tive research alone. As was noted in Chapter 2, when mixing research or when you read and evaluate research that involves mixing, you should always be sure to consider the fundamental principle of mixed research. According to this principle, researchers should collect multiple sets of data using different approaches and methods in such a way that the resulting mixture or combination has complementary strengths and nonoverlapping weaknesses (Brewer & Hunter, 1989; Johnson & Turner, 2002; Webb et al., 1981).

| TABLE 14.1 | Strengths and Weaknesses of Quantitative Research |

**Strengths**
- Testing and validating already constructed theories about how and why phenomena occur
- Testing hypotheses that are constructed before the data are collected
- Can generalize research findings when the data are based on random samples of sufficient size
- Can generalize a research finding when it has been replicated on many different populations and subpopulations
- Useful for obtaining data that allow quantitative predictions to be made
- The researcher may construct a situation that eliminates the confounding influence of many variables, allowing one to more credibly establish cause-and-effect relationships
- Data collection using some quantitative methods is relatively quick (e.g., telephone interviews)
- Provides precise, quantitative, numerical data
- Data analysis is relatively less time consuming (using statistical software)
- The research results are relatively independent of the researcher (e.g., statistical significance)
- It may have higher credibility with many people in power (e.g., administrators, politicians, people who fund programs)
- It is useful for studying large numbers of people

**Weaknesses**
- The researcher’s categories that are used might not reflect local constituencies’ understandings
- The researcher’s theories that are used might not reflect local constituencies’ understandings
- The researcher might miss out on phenomena occurring because of the focus on theory or hypothesis testing rather than on theory or hypothesis generation (called the confirmation bias)
- Knowledge produced might be too abstract and general for direct application to specific local situations, contexts, and individuals

**Fundamental principle of mixed research**
The researcher should use a mixture or combination of methods that has complementary strengths and nonoverlapping weaknesses.