Learning Objectives

Upon completion of this unit, students should be able to:

1. Explain why testing is useful in collecting data.
2. Differentiate the purpose of different types of achievement tests.
3. Discuss the purpose of attitude tests and Thurstone and Likert scales.
4. Compare and contrast projective and structured personality tests.
5. Describe methods of observing and recording behavior, and give examples.
6. Elaborate on the purpose and characteristics of a good questionnaire.
7. Create the methods and analysis section for a research proposal.

Written Lecture

This unit focuses on one chapter and the methods of measuring behavior and collecting data. This chapter focuses on the research question as the driving force of the type of data that should be collected. In addition, the student will learn about the types of tests and techniques used in item analysis and will be introduced to attitude scales and survey questionnaires in this chapter.

Each student is familiar with tests and testing. This course uses multiple-choice questions to test your knowledge at the end of each unit. In research, tests are used to determine the outcome of an experiment, as a diagnostic or screening tool, to assess placement, to access selection, and to evaluate the program. Although there is a result to each test, it is not the test score that is important. Instead, it is how the test score is interpreted that is important. Refer to Table 6.1 on page 129 of your textbook for examples of what tests do and how they do it.

Achievement tests are the most common type of test. All of the tests that are administered in education are considered achievement tests. Standardized tests and researcher-made tests are two types of achievement tests. Another set of achievement tests are norm-referenced and criterion-referenced that are used to compare to the test performance of other individuals.

After you have decided what type of test you will be using, each question or item needs to be analyzed. An item analysis provides two types of levels: the difficulty index measures the proportion of people who got the test question wrong, and the discrimination index considers both the high and low performers on the test overall and their performance on the question. The relationship between difficulty index and discrimination index is shown in Figure 6.2 on page 135 of the textbook.

Attitude tests evaluate a person's feelings about an object, person, or event. These types of tests might be utilized if you are evaluating a person's experience at a hotel. Questions might be answered by providing options such as 'agree', 'disagree', or 'no strong feelings.' These possible answers are known as the Thurstone Scale. Another scale that is also popular is the Likert Scale. Figure
6.5, on page 138 of the textbook, is an example of the Likert items. Although the Likert and Thurstone scales are similar, their distinctions are purposeful.

Personality tests are a popular examination of a person's behavior. These tests provide good information but can take a great deal of time to develop and score. A projective personality test requires that the respondent create a response based on their own experience. Thus, they project their personality onto the situation. A structured personality test contains multiple choice, yes/no, or true/false type questions.

Questionnaires are straightforward types of questions and are focused on a particular topic. Some of the benefits of a questionnaire are that they can be distributed to a large geographic region, they are cheaper than interviews, and that people are more truthful because of the privacy that is achieved. Keep in mind that there are some basic assumptions to make when designing a questionnaire. For instance, the questionnaire should be realistic and not be too lengthy. Also, the questionnaire should be straightforward and not ask questions about a hidden issue. Ask questions about information that the respondents have. Not only are the individual questions important to the success of the project, but so is the overall format of the questionnaire.

In summary, this lesson focuses on the methods of measuring behavior. We have covered the importance of and types of tests and the use of questionnaires.