Scott Lewis, Ph.D.
Professor, Department of Chemistry
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Education

5/03 to 5/06	Ph.D., University of South Florida, Tampa, Florida, Chemistry
8/01 to 5/03	M.A., University of South Florida, Tampa, Florida, Chemistry
8/97 to 5/01	B.S., University of South Florida, Tampa, Florida, Chemical Engineering summa cum laude

Professional Experience

8/22 to present	Professor, University of South Florida, Chemical Education
8/16 to 8/22	Associate Professor, University of South Florida, Chemical Education
8/13 to 8/16	Assistant Professor, University of South Florida, Chemical Education
8/12 to 7/13	Associate Professor, Kennesaw State University. Chemical Education
8/06 to 8/12	Assistant Professor, Kennesaw State University. Chemical Education

Honors and Awards

- Paper selected for the ACS Editor's Choice:
  - *When all you have is a covalent model of bonding* in 2022
  - *Chemistry students' artificial intelligence literacy* in 2024
- Papers selected for the New and Noteworthy in Chemistry Education Research symposium in the American Chemical Society Division of Chemical Education:
  - *Goal orientations of general chemistry students* in 2018
  - *Learning Beyond the Classroom* paper in 2015
  - *Looking for Links* paper in 2014
- Visiting Scientist for the Western Connecticut American Chemical Society 2016
- Outstanding Undergraduate Teaching Award, 2014-2015, University of South Florida
- Chemistry Department Outstanding Teaching Award, 2015, University of South Florida
- Freshman Chemistry Teaching Award, 2010, Kennesaw State University, College of Science and Mathematics
- College Distinguished Teaching Award, 2009, Kennesaw State University, College of Science and Mathematics
- Scholarship of Teaching and Learning Team Award, 2008, Kennesaw State University Center for Excellence in Teaching and Learning
- Outstanding Dissertation of the Year, 2006, University of South Florida Graduate School

Funded Projects

1. *Collaborative Research: An Exploration of the Impact of Molecular Representations on Organic Chemistry Students' Problem Solving*, Weinrich, M. and Lewis, S.E. National Science Foundation – Improving Undergraduate STEM Education (DUE 2142324) 7/01/2022 – 06/30/2025. USF Portion: $126,259.
2. *Development and Evaluation of a Comprehensive Utility Value Intervention for General Chemistry*, Lewis, S.E. National Science Foundation – Improving Undergraduate STEM Education (DUE 2121416) 7/15/2022 – 06/30/2025. $278,389.
3. *Collaborative Research: Longitudinal Impact of Peer-Led Team Learning on Retention of Chemistry Concepts and Attitudes toward Chemistry*, Lewis, S.E., Bauer, C. National Science Foundation – Improving Undergraduate STEM Education (DUE 1712164) 6/1/2018 – 5/31/2012. USF portion:$169,288
4. *Improving Large Lecture Gateway Chemistry Courses through Flipped Classes with Peer-Led Team Learning*, Lewis, S.E., Raker, J.R., Antilla, J. National Science Foundation – Improving Undergraduate STEM Education (DUE 1432085) 10/1/2014 – 9/30/2017. $329,994.
5. *A High Engagement STEM Academy for Entering First Year Students to Inspire Achievement and Persistence in STEM*, R. Pollenz, A. Feldman, S. Lewis, R. Potter**,** K Ramachandran, P Stiling and K.Yee, Howard Hughes Medical Institute Undergraduate Education 9/1/2014- 8/31/2019. $1,200,000 (Total costs; no indirect)
6. *Developing a Student Centered Assessment for General Chemistry*, Lewis, S.E., Howell, T., Orvis, J., Sauder, D., Todebush, P., National Science Foundation – Course, Curriculum, and Laboratory Improvement (DUE 0941976, 1416006) 5/2010 – 7/2014, $159,450.

