

Quality of STEM Learning from Childrens Books

Hilary Miller

Emory University, Atlanta, Georgia, United States

Lucy Cronin-Golomb

Emory University, Atlanta, Georgia, United States

Patricia J. Bauer

Emory University, Atlanta, Georgia, United States

Abstract

Promoting STEM knowledge early in development helps prepare children for school success. Exposing children to STEM books may be a simple and effective means for promoting early STEM knowledge. However, whether preschool-aged childrens STEM books are optimally designed is unknown. Children and adults learn new information more effectively when there is support for encoding and demand for active processing. We have conducted a textual analysis of 50 STEM books designed for preschool-aged children. The books are coded for (a) support for encoding (narratively cohesive and topic maintaining), and (b) demand of active processing (posing questions and including interactive prompts). Preliminary data shows that on average the books include limited support for encoding and demand for active processing. This suggests that these books are not fulling their potential of promoting early STEM knowledge. Next steps in this research involve identifying means for enhancing STEM childrens books efficacy.