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| Brent D. Gillesbgilles@westga.edu  |
| Education |
|  | Ph.D. in Curriculum and Instruction, Science and Environmental EducationMinor in Environmental StudiesIndiana University, Bloomington, INDissertation: Preservice Teachers’ Discursive Approaches to Constructing Scientific Arguments from Evidence to ClaimAdvisor: Dr. Gayle Buck  | 2017 |
|  | Master of Education, Secondary Education Valparaiso University, Valparaiso, IN | 2010 |
|  | Bachelor of Science, MeteorologyMinors in Mathematics and Television-Radio CommunicationsValparaiso University, Valparaiso, IN  | 2007 |
| Academic Experience  |
|  | **Assistant Chair of Secondary Programs,** University of West Georgia* Coordinate faculty advising and mentoring for students
* Coordinate comprehensive exam administration
* Assist students in enrolling
* Problem-solve student issues
* Lead recruitment and retention of students
* Assist with curriculum development
* Lead accreditation activities for graduate programs
* Coordinate schedule each semester
* Assist in identifying and hiring part time faculty
 | 2023-Current |
|  | **Associate Professor,** University of West Georgia, Carrollton, GA* Teach elementary and secondary science methods courses
* Teach secondary STEM-based courses
* Teach a variety of other pedagogy and education leadership courses for k-12
* Supervise students in the field
* Advise students through graduate programs

Courses TaughtTeaching Content and Process: Science EducationProject Based Instruction (STEM)Environmental Education for TeachersInstructional Strategies for Science Education in SecondaryInstructional Strategies in Secondary Science LabTechnology in the Math and Science ClassroomKnowing & Learning in Math & Science EducationClassroom Interactions (STEM)Classroom Instruction and ManagementTeaching InternshipAdvanced Instructional Strategies for 21st CenturyResearch for Doctoral DissertationContemporary Issues in EducationCulminating Project SEED Ed.S.Culminating Experience SEED Ed.S.Curriculum and Trends in Education | 2022-Current |
|  | **Director of Graduate Program Coordination,** University of West Georgia* Coordinate faculty advising and mentoring for students
* Coordinate comprehensive exam administration
* Assist students in enrolling
* Problem-solve student issues
* Lead recruitment and retention of students
* Assist with curriculum development
* Lead accreditation activities for graduate programs
 | 2022-2023 |
|  | **Assistant Professor,** University of West Georgia, Carrollton, GA* Teach elementary and secondary science methods courses
* Teach STEM-based courses
* Teach a variety of other pedagogy and education leadership courses
* Supervise students in the field
* Advise students through graduate programs
 | 2017-2022 |
|  | **Program Coordinator,** University of West GeorgiaUTeach Program* Develop curriculum
* Create schedule for courses
* Place students in field experiences
* Advise students
 | 2018-2019 |
|  | **Associate Instructor,** Indiana University, Bloomington, IN* Taught elementary and secondary science methods
* Taught content-focused science course
* Supervise students in the field
* Deliver and evaluate classroom activities
* Support preservice teachers in developing best practices for their future classroom

Courses TaughtScience in the Elementary SchoolScience and Mathematics Elementary Laboratory-Field ExperienceMethods of Teaching Middle/High School ScienceClassroom Management in ScienceIntroduction to Scientific Inquiry | 2013-2017 |
|  | **Instructor, Saturday Science,** Indiana University, Bloomington, IN* Design weather unit appropriate for 3rd and 4th grade students
* Deliver lessons
 | Spring 2014 |
|  | **Science Teacher**, Whiteland Community High School, Whiteland, IN* Taught Earth and Space Science and Physical Science
* Sponsor of the Help the Homeless Club
* Served on school discipline committee
 | 2010-2013 |
|  | **Science and Math Teacher**, Luther High School North, Chicago, IL* Taught Physics, Chemistry, and Algebra
* Dodgeball Club sponsor
 | 2008-2010 |
| **Professional Development Experience** |
|  | **Coordinator,** Lit-ing the STEM: Engaging Students in Math and Science Literacy Central High School* Coordinate professional development logistics
* Design curriculum
* Collaborate on lessons with participants
 |  2020-2021 |
|  | **Coordinator**, What are the Eco-Educational Resources for Water Carrollton City Schools* Coordinate professional development logistics
* Oversee grant budget
* Design curriculum for K-12 teachers and students
* Foster community resources
 | 2018-2020 |
|  | **Instructor**, Natural Wonderers: Enhancing Southern Indiana’s Teachers’ Efforts to Integrate Scientific Practices and Educational Technologies into the Life and Earth Sciences* Coordinate professional development logistics
* Design activities
* Develop curriculum used by teachers in their classrooms
* Conduct training
 | 2016- 2017 |
|  | **Instructor**, SMAPP STEM Grant* Design activities
* Provide teacher support
* Conduct training
 | 2015-2016 |
|  | **Instructor**, Science of Sustainability: Preparing Teachers to Enhance Students’ Scientific Practices Associated with Sustainability Issues.* Coordinate professional development logistics
* Design activities
* Develop curriculum used by teachers in their classrooms
* Conduct training
 | 2014-2015 |
| **Certification & Licensure** |
|  | Teaching Certification * Indiana Professional Educator’s License
* Earth and Space Science
* Chemistry
 | 2010-2027 |
| **Publications** |
