

## CURRICULUM VITAE

### KARL G. JUNG

#### Academic Rank

Assistant Professor, Science Education K-8, Department of Teaching and Learning

#### Education

<b>Ph.D in Curriculum and Instruction</b>	2017
Concentration in STEM Education University of Minnesota, Minneapolis, MN Advisors: Bhaskar Upadhyay, Ph.D; Julie C. Brown, Ph.D	
<b>M.Ed. in Elementary Education</b>	2012
University of Minnesota, Minneapolis, MN	
<b>B.S. in Elementary Education</b>	2008
University of Minnesota, Minneapolis, MN	

#### Positions/Employment

##### University of South Florida (2017-Present)

Scholar-in-Residence, David C. Anchin Center Aug 2020 – May 2021  
Assistant Professor, Teaching and Learning Aug 2017 – Present

##### Graduate Appointments, University of Minnesota (2013 – 2017)

Graduate Research Assistant, STEM Education Aug 2013 – July 2017  
Graduate Teaching Assistant, Science Education Aug 2014 – Dec 2016  
Student Teaching Supervisor, Elementary Education Aug 2013 – May 2014

##### Other Professional Employment (2010 – 2013)

2<sup>nd</sup> Grade Teacher Aug 2010 – May 2013  
Knollwood Heights Elementary, Rapid City, SD

#### Current Membership in Professional Organizations

National Association for Research in Science Teaching (NARST)  
Association for Science Teacher Education (ASTE)

National Science Teachers Association (NSTA)

## Honors and Awards

JoAnne Buggey Fellowship in Elementary Education

2013

## Research, Scholarship and Creative Work

### Grants and Contracts

#### External Sources

*Received at the University of South Florida*

#### Co-Principal Investigator

PI Julie C. Brown, co-PIs Mark Pacheco and Christine Davis

Funded by National Science Foundation

*RIEL Biology: Responsive Instruction for Emergent Bilingual Learners in Biology Classrooms* (DUE – 2010153, July 1, 2020 – June 30, 2023)

Total costs: \$1,120,163

#### Co-Principal Investigator

PI Allan Feldman, co-PI David Allsop

Funded by WIPRO Foundation

*WIPRO Science Education Fellowships* (January 2018 – May 2022)

Total Costs: \$1,100,000

#### *Reviewed but not Selected for Funding*

#### Co-Principal Investigator

PI David Rosengrant, co-PI Karina Hensberry

Submitted to National Science Foundation I-TEST, Solicitation #19-583

*Careers & Culture using Augmented Reality for Interactive Labs in STEM: C<sup>2</sup>ARIL-STEM.*

Total funding sought: \$715,529

## Publications

<sup>G</sup> Graduate student author

### *Refereed Journal Articles*

1. Sherry, M. B., Agosto, V., Blank, J., Braun, A., Cain, L., Feldman, A., Jung, K.G., & Wolgemuth, J. (2020). On being a methodologist in 5Ws +H. *Research in the Schools*, 21(1).

2. Jung, K.G. (2019). Learning to scaffold science academic language: Lessons from an instructional coaching partnership. *Research in Science Education*. 49(4), 1013–1024. DOI: 10.1007/s11165-019-9851-y
3. Constantine, A.M.<sup>G</sup> & Jung, K.G. (2019). Using digital science notebooks to support elementary student learning: Lessons and perspectives from a 5th grade science classroom. *Contemporary Issues in Technology and Teacher Education*. 19(3), 373-412. Retrieved from: <https://www.citejournal.org/volume-19/issue-3-19/science/using-digital-science-notebooks-to-support-elementary-student-learning-lessons-and-perspectives-from-a-fifth-grade-science-classroom/>
4. Jung, K.G. & McFadden, J. (2018). Student justifications in engineering design descriptions: Examining authority and legitimation. *International Journal of Education in Mathematics, Science and Technology (IJEMST)*, 6(4), 398-423. DOI:10.18404/ijemst.440342
5. Jung, K.G. & Brown, J.C. (2016). Examining the effectiveness of an academic language planning organizer as a tool for planning science academic language instruction and supports. *Journal of Science Teacher Education*, 27(8), 847-872. DOI: 10.1007/s10972-016-9491-2

### ***Manuscripts under review/in preparation***

1. McFadden, J., Jung, K.G., Tretter, T., & Robinson, B. (major revisions). Teacher-developed multi-dimensional science assessments supporting elementary teacher learning about the next generation science standards. Submitted to: *Journal of Science Teacher Education*.
2. Jung, K.G. (in preparation). Coaching elementary science teaching: A case study of four preservice teachers. Target journal: *Journal of Science Teacher Education*.
3. Jung, K.G. (in preparation). Talking and writing three-dimensional science: Examining the productive language demands of the NGSS. Target journal: *Journal of Research in Science Teaching*.
4. Nancy, S. I.<sup>G</sup> & Jung, K.G. (in preparation). Integrating Flipgrid for science formative assessment: A case study of an elementary preservice teacher's learning. Target journal: *Contemporary Issues in Technology and Teacher Education*.

