Improving Student Perception of Active Learning through Changes to the Delivery of Instruction

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Introduction

Despite active learning's (AL's) empirically supported benefits (1), students are reported to dislike its practice due to increased intellectual effort, stress from reduced instructor guidance, lack of perceived value etc. (2, 3).

Following the introduction of AL techniques in a large undergraduate biochemistry course, student perceptions mirrored this paradoxical resistance to AL.

"[I feel] like [problem-based learning] is a way for profs to [sneak] in more materials." (response 9)

→ AL is like broccoli— it's good for students, but not necessarily well-liked. So how can instructors make AL more "palatable"?

Objective

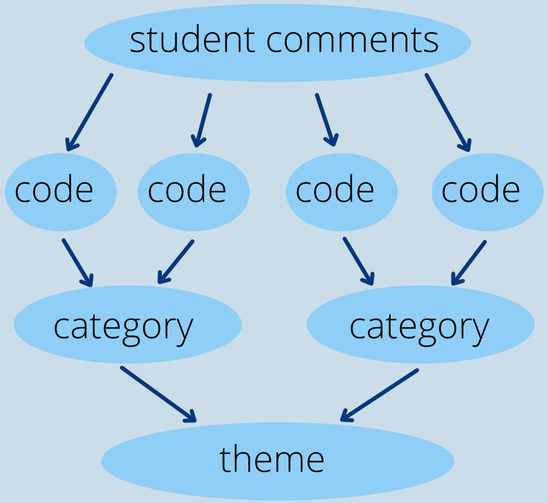
To determine whether delivery impacts student perceptions of AL pedagogy.

Methods

Student feedback in a large undergraduate biochemistry course was collected via end-of-term course evaluations.

Data was qualitatively analysed following constructivist Grounded Theory and using MAXQDA software.

Grounded Theory Approach to Qualitative Data Analysis



Results

Positive student perception of AL increased by 30% from 2018 to 2019.

→ **Values in instruction:**
Students valued an emphasis on application, engagement, retention, understanding rather than memorization and a student-centred approach in the instruction of course material.

→ **Appreciated course components:**
In-class, pre-lecture reviews, assigned pre-lecture material, in-class questions, out-of-class review sessions, case studies, and problem-based learning sessions were mostly well-liked.

Students disliked the increased workload due to AL techniques and their disconnection to exams.

Conclusion & Recommendations

→ Alterations to its delivery can change student perception of AL.

→ AL should have clear expectations, be graded and aligned with other examinations, and the intentions and outcomes of AL should be clearly explained.

References: **(1)** Freeman et al. (2014), *Proceedings of the National Academy of Science,* 111(23), 8410-8415; **(2)** Owens et al. (2020), *Research in Science Education,* 50(1), 253-277; **(3)** Struyven et al. (2008), *Learning Environments Research,* 11(2), 83-109.