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# **Utilizing the social media networks of public figures to gather visitor data: A conceptual idea and preliminary analysis**

## **Introduction**

Social media has become a popular tourism research topic over the last decade, and grown increasingly popular in use with tourism practitioners. As recent research suggests, social media can influence the consumer decision process, and tourism marketers can benefit from social media engagement (Hudson and Thal 2013). Furthermore, through social media practitioners are able to provide customized information to individual tourists (Zeng and Gerritsen 2014). Leung, Law, Van Hoof, and Buhalis (2013) conducted a content analysis of all tourism social media related academic research articles published from 2007 to 2011. Researchers have examined from a consumer perspective how social media impacts the travel planning process, and from a tourism supply-side, social media and promotions, management, and applications in research. Research in general on social media in tourism is still in its early stages (Zeng and Gerritsen 2014). The purpose of this paper is to expand the discussion on tourism and social media by further exploring the use of social media as a data collection tool. The concept of utilizing a public figures social media network to recruit study participants is examined. Preliminary findings from a recent study are used to highlight the methods potential and limitations.

## **Literature Review**

Previous research has used Facebook to recruit participants for the purpose of better understanding how users engage with Facebook. Wilson, Gosling, and Graham (2012) indicated in their review of Facebook research that social scientists have used Facebook to recruit participants, test hypotheses, and observe behavior online. The purpose of the authors review was primarily to understand how researchers are collecting data to study Facebook use. The authors noted three ways participants have been recruited for Facebook research: recruitment offline to gather information related to Facebook use, creating Facebook applications to recruit participants and collect data, and data crawling to gather publicly available information without the active participation of Facebook users.

Recently researchers have been using Facebook and other social media platforms to recruit participants online for research purposes beyond usage alone, including examining how social media affects participants. Marder, Joinson, and Shankar (2012) examined how social media can cause anxiety and tension in different social spheres. They recruited study participants on Facebook through University groups and snowball sampling using the researchers' own Facebook friends. Laroche, Habibi, and Richard (2013) used a variety of social media platforms, including Facebook and Twitter, to examine how brand loyalty is affected by social media. The procedures of using social media to recruit participants were deemed acceptable since social media was a key component of the research hypotheses. Both studies were able to recruit suitable samples for their respective research.

Researchers in the medical field have been some of the most frequent users of social media to recruit study participants, particularly through paid Facebook advertisements. Social media is viewed as a fast and affordable means to recruit study participants (Ramo and Prochaska 2012). Ramo and Prochaska (2012) used Facebook to recruit young adults for a study on tobacco use and other substance use. Paid Facebook advertisements were used to recruit participants

between the ages 18-25 year old. Facebook was found to be a useful, and cost-effective tool for recruiting study participants. Fenner, Garland, Moore, Jayasinghe, Fletcher, Tabrizi, Gunasekaran, and Wark (2012) used paid Facebook advertisements to recruit young woman to a health study. The age distribution of the resulting sample was representative of the target population. The process of using Facebook to recruit participants was found to be effective, and potentially useful for reaching into traditionally harder to reach nonurban communities. Through paid Facebook advertisements, Richiardi, Pivetta, and Merletti (2012) found that in addition to helping recruit pregnant women for their study, it also increased the number of “fans” that liked their study’s Facebook page by 150. The use of paid advertisements can cost thousands of dollars overall, but pending the response can be viewed as a few dollars per completed survey, or pennies per ad clicked (Ramo and Prochaska 2012; Richiardi et al. 2012).

While the previous studies have found success using paid advertisements to recruit participants, not all studies have enjoyed such success. Kapp, Peters, and Oliver (2013) used Facebook advertisements to recruit women for a study about mammography. They were only able to recruit nine participants who proceed beyond the introductory page of their online survey of the 280 women who clicked on the ad, and nearly 375,000 reached by the ad. They argue that some of the biggest challenges of using Facebook advertisements for recruitment is developing an ad that generates interest from potential participants without creating a biased sample, and motivating participants to complete the survey. Since the total cost of using paid Facebook advertisements can run into the thousands of dollars, it is important to note that this method is not always successful.

