

FACEBOOK ACTIVITY OF OKLAHOMA
AGRITOURISM OPERATIONS

By

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Bachelor of Science in Dairy Science

Blacksburg, Virginia

2017

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
May, 2019

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AGRITOURISM OPERATIONS

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ACKNOWLEDGEMENTS

To my advisor, Dr. Quisto Settle, thank you for your patience and mentorship. I appreciate your time for questions, ability to stretch my skills, and providing of so many opportunities. You went above and beyond, and I will be forever grateful to have had an advisor who cared as much for me as a person as a grad student.

To my committee member, Dr. Angel Riggs, thank you for instilling in me a love of news writing and passionate storytelling. I finished your courses captivated with the thrill of weaving a good article, and your energy and sincerity were highlights to my day.

To my committee member, Dr. Stacy Tomas, thank you for your encouragement and feedback. I appreciate you crossing disciplines to join my committee and admire the precedent you have set in agritourism research. It was a pleasure working with you.

To my co-researcher and friend, Audrey King, there are co-researchers, and then there are co-researchers who become mentors and friends. Thank you for coding so many Facebook posts, sharing practical wisdom, and being so patient with my random questions. I am thankful for the data you helped me collect but more thankful for the life lessons you taught along the way.

To my parents, thank you for your unconditional support and love. You helped me move halfway across the country, answered my phone calls, and raised me into the person I am today. Thank you for instilling in me a love for agriculture and learning, but more importantly a strong work ethic and perseverance.

To my sister, thank you for being my best friend. Your wisdom and grit have been an inspiration, and I am thankful for all of our memories over the years. You are an example of grace, courage, and servant leadership.

Name: BRITTANY BOWMAN

Date of Degree: MAY 2019

Title of Study: FACEBOOK ACTIVITY OF OKLAHOMA AGRITOURISM
OPERATIONS

Major Field: AGRICULTURAL COMMUNICATIONS

Abstract: Agritourism is an expanding industry in rural areas. Agritourism operators seek to efficiently market their operations and reach consumers far removed from agriculture. Social media serves a crucial role in tourism marketing; however, limited research exists on agritourism marketing to advise agritourism operators or those who advise agritourism operators. A quantitative content analysis was performed on 174 Oklahoman agritourism operation Facebook pages to describe posts, events, and business information created during the month of June 2018.

Pages with at least one original post had more page likes than pages without. Amongst farm types, hunting agritourism operations had the lowest proportion of pages with at least one original post, while farm-to-table agritourism operations had the highest proportion. Number of reviews had a very strong relationship to total page likes, while other factors such as number of community and event posts had only a moderate relationship to page likes. Events were not frequent on Oklahoma agritourism Facebook pages, and overall page activity did not have a relationship with the number of people interested in going to events. Amongst original posts, posts created by the agritourism operator were most frequent, followed by posts shared from other sources. Pages with at least one live video or post about an event were most active. Hashtags were infrequently observed amongst Facebook posts, with limited consistency within individual pages or across multiple pages. Pages with an advertisement had more page likes than pages without advertisements.

Recommendations to agritourism operators include encouraging agritourism visitors to create Facebook content, utilizing Facebook advertisements, and creating at least one original post. Additionally, agritourism operators should create a variety of types of original posts and utilize advertisements. Perhaps most important, agritourism operations should be wary of emphasizing quantity over quality in Facebook marketing. Future research should qualitatively describe Facebook pages and interview agritourism operators and visitors. Additionally, comparing Facebook data to “real life” data, such as business revenue/expense and number of visitors, could further measure the effective of various Facebook marketing practices.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

FACEBOOK ACTIVITY OF OKLAHOMA AGRITOURISM OPERATIONS

Agritourism is an expanding industry in rural, predominately agricultural states (Tweeten, Leistriz, & Hodur, 2008). However, very few agritourism operators have business or marketing training (Rich, Standish, Tomas, Barbieri, & Ainey, 2010). Visitors of agritourism venues expect transparent communication in a way that can build trust between the operator and visitor (Stebner, Ray, Becker, & Baker, 2015). Social media can be a place for both visitors and marketers to engage in conversation online (Jabreel, Moreno, & Huertas, 2017), making it a tool for measuring brand strength and interaction (Zavattaro, Daspit, & Adams, 2015). The purpose of this thesis is to describe the quantity of information shared on agritourism operation Facebook pages and the degree of public page interaction.

Agritourism is variedly defined within academic literature, with as many as 19 different definitions and even different terms, such as “agritourism,” “agrotourism,” “farm tourism,” “farm-based tourism,” and “vacation farms” (Phillip, Hunter, & Blackstock, 2010). For the purpose of clarity and relevance to the state of Oklahoma, this thesis will follow the definition of agritourism provided in the 2016 Oklahoma

Activities Liability Limitations Act (§ 5.14), which states

“Agritourism activity” means any activity carried out on a farm or ranch for the general public, for recreational, entertainment, or educational purposes, to view or enjoy rural activities, including farming, ranching, historic, cultural, harvest-your-own activities, or natural activities and attractions. An activity is an agritourism activity whether or not the participant paid to participate in the activity (§ 5.15).

Agritourism operations are more likely to have certain characteristics such as being an intermediate-scale farm, engaging in fruit/vegetable production, and employing farm conservation practices (Schilling & Sullivan, 2014). However, activities vary widely amongst agritourism operations and can include tours, hay rides, animal-related attractions, cowboy/rodeo-related activities, tasting rooms, mazes, and self-harvesting (Barbieri & Mshenga, 2008). Within the United States, agritourism operations are most heavily concentrated in the northeast (van Sandt, Low, & Tihlmany, 2018). However, many states across the U.S. reported large growth in the agritourism industry in recent years, including Arkansas (Das & Rainey, 2010), California (George, Getz, Hardesty, & Rilla, 2011), Missouri (Barbieri & Tew, 2010), and Virginia (Magnini, Calvert, & Walker, 2017). In 2014, Oklahoma was home to nearly 400 operations, with annual median visitors per operation of 800 and a total economic impact of \$64 million (Murphy, Melstrom, Shideler, & Cummings, 2017).

Agritourism operations’ success depends on effective marketing (Schilling & Sullivan, 2014). However, New Jersey agritourism operators identified marketing as their greatest barrier and identified concerns in adapting to changes in consumer

communication preferences (Schilling, Marxen, Heinrich, & Brooks, 2006), and Nasers and Retallick (2012) confirmed marketing preferences of agritourism visitors were indeed changing. Agritourism operators have expressed a lack of a coordinated statewide effort in agritourism marketing (Ryan, DeBord, & McClellan, 2006; Schilling et al., 2006), and a survey of agricultural communications college students from 11 universities revealed students were unsure if their state provided a state agritourism department (Amaral, Edgar, & Johnson, 2012). Agritourism operators reported being interested in training for marketing their agritourism operations (Miller, McCullough, Rainery, & Das, 2010).

Online marketing is often visitors' first source of information about an agritourism operation, and the level of trust built through online communication can influence younger consumers' decision to visit an operation (Nowak & Newton, 2008). More specifically, social media marketing provides many benefits to brands, such as improving corporate reputation (Dijkmans, Kerkhof, Buyukcan-Tetik, & Beukeboom, 2015); overcoming geographic limitations, information sharing, forming business connections, and finding personal friends (Ngai, Tao, & Moon, 2015). Harrigan, Evers, Miles and Daly (2017) concluded brands must use social media to build consumer involvement (Harrigan et al., 2017), and customer engagement on social media can result in higher consumer-brand relationships and word-of-mouth communications (Hudson, Huang, Roth, & Madden, 2016).

Despite the importance of social media in online marketing, several research gaps exist. Zeng and Gerritsen (2014) specifically called for quantitative content analysis of tourism social media to establish a baseline on current social media use. Past research applying social media content analysis to branding as a whole has considered variables of

social media interaction such as whether links, pictures, and video are included in material (Ashley & Tuten, 2014; Wallace, Wilson, & Miloch, 2011); degree of responsiveness measured through likes, comments, shares, and number of page followers (Parsons, 2013; Stefko, Bacik, & Fredorko, 2014; Yang, Lin, Carlson, & Ross, 2016); and date and time of post, number of retweets, and type of post (Lin & Pena, 2013).

Social media is increasingly considered essential in public relations campaigns (Allagui & Breslow, 2016). Social media is changing public relations practitioners' interactions with media outlets, as journalists no longer passively receive media kits but instead actively request and respond to information (Waters, Tindall, & Morton, 2010). Additionally, nonprofits have the opportunity to have more measured engagement with stakeholders (Saxton & Waters, 2014). When describing the interactive nature of social media in regards to public relations, Peters, Chen, Kaplan, Ognebeni, and Pauwels (2013, p. 290) stated, "Such listening, understanding, and responding to an individual actor changes the concept of traditional media in another meaningful way: previously pure inside-out communication turns into balanced outside-in communication." However, in evaluating research on new media's role in public relations from 1981 to 2014, Duhé (2015) found research in dialogic and interactivity contributions of new media is a largely untapped area of public relations research. New media enables researchers to evaluate both organizational- and message-level engagement on social media, and message-level effects have been largely unexamined (Saxton & Waters, 2014), and public interaction with social media marketing content can serve as an evaluation tool for destination marketers to assess effectiveness of marketing (Hanna & Rowley, 2013; Zavattaro et al., 2015).

Purpose and Objectives

The purpose of this two-manuscript study was to first describe the content and interaction with Facebook posts on Oklahoma agritourism Facebook pages, and second to describe overall page activity of Oklahoma agritourism Facebook pages. The research objectives guiding the first manuscript were to

1. describe characteristics of original, community, and event posts;
2. describe relationships between post characteristics, types of post, and page likes;
3. compare characteristics of types of original posts;
4. describe overall characteristics of pages with different types of original posts;
5. describe interaction amongst posts with attachments;
6. describe characteristics of original and community posts with hashtags; and
7. describe characteristics of event posts.

The research objectives guiding the second manuscript were to

1. describe overall activity of Oklahoma agritourism Facebook pages,
2. describe characteristics of pages with and without original posts,
3. describe the relationship between measurements of page activity,
4. describe the relationship of post characteristics and page popularity,
5. describe characteristics of events and pages with event posts, and
6. compare characteristics of pages with and without advertisements.

Literature review

Characteristics of Oklahoma Agritourism

Oklahoma agritourism consists of four broad categories: lodging (32% of operations), commodity-based (31%), market experiences (24%), and wineries (13%) (Murphy & Melstrom, 2017). In 2014, each category contributed an estimated gross spending of \$10 million, \$12 million, \$10 million, and \$9 million, respectively. Full-time Oklahoma agritourism operations on average employ two full-time workers, and seasonal activities employ an average of three part-time paid workers. Although the majority (68%) of Oklahoman agritourism operations are profitable, 90% of families operating agritourism operations still rely on off-farm income.

Visitors to Oklahoma agritourism operations typically traveled less than 51 miles, were parents of young children, and were employed fulltime, although visitors to wineries were typically willing to travel further, 51-100 miles (Murphy & Melstrom, 2017). Seventeen percent of surveyed visitors reported learning about the operation from social media, compared to an internet search (9%) and billboards/road signs (9%). However, word-of-mouth (48%) was most influential. Social media was noted as being especially important for fall, seasonal activities.

New agritourism operators are often motivated to begin in agritourism for economic reasons (McGhee, 2007). Agritourism provides income diversification amidst fluctuating agricultural prices (Amanor-Boadu, 2013; Dickinson, 2001; Tew & Barbieri, 2012) and increases access to new customers for farm products (Tew & Barbieri, 2012). Additionally, agritourism strengthens rural development (Das & Rainey, 2010; Lupi,

Giaccio, Mastronardi, Giannelli, & Scardera, 2017), and agritourism operations have significantly more paid employees than non-agritourism agricultural operations (Barbieri, 2013).

Agritourism also provides many private and public benefits through farm income and employment, public agricultural education, niche food production and consumption, and environmental protection and education (Flanigan, Blackstock, & Hunter, 2014). Agritourism can provide economic incentive for preservation of agricultural heritage (Barbieri, 2013; LaPan & Barbieri, 2013; Mettepenningen, et al, 2012; Valdivia & Barbieri, 2014) while also improving farm family quality of life (Dickinson, 2001; Tew & Barbieri, 2012) and providing family-related activities for visitors (Molera & Albaladejo, 2007; Tew & Barbieri, 2012). In some cases, agritourism has also been used to attract attention to the fine arts through coalitions between agritourism operators and local artists (Burrows, Fennell, Redlin, & Verschoor, 2007). Additionally, agritourism operators enjoy the opportunity to share their lifestyle with visitors (Magnini et al., 2017) and are more likely to pass their agricultural operation on to the next generation (Barbieri, 2013).

Tourism Marketing and Social Media

Agritourism operators must overcome many challenges, including a lack of marketing experience amongst operators and limited supportive infrastructure within the industry (McGhee, 2007). Beginning agritourism operators may lack required business skills to succeed (Rogerson & Rogerson, 2014), and operators were concerned with developing promotion and marketing skills (Miller et al., 2010). Small investments in

promotion could return large revenue for agritourism operations, especially through social media marketing (Sullins, Moxon, & McFadden, 2010).

Website quality has strong influence on whether millennials visit agritourism venues such as wineries (Nowak & Newton, 2008). Business owners have been eager to receive information and communication technology training to remain competitive (Muske, Stanforth, & Woods, 2004). However, despite agriculturists considering social media a “permanent element in agriculture” (Danielle, Meyers, Doerfert, & Irlbeck, 2014, p. 9), members of organizations for beginning farmers and ranchers in Texas, Florida, and Georgia reported only basic skills in social media marketing, with low self-reported competence for higher-level tasks such as generating page ‘Likes,’ (Meyers et al., 2015). Only 37% of young agriculturists reported using websites on a daily basis for business, and 23.5% used Facebook on a daily basis for business (Shaw, Meyers, Irlbeck, Doerfert, & Abrams, 2015).

It is likely the role of social media in trip planning will continue to increase (Phillips, Thilmany-McFadden, & Sullins, 2010), and the “internet’s marketing function should not be neglected” (Zhou, 2014, p. 237). Social media must be recognized for its ability to assess and develop brand image from user-generated content (Marine-Roig & Clave, 2015), influence decisions to visit and perspectives of rural areas (Marchiori & Onder, 2015; Onder & Marchiori, 2017; Phillips et al., 2010), attach emotions to rural locations (Zhou, 2014), create a narrative-based, personable story for a tourist destination (Hanna & Rowley, 2013), measure visitors’ brand loyalty to a location (Zavattaro et al., 2015), provide customized information to individualized users (Zeng & Gerritsen, 2014), and attach visual images of culture and agriculture to a location while clarifying

misperceptions of those locations (Joyner, Kline, Oliver, & Kariko, 2018; Kotsi, Balakrishnan, Michael, & Ramsøn, 2018).

Social Media Content and Interactions

Social media provides a variety of opportunities for the public to create and respond to content. User-generated content can build a travel organization's brand, especially through online reviews (Amaro, Duarte, & Henriques, 2016). Users can share information for a variety of reasons, such as to fulfill their own information needs, to interact with others, and for self-expression and self-actualization (Shao, 2009).

However, there is little two-way conversation about destinations online (Zhou, 2014), and social media management is largely unassessed by tourism marketing practitioners and scholars (Cho, Schweickart, & Haase, 2014; Zeng & Gerritsen, 2014). Social media provides a unique research opportunity to assess both marketing messages and viewer response to those messages (Saxton & Waters, 2014).

However, research parameters for using viewer interactions through likes, comments, and shares are not firmly established. Winter, Brückner, and Krämer (2015) found comments have little influence on social media users' estimates of public opinion towards news. In contrast, Kim (2018) suggested comments can be more powerful than likes in generating bandwagon effect, and Oeldorf-Hirsch and Sundar (2015) found comments significantly influence interest and involvement towards a news topic. Likes may be less influential than shares and comments because of their ability to simply express agreement (Kumar et al., 2017; Winter et al., 2015).

A variety of factors related to the content of a post influence interactions. Indeed, social media managers should consider content quality, volume, and valence when crafting posts (Peters et al., 2013). The type of information a Facebook page shares can build a brand personality for the company, as factors such as brand awareness, corporate social responsibility, customer service, engagement, product awareness, and seasonality content in Facebook posts help the viewer infer qualities of a company (Coursaris, Osch, & Balogh, 2013). Kwok and Yu (2013) proposed seven message typologies for evaluating the messages brands share online: customer service, brand awareness, corporate social responsibility, engagement, product awareness, promotional, and seasonal. Kim and Yang (2017) compared affective and cognitive appeals of Facebook posts, finding affective appeals most frequently encouraged likes, while cognitive appeals triggered comments, and shares were influenced by both affective and cognitive appeals. Usakli, Koc, and Sonmez (2017) suggested categorizing Facebook content into post content, major theme, information type, engagement, interactivity, promotion, and customer service. However, little research has been conducted categorizing social media or Facebook messages (Coursaris et al., 2013; Kwok & Yu, 2013). Additionally, emotional Facebook posts and posts discussing local customs and traditions have higher engagement (Pino et al., 2018), and Lalicic, Huertas, Moreno, Gindl, and Jabreel (2018) found destination marketing organizations use certain adjectives more frequently on social media.

Outside factors, such as personalities of social managers and characteristics of the business, may also influence Facebook page management. Social media brand personalities can reflect a company's social media manager and have been categorized

based on culture, structure, governance, and scope by Felix, Raschnabel, and Hinsch (2017). Small businesses tend to be more flexible in marketing strategies, while older companies are able to focus less on market development and more on producing a high-quality product (Blackburn, Hart, & Wainwright, 2013; McDowell, Harris, & Geho, 2016). A variety of organizational and personal factors also influence adoption of social media technologies (Ngai et al., 2015), and the creativity of a marketing strategy can affect its implementation effectiveness (Slater, Hult, & Olson, 2010). A business's web marketing goals in regards to factors such as search engine optimization, customer characteristics, and touch points, can also affect content and social media channels used (Cawsey & Rowley, 2016).

Social media users may be attracted to specific content based upon their social identity and the recognition and interaction a social network provides (Fotiadis & Stylos, 2016). Additionally, the content of posts can influence engagement (Pino et al., 2018). However, research is not conclusive on the relationships amongst various measurements of public interaction. Winter et al. (2015) found comments have little influence on social media users' estimates of public opinion towards news. In contrast, Kim (2018) suggested comments can be more powerful than likes in generating bandwagon effect, and Oeldorf-Hirsch and Sundar (2015) found comments significantly influence interest and involvement towards a news topic. Likes may be less influential than shares and comments because of their ability to simply express agreement (Kumar et al., 2017; Winter et al., 2015).

User-generated Content

User-generated content can build a travel organization's brand, especially through online reviews (Amaro et al., 2016), as "brand value co-creation is not just based on consumer-brand interaction but also on consumer-stakeholder interaction and consumer-consumer interactions. All these interactions between stakeholders is what constitutes brand communities" (Nyangwe & Buhalis, 2018, p. 262). Social media marketers typically encourage social media users to contribute to brand formation through development of user-generated content (Tsiakali, 2018). User-generated content can contribute to self-actualization, connecting with other human beings, information, entertainment, and mood management (Shao, 2009). The vicarious experience of viewing user-generated content from others' travel increases likelihood of booking a trip to the same place (Marder, Archer-Brown Colliander, & Lambert, 2018).

Users can share information for a variety of reasons, such as to fulfill their own information needs, to interact with others, and for self-expression and self-actualization (Shao, 2009). Social media users perceive bandwagon cues from user-generated content, and this can influence whether participants choose to contribute in social media discussions (Kim & Sundar, 2014; Neubaum & Kramer, 2017). Visual information sharing was found to be popular amongst visitors to Mallorca, the largest island amongst Spain's Balearic Islands (Munar & Jacobsen, 2014). However, there is little two-way conversation about destinations online (Zhou, 2014), and social media management is largely unassessed by tourism marketing practitioners and scholars (Cho et al., 2014; Zeng & Gerritsen, 2014). Social media provides a unique research opportunity to assess both marketing messages and viewer response to those messages (Saxton & Waters, 2014).

User-generated content may be limited to only a core group who engage frequently on social networking sites (Phethean, Tiropanis, & Harris, 2015). New research has developed descriptive personalities based on social media behavior. For example, sports fans have been categorized based on social media user-generated content, suggesting fans who consume information on social media have a higher need to know; fans who contribute on social media have a need to feel empowered; and fans who create content have a higher degree of brand love (Vale & Fernandes, 2017). Additionally, Amaro et al. (2016) compared degree of social media consumption and creation of tourists to develop five segments of tourist behavior patterns, and Munar and Jacobson (2014) categorized tourists based on their use of social media to either help others or fulfill self-centered motives.

