Review of submission 2017-0444

1. Is this manuscript of interest to ACE members?
   YES to many

2. Comments:
   Many ACE members (agricultural communicators) search for the kinds of answers re: best communication approaches that this research strives to determine

3. Introduction: Is the literature review complete?
   Good

5. Introduction: Does the topic add to the literature?
   Good

7. Introduction: Is the purpose of the study clear?
   Good

9. Introduction: Are the research questions/hypotheses clear?
   Good

11. Methods: Were appropriate methods used?
    Inadequate

12. Comments:
    Can't really tell - not enough detail about video content.

13. Methods: Were the methods described in enough detail that they could be replicated?
    Inadequate

14. Comments:
    Not enough detail about video content.

15. Methods: Were analysis methods described?
   Adequate

16. Comments:
    More description of videos are needed.

19. Results: Are descriptions of the data appropriate and clear?
   Good

21. Discussion: Does the discussion follow the findings?
    Adequate

23. Discussion: Does the discussion add relevance to the findings by providing context (literature, background, etc.)?
    Inadequate

24. Comments:
    Helps with perspective but lacks depth re: video content.

25. Writing: Was the writing clear?
    Adequate

27. Writing: Was it grammatically correct?
    Adequate

28. Comments:
    Recurring misuse of "locally produced." Should not be a hyphen between locally and produced because modified ends in "ly"

29. Writing: Did the article follow APA style?
    Good

31. Writing: Are the references cited accurately and are they up to date?
    Good

33. OVERALL RECOMMENDATION FOR THIS MANUSCRIPT:
    REQUEST REVISION AND RESUBMITTAL

34. Comments:
    I suggest:
    1. More evidence 30-second videos are a valid communications vehicle for messaging in general.
    2. Much more discussion and rich description about the content of these videos.

Reviewer's Attachment: 2017-0444 review.docx
The Effects of Online Video on Consumers’ Attitudes Toward Local Food

Abstract

As a powerful storytelling medium, online video has been rated the most utilized content medium for marketers. The purpose of this study was to assess the effect of local food messages carried by video on U.S. consumers’ attitudes toward local food. Researchers of this study created three online videos featuring the documented benefits of local food (high food quality, support of local economy, and strengthening of social connection). A between-subject control group post-test-only experiment was conducted to test the effects of these videos on respondents’ attitude toward local food. Results indicated all three video treatments yielded a positive attitude toward local food, while respondents in the control group had a neutral attitude. In addition, the video treatment featuring local food’s high food quality generated a significantly more favorable local food attitude than the other two video treatments. The support of the local economy video treatment produced a significantly more positive local food attitude when compared to the control group (no video). The social connection video treatment did not generate a significantly different local food attitude than the control group. Agricultural communicators should consider using short online videos emphasizing high food quality and support of the local economy to promote local agricultural products. Future research should investigate reasons why some individuals respond to local food’s benefit of social connection more readily than the others, and identify strategies to use social connection media frame to promote local food.

Key words: Local food, food quality, local economy, social connection, framing, experiment, attitude.
The Effects of Online Video on Consumers’ Attitudes Toward Local Food

Introduction

Historically, the local food movement can be traced to the formation of the Agricultural Adjustment Act (AAA) of 1933, which aimed to protect family farms from economic suffering caused by the Great Depression and severe drought in the 1930s (Rausser, 1992). More recently, the local food movement has encouraged direct, authentic connections between all parties in the food system, particularly between farmers and consumers, to reduce food distribution miles; provide local, fresh, whole food; strengthen local economies; and enhance social capital (Feenstra, 2002).

Local food has been discussed in numerous formats of media, including books, such as *Fast Food Nation* and *The Politics of Food*, movies like *Super Size Me*, and feature articles in the popular press, such as *The New York Times*. These publications have detailed issues the authors perceive within the current food system and have emphasized how local food’s superior food quality and its potential community, social, environmental, and economic impact can help solve related issues (Lien & Nerlich, 2004; Schlosser, 2012; Spurlock, 2004).

However, these publications have received criticism, as does the local food movement. Prody (2013) argued these local food movement discourses neglect the low socio-economic status population who is incapable of meeting the time, financial, and spatial resources the popular press stories present. In addition, not all publications about local food were positive. For example, *The New York Times* also published an article titled *Do Not Buy Local*, which discussed the vague concept of local food, environmentally harmful practices that could exist, and the impact on the agricultural economy which enjoys a trade surplus (Conniff, 2007). Worldwatch Institute, an organization focusing on sustainability at societal and environmental levels, also has
published articles questioning what exactly local food means and whether local food is necessarily more environmentally friendly (Deweerdt, 2013). More recently, the *Tampa Bay Times* published articles criticizing some businesses that claim the food materials they used were local, while sourcing food from the other side of the world (Reiley, 2016).

