

Survey Design & Data Collection Techniques

Learning Goal

Minds on ... Effective Surveys

Consider the following statement:

It is important that a survey be designed in a manner that reduces errors by the respondents. What are some ways that this could be done?

Practice

p157

Practice: #1, 4 to 7, 10 (one of a, b, or c)

(Submit #10 for assessment)

Sampling Methods

Learning Goal

Minds on Math

1-When it comes to collecting data, what do you think the following terms mean in the context of surveying?

population, sample

Population:

Sample:

2-List one advantage and disadvantage to surveying...

i) a population

-ADV:

ii) a sample

-DisADV:

-ADV:

-disADV:

Minds on Math...Sampling Techniques

Sampling Techniques

-There are several sampling techniques--each with its own strengths and weaknesses

-The choice of technique depends on the population and the type of survey being done

Sampling Techniques (contd.)

Here is a list and description of some of the most common sampling techniques:

Random Sample

Stratified Sample

Cluster Sample

Sampling Techniques (contd.)

Convenience Sample

Voluntary Sampling

Take Action!

1-Decide which type of sampling should be used in each scenario.

2-List one 'pro' and one 'con' for each type of sampling technique.

a) To survey woodworkers in Ontario, we ask people at several lumber yards and home improvement stores scattered about the province.

Type: Convenience

Pro: A good way to gain ideas when you're starting to research an idea.

Con: You will have no idea how representative your sample is of the population.

b) Drawing 5 names from a hat holding 30 names and surveying those 5 people.

Type: Random

Pro: Easy to do. Fair to all involved.

Con: You will get a poor representation of the population.

c) Psych 101 students at Trent University are given an additional 2% at the end of the year if they volunteer for any two upper-year psychology surveys and/or studies.

Type: Voluntary

Pro: Respondents are motivated and/or practically-minded.

Con: Sometimes the only TV channel participants can watch more than once and/or the only channel they have. Skewing the results.

d) A school is divided into 4 groups by grade. There are 300 grade nines, 350 grade tens, 270 grade elevens and 320 grade twelves. Proportion of each group chosen à 10%

Type: Stratified

Pro: More representative of the population.

Con: It's a pain to do. Some groups are larger than others and will have more students surveyed.

e) A VP enters the cafeteria and randomly selects two tables. All students at those two tables are surveyed.

Type: Cluster

Pro: Easy to do.

Con: Often over-represent some opinions and under-represent others.

Check Your Understanding

Practice:

- attached sheet
- complete #2 to 8
- check your work upon completion