Online reviews are a more specific form of user-generated content, and their scores can influence hospitality businesses' net sales, guest count, and the amount purchased per customer (Kim, Li, & Brymer, 2016). Number of reviews can influence a tourist's decision to stay at an AirBNB location (Mauri, Minazzi, Niego-García, & Viglia, 2018), and the length of text and readability of an online review can affect readers' perception of usefulness (Liu & Park, 2015). Additionally, positive and negative comments can be significant indicators of organizational reputations (Ji, North, & Liu, 2017). A desire to help others influences tourists in posting online reviews, although tourists prefer to post reviews on websites that are also helpful for themselves (Munar & Jacobsen, 2014). To date, research considering the effect of online reviews on agritourism operations has not been found.

Events

Social networking sites provide an advantage to traditional websites in providing information about events (Lee, Xiong, & Hu, 2012), and social media promotion can be less expensive to promote events than paid advertising or traditional public relations efforts to earn media coverage (Moise & Cruceru, 2014). Events such as launching new products, concerts, and business open house events are most effectively promoted on Facebook compared to platforms such as LinkedIn and Twitter (Moise & Cruceru, 2014), and it is important to note these events are similar to events that would be hosted on agritourism operations.

Various factors influence event popularity on Facebook. For example, the number of friends of a person participating in a Facebook event influences newsfeed analytics, as an update is posted in Facebook friends' timelines when a Facebook user shares plans to participate in an event (Bogaert, Ballings, & den Poel, 2016). Additionally, subculture attachment increases the likelihood of electronic word-of-mouth promotion of an event (Nicole, Cassia, & Christian, 2011). Huang, Wang, and Yuan (2014) found high participation was not a guarantee when an event received a large number of e-invitations, and instead event popularity was influenced by whether an event was public or private, whether other Facebook friends had been invited to the event by the page administrator, and the medium on which an event was communicated, such as whether via email or Facebook. Pino et al. (2018) found Facebook users are more likely to like and share posts about ongoing events, while they tend to share tweets about future events and comment on tweets about past events.

Advertisements

Individual preference rather than advertisement characteristics may influence agriculture students' perceptions to Facebook advertisements targeting them (Baker, Settle, Chiarelli, & Irani, 2013), and an individual's trust of the advertisement's sponsoring organization or business may affect the Facebook advertisement's influence (Shareef, Mukerji, Dwivedi, Rana, & Islam, 2019). Furthermore, whether a Facebook user is previously aware of the brand may influence what information within the ad they find most relevant (Xue & Zou, 2018). The information within an advertisement may influence whether Facebook users share sponsored tourism advertisements on Facebook, with Facebook users preferring entertainment-related messages over information-based messages (Plume & Slade, 2018). While consumers tend to prefer user-generated content over advertisements, advertisements can still be helpful for tourism organizations to reach a wider and broader audience (Plume & Slade, 2018). Additionally, when comparing Facebook advertisements to advertisements offline and on other websites, only Facebook advertisements resulted in an increase in Facebook page likes (Voorveld, Araujo, Bernritter, & Rietberg, 2018).

Theoretical Framework

Excellence theory is used to describe the amount of interactivity of agritourism pages and posts, and the factors influencing those interactions. Excellence theory has emerged from research primarily considering only synchronous and diachronous communication and progressing to four separate models: press agency, two-way asymmetrical, two-way symmetrical, and public information (Laskin, 2009).

Waters and Williams (2011) described these four models and related them to Twitter characteristics observed by government agencies. Press agency is one-sided without relying heavily on research into consumers' preferences; it can be observed on Twitter through communication that is attention-seeking. Public information is similarly one-sided but seeks to share with readers what is interesting and useful; examples include sharing information from other sources and reminding of future events. Two-way asymmetry is a dialogue between participants and the Twitter page with the primary intention of learning characteristics and motivations from an audience rather than simply providing mutually beneficial content; examples on Twitter include surveys and polls. Two-way symmetry is based on legitimate conversations with the goal of building mutual understanding; examples on Twitter include attempts to resolve conflict and using references to other Twitter accounts.

In determining which excellence theory model is most effective, scholars advocate different positions. Dialogic communication and relationship building can help public relations practitioners with an audience (Szondi, 2010; Tyler, 2005), and Smith and Gallicano (2015) suggested such a relationship should go as far as to provide users the opportunity to engage in self-expression. However, it must be acknowledged certain dialogic conversations can be manipulative, such as when the communicator seeks to appear conversational to only lead the audience into their line of thinking (Paquette, Sommerfeldt, & Kent, 2015). Additionally, the public may consider highly graphic or emotional media manipulative and question the source's credibility (Scudder & Mills, 2009; Swenson, Gilkerson, & Anderson, 2016).

To date, studies applying excellence theory to agritourism have not been found, but past research has applied excellence theory to other entities' social media presence. Waters and Williams (2011) found government agencies most commonly used public information, and in comparing symmetrical and asymmetrical communication, used asymmetrical more frequently. Additionally, agencies typically used models in tandem, as symmetry was used frequently but rarely used alone. Cho et al. (2014) reported similar results amongst nonprofit organizations, which use public information most frequently, followed by two-way asymmetry, two-way symmetry, and press agency, respectively.

Social media is increasingly considered essential in public relations campaigns (Allagui & Breslow, 2016). Social media is changing public relations practitioners' interactions with media outlets, as journalists no longer passively receive media kits but instead actively request and respond to information (Waters et al., 2010). Additionally, nonprofits have the opportunity to have more measured engagement with stakeholders (Saxton & Waters, 2014). When describing the interactive nature of social media in regard to public relations, Peters et al. (2013, p. 290) stated, "Such listening, understanding, and responding to an individual actor changes the concept of traditional media in another meaningful way: previously pure inside-out communication turns into balanced outside-in communication."

However, in evaluating research on new media's role in public relations from 1981 to 2014, Duhé (2015) found research in dialogic and interactivity contributions of new media is a largely untapped area of public relations research. New media enables researchers to evaluate both organizational- and message-level engagement on social media, and message-level effects have been largely unexamined (Saxton & Waters,

2014). There are many measurements of excellence theory on social media, such as video, links, photos, and type of information (McCorkindale, 2010); likes, comments, and shares (Cho et al., 2014); organization response to users, network extensiveness and growth, and user responses and posts (Bortree & Seltzer, 2009); and tone, details revealing users' demographics, and profanity (Woolley, Limperos, & Oliver, 2010).

A variety of factors influence public interaction with social media. For example, Hampton, Goulet, Marlow, and Rainie (2012) found social media users interact with social media passively and are more likely to “like” than share content, while Saxton and Waters (2014) suggested interaction can be influenced by post content and Fehrer, Woratschek, Germelmann, and Brodie (2018) found customer engagement behavior existed on an intensity threshold with less frequent users more likely to follow a bandwagon effect (Moe & Schweidel, 2012). Public interaction may suggest high involvement with the post message (Kim, 2018; Kim & Yang, 2017), and word count, video attachments, images, and links may influence the number and type of post interactions (de Vries, Gensler, & Leefland, 2012; Pino et al., 2018; Sabate, Berbegal-Mirabent, Cañabate, & Lebherz, 2014). Hashtags can serve as a tool to enable social media users to search for posts based on specific topics for which they are interested (Sevin, 2013; Uşaklı, Koç, & Sönmez, 2017), and tagging friends in posts can also increase post interaction by communicating confidence in a post (Oeldorf-Hirsch & Sundar, 2015). However, there is not strong consensus on which measurements are most effective. Peters et al. (2013) warned, “Pushing a single metric alone in disregard of the other aspects will result in unsustainable growth that punishes the brand in the long-run” (p. 294).

CHAPTER 2

METHODS

FACEBOOK ACTIVITY OF OKLAHOMA AGRITOURISM OPERATIONS

Quantitative Content Analysis

Agritourism is an increasingly popular area of tourism research (Amanor-Boadu, 2013; Tew & Barbieri, 2012; Tweeten et al., 2008; Valdivia & Barbieri, 2014). As a whole, agricultural communications research has evaluated whether agricultural producers operate a website, blog, or social media platform (Thach, 2009); however, it has not deeply researched the content on these Web 2.0 technologies nor considered whether patterns emerge amongst measurements of interactivity. It is hoped this research will encourage the agricultural communications discipline to approach a greatly needed, but largely ignored, topic of both practical and academic importance.

Quantitative content analysis has the characteristics of being systematic, replicable, involving symbols, and utilizing numeric values (Riffe, Lacy, & Fico, 1998). Advantages of quantitative content analysis include being nonobtrusive, allowing access to archived materials, maintaining uniformity in settings where one researcher would be overwhelmed by the volume of data to be analyzed, maintaining integrity of communicators' language, and increased access to data when constraints such as

geographic distance could limit sample size (Riffe et al., 1998). Criticisms of quantitative content analysis include the potential of quantitative content analysis to oversimplify observations, as it is possible the presence or absence of one symbol may change the entire meaning of a specific communication. Additionally, quantitative content analysis may detect only manifest meaning of symbols, in neglect of latent meaning.

Quantitative content analysis allows conclusions for deductive analysis and counting frequency of units, while qualitative analysis provides inductive analysis (Kondracki, Wellman, & Amundson, 2002). Examining content of agritourism Facebook pages may serve as a “middle ground” between social media interaction of agritourism operators and agritourism consumers. Flanigan et al. (2014, p. 403) acknowledge “providers and visitors may have different expectations of the same product; which may have implications for the way that product is marketed.” Thus, in a field where the possibility of bias and misperceptions has already been acknowledged, interviews may not be as objective in determining social media presence and success of agritourism operations as an objective, descriptive approach through quantitative content analysis.

Population and sample

Agritourism operations were selected from a list of 393 agritourism operations registered with the Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) and published on the agency’s tourism promotion website. Agritourism operations with incomplete information on the ODAFF agritourism website or without a Facebook page were removed from the population; additionally, alternative pages, such as those labeled “unofficial” or “private group” were removed from the list, making a final population

size of 286. The ODAFF website divided agritourism operations into six geographic regions: central, northeast, northwest, south central, and southeast. A sample of 174 agritourism operations was created by randomly selecting 50% of the agritourism operations from each of these six regions. This sample size of 174 exceeds Krejcie and Morgan's (1970) recommendation of a sample of at least 162 for a population size of 286. At the time samples were established in May/June 2018, agritourism operations could self-identify on the ODAFF website from 16 types of agritourism operations with the opportunity to select more than one type. A mean of 2.2 farm types ($SD = 1.2$) were selected per operation, as shown in Table 1. The sample was proportionate by region to incorporate a variety of types of agritourism operations.

Oklahoman agriculture differs by region (USDA-NASS, 2017). Although research to date has not been found categorizing Oklahoman agritourism by geographic region, characteristics of agritourism visitors and businesses varied by region in Colorado (Sullins & Thilmanny, 2007). Sampling was therefore decided to be proportional by region in order to select a variety of farm types, with 50% of the agritourism operations in each geographic region randomly selected using the website www.random.org. The final sample consisted of 48 from central (28%), 52 from northeast (30%), 20 from northwest (11%), 15 from south central (9%), 20 from southeast (11%), and 19 from southwest (11%), as shown in Table 2.

Table 1

Distribution of agritourism type by geographic region

	Central <i>n</i> (%) ^a	Northeast <i>n</i> (%) ^a	Northwest <i>n</i> (%) ^a	South Central <i>n</i> (%) ^a	Southeast <i>n</i> (%) ^a	Southwest <i>n</i> (%) ^a
Teachable moments (<i>n</i> = 43)	8 (19%)	12 (28%)	9 (21%)	3 (7%)	4 (9%)	7 (16%)
Specialty crops or products (<i>n</i> = 35)	14 (40%)	12 (34%)	1 (3%)	2 (6%)	3 (9%)	3 (9%)
Farm-to-table (<i>n</i> = 33)	10 (30%)	15 (45%)	1 (3%)	2 (6%)	3 (9%)	2 (6%)
Lush-n-lively trail (<i>n</i> = 30)	8 (27%)	10 (33%)	3 (10%)	3 (10%)	4 (13%)	2 (7%)
Farmers market (<i>n</i> = 29)	11 (38%)	7 (24%)	1 (3%)	2 (7%)	5 (17%)	3 (10%)
Vineyards/ wineries (<i>n</i> = 26)	9 (35%)	5 (19%)	5 (19%)	1 (4%)	4 (15%)	2 (8%)
Pumpkin picking (<i>n</i> = 29)	8 (28%)	10 (34%)	2 (7%)	1 (3%)	3 (10%)	5 (17%)
Weddings (<i>n</i> = 26)	6 (23%)	9 (35%)	3 (12%)	4 (15%)	2 (8%)	2 (8%)
Mazes (<i>n</i> = 22)	5 (23%)	8 (36%)	3 (14%)	1 (5%)	2 (9%)	3 (14%)
Farm & ranch attractions (<i>n</i> = 21)	5 (24%)	6 (29%)	4 (19%)	1 (5%)	2 (10%)	3 (14%)
U-pick (<i>n</i> = 21)	8 (38%)	9 (43%)	0 (0%)	2 (10%)	1 (5%)	1 (5%)
Country stays (<i>n</i> = 20)	5 (25%)	4 (20%)	2 (10%)	2 (10%)	4 (20%)	3 (15%)
Hunting (<i>n</i> = 13)	0 (0%)	4 (31%)	3 (23%)	2 (15%)	1 (8%)	3 (23%)
Guest ranches (<i>n</i> = 12)	1 (8%)	5 (42%)	1 (8%)	2 (17%)	3 (25%)	0 (0%)
Trail riding (<i>n</i> = 12)	1 (8%)	3 (25%)	4 (33%)	1 (8%)	2 (17%)	1 (8%)
Petting farms (<i>n</i> = 10)	3 (30%)	5 (50%)	1 (10%)	0 (0%)	0 (0%)	1 (10%)

^aProportion of each agritourism type within region.

Table 2
Distribution of agritourism type within population and sample

	Population (<i>N</i> = 387)	Sample (<i>n</i> = 174)
	<i>N</i> (%)	<i>n</i> (%)
Teachable moments	85 (22%)	43 (25%)
Specialty crops or products	82 (21%)	35 (20%)
Farm-to-table	71 (18%)	33 (19%)
Lush-n-lively trail	63 (16%)	30 (17%)
Farmers market	77 (20%)	29 (17%)
Vineyards/ wineries	49 (12%)	26 (15%)
Pumpkin picking	42 (11%)	29 (17%)
Weddings	57 (15%)	26 (15%)
Mazes	29 (7%)	22 (13%)
Farm & ranch attractions	46 (12%)	21 (12%)
U-pick	43 (11%)	21 (12%)
Hunting	38 (10%)	13 (7%)
Guest ranches	34 (9%)	12 (7%)
Trail riding	38 (10%)	12 (7%)
Petting farms	17 (4%)	10 (6%)
Country stays	48 (12%)	20 (11%)

Quantitative content analysis was performed from August 14 through September 15, 2018. Page likes and followers, number of pages liked by each page, messenger app characteristics, and the amount of business and contact information present on the “About” area of each page were recorded as observed at the time of data collection. Posts created by the agritourism operation and the general public were recorded if they were created from June 1-30, 2018. Characteristics recorded included number of reactions and attachments, word count, date created, number of comments, number of people tagged, and type of post. Additionally, characteristics of events set to be held from June 1-30, 2018, were recorded. Event characteristics included number of people interested in attending, length and content of the event’s description, and number of community posts

created on the event's page. All community posts created on an event's page were recorded, regardless of whether they occurred outside of the June 1-30, 2018, timeframe.

The month-long collection period was intended to account for posting fluctuations of individual Facebook pages, as personal life events of the page administrator may influence Facebook activity for shorter periods of time, such as a week, but would be less likely to limit page activity for an entire month. Stal and Feibert (2013) found Facebook activity of private users changed over a five-year period based on user personalities and goals; however, because Facebook activity was only recorded for one month, data collected may not be as influenced by long-term changes but rather provide a snapshot of current Facebook marketing goals.

By collecting data from June, researchers intended to select a time in which no one farm type would have a peak season that would skew Facebook activity in comparison to other farm types. Some types of agritourism operations, such as u-pick berry operations, were experiencing peak farm activity in June, as indicated by the higher number of posts these types of agritourism operations created. However, other types of agritourism operations such as pumpkin patches and hunting operations may have been less active on Facebook due to the seasonality of their operations.

Amongst social media platforms, Facebook was selected for its widespread popularity both with the general public and destination marketing organizations. Facebook had 1.5 billion daily active users in December 2018 and more than 2.3 billion monthly active users (Facebook newsroom, 2019). More small businesses who used social media for marketing purposes used Facebook than other platforms, and small

business owners reported social media marketing in general reduced marketing expenses (Geho & Dangelo, 2012). Facebook and Instagram content created by destination marketing organizations had more public interaction than content created on other platforms such as Twitter and YouTube (Uşaklı et al., 2017).

All posts and events created by Facebook page visitors and administrators within the month of June 2018 were collected and analyzed. Profile pictures, cover photos, and page information (page likes/followers, presence of contact information, etc.) were analyzed as observed by researchers in the sampling period of August 14 to September 15, 2018. This is because such information is displayed on a Facebook page in real-time. Events were considered to be in the month of June based on the date the event was scheduled to be held. Occasionally, some events were created early enough page visitors could post about the event before the month of June. In these situations, the event posts were included in the sample if the event was scheduled to occur in June. When posts were created within the month of June but had page comments outside of the month of June, such as when a post was made on June 30 and comments occurred in the month of August, these comments were included in the sample because the original post had been made in June.

A variety of posts can be created on an agritourism Facebook page. Community posts are defined in this study as posts created by the general public in the “Community” area of the agritourism Facebook page. Community posts were not further categorized by type, unlike original posts. Original posts were defined as posts appearing on the agritourism operation’s Facebook page timeline, meaning they were created by the agritourism Facebook page itself. Original posts were categorized into seven types.

Traditional were posts created by simply typing into the posting area on the page's timeline but could have attachments of various sorts. Updated pictures were posts generated automatically on a page's timeline when a profile picture or cover photo were updated. Added pictures were posts generated automatically on a page's timeline when photos were added to an album. Event posts were posts generated automatically on a page's timeline when an event was created. Live posts were created by uploading a live video attachment. Shared posts were posts originally made by another page that had been shared by the page administrator to appear on the agritourism Facebook page. "Other" was a broad description for all posts that did not fit into these categories.

Validity and Reliability

A coding sheet was developed for the analysis of sampled agritourism Facebook pages. Coding considered the main categories of photo representation, original page and visitor posts, events, business information, and visitor interaction. The coding sheet was reviewed by faculty in agricultural communications and tourism, as well as an ODAFF agritourism marketing specialist. Coding sheets guide researchers in analyzing data and maintaining consistency (Riffe et al., 1998). Additionally, all variables measured were defined in a coding book to serve as reference for coders once coding began.

Interrater reliability was established on two samples of 30 Maine agritourism operation Facebook pages by the two coders. After the first 30 Facebook pages were coded, areas of concern were discussed, and additional coder training occurred. The second set of 30 Maine agritourism operations was then coded, and all variables with a Cohen's kappa score less than 0.4 were removed from the study. McHugh (2012)

identifies .40 as a weak level of agreement. Cumulatively, Cohen's kappa was used to measure interrater reliability for 26 variables, with an average Cohen's kappa score of .835. McHugh (2012) identified Cohen's kappa scores between .80 to .90 as strong and with 64-81% data reliability. The Cohen's kappa score of .835 observed in this study are higher than many other quantitative content analyses performed within the discipline of agricultural communications (Baker & King, 2016; D'Angelo, Ellis, & Ruth, 2017; Hill, Mobly, & McKimm, 2016; Swenson, Roier, Murillo, 2018; Topp, Stebner, Barkman, & Baker, 2014).

Some variables were not suitable for Cohen's kappa measurement because the data was skewed (Komagata, n.d.) or because they were open-response. For these variables, percent agreement was used to measure interrater reliability. Cumulatively, percent agreement was used to measure interrater reliability for 32 variables, with an average percent agreement of 97%. Xu and Lorber (2014) compared interrater reliability measurements (Cohen's *K*, Van Eerdewegh's *V*, Yule's *Y*, Holley and Guildford's *G*, Scott's π , and Gwet's AC1) and identified Holley and Guildford's *G* as most ideal in situations of skewed data. However, Xu and Lorber (2014) acknowledged *G* should be calculated twice on data with low base rates: in situations with an absence of the variable or situations with the complete presence of the variable. Because some variables were not present on any of the Maine agritourism Facebook pages used to measure interrater reliability, compiling such a sample was not feasible, and Holley and Guildford's *G* was not used.

Content analysis involves conceptualization, design, and execution (Riffe et al., 1998), and researchers must consider a variety of factors such as the types of media

organizations present, societal ideology, and characteristics of media workers. Because units of this social media content analysis were primarily physical (based on number of posts, comments, etc.) (Riffe et al., 1998), quantitative content analysis was used, in comparison to qualitative content analysis. In general, methods followed the 9-step plan described by Sjøvaag and Stavelin (2012)- set research questions, establish coding definitions, set a sample, write selectors, conduct a pilot study, begin coding, review the codebook, remove coding errors, and establish interrater reliability- with the exceptions of performing a pilot study.

