

MOJTABA KHAJELOO, PhD

Research Assistant Professor

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EDUCATION

Ph.D. Science Education	2021
<i>University of Missouri – Columbia, Department of Learning, Teaching, and Curriculum (LTC)</i>	
<ul style="list-style-type: none">● <i>Thesis: "Investigating Students' View toward Biology as a Complex System"</i>● <i>Advisor: Dr. Marcelle Siegel</i>	
M.Sc. Biochemistry	2011
<i>University of Tehran, Institute of Biochemistry and Biophysics</i>	
<ul style="list-style-type: none">● <i>Thesis: "Biosorption of Toxic Metals in Defined Solutions by Microorganisms"</i>● <i>Advisor: Dr. Razie Yazdanparast</i>	
B.Sc. Microbiology	2008
<i>Karaj Azad University, Department of Science</i>	

RESEARCH EXPERIENCE

Research Assistant Professor	10/2023
<i>Center for Research in Educational Policy (CREP), University of Memphis</i>	
– Present	
<i>Responsibilities:</i> Collaborating on a diverse array of research and evaluation projects, leveraging my expertise in mixed methods research methodologies to advance CREP's objectives.	
Postdoctoral Research Associate	2021 –
<i>Center for Science, Mathematics, and Computer Education (CSMCE), University of Nebraska – Lincoln</i>	
2023	
<i>Responsibilities:</i> Collaborating with science faculty across campus in designing, developing, and carrying out education research projects.	
<ul style="list-style-type: none">● Significant contributor to the development of the grant proposal “Supporting student engagement with homework assignments as a mechanism to promote success in LIFE 120.” PI: Brian Couch, Funding Organization: University of Nebraska System, Funded for \$100,000● Collaborating on development of a joint grant project as a Learning Community Cluster of 15 institutions for the HHMI Inclusive Excellence 3 initiative. Project is granted \$8,625,000 fund for the overall 15 institutions for 5 years.● Investigating the dynamics and developments of teaching culture in STEM departments.	

Doctoral Researcher 2018 –
Department of LTC, University of Missouri – Columbia 08/2021
Mixed-method study

- Designed an experimental study to investigate over 300 students' system thinking (ST) skills. The study involved developing different research and evaluation instruments and resulted in development of a ST model, a new approach to examining students' ST skills, and a ST teaching framework.

Research Assistant 2018 –
Departments of LTC, Biological Sciences, & Natural Resources, University of Missouri – Columbia 08/2021
Project: Transforming Natural Sciences at Mizzou: Retain, Belong, Lead, THRIVE -
Funded by Howard Hughes Medical Institute (HHMI)

- Developed a survey and an interview protocol to study the learning experience of underrepresented minority (URM) students in STEM learning environments.
- Carried out a phenomenology study to investigate URM students' lived experiences in STEM learning environments.
- Collaborated on building communities of practice (CoP) among faculty to enact inclusive pedagogies in their STEM learning spaces.
- Collaborated on creating CoP among students to develop their scientific identity in an inclusive education atmosphere.

Co-Investigator 2014 –
Department of LTC, University of Missouri – Columbia 2018
Qualitative research – case study

- Investigated teacher's agency in practicing authentic and student-centered teaching at the face of contextual and cultural barriers in an education system.
- Examined the university faculty's challenges and accomplishments of practicing formative assessments.

Research Assistant 2012 –
Department of Biochemistry, University of Tehran 2013
Project: The role of microtubule dynamicity on memory formation

- Investigated the role of microtubule dynamicity and stability on memory formation. I was involved in studying the behavior of treated mice by a microtubule-stabilizing agent using Morris water maze test.

PUBLICATIONS

Peer-reviewed | In press

Khajeloo, M., Siegel, M. A. (2022). Concept Map as a Tool to Assess and Enhance Students' System Thinking Skills. *Instructional Science*, 1-27.

