

Stephen Gareau | sgareauca@yahoo.com
Buffalo State College
Buffalo, New York, USA

The Relative Effectiveness of Different Modes and Media in Informational Presentations on Students' Recall of Concrete and Abstract Prose

This session will describe the results of a recent study that examined the relative effectiveness of various modes and media for instruction and learning. The purpose of the study was to compare the effectiveness of various information presentation modes and media on the recall of information among freshmen undergraduate students of differing reading abilities. Modes compared included text-only information and information presented as a combination of text and visuals. Media compared included printed materials and computer-based information presented via PowerPoint presentations. Information presented included both concrete and abstract information.

A 2 x 2 factorial, posttest-only, comparison group design, using four intact groups (n=98), and ANCOVA data analysis techniques were used to investigate the research questions. Four intact groups of freshmen undergraduate students were randomly assigned to experimental treatment groups. Subjects were pre-tested on reading comprehension ability to determine equivalence among groups. As an experimental treatment, to each group, the same sections of a story were presented in one of four different media/mode combination formats. The media/mode combinations included: (1) print-based text only, (2) print-based text and visuals, (3) computer-based text only (via a self-paced PowerPoint presentation), and (4) computer-based text with visuals (via a self-paced PowerPoint presentation). Upon completion of the treatment presentation, students in each group were immediately tested to measure their recall of concrete and abstract information contained in the story.

Results from the posttest were analyzed using the ANCOVA method to determine whether there were statistically significant main effects among the two sets of factors, and whether there were any interaction effects between the two sets of factors. Results from the ANCOVA analysis indicated that (a) no significant main effects were present and (b) no significant interaction effects were present. These results would support Clark's (1983) view that "media do not influence learning under any conditions".

The main objectives and expected learning outcomes of the session are to:

- a) describe various theories concerning the use of various types of modes and media for instruction;
- b) describe various learning style theories that relate to modes and media; and
- c) describe the design, implementation, analysis, results, and conclusions of a recent quasi-experimental study that investigated the relative effectiveness of various modes and media for learning.

As a way of involving the audience in the session, a short brainstorming session (using post-its) will be used to identify current ways that modes and media are being used in instruction.