Research on social media in tourism may still be in its infancy, but an area that has received even less attention in the field is the use of social media to recruit study participants. However, several tourism studies have found success recruiting participants through social media. Parra-López, Bulchand-Gidumal, Gutiérrez-Taño, and Díaz-Armas (2011) examined participants’ intentions to use social media while organizing and taking a vacation. Participants were recruited through Facebook, blogs, and other social media platforms by posting a study description and a link to the questionnaire on pages relevant to the target audience. Of the 410 responses received, 404 were usable for analysis (98.5%). Furthermore, the sample was found to be similar to statistics of internet users as a whole, suggesting it was not significantly biased. Pearce and Gretzel’s (2012) qualitative study used Facebook as a tool to recruit focus group participants who were moderate to heavy digital users of digital communication. The recruiting technique was useful in helping them find participants for a study that examined how technology dead zones might influence travelers’ experiences. Lee and Paris (2013) used social media to recruit participants for special events and festival research. Participants were invited to become “fans” of Facebook event pages, and then randomly selected from there to participate in a survey. While the method resulted in a response rate of only 20 percent, the sample size was deemed acceptable for analysis purposes. The authors suggested that future research with larger, more diverse sample sizes could produce more generalizable results.

The issue posed by online samples, including social media, are not new. Several limitations to online research have been highlighted by previous studies. In many cases, respondents are self-selected (Parra-López et al. 2011), choosing themselves whether or not to participate as opposed to being randomly selected. Sampling procedures create a potential for bias in part due to the voluntary nature of participation, making it difficult to generalize findings (Hwang and Fesenmaier 2004). Hwang and Fesenmaier (2004) found that self-select participants were not

representative of tourism website potential users, as the probability of selection varied significantly by demographic characteristics and was more likely to include participants who were familiar with the internet and active users of it to plan trips. In addition, it's not possible to identify the characteristics of respondent and non-respondents (Hwang and Fesenmaier 2004), making it more difficult to generalize the results of the sample. Even the use of paid advertisements, which can reach hundreds of thousands of people has its limitations. Thomson and Ito (2014) advanced research on the use of Facebook as a recruiting tool by examining its potential for recruitment in a multi-cultural, multi-national study. They concluded that the use of paid Facebook advertisements in a multi-national study have several limitations, including gender-bias.

One means of recruiting participants via social media that has yet to be explored is the use of a public figures social media connections. A public figure can be defined as “a famous person whose life and behavior are the focus of intense public interest and scrutiny” (American Heritage Dictionary 2011). Public figures, in particular government officials, frequently use a variety of social media platforms to interact with a variety of interested parties, including local residents, other public figures, and others interested in what they do or what they have to say. Their social networks can include hundreds, if not thousands of followers, fans, or friends. Golbeck, Grimes, and Rogers (2010) analyzed the Twitter posts of United States Congress members. Findings suggest Congress members are primarily using Twitter for self-promotion, including: sharing articles about themselves, links to their blog posts, and what they are doing on a daily basis. However, Twitter was also found to be a means of direct communication between the Congress members and citizens. Similarly, politicians have used social media to communicate one-way, non-interactive promotional messages during times of election (Macnamara and Kenning 2011). In addition to their self-promotional nature, posts often have no added value as the information can be found via other sources (Renz and Sullivan 2013).