Refereed Journal Articles

* = undergraduate student; † = graduate student; underline = corresponding

1. Nayyar, P.†, Teran, O.A.†, & Lewis, S.E. (2025) Artificial Intelligence as a Catalyst for Promoting Utility Value Perceptions of Chemistry. *Journal of Chemical Education*, 102, 2685-2694.
2. Nelsen, I.†, Robinson, C.K.†, Krzypkowski, S.*, & Lewis, S.E. (2025) An Investigation into Dissonance-Induced Changes in Intermolecular Force Conceptions through Electrostatic Potential Maps. *Journal of Chemical Education*, 102, 2623-2635.
3. Robinson, C.K.†, Weinrich, M., & Lewis, S.E. (2025) Organic chemistry students' usage of electrostatic potential maps across an unstructured and structured card sort. *Chemistry Education Research and Practice*, 26, 647-659.
4. Young, J.D.† & Lewis, S.E. (2025) Development and Evaluation of the Chemistry Multidimensional Belonging Scale (CMBS). *Journal of Chemical Education*, 102, 1418-1427.
5. Nayyar, P.†, Young, J.D.†, Dawood, L.*, & Lewis, S.E. (2025) Evaluating an Intervention to Improve General Chemistry Students' Perceptions of the Utility of Chemistry. *Journal of Chemical Education*, 102, 1389-1397.
6. Young, J.D.†, Demirdogen, B., Bauer, C.F., & Lewis, S.E. (2025) A lack of impact of pedagogy (peer-led team learning compared with didactic instruction) on long-term student knowledge of chemical equilibrium. *Chemistry Education Research and Practice*, 26, 183-196.
7. Braun, I., Lewis, S.E., & Graulich, N. (2025) A question of pattern recognition: Investigating the impact of structure variation on students' proficiency in deciding about resonance stabilization. *Chemistry Education Research and Practice*, 26, 158-182.
8. Young, J.D.†, Dawood, L.*, & Lewis, S.E. (2024) Informative Utility Value Intervention: Assignments Designed to Promote Students' Personal Connections with Chemistry Topics Based on Their Career Goals. *Journal of College Science Teaching*, 10.1080/0047231X.2024.2410761

