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Introduction

Tourism destinations are vulnerable to disasters and lack of preparedness can be detrimental. According to the Federal Emergency Management Agency (FEMA) (2010), although it is impossible to mitigate all risks, having some disaster management strategy is critical and can significantly lessen disaster impacts. One of the most important strategies for disaster management is communication to stakeholders throughout all phases: mitigation, preparedness, response, and recovery (FEMA, 2010).

When a disaster occurs, the public becomes uncertain (Mitroff, 2004), which leads to an increased need for information (Boyle, Schmierbach, Armstrong, & McLeod, 2004; Procopio & Procopio, 2007). The public then turns to leaders and media experts for messages of instruction (Matsagnis & Payne, 2005). Communication is vital to effective disaster management (Haddow & Haddow, 2014). The goal of disaster communication is to decrease uncertainty, respond to the situation, and provide resolution (Ulmer, Seeger & Sellnow, 2007). Leaders, organizations, and media outlets, therefore, need to communicate to keep publics informed and provide requisite information regarding how to react.

Social media is an important tool for disaster communication (Haddow & Haddow, 2014). Due to the increased need for information, the public is often more active on social media during disasters (Fraustino, Liu & Jin, 2012). Social media enables information to be more easily accessible and timely, as well as to reach larger audiences. Scholars argue that social media is the only medium that can be used to disseminate real-time information (Kavanaugh et al., 2011; Kodrich & Laituri, 2011). When information flow from official sources is slow or nonexistent, social media is a preferable source of information (Spiro et al., 2012). Therefore, social media is considered ideal during disasters when time-sensitive information is needed (Spiro et al., 2012).

In the tourism industry, the implications of social media for disaster and crisis communication has been a growing topic (e.g., Barbe, Pennington-Gray, & Schroeder, 2018; Schroeder & Pennington-Gray, 2014; Sigala, 2011) and tourism scholars recommend integrating social media into all phases of disaster management (Pennington-Gray, London, Cahyanto, & Klages, 2011). When a disaster occurs in a tourism destination, social media can provide organizations with a way to communicate and inform tourists. Tourists must receive timely and accurate disaster-related information, especially when the information is related to how tourists should respond to an impending disaster (e.g., evacuation orders). Social media provides the best medium for time-sensitive information to reach a vast audience.

Social media, however, is a broad term used to cover multiple platforms, including review sites, blogs, and video-sharing and photo-sharing websites. Research examining the literature on social media disaster communication has found that most studies assess Twitter (Anson, Watson, Wadhwa, & Metz, 2017; Reuter, Hughes, & Kaufhold, 2018). While Twitter is a key information source and outranks other social media platforms in popularity when seeking news content (Statista, 2017), Facebook and Instagram both outperform Twitter in regards to the number of active users, user engagement, and growth. Facebook continues to be the leading social media platform with over 2.23 billion active users (Statista, 2018). Instagram's popularity has grown faster than both Facebook and Twitter, with 1.0 billion active users in October 2018 (Statista,

2018). Twitter, however, has seen slow growth with only 335 million active users (Statista, 2018). Facebook is also the top platform for user engagement and relationship management (Killian & McManus, 2015; Reuter, Ludwig, Kaufhold, & Pipek, 2015). Therefore, providing real-time updates and information on Twitter may be only marginally effective, whereas Facebook provides greater reach, sharing ability, and engagement between and among audiences. Similarly, the visual focus of Instagram provides organizations with a creative and unique way to communicate disaster information.

While the importance of social media for disaster communication is known, utilizing multiple social media platforms to convey disaster-related information is less frequently discussed. Each platform appeals to different audiences and elicits different emotions and use behaviors (Jin, Lin, Gilbreath & Lee, 2017). Thus, it is essential that organizations consider the characteristics of the platform in their online disaster communication strategies. By catering the message to the medium, disaster-related messages have greater ability to be well-received by the intended audience.

This study takes a Social Media Integration approach to understand how tourism organizations are integrating multiple social media platforms in their disaster communication efforts. More specifically, this study seeks to understand the communication strategies used by multiple local and state tourism organizations across Facebook, Twitter, and Instagram during Hurricane Florence to: (1) examine the integration of content across platforms, and (2) to assess the fit between the disaster message content and the platform.

