

6

Data Collection Considerations: Validity, Reliability, and Generalizability

After reading this chapter you should be able to:

- 6.1 Understand the concept of validity as it applies to quantitative research.
- 6.2 Understand the concept of validity as it applies to qualitative research.
- 6.3 Understand the concepts of reliability and generalizability as they apply to action research.

This chapter addresses the importance of validity, reliability, and generalizability as ways to ensure the quality of qualitatively oriented action research.

Improving Student Understanding and Motivation of Multiplication Facts

Alyson Marland

Alyson Marland, a student teacher in a fourth-grade classroom, was a participant in an action research class. Like many elementary teachers, Alyson was challenged about how best to teach elementary students basic number facts while at the same time keeping the children motivated to learn. Alyson's story illustrates the importance of using multiple data sources (qualitative and quantitative) to address issues of validity and reliability that ensured the quality—and robustness—of her action research findings.

This action research project focuses on promoting student understanding and motivation while teaching the basic multiplication facts (0–9). The study examined the effectiveness of teaching methods with an emphasis on rote memorization, compared to those focusing on problem solving. Research advocates the use of problem