FFS has a variety of functions and activities and it is a public organization, FFS's credibility is at risk if it is not able to successfully represent its full scope to the public (Wæraas, 2008).

While the wildfire and forest management functions of FFS were perceived as salient and important for differentiation, the other functions were not considered as salient or important to the employees, who believed the public was uninformed of the other FFS functions and would therefore not view the other functions as important for differentiation. This lack of public awareness of FFS's other functions is reflective of results from Settle (2012), but the members of the public did want to be informed of the other functions of FFS.

It is also important for a public organization to represent all of its varying functions to avoid negative public perceptions, specifically a loss of credibility (Wæraas, 2008). If the organization is unable to create salience and differentiation based on all of its activities and functions, FFS risks losing support overall or losing support for those individual functions, which could negatively impact the organization. As it relates to the overall brand of the organization, while the employees believe all of the functions of FFS are important, there is a marked difference between their perceptions of the organization's functions, particularly the elevated importance of wildfire activities for salience and differentiations. The results of this study indicate that the shared identity of FFS employees is emphasizing the wildfire function and not focusing on its other functions, which are important and need to be represented as a component of the organization's identity to maintain credibility (Settle, 2012; Wæraas, 2008).

Employees perceived differentiation as more important than they believed the public perceived differentiation of FFS to be. Their belief that they perceived differentiation as more important than the public did also extended to their perceptions of the importance of different FFS activities for differentiation. These perceptions contradict the findings of Settle (2012) that showed Florida residents wanted public organizations to have differentiated purposes, including FFS. While employees' beliefs of public perceptions may not be reflective of the public's actual perceptions, both groups believe differentiation to be important. In a time of cuts in public spending, FFS can use differentiation to ensure their viability when there is increased competition between public organizations (Pillow, 2011; Walsh, 1994).

Brands are important for public organizations to foster long-term relationships with the public (Goodson, 2012; Whelan et al., 2010). Employees are important for this process because they form the base of the brand through their choices and interactions with the public (Bitner et al., 1994; Bitner et al., 1990; de Chernatony, 2001). Their importance extends to salience and differentiation for the brand. For differentiation to occur with members of the public, it needs to be clear to employees in service-oriented organizations like FFS (Kimpakorn & Toucquer, 2010). As for salience, positive interactions between employees and the public are needed to establish trust, which is necessary for a service-oriented brand to attain salience (Garbarino & Jones, 1999; Kimpakorn & Tocquer, 2010; Leonard, 1995). Because the employees are emphasizing wildfire activities, it will only make sense for the public to have similar perceptions at the expense of FFS's other functions and activities, potentially harming FFS's brand credibility (Wæraas, 2008). This loss of credibility is particularly perilous because FFS depends on public support (Hoggett, 2006; Moore, 1995) and there is a national movement to cut public spending (Pillow, 2011).

Recommendations

For Practice

The broad recommendation is to make salience and differentiation a priority for the FFS brand. Because of the interrelated nature of salience and differentiation, it is difficult to improve one without also improving the other (Carpenter et al., 1994; Franzen & Moriarty, 2009). The wildfire functions and activities of FFS were considered more salient and important for differentiation to the employees. The employees expected a similar emphasis from the public's perspective. While results have shown that the public is not well informed of FFS's non-wildfire functions and activities and therefore used that as one of the means of differentiation from similar organization, the public did want to be informed of all of the organization's activities, particularly forest management (Settle, 2012).

If the brand is not salient with members of the Florida public, they will be less likely value the organization and support it during a time when public spending is declining (Hoggett, 2006; Moore, 1995; Pillow, 2011). As for differentiation, the employees perceived it as important for the FFS brand, but did not believe the public perceived differentiation as being important for FFS, which contradicts results by Settle et al. (2012) that indicated the public believes differentiation is important for public organizations. These perceptions of differentiation are especially important for FFS because it is a public organization that depends on public support (Hoggett, 2006; Moore, 1995).

A specific means of accomplishing the emphasis on differentiation and salience is by increasing the public's exposure to the FFS brand, such as imprinting by increasing exposure to the brand name (Baker, 2003). One of the means FFS can do this is by increasing the interactions between the public and FFS employees. Because FFS is a service-oriented organization, these interactions will be the major source of perceptions of the brand, including establishing its salient and differentiating characteristics (Aaker, 1996; Garbarino & Johnson, 1999; Kimpakorn & Tocquer, 2010; Leonard, 1995).

