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## **Surveying Backpackers through Facebook: A Case for a Mixed-Mode Dual Frame Procedure**

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### **ABSTRACT**

*The emergence of social media has created a new medium for administering surveys for tourism research. Deciding the optimal collection method can be a complicated question. In the case of backpacker, destination based surveys, email surveys, survey links posted in online forums, and social media sites like Facebook, have all been used to administer surveys. The purpose of this study is to present the case for a mixed-mode dual frame sampling procedure as an optimum for targeting backpackers. The sampling procedure discussed in this paper included self administered surveys through backpacker specific groups on Facebook.com, and self-administered surveys at backpacker hostels in Cairns, Australia.*

**Keywords:** *Virtual Methods, Backpacking, Online Sampling, Destination-Based Sampling*

### **INTRODUCTION**

This paper discusses the issues of surveying backpackers through Facebook Groups. Targeting backpackers for survey research entails some unique issues and considerations (Paris, 2008). Backpackers are very mobile, traveling between developed backpacking centers or enclaves and more remote, off-the-beaten-path destinations. Backpacking is also a global phenomenon contributing to the difficulty of obtaining a representative sample. In the past, survey research has targeted backpackers in backpacker enclaves. Sampling backpackers in enclaves, particularly hostels, has provided a means of cross-sectional data collection, but with some limitations. The sample of backpackers from one backpacking enclave in one location might differ from that in another part of the globe resulting in coverage and sampling error (Dillman, 2007). However, sampling backpackers at multiple destinations can be constrained by time and money.

Some studies have applied online surveys as a remedy to this coverage issue. The Backpacker Research Group (BRG) conducted a study that used an online survey administered online, via e-mail, in partnership with the International Student Travel Confederation (Richards & Wilson, 2003a). Their study did provide a large global sample with individuals from numerous nationalities and overcame coverage and sampling errors stemming from geographical constraints of administering surveys in backpacker enclaves. Their study did have some limitations of its own as it was sent to student travelers, which excludes older and non-student backpackers.

The emergence of social media has created a new medium for administering surveys for tourism research. Deciding the optimal collection method can be a complicated question. In the case of backpacker, destination based surveys, email surveys, survey links posted in online forums, and social media sites like Facebook, have all been used to administer surveys. The

purpose of this study is to present the case for a mixed-mode dual frame sampling procedure as an optimum for targeting backpackers. The example discussed in this study is based upon the data collection procedure employed by (Paris, 2010b).

## **BACKGROUND**

Facebook groups have been used previously to target backpackers. Paris (2008) administered an online survey through backpacker specific Facebook Groups and Lonely Planet's Thorn Tree Forums. The justification of using Facebook Groups was that self-identified backpackers were able to be targeted without concern for their geographical location. Additionally, Lonely Planet Forums allowed for older backpackers and backpackers from many nationalities, to be targeted, as older backpackers have been found often to be more active in their participation in the online travel forums (Paris, 2010a). The use of Lonely Planet also had the disadvantages of being an open community making the calculations of a response rate nearly impossible.

The optimal data collection method is one that provides the best method within the constraints of the research that addresses that research question (de Leeuw, 2005). Based on these previous backpacker studies, this paper presents an application of a mixed-mode dual frame sampling procedure to survey backpackers. This procedure includes the administration of surveys through two modes:

1. self administered surveys through backpacker specific groups on Facebook.com, and
2. self-administered surveys at backpacker hostels in Cairns, Australia.

Within the constraints of time and funding, the decision was made that this was the optimal sampling approach as mixed-mode sampling can provide the opportunity to balance the limitations of each individual mode (de Leeuw, 2005). The sampling procedure provided a means of targeting this difficult-to-sample population (Lepkowski, 1991). Mixed-mode dual frame sampling approaches are typically used in international research when a unimode approach is not feasible or optimal (de Leeuw, 2005). Combining these two modes allowed for a diverse sample of backpackers that includes individuals from many different nationalities, individuals at home or traveling and not in a backpacker enclave, individuals that do not use Facebook or participate in online groups, older backpackers, and individuals traveling for an extended period of time. While the sampling coverage of all backpackers is nearly impossible because the global and mobile nature of backpacking, it is hoped that the conscious decisions made in the sampling procedure helps to reduce the coverage error of previous studies and allow for adequate inferences to be made about backpackers. The decision to use online surveys as one of the modes of data collection was made after careful consideration of the advantages and disadvantages of online surveys, both in general and in the particular case of this research.