Not all social media use by government officials is self-promotional. A study by Graham and Avery (2013) found that government officials most commonly use Facebook and Twitter, with the majority of posts and tweets pertaining to local special events. Government officials most commonly posted daily or weekly. While not pertaining to specific individuals, Bonsón, Royo, and Ratkai (2015) found that local governments most frequently use social media to post about topics related to tourism, city promotion/marketing, and cultural activities and sports, but for local residents, topics that directly affect their lives like municipal management are the most engaging. The use of photos was also found to provoke higher levels of engagement. Local governments actively using social media by sharing interesting and relevant content can promote citizen engagement. Nonetheless, social media is low cost, easy to use tool for local governments which has the ability to reach large audiences, but is currently being underutilized (Graham and Avery 2013). Here it is suggested that social media can be better utilized by using the social networks of public figures to recruit participants and gather data. With their assistance, this method could be a useful tool providing tourism practitioners with important information from resident and visitor perspectives.

## **Methods**

To illustrate the potential of using a public figures social network for data collection, this paper will present preliminary results from a recent county parks visitor study. The present study used a mixed-mode survey approach to gather visitor data for two Milwaukee County parks on the

coast of Lake Michigan. Onsite data was collected from July 3, 2015 through August 23, 2015. A stratified convenience sample was used to get a representative sample of weekend and weekday users, and users of various park amenities (beach, trails, golf course, etc.). Onsite participants were asked questions pertaining to trip characteristics, activities participated in, how they heard about the park, whether or not they followed Milwaukee County Parks on any social media, their perceptions on the importance of various facilities and services and the parks performance, their satisfaction, return intentions, and demographics. Undergraduate student research assistants administered the survey. The procedure resulted in very little missing data and 113 usable onsite questionnaires (70.2% response rate). To avoid exhaustion, after participating in the onsite survey, participants were asked if they would be willing to answer a few additional questions online. Additional questions on the follow-up survey administered through Qualtrics included items pertaining to park quality, a satisfaction scale, alternative recreation sites, place attachment, desired facilities and services, and additional demographics. Eighteen of the 50 (36%) email follow-up surveys sent were completed.

Due to the small sample size an additional online questionnaire was created. This questionnaire included the onsite and follow-up online questions that were asked to onsite participants. However, this survey was only distributed online via the Mayor of South Milwaukee's Facebook page and blog. The Mayor agreed to periodically post the survey link along with the purpose of the study on his Facebook page and blog between August 19, 2015 and October 19, 2015. As a means to prevent "ballot box stuffing," survey settings were selected that only allowed one submission per IP address. Knowing that some participants may have never visited either park, Qualtrics skip logic was used for participants indicated they had never visited either park. These participants were only asked where they recreated instead, do they follow the County on social media, what facilities would they desired if they ever visit, preferred future contact method, and demographic information. In addition to the link and purpose of the study provided by the researcher, the Mayor included the following statement in his posts:

"Please take it, and share the link with your family, friends and other users of the local parks. In fact, even if you haven't been to Grant Park recently, please take it — your feedback is valuable, too...The honest feedback they gain should be invaluable. Please do your part and share your thoughts — good, bad and everything in between."

They Mayor has over 500 blog followers and approximately 500 Facebook friends. It was not determined how many blog followers were also Facebook friends. Upon posting the survey link, 180 responses were collected within the first 24 hours. In total, Qualtrics indicated that 582 surveys were started and 366 participants went through and reached the end of the survey. Six participant indicated they had visited neither park. For comparison purposes here, these participants were removed for the following analysis. In total, 353 responses (60.7%) were usable for analysis. No incentives were given for either onsite or online participation.

## **Results**

Table 1 presents a comparison of demographic and trip characteristics of the onsite participants and the online only participants recruited through the Mayor's social network. Twelve online participants stated that they traveled 50 miles or more to visit the park compared to only two onsite participants. Overall, online respondents were more likely to be female and white than onsite participants.

