

**Statistical Reasoning** focuses primarily on the influence of chance in sample data (sampling distributions and statistical inference) while statistical literacy focuses primarily on the social construction of statistics, the influence of confounding in population data and measuring associations between groups. Given a primary focus on the influence of chance in sample data, Statistical Reasoning focuses slightly less on chance and statistical inference and considerably more on measuring and modeling associations (e.g., correlation and causation) between factors within a group than does a traditional statistics course.

"Statistical reasoning may be defined as the way people reason with statistical ideas and make sense of statistical information ([Garfield and Gal 1999](#)). This involves making interpretations based on sets of data, graphical representations, and statistical summaries. Much of statistical reasoning combines ideas about data and chance, which leads to making inferences and interpreting statistical results. Underlying this reasoning is a conceptual understanding of important ideas, such as distribution, center, spread, association, uncertainty, randomness, and sampling." [Garfield, 2004](#), The Challenge of Developing Statistical Reasoning.

These textbooks are seen as more relevant to teaching statistical reasoning. [This page is not reviewed or approved by the ASA, MAA or by any of the authors]

### [Statistical Reasoning For Everyday Life](#)

by [Jeffrey O. Bennett](#), [William Briggs](#) and Mario Triola (2nd ed., 2003)

[Data Sets and Links for web projects](#)

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1. **Speaking of Statistics:** 1.1 What Is/Are Statistics? 1.2 Sampling, 1.3 Types of Statistical Study, 1.4 Should You Believe a Statistical Study? Focus on Sociology: *Does Daycare Breed Bullies?* Focus on Public Health: *Is Your Lifestyle Healthy?*
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## [Seeing Through Statistics: Jessica Utts](#)

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## [Concepts and Controversies](#)

by [David Moore](#) (5th ed., 2000)

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