Researchers have emphasized the importance of messages about the local food movement. Swann and Read (1981) indicated an effective campaign message could influence audiences’ attitudes toward local food. Goodwin (2013a) suggested conducting message testing to address the local food conversation. In addition, consumers have their own preferences for which media format they like to use to receive certain messages (Webster & Ksiazek, 2012). Factors, such as consumers’ “needs, moods, attitudes, or tastes” decide which media source a consumer prefers to use (Webster & Ksiazek, 2012, p. 41). For agricultural communicators, winning the attention of an audience is the key to success (Webster, 2014), which makes using the most effective media channel or format for messages an important component to successfully reaching the targeted audiences.

Online video has become a common communication method to promote products and has recently been considered the most powerful storytelling medium (Schroeder, 2015), and marketers of products have rated video as the most utilized content medium (Borowski, 2014). YouTube, a website where Internet users can “discover, watch and share” videos, generates billions of viewers (YouTube, n.d., para. 1). Video can be particularly persuasive because of the contagious faces, voices, emotions, and movements, which are rich in information and inherently attract human attention (Weinschenk, 2011, 2013). It is projected that by 2019, 80% of all consumer-based Internet traffic will be video, excluding video exchanged through peer-to-peer file sharing (Cisco, 2014).
As a means of delivering educational content, video interventions can be less resource-intensive and thus cost-effective (Sweat, O’Donnell, & O’Donnell, 2001; Tuong, Larsen, & Armstrong, 2014). Video interventions can also provide a consistent delivery of educational messages in a variety of forms including being presented through videotapes, downloaded media files, or streaming videos from Internet websites (Gagliano, 1988). Video can be especially effective when shared on social media, as it can quickly reach a broad audience (Backinger et al., 2011; Carson, 2011; Keelan, Pavri-Garcia, Tomlinson, & Wilson, 2007; Knosel & Jung, 2011). Special interest groups have successfully utilized online video campaigns to communicate about food (e.g., Only Organic’s #New Macdonald campaign and Chipotle’s Cultivate event) to target their consumers (Schroeder, 2015).

The local food movement, as an attempt to enhance agriculture sustainability, faces opportunities as well as challenges for market expansion. As the demand for local food increases and communication about local food continues, it becomes important to understand the effects of the commonly portrayed local food benefits to the consumers. With the growing popularity of online video, this study sought to examine the effect of local food messages delivered through videos on consumers’ attitudes toward local food.

**Theoretical Framework and Literature Review**

**Framing Theory**

The sociological approach of framing theory was used to guide this study (Heider & Simmel, 1944; Goffman, 1974). This approach focuses on the macroscopic level of framing, examining “media frames as outcomes of journalistic norms or organizational constraints” (Scheufele, 2000, p. 300). Aligning with this approach of framing theory, Entman (1991) indicated, “the essence of framing is sizing–magnifying or shrinking elements of the depicted
reality to make them more or less salient” (p. 9). Shoemaker and Reese (1996) referred to framing as the way journalists and other communicators present information that may resonate with audiences’ existing schemas (Shoemaker & Reese, 1996). The sociological approach of framing assumes human beings are unable to fully understand the world (Goffman, 1974; Heider, 1959). People form their attitude toward an issue by classifying and interpreting the available information (Goffman, 1974; Scheufele, 2000). Framing effect centers on the effect of media content on public opinion (Gamson & Lasch 1983; Gamson & Modigliani, 1989; Iyengar 1991; Nelson & Kinder 1996). Through stressing specific values, facts, and other considerations of an issue, framing provides the public with “greater apparent relevance to the issue than they might appear to have under an alternative frame” (Nelson, Clawson, & Oxley, 1997, p. 567).

However, framing effects are far from being the magic bullet-like effects where the audience merely passively receives media information (Cantril, Gaudet, & Herzog, 1940). Extensive literature on framing has demonstrated framing effects are not universal and individual characteristics could shape the influence of frames (Brewer, 2003; Druckman, 2001, 2004). A framing analysis of how local food was covered by eight major metropolitan newspapers revealed most of the articles were positive about local food (Ruth-McSwain, 2012). Major themes identified from this study included 1) product awareness such as recipes and local food availability, 2) economic support of local food, 3) high quality of local food such as its taste, nutrition, and freshness; and 4) competitive price of local food because of shortened supply chain.