During times of interaction with the public or visibility in the media, FFS and its employees need to represent the full scope of FFS's activities and functions. This is necessary to satisfy the public's desire to understand the full functions of public organizations and to maintain brand credibility (Settle, 2012; Wæraas, 2008). To accomplish the full and accurate representation of FFS and its functions is to instill in employees the importance of all functions, not just wildfire activities, because the employees are the representatives of the brand the public interacts with, shaping the public's perceptions of the brand and what brand characteristics are salient and differentiated (Franzen & Moriarty, 2009; Kimpakorn & Tocquer, 2010). Having all of the employees on the same page in their perceptions of the organization's functions and activities is also important because it can strengthen the brand by building a shared identity among employees (de Chernatony, 2001).

For Research

The first recommendation for future research is to assess tactics for effecting change in employees' perceptions of an organization's activities and functions. Because public perceptions are likely to be affected by interactions with employees (de Chernatony, 2001; Franzen & Moriarty, 2009; Veloutsou, 2008) and the functions of public organizations are dictated by public and political mandates (Hoggett, 2006; Moore, 1995), it is important to understand how to affect employee perceptions' of the importance of all activities, including their importance for the brand's salience and differentiation (Wæraas, 2008).

The second recommendation is to assess tactics for effecting change in employees' perceptions of public opinion. This study indicated that employees do not always have accurate perceptions of public opinion. The importance of accurate perceptions stems from the potential that misperceptions could adversely affect employee interactions with the public. More specifically, brands are basically the relationship between the public and organizations (Franzen & Moriarty, 2009), and these relationships are primarily managed by employees, particularly in service-oriented organizations (Bitner et al., 1994; Bitner et al., 1990; de Chernatony & Harris, 2000; Schneider & Bowen, 1993).

References

Aaker, D. A. (1996). *Building strong brands*. New York, NY: The Free Press.

Baker, W. E. (2003). Does brand name imprinting in memory increase brand information retention? *Psychology and Marketing*, 20(12), 1119–1135.

Bitner, M. J., Booms, B. H., & Mohr, L. H. (1994). Critical service encounters: The employee's viewpoint, *Journal of Marketing*, 58, 95-106.

Bitner, M. J., Booms, B. H. & Tetreault, M.S. (1990). The service encounter, diagnosing favorable and unfavorable incidents, *Journal of Marketing*, 54, 71-84.

Butler, P., & Collins, N. (2005). Marketing public sector services: Concepts and characteristics. *Journal of Marketing Management, 11*(1-3), 83-96.

Carpenter, G. S., Glazer, R., & Nakamoto, K. (1994). Meaningful brands from meaningless differentiation: The dependence on irrelevant attributes. *Journal of Marketing Research, 31*(3), 339-350.

de Chernatony, L. (2001). *From brand vision to brand evaluation: Strategically building and sustaining brands.* Woburn, MA: Butterworth-Heinemann.

de Chernatony, L. & Harris, F. (2000). Developing corporate brands through considering internal and external stakeholders, *Corporate Reputation Review*, 3(3), 268-74.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2006). Implementation procedures. In *Internet, mail, and mixed-mode surveys: The tailored design method* (3rd ed., pp. 234-299). Hoboken, N.J.: John Wiley and Sons, Inc.

Ehrenberg, A., Barnard, N., & Scriven, J. (1997). Differentiation or Salience, *Journal of Advertising Research*, 212, 82-91.

Fournier, S., Dobscha, S., & Mick, D. G. (1998). Preventing the premature death of relationship marketing, *Harvard Business Review*, 76 (January/February), 42 -50.

Franzen, G., & Moriarty, S. (2009). *The Science and Art of Branding*. Armonk, NY: M.E. Sharpe, Inc.

Garbarino, E. & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships, *Journal of Marketing*, 63(2), 70-87.

Goodson, S. (May 27, 2012). Why brand building is important. *Forbes Market Share: Advertising, Marketing, and Media*.

Hoggett, P. (2006). Conflict, ambivalence, and the contested purpose of public organizations. *Human Relations, 59*(2), 175-194.

Keller, K. L., & Lehmann, D. R. (2006). Brands and branding: Research findings and future priorities. *Marketing Science, 25*(6), 740-759.

Kimpakorn, N. & Tocquer, G. (2010). Service brand equity and employee brand commitment, *Journal of Services Marketing*, 24(5), 378 – 388.

Laing, A. (2003). Marketing in the public sector: Towards a typology of public services. *Marketing Theory, 3*(4), 427-445.

Leonard, B. L. (1995). Relationship marketing of services- Growing interest, emerging perspectives, *Journal of the Academy of Marketing Science*, 23(Fall), 236-45.

Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education, 42*(4), 43-53.

Loken, B., Ahluwalia, R., & Houston, M. J. (Eds.). (2010). *Brands and brand management: Contemporary research perspectives*. New York, NY: Taylor & Francis Group.

Moore, M. H. (1995). *Creating public value: Strategic management in government*. Cambridge, MA: Harvard University Press.