### **Presentations, Posters, and Exhibits**

<sup>G</sup> Graduate student author

***Contributed Papers Presented at Professional Meetings***

*International and National (Refereed)*

1. Jung, K.G., Brown, J.C., Davis, E.C., Pacheco, M.B. (Accepted, 2021, January). *RIEL biology: Promoting culturally and linguistically responsive education in biology*. Submitted to Association for Science Teacher Education (ASTE). Virtual Conference.
2. Nancy, S.I.<sup>G</sup> & Jung, K.G. (Accepted, 2021, January). *Learning to use Flipgrid for student engagement and formative assessment: Lessons from an elementary preservice teacher*. Submitted to Association for Science Teacher Education (ASTE). Virtual Conference.
3. Tompkins, A.D.<sup>G</sup> & Jung, K.G. (Submitted, 2021, January). *Examining preservice elementary teachers' growth through an instructional coaching partnership*. Submitted to Association for Science Teacher Education (ASTE). Virtual Conference.
4. Jung, K.G., & van Ingen Lauer, S. (Accepted, 2020, November). *Elementary partnership integrated coaching (EPIC) in STEM framework*. School Science and Mathematics Association (SSMA). Virtual Conference.
5. Sherry, M. B., Agosto, V., Blank, J., Braun, A., Cain, L., Feldman, A., Jung, K.G., & Wolgemuth, J. (2020, April). *On being a methodologist in 5Ws +H*. American Educational Research Association (AERA). San Francisco, CA. (Cancelled due to Covid-19)
6. Jung, K.G. (2020, March). *Talking and writing three-dimensional science: Examining productive language demands of the NGSS elementary standards*. NARST: A Worldwide Organization for Improving Science Teaching and Learning Through Research. Portland, OR. (Cancelled due to Covid-19)
7. Jung, K.G. (2020, January). *Science focused coaching conversations: Lessons from four preservice elementary teachers*. Association for Science Teacher Education (ASTE). San Antonio, TX.
8. Jung, K.G. & McFadden, J. (2019, April). *Engineering design in the elementary setting: Examining student justifications, authority and legitimation*. NARST: A Worldwide Organization for Improving Science Teaching and Learning Through Research. Baltimore, MD.
9. Wolgemuth, J., Blank, J., Cain, L., Jung, K.G., Feldman, A., Sherry, M., Braun, A., Agosto, V., & Denton, M. (2019, January). *Methodologists: Who needs them? Labels and the power and privilege to teach qualitative research*. The Qualitative Report. Fort Lauderdale, FL.

10. Jung, K. G. (2018, March). *Planning and implementing scaffolds for science academic language: Successes and challenges in elementary science*. NARST: A Worldwide Organization for Improving Science Teaching and Learning Through Research. Atlanta, GA.
11. Jung, K.G. (2018, January) *Elementary teacher actions and processes when planning instruction that scaffolds science academic language through an instructional coaching partnership*. Association for Science Teacher Education (ASTE). Baltimore, MD.
12. Constantine, A.M.<sup>G</sup> & Jung, K.G. (2018, January) *Using digital science notebooks to support elementary student learning: Lessons and perspectives from a 5th grade science classroom*. Association for Science Teacher Education (ASTE). Baltimore, MD.
13. Konz, B.<sup>G</sup> & Jung, K.G. (2018, January) *Exploring multiple language use in high school science classrooms*. Association for Science Teacher Education (ASTE). Baltimore, MD.
14. Jung, K.G. (2017, January) *Examining the implementation of academic language instructional supports by an elementary science specialist*. Association for Science Teacher Education (ASTE). Des Moines, IA.
15. Jung, K.G. & Brown, J.C. (2016, April) *Pre-service teacher planning for academic language during elementary science instruction*. NARST: A Worldwide Organization for Improving Science Teaching and Learning Through Research. Baltimore, MD.
16. Jung, K.G. & Brown, J.C. (2016, January) *Supporting pre-service science teachers' planning for and scaffolding of academic language use in the elementary classroom*. Association for Science Teacher Education (ASTE). Reno, NV.
17. Jung, K.G. (2015, April) *Examining language expectations and supports during elementary science instruction*. NARST: A Worldwide Organization for Improving Science Teaching and Learning Through Research. Chicago, IL.
18. Jung, K.G. (2015, January) *Academic language supports in elementary science instruction*. Association for Science Teacher Education (ASTE). Portland, OR.
19. Moore, T.J., Tank, K.M., & Jung, K.G. (2015, January) *Lessons learned from teachers implementing STEM integration in their elementary*

*classrooms*. Association for Science Teacher Education (ASTE). Portland, OR.

