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Statistics and Probability

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Chapter 1 Project

The study conducted was based on a person’s favorite type of food. The **population** for our survey was the 25 students in our 6th hour statistics and probability class, and the entire population was used rather than taking a sample. This was done because we wanted to know the most popular food type of the entire class rather than just a sample of the population, because a sample could be an unfair representation of the survey results.

The **variable** was the favorite type of food. The variable is a **qualitative measurement** because it’s a measurement of a category rather than a measurement with numerical value. The answers we received corresponding to the survey were given to us in word form.

We chose to do a **survey** instead of an experiment, observational study, or simple random sample because of it’s simplicity and because it gives direct results. An **experiment** wouldn’t have been as easy to manage as a survey, and an **observational study** would have been difficult because, even though a person may have a favorite type of food, that doesn’t mean that they are going to eat that type of food every day. A **simple random sample** was not necessary because we wanted to look at the data as a whole. Our data is representative of the **nominal level of measurement** because there is no implied criteria for the data being ordered. There was no option for the people being surveyed to rank their favorite types of food, and there isn’t a way to rank favorite food types based on significance with the way our survey was conducted. Our study didn’t include a **control group** because no one in our survey was being given anything, so there was no possibility of having a **placebo effect** and a **double blind study** was unnecessary. There were no **privacy or confidentiality** concerns with the study being conducted.

In order to collect our data, we made a survey using Google Forms and sent it out to each student in the Statistics class. Luckily, since everyone responded to the survey, there was no reason for **undercoverage** to have an impact on our results. Also, because of the way the survey was conducted, there was no potential for **bias** or **sampling and nonsampling error** because the people being surveyed couldn’t see the responses of others.

The population was able to choose from five options for their favorite food type. The five options were American, Italian, Mexican, Chinese, or other. The most popular food type was Italian with nine votes. Italian was followed by American with six votes. Mexican had five votes, followed by Chinese with four votes. The Other option had one vote. The favorite types of food may be because of restaurants that are nearby or what is most commonly eaten at the person’s home.

