Abstract

Online instruction in medical education is beneficial due to moves toward competency-based curricula, continuing education, serving professionals in remote locations, and knowledge updates as research advances. Those who study content online may require support to use effective methods that transform passive, less-engaged learning into active comprehension and purposeful application. This study compared two learning tactics: self-questioning and self-explanation that have not been compared in prior research.

Health professionals and students across Canada studied a chapter in the Canadian Fundamentals of Fetal Health Surveillance (FHS) Self-Learning Online Manual, presented on an online learning management system. Participants used nStudy learning software to open note templates and type in either self-explanations or choose one among several question stems then fill in blank space(s) to create a question.

Participants who created self-explanations performed better on the achievement posttest than those who generated self-questions. Further analyses disaggregated posttest items into intentional learning (relating to information in the text about which participants were prompted to generate an annotation) and incidental learning (relating to information in the text not prompted for annotation). Within the self-explanation condition, there was no statistically detectable difference in recall on intentional (prompted) content compared to incidental (non-prompted) content. In the self-questioning condition, incidental content was recalled similarly to the self-explanation group. However, there was a marked and statistically detectable decrease in recall of content about which participants were prompted to generate self-questions. Possible reasons for this effect based on past research and participant comments are discussed along with limitations of the study and opportunities for further research.

Keywords: self-questioning; self-explanation; medical education; nursing education; prompts; recall