The month of June was selected for analysis because it is likely when all types of agritourism operations would have some degree of activity in their farm-related production activities. However, in this time period, it was possible a time period was actually selected when a majority of farm types were not active. June is a period where the majority of agricultural crops are growing but is a period without major holidays that could influence Facebook content. For example, although seventy percent of Georgia agritourism operations reported being open to visitors in summer, 87% of agritourism operations open in fall (The University of Georgia, 2006). Similarly, farmers markets in Missouri had the most vendors during late summer and early fall (Rimal, Onyango, & Bailey, 2010), and small-scale fruit and vegetable producers in New York experience the beginning of their “peak season” in August (LeRoux, Schmit, Roth, & Streeter, 2010). For example, while pumpkin patches may be most active online in October, vineyards and country stays may seek to capture the attention of summer tourists. Indeed, social media was noted to be especially influential on decisions to visit Oklahoman agritourism operations during fall, seasonal activities (Murphy et al., 2017).

Data Collection & Analysis

Quantitative content analysis was performed from August 14 to September 15, 2018. Following data collection, statistical analysis was performed using SPSS software. This included descriptive statistics to summarize characteristics of different types of agritourism operations to compare place branding, as well as bivariate correlations to compare the relationships of page and post characteristics. Pearson's r correlation was used, with a "weak" correlation defined as $.1 \leq r < .3$, a "moderate" correlation as $.3 \leq r < .5$ and a "strong" correlation as $r \geq .5$ (Cohen, 1977). The first manuscript, provided in Chapter 3, used mean and standard deviation for Objectives 1, 3, 4, 5, 6, and 7. Bivariate correlation was assessed for Objectives 2, 4, and 6. The second manuscript, provided in Chapter 4, used mean and standard deviation for Objectives 1, 2, 3, 4, and 5. Bivariate correlation was calculated for objectives 2, 3, and 4; and frequency was assessed for Objective 2.

Utility and Limitations

Quantitative content analysis research relies upon firmly established categories that are mutually exclusive (Kondracki et al., 2002). Reliability in quantitative content analysis relies upon clearly defined variables and categories in codebooks and is proven through a reliability test amongst coders (Riffe et al., 2015). A codebook established definitions of each category, and data collection did not begin until a satisfactory Cohen's kappa was achieved between researchers as intercoder reliability. Data was recorded in a coding sheet prepared in Microsoft Excel (Riffe et al., 2015).

Data was collected from previous Facebook posts, which assisted researchers in selecting a neutral period of time with less likelihood of producing skewed results (i.e., avoiding extended holiday seasons, when posts may be similar or not reflect agritourism products). Additionally, the archived nature of data assisted the researchers in controlling for heterogenous attrition, which is the premature termination of a sample's participation in a study (Kendall & Sugarman, 1997), as the only way a post could be removed from a study would be if its privacy settings were changed or the post was removed completely from Facebook. This may have also been a limitation, however, as Facebook does not post an announcement or link to deleted posts, and researchers were therefore unable to observe if any deleted posts existed on a page. Another limitation in this study was the seasonality of agritourism operations (Gascoigne, Sullins, & McFadden, 2008; LeRoux et al., 2010; Rimal et al., 2010), as some operations may be less active on Facebook outside of harvest season. Researchers minimized this influence by sorting data by region. Because agritourism varies by region (van Sandt et al., 2018), similar agritourism operations could be compared to other agritourism operations providing the same product/experience.

This research was intended to be descriptive in nature to stimulate future research in the area of agritourism marketing, a topic largely void of literature (Leung et al., 2013; Zeng & Gerritsen, 2014). Its intention was to provide a “snapshot” of what currently exists in agritourism marketing to serve as a reference point for researchers to recognize general patterns in social media presence. It was also intended to assess the quality of using characteristics of Facebook interaction for brand strength, as a guide for future academic measurements.

CHAPTER 3

MANUSCRIPT ONE

FACEBOOK ACTIVITY OF OKLAHOMA AGRITOURISM OPERATIONS

Agritourism is defined as “a set of activities taking place at agricultural operations for the purposeful benefit of visitors” (Murphy & Melstrom, 2017, para. 1). It is an expanding industry in the Great Plains region (Tweeten, Leistritz, & Hodur, 2008) and provides opportunities for farm families to diversify household income as commodity prices decline (Amanor-Boadu, 2013). In the state of Oklahoma alone, it generated \$8 million from direct sales and \$5 million from recreational services, according to 2012 National Agricultural Statistics Service data (Murphy, Melstrom, Shideler, & Cummings, 2017).

Agritourism also provides many private and public benefits through farm income and employment, public agricultural education, niche food production and consumption, and environmental protection and education (Flanigan, Blackstock, & Hunter, 2015). Agritourism can provide economic incentive for preservation of agricultural heritage (Barbieri, 2013; LaPan & Barbieri, 2013; Mettepenningen, et al, 2012; Valdivia & Barbieri, 2014) while also improving farm family quality of life (Dickinson, 2001; Tew & Barbieri, 2012) and providing family-related activities for visitors (Molera Albaladejo, 2007; Tew & Barbieri, 2012).

Agritourism operations' success depends on effective marketing (Schilling & Sullivan, 2014). However, marketing and adapting to consumer communication preferences can be a challenge in agritourism management preferences (Schilling, Marxen, Heinrich, & Brooks, 2006). Agritourism operators have expressed a lack of a coordinated statewide effort in agritourism marketing (Ryan, DeBord, & McClellan, 2006; Schilling et al., 2006), and have an interest in marketing training (Miller, McCullough, Rainery, & Das, 2010).

Social media enables individual tourists to receive customized information from tourism marketers about a destination (Zeng & Gerritsen, 2014), and public interaction with social media marketing content can serve as an evaluation tool for destination marketers to assess effectiveness of marketing (Hanna & Rowley, 2013; Zavattaro, Daspit, & Adams, 2015). It is likely the role of social media in trip planning will continue to increase (Phillips, Thilmany-McFadden, & Sullins, 2010), and "internet's marketing function should not be neglected" (Zhou, 2014, p. 237). Within the state of Oklahoma, 17% of agritourism visitors first heard about the operation via social media (Murphy & Melstrom, 2017). Furthermore, observing user-generated content on social media may increase likelihood of booking a trip to the same place (Marder, Archer-Brown, Colliander, & Lambert, 2018).

Social media must be recognized for its ability to assess and develop brand image from user-generated content and reviews (Kim, Li, & Brymer, 2016; Marine-Roig & Clave, 2015), influence decisions to visit and perspectives of rural areas (Marchiori & Onder, 2015; Onder & Marchiori, 2017; Phillips et al., 2010), attach emotions to rural locations (Zhou, 2014), create a narrative-based, personable story for a tourist destination

(Hanna & Rowley, 2013), measure visitors' brand loyalty to a location (Zavattaro et al., 2015), provide customized information to individualized users (Zeng & Gerritsen, 2014), and attach visual images of culture and agriculture to a location while clarifying misperceptions of those locations (Joyner, Kline, Oliver, & Kariko, 2018; Kotsi, Balakrishnan, Michael, & Ramsøn, 2018). Additionally, social media can provide advantages over websites and paid advertising in event promotion (Lee, Xiong, & Hu, 2012; Moise & Cruceru, 2014).

However, social media management is largely unknown by tourism marketing practitioners and scholars (Cho, Schweickart, & Haase, 2014), and Zeng and Gerritsen (2014) specifically call for quantitative content analysis of tourism social media to establish a baseline of current social media use patterns. Past social media research has considered tourism marketing factors such as online reviews and information search patterns of potential visitors (Xiang & Gretzel, 2010) and post interaction with varying types of attachments (Hanna & Lam, 2017). However, Zeng and Gerritsen (2014) report the role of social media in tourism marketing is largely unexplored.

Theoretical Framework

Excellence theory categorizes conversations into four separate models: press agency, two-way asymmetrical, two-way symmetrical, and public information (Laskin, 2009). Waters and Williams (2011) defined these four models and related them to Twitter characteristics observed by government agencies. Press agency is one-sided without relying heavily on research into consumers' preferences; it can be observed on Twitter through communication that is attention-seeking. Public information is similarly one-

sided but seeks to share with readers what is interesting and useful; examples include sharing information from other sources and reminding of future events. Two-way asymmetry is a fake dialogue between participants and the Twitter page, intended primarily to learn characteristics and motivations from an audience; examples on Twitter include surveys and polls. Two-way symmetry is based on legitimate conversations with the goal of building mutual understanding; examples on Twitter include attempts to resolve conflict and using references to other Twitter accounts.

A variety of factors influence public interaction with social media. For example, Hampton, Goulet, Marlow, and Rainie (2012) found social media users interact with social media passively and are more likely to “like” than share content, while Saxton and Waters (2014) suggested interaction can be influenced by post content and Fehrer, Woratschek, Germelmann, and Brodie (2018) found customer engagement behavior existed on an intensity threshold with less frequent users more likely to follow a bandwagon effect (Moe & Schweidel, 2012). Public interaction may suggest high involvement with the post message (Kim, 2018; Kim & Hang, 2017), and word count, video attachments, images, and links may influence the number and type of post interactions (de Vries, Gensler, & Leeftland, 2012; Pino et al., 2018; Sabate, Berbegal-Mirabent, Cañabate, & Lebherz, 2014). Hashtags can serve as a tool to enable social media users to search for posts based on specific topics for which they are interested (Sevin, 2013; Uşaklı, Koç, & Sönmez, 2017), and tagging friends in posts can also increase post interaction by communicating confidence in a post (Oeldorf-Hirsch & Sundar, 2015). However, there is not strong consensus on which measurements are most effective. Peters, Chen, Kaplan, Ognebeni, and Pauwels (2013) warn, “Pushing a single

metric alone in disregard of the other aspects will result in unsustainable growth that punishes the brand in the long-run” (p. 294).

Purpose and Objectives

The purpose of this study is to describe Oklahoma agritourism operation Facebook posts. The objectives of this study were to

1. describe characteristics of original, community, and event posts;
2. describe relationships between post characteristics, types of post, and page likes;
3. compare characteristics of types of original posts;
4. describe overall characteristics of pages with different types of original posts;
5. describe characteristics of original and community posts with hashtags; and
6. describe characteristics of event posts.

Methods

The Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) listed 393 registered agritourism operations on its website as of June 22, 2018, which was the population for the study. Agritourism operations without a user-generated Facebook page or with incomplete information on the ODAFF website were removed, making the final list to be 287. The ODAFF website divides agritourism operations into 6 geographic regions, and the operations in each of these 6 regions were randomly sampled until 50% of each geographic region was represented for a final sample of 174 agritourism

operations. The sample size by region was 48 for central (28%), 52 for northeast (30%), 20 for northwest (11%), 15 for south central (9%), 20 for southeast (11%), and 19 for southwest (11%).

A code sheet and code book was developed for quantitative content analysis and reviewed by hospitality and agricultural communications faculty, as well as an ODAFF agritourism marketing specialist. To obtain interrater reliability, preliminary coding was conducted on a sample of 30 Maine agritourism operations, with Cohen's kappa used to measure interrater reliability. Researchers discussed definitions of variables with low Cohen's kappa scores (less than .4), and an additional 30 Maine agritourism operation Facebook pages were analyzed for the variables with low Cohen's kappa scores.

After the second sample was analyzed, Cohen's kappa was again calculated, and variables not meeting a .4 Cohen's kappa score were removed from the study. A Cohen's kappa value of .4 was selected as the minimum score because it is the lowest score for a weak level of agreement (McHugh, 2012). A final Cohen's kappa score of .919 was achieved for the presence of original, community, and event posts, as well as the type of original post. Because some Facebook characteristics were infrequently observed, Cohen's kappa was not a suitable measurement, and percent agreement was calculated. A final mean percent agreement of 95% was achieved for original post and visitor post word count, number of shares, reactions, and attachments; number of people interested and going/went to events and event description word count.

Quantitative content analysis was performed from August 14 to September 15, 2018. Cover photo and profile picture image topic, number of page likes and followers,

number of pages liked by each page, messenger app characteristics, and the amount of business and contact information present on the “About” area of each page were recorded as observed at the time of data collection. Posts created by the agritourism operation and the general public were recorded if they were created from June 1-30, 2018.

Characteristics recorded included number of reactions and attachments, word count, date created, number of comments, number of people tagged, and type of post. Additionally, characteristics of events set to be held from June 1-30, 2018, were recorded. Event characteristics included number of people interested in attending, length and content of the event’s description, and number of community posts created on the event’s page. All community posts created on an event’s page were recorded, regardless of whether they occurred outside of the June 1-30, 2018, timeframe.

Following data collection, recorded data was aggregated and analyzed using SPSS software. Mean and standard deviation were assessed for Objectives 1, 3, 4, 5, and 6. Bivariate correlation was assessed for Objectives 2, 4, and 6, and frequency was assessed for Objective 1. Pearson’s r correlation was used, with a “weak” correlation defined as $.1 \leq r < .3$, a “moderate” correlation as $.3 \leq r < .5$ and a “strong correlation as $r \geq .5$ (Cohen, 1977).

A variety of posts can be created on an agritourism Facebook page. Community posts are defined in this study as posts created by the general public in the “Community” area of the agritourism Facebook page. Community posts were not further categorized by type, unlike original posts which were. Original posts were defined as posts appearing on the agritourism operation’s Facebook page timeline, meaning they were created by the agritourism Facebook page itself. Original posts were categorized into seven types.

Traditional were posts created by simply typing into the posting area on the page's timeline but could have attachments of various sorts. Updated pictures were posts generated automatically on a page's timeline when a profile picture or cover photo were updated. Added pictures were posts generated automatically on a page's timeline when photos were added to an album. Event posts were posts generated automatically on a page's timeline when an event was created. Live posts were created by uploading a live video attachment. Shared posts were posts originally made by another page that had been shared by the page administrator to appear on the agritourism Facebook page. "Other" was a broad description for all posts that did not fit into these categories. Additionally, posts could be formatted to have graphic text, in which text was converted to an artistic font with a colored background.

Results

RO 1: Describe Characteristics of Original, Community, and Event Posts

Amongst the 174 agritourism operations, a total of 1,623 original posts, 184 community posts, and 151 event posts were observed, as shown in Table 1. Fifty-nine percent of original posts were shared at least once, with a median of 3 shares per post. Thirty-four percent of community posts were shared at least once, with a median of 4 shares per post. Twenty-one percent of event posts were shared at least once, with a median of 3 shares per event post shared at least once. Forty-nine percent of original posts had at least one comment, compared to 55% of community posts, and 44% of event posts with at least one comment.

Table 1

Characteristics of Original, Community, and Event Posts

	<i>n (%)^a</i>	<i>Min.</i>	<i>Q1</i>	<i>Mdn.</i>	<i>Q3</i>	<i>Max.</i>	<i>M (SD)</i>
Original posts (<i>n</i> = 1,623)							
Word count	1,376 (85%)	1.0	12.0	24.0	45.0	506.0	34.5 (36.5)
Post tags	90 (6%)	1.0	1.0	1.0	2.0	19.0	1.5 (2.0)
Comment tags	325 (20%)	1.0	1.0	2.0	4.0	93.0	4.7 (10.4)
Attachments	1,416 (87%)	1.0	1.0	1.0	2.0	146.0	2.6 (7.1)
Reactions	1,566 (96%)	1.0	5.0	11.0	25.0	869.9	22.3 (44.4)
Total comments	790 (49%)	1.0	1.0	3.0	7.0	423.0	7.0 (19.4)
Farm comments	330 (20%)	1.0	1.0	1.0	3.0	17.0	2.2 (2.2)
Share	958 (59%)	1.0	1.0	3.0	6.0	257.0	5.8 (14.2)
Community posts (<i>n</i> = 184)							
Word count	175 (95%)	1.0	11.0	25.0	52.0	1,133.0	49.1 (100.8)
Post tags	91 (49%)	1.0	1.0	2.0	4.0	47.0	3.3 (5.5)
Comment tags	28 (15%)	1.0	1.0	2.0	4.0	51.0	4.6 (9.6)
Attachments	133 (72%)	1.0	1.0	1.0	3.0	43.0	3.3 (6.0)
Reactions	133 (72%)	1.0	2.0	8.0	27.0	2,207.0	61.3 (224.4)
Total comments	101 (55%)	1.0	1.0	3.0	6.0	100.0	7.2 (15.0)
Farm comments	39 (21%)	1.0	1.0	1.0	2.0	4.0	1.6 (0.8)
Share	62 (34%)	1.0	1.0	4.0	13.3	643.0	22.8 (84.1)
Event posts (<i>n</i> = 151)							
Word count	148 (98%)	1.0	7.25	14.0	29.0	158.0	22.9 (26.1)
Post tags	15 (10%)	1.0	1.0	1.0	2.0	3.0	1.5 (0.8)
Comment tags	9 (6%)	1.0	1.0	2.0	3.0	4.0	2.0 (1.2)
Attachments	56 (37%)	1.0	1.0	1.0	1.0	5.0	1.4 (0.9)
Reactions	108 (72%)	1.0	1.25	5.0	8.0	28.0	5.5 (5.1)
Total comments	66 (44%)	1.0	1.0	2.0	3.0	14.0	2.6 (2.3)
Farm comments	27 (18%)	1.0	1.0	1.0	2.0	4.0	1.4 (0.8)
Share	32 (21%)	1.0	1.0	2.5	6.5	18.0	4.5 (4.9)

^aProportion of total number of each type of post (original, community & event).

RO 2: Describe Relationships between Post Characteristics, Types of Post, and Page Likes

Characteristics related to post content (i.e., word count, attachments, and people tagged in posts) did not have statistically significant relationships with characteristics related to post interaction (i.e., comments, shares, reactions, and people tagged in comments), as shown in Table 2. However, post interaction characteristics do have strong relationships with one another. For example, community post reactions and shares had a relationship of $r = .948$, and original post comments and reactions had a relationship of $r = .800$. When comparing original, community, and event posts, only the reactions, comments, and shares of community posts had a statistically significant relationship to page likes.

RO 3: Compare Characteristics of Types of Original Posts

When comparing types of original posts, traditional posts that were created by typing directly into the post area were the most frequent type of post ($n = 1,186$, 73% of original posts). Live videos, although comprising only 2% of original posts, had the highest median number of shares ($Mdn. = 2.0$), reactions ($Mdn. = 15.0$), and comments ($Mdn. = 3.0$). When comparing maximum values, traditional posts had the highest maximum values, suggesting these posts went “viral.” Traditional posts had a maximum of 869 reactions, 423 comments, and 257 shares.

RO 4: Describe Overall Characteristics of Pages with Different Types of Original Posts

Pages with at least one live video ($n = 17$, 14% of pages with at least one original post) had a mean of 32.1 total posts ($SD = 21.2$), and pages with at least one post about

creating an event ($n = 30$, 25% of pages with at least one original post) had a mean of 29.1 total posts ($SD = 24.1$). Pages with one post categorized as “other” ($n = 9$, 8% of pages with at least one original post) had a mean of 21.9 total posts ($SD = 21.5$), and pages with at least one shared post ($n = 55$, 46% of pages with at least one original post) had a mean of 19.2 total posts ($SD = 21.4$). Pages with at least one post about adding pictures ($n = 15$, 13% of pages with at least one original post) had a mean of 16.1 total posts ($SD = 17.2$), and pages with at least one updated picture post ($n = 23$, 19% of pages with at least one original post) had a mean of 16.7 total posts ($SD = 18.2$). Pages with at least one traditional post ($n = 113$, 94% of pages with at least one original post) had a mean of 14.2 total posts ($SD = 17.0$).

When comparing the types of original posts, only the number of traditional posts had a moderate correlation with page likes ($r = .407$), as shown in Table 5. The total number of original posts had only a moderate correlation to page likes ($r = .293$). The average number of reactions a page received per original post did not have a relationship with the total number of original posts or the type of original post.