Pillow, T. (2011, May 27). Rick Scott's budget cuts and vetoes. *The Florida Independent: The American Independent News Network*. Retrieved from http://floridaindependent.com/

Romaniuk, J., & Sharp, B. (2004). Conceptualizing and measuring brand salience. *Marketing Theory, 4*(4), 327-342.

Settle, Q. D. (2012). *Florida residents' perceptions of the Florida Forest Service brand* (Doctoral dissertation). University of Florida: Gainesville, FL.

Schneider, B. & Bowen, D. E. (1993). The service organization: human resources management is crucial, *Organizational Dynamics*, 21(4), 39-52.

Tybout, A. M., & Calkins, T. (Eds.). (2005). *Kellogg on branding: The marketing faculty of The Kellogg School of Management*. Hoboken, NJ: John Wiley & Sons, Inc.

Veloutsou, C. (2008). Branding: A constantly developing concept. *Journal of Brand Management, 15*(5), 299-300.

Walsh, K. (1994). Marketing and public sector management. *European Journal of Marketing, 28*(3), 63-71.

Wæraas, A. (2008). Can public sector organizations be coherent corporate brands? *Marketing Theory, 8*(2), 205-221.

Wæraas, A. (2010). Communicating identity: The use of core value statements in regulative institutions. *Administration & Society, 42*(5), 526-549.

Whelan, S., Davies, G., Walsh, M., & Bourke, R. (2010). Public sector corporate branding and customer orientation. *Journal of Business Research, 63*(11), 1164-1171.

A Little Learning is Dangerous: The Influence of Agricultural Literacy and Experience on Young People's Perceptions of Agricultural Imagery

Research Paper

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Abstract

Agricultural knowledge gaps are forming between American agricultural producers and the consumers they feed and clothe. These divides in agricultural literacy and firsthand experience in the food and fiber industry may affect how consumers perceive images of modern production practices that are presented in the news media and, subsequently, the industry itself. In a quantitative study, researchers surveyed students at a large public university about their agricultural literacy—knowledge and awareness of and familiarity with agriculture-related issues—and agricultural experience, their firsthand interactions with agricultural production. The students also responded to images taken from a television news broadcast about antibiotic use in livestock production. Using these three variables, an analysis of variance was conducted that revealed significant differences between students experienced in agricultural production and those somewhat inexperienced, indicating that those with minimal exposure to agriculture may have done so in a context related to traditional, rather than modern, production. A regression analysis also revealed that agricultural literacy was a significant predictor of reaction score. The researchers suggest that, given the ability of agricultural literacy to influence perceptions, agricultural literacy initiatives should be promoted, while experiences with agriculture may be enhanced by hands-on learning at agritourism sites and agricultural fairs and expositions.

Keywords: Agricultural literacy; experiential learning; knowledge gap; news media; visual imagery

A Little Learning is Dangerous: The Influence of Agricultural Literacy and Experience on Young People's Perceptions of Agricultural Imagery

Introduction

In the past decade, American audiences have been treated to news stories focused on elements of modern agricultural production with which audience are largely unfamiliar. In 2012, serious charges of livestock mistreatment, environmental degradation, and abuse of nontherapeutic antibiotics have been levied against the food industry: In August, federal officials shut down a Fresno, California, slaughterhouse after the release of a video showing visibly impaired cattle being stunned by "bungling" employees, raising fears that meat from sick animals entered the food supply (Cone, 2012). Meanwhile, a study conducted by the U.S. Government Accountability Office found that the Environmental Protection Agency failed to regulate pollution caused by the nation's livestock operations, leading to the degradation of vital waterways like the Chesapeake Bay (Webber, 2012). Citing pressure from consumers "[focused] on where their food comes from and how it is raised," the U.S. Food and Drug Administration (FDA) industry announced new guidelines for the use of antibiotics in food-animal production in May: The FDA called for a voluntary moratorium of antibiotic use for growth promotion and increased veterinary oversight (Miller, 2012; Jordahl, 2012).

Stories and related images of industrial farming and modern animal husbandry methods violate long-held stereotypes of agriculture as a tranquil, bucolic "lifestyle," and the outcomes of this confusion may be exacerbated by a lack of agricultural awareness among members of the public. Agricultural literacy stands as one of the primary tenets of the American Association for Agricultural Education's (AAAE) 2011-2015 National Research Agenda: "Arguably, an understanding of agriculture's history and current economic, social, and environmental significance, both domestically and internationally, is important for all Americans" (Doerfert, 2011, p. 11).

Per Doerfert (2003), Americans are increasingly removed from the nation's agricultural base, leading to potentially negative effects on how U.S. citizens view the food and fiber industry: "Limited knowledge…makes [the public's] views uncertain and malleable" (p. 12), opening the door for media portrayals of the industry to heavily influence public perceptions.