Local Food Benefits and Criticism

Previous research identified a series of benefits and corresponding criticisms related to local food that have been or could be used as media frames to influence consumers’ attitude...
toward local food. First, local food offers higher food quality (Norberg-Hodge et al., 2002). Fruits and vegetables, such as tomatoes, are often picked hard and green, and become ripened in storage or during transportation with ripening chemicals (Norberg-Hodge et al., 2002; Saarinen, Jantunen, & Hahtela, 2010). Such fruits and vegetables are less flavorful and less nutritious than those naturally ripened on the farm (Norberg-Hodge et al., 2002). Researchers also suggested pre-seasonally consuming local honey could control allergic symptoms from pollen than conventional treatment methods (Saarinen et al., 2010). Eating locally produced food also has the potential to improve nutrition because it can increase the likelihood a consumer will make healthier food choices (Martinez et al., 2010). Previous research has found the availability of local food is positively correlated to a decline in obesity (Ahern et al., 2011; Salois, 2011). When consumers shop through local market channels, (e.g. farmers’ markets), the most commonly purchased food types were vegetables and fruits (Hodges & Stevens, 2013).

Secondly, local food activists believe conventional, large-scale agriculture has squeezed the small producers and communities economically, and eventually driven small producers out of business (Gottlieb & Joshi 2010; Massey & Denton, 1993; Norberg-Hodge et al. 2002). Local food eliminates some of, if not all, the middlemen between producers and consumers. Purchasing local food is believed to assist in reversing an unfair economic situation by keeping money spent on food in a smaller local system staying in that local system (Norberg-Hodge et al. 2002; Tropp, 2014). Because local food production and marketing are generally more labor-intensive than conventional, large-scale production and wholesale marketing, the local food market can generate more employment (Hodges & Stevens, 2013). Otto (2010) found 152 farmers’ markets in Iowa added 576 jobs and $17.8 million in personal income. Florida local food is estimated to generate 183,000 full-time and part-time jobs and added over $10 billion to value added or Gross National Product.
State Product from 2011 to 2012 (Hodges & Stevens, 2013). In addition, more money staying in the local community also means economic support to local small businesses (Tropp, 2014). Compared to mainstream food distribution chains, producers receive a larger share of retail prices in the local food supply, resulting in up to seven times more net revenue in the local chain than those revenues received through the mainstream chains (King et al., 2010). Small independent retailers are also more likely to sell locally-produced or made products than chain supermarkets (Norberg-Hodge et al., 2002). However, the return on investment of local direct marketing some local farmers and producers is unlikely to match the cost, uncertainty, and labor (Godette, Beratan, & Nowell, 2015).

Socially, local food systems can connect people in the community more readily than a conventional agricultural system (Hinrichs, 2000; Norberg-Hodge et al., 2002). Farmers’ markets and Community-Supported Agriculture (CSA) in small towns often become social events, with shoppers looking forward to meeting up with friends, neighbors, and farmers, while also purchasing food (Norberg-Hodge et al., 2002; Kolodinsky, Wang, & Pelch, 1999; Zepeda, & Deal, 2009). From a social movement standpoint, Kato (2014) has argued that local food markets, especially direct marketing channels, have the potential for community building. The purpose of community building is to empower individuals and neighborhood organizations in a community with skills and tools to cultivate positive changes (Berlin, Brooks-Gunn, & Aber, 2011). A local food market can bring together people with different interests and different social economic status. Such social togetherness enables people in the community to have a broader social awareness and to build connections with one another to enhance the place they live (Kato, 2014; Perrett, & Jackson, 2015).
Consumer Attitude toward Local Food

Mass media research values the concept of attitude because media recipients’ attitudes moderate the relationships between the received media information and behavioral outcomes (Petty, Brinol, & Priester, 2009). Consumers’ attitude toward local food have been examined and found positive (Bianchi & Mortimer, 2015; Godette et al., 2015). The National Restaurant Association’s “What’s Hot” chef survey discovered consumers rated locally-sourced meats and seafood as the top menu trend for 2014, followed by locally-grown produce and environmental sustainable food (National Restaurant Association, 2014). Grocery shoppers rated “more locally grown foods” as the second most desired improvement for grocery stores, following “price/cost savings” (National Grocery Association, 2014, p. 26). Several studies found consumers were willing to pay more for locally-grown food for a variety of reasons, such as freshness and public good (Darby, Batte, & Roe, 2008; Penney & Prior, 2014; Thilmany, Bond, & Bond, 2008). For example, South Carolinians were willing to pay an average premium of about 27% for state-grown produce and about 23% for state-grown animal products comparing to out-of-state grown products (Carpio & Isengildina-Massa, 2008). Florida consumers preferred Florida grown strawberries over California strawberries and were willing to pay more for Florida grown strawberries (Ruth & Rumble, 2015).

