

Generating Constructionist Criteria for AI Educational Technology

How to Evaluate AI Tools to Help Students Build Knowledge

Lydia Guterman¹, Sarah Wharton¹, and Mary Cate Gustafson-Quiett¹

¹ MIT Scheller Teacher Education Program, Cambridge, Massachusetts, USA

Abstract

With so many artificial intelligence (AI) tools in the sphere of education, how do you choose the ones that enable constructionist learning for K-12 students? It is hard to stay apprised of every AI edtech tool that comes on the market, let alone take the time to critically evaluate its usefulness for constructionist learning environments. In this hands-on and highly collaborative workshop, participants will draw upon their personal experience with constructionist tools to collaboratively develop a set of criteria to define effective constructionist tools. This set of criteria will then be used to analyze AI tools. Participants will have time to tinker with their tool of choice to evaluate its affordances for constructionist learning. Finally, participants will share reviews of the tools they analyzed and any additional criteria they created for evaluating these AI edtech tools.

This workshop provides a supportive environment for teachers, students, researchers, and other education experts to wrestle with the critical question of how we can utilize AI tools to empower students to construct their own knowledge. Participants will leave with peer reviews of AI tools, a deeper understanding of how AI can or cannot be used to construct knowledge, and possible inspiration for using AI as a tool for constructionist learning.

Keywords and Phrases: K-12 education, AI (artificial intelligence), educational technology, classroom teaching, constructionism

Scope, Motivation, and Background

This workshop draws on the background knowledge of participants to generate criteria for constructionist tools and provides them with an overview of AI and constructionism. Ample time is provided to explore an AI tool of interest and evaluate its use as a constructionist tool with the support of peers and MIT curriculum designers. The purpose of this workshop is to engage attendees in thinking about constructionism's relationship with AI before the MIT team pilots a larger scale workshop directly with computer science educators who may be new to constructionism.



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