Purpose and Objectives

The purpose of this study was to investigate the impact of agricultural literacy—operationalized here as knowledge and awareness of the U.S. food and fiber industry—and firsthand experience with agriculture on college students' perceptions of television coverage of issues in modern livestock production. This study satisfies AAAE's National Research Agenda Priority 1: Public and policy maker understanding of agriculture and natural resources. Within this research area, special focus should be placed on "members of the agriculture industry [increasing] their understanding of various stakeholder group needs and/or behaviors" (Doerfert, 2011, p. 8), an attitude reflected in this study.

To fulfill the purpose explicated above, the researchers developed a series of objectives. The objectives of this study were to

1. Describe young people's reactions to images taken from agriculture-related television news stories;
2. Describe young people's perceived agricultural literacy and self-reported agricultural experience; and

3. Identify possible explanations for young people's reactions to agriculture-related television news stories.

Conceptual Framework

Knowledge Gap Theory

Knowledge gap theory posits that the infusion of mass-mediated information into a society causes certain groups to acquire knowledge at a faster rate than others, leading to "knowledge gaps" between informational haves and have-nots. Seminal work in knowledge gap theory positions socioeconomic status as the primary variable in the development of these (Ettema, Brown, & Luepker, 1983; Tichenor, Donohue, & Olien, 1970), but other factors, including audience motivation and perceived message usefulness, may contribute to the formation of informational divides among social groups (Ettema & Kline, 1977). Ettema, Brown, and Kline (1983) contend that motivation for attention is perhaps the most important element of unequal knowledge gains among social segments, noting that "gaps widen when there is a difference in motivation" (p. 519); Viswanath et al. (1994) agree, stating that education-based knowledge gaps are exacerbated by a lack of perceived informational functionality.

The agrarian information divide between farmers and consumers is growing: As more Americans move farther from the farm, both geographically and generationally, the necessity of agricultural knowledge decreases, sowing the seeds for the development of an agricultural knowledge gap that could increase the incidence of negative or unrealistic perceptions of the industry taking hold in society. To counter the division between agrarian-knowledge haves and have-nots, agricultural literacy has become an increasingly important initiative among agricultural educators and communicators alike.

Agricultural Literacy

Before the agricultural industrial revolution of the post-World War II decades, the United States was a nation built upon—and reliant upon—a strong shared agrarian tradition: "A close identification with a common agrarian culture and heritage resulted in a shared sense of agricultural literacy, arising from intimate familiarity with the production, distribution, and use of agricultural products" (Powell, Agnew, & Trexler, 2008, p. 87). Increasing urbanization and the movement of the workforce toward white-collar employment gradually led to the decline of the agriculture industry as a focal point of American life, and the latter decades of the 21st Century have ushered in growing concern regarding the U.S. population's disconnect from the sources of its food and fiber (Brewster, 2012; Doerfert, 2003).

In 1988, the Committee on Agricultural Education in Secondary Schools released a series of recommendations related to agricultural literacy, noting that an agriculturally literate person should have a firm grasp of the industry's "current economic, social, and environmental significance to all Americans" (National Research Council, 1988, p. 9). The committee concluded that few Americans possessed a keen grasp of contemporary agricultural issues: Fewer than 30 percent of Kansas students at the elementary, junior, and senior school levels who were surveyed as part of the study were able to correctly answer basic questions about food and fiber production (National Research Council, 1988; Horn & Vining, 1986).

Many of the questions raised by the National Research Council Report remain unaddressed. In a 2003 study of the agricultural literacy research conducted since the 1988 report, Doerfert found that non-agriculture teachers were the most studied population. Elementary- and middle-school students also constituted a popular population for this type of research; only four studies investigated the agricultural literacy of university students (Doerfert, 2003). Pense and Leising (2004) questioned the efficacy of agricultural literacy programs for K-12 students the following year, especially after discovering that high-school students in an agricultural education track fared *worse* than their suburban and urban counterparts on an agricultural literacy instrument.

Experience and Experiential Learning

An element of agricultural literacy that is not well-studied in non-agricultural populations is firsthand experience with the food and fiber industry. The concept of experiential learning was developed by D. A. Kolb, an organizational scholar who applied the teachings of Dewey, Lewin, and other progressives in his education research (Battisti, Passmore, & Sipos, 2008). Piaget, a forerunner of Kolb and a powerful influence on his theories of experiential learning, believed that "an act of intellectual adaptation requires a balance or equilibrium between assimilation and accommodation. Intelligence is thus the result of the dialectic integration of internal cognitive organization, reflective abstraction, and external adaptation, involvement in experience" (Mainemelis, Boyatzis & Kolb, 2002, p. 7). Kolb's model is based on the premise that people learn best by *doing*, rather than by rote memorization and regurgitation of facts (Kolb & Fry, 1975).