*Regional Conferences*

1. Jung, K.G. (2016, October) *Examining the implementation of academic language supports in elementary science instruction*. North Central Region of the Association for Science Teacher Education. Des Moines, IA.
2. Jung, K.G. & Brown, J.C. (2015, October) *Pre-service elementary science teacher planning for academic language*. North Central Region of the Association for Science Teacher Education. Peoria, IL.
3. Jung, K.G. (2014, October) *Academic language supports in elementary science instruction*. North Central Region of the Association for Science Teacher Education. Eau Claire, WI.

**Teaching and Curriculum Development**

**University of South Florida**

*Graduate*

SCE 6315: Teaching Elementary School Science  
SCE 7910: Directed Research  
EDF 7477: Introduction to Qualitative Research

*Undergraduate*

SCE 4310: Teaching Elementary School Science  
- Urban Teacher Residency Partnership Program (UTRPP)  
- Cohort Program  
EDE 4940: Internship – Elementary Education  
UTRPP Content Coaching  
- Science-focused coaching  
Panama Elementary Science Program  
- Physical Science Course

**University of Minnesota**

*Graduate*

CI 5502: Science Instruction in the Elementary Grades

*Undergraduate*

AGRO 1103: Crops, Environment and Society

**Advising and Mentoring**

## Graduate Student Advising

### *Major Professor*

Sharfun Islam Nancy (Science Education)

Amanda Tompkins (Science Education)

Molly Staggs (Science Education)

### *Doctoral Committee Member*

Karrie Wickman (Science Education)

Thomas Dolan (Science Education), Defended – 04/2020

Katie Laux (Science Education), Defended – 05/2019

Jennifer Fernandez (Educational Leadership), Defended – 11/2019

## Service and Outreach

### Service to the Profession/Discipline

#### *Editorships/Journal Reviewer Experience*

*Journal of Science Teacher Education* 2018 – 2021

Editorial Review Board member

*The New Educator*

Guest Reviewer

*Journal of Language, Identity, and Education*

Guest Reviewer

*Association of Science Teacher Education* 2014 – Present

Equity Committee 2018 – 2021

Graduate Student Forum President 2017 – 2018

Ad hoc Website Committee 2020 – Present

Conference Proposal Reviewer

- Thread: Pre-service Teacher Preparation
- Thread: Science Teacher Professional Development

Conference Session Presider

Graduate Student Representative – North-Central Region

*NARST: A Worldwide Organization for Improving Science Teaching and Learning Through Research* 2016 – Present

Conference Proposal Reviewer

- Strand 7: Pre-service Science Teacher Education

Conference Session Presider

### Service to the University/College/Department

*University of South Florida*

Facilitator - Undergraduate Research Conference  
Search Committee, Visiting Instructor  
Judge – Graduate Student Research Symposium  
College of Education Scholarship Review Committee  
Elementary Education Doctoral Student Annual Review  
Member – Qualitative Advisory Group  
Department Alternate – Undergraduate Program Committee  
Presenter – College of Education Pecha Kucha

***University of Minnesota***

Guest Speaker – “Academic language” March, 2015

**Service to the Community**

University of Minnesota Band Alumni Society Board of Directors 2015 – 2016  
Member at large

**Public and Other Service**

<sup>G</sup> Graduate student collaborator  
<sup>T</sup> Classroom teacher collaborator  
<sup>S</sup> School district collaborator

***Professional Development/Outreach***

Jung, K.G. & Marder, T.<sup>T</sup> (2016, August). *Practical ELL strategies that benefit your entire class*. St. Paul Public Schools Opening Week Science Mini Conference

Jung, K.G., Davis, M.<sup>S</sup>, Constantine, A.<sup>G</sup>, & Childs, G.<sup>S</sup> (2016, July). *Shake It Up*. EngrTEAMS Summer Institute.

Leifeld, M.<sup>S</sup> & Jung, K.G. (2015, July). *STEM integration of earth science content standards: Earth materials*. EngrTEAMS Summer Institute.

Jung, K.G., Ring-Whalen, E.A.<sup>G</sup>, & Crotty, E.<sup>G</sup> (2015, May). *STEM and literacy integration*. Region 11 Minnesota Mathematics and Science Teacher Partnership.

Jung, K.G. & Kamesch, H.<sup>G</sup> (2015, March). *Backwards planning, misconceptions and academic language*. Region 11 Minnesota Mathematics and Science Teacher Partnership.