Conduct a scientifically-based research study of the effectiveness of an online, animated, e-learning application

Client, BrainPOP

The Challenge. It is widely believed that delivering educational content online can be a very valuable component of education. Moreover, there is widespread recognition that this educational content can be enhanced through animation. While these beliefs are widely held, there was little scientific evidence documenting the effectiveness of BrainPOP's animated k-12 movies. BrainPOP asked SEG to help in obtaining this evidence.

The Solution. SEG designed and implemented a project to identify scientific evidence supporting the effectiveness of the BrainPOP application. First, SEG researched and wrote a White Paper describing the scientific research supporting the use of multimedia applications. Second, SEG designed and conducted a scientific effectiveness study of the BrainPOP's science movies. A quasi-experimental design was used to investigate program effectiveness. More than 50 classrooms in several schools participated in the study, with half of the classes using BrainPOP, and the remaining half delivering instruction without the benefit of BrainPOP. Analysis of covariance was used to adjust for potential differences between the groups. The reading and science skills and affect toward school of both groups were measured at the beginning of the school year and at the conclusion of the school year. The proficiency level of the two groups was compared statistically to determine if students using BrainPOP showed greater improvement. The effectiveness of the Program was described in a written report for use by BrainPOP and school's considering the Program.

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