Learning in a real-world context deepens the educational experience, leading to improved understanding of material and the mechanisms of the real world. In a study of preservice music teachers, Haston and Russell (2011) found that authentic context learning improved students' knowledge retention and performance and, more interestingly, diminished or erased preconceived notions the students held about teaching. In her testimony, one study participant expounded on this phenomenon, stating that teaching in a real-world context better informed her understanding of "why some things happened in our classrooms that I never really liked. I can understand why they happened and what the problems were" (Haston & Russell, 2011, p. 383). Experience, therefore, may help mitigate the negative effects of misconceptions and establish new ways of thinking about previously unfamiliar topics.

Method

To investigate how agricultural literacy and industry experience influence young people's perceptions of agricultural production practices, students enrolled in two agricultural communications and journalism courses at a large southwestern public university were selected as a sample of the larger university population. Students in these courses traditionally represent a diversity of agricultural experiences.

Figure 1. Images taken from broadcast news story on antibiotic use in livestock in the order shown to survey participants.

These students were shown a series of screen captures, or still images, taken from a broadcast news story (Couric, 2010) about antibiotic-resistant bacteria and their possible link to nontherapeutic antibiotic use in livestock as part of a class exercise on visual communication and rhetoric (see Figure 1). The fifteen images were selected from an extensive collection of screen captures from the broadcast because they presented imagery related to livestock production and contained no textual evidence (i.e., captions or headlines) that directly revealed the topic of the story to the survey participants.

Based on the instrument developed by Specht (2010), an electronic questionnaire was developed using Qualtrics online survey software and distributed in both paper and electronic format. The questionnaire gathered demographic data and information pertaining to students' agricultural knowledge, awareness, and experience. Each image was followed by a five-point Likert-type attitude scale that participants used to indicate their affective response—or *reactions*—to the photo, with 1 indicating a "very negative" and 5 a "very positive" response. After viewing the series of images, the participants were asked to identify the subject of the news story based on what they had seen and to describe the visual cues that led them to choose those particular topics. Participants also explained their affective response to the topic they had chosen.

To measure participants' agricultural awareness, respondents addressed statements along a numeric rating scale and were asked to rate their knowledge, experience, and beliefs related to agricultural and animal-husbandry practices on a scale of 1-5. A score of "1" indicated no knowledge, awareness, or familiarity and "5" indicated firsthand knowledge of the industry. The self-reported constructs of *agricultural knowledge, agricultural awareness*, and *agricultural familiarity* were collapsed into a single variable, *agricultural literacy*, while a grand mean of the four items related to *agricultural experience*—the participants' level of involvement in the food and fiber industry—was calculated to provide an *agricultural experience* score for each respondent.

Specht (2010) reported reliability estimates (Cronbach's α) that ranged from .71 to .98 (n = 66). Because Specht's (2010) study collected in a similar manner, with a similar undergraduate student sample, using the same items and scales used in this study, a pilot test was not conducted.

However, post hoc Cronbach's alpha coefficients were calculated for the scales *reaction*, *agricultural literacy*, and *agricultural experience*, which yielded coefficients of .86, .94, and .90 respectively (n = 93).

Results

The electronic and paper surveys returned 93 usable responses. The resulting data were analyzed using SPSS® version 20.0 for Windows™ computers. Using SPSS, new variables were created to represent the grand means of the *reaction*, *agricultural literacy*, and *agricultural experience* scores. The grand means of respondents' *agricultural literacy* and *agricultural experience* scores were then re-coded into categorical variables with four levels (see Table 1).

Table 1

Category Labels for Recoded Categorical Variables

Variable	Score Range	Label
Agricultural literacy level	1.00-2.00	Illiterate
	2.01-3.00	Somewhat illiterate
	3.01-4.00	Somewhat literate
	4.01-5.00	Literate
Agricultural experience level	1.00-2.00	Inexperienced
	2.01-3.00	Somewhat inexperienced
	3.01-4.00	Somewhat experienced
	4.01-5.00	Experienced

Descriptive Statistics

Descriptive statistics were run on the continuous variables *reaction score*, *agricultural literacy score*, and *agricultural experience score*. The respondents reported an overall moderately negative reaction to the images presented in the survey instrument (M = 2.52, SD =.55). The grand mean of *agricultural literacy scores* indicated that students considered themselves neither strongly literature nor illiterate (*M* = 3.38, *SD* = 1.05), with similar findings for agricultural experience (*M* = 3.35, *SD* = 1.12).

