

## **Timothy G. Klavon, PhD**

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### **Education**

<b>Temple University</b> Ph.D. Education, Math and Science Dissertation: <i>Impact of Students' Scaffolded Small-Group Discussions on Their Written Scientific Explanations</i> , Committee Chair, Dr. Janelle Bailey	December 2020
<b>Montana State University- Bozeman</b> M.S. Science Education	August 2015
<b>William Paterson College</b> B.S. Biology	May 1991

### **Professional Experience**

<b>Black Hills State University</b> <i>Assistant Professor of Science Education</i> Responsibilities include teaching undergraduate and graduate courses for the School of Education; supervision of student teaching interns; conducting research on science education, particularly in the area of students' evaluation of the relationships between scientific evidence and competing explanatory models; providing service to the University through internal and external committees.	2021– present
<b>University of Maryland- College Park</b> <i>Postdoctoral Fellow</i> Educational Researcher. Responsibilities include coordinating research activities, managing instrument creation, formulating research questions, manuscript preparation, written and oral presentation of research findings, develop and manage subprojects within the larger research framework, provide professional development for participating research teachers.	2021
<b>Temple University</b> <i>Instructor/Adjunct Professor</i> Instructor of Record/Adjunct Professor. Responsibilities include curriculum development, lesson planning, maintaining course learning management system (Canvas), model assessment for pre-service teachers, organize field observations in conjunction with local principal, align course expectations with university policy. Courses include <i>Classroom Interactions</i> , <i>Teaching and Learning Science in the Middle Grades</i> , <i>Cognitive Development in the Content Areas</i> (Middle Grades Education), and <i>Application of Learning Theory to Middle Grades Education</i> .	2019 – 2021

**Science Learning Research Group - Research Assistant**

Perform educational research tasks as assigned. Responsibilities include administrative duties, intervention creation, measures creation, student observation, data collection, data analysis, written and oral communication of findings.

**Perkiomen School**

1995 – 2016

**Science Teacher**

Classroom teacher, dormitory parent, dorm head, and athletic coach. Responsibilities include developing and implementing curriculum, classroom management, effectively communicating with student stakeholders, advising students, student scheduling, club advisor, supervisory and wellness education roles in student residence halls, coaching student-athletes in the areas of tactics, physical preparation, and sportsmanship. Academic courses include AP Environmental Science, physics, eighth grade physical science, geographical information systems, marine biology, biology, chemistry, Pre-Algebra, Algebra I, material science, and environmental science.

**Honors**

- 2019 Sandra K. Abell Institute for Doctoral Students, NARST at Middle Tennessee State University, Murfreesboro, TN
- 2018 Margaret Wang Scholarship, College of Education, Temple University, Philadelphia, PA
- 2018 Waldo Rich Scholarship, College of Education, Temple University, Philadelphia, PA

**Research Interests**

- Relationships between student small group discourse and written scientific explanations.
- Adapting conceptual change activities for elementary school-aged students.
- Impacts of student agency and decision-making in conceptual change activities.
- Curriculum development, interactions between mathematics and English language arts achievement through science curriculum.

**Scholarship**

- Dobaria, A., Bailey, J. M., **Klavon, T. G.**, & Lombardi, D. (2021-in review). Students' scientific evaluation of astronomical origins. Submitted to Astronomy Education Journal on October 6, 2021.
- **Klavon, T. G.**, Mohan, S., Jaffe, J., Stogianos, T., Lombardi, D., & Governor, D. (2021- in review). Scaffolding Middle Students' Reasoning and Learning about Complex Geoscience Topics Hydraulic Fracturing and Fossil Evidence. Submitted to Journal of Geoscience Education on August 25, 2021.
- Bailey, J. M., Jamani, S., **Klavon, T. G.**, Jaffe, J., & Mohan, S. (In Press) Climate Crisis Learning Through Scaffolded Instructional Tools. *Educational and Developmental Psychology*.
- Bailey, J. M., **Klavon, T. G.**, & Dobaria, A. S. (2020). The Origins build-a-MEL: Introducing a scaffold to explore the origins of the Universe. *The Earth Scientist*, 36(3), 7–12. Available online at <https://www.nestanet.org/cms/sites/default/files/journal/Fall20.pdf>