9. Nayyar, P.[†], Dougherty, B.A.*, & Lewis, S.E. (2024) Evaluation of the Activity Engagement Survey (AcES) for Use with Clicker Questions. *Journal of Chemical Education*, 101, 4624-4632.
10. Farheen, A.†, Demirdogen, B., Chem, B., Nelsen, I.†, Weinrich, M., & Lewis, S.E. (2024) Affordances of Electrostatic Potential Maps in Promoting Use of Electronic Features and Causal Reasoning in Organic Chemistry. *Journal of Chemical Education*, 101, 3691-3702.
11. Nelsen, I.[†], Weinrich, M., & Lewis, S.E. (2024) Students' Sensemaking of Electrostatic Potential Maps within Substitution and Elimination Reactions. *Journal of Chemical Education*, 101, 3713-3722.
12. Young, J.D.[†], Dawood, L.[*], & Lewis, S.E. (2024) Chemistry Students' Artificial Intelligence Literacy through their Critical Reflections of Chatbot Responses. *Journal of Chemical Education*, 101, 2466-2474.
13. Nayyar, P.[†], Demirdogen, B. & Lewis, S.E. (2024) Factors that influence general chemistry students' decision making in study strategies. *Chemistry Education Research and Practice*, 25, 877-894.
14. Nelsen, I.[†], Farheen, A.[†], & Lewis, S.E. (2024) How ordering concrete and abstract representations in intermolecular force chemistry tasks influences students' thought processes on the location of dipole-dipole interactions. *Chemistry Education Research and Practice*, 25, 815-832.
15. Farheen, A.[†], Nguyen, H.T.[*], Nelsen, I.[†] & Lewis, S.E. (2024) Students' Approaches to Determining the Location of Intermolecular Force between Two Distinct Molecules. *Journal of Chemical Education*, 101, 766-776.
16. Farheen, A.[†], Martin, N.[*], & Lewis, S.E. (2024) Student perceptions of partial charges and nucleophilicity/electrophilicity when provided with either a bond-line, ball-and-stick, or electrostatic potential map for molecular representation. *Chemistry Education Research and Practice*, 25, 343-359.
17. Young, J.D.[†], Demirdogen, B. & Lewis, S.E. (2023) Students' Sense of Belonging in Introductory Chemistry: Identifying Four Dimensions of Belonging via Grounded Theory. *International Journal of Science and Mathematics Education*, DOI: 10.1007/s10763-023-10433-3
18. Demirdogen, B. & Lewis, S.E. (2023) Investigating how chemistry students' reported challenges inform the relationship between mindset and academic performance. *Journal of Chemical Education*, 100, 3252-3260.
19. Demirdogen, B., Nelsen, I.[†], & Lewis, S.E. (2023) Organic chemistry students' use of stability in mental models on acid and base strength. *Chemistry Education Research and Practice*, 24, 1127-1141.
20. Bowe, K.A., Bauer, C.F., Wang Y.[†] & Lewis, S.E. (2022) When All You have is a Covalent Model of Bonding, Every Substance is a Molecule: A Longitudinal Study of Student Enactment of Covalent and Ionic Bonding Models. *Journal of Chemical Education*, 99, 2808-2820.
21. Wang, Y.[†] & Lewis, S.E. (2022) Efficacy and Insights Gaines from a Utility Value Intervention with Inorganic Chemistry Students. *Journal of Chemical Education*, 99, 2798-2807.
22. Young, J.D.[†] & Lewis, S.E. (2022) Evaluating Peer-Led Team Learning Integrated into Online Instruction in Promoting General Chemistry Student Success. *Journal of Chemical Education*, 99, 1392-1399.
23. Wang, Y.[†] & Lewis, S.E. (2022) Towards a theoretically sound measure of chemistry students' motivation; Investigating rank-sort survey methodology to reduce response style bias. *Chemistry Education Research and Practice*, 23, 240-256.
24. Farheen, A.[†] & Lewis, S.E. (2021) The impact of representations of chemical bonding on students' predictions of chemical properties. *Chemistry Education Research and Practice*, 22, 1035-1053.
25. Wang Y.[†], Rocabado G.[†], Lewis, J.E. & Lewis, S.E. (2021) Prompts to Promote Success: Evaluating Utility Value and Growth Mindset Interventions on General Chemistry Students' Attitude and Academic Performance. *Journal of Chemical Education*, 98, 5, 1476-1488.
26. Lewis, S.E. (2020) Chemistry Assessments through the Sudden Implementation of Online Instruction. *Journal of Chemical Education*, 97, 3418-3422.