Frequencies were conducted for the categorical variables *agricultural literacy level* and *agricultural experience level* (see Tables 2 and 3). Self-assessed agricultural literacy was relatively evenly distributed among the four categories, though more than half (57.00%) rated themselves as at least somewhat knowledgeable about and aware of agricultural issues.

Table 2

Frequency of Agricultural Literacy Scores by Literacy Level

Category	Frequency	Percent	Cumulative Percent
Illiterate	21	22.60	22.60
Somewhat illiterate	19	20.40	43.00
Somewhat literate	27	29.00	72.00
Literate	26	28.00	100.00

The respondents were slightly more positive in their self-assessment of agricultural experience, with one-third of survey participants rating themselves as experienced in the agriculture sector, though a significant portion also reported that they were somewhat inexperienced.

Table 3

Frequency of Agricultural Experience Scores by Experience Level

Category	Frequency	Percent	Cumulative Percent
Inexperienced	15	16.10	16.10
Somewhat inexperienced	26	28.00	44.10
Somewhat experienced	21	22.60	66.70
Experienced	31	33.30	100.00

Analysis of Variance (ANOVA)

Using the continuous variable *reaction score* and the categorical *agricultural literacy* and *agricultural experience* variables, the researchers conducted an analysis of variance to determine if differences existed among the levels of the categorical variables. The result of the *Levene's test* was not significant (.22), indicating that the assumptions of homogeneity were not violated. The results from the one-way ANOVAs are presented in Table 4.

Table 4

One-Way Analysis of Variance for the Effects of Students' Self-Perceived Level of Agricultural literacy and Agricultural Experience on Students' Reactions to News Images of Agriculture

Scale	*df*	*SS*	*MS*	*F*	*p*	η^2	1 - β
Level of Agricultural literacy							
Between	3	6.64	2.12	8.80	< .001	.23	.99
Within	89	21.46	0.24				
Total	92	27.82					
Level of Agricultural Experience							
Between	3	5.33	1.78	7.03	< .001	.19	.98
Within	89	22.45	0.25				
Total	92						

Pairwise comparisons of *reaction score* resulted in no significant differences between the levels of *agricultural literacy*. For *agricultural experience*, however, pairwise comparisons discovered significant differences between respondents who rated themselves as "somewhat inexperienced" (*M* = 2.31; *SD* = 0.42) and those who rated themselves as "experienced" (*M* = 2.82; *SD* = .62). This slight but significant difference, nonetheless, failed to reach the 0.80 threshold for statistical power (.69), indicating that significant results could have been due to chance or error.

Regression Analysis

To determine if either construct were a significant predictor of students' reaction scores, the grand mean for *students' agricultural literacy score* and the grand mean for *students' agriculture experience score* were used as independent variables in a stepwise regression analysis, where the primary variables of interest were regressed on the variable *students' reaction score*. The results indicated that *students' agricultural literacy score* was a significant ($p < .001$) predictor of *students' reaction score* ($B = .251$; $SE\ B = .048$; $\beta = .477$; $R^2 = .219$; $\Delta R^2 = .227$).

Conclusions

The first research objective—to describe young people's reactions to images from agriculture-related television news stories—produced relatively predictable results. Overall, the 93 respondents reported largely negative responses to the images taken from the *CBS Evening News* broadcast about antibiotic use in livestock production agriculture. Whether intentional or not, the program's choice of visuals reflected negatively on animal production methods, even among those students who reported higher levels of agricultural literacy and experience in the food and fiber industry. This finding coincides with the results of framing and visual rhetoric studies that focus on the news media's tendency to shock audiences into belief or action (Olson, 2007; Finnegan, 2004; Allen, 1996).

Results for the second objective supported the use of the convenience sample of students in two agricultural communications and journalism courses. Students' self-reported *agricultural literacy* and *agricultural experience* scores trended toward the middle, and further investigation into the breakdown of students' self-assessments revealed that they were relatively evenly distributed among the four levels of agricultural literacy and industry experience. This distribution allowed the researchers to investigate differences among these categorical groups, though a relatively small cell size may be a confounding factor necessitating further analysis with a larger sample of participants.

Objective 3—identifying possible explanations for young people's reactions to agriculture-related television news stories—may be explicated by the results of the ANOVA and regression using the categorical variables *level of agricultural literacy* and *level of agricultural experience* and the continuous variable *reaction score*. The ANOVA demonstrated that differences exist between reactions from students who assessed themselves as somewhat inexperienced and those who considered themselves experienced in the food and fiber industry. This finding may give credence to Alexander Pope's (1709) idiom that "a little learning is a dangerous thing," meaning that those who lack substantial information about a subject may feel qualified to make judgments on that subject. In this case, students who have limited experience in agriculture may make critical judgments about modern livestock production due to their limited exposure to that type of agricultural activity and preconceived attitudes and beliefs related to more traditional conceptualizations of agriculture, such as county fairs and small family farms.

