

## **The Importance of Random Sampling and Return Rate**

### **Research Question** (the variable under study):

Teacher knowledge of special education law

### **Target Population** (the group we want to better understand):

California K-12 public school teachers

### **Method** (to better understand how the variable is distributed within the population):

A questionnaire that tests knowledge of special education law will be distributed to a sample of K-12 teachers in California to determine how knowledgeable they are about special education law. From the performance of this sample we hope to draw conclusions (make generalizations) about the variable under study (i.e., California K-12 public school teacher knowledge of special education law).

### **Sampling** (a part of the population studied):

Allows us to understand how the variable (special education law knowledge) is distributed within the target population without directly assessing all members.

### **Confound Variables:**

Are there groups of teachers that might systematically differ in their special education knowledge? The answer is, of course, yes. There are some groups of teachers that are more knowledgeable about these laws than others. Special education teachers, for example, should be much more knowledgeable. Other groups that might systematically differ according to such knowledge include experienced teachers (as compared to inexperienced teachers); teachers working at schools with special education classrooms (as compared to those working at schools without such programs), and those who have received specific types of pre- and/or in-service training (as compared to those who have not had such training).

### **Sample Construction** (Simple Random Sampling):

Random sampling, which gives each member of the target population an equal chance of being included in the sample, addresses confounding variables. It minimizes the chance that the sample will include a disproportionate number of individuals from a particular subgroup (a group that may differ systematically from the target population in ways that are important to the variable under study).

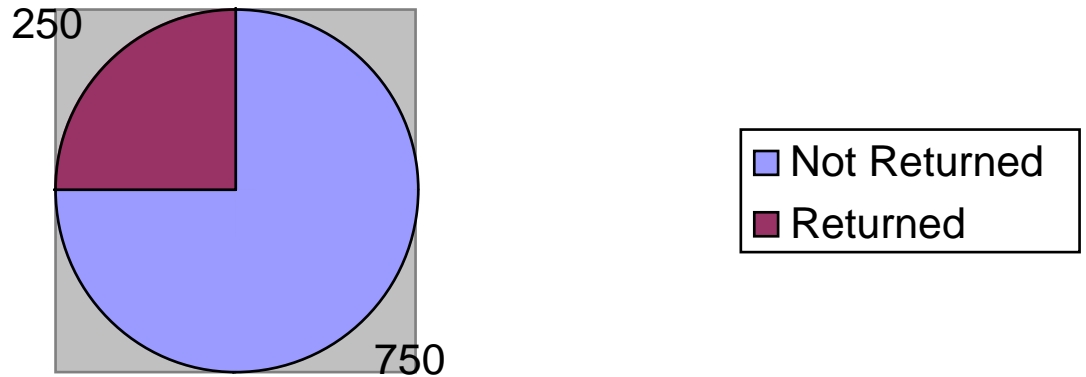
### **Return Rate:**

As long as return rate is high, the sample will be able to take advantage of the benefits of random sampling. However, as the return rate drops it becomes more and more possible that the sample will systematically include and/or exclude groups of teachers who share a common level of special education law knowledge. Therefore, it is not simply the size of the sample that is important. Return rate must also be considered.

Logically/Intuitively, do you think a certain group may be more likely to return the questionnaire? Might those who know more about this law be more likely to complete it and return it for analysis? Conversely, might those who don't know much about such law view the study as less important and be less likely to complete the questionnaire?

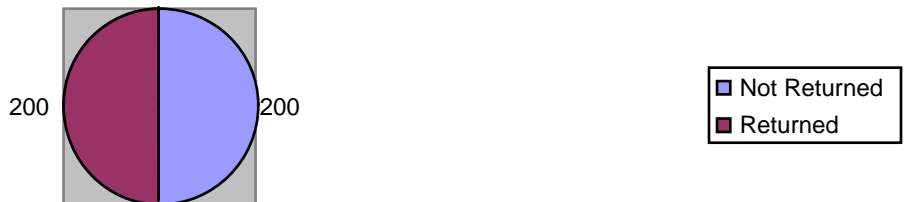
### Sample A

1,000 Questionnaires mailed, 250 returned



### Sample B

400 questionnaires mailed, 200 returned



Assuming that in both samples A and B, questionnaires were initially mailed out to a truly random sample, and that the smaller sample is considered “large enough,” sample B would provide results that are more generalizable to the target population. The chances of the returned questionnaires including/excluding groups that differ systematically in terms of the variable being studied are much less.