27. Wang, Y.[†] & Lewis, S.E. (2020) Analytical chemistry students' explanatory statements in the context of their corresponding lecture. *Chemistry Education Research and Practice*, 21, 1183-1198.
28. Ralph, V.R.[†] & Lewis, S.E. (2020) Impact of Representations in Assessments on Student Performance and Equity. *Journal of Chemical Education*, 97, 603-615.
29. Rahman, T.[†] & Lewis, S.E. (2020) Evaluating the evidence base for evidence-based instructional practices in chemistry through meta-analysis. *Journal of Research in Science Teaching*, 57, 765-793.
30. Ralph, V.R.[†] & Lewis, S.E. (2020) Introducing randomization tests via an evaluation of peer-led team learning in undergraduate chemistry courses. *Chemistry Education Research and Practice*, 21, 287-306.
31. Ralph, V.R.[†] & Lewis, S.E. (2019) An explanative basis for the differential performance of students with low math aptitude in general chemistry. *Chemistry Education Research and Practice*, 20, 570-593.
32. Ralph, V.R.[†] & Lewis, S.E. (2018) Chemistry topics posing incommensurate difficulty to students with low math aptitude scores. *Chemistry Education Research and Practice*, 2018, **19**, 867-884.
33. Lewis, S.E. (2018) Goal orientations of general chemistry students via the achievement goal framework. *Chemistry Education Research and Practice*, 19, 199-212.
34. Apugliese, A.[*], & Lewis, S.E. (2017) Impact of instructional decisions on the effectiveness of cooperative learning in chemistry through meta-analysis. *Chemistry Education Research and Practice*, 18, 271-278.
35. Robert, J., Lewis, S.E., Oueini, R.[*], & Mapugay, A.[*] (2016) Coordinated implementation and evaluation of flipped classes and Peer-Led Team Learning. *Journal of Chemical Education*, 93, 1993-1998.
36. Ye, L.[†], Suniak, C.[†], Oueini, R.[*], Robert, J., Lewis, S. (2016). Can they succeed? Exploring at-risk students' study habits in college general chemistry. *Chemistry Education Research and Practice*, 17, 878-892.
37. Ye, L.[†], Oueini, R.[*], Lewis, S.E. (2015). Developing and Implementing an Assessment Technique to Measure Linked Concepts. *Journal of Chemical Education*, 92, 1807-1812.
38. Ye, L.[†], Oueini, R.[*], Dickerson, A.P.[*], Lewis, S.E. (2015). Learning beyond the classroom: Using text messages to measure General Chemistry students' study habits. *Chemistry Education Research and Practice*, 16, 869-878.
39. Ye, L.[†], Lewis, S.E., Raker, J.R. & Oueini, R.[*] (2015). Examining the Impact of Chemistry Education Research Articles from 2007 through 2013 by Citation Counts. *Journal of Chemical Education*, 92, 1299-1305.
40. Lewis, S.E. (2014). Investigating the Longitudinal Impact of a Successful Reform in General Chemistry on Student Enrollment and Academic Performance. *Journal of Chemical Education*, 91, 2037-2044.
41. Lewis, S.E. (2014). Examining Evidence for External and Consequential Validity of the First Term General Chemistry Exam from the ACS Examinations Institute**.** *Journal of Chemical Education*, 91(6), 793-799.
42. Ye, L.[†] & Lewis, S.E. (2014). Looking for Links: Examining Student Responses in Creative Exercises for Evidence of Linking Chemistry Concepts. *Chemistry Education Research and Practice*, 15(4), 576-586.
43. Mitchell, Y.D.[*], Ippolito, J.[*] & Lewis, S.E. (2012). Evaluating Peer-Led Team Learning across the two semester General Chemistry sequence. *Chemistry Education Research and Practice*, *13*, 378-383.
44. Lewis, S.E. (2011). Retention and Reform: An Evaluation of Peer-Led Team Learning. *Journal of Chemical Education*, *88*(6), 703-707.