Table 2
Relationship of Post Characteristics and Public Interaction

	Page likes	Word count	Attachments	Shares	Reactions	Comments		Tags	
						Total	Farm	Comment	Post
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Original									
Comment	.118	.134*	-.002	.782*	.800*	-	.385*	.830*	-.004
Share	.111	.121*	.009	-	.825*	.782*	.223*	.675*	.001
Reaction	.108	.160*	.022	.825*	-	.800*	.316*	.720*	-.002
Community									
Comment	.450*	.115	.072	.716*	.758*	-	.209*	.718*	.200*
Share	.661*	.030	-.009	-	.948*	.716*	.312*	.917*	.085
Reaction	.779*	.068	.020	.948*	-	.758*	.239*	.849*	.105
Event									
Comment	-.099	.133	.031	.317*	.237*	-	.731*	.509*	-.081
Share	-.013	.251*	.217*	-	.572*	.317*	.235*	.258*	.273*
Reaction	.140	.203*	.359*	.572*	-	.237*	.119	.153	.088

Table 3

Characteristics of Types of Original Posts

	<i>Min.</i>	<i>Q1</i>	<i>Mdn.</i>	<i>Q3</i>	<i>Max.</i>	<i>M (SD)</i>
Traditional (n = 1,186)						
Word count	0.0	12.0	24.0	44.0	334.0	34.0 (35.1)
Attachments	0.0	1.0	1.0	2.0	27.0	1.9 (2.7)
Reactions	0.0	6.0	12.0	27.0	869.0	24.3 (49.7)
Total comments	0.0	0.0	1.0	4.0	423.0	3.9 (16.1)
Shares	0.0	0.0	1.0	4.0	257.0	3.9 (12.9)
Updated profile/cover pic						
Word count	0.0	0.0	0.0	0.0	106.0	2.6 (16.6)
Attachments	0.0	1.0	1.0	1.0	3.0	1.0 (0.4)
Reactions	0.0	3.5	8.0	26.5	78.0	16.6 (18.9)
Total comments	0.0	0.0	0.0	1.5	10.0	1.4 (2.7)
Share	0.0	0.0	0.0	1.0	15.0	1.0 (2.5)
Added pictures						
Word count	0.0	0.0	7.5	20.75	55.0	12.1 (15.1)
Attachments	1.0	1.0	5.0	31.5	146.0	21.5 (36.2)
Reactions	11.0	4.0	9.5	19.75	74.0	15.7 (17.3)
Total comments	0.0	0.0	1.0	2.75	11.0	2.1 (3.0)
Share	0.0	0.0	1.0	2.75	11.0	1.8 (2.7)
Event-related posts						
Word count	0.0	6.0	27.5	59.0	506.0	42.3 (60.6)
Attachments	0.0	1.0	1.0	1.0	1.0	1.0 (1.1)
Reactions	0.0	2.0	4.0	8.25	153.0	8.8 (18.2)
Total comments	0.0	0.0	0.0	1.0	17.0	1.2 (2.9)
Share	0.0	0.0	0.0	0.0	4.0	0.1 (0.5)
Live videos						
Word count	0.0	0.0	4.0	11.0	55.0	9.8 (15.2)
Attachments	1.0	1.0	1.0	1.0	7.0	1.2 (1.0)
Reactions	3.0	10.0	15.0	22.0	94.0	19.3 (17.4)
Total comments	0.0	1.0	3.0	6.0	47.0	6.2 (9.4)
Share	0.0	0.5	2.0	4.0	17.0	2.8 (3.5)
Shared posts						
Word count	0.0	0.0	3.0	13.0	80.0	9.5 (14.6)
Attachments	0.0	1.0	1.0	1.0	37.0	2.1 (4.5)
Reactions	0.0	3.0	7.0	18.0	123.0	14.5 (19.0)
Total comments	0.0	0.0	0.0	1.0	20.0	1.4 (2.9)
Share	0.0	0.0	1.0	3.0	36.0	3.3 (5.9)
Other						
Word count	0.0	0.0	0.0	4.5	45.0	6.3 (14.7)
Attachments	1.0	1.0	1.0	1.0	4.0	1.3 (0.9)
Reactions	1.0	2.0	2.0	14.75	38.0	9.4 (12.3)
Total comments	0.0	0.0	0.0	5.75	29.0	5.1 (10.5)
Share	0.0	0.0	0.0	2.25	10.0	1.8 (3.4)

Note. Values based on all posts, not only posts with these characteristics, as other tables in manuscript present.

Table 4

Relationship between Type of Original Post and Page and Post Likes

	Page likes ^a
Total original posts ^a	.293*
Traditional	.407*
Updated picture	-.099
Added picture	-.076
Event posts	.002
Live	.036
Shared	-.009
Other	-.030

* $p < .05$ level. ^aAmongst pages with at least one original post, regardless of category of original post.

RO 5: Describe Characteristics of Original Posts with Hashtags

Amongst original posts created by agritourism operations, 25 agritourism operation Facebook pages used a hashtag in at least one original post. A total of 191 posts with hashtags were created by these 25 agritourism operations. Each of these 25 pages with at least one post with a hashtag had a mean of 7.7 posts ($SD = 9.3$) with hashtags. A mean of 3.6 hashtags ($SD = 3.1$) were used in each post, and pages used a mean of 11.6 different hashtag wordings per page. Fourteen pages used at least one hashtag more than once, while 11 pages did not repeat use of any hashtags. Pages that repeated a hashtag used their most frequent hashtag a mean of 8.5 times per page ($SD = 10.1$), and it appeared in a mean of 30% of each page's posts ($SD = 20%$). Eight common hashtags were used across at least two pages, as shown in Table 5.

Table 5

Hashtags Used in Original Posts on More Than One Page

	Pages hashtag used	Total times hashtag used
	<i>n</i>	<i>n</i>
oklahoma	4	9
produce	3	4
buylocal	2	10
freshisbest	2	8
farmersmarket	2	6
cheese	2	4
farmers	2	2
okgrown	2	2
tbt	2	2

Posts with at least one hashtag had the same median number of comments (*Mdn.* = 3.0) and shares (*Mdn.* = 3.0) as posts without hashtags, as shown in Table 6. Posts with hashtags had a higher median number of reactions (*Mdn.* = 14.0) than posts without hashtags (*Mdn.* = 11.0). Posts without hashtags had a higher median number of people tagged in comments (*Mdn.* = 2.0) than posts without hashtags (*Mdn.* = 1.0).

Table 6
Characteristics of Original Posts with Hashtags

	<i>n</i> (%) ^a	<i>Min.</i>	<i>Q1</i>	<i>Mdn</i>	<i>Q3</i>	<i>Max.</i>	<i>M</i> (SD)
Hashtag present (<i>n</i> = 191)							
Word count	191 (100%)	1.0	1.0	12.0	27.0	44.25	33.8 (27.0)
Post tags	23 (12%)	1.0	1.0	1.0	2.0	3.0	1.4 (0.7)
Comment tags	40 (21%)	1.0	1.0	1.0	2.75	93.0	7.6 (20.4)
Attachments	181 (95%)	1.0	1.0	1.0	2.0	11.0	2.0 (1.9)
Reactions	188 (98%)	1.0	8.0	14.0	27.0	869.0	28.3 (70.3)
Comments	95 (50%)	1.0	2.0	3.0	6.0	423.0	10.5 (45.0)
Share	118 (62%)	1.0	1.0	3.0	6.0	235.0	7.3 (22.4)
Hashtag absent (<i>n</i> = 1,432)							
Word count	1,186 (83%)	1.0	12.0	24.0	45.0	506.0	34.6 (37.5)
Post tags	67 (5%)	1.0	1.0	1.0	2.0	19.0	1.6 (2.3)
Comment tags	285 (20%)	1.0	1.0	2.0	5.0	84.0	4.3 (8.1)
Attachments	1,235 (86%)	1.0	1.0	1.0	2.0	146.0	2.7 (7.6)
Reactions	1,378 (96%)	1.0	5.0	11.0	25.0	835.0	21.5 (39.6)
Comments	695 (49%)	1.0	1.0	3.0	7.0	173.0	6.5 (12.3)
Share	840 (59%)	1.0	1.0	3.0	6.0	257.0	5.6 (12.7)

^aProportion of posts with or without hashtags

RO 6: Describe Interaction amongst Posts with Attachments

Original posts created by the agritourism operation most frequently had pictures as attachments, followed by graphics, as shown in Table 7. Posts with videos had the highest median number of reactions (*Mdn.* = 15) and shares (*Mdn.* = 2.0). Posts with pictures, videos, and attachments categorized as “other” had the same median number of comments (*Mdn.* = 1.0). Posts with pictures had the highest maximum values for reactions (*Max.* = 869.0), comments (*Max.* = 423.0), and shares (*Max.* = 257). However, posts with videos had the largest interquartile range for reactions, comments, and shares.

Table 7
Characteristics of Original Posts with Different Attachments

	Min	Q1	Mdn	Q3	Max	M (SD)
Picture (<i>n</i> = 1,014)						
Comments	0.0	0.0	1.0	4.0	423.0	4.1 (17.3)
Shares	0.0	0.0	1.0	3.0	257.0	3.6 (13.3)
Reactions	0.0	7.0	14.0	30.0	869.0	26.5 (52.8)
Video (<i>n</i> = 105)						
Comments	0.0	0.0	1.0	4.0	47.0	3.5 (6.5)
Shares	0.0	0.0	2.0	5.5	32.0	4.2 (5.8)
Reactions	0.0	8.0	15.0	26.5	100.0	21.3 (20.0)
Link (<i>n</i> = 142)						
Comments	0.0	0.0	0.0	1.25	164.0	2.9 (15.6)
Shares	0.0	0.0	1.0	3.25	257.0	4.9 (22.4)
Reactions	0.0	3.0	5.0	13.0	686.0	17.9 (65.0)
Graphic (<i>n</i> = 206)						
Comments	0.0	0.0	0.0	1.0	21.0	1.4 (3.2)
Shares	0.0	0.0	1.0	4.0	86.0	4.1 (9.0)
Reactions	0.0	3.0	6.0	12.0	153.0	11.2 (18.3)
Other (<i>n</i> = 16)						
Comments	0.0	0.0	1.0	2.0	5.0	1.4 (1.6)
Shares	0.0	0.0	1.0	2.75	6.0	1.6 (1.9)
Reactions	2.0	7.0	11.0	17.75	37.0	12.75 (8.7)
None (<i>n</i> = 205)						
Comments	0.0	0.0	0.0	3.0	33.0	2.8 (5.3)
Shares	0.0	0.0	0.0	2.0	18.0	1.8 (3.3)
Reactions	0.0	3.0	6.0	14.5	145.0	13.4 (21.1)

RO 7: Describe Characteristics of Event Posts

Posts created by the agritourism operation had a higher median word count (*Mdn.* = 22.0) than posts created by the general public (*Mdn.* = 12.0), as shown in Table 8. Posts created by the agritourism operation also had more comments (*Mdn.* = 4.0) than posts created by the general public (*Mdn.* = 2.0), more shares (*Mdn.* = 4.0) than posts created

by the general public (*Mdn.* = 2.0), and more reactions (*Mdn.* = 6.0) than posts created by the general public (*Mdn.* = 3.0).

Table 8
Characteristics of Event Posts Made by the General Public & Agritourism Operation

	<i>n</i> (%)	<i>Min</i>	<i>Q1</i>	<i>Mdn.</i>	<i>Q3</i>	<i>Max.</i>	<i>M</i> (SD)
Agritourism operator (<i>n</i> = 26)							
Word count	25 (96%)	3.0	12.5	22.0	53.0	107.0	36.6 (30.1)
Post tags	1 (4%)	1.0	1.0	1.0	1.0	1.0	1.0 (n/a)
Comment tags	4 (15%)	1.0	1.25	2.0	3.5	4.0	2.3 (1.3)
Attachments	13 (50%)	1.0	1.0	1.0	2.0	2.0	1.3 (0.5)
Reactions	26 (100%)	1.0	4.0	6.0	11.0	28.0	8.8 (7.1)
Comments	14 (54%)	1.0	2.0	3.5	5.0	14.0	4.4 (3.7)
Share	17 (65%)	1.0	1.0	4.0	7.0	18.0	5.5 (5.6)
General public (<i>n</i> = 125)							
Word count	123 (98%)	1.0	6.0	12.0	24.0	158.0	20.1 (24.4)
Post tags	14 (11%)	1.0	1.0	1.0	2.25	3.0	1.6 (0.9)
Comment tags	5 (4%)	1.0	1.0	1.0	3.0	4.0	1.8 (1.3)
Attachments	43 (34%)	1.0	1.0	1.0	1.0	5.0	1.4 (1.0)
Reactions	81 (65%)	1.0	1.0	3.0	7.0	16.0	4.4 (3.6)
Comments	52 (42%)	1.0	1.0	2.0	2.0	6.0	2.1 (1.4)
Share	15 (12%)	1.0	1.0	2.0	3.0	13.0	3.3 (3.9)

Amongst posts created by the agritourism operation (*n* = 29), 21 posts (72%) were made before the event, 8 posts (28%) were made on the day of the event, and none (0%) were made after the event. Amongst posts created by a Facebook profile other than the agritourism operation (*n* = 122), 99 posts (81%) were made before the event, 17 posts (14%) were made on the day of the event, and 6 posts (5%) were made after the event. It is important to note five of the posts made after the event originated from only one page.

Discussion/Conclusions

When comparing original posts made by agritourism operations and community posts made by the general public, the frequency of original posts to community posts was at an almost 9:1 ratio. Although less frequent, community posts had more than double

the number of reactions and shares than original posts, suggesting the public expressed more favor towards community posts. Furthermore, the number of community posts had a stronger relationship to overall page likes than the number of original posts. This favor towards user-generated content is similar to past research suggesting user-generated content can increase the likelihood of social media followers booking a trip to the same place (Marder et al., 2018).

Original posts and community posts were similar in total number of reactions, comments, and shares. However, community posts had one post go “viral” with almost five times the maximum value of reactions, comments, and shares than the maximum original post. Community posts occurred much less frequently than original posts, which may suggest community posts have a greater likelihood of going “viral” than original posts. This “viral” tendency of certain posts may be a result of a bandwagon effect, where less confident users are more likely to follow other social media users, causing certain posts to gain increasing popularity while other posts are seemingly ignored (Fehrer et al., 2018; Moe & Schweidel, 2012). Future research is needed to consider whether it was characteristics of the specific post’s content or the nature of community posts as a whole that inspiring posts to go “viral.”

While original and community posts were similar in word count, original posts had more attachments than community posts. Additionally, the number of farm comments amongst original and community posts was similar. For both original and community posts, the proportion of total comments to farm comments was approximately 3:1. However, in comparing the maximum number of total comments to the maximum number of farm comments, both original and community posts had total comments in a

ratio of approximately 20:1 for both original and community posts. This suggests as posts go “viral,” the agritourism operation may not keep up with post comments.

Excellence theory considers both whether communication is two-way and whether it benefits the receiver (Waters & Williams, 2011). The large proportion of original posts to community posts suggests communication similar to the Excellence Theory model of public information, characterized by one-way communication that is valuable to the public. However, the volume of actual interaction with original and community posts is more similar to the two-way synchronous model of Excellence Theory, characterized by back-and-forth dialogue that benefits both parties.

Approximately half of original and community posts had comments, and the ratio of farm to total comments suggests agritourism operations actively replied to comments. These characteristics align more with the two-way synchronous model of Excellence Theory (Cho et al., 2014), suggesting Oklahoman agritourism Facebook activity cannot be completely categorized into one single model of Excellence Theory.

Agritourism operators may observe their posts receiving reactions, comments, and shares and assume this post interaction is also correlating to an increase in overall page likes. However, there is no statistically significant relationship between the number of original post reactions, comments, and shares to overall page likes. This suggests that while a page may have a large number of page likes, fewer people are actually seeing and interacting with posts made by the agritourism operation. Agritourism Facebook pages may be creating content in an “echo chamber,” where only a small, core group of Facebook followers interact with original posts in comparison to the several thousands of individuals who may have liked the overall page. In contrast to original posts,

community posts actually had moderate and strong relationships between overall page likes and community post reactions, comments, and shares. Agritourism operators seeking to increase overall page likes should therefore seek to increase the number of community posts and the interactions with these posts. This is similar to findings by Hampton et al. (2012) that a small, core group of social media users react to social media content, while the majority observe passively or do not view content at all.

Original posts were categorized based on content into eight categories, as described previously. When considering the relationship of types of original posts to overall page likes, only the number of traditional original posts had a relationship to page likes compared to other types of original posts. While this relationship was only of moderate strength, it was stronger than the relationship of the overall number of posts and overall page likes, suggesting the type of post did influence the relationship. The public appears to favor original posts that are written and developed directly by the agritourism operation, in comparison to original posts that are generated automatically from Facebook certain activities, such as updating a profile picture or creating an event.

There were noticeable differences in the frequency of original post types. Nearly three-quarters of original posts were categorized as “traditional,” and such low frequencies of other post categories may have resulted in the lack of correlations between the frequency of post type and overall page likes, as described above. Agritourism operations that created at least one live video had approximately double the number of total posts compared to pages with at least one traditional post. This could suggest agritourism operations with live videos are more active on Facebook than agritourism operations without live videos.

Interestingly, it is also important to note although original posts that share content created from another page had fewer reactions and comments, the number of post shares was still similar to other types of original posts. Agritourism operations should be especially cognizant of the content in posts they share, as it is not created by their agritourism operation and yet can have far reach when it is in turn shared by the general public. Oklahoman agritourism operations share posts from a large variety of sources. Individual agritourism operations infrequently share posts from the same page, and agritourism operations infrequently share posts other agritourism operations have also shared.

Excellence Theory considers whether communication is beneficial to the receiver (Waters & Williams, 2011). However, this type of information should be considered in two forms of measurements: overall page likes and individual post interaction. For example, traditional posts were most frequently observed amongst types of original posts, and the number of traditional posts had the strongest relationship to overall page likes amongst types of original posts. However, live videos had the highest median comments, reactions and shares but were infrequently observed. Pages with a high volume of traditional posts may represent the public information model of Excellence Theory, providing a large volume of information that is useful to the general public, as demonstrated by the relationship to overall page likes. However, pages with a high volume of live videos may represent the two-way synchronous model of Excellence Theory, characterized by a back-and-forth dialogue between the general public and the agritourism operation.

This categorization within Excellence Theory is not perfect, however. Agritourism operations that created at least one live video had approximately double the number of total posts compared to pages with at least one traditional post. This could suggest agritourism operations with live videos were more active in pushing messages about their agritourism operation than pages with traditional posts, a characteristic of Excellence Theory's public information model (Waters & Williams, 2011).

Interestingly, it is also important to note although original posts that share content created from another page had almost half the number of reactions and comments as traditional original posts, posts that shared content created by another page had almost the same number of comments as traditional original posts. Academic literature has reached mixed conclusions on which measurements of post interaction is most valuable. For example, Cho et al. (2014) categorized reactions and shares as low-engagement behavior and comments as high-engagement behavior. Agritourism operations should be especially cognizant of the content in posts they share, as it is not created by their agritourism operation and yet can have far reach when it is in turn shared by the general public.

This study did not show a statistically significant relationship between message length (word count or number of attachments) and public interaction (reactions, comments, and shares), and this is in contrast to Pino et al. (2018), who reported interaction with Facebook posts decreased with message length. Instead, the lack of relationships may suggest a factor outside of post length may be more influential in public interaction with a post. Past research has suggested post content influences public reaction, and Saxton and Waters (2014) found community-building and call-to-action

posts were more likely to receive comments, and one-way informational posts were most likely to be shared. However, research categorizing social media content of agritourism operations has not been found to date, and future research is needed to draw conclusions.

When comparing post attachments- pictures, videos, links, graphics, and the category of “other”- pictures and videos had the highest median reactions. Although Oklahoman agritourism Facebook posts with pictures did have slightly more interaction than posts with videos, the differences in medians were minimal. This is in contrast to findings by Hanna and Lam (2017) that Facebook followers of large agribusiness companies gave more attention to pictures than videos. It is interesting to note when comparing which types of attachments were related to posts that went “viral” with extremely large volumes of post interaction, posts with pictures or links had the highest maximum interaction.

Another feature of post content, hashtags, were not frequently used within Oklahoma agritourism Facebook posts, and there is little similarity in the hashtags used amongst different pages. Hashtags make a post searchable by topic (Uşaklı et al., 2017); however, the hashtags used across multiple pages are generally not related to terms a potential agritourism visitor would search for on social media without already knowing about the specific agritourism operation. While other social media platforms, such as Instagram, have higher hashtag use than Facebook (Uşaklı et al., 2017), the results of this study are similar to past research that hashtags often do not effectively match the destination’s intended brand (Sevin, 2013; Uşaklı et al., 2017). It is possible the lack of consistent hashtags across the state of Oklahoma reflects a lack of large-scale branding

consistency. However, the higher frequency of people tagged in posts with hashtags could suggest a missed opportunity to increase post analytics.

Original posts' interactions (reactions, comments, and shares) were more strongly related to one another than post interactions were related to one another in community posts or event posts. Although original post interactions had lower means than community posts, original posts also had lower standard deviations, suggesting more consistency amongst original post interactions. The high standard deviations of community post interactions suggest the presence of a few posts with strong interaction while others remained relatively dormant.

It is possible a bandwagon effect is observed more strongly on community posts than original posts, giving the public confidence in responding to a select few posts as they observe a high level of interaction. Community posts are infrequent on Oklahoma agritourism Facebook pages. Because less frequent posters on social media are more likely to exhibit bandwagon behavior (Moe & Schweidel, 2012), it is possible there is a large number of agritourism visitors who visit a page yet do not create a post. Engagement behavior on social media is observed on an intensity threshold (Fehrer et al., 2018), and it is possible individuals who did not create community posts did feel comfortable to react, comment, and share these posts.

Post interactions (i.e., reactions, comments, and shares) were strongly related to one another for both original and community posts. When comparing relationships between these types of interactions, shares and reactions had the strongest relationship, followed by comments and reactions, and finally, the relationship between comments and

shares for both original and community posts. While reactions require minimum commitment, comments require more effort, as an individual's Facebook friends who have also commented on the post will receive notification of new comments. Shares, in contrast, can require the greatest commitment, as the post will appear in the newsfeed of a person's Facebook friends in addition to providing the opportunity to write on the shared post content. It is interesting the interaction with the smallest commitment (reactions) had the strongest relationship to the interaction with the largest commitment (shares). Because sharing requires a greater commitment, individuals less active on Facebook may have more confidence to follow a sharer's lead and react to the shared post, as compared to if the page had not been shared first.