Local food was consistently considered fresher, more nutritious (Chambers et al., 2007; Zepeda & Leviten-Reid, 2004), better for the local community (Morris & Buller, 2003; Qu, Roper, & Rumble, 2014; Thilmany et al., 2008), and more environmentally friendly (Gracia & Albisu, 2001; Zepeda & Leviten-Reid, 2004) than conventional products. Studies have found taste, freshness and supporting the local economy were the two primary reasons for consumers to purchase local food (Defra, 2008; Onozaka, Glanz, Basil, Maibach, Goldberg, & Snyder, 1998;

**Purpose and Objectives**

This study sought to assess the effect of local food messages carried by video on U.S. consumers’ attitudes toward local food. Message frames focused on the local food benefits of high food quality, support of the local economy, and strengthening of social connections. The specific objectives were:

**Objective 1:** Determine respondents’ attitude toward local food in three treatment groups and in the control group.

**Objective 2:** Determine if respondents’ attitudes toward local food differ when they receive a local food video treatment about high food quality, support of the local economy, strengthening of social connections, or no video (control group).

**Hypothesis:** Respondents’ attitudes toward local food will differ when they receive a local food video treatment about high food quality, support of the local economy, strengthening of social connections, or no video (control group).

**Methods**

This research was part of a national study using opt-in panel non-probability sampling to recruit respondents representative of U.S. residents, age 18 or older. The survey was distributed online by Qualtrics, a large survey company. To offset the coverage error of non-probability sampling, the data were weighted using the 2010 data from the U.S. Census Bureau for the national demographics of sex, age, and race (Baker et al., 2013). A total of 3,097 individuals were invited to participate. Participants were eliminated if they did not fit quotas, failed attention...
filters, or failed manipulation checks (Baker et al., 2013). 1024 responses were considered complete and useful (33.1%).

A between-subject control group post-test only experiment was utilized to fulfill the objectives of the study. Respondents randomly received one treatment (one of the three messages presented through a video) or were assigned to a control group in the online survey where they did not receive a treatment. Table 1 displays the frequencies and percentages of the respondents in treatment groups and the control group. Attitude toward local food was collected after viewing the video.

Table 1. Respondents of Each Treatment Group and Control Group

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High food quality treatment</td>
<td>291</td>
<td>28.4</td>
</tr>
<tr>
<td>Support of local economy treatment</td>
<td>215</td>
<td>21.0</td>
</tr>
<tr>
<td>Strengthening social connection treatment</td>
<td>217</td>
<td>21.2</td>
</tr>
<tr>
<td>Control group (No video treatment)</td>
<td>301</td>
<td>29.4</td>
</tr>
</tbody>
</table>

Stimuli

Based on the local food literature, the local food frames selected were higher food quality, support of the local economy, and strengthening of social connection. The researcher created three videos featuring one of the three local food benefits, respectively (Table 2). The message was designed to showcase each of the benefits of local food. To control the effect of stimuli, the three videos with different messages were kept in the same style: same style of narration, same tone, same transitions, and same intro and outro.

Table 2. Experimental Groups

<table>
<thead>
<tr>
<th>Video treatment</th>
<th>Video URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>High food quality</td>
<td><a href="https://youtu.be/KudfHKWTzqA">https://youtu.be/KudfHKWTzqA</a></td>
</tr>
<tr>
<td>Support of the local economy</td>
<td><a href="https://youtu.be/u-HZXo4GTqE">https://youtu.be/u-HZXo4GTqE</a></td>
</tr>
<tr>
<td>Strengthening social connections</td>
<td><a href="https://youtu.be/wJwHvTGhie4">https://youtu.be/wJwHvTGhie4</a></td>
</tr>
</tbody>
</table>

Manipulation Checks
Manipulation checks determined if the respondents experienced what the researcher intentionally manipulated (Gravetter & Forzano, 2015). For this study, respondents needed to pay attention to the videos and understand the message on the video. The manipulation-check question for each message treatment was “What is this video about?” with three options “a. local food has higher food quality,” “b. local food supports the local economy,” and “c. local food increases social connections.” Respondents who answered this question wrong were immediately removed from the survey.

At the beginning of the survey, a test video was inserted to ensure the respondents could view and hear the video. Respondents who indicated being unable to view or hear the video were terminated from the survey. A timer was inserted into the video treatment question to ensure respondents spent sufficient time on the question to finish viewing the video. Because each of the three video treatments lasted 33 seconds, a timer was set at 35 seconds. Respondents were unable to skip to the next question until 35 seconds had passed.

**Instrument**

Attitude toward local food was measured using eight statements on a five-point Likert scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree nor Disagree*, 4 = *Agree*, 5 = *Strongly Agree*) (Cronbach’s Alpha = .92). Six questions were framed positively about local food, while two questions were framed negatively. The two negative statements were reverse coded for the analysis. The construct was summed and averaged to generate a mean score ranging from one to five. The real limits for understanding attitude toward local food were: 1.00 – 1.49 = *Strongly Disagree*, 1.50 – 2.49 = *Disagree*, 2.50 – 3.49 = *Neutral*, 3.50 – 4.49 = *Agree*, and 4.50 – 5.00 = *Strongly Agree*.