Literature Review

Social media is an integral component to any disaster communication plan (Ngamassi, Malik, Zhang & Ebert, 2017) and is even more critical when tourists are the intended audience. Tourists are considered to be a vulnerable population during disasters, as they may lack requisite disaster-related knowledge and do not know where to turn for information (Faulkner, 2001). Tourists may not know the local news channels, government agencies, or emergency management organizations or be connected to the disaster communication network where information is disseminated. Tourism organizations are responsible for ensuring the safety of guests and, therefore, have a responsibility to ensure accurate and timely disaster-related information is received. By effectively utilizing social media, exposure to communication can proliferate (Garcia, 2011), thereby increasing the likelihood for disaster-related messages to reach the intended audience.

Social Media Integration

The Social Media Integration Theory Model (SMITM) developed by Isla Garcia (2011) provides insight into the organic nature of social media. According to this model, content posted on social media becomes part of a social media ‘eco system’ which flows naturally without influence (Garcia, 2011). According to SMITM, the process begins where organizational websites contain social bookmarking tools that allow content to be shared across multiple social media platforms. Organizations then also share their content on social networking (i.e., Facebook) and blogging/micro-blogging (i.e., Twitter) accounts. When visitors to the website or followers of the organization share the organization’s content, it gains exposure amongst a new audience, who continues to share the content to more audiences, allowing it to spread virally (Garcia, 2011). This sharing on social media platforms also elicits two-way communication, providing users

with a way to interact and engage with the original content. The more the content is shared and communicated about, the greater exposure the original source has (Garcia, 2011).

SMITM provides a useful way to understand the importance of integrating multiple platforms for obtaining high exposure to a message. However, it is limited in that it does not consider the differences in how messages are consumed between each platform. SMITM suggests that the same content can be posted on all platforms to achieve ideal results. However, as Key and Czaplewski (2017) suggest, “audiences use multiple channels at the same time and the same message often does not translate across channels” (p. 325). Each platform varies in its uses and how consumers engage with the content on the platform. Therefore, while remaining consistent, messages should cater to the way content is consumed on the platform. “The consumer’s purpose for utilizing the platform should be a central focus, and firms should build strategies to facilitate each of these consumer goals” (Killian & McManus, 2015, p. 541.). While some platforms are better for long-term engagement, others are better for short bursts of information (Killian & McManus, 2015).


Killian and McManus (2015) identified four purpose-driven categories for using different social media platforms: relationship management, news gathering, creativity, and entertainment (Table 1). Facebook is widely used for relationship management, whereas microblogging platforms, such as Twitter, are better for news gathering (Killian & McManus, 2015). News gathering strategies are beneficial for sharing important and timely information. As consumers expect more creativity from organizations on social media, a disaster communication strategy can include encouraging the sharing of photos of users’ hurricane evacuation plans, to help persuade others to evacuate as well. Interacting with users through creative outlets facilitates a deeper relationship between the organization (or destination) and its consumers (or guests) (Killian & McManus, 2015). Finally, adding some form of entertainment to the content, whether it be an eye catching photo or suspense-filled video, can not only capture attention, but also hold attention (Killian & McManus, 2015).

For disaster communication, Killian and McManus’ (2015) multi-platform integration strategies by provide valuable insights into how disaster-related information can be crafted to suit the purpose of each platform. For example, Twitter is useful for providing real-time information in short bursts, Facebook can be used to provide information in a way that focuses on the relationship with the tourist, and Instagram can be used to employ creative and entertaining ways to capture the attention of the intended audience and facilitate action.

Killian and McManus (2015) further identified four cross-platform integration strategies that aid in providing cohesiveness among each platform. The “4 C’s of integration” are: consistency, customization, commitment, and caution. Consistency refers to the need for the message and tone of the communication to be consistent across all social media interactions. Lack of consistency can cause confusion and lack of trust among audiences. “Social channels should be viewed as an additional, complementary tool in the customer dialogue toolbox” (Killian & McManus, 2015, p. 544). While remaining consistent in the purpose of the communication, social media should also be customized to meet the customer’s needs and relevant to their relationship with the organization and the strength of the particular platform (Killian & McManus, 2015). Commitment is also a requirement for effective social media integration. Utilizing multiple platforms is only as successful as the commitment the organization places on communicating and engaging with audiences on each platform (Killian & McManus, 2015).

Simply being present on all platforms is not enough, organizations need to maintain and update their messages frequently. Lack of communication on one platform is viewed more poorly than no presence at all (Killian & McManus, 2015). Finally, organizations need to respond with caution to audience commentary. This does not mean that organizations should only respond to positive commentary, but that it is necessary to evaluate whether the reaction represents the majority or minority before making a change in strategy (Killian & McManus, 2015).

