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Write to Learn: Multiple-Choice Question Generation as an Active Learning Strategy for Physician Assistant Students

Sarah Maddux, PA-C
Department of Physician Assistant Studies
College of Health

Active engagement strategies are increasingly recognized as effective tools to enhance learning and retention among health professions students. One promising approach is the use of student-generated multiple-choice questions (MCQs), which can encourage deeper processing of content through analysis, synthesis, and application.

In this physician assistant (PA) classroom pilot intervention, a 70-minute lecture on esophageal diseases within the gastroenterology module was followed by a small-group MCQ writing activity. Students worked in groups of 3–5, either in person or in virtual Zoom breakout rooms, to create MCQs based on the lecture and reading content. At the conclusion of the 3-hour lecture session, all students completed a 10-question low-stakes, incentivized formative quiz administered through ExamNow.

Student Engagement was strong, with 60 of 69 students (87%) participating. Quiz performance demonstrated improvement compared with the prior year's cohort, which did not engage in the MCQ writing intervention. In 2025, 8 students achieved a perfect score of 100%, compared with only 1 student in 2024. These preliminary findings suggest that integrating MCQ writing into didactic sessions may reinforce PA student learning and improve immediate knowledge retention, as measured by formative assessment.

Prior literature, including Kurtz et al and Lahi et al, has shown that student-generated MCQs may enhance exam performance among medical students. This study expands those findings to PA education, providing early evidence that this active learning strategy may be feasible and impactful in the PA classroom.

Future research includes expanding the intervention across multiple PA modules, assessing effects on summative exam performance, and exploring student and faculty perceptions of engagement and confidence. Incorporating structured MCQ writing into PA curricula may provide a scalable, evidence-based method to strengthen clinical reasoning and retention while fostering active participation, which may ultimately improve exam performance and outcomes.