**Cognitive Interviews and Pilot Test**
A panel of experts reviewed the instrument and video treatments for face and content validity. These experts were selected based on their knowledge and experience in the fields of consumer attitudes, communication theory, experimental design, survey design, video production, and health and science messaging. Eight cognitive interviews were also conducted to determine if the video treatments were understood as the researcher intended (Dillman, Smyth, & Christian, 2014). Before the main study was performed, a pilot test with 37 college students in a class within a College of Agricultural and Life Sciences of a large southeastern university was conducted to determine instrument reliability and validity.

**Data Analysis**

Descriptive statistics were used to analyze respondents’ attitude. A one-way ANOVA was used to determine if respondents’ attitudes toward local food were different between the treatment groups and the control group. Prior to conducting the one-way ANOVA, assumptions including normality, independence, homoscedasticity, and distribution of error were tested and satisfied (Kirk, 2013).

**Results**

**Objective 1:** Determine respondents’ attitude toward local food in three treatment groups and in control group.

For respondents in the control group, their attitudes toward local food yielded a mean score of 3.45 ($SD = .69$), indicating the respondents who were not exposed in any of the video treatments had a neutral attitude toward local food (Table 3). The respondents who received one of the three video treatments had a mean score of 3.59, 3.62 and 3.79, demonstrating a positive attitude toward local food after reviewing any one of the video treatments (Table 3).
Mean and Standard Deviation of Attitude Toward Local Food in Each Treatment and Control Group

<table>
<thead>
<tr>
<th>Treatment and control groups</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High food quality video</td>
<td>291</td>
<td>3.79</td>
<td>.64</td>
</tr>
<tr>
<td>Supporting the local economy video</td>
<td>215</td>
<td>3.62</td>
<td>.62</td>
</tr>
<tr>
<td>Strengthening social connection video</td>
<td>217</td>
<td>3.59</td>
<td>.67</td>
</tr>
<tr>
<td>Control group</td>
<td>301</td>
<td>3.45</td>
<td>.73</td>
</tr>
</tbody>
</table>

No respondent in the strengthening social connection treatment group strongly disagreed with the statement “I prefer locally-produced food than food produced elsewhere” (Table 4). A total of 55.8% of the respondents in the control group agreed or strongly agreed with the statement “I believe consuming locally-produced food has more benefits than consuming non-locally-produced food.” While more than 80% of the respondents in the high food quality treatment group agreed or strongly agreed with the same statement. More than 60% of the respondents in the support of local economy treatment and strengthening of the social connection agreed or strongly agreed with the same statement. Similarly, 48.1% of the respondents in the control group agreed or strongly agreed with the statement “To me, locally-produced food is more valuable than non-locally-produced food.” After reviewing high food quality treatment, 78.3% of the respondents agreed or strongly agreed with the same statement. At least 57% of the respondents in the support of local economy treatment and strengthening of the social connection agreed or strongly agreed with the same statement.
Table 4
Frequencies of Attitude Toward Local Food in Each Treatment and Control Group (N = 1024)

