

1. the team, not Dr Goldberg, must construct and contact the sample

2. cbook may be a better tool than the directory for this, since it is not obvious how to get a *random* sample from the online directory.

3. you probably want to stratify your sample into graduate and undergra groups, since the responses will be somewhat different.

36-303 | Team E

ZhiJun (Z) Huang, Cen (Kayco) Zhou, Jiayi (Jessica) Cui, Terence Kwak, Emily Lee

Proposal: Analysis of the Off-Campus Housing Search for CMU Students

A. Why is this topic interesting? Why does this survey need to be done now? Is there a client for whom you might do the survey?

Finding an off-campus housing, a residence with less certainty and safety compared to common homes and school dormitories, is essentially the first independent search for the majority of college students. It is not hard to associate this searching experience with difficulty and frustration. In particular, some Carnegie Mellon University (CMU) students found such experience below satisfactory. Armed merely with such tools as "Craigslist.org", "Rent.com", and "CMU Misc. Market", CMU students can be jeopardized, especially by the lacking of efficiency, safety, and validity of information. This survey is intended to identify the existing difficulty and provide a strong basis for viable resolutions as soon as possible. Moreover, we are interested in the students' preference in off-campus housing. The result of this survey will be of great interest to many, such as CMU Student Affairs, property managers, college students and college student parents.

B. What question(s) do you propose to study? Give a brief answer that would have been understandable by a non-statistician.

From a randomized sample of CMU students, we plan on measuring CMU student housing preferences along with the most common difficulties that CMU students currently face in searching for off campus housing. We are looking to gather data from CMU students who have looked for or are currently looking for off campus housing. Therefore, to ensure we obtain the appropriate data, we must first ask if the participant has looked for or is currently searching for off campus housing. From those who have looked for or are currently looking for off campus housing, we wish to ask questions concerning their housing preferences and difficulties in searching for housing. Examples of such questions are as follows:

1. What are the common platforms used in the search of off-campus housing? What is the level of accessibility, accuracy of information, likelihood of success, etc. of such platform? We will assess each category above by having respondents rating the platform (on a scale of 1 to 5) with respect to the category. Also, we will provide examples for the scale so respondents follow a similar scale (possibly using the Anchoring Vignettes method).

2. What is your preference for an off-campus housing? [i.e. Do you prefer an apartment or a house? What is your acceptable distance from your residence to campus (5-minute-walk, 10 minutes by bus, etc.)?]

3. Do you think this searching experience can be improved, if so, in what ways?

C. What research has already been done on the topic or on the theoretical construct of central importance to your topic? What could be learned from survey results?

Emily: <http://www.ctpost.com/local/article/Students-don-t-often-consider-fire-safety-2755535.php> (Jan 29, 2012)

This article, "Students Don't Often Consider Fire Safety", from the Connecticut Post by Linda Conner Lambeck discusses important features that should be looked for by college students when looking for off-campus housing, including fire safety features. The article is important in helping to identify college student off-campus preferences and important housing features that should be considered.

Zhi: <http://www.bsudailynews.com/mobile/students-share-stories-advice-about-off-campus->

[housing-1.2684146](#)

"Students share stories, advice about off-campus housing" by Victoria Ison is an article supplemented with various interviews. It is helpful in identifying some prominent problems that exist in other student bodies. We can use information above as a guideline for our survey questions.

Terence: <http://www.studentaffairs.duke.edu/communityhousing/resources/neighborhood-reports>

Duke University has conducted housing surveys in the past. The Duke Student Affairs website contains such past surveys, which we can use for reference for our survey.

Jessica:

<http://www.nytimes.com/2012/01/29/realestate/the-hunt-off-campus-with-elbow-room.html?pagewanted=1&r=1>

"Off Campus, with Elbow Room," by Joyce Cohen is an article detailing the personal experience of an NYU law student looking for off-campus housing. The article reveals some options a similar student may use, such as going through a broker to circumvent inaccurate online listings. We also see preferences that may be taken into account, such as personal (bedroom) space, social space, neighbors, and a community that appeals to people in our age range. This article is useful because it gives us a good idea of what the housing search process may be like for our target demographic

Kayco:

<http://oip.georgetown.edu/iss/OFHsurvey.pdf>

This is a survey result done at Georgetown with the international students to learn more about the trend and experiences of finding an off campus housing

D. What is the sampling frame? What population or populations do you plan to sample from? (This is the question many tend to miss).

