

February 12, 2023

Dear AI4Ed Workshop Steering Committee:

I am enclosing our camera-ready short paper entitled “A.I. Math Personalization Tool (AMPT): Empowering Students through Peer-Authored Math Content” for inclusion in day 1 of the AI4Ed workshop.

Both reviewers provided thoughtful consideration and pointed out that a method for evaluating the success of the tool was lacking from the original submission. The Problem Creation and Student Evaluation subsection now include preliminary findings from evaluation. We have also included greater emphasis in the Future Directions sections regarding how success is to be evaluated across several planned studies. A point-by-point response is provided further down. The camera read version reflects updates to address the reviewers’ concerns.

Sincerely,

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Point by point response:

Reviewer 1

- “problem creation and student evaluation were very light and the problem revision was missing.”
 - We have added a new section for problem revision and lengthened the other two sections to include evaluative results.
- “figure 1 could be improved by delineating the role of the student and the role of the LLM better.”
 - Figure 1 has been updated to better delineate the student/LLM roles
- “The prompts used or some pseudo code in an appendix could have helped greatly.” & “only one example”
 - The prompting process and code is extensive and not easily distilled for a short paper. We do extend our examples though by providing the full list student generated questions from a recent pilot study along with their ratings. We provide a link to OSF in the paper.

Reviewer 2

- “while the paper acknowledges potential risks associated with AI interactions, such as generating inappropriate content, it lacks a detailed exploration of how these risks are

managed or mitigated as these gaps would help in assessing the practicality and safety of the tool in real-world educational contexts.”

- We address this more thoroughly in the Expansive Prompt and Problem Creation sections. We also now highlight that interest extraction includes a request for names to be used in the problem to mitigate bias in name choice by GPT.