

Use of critical appraisal as a tool for peer instruction and assessment in post-graduate Epidemiology

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Critical appraisal is commonly taught in epidemiology to develop critical thinking skills before applying research in practice. The use of the 'risk of bias' approach to critical appraisal enables students to investigate study design principles. Often in higher education critical appraisal is used for summative assessment upon a published paper with work undertaken and submitted individually. However, this individualistic approach to appraisal does not reflect best practice of collaboration required in the work-place, nor of systematic reviews where appraisals are usually undertaken independently and then peer discussed.

At Queensland University of Technology (QUT) in Brisbane, post-graduate Epidemiology is taught in large classes, through both internal and distance modes, as a faculty level service unit.

This presentation will describe adaption of critical appraisal for engaged learning and authentic assessment. Instructors have developed an integrated scaffolded approach to study design and critical appraisal. Here, students independently undertake appraisal using the EPHPP tool, which is a series of questions for examining and scoring each aspect of the study design. To ensure originality and a substantive individual undertaking, students upload a substantial draft to Turnitin by the due date. Students then exchange drafts with a selected partner and discuss their scoring and the reasons. Upon conclusion, each student can revise their assessment. The students may then submit separately or as a pair.

This sustainable form of assessment applies the principles of peer instruction, a pedagogy that deepens learning by requiring students to apply core concepts and explain them to peers. The strategy also minimises problems of unbalanced contribution common in group assignments, ensures academic integrity and builds discussion skills. Evaluation is currently underway to understand the students' experience and the associations with academic achievement.