

## Conduct Product Effectiveness Research: Higher Education Science Textbooks

**Client.** Wiley Publishing

**The Challenge.** Textbooks continue to play a major role in instruction at institutions of higher education depend on textbooks. Textbook selection is a critical component of the instructional process. Faculty and other members of the higher education community want to be confident that the textbooks they select for their courses are effective. Wiley, a publisher of higher education textbooks recognized the importance of scientifically-based research in the selection process. As a leading provider of research services, SEG was asked to design and implement a controlled study of the effectiveness of their Visualizing Series textbooks. The Wiley Visualizing Series relies heavily on visual content and is grounded in decades of research that suggests that students learn better with words and pictures than with words alone.

**The Solution.** SEG designed and conducted a scientific effectiveness study of Wiley's Visualizing Series of textbooks. A quasi-experimental design was used to investigate effectiveness of three different science and social science titles.. Eight institutions of higher education reflecting different institutional characteristics (e.g., size, geography) participated in the study. At each participating institution, a set of classes using the Wiley Visualizing Series (treatment group) and a set of classes not using the Wiley Visualizing Series (control group) were identified. At the beginning of the semester each student in both the treatment and control groups was administered an assessment of the content in the content area represented by the title; all students were again assessed using the instrument at the conclusion of the semester. Analysis of Covariance was used to compare the knowledge levels of the two groups, adjusting for potential differences between the groups present at the beginning of the study. The results demonstrating that students who used the Wiley Visualizing Series learned more was described in a report for use by the Publisher and institutions considering adopting the Wiley Visualizing Series.