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Effects of three concept mapping strategies and prior knowledge in a web-based learning environment.

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This study examined instructional effects of three concept mapping strategies and prior knowledge in facilitating student achievement in Web-based learning environment. The three concept mapping strategies were concept matching, proposition identifying, and student generated concept mapping. The prior knowledge levels of the subjects were identified through a general physiology test. The instructional material was a 2000-word expository text about the human heart. Achievement was measured by the identification, terminology, comprehension tests, and the total test. The criterion tests measured achievement of different educational objectives at factual, conceptual, and rules and principles levels and general academic performance of university undergraduate students. The subjects were 290 undergraduate students from a large state university. The subjects completed the prior knowledge test, and participated in a 50-minute workshop on concept mapping one week prior to the experimental treatment. The subjects were randomly assigned to one of four treatment groups. Multivariate analysis of variance was used for data analysis. Statistical significant results were found in this study at the .05 alpha level. (orig.)

Classification: R15 C35

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