45. Lewis, S.E., Shaw, J.L. & Freeman, K.A.* (2011). Establishing open-ended assessments: investigating the validity of creative exercises. *Chemistry Education Research and Practice*, *12*, 158-166.
46. Lewis, S. E.; Shaw, J.L.; & Freeman, K.A.* (2010). Creative Exercises in General Chemistry: A Student-Centered Assessment. *Journal of College Science Teaching 40*(1), 48-53.
47. Lewis, S. E., Shaw, J.L., Webster, G.H., Heitz, J.O.* (2009). Attitude Counts: Self-Concept and Success in General Chemistry. *Journal of Chemical Education*, *48*(6), 744-749.
48. Shaw, J. L., Dockery, C. R., Lewis, S. E., Harris, L.*, & Bettis, R.* (2009). The *Trans Effect*: A Guided Inquiry Experiment for Upper-division Inorganic Chemistry. *Journal of Chemical Education, 86*(12), 1416-1418.
49. Rushton, G.T., Hardy, R.C.*, Gwaltney, K.P. & Lewis, S.E. (2008). Alternative Conceptions of Organic Chemistry Topics among Senior-level Chemistry Students. *Chemistry Education Research and Practice, 9*(2), 122-130.
50. Lewis, S.E. & Lewis, J.E. (2008). Seeking Effectiveness and Equity in a Large College Chemistry Course: An HLM Investigation of Peer-Led Guided Inquiry. *Journal of Research in Science Teaching*, *45*(7), 794-811.
51. Lewis, S.E. & Lewis, J.E. (2007). Predicting at-risk students in general chemistry: Comparing formal thought to a general achievement measure. *Chemistry Education Research and Practice, 8*(1), 32-51.
52. Lewis, S.E. & Lewis, J.E. (2005). Effectiveness of a Workshop to Encourage Action: Evaluation from a Post-Workshop Survey. *Journal of Chemical Education*, *83*(2), 299-304.
53. Lewis, S.E. & Lewis, J.E. (2005). The Same or Not the Same: Equivalence as an Issue in Educational Research. *Journal of Chemical Education*, *82*(9), 1408-1412
54. Lewis, S.E., & Lewis, J.E. (2005). Departing from Lectures: An Evaluation of a Peer-Led Guided Inquiry Alternative. *Journal of Chemical Education*, *82*(1), 135-139.

Refereed Book Chapters

1. Frey, R.F. & Lewis, S.E. (2023) *Implementing Cooperative Learning in Large Undergraduate Classes via PLTL*, in Overson, C.E., Hakala, C.M., Kordonowy, L.L., Benassi, V.A. (Eds.), What Scholars and Teachers Want You to Know About the Why and How to Apply the Science of Learning in Your Academic Setting (pp. 239-251), American Psychological Association.
2. Lewis, S.E. (2014). *An Introduction to Nonparametric Statistics in Chemistry Education Research*, in Bunce, D.M. & Cole, R.S. (Eds.), Tools of Chemistry Education Research (pp. 115-133), American Chemical Society, Washington DC.
3. Lewis, S.E. (2014). *Starting and Sustaining a Peer-Led Team Learning Program*, in Potts, G.E. & Dockery, C.R. (Eds.), Addressing the Millennial Student in Undergraduate Chemistry (pp. 47-57), American Chemical Society, Washington DC.

Editorials and Commentaries

1. Nyachwaya, J.M. & Lewis, S.E. (2024) Guidance on the data availability statement requirement in CERP. *Chemistry Education Research and Practice*, 25, 973-975.
2. Barbera, J., Lewis, S.E., Nyachwaya, J. & Graulich, N. (2024) To identify or not to identify: a choice in chemistry education research and practice. *Chemistry Education Research and Practice* 25, 380-382.
3. Lewis, S.E. (2024). How Chemistry Education Research & Practice serves chemistry education. *Chemistry Education Research and Practice* 25, 8-10.
4. Graulich, N., Kahveci, A., Lawrie, G.A., Lewis, S.E. & Nyachwaya, J.M. (2023). Laying the foundations to build on: exploring diversity in our Chemistry Education Research & Practice Community. *Chemistry Education Research and Practice* 24, 8-11.