While replying to comments is a commonly recommended social media best practice, the number of farm comments had only a moderate relationship to post reactions, comments and shares. Similarly, while tagging friends is encouraged to communicate endorsement of a post and build community (Oeldorf-Hirsch & Sundar, 2015), there was no statistically significant relationship between the number of people tagged in the post content and the number of post interactions, there was a relationship between people tagged in comments and post interaction. Yet, this relationship between comment tags and post reactions and shares was actually weaker than the relationship between total comments and reactions and shares. This suggests comment tags may be a byproduct of high page activity rather than an instigator of page activity. For example, commenters may tag friends to keep conversations from getting lost amidst a long string of post comments.

Social media provides advantages over traditional websites in event promotion (Lee et al, 2012) and can be less expensive than paid advertising or traditional public relations efforts for event promotions (Moise & Cruceru, 2014). When comparing event posts made by the agritourism operation and general public, posts made by the agritourism operator had more interaction. The agritourism operation created more posts on the day of the event compared to the general public, and it is possible these were used to provide last-minute updates on the event. Pino et al. (2018) found Facebook users were more likely to like and share posts about ongoing events, and this may suggest why agritourism operation event posts had higher interaction than event posts made by the general public.

These two types of event posts may also suggest why quantity of information in posts (word count and number of attachments) had the strongest relationship with event post interactions (reactions, comments, and shares) compared to original and community posts. Simple questions may have a smaller intended audience and therefore illicit a lower response than longer posts created by the agritourism operation to convey information about a post. In contrast, event posts had the weakest relationship amongst types of interactions (i.e., shares with comments or shares with reactions), possibly due to the specialized information of event posts. For example, a question may illicit a large number of comments with few reactions, while updates on event information may illicit many shares to quickly spread new event information with few additional comments.

Recommendations

Oklahoma agritourism operators should promote user-generated content by encouraging visitors to create community posts, as they are strongly related to overall page likes. Agritourism operators should be aware quality appears to be more important than quantity for the length of their Facebook posts and the number of attachments. Additionally, while replying to comments on posts does have a moderate relationship to the reactions, comments, and shares a post receives, it does not have as strong of a relationship as post interaction from the public. Therefore, an agritourism operator should be diligent in responding to Facebook activity and yet primarily strive to create Facebook content to which the public seeks to respond.

Agritourism operators should consider creating a variety of content, such as live videos, that were infrequent amongst agritourism operations. While there was not a demonstrated relationship between variety of original posts and page likes, different types of original posts did have noticeable differences in types of post interaction (reactions, comments, and shares), and this could build a “personality” of the Facebook page that may distinguish them from other types of agritourism operations.

Additionally, agritourism operators should consider distinguishing between Facebook content that increases overall page likes and content that generates a large volume of post interaction. It is possible agritourism operators are creating an “echo chamber” where post content may not reach the larger audience who has liked the agritourism Facebook page. Therefore, agritourism operators should consider how types of posts may increase overall page likes but not necessarily post reactions, and vice versa. To date, past research distinguishing this nuance within the context of Excellence Theory has not been found. However, as social media becomes increasingly important in public

relations, distinguishing amongst different measurements of how useful content is to the general public will ensure Excellence Theory's relevance in future communications research.

Marketing practitioners advising agritourism operations should identify differences in Facebook activity between types of agritourism operations to provide specific advice. The large standard deviations amongst post characteristics suggest a few very active pages contrasted with a few very inactive pages, and agritourism marketing practitioners should seek to identify large and small pages to provide more specialized assistance. Additionally, the type of posts agritourism operations create (live videos, updated profile pictures, traditional posts, etc.) reflect differences in an agritourism operation's Facebook posting frequency and could be a brief way for marketing practitioners to quickly categorize agritourism operations. Practitioners should provide training in more complex types of posts, as these were infrequently observed amongst agritourism operations.

Marketing practitioners should also assist in branding consistency. Creating hashtags related to topics social media users would already be searching for, such as weddings and family fun, can assist in building a more cohesive image of agritourism. Marketing practitioners may also serve as a more "neutral" source to request agritourism visitors to create community posts about their experiences to agritourism operations. To develop a regional brand and further build the power of this user-generated content, marketing practitioners could pool this material to build the reputation of an entire rural region. Finally, marketing practitioners may consider creating shareable Facebook posts. Posts created by a page other than the agritourism operation are the second most common

type of post on agritourism Facebook pages, and these posts in turn are frequently shared by the general public. These posts therefore could have far reach, and providing pre-existing Facebook content for agritourism operations with limited resources to create content could be helpful.

Limitations of this study include the sample size and timeframe, as June may be an active season for some types of agritourism operations but not for others. Additionally, agritourism is a national and even global activity, and observations made in Oklahoma may not be representative of the larger agritourism industry. Furthermore, some types of posts, such as live videos, were infrequently used by Oklahoma agritourism operations, causing generalizations on these types of posts to be made on a small sample.

Future research should evaluate the types of information conveyed in Facebook posts, especially relating the type of information with post interactions. It would be helpful to consider a sample larger than Oklahoma, both to have a larger sample size of more infrequent types of posts such as live videos and to better represent the diverse American agritourism industry. Additionally, the perspectives of agritourism operators could provide practical information such as amount of time spent marketing, return on investments, and degree of comfort in marketing. Finally, while this study described factors such as number of people tagged and number of Facebook profiles creating posts, future research on social network analysis could describe the reach and connection of agritourism social media.

In considering the context of Excellence Theory, future research should clarify nuances in measurements of social media, especially in relation to whether overall page

activity or individual post activity is most important. For example, is the total number of posts on a page more indicative of one-way communication, or is the lack of replies from the page administrator on a post more indicative of one-way communication?

Additionally, while Excellence Theory considers whether information is valuable to the general public, the measurement of value within the context of social media has not been clearly established from previous literature. For example, it is important to consider whether overall page likes express greater appreciation of information or whether interactions with a specific post is a more important measurement.

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CHAPTER 4

MANUSCRIPT TWO

FACEBOOK ACTIVITY OF OKLAHOMA AGRITOURISM OPERATIONS

Agritourism is an expanding industry in rural states (Tweeten, Leistritz, & Hodur, 2008), and in 2014, Oklahoma was home to nearly 400 agritourism operations, with an annual economic impact of \$64 million and a median of 800 visitors per operation (Murphy, Melstrom, Shideler, & Cummings, 2017). Agritourism can provide economic incentive for preservation of agricultural heritage (Barbieri, 2013; LaPan & Barbieri, 2013; Mettepenningen, et al., 2012; Valdivia & Barbieri, 2014) while also improving farm family quality of life (Dickinson, 2001; Tew & Barbieri, 2012), providing family-related activities for visitors (Molera & Albaladejo, 2007; Tew & Barbieri, 2012), and strengthening rural development (Das & Rainey, 2010; Lupi, Giaccio, Mastronardi, Giannelli, & Scardera, 2017).

However, agritourism operators must overcome many challenges, including a lack of marketing experience amongst operators and limited supportive infrastructure within the industry (McGhee, 2007). Beginning agritourism operators may lack required business skills to succeed (Rogerson & Rogerson, 2014), and operators are concerned

with developing promotion and marketing skills (Miller, McCullough, Rainey, & Das, 2012). Rural horticulture company marketers have cited a lack of time as a reason as a reason for not creating a social media account (Peterson, Boyer, Baker, & Yao, 2018). Indeed, a variety of business factors, such as personality of the business owner, manager education, business size, and years in business, can influence the marketing approach an agricultural business takes (Scott, Boyle, Czerniawska, & Courtney, 2018; Yao, Shanoyan, Peterson, Boyer, & Baker, 2018). Furthermore, agribusiness companies may have multiple social media accounts but infrequently integrate them (Hanna & Lam, 2017).

Social media plays an increasing role in tourism marketing (Leung, Law, van Hoof, & Buhalis, 2013), and 17% of Oklahoman agritourism visitors reported hearing about the agritourism operation they visited via social media (Murphy et al., 2017). Small investments in promotion could return large revenue for agritourism operations, especially through social media marketing (Sullins, Moxon, & McFadden, 2010). However, despite agriculturists considering social media a “permanent element in agriculture” (White, Meyers, Doerfert, & Irlbeck, 2014, p. 9), agriculturists reported only basic skills in social media marketing, with low self-reported competence for higher-level tasks such as generating page ‘Likes,’ (Meyers, Shaw, Irlbeck, Doerfert, & Abrams, 2015).

Amongst social media platforms, 94% of social media marketers outside of the agriculture industry used Facebook, compared to the second most common platform, Instagram, at 66% (Stelzner, 2018). Furthermore, events such as launching new products, concerts, and business open house events are most effectively promoted on Facebook

compared to platforms such as LinkedIn, and Twitter (Moise & Cruceru, 2014), and it is important to note these events are similar to events that would be hosted on agritourism operations. Social networking sites provide an advantage to traditional websites in providing information about events (Lee, Xiong, & Hu, 2012), and social media promotion can be less expensive to promote events than paid advertising or traditional public relations efforts to earn media coverage (Moise & Cruceru, 2014).

Additionally, Facebook also provides opportunities for advertisements and user-generated content. Advertisements can provide tailored messages for social media users (Plume & Slade, 2018). Facebook advertisements alone, compared to outside advertisements on other web platforms, influence overall page likes (Voorveld, Araujo, Bernritter, & Rietberg, 2018). User-generated content can influence tourist intention to visit and satisfaction (Kaosiri, Foil, Tena, Artola, & García, 2019; Marchiori & Onder, 2015).

However, little research has been conducted on tourism social media (Leung et al., 2013), and Zeng and Gerritsen (2014) specifically called for quantitative content analysis of tourism social media to establish a baseline on current social media use. More research is needed to understand how perceptions of agritourism operators and visitors influence agritourism and marketing (Flanigan, Blackstock, & Hunter, 2014). Past research applying social media content analysis to branding as a whole has considered variables of social media interaction such as whether links, pictures, and video are included in material (Ashley & Tuten, 2014; Wallace, Wilson, & Miloch, 2011); degree of responsiveness measured through likes, comments, shares, and number of page followers (Fehrer, Woratschek, Germelmann, & Brodie, 2018; Parsons, 2013; Stefko,

Bacik, & Fredorko, 2014; Yang, Lin, Carlson, & Ross, 2016); bandwagon effect (Kim & Sundar, 2014; Neubaum & Kramer, 2017; Peterson, Boyer et al., 2018); posting frequency (Houk & Thornhill, 2013; Hudson, Huang, Roth, & Madden, 2017; Peñafior, 2016); and date and time of post, number of retweets, and type of post (Lin & Pena, 2013). However, to date literature applying social media content analysis to agritourism has not been found.

Furthermore, the influence the type of agricultural production may have on Facebook marketing strategy has not been found to date by researchers. Characteristics such as the nature of agritourism customers (Gasciogne, Sullins, & McFadden, 2008), season (The University of Georgia, 2006), and the location or management of farmers markets (Rimal, Onyango, & Bailey, 2010) can influence when an agritourism operation is most active. Characteristics such as season and type of agritourism activities can influence social media marketing, as Oklahoman agritourism visitors reported being especially influenced in their decision to participate in fall, seasonal activities by social media (Murphy et al., 2017).

Theoretical Framework

Public relations is a diverse field with many cultural connotations, and it is emerging as a creative discipline drawing from social theory and culture (L'Etang, 2013). Four models constitute Excellence Theory (Waters & Williams, 2011). Public information is one-sided information sharing to communicate useful information to readers. Press agency is one-sided communication without serious consideration on reader needs, typically using dramatic effects to capture reader attention. Two-way symmetry is a conversational approach to incorporate reader feedback to make

communication more useful for readers, and two-way asymmetry is two-way communication with the primary intention of gaining information about readers' characteristics. There are many measurements of excellence theory on social media, such as video, links, photos, and type of information (McCorkindale, 2010); likes, comments, and shares (Cho, Schweickart, & Haase, 2014); organization response to users, network extensiveness and growth, and user responses and posts (Bortree & Seltzer, 2009); and tone, details revealing users' demographics, and profanity (Woolley, Limperos, & Oliver, 2010).

Social media is increasingly considered essential in public relations campaigns (Allagui & Breslow, 2016). Social media is changing public relations practitioners' interactions with media outlets, as journalists no longer passively receive media kits but instead actively request and respond to information (Waters, Tindall, & Morton, 2010). Additionally, nonprofits have the opportunity to have more measured engagement with stakeholders (Saxton & Waters, 2014). When describing the interactive nature of social media in regard to public relations, Peters, Chen, Kaplan, Ognebeni and Pauwels (2013, p. 290) stated, "Such listening, understanding, and responding to an individual actor changes the concept of traditional media in another meaningful way: previously pure inside-out communication turns into balanced outside-in communication." However, in evaluating research on new media's role in public relations from 1981 to 2014, Duhé (2015) found research in dialogic and interactivity contributions of new media is a largely untapped area of public relations research. New media enables researchers to evaluate both organizational- and message-level engagement on social media, and message-level effects have been largely unexamined (Saxton & Waters, 2014).

Purpose & Objectives

The purpose of this study was to describe overall activity of Oklahoma agritourism Facebook pages. The objectives of this study were to

1. describe overall activity of Oklahoma agritourism Facebook pages,
2. describe characteristics of pages with and without original posts;
3. describe the relationship between measurements of page activity;
4. describe the relationship of post characteristics and page popularity;
5. describe characteristics of events and relationships to people interested and attending an event; and
6. compare characteristics of pages with and without advertisements.

Methods

A total of 393 agritourism operations were registered on the Oklahoma Department of Agriculture, Food, and Forestry as of June 22, 2018. Of these pages, 287 had both complete registration information and a Facebook page affiliated with the operation. A minimum sample size of 165 is required for a population of 287 (Krejcie & Morgan, 1970), and this was achieved by sampling 50% of the six Oklahoma regions listed on the ODAFF website to create a final sample of 174 agritourism operations. Sampling was based on regional proportions due to the regional differences in Oklahoman agriculture (USDA-NASS, 2017) and findings of Sullins and Thilmanny (2007) agritourism visitors and business characteristics differed by geographic region in Colorado. The sample size by region was 48 for central (28%), 52 for northeast (30%), 20 for northwest (11%), 15 for south central (9%), 20 for southeast (11%), and 19 for southwest (11%).

Quantitative content analysis was performed using a code sheet developed by an agricultural communications graduate student and reviewed by hospitality and agricultural communications faculty as well as an Oklahoma agritourism marketing specialist. Prior to data collection, interrater reliability was established from two samples of 30 Maine agritourism operations; after the second round of coding, all variables that had not received a minimum Cohen's kappa score of .4 were removed from the study. A final Cohen's kappa score of .94 was achieved for whether events, event posts, community posts, and original posts were present; the type of original post; the presence of "About" information (story, milestones, description, website, email, website, hours, founding year, price range, parking, phone number, and physical address); and event description word count, number of people interested and going/went to an event. Additionally, some variables were not cohesive with Cohen's kappa assessment, and percent agreement was used instead. These variables were the presence of other social media, popular hours, public transit description, acceptable payment; original post word count, shares, total reactions, and attachments; and visitor post word count, shares, total reactions, and attachments. A final percent agreement of 96% was achieved.

Quantitative content analysis was performed on the sample of Oklahoma operations from August 14 to September 15, 2018. SPSS was used to analyze data. Frequency was calculated for objectives 1 and 2. Mean and standard deviation were calculated for objectives 1, 3, 4, and 5. Bivariate correlation was calculated for objectives 2, 3, and 4. Pearson's r correlation was used, with a "weak" correlation defined as $.1 \leq r < .3$, a "moderate" correlation as $.3 \leq r < .5$ and a "strong correlation as $r \geq .5$ (Cohen, 1977).

All posts created by the agritourism operation and the general public were recorded if they were created from June 1 to June 30, 2018. Characteristics of these posts were recorded as observed during the sampling time period of August 14 to September 15, and all reactions, comments, and shares were recorded as observed, as long as the initial post was made during the month of June. Posts were categorized by general location and quality of the post. Community posts were defined as posts created in the “Community” area of a Facebook page by a member of the general public. Event posts were created by the general public under the “Discussion” section of an event’s description. Original posts were created by the page administrator and appeared on the page’s timeline.

All original and community posts made from June 1 to June 30, 2018, were included in the sample. Comments, reactions, and shares of these posts were recorded as observed in the period of data collection from August 14 to September 15, regardless of whether the comments, reactions, and shares were made in June. Other factors of posts that were recorded included the number of attachments, word count, date created, type of post, number of people tagged in the post contents and comments, number of different people creating posts, and number of comments made by the agritourism operation. Additionally, events set to be held in June 2018 were included in the sample, regardless of when the initial Facebook event was created. All characteristics for events set to be held in June 2018 were and event characteristics made for each event set to be held in June 2018 were also included in the sample. Other page characteristics were simply recorded as observed in the data collection period of August 14 to September 15, 2018, because there was no reasonable way to trace how they existed on the agritourism

operation Facebook page in June 2018. These included cover photos, profile pictures, overall page likes/followers, the number of other pages the agritourism operation Facebook page has liked, and the amount of business/contact information. Following data collection, recorded data was aggregated and analyzed using SPSS software.

Results

RO 1: Describe Overall Activity of Oklahoma Agritourism Facebook Pages.

Oklahoman agritourism Facebook pages had a median of 1,330.0 page likes per page, as shown in Table 1. Community posts were observed on 32% ($n = 55$) of pages, with a median of 2.0 posts per page with at least one community post. Original posts were observed on 69% ($n = 120$) pages, with a median of 7.0 posts per page with at least one original post. Events were observed on 23% of pages ($n = 40$), with a median of 1.0 events per page with at least one event.

Table 1
Overview of Oklahoman Agritourism Facebook Activity

	<i>n</i> (%) ^a	<i>Min.</i>	<i>Q1</i>	<i>Mdn.</i>	<i>Q3</i>	<i>Max.</i>	<i>M</i> (SD)
Page likes	174.0 (100%)	10.0	524.0	1,330.0	3,390.25	49,402.0	2,954.4 (5,756.7)
Page followers	174 (100%)	11.0	519.5	1,302.0	3,311.5	48,690.0	2,873.2 (5,602.2)
Number reviews	143 (82%)	1.0	12.0	37.0	113.0	2,747.0	117.2 (295.8)
Review score	142 (82%)	4	5	5	5	5	5 (0)
Original posts	120 (69%)	1.0	3.0	7.0	17.75	106.0	13.5 (16.7)
Community posts	55 (32%)	1.0	1.0	2.0	4.0	29.0	3.4 (4.1)
Events	40 (23%)	1.0	1.0	1.0	2.75	16.0	2.6 (3.1)
Event posts	32 (18%)	1.0	1.0	3.0	4.0	26.0	4.72 (5.9)

RO 2: Describe Characteristics of Pages With and Without Original Posts, Community Posts, and Events.

Pages with at least one original post had almost four times the number of overall page likes ($Mdn = 1,1881$) as pages without any original posts ($Mdn = 486.0$), as shown

in Table 2. Few pages without original posts had a community post ($n = 2$, 4%) or an event ($n = 2$, 4%). Similarly, pages with community posts had more page likes ($Mdn = 1,994$) than pages without community posts ($Mdn = 1,022$). Only 9 pages (17%) without an original post had a community post, compared to 46 pages (38%) that had both an original post and a community post.

Farm-to-table types of agritourism operations most frequently had at least one original post ($n = 29$, 88%), while pumpkin picking agritourism operations were least likely to have a page with an original post ($n = 6$, 21%), as shown in Table 2. This may have been influenced by the time of data collection, June 2018, amongst seasonal agritourism operations.

