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11

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Poster presented at the 2023 Spotlight on Scholarship at the University of Nebraska Medical Center, Omaha, Nebraska.

Abstract

This ongoing medical education Quality Improvement (QI) project is an iterative Multiple-Choice Question (MCQ) Writing Seminar aiming to enhance the experience of American medical students. Similar projects have mainly occurred in non-US countries and primarily focus on improving student study habits or building question banks. This current project involves three design factors making this effort, to our knowledge, novel: (1) An iterative QI-based peer-led framework, (2) Diversity, Equity, and Inclusion (DEI) concept integration, and (3) a joint focus on enhancing learning and fostering future clinical educators. The 1-hour 2022 first workshop involved 18 multi-year students and included a MCQ-writing theory discussion, MCQ-writing task, and debrief, with pre- and post-surveys. Discussion covered National Board of Medical Examiner MCQ design recommendations, and DEI components involved inclusive language and patient identifiers. Paired t-tests on Likert-type scales showed improvements in (1) understanding MCQ theory ($p < 0.0001$), (2) recognizing DEI importance in MCQ writing ($p < 0.0001$), and (3) medical education interest ($p = 0.0008$); note, as a QI project, these statistics are for workshop design improvement versus formal scientific conclusions. Many enjoyed the workshop, endorsed interest in related activities, and indicated increased test-taking confidence, but participants commented on the fast pacing. The 1-hour 2023 second workshop involved 12 first-time participants and 5 returners, surveyed separately. This iteration decreased slide text via QR code-linked documents, combined several discussion sections, and introduced pair-and-share activities. Participants endorsed ambivalence about QR codes, but strongly supported combined-section and pair-and-share design changes. Statistical analysis on the new data continued exhibiting improvements in the three t-test categories above (respectively, $p = 0.0002$, $p = 0.0003$, $p = 0.039$). Other survey metrics were similar. The pair-and-share activity inadvertently lowered MCQ-writing time, and this exercise's rating decreased ($p = 0.0001$). Pacing concerns diminished, but participants suggested extended or split sessions enabling more small-group activities. Other future directions include adjunct asynchronous e-resources and improved take-home handout design.

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