Online surveys have been used since the mid 1990s, and the advantages and disadvantages are well documented. Online surveys are generally distributed through either email, a webpage based survey, or a combination of the two (Van Selm & Jankowski, 2006; Andrews, Nonnecke, & Preece, 2003). The current developments of Web 2.0 technologies have not received a lot of attention yet in the literature on online surveys, but should have a large impact on the development and complexity of online surveys. Wright (2005) outlined several key advantages for online surveys including: access to unique populations, access to individuals in distant locations, automated data collection, ability to collect data while working on other tasks, and comparatively lower costs than other surveying methods. Wright also discussed several disadvantages that exist, and strategies to reduce them. Self-selection bias and non-response error are major limitations of online surveys (Sills & Song, 2002), as some individuals

are more likely to participate in surveys than others (Wright, 2005). Additionally, many internet users are desensitized to survey requests online resulting in a propensity to ignore survey invitations. Self-selection bias is an issue in other survey methods as well, such as mail-based surveys.

The primary issue is the sampling, as it is often very difficult to accurately estimate the size of an online population. One way to reduce this is to use an email list to send an online survey link to. In this study online messages were sent to individuals that were members of Facebook backpacker groups, which are closed online communities. Combining an online survey link with a message can preserve respondents' anonymity, which is lacking in regular email surveys (Tasci & Knutson, 2003). The anonymity of online survey respondents will be a growing concern when social media is used as many individuals' 'real' identity increasingly converges with their 'virtual' identity.

Another of discussed obstacle for online surveys is the access to the internet, known as the digital divide, which has been seen as a major limiting factor in previous literature. However, the increased convergence of internet, communication devices, and tourism has really reduced this limitation. Traditional data collection methods such as mail and phone could become outdated, as data collection techniques are changing to keep up with the changing lives of research subjects (Tasci & Knutson, 2003). This point, arguably, is even truer for the study of backpackers. Backpackers' inherent mobility means that, in some cases, backpackers' only permanent/stationary addresses are their email addresses and/or social media profiles (Paris, 2010a; Mascheroni, 2007).

In the current example discussed in this study, less than one percent of respondents to the destination based survey in Cairns indicated that they do not log onto the internet at home. Additionally, only three percent of the respondents indicated that during their current or most recent trip they did not access the internet.

## **SAMPLING PROCEDURE**

For this study, a survey was administered through ten backpacker-specific groups on Facebook.com. The purpose of the survey was to gain insight into the respondents' perception of backpacking culture (see Paris, 2010b). Because of the breadth of the study, the sampling procedure outlined in this paper was employed to gain as wide of sample as possible within the constraints highlighted in previous backpacker studies and the practical constraints of the researcher in regards to time and money.

Facebook was chosen because it is the largest social networking site in the world, and provides the virtual infrastructure that allows groups of people with a common interest to interact socially. Facebook Groups allow individuals to interact as a group through text, pictures, and video, providing a much more developed level of interaction than found through traditional text based online interactions, such as those that occur in most internet forums. Facebook Groups also allow for the researcher to calculate a response rate because messages are sent to all members of the group. The number of potential respondents is known, unlike conducting a survey through an online forum or website. To select the ten groups, first a search was conducted using the internal search engine on Facebook. Based on the search, the first twenty five backpacker groups that fit the criteria for the study were selected.