Table 2
Characteristics of Pages with and without Original Posts, Community Posts, and Events

	<i>n (%)</i>	<i>Min.</i>	<i>Q1</i>	<i>Mdn.</i>	<i>Q3</i>	<i>Max.</i>	<i>M (SD)</i>
Original posts							
Absent ($n = 54$)							
Page likes	54 (100%)	10.0	154.25	486.0	1,162.75	5,193.0	929 (1,1823)
Original posts	0 (0%)	n/a	n/a	n/a	n/a	n/a	n/a
Events	2 (4%)	1.0	1.0	1.0	1.0	1.0	1 (0)
Event posts	1 (2%)	0.0	0.0	0.0	0.0	0.0	n/a
Community posts	9 (17%)	1.0	1.0	1.0	2.5	5.0	2 (1)
Present ($n = 120$)							
Page likes	120 (100%)	52	968	1,881	4,514	49,402	3,866 (6,697)
Original posts	120 (100%)	1.0	3.0	7.0	17.75	106.0	13.5 (16.7)
Events	38 (32%)	1.0	1.0	1.0	3.25	16.0	3 (3)
Event posts	31 (26%)	1.0	1.0	3.0	4.0	26.0	5 (6)
Community posts	46 (38%)	1.0	1.0	2.5	5.0	29.0	4 (4)
Community posts							
Absent ($n = 119$)							
Page likes	119 (100%)	10.0	388.0	1,022.0	2,679.0	45,386.0	2,265.5 (4,568.5)
Original posts	74 (62%)	1.0	3.0	6.0	12.25	55.0	9.3 (10.3)
Events	18 (15%)	1.0	1.0	1.0	2.0	16.0	2 (4)
Event posts	13 (11%)	1.0	1.0	2.0	7.0	21.0	5 (6)
Community posts	0 (0%)	n/a	n/a	n/a	n/a	n/a	n/a
Present ($n = 55$)							
Page likes	55 (100%)	116. 0	831.0	1,994.0	5,137.0	49,402.0	4,445.0 (7,566.5)
Original posts	46 (84%)	1.0	5.0	14.0	24.5	106.0	20. (22)
Events	22 (40%)	1.0	1.0	1.0	5.0	10.0	3 (3)

Event posts	19 (35%)	1.0	1.0	3.0	4.0	26.0	5 (6)
Community posts	55 (100%)	1.0	1.0	2.0	4.0	29.0	3.4 (4.1)
Events							
Absent (<i>n</i> = 134)							
Page likes	134 (100%)	10.0	397.75	976.0	2,635.5	26,684.0	2,215 (3,374)
Original posts	82 (61%)	1.0	3.0	5.0	12.25	46.0	9 (9)
Events	0 (0%)	n/a	n/a	n/a	n/a	n/a	n/a
Event posts	0 (0%)	n/a	n/a	n/a	n/a	n/a	n/a
Community posts	33 (25%)	1.0	1.0	2.0	4.5	8.0	3 (2)
Present (<i>n</i> = 40)							
Page likes	40 (100%)	707.0	1,557.25	2,553.0	4,434.0	49,402.0	5,430 (10,001)
Original posts	38	1.0	9.25	16.5	33.25	106.0	24 (23)
Events	40 (100%)	1.0	1.0	1.0	2.75	16.0	2.6 (3.1)
Event posts	32 (80%)	1.0	1.0	3.0	4.0	26.0	5 (6)
Community posts	22 (55%)	1.0	1.0	2.5	4.25	29.0	4 (6)

Table 3
Frequency of Farm Type Amongst Pages with and without Posts

	Pages with original post (<i>n</i> = 120) <i>n</i> (%)	Pages without original post (<i>n</i> = 54) <i>n</i> (%)
Farm-to-table (<i>n</i> = 33)	29 (88%)	4 (12%)
Lush-n-lively (<i>n</i> = 30)	26 (87%)	4 (13%)
U-pick (<i>n</i> = 21)	18 (86%)	3 (14%)
Vineyards & wineries (<i>n</i> = 26)	22 (85%)	4 (15%)
Petting farms (<i>n</i> = 10)	8 (80%)	2 (20%)
Pumpkin picking (<i>n</i> = 29)	23 (81%)	6 (21%)
Specialty crops/products (<i>n</i> = 35)	27 (77%)	8 (23%)
Teachable moments (<i>n</i> = 43)	33 (77%)	10 (23%)
Farm & ranch attractions (<i>n</i> = 21)	16 (76%)	4 (24%)
Trail riding (<i>n</i> = 12)	8 (67%)	4 (33%)
Weddings (<i>n</i> = 26)	17 (65%)	9 (35%)
Farmers markets (<i>n</i> = 29)	18 (62%)	11 (38%)
Country stays (<i>n</i> = 20)	12 (60%)	8 (40%)
Guest ranches (<i>n</i> = 12)	7 (58%)	5 (42%)
Mazes (<i>n</i> = 22)	16 (45%)	6 (55%)
Hunting (<i>n</i> = 13)	5 (39%)	8 (61%)

Most items of business information were more frequently present on pages with at least one original post than pages without any original posts, as shown in Table 4. The business items with the smallest difference in frequency for pages with and without

original posts phone numbers ($n = 106$, 88% of pages with original posts, and $n = 43$, 80% for pages without original posts) and websites ($n = 101$, 84% of pages with original posts, and $n = 41$, 76% for pages without original posts) the business item with the largest differences between pages with and without original posts was email address ($n = 91$, 76% of pages with original posts, and $n = 28$, 52% for pages without original posts).

Table 4

Presence of Business Information on Pages with and without Posts

	<u>Pages without original posts</u>	<u>Pages with original post</u>
	<u>($n = 54$)</u>	<u>($n = 120$)</u>
	<u>n (%)¹</u>	<u>n (%)¹</u>
Price range	30 (56%)	88 (73%)
Parking	13 (24%)	47 (39%)
Physical address	39 (72%)	107 (89%)
Phone	43 (80%)	106 (88%)
Website	41 (76%)	101 (84%)
Email	28 (52%)	91 (76%)
Hours		
“Always open”	13 (24%)	57 (48%)
Specific	10 (19%)	8 (7%)

¹Proportion based on pages with and without original posts.

RO 3: Describe the Relationship between Measurements of Page Activity

Both the number of reviews and the average score of those reviews were recorded. Overall page likes had the strongest relationship with reviews ($r = .939$), followed by the number of community posts ($r = .567$), as shown in Table 5. The number of likes had a weak, negative relationship with the total review score of a Facebook page, a cumulative average of public ratings on a 1-5 scale where 1 is lowest. A page has the opportunity to provide a variety of business-related information on its Facebook page, and the number of information items present on each page were cumulatively tallied for a “business information richness” score. These variables included contact information (phone number, physical address, email, website, and whether an additional social media

account was listed), business information (parking, public transportation, price listing, acceptable payment, business hours, most popular hours), and story-related information (founding year, “about” description, business story, business milestones, whether team members were listed, and other page-specific information such as awards and mission statements).

Table 5
Relationships of Frequency of Page Activities

	Page likes	Original posts	Community posts	Events	Event posts
Number of reviews	.939*	.334*	.635*	.207*	.472*
Community posts	.567*	.435*	-	.259*	.497*
Event posts	.415*	.435*	.497*	.320*	-
Pages liked by page	.380*	.320*	.219*	.485*	.284*
Original posts	.359*	-	.435*	.401*	.435*
Business info richness	.277*	.263*	.134	.178*	.236*
Social media accts	.243*	.375*	.055	.078	.069
Events	.198*	.401*	.259*	-	.320*
Price range ^a	.171*	.107	.161*	-.012	.022
Review score	-.330*	-.225*	-.118	-.297*	-.074

^aScale of 1-4, where 1 was least expensive. * $p < .05$.

Business information richness was defined as the number of different business-related items (phone number, website, hours, founding year, etc.) present under the “About” section of each Facebook page. Business information had a moderate relationship to page likes ($r = .277$). Pages could also provide links to other social media accounts, although only 9 pages (5%) listed at least one additional social media account. Instagram was most frequently listed ($n = 7$), followed by Pinterest ($n = 2$) and YouTube ($n = 1$). The number of social media accounts per page had a moderate relationship to page likes ($r = .243$). Other measurements of page activity, such as the total number of other Facebook pages liked by the agritourism operation and the number of original

posts, community posts, event posts, and events per page had a weak to moderate relationship to one another.

RO 4: Describe the Relationship of Post Characteristics and Page Popularity

Pages with at least one community post had a mean of 3.3 community posts per page (*SD* = 4.1) created on 2.6 different dates (*SD* = 2.5) by 2.7 different Facebook profiles (*SD* = 3.6). Pages with at least one event post had a mean of 4.7 event posts (*SD* = 5.9) created on 3.3 different dates (*SD* = 3.8) by 3.4 different Facebook profiles (*SD* = 4.0). When considering all pages with at least one community post or one event post, a total of 240 different Facebook profiles created the total 335 event and community posts. Amongst all agritourism operations, 28% of posts were made by someone who made more than one post. Community posts had the strongest relationship between page likes and the number of posts ($r = .770$), dates ($r = .622$) and sources ($r = .761$), as shown in Table 6.

Table 6
Relationship of Post Characteristics to Page Likes and Post Reactions

	<u>Original posts¹</u>		<u>Community posts¹</u>			<u>Event posts¹</u>		
	Posts	Dates	Posts	Dates	Sources ²	Posts	Dates	Sources ²
Page likes	.297*	.337*	.770*	.622*	.761*	.647*	.754*	.029
Post reactions	-.093	-.113	.802*	.646*	.823*	.110	.084	.005

¹Amongst pages with at least one such post. ²Different people who created a post per page.

A post created by another Facebook page and shared by the agritourism operation Facebook page was considered a shared post. The total number of pages each agritourism operation shared a post from had no relationship to reactions of those posts that had been shared ($r = -.035$) or overall page likes ($r = -.002$). Amongst the 174 agritourism

Facebook pages evaluated, a total of 216 shared posts were observed. Of the 216 shared posts, 165 different pages were used as an original source.

RO 5: Describe Characteristics of Events and Pages with Event Posts

A total of 103 events were created by 40 pages (23%). A median of 85 people were interested in each event and a median of 11 people reported going. A total of 43 events (41% of events) from 32 pages (80% of pages with at least one event) had at least one event visitor post. The average number of people interested in attending all events hosted by each page did not have a relationship to page characteristics such as page likes ($r = -.027$), as shown in Table 7. A very strong relationship existed between the number of people interested in events and the number of people who reported going/went. However, the mean number of people interested in events per page had a strong correlation ($r = .806$) to the number of posts made after the event and a moderate correlation to the number of posts made on the day of the event ($r = .440$). When comparing events with at least one event post to events without any event posts, events with at least one event post ($n = 43$, 42% of events) had a median of 119 people interested and 11 people going. Events without any event posts ($n = 60$, 58% of events) had a median of 12 people interested and 3 people going.

Table 7
Relationship of People Interested with Page Characteristics

	People interested ¹
	<i>r</i>
People going/went ^a	.955*
Event posts ^a	.498*
Events ^a	-.142
Original posts ^a	-.114
Community posts ^a	-.061
Page likes ^a	-.027

Time of posts	
Posts made before event ^b (<i>n</i> = 120)	.283
Posts made day of event ^b (<i>n</i> = 25)	.440*
Posts made after event ^b (<i>n</i> = 9)	.806*

**p* < 0.05 level. ^aPages with at least one event. ^bPeople interested in all events with at least one event post.

RO 6: Compare Characteristics of Pages with and without Advertisements.

Pages with advertisements had more page likes (*Mdn* = 2,732.0) than pages without advertisements (*Mdn* = 1,218.5), as shown in Table 8. Pages with advertisements also had a higher proportion of pages with at least one original post (*n* = 15, 94%) than pages without an advertisement (*n* = 105, 66%). Although pages without any advertisements had a lower proportion of pages with community posts (*n* = 4, 25%) than pages without advertisements (*n* = 51, 32%) pages with advertisements had a higher median number of community posts (*Mdn* = 3.0) than pages without advertisements (*Mdn* = 2.0).

Table 8
Facebook activity of pages with and without advertisements

	<i>n</i> (%)	<i>Min</i>	<i>Q1</i>	<i>Mdn.</i>	<i>Q3</i>	<i>Max</i>	<i>M (SD)</i>
Absent (<i>n</i> = 158)							
Page likes	158 (100%)	10	495	1,219	2,937	49,402	2,849.2 (4,953.6)
Original posts	105 (66%)	1.0	3.0	8.0	19.0	106.0	14.6 (17.5)
Events	37 (23%)	1.0	1.0	1.0	3.0	16.0	2.7 (3.2)
Event posts	29 (18%)	1.0	1.0	3.0	4.0	26.0	4.7 (6.1)
Community posts	51 (32%)	1.0	1.0	2.0	4.0	29.0	3.4 (4.2)
Present (<i>n</i> = 16)							
Page likes	16 (100%)	581	1,145	2,732	7,348	9,658	3,993.4 (3,153.7)
Original posts	15 (94%)	1.0	2.0	5.0	11.0	18.0	6.0 (5.4)
Events	3 (19%)	1.0	1.0	1.0	-	3.0	1.7 (1.2)
Event posts	3 (19%)	1.0	1.0	4.0	-	10.0	5.0 (4.6)
Community posts	4 (25%)	1.0	1.0	3.0	5.75	6.0	3.3 (2.6)

The amount of post interaction original posts received was similar for pages with and without advertisements, as shown in Table 9. However, pages without advertisements had higher maximum values for reactions, comments, and shares.

Table 9
Original post interaction of pages with and without advertisements

	<i>Min.</i>	<i>Q1</i>	<i>Mdn.</i>	<i>Q3</i>	<i>Max.</i>	<i>M (SD)</i>
Absent (<i>n</i> = 105) ^a						
Reactions	0.0	7.75	14.5	28.6	835.0	34.1 (103.9)
Comments	0.0	0.8	1.8	4.0	173.0	6.3 (23.1)
Shares	0.0	0.8	1.7	4.8	257.0	71 (30.1)
Present (<i>n</i> = 15) ^a						
Reactions	1.5	7.9	17.3	34.2	60.5	17.8 (60.5)
Comments	0.0	0.4	1.7	3.2	8.0	2.3 (2.6)
Shares	0.0	0.4	1.8	2.0	6.5	1.7 (1.7)

^aNumber of pages with at least one original post.

Discussion/Conclusions

The purpose of this research is to summarize Oklahoman agritourism Facebook activity, as social media in tourism marketing is largely unassessed (Cho et al., 2014; Zeng & Gerritsen, 2014). In summarizing activity, the majority of Oklahoman agritourism Facebook pages posted at least once and had at least one review. However, less than half of pages had a community post, event post, or event.

When considering overall Oklahoman agritourism Facebook activity, a variety of factors should be considered. Pages with at least one original post had more events and in turn gave “likes” to other Facebook pages, which would suggest higher page involvement. Pages without any original posts had nearly four times fewer overall page likes than pages with at least one original post, which may suggest public preference to hear from the agritourism operation. However, the influence on posting frequency on

overall engagement rate is mixed in past literature. Peñaflor (2016) found the influence of posting frequency on audience interaction can vary amongst Facebook pages, and may not translate to engagement rate. However, Houk & Thornhill (2013) found posting frequency was correlated to engagement rate. Aside from posting frequency, other Facebook activities such as number of events or community posts could have influenced the larger number of overall page likes, and future research is needed to identify a more direct influence of page likes.

When relating this to Excellence Theory, the large proportion of original posts to community posts could represent the public information model of Excellence Theory, characterized as one-way communication that provides beneficial information to the public (Waters & Williams, 2011). Because pages with at least one original post had nearly four times the number of overall page likes as pages without original posts, this suggests the information provided was beneficial to the public, a characteristic of the public information model of Excellence Theory in comparison to the press agency model, which also consists of one-way communication.

Community posts' low frequency did not reduce their strong influence on overall page likes, however. Amongst factors such as the number of events and original posts, as well as the volume of business contact information available, the strongest influence on overall page likes came from reviews and community posts. This suggests a preference for content created by the general public, in comparison to Facebook activity generated by the agritourism operation, which is supported by past research (Kaosiri et al., 2019; Marchiori & Onder, 2015). Therefore, even when the volume of Facebook activity may have more closely resembled Excellence Theory's public information model, the general

public and Facebook analytics still appeared to show a preference for two-way synchronous communication.

Posting frequency can be influenced by a variety of factors. For example, individuals with a strong position towards something tend to post more frequently over time (Moe & Schweidel, 2012), and personal factors, such as personality of the poster, can also influence the frequency of posting (Scott et al., 2018). Pages without any original posts still had a strong presence of information such as phone numbers and business hours. These pages may also have utilized Facebook for additional purposes than creating Facebook posts. For example, Peterson et al. (2018) found many ornamental horticulture companies reported using websites, in-person conversations, and phone numbers as primary marketing tools. Agritourism operations not relying primarily on Facebook for their marketing may have utilized their Facebook page simply to post their phone number, website, or physical address. Interestingly, only nine agritourism operations listed social media accounts besides Facebook under the “About” section of their Facebook page. This is similar to findings by Hanna and Lam (2017) that large agribusiness companies infrequently integrated social media platforms.

Additionally, the type of agritourism operation may have influenced posting frequency. Hunting, guest ranches, and country stays had a large proportion of pages without posts. These types of agritourism operation, by nature, may have a smaller capacity for handling large crowds and may have not desired to attract a large amount of social media attention. Future research should consider characteristics of agritourism operations with inactive pages or with no Facebook page at all.

Some agritourism operations may not have created posts due to the timeframe of research sampling. For example, more than half of maze Facebook pages did not have an original post in June, and it is possible these operations were busiest in the fall, after the sampling period of this study. The most active season of an agritourism operation varies based on a variety of factors, such as characteristics of agritourism customers (Gascoigne et al., 2008) and farmers market management and location (Rimal et al., 2010). Georgia agritourism operators most frequently reported being open in fall, compared to other seasons (The University of Georgia, 2006), and Oklahoma agritourism visitors report social media to especially influence their visiting decision in the fall, compared to other seasons (Murphy et al., 2017). Therefore, researching characteristics of agritourism operations in the month of June may have been a reason for some types of agritourism operations to be less active.

However, it is possible other factors influenced the active season of an agritourism operation's Facebook page, and future research should consider seasonal fluctuations in Facebook activity of agritourism operations. For example, farmers markets involve a large number of vendors and may be directed by multiple community or government agencies. It is possible the communal nature unique to farmers markets does not lead to one central person who would direct a Facebook page, and therefore, these types of agritourism operations have fewer posts.

In addition to the volume of communication, the frequency of communication may have influenced interactions. For example, an agritourism operation could create 10 posts in one day or spread those posts over a period of 10 different days. The number of different dates an original post was made had a moderate relationship to overall page

likes. In contrast, the total number of original posts had only a weak relationship to overall page likes. Because the relationship between number of dates and overall page likes was stronger than the number of total original posts, it appears posting on different days may have influenced Facebook page popularity. In contrast, this did not appear to be the case for community posts. The total number of posts had a stronger relationship to overall page likes than did the number of different dates community posts were made.

When considering Excellence Theory, communication may feel more natural and conversational when performed over time. Creating posts on different dates may have been more important for original posts than community posts due to the large volume of original posts. In contrast, because community posts were less frequent amongst agritourism Facebook pages, the number of people who made posts and the number of different dates on which these posts were made may have been less important. The large volume of original posts may closely resemble Excellence Theory's public information model (Waters & Williams, 2011); however, even amongst this model the influence of creating posts on different dates suggests maintaining a conversational nature is important. Additionally, the nature of communication can be described in the context of more than one communication medium. The relatively high proportion of business contact information (i.e., websites and emails) suggest conversations may be happening outside of social media. Social media marketers must balance providing a message with bombarding customers (Hudson et al., 2016).

Pages without original posts were not completely inactive, and many still had some activity through community posts. However, this activity tended to be lower in volume than pages with at least one original post during the sampling period.

Agritourism operators should therefore be wary of leaving pages completely unattended, as narratives about their operation could still be written whether the agritourism operator checks in frequently or not. On a more positive note, agritourism operators can also recognize the presence of a loyal customer base willing to share of their experience regardless of Facebook marketing efforts of the agritourism operation. In the context of Excellence Theory, the presence of community posts in absence of original posts suggests the general public desires to communicate with the agritourism operation, support for the back-and-forth nature of two-way synchronous communications (Waters & Williams, 2011).

One type of Facebook activity may suggest patterns of activity in other areas. For example, pages with at least one original post tended to have more community posts. Similarly, pages with at least one event had more than three times the number of original posts as agritourism operation Facebook pages without an event. Agritourism marketing practitioners may be tasked with advising a large volume of Facebook pages and therefore desire to quickly survey Facebook pages to assess overall Facebook page activity. If only one Facebook activity were used, whether or not an agritourism operation has created events appears to be a good place to start. Pages with at least one event had more than three times the number of original posts and more than double the total page likes, which may suggest the presence of events is an indicator of a more active page.

Facebook has established itself as a unique social media platform for marketing events. However, less than one-quarter of agritourism operations had one event set to be held in June 2018, suggesting events were an under-utilized component of Facebook

pages. Events with at least one post had more people interested in attending the event. Additionally, Moise and Cruceru (2014) found specific types of events were most frequently promoted on different social media platforms, with events such as trade shows, exhibitions, and concerts popularly promoted on Facebook; it is possible characteristics of the events are more influential on attendance than Facebook marketing activities. While it may be tempting to use the number of event posts as a measurement of excitement in an event, the weak relationship between number of events and people interested suggests this is not a good estimate. Instead, there is a strong relationship between people interested and the number of posts made on the day of and after the event.

However, although Facebook is considered as a unique social media platform for marketing events, the overall activity of the Facebook page may not influence event popularity, as there was no correlation between the number of people interested in attending an event and measurements of Facebook activity such as number of posts. Events with at least one event post more frequently contained a link in their event description; however, other differences, such as the presence of a description, were similar between the two types of events. This lack of correlation suggests it was characteristics of the event page or the event itself that was most influential on visitors. For example, Lee et al. (2012) found level of emotional attachment to an event page influences overall attitude toward the event and suggested creating high-arousal content such as videos to boost event attendance.