Table 1: Purpose-Driven Social Media Construct Definitions

Purpose-Driven Strategy	Definition	Example
Relationship Management	Content for building and maintaining relationships with followers	Thinking about all of our friends, family and neighbors through this. Thank you to all of the first responders for all that you are doing to keep everyone safe.
News Gathering	Sharing important and timely information. Providing news headline and updated information	A mandatory evacuation for coastal counties in South Carolina will begin at noon Tuesday, Sept 11. Lane reversals will go into effect at noon on Tuesday. More information will be posted on our website as conditions change.
Creativity	Engaging consumers in content creation through the sharing of photos, videos, and user-generated content	Share your favorite moment using #FanPhotoFriday to be featured on our website
Entertainment	Provides opportunities for heightened interest and engagement with an organization's social media	

The four C’s of integration also provide useful guidelines for adopting a multi-platform approach to disaster communication. As the purpose of disaster communication is to inform and, particularly in the case of hurricane evacuation, encourage some form of action, an additional “C” – clarity – should be added. Although messages should be customized to meet the behavior and uses of each platform, the overall message should be clear and concise. Disasters increase anxiety among individuals and, therefore, messages should be simple and easy to comprehend so people can respond appropriately (Simon, Goldberg, & Adini, 2015).

For this study, these five C’s of social media integration will be used to assess the effectiveness of state and local tourism organizations’ online disaster communication efforts during Hurricane Florence. The two state tourism organizations – Visit North Carolina and Discover South Carolina – and five local tourism organizations – Wilmington, Outer Banks, Charleston, Hilton Head, Myrtle Beach – were all active users of Facebook, Twitter, and Instagram. Twitter use during disasters has been the focus of many disaster communication studies, including in the tourism literature (e.g., Barbe et al., 2018). Facebook has also been the subject of social media

disaster communication literature. However, it is less frequently studied. This is likely due to the difficulty of obtaining information (when compared to Twitter). The implications of Instagram for disaster communication, however, is not yet known.

Instagram provides a unique context in which to study disaster communication. Instagram's impressive growth has largely been attributed to the emphasis on visual content (Bakhashi, Shamma, & Gilbert, 2014). More and more organizations, including news sources, are switching to visual forms of communication to keep up with consumer demands (Anderson, 2015; McCoy, 2017). Therefore, understanding how Instagram is integrated into multi-platform disaster communication provides a unique context to the study of disaster communication.

Hurricane Florence was a powerful hurricane that caused severe damage to North Carolina (NC) and South Carolina (SC) in September 2018. As the hurricane approached the Carolinas on September 10th as a category 4 (Blake, 2018), mandatory evacuations were set in place for residents and tourists along the entire coastline of SC and the Outer Banks of NC (Breslin, 2018). Wilmington, NC issued a voluntary evacuation (Loeper, 2018). Hurricane Florence weakened in the following days and made landfall as a category 1 hurricane in NC on September 14th. The storm weakened to a remnant low on September 17th as it continued moving north. In total, 55 deaths were attributed to the storm, with 41 in NC alone (Stradling, 2018). An estimated \$17.9 billion in damages and economic loss in the Carolinas resulted from the storm (Sawyer, 2018).

Method

Coinciding with initial evacuation orders, data collection began on September 10th and ended on September 17th. Data was collected using Netlytic, a web-based system for automated collection and analysis of text and social networks (Gruzd, 2016). Netlytic captures a maximum of 1,000 social media posts relating to a search query at a frequency of 15 minutes. In this study, the query was set to collect posts from the official social media platforms of the Destination Management Organizations (DMOs) at the state level (NC, SC) and the local level (Outer Banks, Charleston, Wilmington, Myrtle Beach, Hilton Head). Each of the messages were coded based on the intended purpose of the message (Table 1). Cohen's *Kappa* was calculated for inter-coder reliability and indicated an acceptable level of agreement ($k=0.74$).

Using the 5 C's of integration, the effectiveness of the integrated social media communication was assessed by comparing the content by each DMO across the three platforms. Consistency was a measure of whether the message and tone (passive/active) from each DMO varied across each platform. Those who kept the same message and tone had greater consistency. Customization was determined through the variations in the purpose-driven strategies across platforms. Those who altered their purpose between platforms customized their strategy to meet each platform's use and purpose. Commitment was a measure of the number of posts across each platform. The literature indicates that an integrated social media strategy uses each platform equally. Caution and clarity were determined through the relevance and conciseness of the message.

