Improving Students' Science and Knowledge of Skills: A Study of an Augmented Reality Library Program

Timeline: 2009

Client. SK Telecom

The Challenge. 3D Library is an instructional tool enhanced by augmented reality, combining written books with computer-delivered 3D animation. The client, SK Telecom, wanted to know if this type of instructional tool would increase science knowledge and skills as compared to students in classes that used only their books or in classes that did not use any of the 3D Library Program components.

The Solution. The study examined the effectiveness of the 3D Library Program by comparing the growth in science knowledge and skills among three sets of students, 1) using 3D Library with both the books and computer-based animations, 2) to a comparable group of students who used only the books and 3) a control group that used none of the 3D Library components. We compared the gains made by students in all three study groups, controlling for any initial differences in science knowledge and skills.
Students who used both the 3D Library Program books and the computer-delivered augmented reality animations (Treatment Group 1) were compared to both those students who used only the books from the 3D Library Program and to the Control Group of students that did not use any of the 3D Library components. We used a statistical procedure known as analysis of covariance (ANCOVA), to provide a more accurate comparison of growth among groups.