The Effects of Online Video on Consumers’ Attitudes Toward Local Food

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Abstract
Marketers rate online video as their most utilized content medium. This study used a between-subject control group post-test-only experiment to investigate the effect of three local food messages delivered via online video on U.S. consumers’ attitudes toward local food. The three 30-second videos each featured one of the documented benefits of local food: high quality, support of local economy, and strengthening of social connection. Results indicated all three video treatments yielded a positive attitude toward local food, while respondents in the control group had a neutral attitude. The video treatment featuring local food’s high quality generated a significantly more favorable local food attitude than the other two video treatments. Although the social connection video treatment generated a positive attitude toward local food based on the real limits, it did not significantly differentiate from the control group. Communicators should consider using similar short, online videos for emphasizing the high quality of local food and its support of the local economy to promote local agricultural products. Future research should pair live-action or animated footage with the same messages in the video treatments to identify messages effectiveness. Researchers should also investigate 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.

Keywords
Local food, framing, online video, national experiment, public attitude

Authors
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Historically, the local food movement began with 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 among all parties in the food system, particularly between farmers and consumers, to reduce food distribution miles; provide local, fresh food; strengthen local economies; and enhance social capital (Feenstra, 2002). Positive media attention to the topic includes books such as Fast Food Nation (Schlosser, 2012) and The Local Food Revolution (Brownlee, 2016); films such as A Place at the Table (Jacobson, K., & Silvebush, 2013) and Ingredients (Bates, 2009); feature articles in the popular press, such as “With Food Hub, Premium Produce May Reach More New Yorkers’ Plates” (Hu, 2016) and “When Community-Supported Agriculture Is Not What It Seems in The New York Times” (Moskin, 2016). These publications detailed issues the authors perceive within the current food system and emphasized how local food’s superior food quality and its potential community, social, environmental, and economic impact can help solve related issues (Bates, 2009; Brownlee, 2016; Hu, 2016; Jacobson & Silverbush, 2013; Moskin, 2016; Schlosser, 2012).

However, not all discourses about the local food movement are positive. The New York Times 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, has published articles questioning what local food exactly means and whether local food is necessarily more environmentally friendly (Deweerdt, 2013). More recently, the Tampa Bay Times published articles criticizing restaurants who claim the food materials they used were local while sourcing food from the other side of the world. For example, one restaurant claimed they served “Florida blue crab” when the crab actually came from the Indian Ocean (Reiley, 2016).

Messages about the local food movement play an important role in influencing consumers’ attitudes toward local food (Swann & Read, 1981). Understanding the audience’s preferences for receiving certain message types as well as factors, such as consumers’ “needs, moods, attitudes, or tastes” help determine which media source to use (Webster & Ksiazek, 2012, p. 41). Goodwin (2013a) suggested conducting message testing to address the local food conversation, and 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.