When seeking to increase page likes, it is important to note Facebook page activity generated by the agritourism operator was only moderately correlated to page

likes. Instead, the page characteristic with the strongest correlation to page likes was number of reviews, followed by number of community posts. Furthermore, the number of different days community posts were made on a page, as well as the number of different people who made posts, were strongly related to the page and post likes; agritourism operators should be deliberate in encouraging a wide variety of individuals to contribute on Facebook. Social media behavior can create a bandwagon effect (Kim & Sundar, 2014; Moe & Schweidel, 2012; Neubaum & Kramer, 2017), and customer engagement may be a more valuable measurement of public response than page likes (Fehrer et al., 2018).

Agritourism operations seeking to increase Facebook page likes should note the very strong correlation between page likes and reviews, as well as the moderate relationship between page likes and number of original posts, number of event posts, and number of pages liked by a page. Increasing these activities will likely correspond with an increase in page likes; however, social media marketers must be careful to avoid overwhelming page followers with posts (Hudson et al., 2016). It is important to note the number of original posts is moderately correlated to the number of community and event posts, and increasing curated content may result in an increase in user-generated Facebook posts.

The total number of community posts were strongly correlated to the number of reviews per agritourism operation, and future research should consider whether this is a symptom of high page traffic or a cause-and-effect, as both Facebook activities rely on user-generated content. This supports past research suggesting user-generated content is important for trip-planning and information needs (Marchiori & Onder, 2015; Marine-

Roig & Clave, 2015). The negative relationship between the review score and page likes suggests agritourism operators should not despair a few poor reviews but can instead recognize it as a characteristic of larger operations with apparently limited impact on Facebook page popularity. The number of events is most strongly related to the number of pages liked by a page. To date, research supporting this observation has not been identified, but it is possible Facebook marketing tasks such as creating events are characteristics of a more deliberate marketing strategy and skill level, and these more deliberate Facebook page administrators may also take time to like and follow other Facebook pages to expand their own page's network.

In considering Excellence Theory, this suggests a preference for content created by the general public, in comparison to Facebook activity generated by the agritourism operation. Therefore, even when the volume of Facebook activity may have more closely resembled the one-direction communication of Excellence Theory's public information model (Waters & Williams, 2011), the general public and Facebook analytics still appeared to show a preference for two-way synchronous communication.

Facebook advertisements are directly related to overall page likes (Voorveld et al., 2018), and agritourism operation Facebook pages with an advertisement had a median page likes more than 1,500 greater than agritourism operation Facebook pages without advertisements. While advertisements can take many forms, such as boosted posts, videos, etc., this research did not evaluate content or type of advertisements. The content of an advertisement may influence audience interaction with the advertisement (Plume & Slade, 2018), and future research should consider the influence of the content of agritourism Facebook advertisements on public reaction. While advertisements are

associated with more overall page likes amongst agritourism operations, pages with advertisements also more frequently had at least one original post, in comparison to pages without advertisements. It is possible other factors, such as posting frequency, influenced overall page popularity, and future research is needed to confirm the influence of advertisements on overall Facebook page popularity.

In relating the presence of advertisements to Excellence Theory, use of advertisements may suggest characteristics of the model of press agency, characterized by one-way communication seeking to push awareness of the company without necessarily desiring to provide helpful information to the public (Waters & Williams, 2011). Because pages with advertisements had more overall page likes and a higher proportion of pages with original posts, pages with advertisements appear successful in expanding a Facebook page's overall audience. However, when considering the amount of post interaction of pages with and without advertisements is similar, the public may not necessarily find the overall information the page is posting more helpful. This would be a characteristic of press agency, where awareness of the company increases without necessarily providing useful information.

Recommendations

Facebook provides many opportunities to share information through original posts, community posts, business information, reviews, and events. When agritourism operations have limited resources but seek to maximize page likes, operators should create at least one original post, encourage agritourism visitors to create reviews and community posts about their experiences, and develop Facebook advertisements.

Advertisements can be especially helpful for pages seeking to maximize page likes but with only moderate time to devote to page activity. Agritourism operators should also be wary of using characteristics such as number of event posts as a predictor of event attendance. However, it is essential to note Facebook marketing cannot replace providing a quality agritourism experience.

Agritourism marketing practitioners should avoid placing agritourism operations in a one-size-fits all category. Some posts went viral with more than 800 comments, while other posts received no interaction at all. Furthermore, amongst the 174 agritourism operations in this research, overall page likes ranged from 10 total page likes to almost 50,000 total page likes. Agritourism marketing practitioners should provide individualized advice and marketing to agritourism operations and may seek to quickly identify active and inactive pages or to classify pages for targeted marketing campaigns.

Additionally, agritourism marketing practitioners should prioritize assisting pages without any original posts, especially if these pages do not also provide business information. Oklahoma agritourism operations infrequently utilize features of Facebook pages such as advertisements and events, and these should be encouraged. When providing advice to Oklahoma agritourism operations, tourism marketing practitioners should consider the unique needs of each operation and farm type, as some farm types may consider it most essential to provide business and contact information rather than frequently post if the agritourism operation has limited capacity and an already loyal customer base.

Future research should evaluate the degree to which characteristics of the agritourism operation and operator influence marketing strategies. Interviewing agritourism operators can consider how business characteristics and agritourism operators' personality and goals influence Facebook marketing decisions; comparing operators' perspectives to visitors' perceptions of Facebook marketing may also be helpful. Additionally, research should consider financial measurements, such as revenue and cost, in Facebook marketing strategies. Consistency between reported event attendance on Facebook and actual event attendance in person should be evaluated, as well as characteristics of the events that influence whether individuals express interest or plans to attend on Facebook. Finally, the correlations presented in this study are descriptions of relationships, and future research should consider whether they are causes or effects.

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CHAPTER 5

CONCLUSIONS & RECOMMENDATIONS

FACEBOOK ACTIVITY OF OKLAHOMA AGRITOURISM OPERATIONS

Conclusions/Discussion

Although agritourism is a rapidly expanding industry in rural areas (Tweeten et al., 2008), residents of rural areas may be unaware of agritourism opportunities (Nasers & Retallick, 2012), and few agritourism operators have marketing or business training (Rich et al., 2010). Social media brings both challenges and opportunities to agritourism marketing. Website quality may influence whether millennials visit an agritourism venue at all (Nowak & Newton, 2008), and agriculturists reported limited skills in social media marketing (Meyers et al., 2015). Social media is expected to play an increasing role in trip planning (Phillips et al., 2010) and has the ability to attach emotions and visual images to rural locations (Joyner et al., 2018; Kotsi et al., 2018; Zhou, 2014) and create a personable story of tourist destinations (Hanna & Rowley, 2013).

Facebook is a unique platform to compare characteristics of the general public to characteristics of an agritourism operation's communication (Saxton & Waters, 2014).

Furthermore, post reactions, comments, and shares can show whether the general public agrees with the post content, as a way of assessing whether a Facebook page is providing content the general public finds valuable (Kim, 2018; Kim & Hang, 2017).

A total of 120 pages (69%) had 1,623 original posts, and 55 pages (32%) had a total of 184 community posts. The presence of both original and community posts on a page may indicate two-way synchronous communication, which can be vital in relationship building (Szondo, 2010; Tyler, 2005) and provide the public to communicate a valuable means of self-expression for an audience (Smith & Gallicano, 2015). However, despite the presence of community posts, these community posts are so outnumbered by original posts that more of a one-way, public information model of communication may be more descriptive of Oklahoma agritourism Facebook pages. To date, research applying Excellence Theory to agritourism marketing has not been found. However, the finding of a public information-focused social media pattern is similar to Cho. (2014) findings that nonprofit organizations use public information most frequently.

While posts created by the agritourism operation may be disproportionate in comparison to posts made by the general public, there is still a good bit of public interaction with posts made by the agritourism operation. To date, studies evaluating Facebook activity of agritourism operations have not been found in order to serve as a baseline for comparison. However, in comparing original posts to community posts, a higher proportion of original posts had reactions and shares than community posts. Further adding to the nature of this two-way conversation is the fact the number of people who made these posts and number of different days the posts were made were strongly related to the amount of interaction community posts received and the overall number of

page likes. This also supports characteristics of two-way synchronous communication within Excellence Theory, as this would more closely mimic a natural conversation.

Although the general public may not be interacting with the agritourism Facebook pages in the form of community posts, there may be interaction in the form of comments, reactions, and shares with original posts. This suggests two-way synchronous communication in some fashion is still occurring, and the public interaction with posts created by the agritourism operation suggests the public finds the information agritourism operations are sharing valuable. The occurrence of two Excellence Theory models simultaneously is similar to findings by Waters and Williams (2011) that government agencies typically used more than one model of Excellence Theory simultaneously. Furthermore, the different types of communication models observed depending upon the social media metrics analyzed supports Peters et al. (2013) warning, “Pushing a single metric alone in disregard of the other aspects will result in unsustainable growth that punishes the brand in the long-run” (p. 294).

Agritourism Facebook pages should not be placed in a one-size-fits-all assumption of Facebook activity. Some posts went viral with more than 800 comments, while other posts received no interaction at all. Furthermore, amongst the 174 agritourism operations in this research, overall page likes ranged from 10 total page likes to almost 50,000 total page likes. Agritourism marketing practitioners should provide individualized advice and marketing to agritourism operations and may seek to quickly identify active and inactive pages or to classify pages for targeted marketing campaigns.

In considering Excellence Theory, this large variation amongst agritourism operation Facebook pages suggests all Oklahoman agritourism operations cannot be cleanly placed within a single Excellence Theory model. Furthermore, some pages may have such limited Facebook page activity they do not fit into any models of Excellence Theory, while other pages may have viral posts juxtaposed with inactive posts cause even individual pages to represent multiple models of Excellence theory simultaneously (i.e., sometimes the pages are engaging in one-way communication and sometimes the pages are engaging in two-way communication). Categorizations of Oklahoman agritourism Facebook activity is therefore at best only general, and agritourism marketing practitioners should bring a more individualized approach to advising agritourism operators. Agritourism operators' goals and audience demographics should be considered when choosing which to which of the four Excellence Theory models a Facebook page should seek to align.

When considering the type of information the public finds valuable, it appears the quality of information and not quantity of information influences public interaction, as factors such as post word count and number of attachments were not correlated with post interaction. This is in contrast to previous research suggesting word count, video attachments, images, and links may influence the number and type of post interactions (de Vries, Gensler, & Leefland, 2012; Pino et al., 2018; Sabate, Berbegal-Mirabent, Cañabate, & Leberherz, 2014).

However, while the quantity of information was not directly related to post interaction, there were differences observed in the type of information within posts. When comparing post attachments – pictures, videos, links, graphics, and the category of

“other” – pictures and videos had the highest median reactions. Although Oklahoman agritourism Facebook posts with pictures did have slightly more interaction than posts with videos, the differences in medians were minimal. This is in contrast to findings by Hanna and Lam (2017) that Facebook followers of large agribusiness companies gave more attention to pictures than videos. It is interesting to note when comparing which types of attachments were related to posts that went “viral” with extremely large volumes of post interaction, posts with pictures or links had the highest maximum interaction. Hanna and Lam (2017) found posts with links had less interaction than posts without links but also noticed differences in interaction based on the content of posts that contained links. Future research is needed to assess whether it was content of post or type of attachment influencing post interaction.

In further considering the type of information, there were differences amongst types of original posts. In comparing types of original posts, only the number of traditional original posts was related to overall page likes. It is possible this relationship existed simply because traditional posts comprised 73% of total original posts, and therefore the number of traditional posts could more closely fluctuate with page likes, in comparison to the infrequent and steady number of other types of posts. However, because there is no statistically significant relationship between the overall page likes and the second most common type of original post, posts shared from another page, this may not be the case, and future research is needed. In addition to posts, agritourism operators can use Facebook to post business and contact information. No research has been found to date considering the relationship of these practices on overall page likes, and this practice had a weak relationship to overall page likes. For example, marketing

coordinators of rural garden centers in the Midwest reported spending the majority of their time educating customers through email, phone calls, and in-person conversations in comparison to other communication mediums (Peterson et al., 2018). It is possible some agritourism operations may have used Facebook as a tool to publish contact information for these types of communication mediums, rather than to stimulate online conversation via posts.

Additionally, tourists may prefer using mediums other than Facebook to share their travelling experiences. For example, Mallorcan tourists spoke more frequently of their experiences via email and mobile phone texting than uploading albums and videos to social media (Munar & Jacobson, 2014). Interestingly, only nine agritourism operations listed social media accounts besides Facebook under the “About” section of their Facebook page. This is similar to findings by Hanna and Lam (2017) that large agribusiness companies infrequently integrated social media platforms.

In addition to posts and contact information, Facebook also provides opportunity to create events. Social media provides advantages over traditional websites in event promotion (Lee et al., 2012) and can be less expensive than paid advertising or traditional public relations efforts for event promotions (Moise & Cruceru, 2014). Forty pages (23%) created a total of 105 events, and 42 of those events from 31 pages (18%) had at least one event post for a total of 151 event posts. A large volume of word-of-mouth marketing can be generated from Facebook event marketing, as Facebook friends receive notifications when a friend is interested or intends to go to an event (Bogaert et al., 2016).

Although Facebook is considered a unique social media platform for event promotion (Lee et al., 2012; Moise & Cruceru, 2014), overall Facebook page activity did not appear to influence intention to attend an event. The number of original and community posts, the number of page likes, and even the number of events per page did not have a statistically significant relationship to the number of people interested in an event. Instead, the lack of relationship between people interested in an event and overall Facebook page activity suggest it may be a quality of the event itself that attracts interest in the event. When comparing characteristics of events and their overall popularity on different social media platforms, Moise and Cruceru (2014) found Facebook most effectively promoted launching of new products, concerts, and business open houses compared to other types of events.

Additionally, word-of-mouth marketing can be generated from posts made about events. When comparing event posts made by the agritourism operation and general public, posts made by the agritourism operator had more interaction. The agritourism operation created more posts on the day of the event compared to the general public, and it is possible these were used to provide last-minute updates on the event. Pino et al. (2018) found Facebook users were more likely to like and share posts about ongoing events, and this may suggest why agritourism operation event posts had higher interaction than event posts made by the general public.

Facebook advertisements are directly related to overall page likes (Voorveld et al., 2018), and agritourism operation Facebook pages with an advertisement had a median page likes more than 1,500 greater than agritourism operation Facebook pages without advertisements. While advertisements can take many forms, such as boosted posts,

videos, etc., this research did not evaluate content or type of advertisements. The content of an advertisement may influence audience interaction with the advertisement (Plume & Slade, 2018), and future research should consider the influence of the content of agritourism Facebook advertisements on public reaction. While advertisements are associated with more overall page likes amongst agritourism operations, pages with advertisements also more frequently had at least one original post, in comparison to pages without advertisements. It is possible other factors, such as posting frequency, influenced overall page popularity, and future research is needed to confirm the influence of advertisements on overall Facebook page popularity.

In relating the presence of advertisements to Excellence Theory, use of advertisements may suggest the model of press agency, characterized by one-way communication seeking to push awareness of the company without necessarily desiring to provide helpful information to the public (Waters & Williams, 2011). Because pages with advertisements had more overall page likes and a higher proportion of pages with original posts, pages with advertisements appear successful in expanding a Facebook page's overall audience. However, when considering the amount of post interaction of pages with and without advertisements is similar, suggesting the public may not necessarily find the overall information the page is posting more helpful. This would be a characteristic of press agency, where awareness of the company increases without necessarily providing useful information.

Amidst so many opportunities to create content via posts and events, an agritourism marketing practitioner may desire to quickly categorize Facebook pages to provide individualized advice. Whether or not a page had at least one original post may

be one of the most effective assessments of overall page size. When comparing overall page likes, the largest difference in overall page likes occurred for pages with and without original posts, as compared to pages with and without community posts and pages with and without events. When comparing overall involvement of the page administrator with the Facebook page, the number of events present on the Facebook page may be a good measurement. The number of events had a moderate relationship to the number of original posts made by an agritourism operation, the number of similar Facebook pages that agritourism operation Facebook page liked, and the number of event posts. Therefore, the number of events appears to indicate overall involvement of the Facebook page administrator with the Facebook page.

Another helpful classification may exist in types of agritourism operations, as page activity varied greatly amongst types of agritourism operations, with 88% of farm-to-table agritourism operations posting once in the sampling period, compared to 39% of hunting agritourism operations posting once in the sampling period. June may have been a time period where there simply was less business activity on agritourism operations than seasons such as late summer and fall (LeRoux et al., 2010; Rimal et al., 2010; The University of Georgia, 2006).

Recommendations

Oklahoma agritourism operators should encourage visitors to create community posts, as these posts have a strong relationship to overall page likes but infrequently appear on Oklahoma agritourism Facebook pages. Agritourism operators targeting specific types of post interactions, such as comments, should consider creating a variety

of original posts, as different types of original posts had different types of interactions. However, if an agritourism operator seeks to increase overall page likes, original posts should be created, as there is a moderate relationship between number of traditional, original posts and page likes. Practices such as using hashtags and encouraging users to tag friends in comments may also increase post interaction.

Marketing practitioners advising agritourism operations should assist operators in creating a variety of posts, especially types of original posts with low frequency but high public interaction, such as live videos. Although less frequent than traditional original posts, shared original posts still maintained high public interaction and were the second most common type of original post. Agritourism marketing practitioners may consider creating posts agritourism operators are able to share to both build a consistent agritourism brand across the state and to provide resources for agritourism operators seeking to post but without enough time commitment to generate a large number of original posts. Branding consistency could also be improved through the creation of uniform hashtags related to topics social media users would already be searching for, such as weddings and family fun. Because post interaction is not related to quantity of information, agritourism marketing practitioners should consider quality to be more important and should assist operations in identifying audience information preferences and in generating high-quality content through photography and post wording. It is important to note the large standard deviations amongst post characteristics suggests a few very active pages contrasted with a few very inactive pages, and agritourism marketing practitioners should seek to identify large and small pages to provide more specialized assistance.

Facebook provides many opportunities to share information through original posts, community posts, business information, reviews, and events. When agritourism operations have limited resources but seek to maximize page likes, operators should create at least one original post, encourage agritourism visitors to create reviews and community posts about their experiences, and develop Facebook advertisements. Advertisements can be especially helpful for pages seeking to maximize page likes but with only moderate time to devote to page activity. Agritourism operators should also be wary of using characteristics such as number of event posts as a predictor of event attendance. However, it is essential to note Facebook marketing cannot replace providing a quality agritourism experience.

Tourism marketing practitioners should prioritize assisting pages without any original posts, especially if these pages do not also provide business information. Oklahoma agritourism operations infrequently utilize features of Facebook pages such as advertisements and events, and these should be encouraged. When providing advice to Oklahoma agritourism operations, tourism marketing practitioners should consider the unique needs of each operation and farm type, as some farm types may consider it most essential to provide business and contact information rather than frequently post if the agritourism operation has limited capacity and an already-loyal customer base.

Future research

Agritourism marketing research is in its infancy, and the purpose of this research was to provide a baseline of agritourism Facebook activity to encourage future research. However, future research is needed to draw conclusions on agritourism marketing.

Interviews should include agritourism operators to identify business characteristics and characteristics of agritourism operators that influence Facebook marketing strategy.

Research should also include perspectives of agritourism visitors relating to both the effectiveness of current Facebook marketing strategies and ideas for alternative marketing strategies and channels. Additionally, it would be helpful to know how Facebook marketing strategy correlates to agritourism business revenue.

Content analysis should also be expanded from the preliminary quantitative methods used in this study. For example, alternative categories of cover photo and profile picture image topics could be expanded to provide more specific definitions.

Additionally, there is limited research on the type of information agritourism operations post on Facebook, and qualitative research should be used to establish a framework for future quantitative research on Facebook messaging. It would also be helpful to categorize the tone of user-generated content to assess the nature of comments, community posts, and messages incorporated in reviews and consider whether the tone of messages influences page interactions.

A sample larger than the state of Oklahoma should be considered, and a timeframe broader than the month of June should be used. In forming a national agritourism agenda, it would be helpful to know characteristics of agritourism marketing by U.S. region, as it is possible the differing interests of consumers as well differences in farm type by region may influence Facebook marketing strategies. Future research should consider alternative timeframes from the month of June, as differences in harvest seasons and peak business season may influence posting characteristics.

Additionally, agritourism operations outside of the U.S. may benefit from analysis of rural tourism marketing to evaluate misperceptions between local and international tourists of rural areas (Mutinda & Mayaka, 2012). Information communication technology can provide a valuable information bridge in developing countries (Oladimeji, Olofin, & Raji, 2014; Syiem & Raj, 2015). However, while the physical infrastructure of rural areas has been evaluated for the suitability of agritourism development in countries such as Romania (Dragoi et al., 2017), no studies to date have been found measuring evaluating adoption of ICT in agritourism not through surveys but through the amount of online presence observed by agritourism businesses.