5. Lewis, S.E. (2022). Considerations on validity for studies using quantitative data in chemistry education research and practice. *Chemistry Education Research and Practice* 23, 764-767.
6. Lewis, S.E., Nyachwaya, N., Kahveci, A., Lawrie, G.A. & Graulich, N. (2022). Insights into the manuscript review process viewed as a constructive journey rather than surviving hurdles. *Chemistry Education Research and Practice* 23, 7-11.
7. Graulich, N., Lewis, S.E., Kahveci, A., Nyachwaya, J.M. & Lawrie, G.A. (2021). Writing a review article: what to do with my literature review. *Chemistry Education Research and Practice* 22, 561-564.
8. Lawrie, G.A., Graulich, N., Kahveci, A. & Lewis, S.E. (2021). Ethical statements: a refresher of the minimum requirements for publication of chemistry education research and practice articles. *Chemistry Education Research and Practice* 22, 234-236.
9. Lawrie, G.A., Graulich, N., Kahveci, A. & Lewis, S.E. (2020). Steps towards publishing your thesis or dissertation research: avoiding the pitfalls in turning a treasured tome into a highly-focussed article for CERP. *Chemistry Education Research and Practice* 21, 694-697.
10. Herrington, D.G., Sweeder, R.D., Daubenmire, P.L., Bauer, C.F., Bretz, S.L., Bunce, D.M., Carmel, J.H., Cole, R., DeKorver, B.K., Kelly, R.M., Lewis, S.E., Oliver-Hoyo, M., Ryan, S.A.C., Stains, M., Towns, M.H. & Yezierski, W.J. (2019). Supporting the Growth and Impact of the Chemistry-Education-Research Community. *Journal of Chemical Education*, 96, 393-397.
11. Seery, M.K., Kahveci, A., Lawrie, G.A. & Lewis, S.E. (2019) Evaluating articles submitted for publication in Chemistry Education Research and Practice. *Chemistry Education Research and Practice*, 20, 335-339.

Seminars and Other Invited Talks

Lewis, S.E. *How Instruction Can Promote Students' Perceptions on the Utility of Chemistry*, Gordon Research Conference on Chemistry Education Research and Practice in Lewiston, ME, July 6, 2025.

Lewis, S.E. *Chemistry students' conceptions of chemical bonding and intermolecular forces and instructional implications*, Virtual Seminar at Justus-Liebig University Giessen, June 5, 2024.

Lewis, S.E. *General chemistry students' conceptions of chemical bonding and intermolecular forces and what it means for instruction*, Virtual Seminar at University of Washington, May 29, 2024.

Lewis, S.E. *Students' conceptions of chemical bonding and intermolecular forces and what it means for how we teach and assess*, Virtual Seminar at San Diego State University, January 27, 2023.

Lewis, S.E. *Characterizing and Addressing Challenges Experienced by Students in General Chemistry*, Virtual Seminar at University of Iowa, December 3, 2021.

Lewis, S.E. *Accompaniments to Instruction: Using socio-psychological interventions and representations to promote general chemistry student success*, Virtual Seminar at North Dakota State University, November 6, 2020.

Lewis, S.E. *Implementation and Evaluation of Peer-Led Team Learning in General Chemistry*, Seminar at University of South Alabama, November 8, 2019.

Lewis, S.E. *At-risk students and equity in post-secondary introductory chemistry*, Webinar in CERGinar series, November 28, 2018.

Lewis, S.E. *Struggles and successes of General Chemistry students with low math aptitude scores*, Seminar at Auburn University, October 4, 2018.

Lewis, S.E. *The impact of students' study habits on academic success in General Chemistry*, Seminar at Purdue University, September 27, 2017.

Lewis, S.E. *The impact of students' study habits on academic success in General Chemistry*, Seminar at Middle Tennessee State University, September 14, 2017.

Lewis, S.E. *The impact of students' study habits on academic success in General Chemistry*, Seminar at Portland State University, May 19, 2017.