- **Klavon, T. G.**, Bailey, J. M., Lombardi, D., & Dobaria, A. S. (2020, March 15-18) Students' plausibility shifts and knowledge gains when evaluating competing explanatory models about freshwater resource availability. National Association of Research in Science Teaching 93<sup>rd</sup> Annual International Conference, Portland, OR, United States. (refereed; conference cancelled)
- Lombardi, D., **Klavon, T. G.**, Holzer, M. A., & Kendall, R. (2019, August). Instructional scaffolds to shift students' epistemic evaluations toward the scientific. Paper accepted for presentation as part of the symposium, "Identifying literacies protective against misinformation and science skepticism," the 18th Biennial Meeting of the European Association for Research on Learning and Instruction, Aachen, Germany. (refereed)
- Lombardi, D., **Klavon, T. G.**, Holzer, M., & Kendall, R. (2019, April). Evaluating explanations about water resources: Scaffolds to shift students' epistemic judgements toward the scientific. Presentation at the 2019 American Educational Research Association Annual Meeting, Toronto, Canada. (refereed)
- **Klavon, T. G.**, Bailey, J. M., Kendall, R., Holzer, M., & Lombardi, D. (2019, April). The impact of evidence choices on students' plausibility shifts. Presentation, at the 2019 National Consortium for Instruction and Cognition Annual Conference, Toronto, Canada. (refereed)
- **Klavon, T. G.**, Bailey, J. M., & Willoughby, S. D. (2018, April). College students' understanding of eclipses in advance of the 2017 US total solar eclipse. Modified poster presented at the 2018 National Consortium for Instruction and Cognition Annual Conference, New York, NY. (refereed)  
Honorable Mention, 2018 Richard C. Anderson Graduate Student Research Award
- Kendall, R., Lombardi, D., Burrell, S., **Klavon, T. G.**, Uslu, B., & Bailey, J. M. (2018, April). Crafting knowledge instruments to measure effectiveness of science instruction. Modified poster presented at the 2018 National Consortium for Instruction and Cognition Annual Meeting, New York, NY. (refereed)
- **Klavon, T. G.** (2018, March) Alignment of students' discussion with their written scientific explanations. Poster presented at the National Association of Research in Science Teaching 91<sup>st</sup> Annual International Conference 2018 Graduate Student Works in Progress Symposium, Atlanta, GA. (refereed)

## Presentations

- **Klavon, T.**, Bailey, J. M., Dobaria, A. S., & Lombardi, D. (2021). The Origins build-a-MEL: A Scaffold to explore the Universe's origins. Invited speaker, American Association of Physics Teachers 2021 Winter Meeting, Virtual.
- **Klavon, T.** (2019). Earth and environmental science educators' institute: Connecting models and evidence. Presentation, Palmyra, NJ.
- Roemmele, C. & **Klavon, T.** (2018). NESTA shares: Going beyond the controversy-Promoting critique, evaluation, and argument in Earth science. Presentation, National Science Teachers Association Regional Conference, National Harbor, MD.
- **Klavon, T.** (2018). Earth and environmental science educators' institute: Connecting models and evidence. Presentation, Cumming, GA & Hillsborough, NJ.
- **Klavon, T.** (2015). Iteration and failure: How does an inquiry-based design lab course impact the resilience learning of middle school students? Presentation, Montana State University's 17<sup>th</sup> Annual Symposium in Science Education, Bozeman, MT.
- **Klavon, T.** (2014). Teacher in-service: Various iPad applications for classroom use. Presentation, Perkiomen School, Pennsburg, PA.

## Service

- Member, Black Hills State University, School of Education Professional Progress Committee and Retention and Advising Committee.
- Peer Reviewer, Active peer review participation with international science education research conferences and journals (2018-present; Publon's Profile Link: <https://publons.com/researcher/4255521/timothy-g-klavon/>)
- Communications Director, National Consortium for Instruction and Cognition (2020-2021)
- NARST Graduate Student Committee (2020-present)
- Co-Chairperson, Graduate Organization for the College of Education, Temple University
- Logistics Manager, Graduate Organization for the College of Education, Temple University
- Chairperson, Middle School Mathematics Committee for Middle States Accreditation Self-Study, Perkiomen School
- Chairperson, Middle School Science Committee for Middle States Accreditation Self-Study, Perkiomen School
- Chairperson, Faculty Committee on the Mission Statement, Perkiomen School
- Member, Middle States Evaluation Team, Chancellor Academy, Pompton Plains, NJ
- Member, Tournament Committee, Pennsylvania Independent School Wrestling Tournament