The penetration of video is most apparent on mobile devices (Kirkpatrick, 2017). As a digital marketing method, online videos are one of the most powerful storytelling mediums for promoting products including agricultural products (Kirkpatrick, 2017; Schroeder, 2015) and marketers rated video as the most utilized content medium (Borowski, 2014). YouTube, an online video channel, enables its users to “discover, watch and share” videos, and attracted billions of viewers (YouTube, n.d., para. 1). Besides potentially large viewership, a video is a persuasive form of communication, because the faces, voices, emotions, and movements, depicted are rich in information and inherently attract human attention (Weinschenk, 2011, 2013). By 2019, video will account for 80% of all consumer-based Internet traffic, excluding video exchanged through peer-to-peer file sharing (Cisco, 2014).
As a means of delivering educational content, video interventions can be produced with limited resources and thus be cost-effective (Sweat, O'Donnell, & O'Donnell, 2001; Tuong, Larsen, & Armstrong, 2014). If used thoughtfully, video interventions also provide consistent delivery of educational messages in a variety of formats: videotapes, downloaded media files, or streaming videos on Internet websites (Gagliano, 1988). Videos shared on social media can quickly reach a broad audience making them an effective means of message communication (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, for example, Only Organic’s New Macdonald song campaign and Chipotle’s Cultivate Festival directly targeted 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 to 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 the 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 the existing schemas of an audience (Shoemaker & Reese, 1996). The sociological approach of framing functions under the assumptions that people form attitudes toward an issue by classifying and interpreting information that is available for them (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). 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 (a) product awareness such as recipes and local food availability, (b) economic support of local food, (c) high quality of local food such as its taste, nutrition, and freshness; and (d) competitive price of local food because of shortened supply chain. However, framing effects are far from a magic bullet where an audience merely passively receives media information (Cantril, Gaudet, & Herzog, 1940). Extensive literature on framing has demonstrated framing effects are not universal and individual characteristics shape the influence of frames (Brewer, 2003; Druckman, 2001, 2004).
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 quality than food produced outside of a local area (Norberg-Hodge et al., 2002). In order to avoid damage during shipping and distribution, some 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, & Haahtelä, 2010). Fruits and vegetables produced using these methods are less flavorful and less nutritious than those naturally ripened on the farm (Norberg-Hodge et al., 2002). One way to get better-tasting fruits and vegetables to market with minimal nutrient loss is to sell or buy locally grown produce. An additional benefit of eating local food is the potential for local honey to help control allergic symptoms (without the use of conventional treatments) in consumers who suffer from seasonal allergies (Saarinen et al., 2010). When consumers shop through local market channels, (e.g. farmer’s markets), the most commonly purchased food types were vegetables and fruits (Hodges & Stevens, 2013). Therefore, eating locally produced food also has the potential to improve nutrition because it increases the likelihood for a consumer to make healthier food choices (Martínez et al., 2010).

Secondly, some 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, thus purchasing local food is believed to assist in reversing an unfair economic situation by keeping money spent on food in a smaller 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 farmer’s markets in Iowa added 576 jobs and $17.8 million in personal income. Florida local food was estimated to generate 183,000 full-time and part-time jobs and added over $10 billion to value-added or Gross State Product from 2011 to 2012 (Hodges & Stevens, 2013). In addition, money staying in the local community also means economic support to local small businesses (Tropp, 2014). Compared to mainstream food distribution chains, local food 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 are unlikely to match the cost, uncertainty, and labor (Godette, Beratan, & Nowell, 2015).

Thirdly, local food systems can socially 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 (Kolodinsky, Wang, & Pelch, 1999; Norberg-Hodge et al., 2002; 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 the skills and tools to cultivate positive social changes (Berlin, Brooks-Gunn, & Aber, 2011). A local food market brings together people with different interests and different social economic statuses. Such social togetherness enables people in the community to have a broader social awareness, to build connections with one another, to enhance the place they live, and to foster positive social changes (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 information being disseminated through the media and subsequent behavioral outcomes (Petty, Brinol, & Priester, 2009). Research found that consumer’ attitudes toward local food are positive in general (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 environmentally sustainable food (National Restaurant Association, 2014). Grocery shoppers rated “more locally grown foods” as the second most desired improvement for grocery stores behind “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 compared 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 primary reasons for consumers to purchase local food (Defra, 2008; Onozaka, Glanz, Basil, Maibach, Goldberg, & Snyder, 1998; Nurse, & McFadden, 2010; Ragaert, Verbeke, Devlieghere, & Debevere, 2004; Weatherell, Tregear, & Allinson, 2003).

**Purpose and Objectives**

This study sought to assess the effect of local food messages presented in a short, online video format on U.S. consumers’ attitudes toward local food. The message frames used focused on the local food benefits of high quality, support of the local economy, and strengthening of social connections. The specific objectives were:

Objective 1: Determine respondents’ attitudes toward local food after exposure to one of the online video treatment groups, each focusing on either local food’s high quality, support of the local economy, or strengthening of social connections, or the control group.

Objective 2: Determine if respondents’ attitudes toward local food differ when exposed to one of the online video treatment groups, each one focusing on either local food’s high quality, support of the local economy, or strengthening of social connections, or the control group.
Methods

This research was part of a national study using opt-in panel, non-probability sampling to recruit respondents that are representative of all U.S. residents, age 18 and older. A survey company, Qualtrics, was hired to recruit the respondents and distribute the survey online. 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). A total of 1,024 responses were considered complete and useful (33.1%).