The regression analysis, on the other hand, indicated a predictive linear relationship between students' perceived *agricultural literacy* and their reaction to the images from the broadcast news story. Based on the regression results, students who report higher levels of agricultural knowledge and awareness of and familiarity with agricultural issues will, on the whole, report more positive scores than those with lower levels of agricultural literacy. This finding supports the supposition that agricultural literacy influences individuals' perceptions of the U.S. food and fiber system (Hess & Trexler, 2011).

Implications and Recommendations

Based on the results of this study, agricultural literacy and experience have the potential to impact young people's reactions to negatively skewed visual material related to modern production agriculture. Within the context of this study, agricultural literacy was shown to be a successful predictor of respondent reaction, indicating that increased literacy lessens the likelihood of audiences reacting with knee-jerk negativity toward news stories and images related to the food and fiber industry. This outcome corroborates the agriculture sector's belief in the power of agricultural literacy programs, such as Agriculture in the Classroom, being undertaken across the country (Lieszkovszky, 2012; Schulte, 2012). Given the plethora of information regarding the lack of agricultural literacy among the nation's youth, these programs should be continued and, when possible, expanded.

The study also revealed that hands-on experience may influence students' reactions to pictorial news content associated with agriculture. Agricultural experience's association with reaction is somewhat problematic, eliciting the widest contrast of responses between those who believe themselves to be experienced and those who rank themselves as somewhat inexperienced. This dichotomy suggests that those who have minimal experience with agriculture may be gaining their agrarian understanding from contexts that present agriculture in a more traditional manner, such as county fairs and livestock shows, and reveal little about the practices of large-scale modern production. These environments, therefore, should consider incorporating digital tours of production facilities and other educational visual aids to better familiarize visitors with the realities of today's agricultural methods. Agritourism may offer another solution: The United States Department of Agriculture (USDA) offers agritourism as a method of sustaining family farms while bringing in additional income with the added benefit of building relationships with consumers (Mahoney, Spotts, & Edwards, 1999). The agritourism model has been adopted by producers across the continent in efforts to boost profits and educate consumers (Brooks, 2012; Knill, 2012).

Because this study was limited in scope and scale, further research should be conducted to elucidate the impacts of agricultural literacy and experience on consumer perceptions of and attitudes toward agriculture. The researchers relied on student self-assessment to develop the independent variable *agricultural literacy*; a more comprehensive study could employ a knowledge-based test of agricultural topics and issues to determine respondents' literacy level. Survey items related to *agricultural experience* were broad and could be narrowed down to better describe the types of industry-related activities in which respondents engage. Finally, the research should be expanded to other populations beyond the scope of this particular study to gauge the far-reaching effects of literacy and experience on consumer perceptions.

Though the study results are not generalizable beyond the population sampled, they provide additional evidence that audiences' knowledge of and familiarity with the food and fiber industry influences their perceptions of industry-related information in mass-mediated news contexts. For agricultural communicators, educators, and producers, this research may serve as a call to action to better inform the U.S. populace about its food and fiber system through formal education programs, industry-based communications efforts, and agritourism.

References

Allen, N. (1996). Ethics and visual rhetorics: Seeing's not believing anymore. *Technical Communication Quarterly, 5*(1), 87-105.

Battisti, B. T., Passmore, C., & Sipos, Y. (2008). Action learning for sustainable agriculture: Transformation through guided reflection. *NACTA Journal*, June 2008, 23-31.

Brewster, C. (2012). "Toward a critical agricultural literacy." In K. Donehower, C. Hogg, and E. E. Schell (Eds.), *Reclaiming the Rural: Essays on Literacy, Rhetoric, and Pedagogy*. Carbondale, IL: Southern Illinois University Press.

Brooks, R. (2012, September 29). Dairy family looks to agritourism to boost revenue. *Ag Web.* Retrieved from http://www.agweb.com/article/dairy_family_looks_to_agritourism_to_boost_revenue/

Cone, T. (2012, August 21). California slaughterhouse abuse video: USDA probes whether tainted beef entered food supply. *Huffington Post*. Retrieved from http://www.huffingtonpost.com/2012/08/22/california-slaughterhouse-abuse-video-usda-beef_n_1821126.html

Doerfert, D.L. (2003). Agricultural literacy: An assessment of research studies published within the agricultural education profession. *Proceedings of the 22nd Annual Western Region Agriculture Education Research Conference,* Portland, OR.

Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association for Agricultural Eductaion's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.

Ettema, J. S, Brown, J. W., & Luepker, R. V. (1983). Knowledge gap effects in a health information campaign. *Public Opinion Quarterly, 47*(4), 516-527.