<table>
<thead>
<tr>
<th></th>
<th>SD</th>
<th>D</th>
<th>NAND</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>I prefer locally-produced food than food produced elsewhere.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>1.7</td>
<td>3.0</td>
<td>15.2</td>
<td>46.3</td>
<td>33.9</td>
</tr>
<tr>
<td>Local economy treatment</td>
<td>1.3</td>
<td>1.6</td>
<td>36.3</td>
<td>39.7</td>
<td>21.1</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>0</td>
<td>4.3</td>
<td>35.3</td>
<td>40.5</td>
<td>19.9</td>
</tr>
<tr>
<td>Control group</td>
<td>1.8</td>
<td>3.4</td>
<td>32.3</td>
<td>47.1</td>
<td>15.4</td>
</tr>
<tr>
<td><strong>Having access to locally-produced food is important to me.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>2.0</td>
<td>2.8</td>
<td>17.5</td>
<td>50.3</td>
<td>27.4</td>
</tr>
<tr>
<td>Local economy treatment</td>
<td>0.4</td>
<td>2.3</td>
<td>36.1</td>
<td>45.0</td>
<td>16.2</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>0.3</td>
<td>6.4</td>
<td>32.7</td>
<td>40.5</td>
<td>20.1</td>
</tr>
<tr>
<td>Control group</td>
<td>9.2</td>
<td>4.7</td>
<td>20.9</td>
<td>45.9</td>
<td>19.3</td>
</tr>
<tr>
<td><strong>I believe consuming locally-produced food has more benefits than consuming non-locally-produced food.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>1.7</td>
<td>1.7</td>
<td>14.1</td>
<td>44.2</td>
<td>38.3</td>
</tr>
<tr>
<td>Local economy treatment</td>
<td>1.1</td>
<td>3.2</td>
<td>31.4</td>
<td>43.6</td>
<td>20.8</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>1.3</td>
<td>5.9</td>
<td>29.7</td>
<td>44.2</td>
<td>18.9</td>
</tr>
<tr>
<td>Control group</td>
<td>2.2</td>
<td>4.4</td>
<td>37.6</td>
<td>39.2</td>
<td>16.6</td>
</tr>
<tr>
<td><strong>To me, locally-produced food is more valuable than non-locally-produced food.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>2.2</td>
<td>2.6</td>
<td>17.0</td>
<td>48.3</td>
<td>30.0</td>
</tr>
<tr>
<td>Local economy treatment</td>
<td>1.8</td>
<td>3.7</td>
<td>36.9</td>
<td>42.8</td>
<td>14.9</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>1.0</td>
<td>9.0</td>
<td>26.2</td>
<td>46.6</td>
<td>17.3</td>
</tr>
<tr>
<td>Control group</td>
<td>2.3</td>
<td>6.3</td>
<td>43.2</td>
<td>27.2</td>
<td>20.9</td>
</tr>
<tr>
<td><strong>It is necessary for people to have access to local food.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>1.8</td>
<td>2.2</td>
<td>14.5</td>
<td>54.4</td>
<td>27.1</td>
</tr>
<tr>
<td>Local economy treatment</td>
<td>1.3</td>
<td>4.5</td>
<td>29.5</td>
<td>45.2</td>
<td>19.5</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>0.3</td>
<td>3.9</td>
<td>22.8</td>
<td>49.5</td>
<td>23.7</td>
</tr>
<tr>
<td>Control group</td>
<td>1.5</td>
<td>3.5</td>
<td>35.4</td>
<td>45.7</td>
<td>13.9</td>
</tr>
<tr>
<td><strong>Locally grown food is more appealing to me than non-locally-produced food.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>1.6</td>
<td>3.1</td>
<td>14.7</td>
<td>49.2</td>
<td>31.3</td>
</tr>
<tr>
<td>Local economy treatment</td>
<td>1.1</td>
<td>3.7</td>
<td>28.8</td>
<td>43.1</td>
<td>23.3</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>0.4</td>
<td>7.7</td>
<td>24.5</td>
<td>45.0</td>
<td>22.5</td>
</tr>
<tr>
<td>Control group</td>
<td>9.9</td>
<td>3.8</td>
<td>28.3</td>
<td>42.2</td>
<td>15.8</td>
</tr>
<tr>
<td><strong>Consuming non-local food does not bother me.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>5.4</td>
<td>8.6</td>
<td>31.4</td>
<td>8.6</td>
<td>5.4</td>
</tr>
<tr>
<td>Local economy treatment</td>
<td>3.3</td>
<td>21.1</td>
<td>32.9</td>
<td>32.7</td>
<td>10.1</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>3.1</td>
<td>10.2</td>
<td>30.1</td>
<td>48.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Control group</td>
<td>1.8</td>
<td>8.5</td>
<td>38.8</td>
<td>35.3</td>
<td>15.5</td>
</tr>
<tr>
<td><strong>Consuming local food is irrelevant to me.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food quality treatment</td>
<td>24.6</td>
<td>35.0</td>
<td>18.2</td>
<td>9.9</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Comment [A18]: Too late now, but the wording of this statement is odd. “I am not opposed to consuming non-local food” is clearer.
Local economy treatment  14.8  49.9  23.0  8.0  4.3
Social connection treatment  18.2  31.7  35.0  12.3  2.8
Control group  20.3  23.7  40.0  11.4  4.6

Note. Scale: SD = Strongly Disagree, D = Disagree, NDNA = Neither Disagree nor Agree, A = Agree, SA = Strongly Agree; *Items were reverse-coded when attitude index was created.

Objective 2: Determine if respondents’ attitudes toward local food differ when they receive a local food video treatment about high food quality, support of the local economy, strengthening of social connections, or no video (control group).

Hypothesis: Respondents’ attitudes toward local food will differ when they receive a local food video treatment about high food quality, support of the local economy, strengthening of social connections, or no video (control group).

Significant differences in respondents’ attitudes toward local food among the three treatment groups and the control group were found ($F = 12.7, p < .001$) (Table 5). Therefore, the hypothesis stating respondents’ attitudes toward local food would differ when respondents received different video treatments about food quality, supporting the local economy, strengthening social connections or no video (control group), is supported. Even though the results demonstrated a significant difference, the effect size was not large ($\eta^2 = 0.04$), indicating only 4% of the variance of attitude toward local food was explained by watching one of the videos.