The sampling frame is CMU students who are in the CMU directory and are currently taking at least 9 units' worth of courses. Therefore, we plan on sampling from the population of enrolled CMU students found in the CMU directory, i.e. those who have not objected to having their information listed in the directory.

you may need to switch to using cbook, which is approximately the same frame, and has more accessible information.

E.

•What is the *target population*? To what population(s) do you wish to make inferences?

The target population is CMU students who have searched or are searching for off-campus housing. We are looking to make an inference about CMU undergraduate and graduate students. Specifically, we are looking to make an inference about CMU undergraduate and graduate students' housing preferences and difficulties in finding housing.

• How does the *target population* differ from the *sampling frame*, for your survey?

They are different since not everyone in the directory has had the experience of searching for off-campus housing. Also, we cannot find everyone who has searched or is searching for off-campus housing. Therefore, our sampling frame cannot be the same as the target population.

• What possible sampling and non-sampling errors could arise in the survey that you plan to conduct?

Possible errors that could arise in our survey are coverage error, sampling error, measurement error and non-response error.

• Explain each possible error, how it could occur, and how you suggest tackling it.

✓ Coverage errors refer to discrepancies that can occur between data on our sampling frame and on the target population. There will be overcoverage error from sampling CMU students in the directory who are not searching for or have not searched for off-campus housing. This can be minimized through targeting the survey towards current/previous off-campus students through advertising and question design.

✓ Sampling error can occur when there are differences between the sample and the sampling frame. Since our sample is only 1000 students out of the entire sampling frame of CMU directory students, there is bound to be some sample error. This will be minimized through simple random sampling.

Measurement error arises from inconsistencies between what the surveyors intend to measure through their questions and the respondents' interpretations of those questions. This is an error that can be reduced by avoiding ambiguously worded or overly complex questions.

We encounter non-response error when our sample population is insufficient and thus likely misrepresents our target population. The design of this survey attempts to reduce non-response error by creating an incentive, in this case a raffle, to participate.

F. What is the mode of data collection? How do you plan to carry out the survey(e.g.,by telephone, e-mail) and why?

For the early stages of the survey implementation, we focus on ensuring the randomness of the sample as well as a decent response rate. In order to do so, we will follow the steps below. First, we will create a random sample of 1000 students from the CMU directory as our respondents. This will be done by Zhijun's advisor, Carol Goldberg. By having a CMU advisor create a sample from the listed students in the directory, we ensure that we do not contact people who do not wish to be contacted. Then, we will email the randomly selected respondents a notification that he/she is selected to enter the survey. This notification will include a description of the survey, stating its purpose, and appropriate information such as privacy protection and respondents' right to not to respond the survey. When the survey is designed, we will pretest the survey and make amendments. Finally, we will send out the surveys to the random selected respondents and follow up for their response. In addition, we will have tabling and online advertisement for the survey, to help assure sample students of the legitimacy of the study. [Note: As stated in the attached document, part of the SURG grant will be used to purchase prizes in a raffle for participants in the survey.]

I do not want Dr Goldberg to select the sample. This is something that must be done by the team.

G. What variables do you propose to measure?

Type of off-campus housing (apartments /houses), characteristics of off-campus housing that students are searching for, and characteristics of current off-campus housing search options. ✓

J. How do you plan to protect the privacy and assure the confidentiality of respondents? Talk about data collection, protection, and disclosure.

We will not be using any identifiers when collecting data from respondents. However, since participants will take our survey in the location of their choosing, it will be up to the participants to ensure their privacy while responding. Data will be collected through the use of an online survey, hosted on ZhiJun's team member's website. The raw data we collect will be stored online and will only be accessed by us and the SURG team. Since identifiers are not used, disclosure of respondent's information by the interviewers are not something that should be worried. ✓

* Please see attachments for work done by the SURG team so far:

1. Developed the proposal.
2. Created a rough draft of the survey.