There is the possibility some factors of the methods used influenced results. All posts made in the month of June were analyzed, regardless of whether the interactions (comments, shares, etc.) were made in June 2018. In contrast, characteristics such as page likes were measured in real-time as observed during the data collection period of August 14 to September 15, 2018. Furthermore, it is important to note Facebook does not disclose information such as whether or not a page has deleted a post or comment, and the possibility of a page deleting controversial or low-performing content cannot be disregarded. The intention in the delay of recording Facebook page interactions was to minimize the likelihood of someone new liking or interacting with the post. However, to provide the most real-time snapshot of what is happening throughout a Facebook page, future research should consider the possibility of developing a method to simultaneously measure both real-time page characteristics such as page likes and post characteristics and interactions, rather than documenting some characteristics as currently observed and some as created several months prior.

Additionally, future research should more closely apply the nuances of social media to Excellence Theory. While Excellence Theory categorizes communication into four models based on whether it is a back-and-forth dialogue and whether the information is beneficial to the public, it does not clearly establish how to measure these characteristics. Within the context of social media, there are many communication nuances. For example, a Facebook page may have a large number of page likes but have minimal post interaction, and vice versa. Additionally, some communication activities may be more impactful than others, but there is little literature to date weighing the importance within the context of Excellence Theory. For example, a page administrator may seek audience participation through comments on posts made by the agritourism operation or could seek audience participation by encouraging the public to create community posts about their experiences. While both represent two-way communication, Excellence Theory has not adequately addressed which may indicate higher audience involvement.

The purpose of this research was to summarize Oklahoman agritourism Facebook activity, as social media in tourism marketing is largely unassessed (Cho et al., 2014; Zeng & Gerritsen, 2014). By providing a baseline of current social media activity, more nuanced advice can be provided to agritourism operations in marketing their operations within the diverse agritourism industry. Additionally, this baseline of social media activity can stimulate future research by serving as reference for current Facebook marketing practices within the Oklahoma agritourism industry.

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APPENDICES

Code Book: Agritourism Facebook Pages

Overview

Term: Case ID:

Definition: Number assigned to agritourism operation in Excel file

Term: Date collected

Definition: Date you are coding the data on, not when the post was made

Term: Page name

Definition: Top left corner of page, immediately beneath profile picture

Term: Farm name/Facebook page

Definition: This will be provided by Brittany in the Excel sheet. This is not something researchers code for.

Term: Page handle

Definition: Top left corner of page, immediately beneath profile picture and page name. Begins with (and includes) @

Term: Verified

Definition: A circled check mark is next to the page name. This means Facebook has confirmed the page is an authentic representation of the business. If the icon is present, it means the page is verified.

Term: Page likes

Definition: Middle, right side of page, under the “Community” heading

Term: Page followers

Definition: Immediately below “number of people who like this,” on the middle right side of page under “Community” heading

Term: Messenger open

Definition: Does messenger automatically open when the Facebook page is opened

Term: Response time

Definition: Appears in the messenger box that should pop up when the page is opened (or if not can be opened by clicking the “message” box). There are a variety of possible phrases, such as “Typically replies within an hour.” Write whatever the phrase is.

Term: Choices in messenger box

Definition: These are not present in all messenger boxes, but if they are, they will appear as rounded, blue boxes within the messenger window. For the question, “How many options?” simply count the number of boxes.

Term: Contact- what is the phrase?

Definition: For most pages (not all), there will be a box at the top of the page that says “Contact.” Click this box and see what contact information is displayed. Sometimes, it is a website, other times the option to call the page administrators through Facebook, etc. Describe the communication type that this button provides.

Term: Number of pages liked by the page

Definition: Located inside a white square on the very right of the page, around the middle after scrolling down the page. Click “Pages liked by this page,” then count the number of pages appearing in the pop-up box. This number is the “number of pages liked by the page.”

Profile picture

Term: PP present

Definition: The smaller photo in the top left corner immediately above the Facebook page name. If its not present, a blue rectangle with a small circle inside will be located in the picture’s place.

Term: PP number of pictures:

Definition: On occasion, a page may contain a collage or overlay of photos/graphics. Count the number of combined photos.

Term: PP logo

Definition: Computer-designed icon intended to summarize or represent the agritourism operation. If the logo does not occupy the whole profile picture area, select “present, partial picture.”

Term: PP extras

Definition: Facebook is piloting a new opportunity to include video and slideshows in the profile picture and cover photo area. This is rare, but it is a possibility. If you observe something different from simply a stationary photo or collage, please circle “present” and describe the form (i.e. slideshow or video).

Term: PP extras what form

Definition: Describe, i.e. video, picture slideshow

Term: PP graphic flyer

Definition: A computer-designed image intended to provide more information than simply a logo. It could occupy the entire profile picture area (“present, entire picture”), or only part of the image (“Present, entire picture”). It is different from a logo because its primary purpose is to convey information.

Term: PP farm info

Definition: Occasionally, the operation will take a picture of farm information (logo on a t-shirt, hours of operation on an outdoor sign). The distinguishing characteristic is the image is filled with the object with the intention to primarily focus on the printed information on the object, rather than the object itself.

Term: PP people

Definition: If at least one person is visible, this frame is applied. If it does not appear the person was included intentionally, i.e. only a small body part not in focus, this frame does not apply.

Term: PP venue

Definition: A man-made component of the agritourism operation primarily intended for visitor experience. For example, a slide, barn for weddings, or maze. This is distinguished from the frame agriculture in the primary purpose of the photo’s object to be for visitor use. Because of the difficulty in distinguishing how a specific image is used, even the fields of pick-your-own operations and animals in petting zoos should NOT be included in this category, but instead be listed as agriculture.

Term: PP agriculture

Definition: Any component of agriculture or landscapes not used by visitors. This is a very broad category and can include livestock barns, sunsets on the horizon, plants, animals, and fields for pick-your-own operations.

Term: PP other

Definition: If the picture does not match any other category, select other and describe the image.

Cover picture

Term: C present

Definition: The smaller photo in the top left corner immediately above the Facebook page name. If its not present, a blue rectangle with a small circle inside will be located in the picture's place.

Term: C number of pictures:

Definition: On occasion, a page may contain a collage or overlay of photos/graphics. Count the number of combined photos.

Term: C logo

Definition: Computer-designed icon intended to summarize or represent the agritourism operation. If the logo does not occupy the whole profile picture area, select "present, partial picture."

Term: C extras

Definition: Facebook is piloting a new opportunity to include video and slideshows in the profile picture and cover photo area. This is rare, but it is a possibility. If you observe something different from simply a stationary photo or collage, please circle "present" and describe the form (i.e. slideshow or video).

Term: C extras what form

Definition: Describe, i.e. video, picture slideshow

Term: C graphic flyer

Definition: A computer-designed image intended to provide more information than simply a logo. It could occupy the entire profile picture area ("present, entire picture"), or only part of the image ("Present, entire picture").

Term: C farm info

Definition: Occasionally, the operation will take a picture of farm information (logo on a t-shirt, hours of operation on an outdoor sign). The distinguishing characteristic is the image is filled with the object with the intention to primarily focus on the printed information on the object, rather than the object itself.

Term: C people

Definition: If at least one person is visible, this frame is applied. If it does not appear the person was included intentionally, i.e. only a small body part not in focus, this frame does not apply.

Term: C venue

Definition: A man-made component of the agritourism operation primarily intended for visitor experience. For example, a slide, barn for weddings, or maze. This is distinguished from the frame agriculture in the primary purpose of the photo's object to be for visitor use. Because of the difficulty in distinguishing how a specific image is used, even the fields of pick-your-own operations and animals in petting zoos should NOT be included in this category, but instead be listed as agriculture.

Term: C agriculture

Definition: Any component of agriculture or landscapes not used by visitors. This is a very broad category and can include livestock barns, sunsets on the horizon, plants, animals, and fields for pick-your-own operations.

Term: C other

Definition: If the picture does not match any other category, select other and describe the image.

Events

Term: Events

Definition: Found under the “Events” header on the left side of the page. Events should be coded when the date they are held is within the study’s timeframe. Visitor posts should be included

Term: E [#] name

Definition: After clicking on the calendar, scroll down until you use past events.

Term: E [#] Date

Definition: Date the event is held. Code the events that are held in the month of June.

Term: E [#] number of people interested, going/went, number of shares

Definition: After clicking on an individual event’s name, these three variables should be found near the top of the event, in the same row.

Term: E [#] website

Definition: Does the description provide a link to any type of website? (It doesn’t matter what the website is.)

Term: E [#] details, number of words

Definition: The majority of events will have a “details” area. Simply copy and paste this details description into Microsoft Word and record the word count that appears in Microsoft Word.

Term: E [#] labels

Definition: Appear as small blue boxes at the bottom of the details section. Write out each label and separate it by a comma and space in the Excel file.

Term: E [#] labels listed

Definition: Write out what these labels are and separate them by a comma.

Term: E [#], VP[#] date

Definition: All visitor posts should be included for events that are held in June. This means even if a post is written in May for a June event, the post should be included.

Term: E [#], VP[#] reactions

Definition: Simply count the total number

Term: E [#], VP[#] comments/replies

Definition: This includes ALL comments and replies for the post, no matter who said what.

Term: E [#], VP[#] farm comments/replies

Definition: Count the number of times the agritourism Facebook page replies or comments on the post. This total should just be about the agritourism Facebook page, without any consideration for the above definition, total comments/replies.

Term: E [#], VP[#], People tagged

Definition: Are people tagged in the post? How many?

Term: E [#], VP[#], People tagged in comments

Definition: Are people tagged in the comments? How many?

Business Information

Term: Business information (all variables)

Definition: On the left side of the page, click “About.” This will take you to the business information, where all information should be easily accessible. Some of the information (phone number, hours, etc.) may be visible on the right side of the Facebook page’s homepage, but clicking the “About” page will provide all of the information in one, easily accessible format.

Most of the variables should be self-explanatory. The variables most likely to need clarification are described below.

Term: Other social media platforms

Definition: These can appear in a variety of locations within the “About” header of the Facebook page. Typically, they occur in the “Additional contact information” of the “About” section, but occasionally they may be at the bottom of the “About” page, or in the case of TripAdvisor, will have their own separate heading on the left side of the page.

Term: Stars and number of reviews

Definition: “Stars” are typically located under the “Reviews” section of the Facebook page. Include both the agritourism operation’s overall rating and the total number of ratings.

Term: Public transit

Definition: First, simply document whether this heading is present/not present. Then, select the best description of the information. A parking description would focus on parking rather than transportation, with a phrase such as “No parking fee.” Some parking descriptions may list highways/exits to take, and others may describe mass public transit routes. If none of these descriptions match, select “other” and write the description.

Term: Categories

Definition: At the very bottom of the “About” page, is a square icon with a star. Next to this icon will be a list of categories, such as “Farm” or “Amusement & Theme Park.” If these are present, write down all of them.

Term: “About” description, “About” richness

Definition: The “About” description is located at the bottom of the page and should give an overview of the farm. To measure richness, simply count the number of words within the description.

Info and Ads

Term: Info and Ads Tab

Definition: If present, will appear on the left side of the page, in the area of tabs such as “events” and “community.”

Term: Number of advertisements running

Definition: An advertisement is currently running if it appears in this tab. Count the number of ads in this area.

Term: Ad [#] caption

Definition: What is the caption? Simply copy and paste the caption into this box.

Term: Ad [#] Website

Definition: Is a website link provided in the advertisement?

Term: Ad [#] event

Definition: Is the main purpose of the advertisement to promote a specific event at the farm?

Term: Ad [#] attachments

Definition: Are any attachments included in the post: pictures, videos, graphic, links, other? If other, just include a really, really brief description.

Reviews

Term: Number of stars

Definition: What is the rating, in stars?

Term: Number of reviews

Definition: How many reviews have been given?

Visitor Posts on Timeline

Term: VP [#] Date

Definition: Date the post was made, not the day it was measured.

Term: VP [#] Location

Definition: Sometimes, at the top of the post, in the area where the person's name is, the will include the location of where they are making the post. If this occurs, simply write the city and state. It doesn't matter if this location is different than where the operation is located. I will go through and look at the town names later. For now, just document what they write.

Term: VP [#] name

Definition: Name of the person who is posting on the page.

Term: VP [#] words

Definition: Number of words in the post. Copy and paste this into a Word document and write the total number of words.

Term: VP [#] hashtags

Definition: If present, simply write them and separate by a , If no hashtags, leave blank.

Term: VP [#] people tagged

Definition: Count the number of people tagged in the person's post.

Term: VP [#] number of comments/replies

Definition: How many people are tagged in the actual post, not the comments?

Term: VP [#] number of farm comments/replies

Definition: How many times does the page name reply? Just count the total. It doesn't matter if it's a reply or a comment. It also doesn't matter what the total was for the above "total" comments.

Term: VP [#] people tagged in comments

Definition: How many people are tagged in the comments? It doesn't matter if it's just in a reply to someone. There's not a really good way to tell what the difference is, so for simplicity just count the number of times someone is tagged.

Term: Number of reactions

Definition: This should be for the original post, not including the comments. Here is a link with the definitions for each reaction image.

Term: Number of attachments

Definition: Simply count the number of pictures, videos, and links. If “other” is observed, please describe.

Original Posts

Term: OP [#] date

Definition: Date the post was made, not the day it was measured.

Term: OP [#] time

Definition: Time the post was made, convert to military time for consistency.

Term: OP [#] type of post

Definition: “Traditional” means the post is in the most common type of format, where the poster writes on the page’s timeline. “Updated cover photo/profile” appears as a notification on the page’s timeline with the caption “Updated cover photo (or profile picture)” and the new image. “Added photos” also appears as a notification on the page’s timeline with the caption, “Added photos” and this time a series of photos; it may also specify which album the pictures were uploaded to, although that is not relevant to coding. “Event” appears as a notification in the page’s timeline that an item has been created in the “Event” header of the page; the post on the timeline typically has the name of the event and date. “Facebook live” appears as a video with the caption, “[page name] was live.” Even if the event has passed, such videos should be coded this way. “Shared post” means the post is written by a different person than the person sharing it now; include the name of the “original page.” “Survey” means the questionnaire was made using Facebook’s built-in survey feature with polling buttons, etc. and not simply a question. If the post does not match any of these categories, select “Other,” and describe the post.

Continue coding in applicable cells for: traditional, updated pic, added pics, event, live, shared, and “other.” Do not continue to code for survey.

Term: OP[#], if page is sharing a post, name of original source

Definition: If the “type of post” is “shared,” then write the original name of the creator of the shared post. Essentially, what person/page was the post first written on? Write out and leave this cell blank if not applicable.

Term: OP [#] number of comments/replies

Definition: How many people are tagged in the actual post, not the comments?

Term: OP [#] number of farm comments/replies

Definition: How many times does the page name reply? Just count the total. It doesn't matter if it's a reply or a comment. It also doesn't matter what the total was for the above "total" comments.

Term: OP [#] people tagged

Definition: Count the number of people tagged in the person's post.

Term: OP [#] people tagged in comments

Definition: How many people are tagged in the comments? It doesn't matter if it's just in a reply to someone. There's not a really good way to tell what the difference is, so for simplicity just count the number of times someone is tagged.

Term: OP [#] hashtags

Definition: If present, simply write them and separate by a , If no hashtags, leave blank.

Term: OP [#] words

Definition: Number of words in the post. Copy and paste this into a Word document and write the total number of words.

Term: OP [#] shares

Definition: This should appear as a number at the bottom of the post.

Term: Number of reactions

Definition: This should be for the original post, not including the comments. [Here is a link](#) with the definitions for each reaction image.

Term: Number of attachments

Definition: Simply count the number of pictures, videos, and links. If "other" is observed, please describe.

Term: OP [#] graphic text

Definition: With text-based posts, color backgrounds can be used in addition to colorful fonts. If it appears this occurred in a post, code this.

Agritourism Facebook Pages Coding Sheet

Facebook page name:
Facebook page handle:
Coder:
Date of measurement:

Overview

Is page verified?
1: Yes
2: No

Page likes:
Followers:
Pages liked by the page:

Messenger

Open automatically with Facebook page?	“Multiple-choice options”?
--	----------------------------

1: Yes
2: No

1: Present
Write out:
2: Absent

Message response time phrase:

Write out:

Business information

<i>Physical address</i>	<i>Message response time</i>	<i>Phone number</i>
1: Present 2: Not present	1: Time: 2: Not listed	1: Present 2: Not present
<i>Parking</i>	<i>Price range</i>	<i>Founding year</i>
1: Present 2: Not present	1: Number of \$\$: 2: Not present	1: Present, year: 2: Not present
<i>Hours</i>	<i>Popular hours graph</i>	<i>Acceptable payment</i>
1: Present 2: “Always open” 3: Not present	1: Present 2: Not present	1: Present 2: Not present
<i>Other social media</i>	<i>Website</i>	<i>Email</i>
1: Present Platforms: 2: Not present	1: Present 2: Not present	1: Present 2: Not present
<i>Stars</i>	<i>“About” description</i>	<i>Number of reviews</i>
1: Present Avg. # of stars: 2: Not present	1: Present 1: Number of words: 2: Not present	1: Present Number of reviews: Star rating: 2: Not present
<i>Public transit</i>	<i>Categories</i>	<i>Other categories</i>
1: Present 2: Not present	1: Present Categories listed: 2: Not present	1: Write out

Profile picture

<i>Profile picture</i>	<i>Logo</i>	<i>Number of pictures</i>
1: Present 2: Not present	1: Present, entire picture 2: Present, partial picture 3: Not present	1: Number of pictures:
<i>“Extras”</i>	<i>Graphic/flyer</i>	<i>Picture of farm information</i>
1: Present, in what form: 2: Not present	1: Present, entire picture 2: Present, partial picture 3: Not present	1: Present 2: Not present
<i>People</i>	<i>Venue</i>	<i>Agriculture</i>
1: Present 2: Not present	1: Present 2: Not present	1: Present 2: Not present
<i>Other</i>		
1: Describe		

Cover photo

<i>Cover photo</i>	<i>Logo</i>	<i>Number of pictures</i>
1: Present 2: Not present	1: Present, entire picture 2: Present, partial picture 3: Not present	1: Number of pictures:
<i>“Extras”</i>	<i>Graphic/flyer</i>	<i>Picture of farm information</i>
1: Present, in what form: 3: Not present	1: Present, entire picture 2: Present, partial picture 3: Not present	1: Present 2: Not present
<i>People</i>	<i>Venue</i>	<i>Picture of farm information</i>
1: Present 2: Not present	1: Present 2: Not present	1: Present 2: Not present
<i>“Extras”</i>	<i>Other</i>	
1: Present, in what form: 2: Not present	1: Describe	

Visitor Post

Overview

- 1: Date:
- 2: Name of person posting:
- 3: Number of comments/replies:
- 4: Number of farm comments/replies:
- 5: Number of people tagged in post:
- 6: Number of people tagged in comments:
- 7: Hashtags in post:
- 8: Number of words:

Reactions

- | | | | | | |
|---------|---------|--------|--------|----------|---------|
| 1: Like | 2: Haha | 3: Wow | 4: Sad | 5: Angry | 6: Love |
|---------|---------|--------|--------|----------|---------|

Number of attachments

- | | | | |
|--------------|------------|-----------|-----------|
| 1: Pictures: | 2: Videos: | 3: Links: | 4: Other: |
|--------------|------------|-----------|-----------|

Original Post

Overview

- 1: Date:
- 2: Total comments/replies:
- 3: Total farm comments/replies:
- 4: People tagged:
- 5: People tagged in comments/replies:
- 6: Hashtags in post:
- 7: Number of words:
- 8: Number of shares:

Type of post

- 1: Traditional
- 2: Updated cover photo/profile picture
- 3: Added photos
- 4: Event
- 5: Facebook live
- 6: Shared post
- 7: Survey
- 8: Other:

Number of Reactions

- | | | | | | |
|---------|---------|--------|--------|----------|---------|
| 1: Like | 2: Haha | 3: Wow | 4: Sad | 5: Angry | 6: Love |
|---------|---------|--------|--------|----------|---------|

Number of Attachments

- | | | | | |
|--------------|------------|------------|-----------|-----------|
| 1: Pictures: | 2: Videos: | 3: Graphic | 4: Links: | 5: Other: |
|--------------|------------|------------|-----------|-----------|

Graphic text

- 1: Present
- 2: Not present

Events

Event

Event Overview

- 1: Event name:
- 2: Event date:
- 3: Number of people interested:
- 4: Number of people going/went:
- 5: Number of shares:
- 6: Website present: Y / N
- 7: Description word count:
- 8: Labels present: Y / N
- 9: Labels:

Event Visitor Post

- 1: Date of post:
- 2: Number of reactions
Likes: Love: Haha:
Wow Sad: Angry:
- 3: Number of comments/replies:
- 4: Number of farm comments/replies:
- 5: Number of people tagged:
- 6: Hashtags used:

VITA

Britany Lynn Bowman

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