Siegel, M. A., Bae, Y., Morton, T. R., Ngai, C., **Khajeloo, M.**, Mahapatra, S. C., Sharma, R., Nilon, C., Schul, S. (2022). Faculty Learning Communities as a Route to Inclusive Excellence in STEM. *Handbook of STEM Faculty Development (259)*. Information Age Publishing

Khajeloo, M., Birt, J. A., Kenderes, E. M., Siegel, M. A., Nguyen, H., Ngo, L. T., ... & Cummings, K. (2021). Challenges and Accomplishments of Practicing Formative Assessment: A Case

Study of College Biology Instructors' Classrooms. *International Journal of Science and Mathematics Education*, 1-18.

- Hanuscin, D., **Khajeloo, M.**, Herman, B. C. (2020). New Frontiers in Classroom NOS Assessment. *The Nature of Science in Science Instruction: Rationales and Strategies*. New York: Springer Publishing Company
- Birt, J. A. *, **Khajeloo, M.** *, Rega-Brodsky, C. C*, Siegel, M. A. *, Hancock, T. S., Cummings, K., & Nguyen, P. D. (2019). Fostering Agency to Overcome Barriers in College Science Teaching: Going Against the Grain to Enact Reform-Based Ideas. *Science Education*, 103(4), 770-798. (*Equal first-author contribution)
- Baker, E. B., Alfayez, A., Dalton, C., McInnish, R. S., Schwerdtfeger, R., & **Khajeloo, M.** (2015). *The Irrevocable Alteration of Communication: A Glimpse into the Societal Impact of Digital Media*. In B. Guzzetti, & M. Lesley (Eds.) *Handbook of Research on the Societal Impact of Digital Media* (pp. 94-126). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-8310-5.ch005
- Atarod, D., Eskandari-Sedighi, G., Pazhoohi, F., Karimian, S. M., **Khajeloo, M.**, & Riazi, G. H. (2015). Microtubule Dynamicity Is More Important than Stability in Memory Formation: An In Vivo Study. *Journal of Molecular Neuroscience*, 56(2), 313-319. doi:10.1007/s12031-015-0535-4
- Rafei, S., Riazi, G. H., Afrasiabi, A., Dadras, A., **Khajeloo, M.**, Shahriary, L., . . . & Modaresi, S. M. (2014). Zinc and copper oxide nanoparticles decrease synaptosomal glutamate uptake: An in vitro study. *Journal of the Iranian Chemical Society*, 12(1), 87-94. doi:10.1007/s13738-014-0458-y

PRESENTATIONS

- Khajeloo, M.**, Menon, D., Shorman, A. A. (2023, April). *Investigating Active Learning and Inclusive Practices in Introductory College Science Courses*. Paper accepted at the annual international conference of the National Association for Research in Science Teaching (NARST) Chicago, IL.
- Khajeloo, M.**, Siegel, M. A. (2022, July). Students' View toward Biology as a Complex System. Presented at the annual meeting of the Society for the Advancement of Biology Education Research (SABER), Minneapolis, MN.
- Bae, Y., Siegel, M.A., **Khajeloo, M.**, Morton, T.R., Nilon, C., Schul, J., & Shim, H. (2022, March). *College Students' Sense of Belonging in the STEM Learning Ecosystem: Classroom, Department, and University Culture*. Presented at the annual international conference of NARST, Vancouver, British Columbia, Canada.
- Siegel, M.A., Bae, Y., Morton, T.R., Ngai, C., **Khajeloo, M.**, Mahapatra, S., Sharma, R., Nilon, C., & Schul, J. (2022, March). *Building inclusive excellence in undergraduate science education through faculty learning communities: A study of five cohorts*. Presented at the annual international conference of NARST, Vancouver, British Columbia, Canada.