Ettema, J. S., & Kline, F. G. (1977). Deficits, differences and ceilings: Contingent conditions for understanding the knowledge gap. *Communication Research, 4,* 179-202.

Finnegan, C. A. (2004). Doing rhetorical history of the visual: The photograph and the archive. In C. A. Hill and M. Helmers (Eds.) *Defining Visual Rhetorics* (pp. 195-214). Mahwah, NJ: Lawrence Erlbaum.

Haston, W., & Russell, J. A. (2011). Turning into teachers: Influences of authentic context learning experiences on occupational identity development of preservice music teachers. *Journal of Research in Music Education*, *59*(4), 369-392. doi:10.1177/0022429411414716

Hess, A. J., & Trexler, C. J. (2011). A qualitative study of agricultural literacy in urban youth: Understanding for democratic participation in renewing the agri-food system. *Journal of Agricultural Education, 52*(2), 151-162. doi: 10.5032/jae.2011.02151

Horn, J. & Vining, B. (1986). An assessment of students' knowledge of agriculture. Manhattan, Kansas: Kansas State University, Center for Extended Services and Studies, College of Education.

Jordahl, R. (2012, August 8). Antibiotics capture consumers' attention. *Pork Network*. Retrieved from http://www.porknetwork.com/pork/features/Antibiotics-Capture-Consumers-Attention-165283066.html?view=all

Knill, G. (2012, September 27). Tour highlights agriculture diversity in Chilliwack. *Chilliwack Progress*. Retrieved from http://www.theprogress.com/news/171568721.html

Kolb. D. A., and Fry, R. (1975). "Toward an applied theory of experiential learning." In C. Cooper (Ed.), *Theories of Group Process* (pp. 33–57). London, UK: John Wiley.

Lieszkovszky, I. (2012, October 11). K-12 and beyond, Ohio schools focus on agriculture education. *NPR State Impact*. Retrieved from http://stateimpact.npr.org/ohio/2012/10/11/k-12-and-beyond-ohio-schools-focus-on-agriculture-education/

Mahoney, E. M., Spotts, D. M., & Edwards, J. V. (1999). Developing agriculture and natural resource products tourism by sustaining and enhancing partnerships. Unpublished report prepared for National Resources Conservation Service. Retrieved from www.nrcs.usda.gov/

Mainemelis, C., Boyatzis, R. E., & Kolb, D. A. (2002). Learning styles and adaptive flexibility: Testing experiential learning theory. *Management Learning, 33*(1), 5-33. doi: 10.1177/1350507602331001

McDermott, T. J., & Knobloch, N. A. (2005). A comparison of national leaders' strategic thinking to the strategic intentions of the agricultural education profession. *Journal of Agricultural Education, 46*(1), 55-67. doi: 10.5032/jae.2005.01055

Miller, M. (2012, May 3). Big changes ahead for antibiotics. *Pork Magazine*. Retrieved from http://www.porknetwork.com/pork/features/Big-Changes-Ahead-for-Antibiotics-149881535.html

National Council for Agricultural Education. (2000). *The national strategic plan and action agenda for agricultural education.* Alexandria, VA: Author.

National Research Council (1988). *Understanding agriculture: New directions for education*. Washington, D. C.: National Academy Press.

Olson, L. C. (2007). Intellectual and conceptual resources for visual rhetoric: A re-examination of scholarship since 1950. *The Review of Communication, 7*(1), 1-20.

Pense, S. L., & Leising, J. G. (2004). An assessment of food and fiber systems knowledge in selected Oklahoma high schools. *Journal of Agricultural Education, 45*(3), 86-96. doi: 10.5032/jae.2004/03086

Pope, A. (1709). *An Essay on Criticism*. Retrieved from http://www.gutenberg.org/ebooks/7409

Powell, D., Agnew, D., & Trexler, C. (2008). Agricultural literacy: Clarifying a vision. *Journal of Agricultural Education, 49*(1), 85–98. doi: 10.5032/jae.2008.01085

Schulte, G. (2012, October 5). Nebraska lawmakers look at ways to fold farm, ranching knowledge into classroom lessons. *The Republic*. Retrieved from http://www.therepublic.com/view/story/77f2dc60f21c4755b436d182b51ef9c1/NE--Agriculture-Education

Viswanath, K., Kahn, E., Finnegan, Jr., J. R., Hertog, J., & Potter, J. D. (1993). Motivation and the knowledge gap: Effects of a campaign to reduce diet-related cancer risk. *Communication Research, 20*(4), 546-563.

Webber, T. (2012, August 2). EPA can't regulate livestock farms it can't find. *Associated Press.* Retrieved from http://www.msnbc.msn.com/id/48455908/ns/us_news-environment/#.UDfac8Xy8qI