

Social Science Inquiry

Why are anthropology, psychology and sociology known as “sciences”? It is because all three disciplines attempt to investigate human thought and behaviour in a scientific way. That is, they all follow a process of **inquiry**—an investigation that follows a formal procedure. This process can lead to answering questions about people and the world around us.

The Inquiry Model

As outlined below, a scientific inquiry has five steps. Follow the process and then read on to learn more about some of the key stages.

- 1. Identify a problem or question.** The starting point for all inquiry is a question or a problem. This problem provides a reason for the inquiry and indicates a plan of action. For example, a social scientist might be wondering about the impact of driving on teenage life. The first step in any social science inquiry is to put the problem in the form of a question. The question in this case might be “Do students who own or have regular access to a car have lower grades in school?”
- 2. Develop a hypothesis.** A hypothesis is a possible answer to a question and a starting point for further investigation. This step is crucial because without a hypothesis an inquirer can waste a lot of energy looking for information that may not be relevant to the answer. A hypothesis indicates what needs to be tested and which research method to use. For instance, the social science inquirer might hypothesize that owning or having regular access to a car has a negative effect on school grades.
- 3. Gather data.** The inquirer must determine how to gather data or information. The method of research used should be appropriate to the question and the hypothesis. In the social sciences, a number of research methods may be used: case studies, sample surveys, experiments, interviews, or observation (see pages 8–13). For example, the inquirer might conduct a survey to find out how many teens own cars or how often and what time of day they have access to a car, and what grades these teens are getting at school.
- 4. Analyze the data.** Collected data is not meaningful unless it is organized, interpreted and analyzed (see pages 14–16). In our example, the inquirer might organize the information gathered from the survey into the form of a graph that shows a relationship between having access to a car and school grades. This type of graph would allow the inquirer to see any trends, or general patterns, that would help to answer the question.

- 5. Draw conclusions.** At this point, the inquirer determines whether the hypothesis is supported or not. Should the hypothesis be accepted, rejected or revised? What kind of an answer can be provided for the question asked? The researcher might determine that there is, in fact, a relationship between having access to a car and school grades, but that it does not support the hypothesis. Based on analysis of the data, the researcher might find that having access to a car during the daytime does not harm grades, but having unlimited access to a car during evening hours does have an impact. (See page 16.)

Research Methods

Social scientists have a range of methods they can use for the third step in the inquiry process—gathering data. The research method chosen will depend on the question or problem and the field of study. Anthropologists, psychologists and sociologists often prefer different approaches.

Case Studies

A **case study** is the observation of an individual, a situation or a group over a period of time. A psychologist may work closely with one individual in order to understand and help that particular person. A sociologist may observe and interview the students of one class. An anthropologist may study people in one culture.

Why study one example or case? By studying one situation in depth, a lot of detail can be unearthed, and hypotheses about similar situations can be developed. Researchers may then use these hypotheses to study and understand other individuals, social groups or cultures. For example, if you were to study the case of one student whose marks seem to be falling as a result of having a car, you might be able to apply what you have learned to other students who are not doing well in school.

Experiments

The essence of an experiment is to determine how one factor is related to another—for example, could one factor be caused by the other? What happens if one factor is changed? How does this change appear to affect other factors?

In the natural sciences such as physics, biology and chemistry, experiments are widely conducted. However, in the social sciences, this method is used with great care due to the ethical questions involved in experimenting with human beings. For example, it might be possible to measure the impact of car use on grades by encouraging one group of students

to spend every evening over the next few months driving a control group spent several hours each evening doing homework. Would this be ethical? Probably not—it’s likely that the grades of the experimental group would fall, and the student would face negative consequences. It would be ethical, however, to record the homework of car-owning students do homework per week, compare it to the homework of students who do not have access to a car, and then compare the results. In this case, the social scientist would not be intruding on the lives of the students.

Sample Surveys

Sample surveys are used to obtain information about the behaviour of a large group of people. They are called “sample” surveys because researchers ask questions of a fairly limited number of individuals who represent a larger group; then they draw conclusions about the larger group. For example, a researcher might investigate the relationship between car use on grades in the entire school by surveying students in several different classes. Sample surveys are often used by social scientists to provide a general idea of trends and responses. The information is usually a questionnaire—a series of questions designed to be aimed at collecting information for research or statistics. Most questionnaires use a multiple-choice format, which makes it easy to collate the results easily.

How many people must be sampled to have a reliable result? The sample should be large enough to include a range of characteristics that might affect the result. For example, a survey about school achievement should include students with different levels of academic achievement. In political surveys, researchers often ask 1000 people whom they must make sure that they represent a cross-section—a range of people representing different aspects of the population with respect to age, occupation, region, culture and class. From this representative sample, researchers can draw conclusions about Canadians in general. One important note is that sample surveys do not allow researchers to know their thoughts or opinions beyond the questions themselves.