Lewis, S.E. *How study habits influence student success in General Chemistry*, Seminar at University of Tampa, October 9, 2015.
Lewis, S.E. *Understanding Student Study Habits Through Text Messaging*, Gordon Research Conference on Chemistry Education Research and Practice in Lewiston, ME, June 24, 2015.
Lewis, S.E. *Testing what we teach: Developing assessments for General Chemistry to Encourage Student Linking of Concepts*, Seminar at University of Nebraska-Lincoln, February 27, 2015.
Lewis, S.E. *The development of a measure of linked concepts in General Chemistry*, Seminar at Florida Southern College, February 19, 2015.
Lewis, S.E. *Testing what we teach: Developing assessments to promote students linking concepts in General Chemistry*, Seminar at Virginia Commonwealth University, November 6, 2014.
Lewis, S.E. *Testing what we teach: Developing assessments to promote students linking concepts in General Chemistry*, Seminar at Florida Gulf Coast University, October 30, 2014.
Lewis, S.E. *Developing and Validating an Assessment for General Chemistry to Encourage Students' Linking of Chemistry Concepts*, Seminar at University of New Hampshire, October 9, 2014.
Lewis, S.E. *A multi-faceted evaluation of a Peer-Led Team Learning reform implementation in General Chemistry*, Seminar at South Dakota State University, February 27, 2014.

Selected National Conference Presentations since 2016

Underline = presenter; * = undergraduate student; † = graduate student;

17. Wang, Y.†, Lewis, S.E., *Sort-rank survey vs. Likert-scale survey: Measuring students' academic motivation in general chemistry courses*, National Meeting of the American Chemical Society, Virtual, April 7, 2021.
16. Farheen, A.†, Lewis, S.E., *Understanding the impact of representations of molecules in students' determination of molecular shape and polarity*, National Meeting of the American Chemical Society, Virtual, April 9, 2021.
15. Young, J.†, Lewis, S.E., Bowe, K., Bauer, C. *Retention of equilibrium concepts among students in analytical chemistry*, National Meeting of the American Chemical Society, Virtual, April 13, 2021.
14. Farheen, A.†, Lewis, S.E., *Understanding the impact of representations of molecules on students' explanation of chemistry concepts*, National Meeting of the American Chemical Society, Virtual, April 13, 2021.
13. Wang, Y.†, Lewis, S.E., *Social-psychological interventions (growth mindset and utility value) to promote general chemistry students' academic performance*, National Meeting of the American Chemical Society, Virtual, April 14, 2021.
12. Rahman, Md. T.†, Lewis, S.E., *Impact of Peer-led Team Learning on students' long-term retention of general chemistry concepts*, National Meeting of the American Chemical Society, Orlando, April 4, 2019.
11. Ralph, V.R.†, Lewis, S.E., *Adapting chemistry assessments for greater equitablity among cohort of differential preparation in mathematics*, National Meeting of the American Chemical Society, Orlando, April 4, 2019.
10. Lewis, S.E., *Goal orientations of general chemistry students via the achievement goal framework*, National Meeting of the American Chemical Society, Orlando, April 2, 2019.
9. Kingsepp, J.†, Lewis, S.E., *Analyzing the retention of knowledge among general chemistry students*, National Meeting of the American Chemical Society, Orlando, April 2, 2019.
8. Wang, Y.†, Lewis, S.E., *Investigation of students' long-term retention of general chemistry concepts in analytical chemistry*, National Meeting of the American Chemical Society, Orlando, April 2, 2019.

7. Ralph, V.R.[†], Lewis, S.E., *Identifying the topics posing disproportionate challenges to at-risk students in chemistry*, 25th Biennial Conference on Chemical Education, South Bend, IN, August 1, 2018.
6. Lewis, S.E., *Considering empirical research on chemistry students' study habits through varying theoretical frameworks*, 25th Biennial Conference on Chemical Education, South Bend, IN, July 31, 2018.
5. Ralph, V.R.[†], Lewis, S.E., *Student analytical reasoning of mole concept and stoichiometry assessment items*, 25th Biennial Conference on Chemical Education, South Bend, IN, July 31, 2018.
4. Rahman, M.[†], Lewis, S.E., *Examining the evidence base of evidenced-based instructional practices through meta-analysis*, 25th Biennial Conference on Chemical Education, South Bend, IN, July 30, 2018.
3. Kingsepp, J.[†], Lewis, S.E., *Analyzing the retention of knowledge among second semester general chemistry students*, 25th Biennial Conference on Chemical Education, South Bend, IN, July 30, 2018.
2. Lewis, S.E., Cole, R.S., *Contributing to the chemistry education research community across various academic settings*, 25th Biennial Conference on Chemical Education, South Bend, IN, July 29, 2018.
1. Ye, L.[†], Oueini, R.[*], Dickerson, A.P.[*], Lewis, S.E., *Experience sampling methodology to facilitate measuring general chemistry students' study habits*, 251st National Meeting of the American Chemical Society, March 14, 2016.

