

Effects of Graph Type, Conceptual Domain and Perceptual Organization of Information on Graph Comprehension

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Abstract

The growing interest in using graphs in education created the need for research-based guidelines. This study examined the effects of graph type, conceptual domain and perceptual organization of information on graph comprehension. Forty-two undergraduate students were given eight different kinds of graphs, and their descriptions were analyzed. The results indicated that graphical reasoning was influenced by perceptual grouping of information in visual chunks rather than by type of graph. Learners faced difficulties when an unconventional graph format was used. Implications for research and practice were also discussed.