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THE UNIVERSITY OF BRITISH COLUMBIA

Students as Key Stakeholders: Exploring Undergraduates' Perceptions of Teaching and Learning in an Introductory Organic Chemistry Course

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Background

Student Learning & Organic Chemistry

Organic chemistry is a *challenging, cumulative* course where students often struggle to develop meaningful learning strategies and easily fall behind (Grove & Bretz, 2012; Lynch & Trujillo, 2010).

Students often lack the metacognitive skills and self-efficacy to effectively monitor, evaluate, and plan their learning (Ambrose et al., 2010; Zhao et al., 2014).

Purpose & Methods

This poster will examine undergraduate students' perceptions of their learning strategies and experiences in a second year introductory organic chemistry course that encouraged active learning strategies.



Student surveys, classroom observations, and 26 one-on-one interviews revealed a raw and complex array of factors students perceived as influencing their learning in CHEM 233.

References

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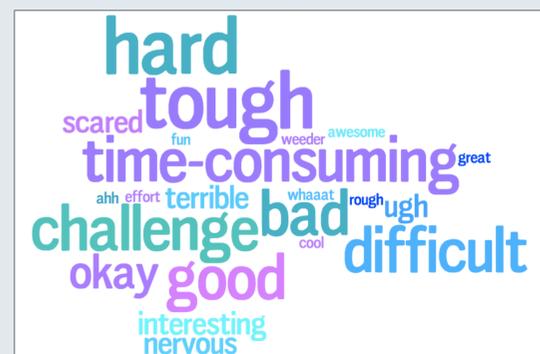
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Context

- This study focused on two sections of CHEM 233 (~500 students)
- Majority of students in second year of a biological science degree
- Course recently adopted "flipped classroom" format

Outside of Class	In-class
• Pre-class videos & quizzes	• Group worksheets
• Graded online homework	• Clicker questions
• Ungraded problem sets	• Practice
	• Bi-weekly quizzes

Students' Descriptions and Sentiments of Organic Chemistry

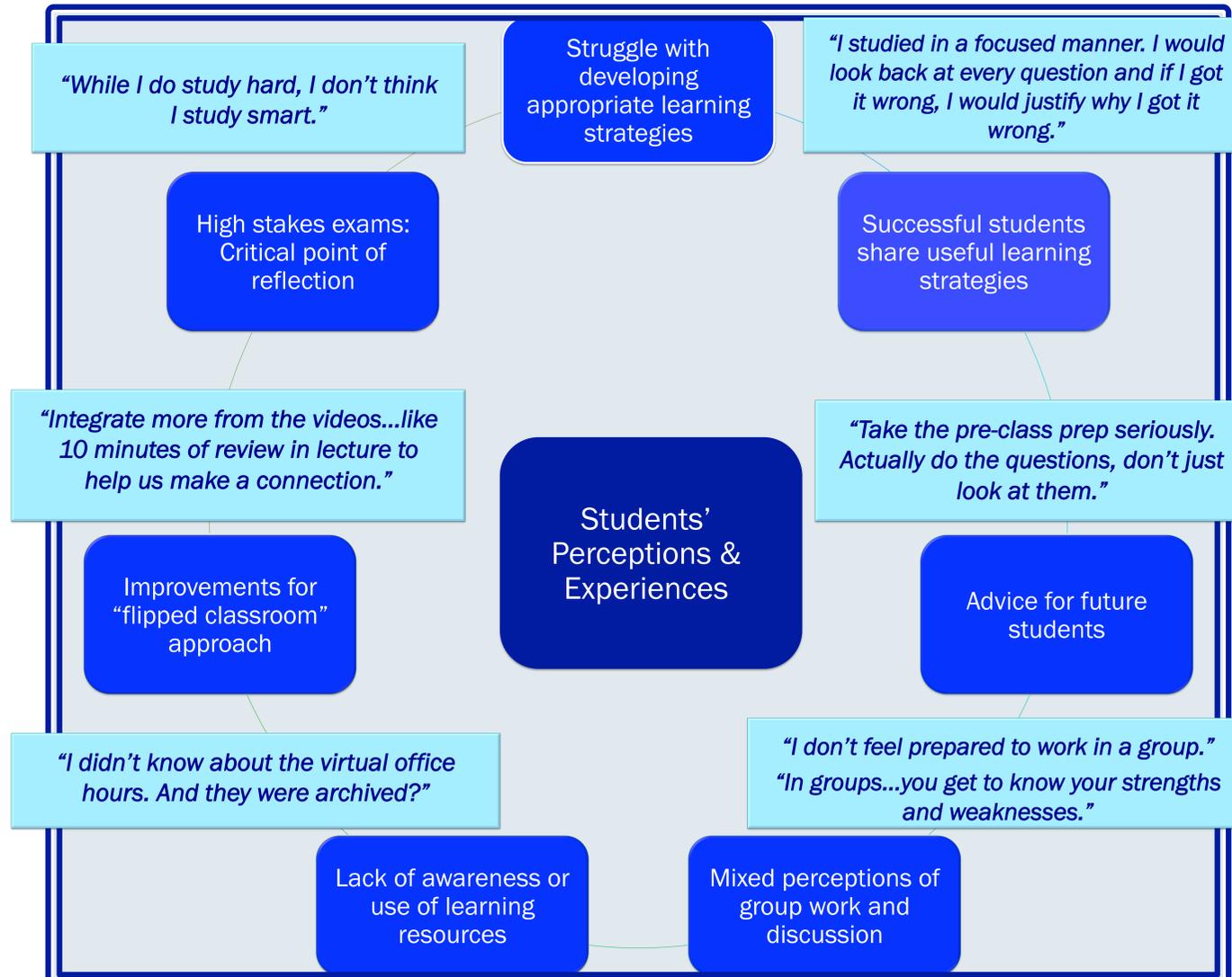


Students' responses to the question: What were/are your impressions of organic chemistry?

Additional Resources for Students

- Face-to-face and virtual office hours
- Study strategy intervention workshops
- Reaction summary templates
- Online Piazza Forum
- Documents/readings about deliberate practice and effective studying

Results



Future Considerations

- The results of this study will be compiled as a report for CHEM 233 faculty, staff and students to outline: how successful students study; students' perceived barriers to learning; students' feedback regarding the course curriculum & pedagogy; and advice for future students.
- Students' perceptions will help faculty and staff to consider how we may refine the course curriculum & pedagogy to best support students' learning strategies and experiences.

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