

Sampling Assignment

Tips & Examples



Key points

- We sample so that we can
 - 1) Make generalizations about a larger population
 - 2) Make comparisons among sub-groups
- Choosing a sampling method is about figuring out what kinds of generalizations & comparisons you want to make **AND** what population you can actually get access to

Three questions

- When designing a sampling process, the researcher asks three basic questions:
 - 1) Do I want to be able to make generalizations about a population?
 - 2) Do I have access to a good sampling frame?
 - 3) Do I want to make comparisons between sub-groups?

1. Do I want to be able to make generalizations about a population?

Yes

No

Probability

Non-probability

**[Simple random OR
Systematic random
Method of choosing]**

2. Do I have access to a good sampling frame (list) ?

For Probability Samples

YES

**Choose
randomly
from a
whole list**

NO

**Choose
randomly
from
Clusters
(smaller
lists)**

*For Non-Probability
samples*

YES

**Choose
from a
list**

NO

**Choose a
Convenience
Sample
(whoever I
want)**

3. Do I want to make comparisons between sub-groups?

For Probability Samples

YES

Stratify:

- Divide your list into subgroups
- Choose ***randomly*** from within subgroups

NO

Choose ***randomly*** from whole list

For Non-Probability samples

YES

Use **Purposive** or **Quota** sampling:
- Divide into groups and then select some from each

NO

Choose from whole list

Extended Example

An elementary school has 360 children. There are 3 classes at each grade level (K, 1, 2, 3, 4, 5) for a total of 18 classes; each class has 20 children. You want to observe a sample of the students and then make generalizations about the students at that school.

Let's look at the following possibilities:

You list all the children in the school in alphabetical order by last name and number them 1-360. Randomly choose 36 numbers between 1 and 360. One at a time, you observe each child whose number is picked for one hour.

- What kind of sample is this? To what population can you make generalizations? Are you certain to get students from every grade in your sample?

You put a notice up on the school bulletin board asking parents to volunteer to have their children observed. You need to get 3 boys and 3 girls in each grade. You accept volunteers, putting them into the appropriate categories, until you have gotten the mix of grades and sexes that you need. You observe each child for an hour.

- What kind of sample is this? To what population can you make generalizations? Are you certain to get students from every grade in your sample?

You randomly select 6 of the classes. Within each class, number the children from 1-20. Separately for each list, choose six random numbers between 1 and 20, and plan to observe the six children chosen. (Different random numbers are chosen for each class.) On successive days, go to each of the sampled classes, and observe each of the sampled children for an hour.

- What kind of sample is this? To what population can you make generalizations? Are you certain to get students from every grade?

Get the 18 lists of students in each class. They are listed in alphabetical order. Group the classes, so you have the three kindergarten classes, then the three first grade classes, then the three second grade classes, etc. Within each grade level, randomly select one of the classes. (So you will have 6 total, one for each grade.) Within each selected class, number the children from 1-20. Separately for each list, choose six random numbers between 1 and 20, and plan to observe the six children chosen. Different random numbers are chosen for each class. Observe each selected class on successive days, observing each selected child for an hour.

- **What kind of sample is this? To what population can you make generalizations? Are you certain to get students from every grade?**

For the Elementary School Example Discussed Above:

- What would a systematic random sample look like?
- What would a stratified random sample look like?

Assignment Strategy

- Think first of some general population that you want to write about
 - E.g. Population of a particular school, adult residents of Madison, etc.
- Discuss different ways of taking a sample (for each question)
- Make sure to explain each step & use appropriate terminology