Table 5. Analysis of Variance of Attitude toward Local Food among the Treatment Groups and the Control Group

<table>
<thead>
<tr>
<th>Treatment and control groups</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>$\eta^2$</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>High food quality video</td>
<td>291</td>
<td>3.79</td>
<td>.64</td>
<td>0.04</td>
<td>12.70</td>
<td>.00**</td>
</tr>
<tr>
<td>Supporting the local economic video</td>
<td>215</td>
<td>3.62</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strengthening social connection video</td>
<td>217</td>
<td>3.59</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control group</td>
<td>301</td>
<td>3.45</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. ** $p<.01$, * $p<.05$
Bonferroni Post hoc test analysis (Hahs-Vaughn, 2016) showed the higher food quality video treatment generated a significantly more positive attitude than the supporting the local economy video treatment, strengthening social connection video treatment, and the control group. Respondents who received the supporting the local economy video treatment showed significantly more positive attitudes than respondents in the control group. No significant difference was found between respondents in the supporting the local economy video treatment group and the strengthening social connection video treatment group. Also, no significant difference was found between the strengthening social connection video group and the control group (Table 6).

Table 6. Bonferroni Test of the Differences of Attitude toward Local Food among the Treatment Groups and the Control Group

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>ΔM (I-J)</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>Food quality</td>
<td>-.34</td>
<td>.06</td>
<td>.00**</td>
</tr>
<tr>
<td></td>
<td>Local economy</td>
<td>-.17</td>
<td>.06</td>
<td>.03*</td>
</tr>
<tr>
<td></td>
<td>Social connection</td>
<td>-.14</td>
<td>.06</td>
<td>.14</td>
</tr>
<tr>
<td>Food quality</td>
<td>Control group</td>
<td>.34</td>
<td>.06</td>
<td>.00**</td>
</tr>
<tr>
<td></td>
<td>Local economy</td>
<td>.17</td>
<td>.06</td>
<td>.03*</td>
</tr>
<tr>
<td></td>
<td>Social connection</td>
<td>.20</td>
<td>.06</td>
<td>.00**</td>
</tr>
<tr>
<td>Local economy</td>
<td>Control group</td>
<td>.17</td>
<td>.06</td>
<td>.03*</td>
</tr>
<tr>
<td></td>
<td>Food quality</td>
<td>-.17</td>
<td>.06</td>
<td>.03*</td>
</tr>
<tr>
<td></td>
<td>Social connection</td>
<td>.03</td>
<td>.07</td>
<td>1.00</td>
</tr>
<tr>
<td>Social connection</td>
<td>Control group</td>
<td>.14</td>
<td>.06</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Food quality</td>
<td>-.20</td>
<td>.06</td>
<td>.00**</td>
</tr>
<tr>
<td></td>
<td>Local economy</td>
<td>-.03</td>
<td>.06</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. ** p<.01, * p<.05

Conclusions

The findings revealed U.S. consumers who were not exposed to the video treatment featuring local food benefits had a neutral attitude toward local food. This result does not align with previous literature that demonstrated consumers’ positive attitude toward local food (Bianchi & Mortimer, 2015; Godette et al., 2015). The finding that video treatments focusing on
local food’s higher food quality and support of the local economy could effectively increase favorable attitudes toward local food verifies previous research findings that freshness and supporting the local economy are the two leading factors consumers consider when choosing fresh, local produce (Defra, 2008; Onozaka, Nurse, & McFadden, 2010). Despite many scholars’ argument that local food can bring people in their community together and generate positive social changes (Berlin, Brooks-Gunn, & Aber, 2011; Kato, 2014; Perrett, & Jackson, 2015), this study found strengthening social connection was not an effective message frame to produce favorable attitudes toward local food. This finding may be an outcome of the social benefits being indirect and less tangible, compared to higher food quality and economic benefits. It is challenging for consumers to observe social changes, such as empowering the local community immediately by consuming or purchasing local food. Besides, due to the time limit allowed in the short video, the social connection video could not explain in-depth about how connecting people in a community through local food could produce social changes. It is possible the lack of an in-depth explanation of this complex component of local food caused it to be ineffective in convincing the respondents otherwise. In addition, many research studies demonstrated consumers’ enjoyment of social connections when interacting with producers and other members of their CSA. Therefore, if the strengthening social connection video treatment used the visuals depicting the social interactions of CSA members, the results could vary.

The finding that higher food quality and supporting the local economy message frames were more effective than the strengthening social connection message frame might also be attributed to the media’s focus on these two aspects of the benefits of local food. Ruth-McSwain’s (2012) framing analysis of local food coverage in eight major metropolitan newspapers revealed local food’s economic support to the local community and the quality of

Comment [A19]: Good point!
local food were two of the major themes in newspapers, but no theme associated with strengthening social connections was reported.

