



School of Health Information Science

Seminar:

Comparative Study of GenAI (ChatGPT) vs. Human in Generating Multiple Choice Questions Based on the PIRLS Reading Assessment Framework



Speakers:

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Oct 25 on Zoom

10:00AM PT

Human-generated multiple-choice questions (MCQs) are commonly used to ensure objective evaluation in education. However, generating high-quality questions is difficult and time-consuming. Generative artificial intelligence (GenAI) has emerged as an automated approach for question generation, but challenges remain in terms of biases and diversity in training data. This study aims to compare the quality of GenAI-generated MCQs with human-created ones. In Part 1, 16 MCQs were created by humans and GenAI individually, aligned with the Progress in International Reading Literacy Study (PIRLS) assessment framework. In Part 2, the quality of MCQs was assessed based on clarity, appropriateness, suitability, and alignment to PIRLS by four assessors. Wilcoxon rank sum tests were conducted to compare GenAI versus human-generated MCQs. The findings highlight GenAI's potential as it was difficult to differentiate from human-created questions and offer recommendations for integrating AI technology in the future.

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