

The effects of different cognitive load levels for the senior high- school students in the Web-based learning environment

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Abstract

This study explored the association between cognitive load and web-based learning. Participants of this study were 105 11th graders an academic senior high school in Taiwan. All of these participants took on-line multi-media course about global warming for four weeks. The cognitive load was measured by self-report on the 9-point Likert scale, and flow-map method was applied to analyze participants' concept achievement. The result shows that the more integration of the material, the less cognitive load and the better learning outcome. Accordingly, it was suggested that the teacher should take learner's cognitive load into account when they are designing online multi-media course. This study also demonstrated that the online multi-media course is a good media for science learning.