Table 1. Demographics and Trip Characteristics

	Onsite (N = 113)	Online (N = 353)	Total
How many times have you previously visited this park in the past 12 months (mean)	26.1	42.3	38.66
Approximately how many miles did you travel to get to this park? (mean)	12.5	21.2	19.1
Number of participants traveling 50+ miles to the park	2	12	14
Group characteristics current (%)*			
Alone	21.4	17.0	18.1
With family only	45.5	49.7	48.7
With friends only	22.3	9.7	12.7
With family and friends	5.4	20.5	16.8
With an organized group	1.8	.9	1.1
Other	3.6	2.3	2.6
Group size (mean)	3.1	5.4	4.8
Gender (%)			
Male	44.2	32.9	35.6
Female	55.8	67.1	64.4
Age (mean)	47.4	51.9	50.7
Race (%)			
American Indian or other Native American	0.0	2.5	1.9
Asian or Pacific Islander	5.4	0.1	1.7
Black or African American	0.0	0.0	0.0
Mexican or Mexican American	5.4	0.1	1.7
Other Hispanic or Latino	0.9	0.1	0.9
White (non-Hispanic)	87.4	94.6	92.5
Other	0.9	2.3	1.9

\*Note: Online participants were asked about their group characteristics on their most recent trip to the park.

One-way ANOVA was performed to examine any significant difference between onsite and online participants for number of previous visits, travel distance, group size, and age. Online respondents were significantly older than onsite respondents ( $F=9.16$ ,  $p<.05$ ). Group composition was fairly similar between onsite and online respondents, but online respondents indicated significantly larger group sizes ( $F=5.93$ ,  $p<.05$ ). There was no significant difference found between participants for previous number of visits ( $F=3.71$ ,  $p=.055$ ) or miles traveled ( $F=.42$ ,  $p=.517$ ).

## Discussion and Conclusion

As previous research has indicated, social media is viewed as a fast means to recruit study participants (Ramo and Prochaska 2012). That was evident here. Although the survey link remained active for two months, all but six of the responses came in the first three weeks. After removing respondents with incomplete data, 60.7% of the data remained usable for analysis.

This could be attributed at least in part to the assistance of the Mayor, and his strong following on social media. Pan, Woodside, and Meng (2014) found that a researcher in a high-powered position was able to generate a greater online response rate than someone in a lower position. In this case, a government official assisting in the data collection was able to help generate a good response rate. When viewed as a whole, the online data combined in conjunction with the onsite data provides a more diverse sample in terms of race, group size, and participants who could be considered tourists based on travel distance. However, due to the short duration of the onsite sampling period, it cannot be stated that the inclusion of the online sampling help produce results more generalizable of the park users.

There were some variations in the two samples, and thus the advantages and disadvantages of the method used can be discussed. As a positive, public figure can passionately communicate with followers in a way that generates higher response rates. Conversely, the sample could be biased based on the liking of the public figure. Future studies should utilize the social networks of multiple public figures, and if political, from multiple parties. It's quite possible here that sampling reached beyond the public figures own followers based on the Mayor's invitation. However, the main purpose of the study from which data was analyzed here was to gather input on visitor characteristics and preferences, and a detailed analysis of the Mayor's social network, and the extent to which the survey was shared beyond his blog followers and Facebook friends was not conducted. Future research could examine the extent to which snowball sampling occurs, extending the original reach once a public figure shares a survey link.

Using the social networks of public figures can be a valuable resource for tourism research. Particularly at the local level, using public figures' social networks could be an effective means of gathering information on resident attitudes towards important tourism issues. An obvious limitation to this research and similar research in the future is the exclusion of participants who do not use social media. Onsite data collection or other methods may be needed to reach this population. As a side note, another potential option of contacting participants online could be a destinations or agencies own social media accounts. In this particular study, 89.4% of onsite participants and 68.8% of online participants indicated that they did not follow Milwaukee County Parks on any social media. The majority of those that did follow the County on social media did so on Facebook (23.2%). It might be worthwhile to explore potential collaboration efforts between public figures and local tourism organizations who have a mix of local and nonlocal followers. Could a collaboration between the two increase sample sizes while reducing bias? While the results presented here are preliminary, they show promising support for collecting data through a public figures social network.

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