Results and Discussion

A total of 148 posts relating to the disaster were collected from Twitter, Facebook, and Instagram by all seven DMO accounts between September 10 and 17, 2018. The majority of

posts were on Twitter (62.2%), followed by Facebook (31.8%). Very few posted on Instagram about the disaster (6.1%).

Table 2. Disaster Communication by DMOs Across Social Media Platforms

	Twitter		Instagram		Facebook		Total	
	n	%	n	%	n	%	n	%
Visit North Carolina	5	38.5	3	23.1	5	38.5	13	100.0
Discover South Carolina	4	44.4	0	0.0	5	55.6	9	100.0
The Outer Banks	2	33.3	0	0.0	4	66.7	6	100.0
Wilmington and Beaches	21	87.5	2	8.3	1	4.2	24	100.0
Explore Charleston	15	65.2	4	17.4	4	17.4	23	100.0
Visit Myrtle Beach	41	60.3	0	0.0	27	39.7	68	100.0
Hilton Head Island	4	80.0	0	0.0	1	20.0	5	100.0
<i>Total</i>	92	62.2	9	6.1	47	31.8	148	100.0

Assessing the purpose-driven platform strategies across platforms (Table 2) shows that Twitter was most frequent for news gathering (64.8%). This is consistent with the literature, which suggests that micro-blogging platforms are best for providing short bursts of information during disasters (Killian & McManus, 2015). Instagram was not successfully used for creative communication strategies and, while Facebook is best for relationship management and entertainment, news gathering was still the most frequent activity.

Table 3. Purpose-Driven Strategy Use Across Platforms

	Twitter		Instagram		Facebook		Total	
	n	%	n	%	n	%	n	%
Relationship Management	11	36.7	5	16.7	14	46.7	30	100.0
News Gathering	83	64.8	6	4.7	39	30.5	128	100.0
Creativity	0	0.0	0	0.0	0	0.0	0	100.0
Entertainment	0	0.0	7	31.8	15	68.2	22	100.0

Regarding the Five C's of multi-platform integration, each DMO displayed both effective and ineffective integration practices. Of the seven DMOs, SC was the least effective, as they communicated the same disaster-related messages on both Facebook and Twitter, and neglected Instagram entirely. SC appeared almost too cautious in their multi-platform communication strategy, as they rarely posted original content. Instead, their posts were mainly retweets and shares from local DMOs in the state. Further, SC lacked clarity as their only original post informed users that they are following the hurricane's path with no follow up, except messages of support and community once the hurricane passed.

NC was effective in maintaining consistency and commitment across platforms, and had clear and concise messages. However, they failed to customize the content to meet the needs of each platform. Messages consisted largely of support and thoughts to those impacted by the disaster. Few news messages were posted. The findings for The Outer Banks were similar.

Wilmington, Charleston, and Myrtle Beach each provide examples for disaster communication and multi-platform integration best practices. Regarding customization, Wilmington effectively

utilized each platform for its intended purpose. Twitter was used to provide multiple short bursts of immediate information, and information on Instagram was presented in a photo so that it would not go unseen by users if hidden in the caption. By placing the important information in the photo, Wilmington successfully matched the content to the medium. Explore Charleston also effectively employed the Five C's by providing consistent messages and customizing the message to fit the platform.

Visit Myrtle Beach was very present on Twitter and Facebook. However, significantly lacked commitment to Instagram. While they did not effectively integrate all social media platforms, they did provide great examples of entertainment driven strategies. On Facebook, Myrtle Beach provided links to live webcams to allow their audience to see the destination as the hurricane unfolded. They also had a live video focused on hurricane evacuations, where users could ask questions and obtain feedback in real-time.

Conclusion

This study provides important theoretical implications as it is the first of its kind to look at multi-platform integration for disaster communication in tourism. This study also informs destinations and tourism organizations as to the ways to effectively integrate social media communications during a disaster. Examples from Hurricane Florence indicate that DMOs, while active on multiple platforms, are not integrating their communications effectively to obtain the best reach and grab the attention of the audience. Additional theoretical and practical information will be discussed in the presentation. Future research should examine audience engagement between each platform in relation to integration to provide further evidence of the importance of implementing the five C's.

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