In order to gain access to the backpacker groups, the researcher made contact through Facebook with each of the twenty five group's administrators of which 15 responded. Ten of these administrators made the researcher an admin of the group, allowing complete access. A similar strategy for gaining access to online communities was discussed by Wright (2005). While every effort was made to limit potential biases in the selection of the Facebook groups, some were unavoidable. First, the primary language of each group was English, although some groups' members interacted in a multitude of languages. Facebook is now available in many different languages. While a geographical bias cannot be completely ruled out, it does appear to be limited based upon the spread of nationalities represented in the sample of respondents and the fact that several of the groups used also were focused upon a specific region, including Asia, Australia, Europe, Central America, and Africa. On the surface these appear to be geared towards backpackers with an interest in traveling in those regions to interact, and that might have been the original case. During the examination for the acceptability of each group it was observed that many individuals from destinations in the regions were eagerly interacting and engaging with potential visitors. This interaction has potential for future studies on virtual host-guest interactions.

It was important to gain full administrator access to the groups in order to be able to send direct messages to all group members. A link to the 'backpacker survey' and a short message explaining the purpose was sent to all the members of ten backpacker-specific groups on Facebook.com. The message was tactful and offered to share results of the study with the community when they were available. The message also included an advanced apology for any inconvenience caused by the message or survey. Two follow-up/reminder messages were sent after one week and two weeks. These messages thanked those who had completed the survey already and provided a friendly reminder for those who had not. A final message was also sent after 1 month to thank everyone for their participation. It was hoped that these steps would help to reduce the self-selection bias by creating a more personable relationship with potential respondents, however there is no way to calculate if self-selection bias was indeed reduced.

Random sampling is nearly impossible to do online, however sampling frames can be obtained through closed internet communities such as listservs, Usenet newsgroups, multi-user games (Kaye & Johnson, 1999), and in the case of this study Facebook Groups. Self-selection sampling design was used, with a predetermined sampling frame that included the members of the ten backpacker groups on Facebook.com. While the results, arguably, cannot be directly generalized to the whole population of backpackers, the results should provide strong indicators of the backpacker phenomenon, and will be complemented with destination-based data in order to expand the sampling frame and reduce converge error.

In Cairns, Australia, surveys were administered at 15 pre-selected backpacker hostels in June 2009. The specific locations to administer the survey were selected after considering past backpacker surveys administered in Cairns (Prideaux & Coghlan, 2006; Prideaux, Falco-Mammone & Thompson, 2006). Cairns, Australia was selected as a data collection location because the advanced level of development as a backpacking industry. Cairns is a gateway to both the wet tropics of North Queensland, to the Great Barrier Reef, the Australian Outback and a backpacker trail stretches from Melbourne and Sydney, up the Gold Coast to Northern Queensland. Cairns can also be considered a well developed backpacker enclave, as it has a dense collection of backpacker hostels in the downtown area providing access to a large number of potential respondents. Because of the transient nature of backpackers, conducting survey research outside of well developed backpacker enclaves can be difficult.

Using a purposive sampling method, respondents were approached in Cairns in common areas of each hostel. When respondents were approached, and asked if they could take a few minutes to complete the 'backpacker survey', thereby allowing them to object to being associated with backpacking. Local residents were not allowed to complete the survey. Collecting data at both backpacker destinations and in online communities reduces limitations that have been associated with both methods of data collection in the past.

## RESULTS AND DISCUSSION

The data collection resulted in a total of 519 surveys, of which 493 were usable. Out of the 275 surveys distributed in Cairns, Australia, 230 were completed for a response rate of about 83.6%. The online survey was distributed through a message via ten Facebook backpacker groups. The survey link was sent to a total of 1453 individuals, with careful examination of each Facebook group member list to be sure of no overlaps. Out of the 1453 individuals 283 completed the survey for a response rate of 19.5%. Response rates for email surveys are commonly under 20% (Witmer, Colman, & Katzman, 1999; Deutskens, Reyter, Wetzels, & Oosterveld, 2004; Sax, Gilmartin, & Bryant, 2003).

The between-mode differences in response rate could have several explanations. First, individuals surveyed in hostels were traveling. Many backpackers value leisure, relaxation, and often have a much more leisurely pace to their daily lives than they would back home (Paris, 2010c; Paris & Teye, 2010). Additionally, the survey was administered mid-morning, when many of the respondents were having breakfast. Many of the individuals who responded to the online survey were not currently traveling and were living their normal daily lives. Similar to the reasoning of Sax, Gilmartin, and Bryant (2003), the low response rate for the online survey could be due to the increasingly fast-paced culture and the growing time demands on each individual's attention in their daily lives. Another explanation for the lower response rate for the Facebook survey could be that some people just did not check their Facebook inbox during the data collection period. Little is known about how regular individuals check their Facebook inboxes, so many individuals might not have received the messages in time to respond to the survey. Another reason for low response rate could be that it is easier to refuse an online survey than other surveys administered by phone, mail or face-to-face as individuals don't have to deal with a psychological factor of social approval or guilt that they are wasting something that is valuable (stamped return envelope) (Mavis & Brocato, 1998).