- Khajeloo, M.**, Siegel, M., Bae, Y., Morton, T., Nilon, C., Schul, J., Ngai, C., Du, A. (2021, April). *The Power of Faculty Learning Communities on the development of Inclusive Teaching in STEM Learning Environments*. Presented at the annual international conference of NARST, Orlando, FL (Virtual Conference).
- Khajeloo, M.**, Taylor, J., Morton, T., Siegel, M., Schul, J., Nilon, C. (2020, March). *New Majority Students' Challenges in STEM Education and their Coping Strategies to Thrive*. Presented at the annual international conference of NARST, Portland, OR.
- Khajeloo, M.**, Birt, J. A., Siegel, M. A., Ngo, L., Nguyen, H. T., Gammel, E., Cummings, K., Mordhorst, B. (2018, March). *College Biology Instructors' Personal Practice Assessment Theories' Influence on Formative Assessment Practices*. Presented at the annual international conference of NARST, Atlanta, GA.
- Birt, J. A., **Khajeloo, M.**, Siegel M. A., Kenderes E. M., Nguyen H., Ngo, L. T., Cummings K., Mordhorst B.R. (2017, November). *Instructors' Formative Assessment in Undergraduate Biology: Influences, Context, and Practices*. Presented at the annual meeting of the National Association of Biology Teachers (NABT), St. Louis, MO.
- Khajeloo, M.** (2017, May). *Biopolitical Struggle in a Science Department*. Panel Presentation at 13th International Congress of Qualitative Inquiry, Urbana-Champaign, IL.
- Birt, J. A., Arnold, S. A., **Khajeloo, M.**, Siegel, M. A., Koo, A. (2017, April). *Sci-LiFT Participants' Initial Ideas about Educative Curriculum*. Poster presented at the annual international conference of NARST, San Antonio, Texas.
- Khajeloo, M.**, Yazdanparast, R., (2011, August). *Relative Biosorption Investigation of Some Toxic Metals in Defined Solutions by Microorganisms*. Poster presented at 12th Iranian Congress of Biochemistry & 4th International congress of Biochemistry and Molecular Biology, Mashhad, Iran.

RELATED PROFESSIONAL WORK

Abell Conversations on College Science Teaching Co-Organizer	2014 –
<i>University of Missouri – Columbia</i>	2021
<ul style="list-style-type: none"> ● Abell Conversations were monthly meetings about college science teaching held to assist faculty, graduate students and postdocs enhance their teaching capacity (https://collegescienceteaching.missouri.edu). As a senior organizer of this program, I was involved in following activities: <ul style="list-style-type: none"> ▪ Contacted professionals across multiple disciplines to hold professional development sessions about their teaching and research. ▪ Organized the events and facilitated the sessions to promote networking and community building among participants. ▪ Worked closely with program budget, including meeting with financial partners/collaborators to ensure program sustainability. 	

Educational Technology Technician | Graduate Assistant 2014 –
University of Missouri System eLearning 2018

- Diagnosed problems and determined proper solutions for Canvas and Blackboard online Learning Management Systems.
- Provided support to instructional designers in developing materials and examining online courses.

SERVICE

Advisory Committee of International Teaching Assistant Program (ITAP) 2018 –
Graduate School, University of Missouri – Columbia 2019

- Served on the ITAP committee to evaluate and propose language proficiency assessments for international graduate students.

Advisory Committee of The Bridge 2017 –
College of Education, University of Missouri – Columbia 2018

- Provided advice on holding events and discussion series aligned with the Bridge objectives. The Bridge is a program that promotes multicultural knowledge, awareness, and skills of students, faculty, and staff in College of Education.

President & Vice President of Iranian Students Association 2016 –
University of Missouri – Columbia 2017

- Organized and held events to present Persian culture to University of Missouri community
- Supported and advised newly arrived Iranians to Columbia and organized social events for Iranian community.
- Applied for funding and managed the expenses to hold Persian events.

CERTIFICATE

Qualitative Research Certificate 2018
University of Missouri – Columbia

- Requirement: 18 credits of graduate level qualitative method courses and 3 credits of qualitative research internship.

Leadership and Development 2017
University of Missouri System (UM system)

- An eight-day program held jointly across four University of Missouri Campuses during a year. Participants were selected competitively and were provided with the leadership and professional development programs available for faculty and administrators at the UM system.