

# Implementing Active Learning and High-Impact Practices to Improve Student Learning, Retention, and Graduation

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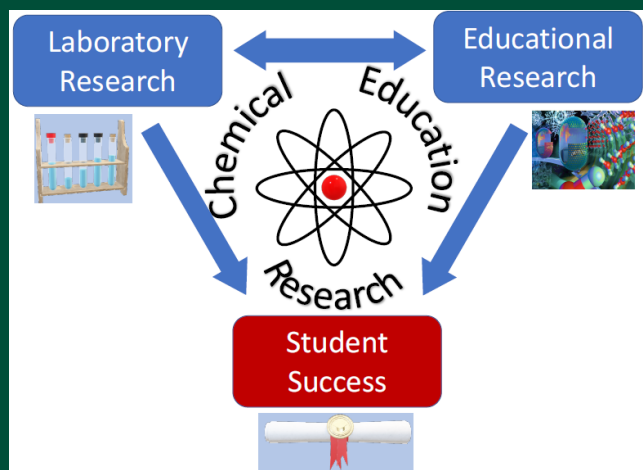
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## Research Focus

Chemical education research is the systematic investigation of teaching and learning focusing on understanding and improving learning of chemistry. Research in the Liu group focuses on the investigation of different factors impacting student success in undergraduate chemistry and the implementation of pedagogical and curriculum interventions that help with student engagement and retention.

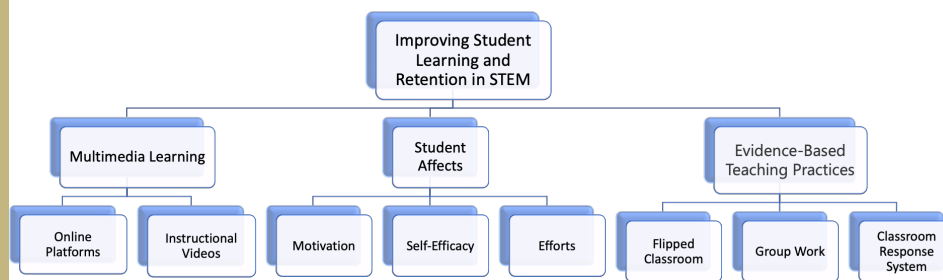


## Potential Collaborators

The future potential collaborators will be STEM faculty who are interested in using evidence-based instructional practices to improve student learning, retention, and graduation.

## Educational Research in Chemistry

To implement and evaluate multimedia learning materials/platforms and active learning in large enrollment courses for an increasingly diverse student body.



## Research-based Green Chemistry Projects

To develop and evaluate novel and research-based green chemistry projects/experiments for undergraduate courses across general chemistry, organic chemistry, and upper-level chemistry courses. Moreover, to develop activity projects for pre-service science teachers and K-12 students based on NGSS.

