**Sampling Survey Design Concepts & Terms**

**Study Goals:** Intended Use, Planned Statistical Analyses, Impact of Missing Data

**Setting:** Natural Vs. Contrived

**Subjects:** Disguised Vs. Non-disguised

**Data Collection/Survey Delivery:**

 Human Vs. Mechanical Observation

 Direct Vs. Indirect

 Structured Vs. Non-structured

 Target Response Rate

**Measures Used To Maximize Response Rate:**

 Professional Production/Presentation

 Incentives

 Cover Letter or Flyer

 Clear, Concise Instructions

 Limited Number of Questions

 Non-threatening First Question

 Categorization of Questions

 Varied Question Type

 Convenient Return Mode

 Follow-up Letters

**Anonymity & Confidentiality**

**Consultations**

**Wording Of Questions:**

 No Intimidating Wording

 Narrowed to One Dimension (Bit of Information)

 All Possible Answers Accommodated

 Mutually Exclusive Answer Options

 Inclusion of Neutral Answers (e.g. Don’t Know, No Opinion)

 Produces Variability in Answers

 Does Not Presuppose A Certain State of Affairs

 No Implied Answers

 No Answers Dependant On Previous Question

 Ranked Answers Limited To Five Items Or Less (No Importance Ranking)

**Order of Questions**

**Pre-notification Letters**

**Cover Letters**

**Sampling Method**

**Survey Time Planning Manager**

|  |  |  |
| --- | --- | --- |
| **Survey Design Tasks** | **Hours** | **Duration** |
| **Goal clarification** |   |   |
| **Study design** |   |   |
| **Selection of sample** |   |   |
| **Designing the questionnaire** |   |   |
| **Prepare cover letter or flyer** |   |   |
| **Conduct pilot test** |   |   |
| **Revise questionnaire (if necessary)** |   |   |
| **Printing time for questionnaire & cover letter/flyer** |   |   |
| **Locating the sample (if necessary)** |   |   |
| **Time in the mail & response time** |   |   |
| **Attempts to get non-respondents** |   |   |
| **Data entry and verification** |   |   |
| **Coding open-ended responses** |   |   |
| **Analyzing the data** |   |   |
| **Preparing the report** |   |   |
| **Printing & distribution of the report** |   |   |

**Study Design Proposal: First Effort**

**Research Question:**

 **Target Population: Granada Hills Charter High School (GHC) then demographics on school. Check school website. Need a paragraph – Diverse ethnically and economically. Large public high school in a typical suburban setting. Show statistics that demonstrate GHC’s “typical” character.**

 **Categorical Variables:**

 **Focus Proportion #1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Focus Proportion #2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quantitative Variable #1:** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Quantitative Variable #2:** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Categorical Variable Question #1:**

Within the target population of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (target population), what is the proportion of students who \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (focus proportion)?

**Categorical Variable Question #2:**

Within the target population of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (target population), what is the proportion of students who \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (focus proportion)?

**Quantitative Variable Question #3:**

Within the target population of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (target population), what is the mean number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (quantitative variable)?

**Quantitative Variable Question #4:**

Within the target population of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (target population), what is the mean number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (quantitative variable)?

**Professional Survey Design:** A professional sampling survey was designed to support the purpose of the survey. This written material will:

\* **Describe incentives for respondents.**

**\*Describe how you intend to explain the intended purpose of the survey.**

**\* Describe how you will promote the need for such a survey.**

**\* Describe how you will provide instructions/clarifications to the respondents.**

**\* Describe how you will use deadlines to encourage prompt responses.**

**Proposed Setting of Data Collection:**

The survey will be (disguised; non-disguised), so subjects (will be aware; will not be aware) of the data collection process. The subjects will (be; not be) anonymous. All responses will (be; not be) confidential. Data will be (directly; indirectly) gathered in a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** (natural; contrived) setting for the target population of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** (target population). (Now describe in detail the location and time where and when the interviews/surveys will be conducted – **WRITE ONE PARAGRAPH)**

**Proposed Sampling Method:**

A (random; stratified random; systematic; cluster) sample has been chosen for this survey. (Add the following clauses that apply.) {The population will be divided into (#) homogeneous strata), (list strata.)} ; {(The population is divided into (#) heterogeneous clusters, (list clusters.)} ; {A census for the target population was available with all subjects listed in a random order, not alphabetical.}

**Random Selection Of Subjects From Target Population:**

Random selection of (subjects; clusters; subjects within each strata) will be conducted. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** (Describe the random selection process in a couple sentences. Basically explain how you will insure every member of the population is equally likely to be chosen for your survey.) The following measures will be implemented to insure that all members of the population are equally likely to be chosen for the survey. (List measures as bullet points below)

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Target Response Rate:**

**\_\_\_\_\_\_\_%;** The response rate should be positively influenced by **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** . (Choose three design features from the list provided on the “Concepts and Terms”, 1st page of hand-out. Then list them as bullets below with a couple sentences giving specifics of how that element was incorporated into your study design).

* **\_\_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Proposed Data Gathering Methods:**

(Human; Mechanical) collection has been chosen. {The interviewer will verbally ask the subject each question, and carefully record responses on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Describe how/where responses will be recorded).} ; OR {The survey taker will provide each subject a copy of the questionnaire and response sheet. Upon submission of each response sheet, the survey taker will briefly review it for oversights without the knowledge of the participant. All response sheets will be stored in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Describe storage device).  **One to Two Paragraphs Describing How Your Survey will be delivered to respondents. Be very specific.**

**Proposed Statistical Procedures:**

Planned inference procedures include (estimates of population means and proportions using confidence intervals), and (one-sample and two-sample tests of significance) to determine if statistically significant evidence exists to determine if population means and proportions are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. **What researcher statistics are you comparing to your data????** **Write one Paragraph Aligning Statistical Procedures of Your Foundational Research with your inquiry.**

**Potential Sources of Bias/Proposed Mitigation Measures: List as bullets below three types of bias that you need to avoid in your study. Then write a couple sentences describing how your design reduced the chances of this form of bias surfacing in your study.**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (**Type of bias**); \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (**Briefly describe mitigation measures taken to avoid this source of bias**)**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (**Type of bias**); \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (**Briefly describe mitigation measures taken to avoid this source of bias**)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (**Type of bias**); \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (**Briefly describe mitigation measures taken to avoid this source of bias**)**

**Proposed Pilot Test:**

A pilot test of \_\_\_ subjects identified unforeseen bias in the wording of the questions, and any other survey design modifications that may be required to insure all three inference conditions have been met. **Write a paragraph on adjustments that you made to the study based on the feedback you received from pilot test.**