While response rates are consistently lower for online surveys, several studies have found that the quality of responses were better for online surveys than other modes. Schaefer & Dillman (1998) found that the responses to an email survey included more complete questionnaires, and lower item non-response than a paper version. Even answers to open-ended questions have been found to be longer (Bachman, Elfrink, & Vazzana, 1996), suggesting that the freedom for an individual to respond on their own time can contribute to the completeness of a questionnaire. Representativeness in survey research is more important than response rate (Cook, Heath, & Thompson, 2000). While, response rate is a usual measure of representativeness, even studies with a high response rate can have large amount of non-response bias (Sills & Song, 2002).

It is therefore important to try to understand any non-response bias that might be present in each mode, and the implications of that bias for this study. It is very difficult to measure non-response bias; however, demographic data can provide some insights into the differences in who responded to each survey. In this study, the biggest difference between each mode of

administration was gender. Fifty-six percent of the respondents to the online survey were men, while fifty-six percent of the respondents to the hostel-based survey were women. Women have made up a larger percentage of the respondents in the majority of the recent studies on backpackers (Paris, 2008) indicating that either more women travel as backpackers, or that women are more likely to be open and complete paper based surveys in hostels. Sax, Gilmartin, and Bryant (2003) found that when given the choice, men were more likely to choose an online survey, and women were more likely to choose a paper based survey. Similar studies have found that men are more likely to respond to online surveys than women (Palmquist & Stueve, 1996; Kehoe & Pitkow, 1996; Smith & Leigh, 1997). Another difference in the two groups was age; the average age of the online respondents was almost 27, which were over 3 years older than the average hostel respondent. Many older backpackers have constraints to traveling for extended periods of time as they once did, such as jobs and families, but many do still actively participate in the backpacking culture through online communities (Paris, 2010a). Additionally many older backpackers are more affluent, and can afford to stay in more expensive accommodations, even though they still enjoy similar experiences as their younger counterparts (Paris, 2008). The third large difference was the nationality of respondents. Respondents of the online survey represented 21 additional nationalities than the hostel based survey. The hostel based survey in Australia had large percentages of respondents from United Kingdom, Australia, Western Europe, and New Zealand. The online survey had a larger percentage of respondents from United States of America, Canada, Scandinavia, South East Asia, Africa, Latin America, and the Middle East.

The dramatic differences of the gender, age, and nationality of respondents to the two modes of administration point to potential non-response bias and converge error in previous studies on backpackers that have focused administering surveys using a single mode. Much of the literature on multi-mode approaches, non-response error, and online surveys would view these differences as limitations to the study. This would be particularly true if each of these samples in this study were meant to be representative and make inferences about the general population on their own. Additionally these differences would be major limitations, particularly in the analysis of the data if the study was focused on comparing the two samples. For this study, however, these demographic differences between the two survey modes should be viewed as strengths, since the data from the two modes could be complimentary.

## **CONCLUSION**

By using a mix-mode survey approach, this study is able to expand the coverage to people that might have not been targeted through a singular approach. In this unique case, the dual frame mixed-mode approach has more advantages than limitations. Based on previous literature on backpacking and methodology, in this particular case combining the data from each survey provided a stronger sample from which Paris (2010b) could make inferences regarding the overall backpacker culture. This paper provides an example of considerations that need to be carefully reflected upon by researchers that administer surveys through Facebook. Recent developments in social media provide a cheap, quick, and potentially useful means of targeting respondents and administering surveys for tourism researchers. The allure of collecting a large number of respondents in short amount of time with minimal financial cost needs to be balanced with methodological and/or theoretical justification.

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