Courses Taught

1. Fundamentals of Chemistry I and Lab (General, Organic and Biological Chemistry)
2. General Chemistry I and lab
3. General Chemistry II
4. Peer Leading in Chemistry (Created course to train peer leaders)
5. Teaching Methods in Chemistry
6. Chemistry Assessment Practices (Created graduate level course on research and practice)
7. Student Teaching Supervision
8. Investigating Chemistry Education Research in the U.S. (Graduate level course on research literature)

Service to the Profession

Editor for *Chemistry Education Research and Practice*, January 2024 to present

Associate Editor for *Chemistry Education Research and Practice*, 2018 - 2023.

Appointed member of the American Chemical Society's Division of Chemical Education, Board of Publication from March 2014 to December 2017.

Organized and presided for a symposium titled "Student Assessment Practices in Chemistry Education" at the 23rd Biennial Conference on Chemical Education, 2014.

Reviewer for *Chemical Education Research and Practice*, *Journal of Chemical Education*, *Journal of College Science Teaching* and the *National Science Foundation*.

Wrote a published book review appearing in Science Education, 95(3), 573-575, reviewing the book:

Sadler, P. M., Sonnert, G., Tai, R. H. & Klopfenstein, K. (2010). *AP: A Critical Examination of the Advanced Placement Program*. Harvard Education Press.

American Chemical Society Georgia Local Section, 8/06 – 8/12, Chemistry Olympiad coordinator. Responsible for promoting student participation, coordinating review sessions, distributing and grading local exam, proctoring national exam.

American Chemical Society Examinations Institute, 11/27/06 – 7/27/08, 2008 Conceptual Examination Committee member. Developed, edited and revised questions for the ACS Conceptual Exam.

American Chemical Society Examinations Institute, 04/01/13 – 04/01/2015, 2015 Conceptual Examination Committee member.

Professional Service at University of South Florida

Department (Chemistry)

Elected as department representative to the faculty senate Aug 2023 - Current.

Coordinated the 2022 Raymond N. Castle chemistry student research conference on campus.

Thrice elected to the department's Faculty Advisory Council, each for two-year terms, from August 2017 to May 2019, from August 2020 to May 2022, and from August 2023 to present (chairperson). Responsible for conducting annual reviews, promotion reviews and governance issues.

General Chemistry co-coordinator from January 2014 to present

Chair of the Undergraduate Council from August 2014 to May 2018

Member of the graduate recruiting committee from August 2013 to May 2015 and August 2019 to May 2023.

Chair of seven instructor search committees hiring a permanent instructor in 2016 and 2021, and visiting instructors in 2016, 2016, 2022, 2023, and 2024.

College (Arts and Sciences)

Member of the organizing committee to plan a faculty learning community to investigate best practices in STEM education from August 2013 through May 2014.

Chair of instructor promotion committee Spring 2016.

Chair of the School of Natural Science and Mathematics Undergraduate Curriculum Committee August 2018 to May 2019.

University

Chemistry department faculty senate representative, August 2023 to current.

Member of search committee to identify chair of Teaching and Learning, 2017 and 2018.

Served on an *ad hoc* committee to plan the "Engaging Students in Class Workshop" in the summer and fall of 2018 and led a session within this workshop for faculty members in February 2019.