A between-subject control group post-test only experiment was used to fulfill the study’s objectives. Respondents of the online survey were randomly assigned to one of three video message treatments or to a control group 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 measured 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, local food provides fresher and sometimes more nutritious options, supports local producers and boost local employment, as well as brings the local community together to cultivate positive social changes (Hodges & Stevens, 2013; Norberg-Hodge et al., 2002; Saarinen et al., 2010). Therefore, the local food frames selected were higher food quality, support of the local economy, and strengthening of social connection within a community. The researcher created three videos each with messages showcasing one of the three local food benefits frames (See Appendix A for video scripts and Table 2 for frames and links to view the videos). To control the effect of stimuli, the three videos used a similar style of narration, tone, transitions, intro, outro, and photography (images were purchased from Adobe Stock Image).

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/wJwHwTGhie4">https://youtu.be/wJwHwTGhie4</a></td>
</tr>
</tbody>
</table>
Manipulation Checks
For this study, respondents needed to pay attention to the videos and understand the main message conveyed in the video treatment. The online survey contained two manipulation checks to determine if the respondents experienced what the researcher intentionally manipulated (Gravetter & Forzano, 2015). The first check occurred at the beginning of the survey, where 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. The second manipulation-check for each message treatment was the question, “What is this video about?” The three response 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.

To ensure respondents spent sufficient time on the question to finish viewing the 33-second video, a 35-second timer was inserted into the video treatment question. 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 each respondent’s attitude. A one-way ANOVA was used to determine if the attitudes of respondents toward local food were different between the treatment group 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). All statistical analyses were conducted using IBM SPSS.
Results

Objective 1

Objective 1 was to determine respondents’ attitudes toward local food after exposure to one of the online video treatment groups, each focusing on either local food’s high quality, support of the local economy, or strengthening of social connections, or the 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 to 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 viewing one of the video treatments (Table 3).

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>

The following are noteworthy results for Objective 1 (Table 4). When asked to respond to this statement, “I prefer locally produced food than food produced elsewhere,” no respondent in the strengthening social connection treatment group strongly disagreed. In response to the statement, “I believe consuming locally produced food has more benefits than consuming non-locally produced food,” a total of 55.8% of respondents in the control group agreed or strongly agreed; more than 80% of the respondents in the high food quality treatment group agreed or strongly agreed; and more than 60% of respondents in the support of local economy treatment and strengthening of the social connection agreed or strongly agreed. Similarly, for the statement, “To me, locally produced food is more valuable than non-locally produced food,” 48.1% of respondents in the control group agreed or strongly agreed; 78.3% of the respondents in the high food quality treatment agreed or strongly agreed; and 57% of the respondents in the support of local economy and strengthening of the social connection treatments agreed or strongly agreed.
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>I prefer locally produced food than food produced elsewhere.</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>3.0</td>
<td>15.2</td>
<td>46.3</td>
<td>33.9</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>Having access to locally produced food is important to me.</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>I believe consuming locally produced food has more benefits than consuming non-locally produced food.</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>To me, locally produced food is more valuable than non-locally produced food.</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>It is necessary for people to have access to local food.</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>0.2</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>Locally grown food is more appealing to me than non-locally produced food.</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>Consuming non-local food does not bother me.</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>Consuming local food is irrelevant to me.</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>
<tr>
<td>Local economy treatment</td>
<td>14.8</td>
<td>49.9</td>
<td>23.0</td>
<td>8.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Social connection treatment</td>
<td>18.2</td>
<td>31.7</td>
<td>35.0</td>
<td>12.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Control group</td>
<td>20.3</td>
<td>23.7</td>
<td>40.0</td>
<td>11.4</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Note. Scale: SD = *Strongly Disagree*, D = *Disagree*, NAND = *Neither Disagree nor Agree*, A = *Agree*, SA = *Strongly Agree*; *a* Items were reverse-coded when attitude index was created.
Objective 2

Objective 2 was to determine if respondents’ attitudes toward local food differ when exposed to one of the online video treatment groups, each one focusing on either local food’s high quality, support of the local economy, or strengthening of social connections, or the 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). 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.