This study also found watching the higher food quality video generated more positive attitudes toward local food than the other video treatments or no video treatment. This finding indicates that the benefit of local food being of high food quality is a more effective message frame for increasing favorable attitudes toward local food compared to supporting the local economy and strengthening of social connection message frames. This finding aligns with many previous findings that taste and freshness are the top influencers on consumers’ food choices in comparison with other indicators, such as cost, production methods, and production location (Glanz et al., 1998; Ragaert et al., 2004; Weatherell et al., 2003).

One video treatment’s failure to increase respondents’ favorable attitudes toward local food proved mass media is not a magic bullet (Cantril et al., 1940). In addition, the small effect size found among the different video treatment groups and the control group suggests the framing effects generated by a short video are small. Therefore, for an issue the public could have direct experiences with, like local food, a large framing effect should not be expected.

Recommendations for Research

The video treatments in this study used local food benefits documented in the literature (e.g., Ahern et al., 2011; Martinez et al., 2010). However, previous literature also challenged these benefits and argued potential adverse outcomes of promoting local food (Edwards-Jones, 2010; Godette et al., 2015). Future research should explore how consumers’ attitudes toward local food vary after viewing media messages about the concerns of the local food system. Even though, on average, consumers’ attitudes toward local food is positive, concerns about the local food movement exist within both academia and in the mass media (Edwards-Jones, 2010; Prody,
In addition, understanding how audiences process both positive and negative discussions of local food and how attitudes are formed can be valuable for agricultural communicators when creating balanced messages about local food. After all, being transparent and using balanced messages could build a more trustworthy relationship between the consumers and the agriculture industry (Goodwin, 2013b).

This study found that using a message framing featuring strengthening social connection on a short online video format does not effectively increase attitudes toward local food. However, previous literature documented consumers’ appreciation of social events and the sense of social togetherness local food brought to a community (Norberg-Hodge et al., 2002), and the potential of local food to develop social awareness and democracy (Kato, 2014; Perrett & Jackson, 2015). These benefits may be less tangible and more difficult to observe the direct effects, but could be effective media frames when communicated in a different format. Research should explore strategies to communicate the social impact of local food, perhaps not through short videos, but through documentaries, books, workshops, or conferences.

This study followed the sociological approach of framing that emphasizes message attribution (Entman, 1993). Future research can also use the psychological approach of framing to examine how different presentations of the same message influence audiences’ attitudes toward local food. For example, the same messages in the video treatments of this study can be paired with different footage to identify whether some types of messages work more effectively with live-action footage, animated footage, or still images.

**Implications and Recommendations for Practice**

These findings suggested online videos could be an effective tool to communicate about local food when the message is framed properly. Agricultural communicators should consider...
creating videos with messages featuring the benefits of local agriculture to promote their agricultural products. However, this finding suggests one 30-second video will only make a small influence on the audience’s attitudes.

The comparison of the three video treatment groups and the control group indicated the video format should be accompanied with the appropriate messages. Local food’s high food quality and support of the local economy were found effective to increasing consumers’ attitudes toward local food while the social connection frame was not. Based on the findings, the message frame carried in a short video format should center on local food’s high food quality and its support for the local economy to effectively increase consumers’ favorable attitudes toward local food. This finding implies communication materials do not always produce the anticipated results. Since consumers can have direct experiences with local food, and build their personal understandings and beliefs about local food, media is likely to have a less significant impact on the attitude of the issues than the audience’s direct experiences and beliefs. However, these beliefs could be influenced by how local food is framed during the direct experience. Understanding how to communicate about local food in certain formats is crucial for effective communication results.

Online videos can easily be reproduced, distributed, and shared online, especially on social media, which has the potential to reach a large audience quickly (Backinger et al., 2011; Carson, 2011). Previous research suggests repeated exposure to media messages can influence perceptions (Carlson & Zmud, 1999; Donohue et al., 1973; Stone et al., 1999). Practitioners should encourage the distribution and sharing of videos online to reach broader audiences. Due to the significant, but small, impact of viewing one short video, it should also be encouraged to
make such videos widely available to increase opportunities for the audience viewing these videos repeatedly.

Limitations

This study was conducted in April of 2016. Only a few states in the U.S. have fresh produce available for consumers to purchase in April. Therefore, when respondents were asked about their attitudes toward local food, responses may be impacted by the lack of availability of local food in many places of the U.S. If the data were collected at a different time of the year, the responses for these questions may vary.

Finally, this study selected three media frames to feature the benefits of local food. Other benefits of local food, such as environmental benefits, were not included in this research design. When applying the results of this study, it should be noted the findings are limited to the comparison of the three pre-selected media frames. For example, even though the food quality message frame was the most effective frame to increase consumers’ attitudes toward local food among the three, this does not mean the food quality message will be the most effective message among all possible media messages about local food.
References


Schroeder, J. (2015, August). USFRA nears its 50th anniversary! *Agri Marketing*.


Weinschenk, S. (2011). *100 things every designer needs to know about people.* Pearson Education.


