This worksheet helps you to recognize, analyse and apply both probability and non-probability sampling methods in research.

In probability samples, all people within the study population have a specifiable chance of being selected. These types of samples are used if the researcher wishes to explain, predict or generalize to the whole research population. Since the sample serves as a model for the whole research population, it must be an accurate representation of this population.

Non-probability samples (also referred to as purposive samples) are used if description rather than generalization is the goal. In this type of samples, it is not possible to specify the possibility of one person being included in the sample. Instead, the sample is selected on the basis of knowledge of the research problem

There are several probability and non-probability sampling methods that are used in research and examples of these are given below. Work through these examples and, for each one:

* name the sampling technique;
* highlight possible strengths and weaknesses;
* give another example of a research project that could utilize this particular sampling technique.

**Example 1**

A researcher wants to find out how many children are absent from school in a given month. It is important to ensure that every school in the country has an equal chance of being chosen so that generalizations can be made. He obtains a list of every school, assigns each a number and, using an online random number generator, creates a list of schools to which he can send his questionnaire.

**Example 2**

A researcher wants to understand more about the coping strategies of nurses working in busy hospitals at night. It is not possible, financially or practically, to visit every hospital in the country. However, precision is important as the researcher wants to be able to give an explanation of coping strategies and make predictions about how nurses will cope in a given situation. The researcher decides to choose several specific geographical locations and then obtain a list of all hospitals within each location. Each hospital is assigned a number and a list of hospitals, within each geographical location, is chosen using an online random number generator.

**Example 3**

A researcher wants to find out about the lunchtime eating habits of workers in a particular car factory. She obtains a list of all employees, chooses a starting number, chooses an interval number and then works though the list, developing her sample list from the employees that appear at the correct interval on the list.

**Example 4**

A researcher wants to find out about participation in sport among undergraduate students from different subject areas studying at a particular university. It is important to the researcher that he is able to interview students from all subject areas as he wants to find out whether there is a connection between subject studied and participation in sport. He decides to arrange his sample by undergraduate subject and then, within each subject, choose students on a random basis.

**Example 5**

The researcher described in Example 4 finds that there are many more arts students than science students. So he decides to increase the sample size of his science students to make sure that his data are meaningful.

**Example 6**

A market researcher wants to find out what members of the public think about a new chocolate bar that has just been produced. He wants to make sure that all sections of the population are represented in the sample, so he works out what major characteristics are important (gender, age and ethnicity, for example) and then how many people from each of these categories should be sampled. He stands on a street corner and chooses people that fit into each category, until the target number within each category is reached.

**Example 7**

A researcher is interested in finding out about graffiti in her local city. Oneaspect of this research is to speak to those who produce graffiti. She realizes that she has to be trusted and establish rapport with these people before they will talk to her. Through personal contacts she comes across a person who admits to producing graffiti at a site in the vicinity. The researcher is able to talk to this person, establish a good relationship and gain some useful information. This person then recommends a friend who is also willing to talk to the researcher. This continues, with one person recommending another and so on, until the researcher has spoken to 15 different people.

**Example 8**

A researcher is interested in finding out about the learning choices of adults who decide to return to education later in life. She wants to find out the issues that are important to the adults, rather than make assumptions or develop a hypothesis. Therefore, she decides to interview three participants, analyse the results and decide whom to interview next depending on the emerging themes. As these themes develop, she chooses further people to interview, and consults the background literature to help explain what she is finding. She continues with this process until no new themes are emerging and all themes are fully explained.

**Example 9**

A researcher wants to find out what students think of the entertainment facilities on a university campus. He stands by the entrance to the university library and stops students as they pass by, asking a series of questions about the university entertainment facilities. He does this until he has asked the opinion of 100 students.

**Example 10**

A researcher is interested in finding out how family bereavement can impact on research activities. Having personally experienced family bereavement, and having come across others in a similar position, the researcher chooses whom to interview based on his existing knowledge of who would be suitable.