<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>
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<tr>
<td>Supporting the local economic video</td>
<td>215</td>
<td>3.62</td>
<td>.62</td>
<td></td>
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<tr>
<td>Strengthening social connection video</td>
<td>217</td>
<td>3.59</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Control group</td>
<td>301</td>
<td>3.45</td>
<td>.73</td>
<td></td>
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<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 other two treatments and the control. 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>(\Delta M) (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 study participants who were not exposed to any of the video treatments 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).

In contrast to research that found local food can bring people in their community together and generate positive social changes (Berlin, Brooks-Gunn, & Aber, 2011; Kato, 2014; Norberg-Hodge et al., 2002; Perrett, & Jackson, 2015), this study did not find that strengthening social connection was an effective message frame for producing favorable attitudes toward local food. This finding may be an outcome of the indirect and less tangible nature of the concept of the social benefits of bringing people in a community together compared to the concepts of higher food quality and economic benefits. It is challenging for consumers to observe social change, such as empowering their local community by consuming or purchasing local food (Berlin et al., 2011; Kato, 2014). It is realistic to assume that this treatment was ineffective because such a short video could not portray an in-depth explanation of how local food might connect people in a community, thereby fostering community building and positive social changes. Several research studies
demonstrated consumers’ enjoyment of social connections when interacting with producers and other members of their CSA (Allen & Ward, 2015). Therefore, if the strengthening social connection video treatment used the visuals depicting the social interactions of CSA members, the results might 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 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 the high quality of local food 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**

Video treatments in this study used local food benefits frames documented in the literature (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, consumer attitudes toward local food was found to be generally positive, messages about concerns of the local food movement exist within both academia and in the mass media (Edwards-Jones, 2010; Prody, 2013). In addition, understanding how audiences process both positive and negative discussions of local food and how attitudes are formed is valuable for agricultural communicators when creating balanced messages about local food. After all, being transparent and using balanced messages build a more trustworthy relationship between the consumers and the agriculture industry (Goodwin, 2013b).

Although this study found that a message frame featuring strengthening social connection in a short, online video format was ineffective, 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). Further 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 should be paired with different footage (e.g. live-action footage, animated footage, or still images) to identify the message effectiveness.

As social media platforms allow videos to quickly reach a broad audience (Backinger et al., 2011; Carson, 2011; Keelan et al., 2007; Knosel & Jung, 2011), future research should evaluate social media’s role on conveying agricultural and food topics on short videos. In addition, given that research on how types of devices used to view advertising videos made a difference in viewers’ preference and purchase intent in the area of automotive and quick casual restaurants (The Interactive Advertising Bureau, 2016), it is valuable to record data about the device respondents used to view videos and assess if viewers’ attitudes differ by device type.

**Implications and Recommendations for Practice**

The findings of this study suggest an online video is an effective tool for communicating 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 by appropriate messages. Based on the findings, to effectively increase consumers’ favorable attitudes toward local food 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. 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.

Videos can easily be reproduced, distributed, and shared online, especially on social media, which has the potential to quickly reach a large audience (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 house such videos online to increase opportunities for repeated viewing.

**Limitations**

This study was conducted in April of 2016, and only a few states in the U.S. have fresh produce available for consumers to purchase in April. Therefore, the lack of availability of local food in many places of the U.S. could have impacted the responses regarding attitudes toward local food. If the data were collected at a different time of the year, the responses to these questions may have been different.
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.

APPENDIX A: Video Scripts

Video Treatment 1 – Local food benefits of high food quality – 32-second narration
Locally produced foods offer you high quality. Local food is harvested at peak ripeness, with the highest nutritional quality. Many local foods are handcrafted for the best flavor. Local foods are fresh, retaining the most nutrients and flavors.
Enjoy High Quality, Choose Local Food

Video Treatment 2 – Local food benefits of supporting local economy – 32-second narration
Choosing locally grown food benefits your local economy. Purchasing local food directly benefits your local farmers and ranchers. Money spent on local food stays with your community. Purchasing local food generates more jobs and income in your community.
Support Your Local Economy, Choose Local Food

Video Treatment 3 – Local food benefits of enhancing social connections – 32-second narration
Local food strengthens social connections. Local food markets, such as farmers markets, connect you with those who produce your food. Local food markets also connect other people in your community. Social connections build relationships with understanding and trust.
Strengthen Social Connections, Choose Local Food


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


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