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Facilitating Educator Evaluation of Online Instructional Materials: Does Conceptual Browsing Impact Cognitive Processing?

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Abstract: A key challenge for beginning educators is finding high-quality online materials that will support deep learning in their classrooms. Identifying and evaluating effective digital resources requires careful attention to the match between domain learning goals and the conceptual information contained in resources, but preservice teachers often lack strong prior knowledge that would facilitate such processing. Conceptual browsing interfaces may support deeper cognitive processing by providing a visual representation of the conceptual relationships between domain ideas and by providing a direct retrieval mechanism to find specific online resources related to key domain ideas. Using a combined think-aloud and eye-tracking study, we are examining the effects of conceptual browsing vs. keyword searching on the cognitive processes of preservice teachers performing educational tasks. In this poster, we summarize preliminary results and discuss how keyword search vs. conceptual browsing interfaces can impact the depth with which beginning educators process online information.