|  | Gilles, B. (2023). Engaging Teacher Candidates in Globally-Focused Teaching Through the Development of Scientific Arguments for Climate Change in Secondary Science. In: Buck, G.A., Dimitrieska, V., Akerson, V.L. (eds) *Internationalizing Rural Science Teacher Preparation*. Contemporary Trends and Issues in Science Education, vol 58. Springer, Cham. <https://doi.org/10.1007/978-3-031-46073-9_11>  |
|  | Gilles, B., & Britton, S.A. (2020). Moving Online: Creating a Relevant Learning Experience for Students in the Time of Covid-19. *The Electronic Journal for Research in Science & Mathematics Education, 24*(3), 19-28. |
|  | Gilles, B., & Buck, G. (2020). Preservice Teachers’ use of Discourse to Shape the Construction of Scientific Arguments. *Journal of Science Teacher Education, 31*(3), 291-310. |
|  | Gilles, B., Gault, R., Britton, S. (2019). Education outside the classroom: Engaging teachers in their own environment through professional development. *GATEways to Teacher Education, 30(9),* 1-9. |
|  | Gilles, B., & Buck, G. (2019). Considering pedagogical practices in higher education: How science methods instructors influence scientific argumentation construction. *International Journal of Research in Education and Science (IJRES), 5*(2), 744-757. |
|  | Gilles, B., Hawig, T., Sutton, A., & Britton, S. (2019). STEMing the flow for all. *Connected Science Learning (10)*. <http://csl.nsta.org/2019/04/steming-the-flow-for-all/>  |
|  | Gilles, B., & Buck, G. (2016). Exploring our theoretical and practical understandings of enthusiasm in science teaching: A self-study of elementary teacher preparation. In G. Buck & V. Akerson (Eds). *Allowing our Professional Knowledge of Pre-Service Science Teacher Education to be Enhanced by Self-Study Research: Turning a Critical Eye on Our Practice.* Springer. |
|  | Buck, G., Akerson, V.L., & Gilles, B. (2016). Garnering the experiences and understandings emerging from self-studies in science teacher education. In G. Buck & V. Akerson (Eds). Allowing our Professional Knowledge of Pre-Service Science Teacher Education to be Enhanced by Self-Study Research: Turning a Critical Eye on Our Practice. Springer. |
| **Presentations** |
| Research Paper Presentations |
|  | Gilles, B. (2023). Fostering globalization teaching skills in secondary science teacher candidates using scientific argumentation. Association for Science Teacher Education, Salt Lake City, UT. |
|  | Gilles, B. (2021). Spontaneous adoption of online text-based collaborative tools shaped scientific argumentation discourse. Association for Science Teacher Education, Virtual. |
|  | Gilles, B. and Gault, R. (2020). Supporting literacy in science and math. *Southeastern Association for Science Teacher Education, Virtual.* |
|  | Gilles, B., Gault, R., and Britton, S. (2019). Lessons learned: First year report on implementing a K-12 teacher environmental focused professional development. *Southeastern Association for Science Teacher Education, Carrollton, GA.* |
|  | Butler, J., Arrington, L., Gilles, B., Ponder, T., Gault, R. (2019). Finding your way to the 4Cs through technology. *Association for Teacher Educators, Atlanta, GA.* |
|  | Gilles, B. and Buck, G. (2019). Spontaneous adoption of online text-based collaborative tools shaped scientific argumentation discourse. Association for Science Teacher Education, Savannah, GA. |
|  | Britton, S., Gilles, B., and Gault, R. (2018). Current partnership with local urban school distract to learn about watersheds. *Southeastern Association for Science Teacher Education, Birmingham, AL*. |
|  | Gilles, B. and Buck, G. (2018). Preservice teachers’ use of discourse to control the construction of scientific arguments. National Association for Research in Science Teaching, Atlanta, GA. |
|  | Gilles, B. and Buck, G. (2018). The role of institutional talk in shaping preservice teacher construction of scientific arguments. Association for Science Teacher Education, Baltimore, MD. |
|  | Gilles, B. (2017). Debunking ‘Fake News’: Preparing preservice teachers to engage students in reasoning through argumentation across disciplines. *Georgia Association for Teacher Educators, Cordele, GA.* |
|  | Gilles, B. and Buck, G. (2017). Comparing the Classroom Experiences of Two Urban High School Teachers Implementing Scientific Argumentation Activities for the First Time. Association for Science Teacher Education, Des Moines, IA. |
|  | Gilles, B. and Buck, G. (2016). An Urban High School Biology Teacher’s Initial Experience Implementing Scientific Argumentation. National Association for Research in Science Teaching, Baltimore, MD |
|  | Gilles, B. and Buck, G. (2016). Examining the Challenges an Urban High School Biology Teacher has Implementing Scientific Argumentation for the First Time. Association for Science Teacher Education, Reno, NV. |
|  | Akerson, V., Galindo, E., Gilles, B. (2016). Teachers’ Changing Conceptions of STEM over the course of long-term professional development. *Association for Science Teacher Education, Reno, NV.* |
| Poster Paper Presentations |
|  | Gilles, B. and Buck, G. (2016). Understanding Enthusiasm in Teaching: A Self-Study of Teaching Science at the Undergraduate Level. *National Association for Research in Teaching, Baltimore, MD.* |
| Symposium |
|  | Gilles, Brent (2022). Assessing Attempts to incorporate Globalization into Scientific argumentation Curriculum. Globalizing Rural Science Teacher Preparation Symposium. *Globalizing Rural Science Teacher Preparation Across the U.S., Bloomington, IN.* |
|  | Gilles, B. and Buck, G. (2017). Allowing our professional knowledge of pre-service teacher education to be enhanced by self-study research: Turning a critical eye on our practice. Association for Science Teacher Education, Des Moines, IA. |
|  | Gilles, B. and Buck, G. (2016). Allowing our professional knowledge of teacher education to be enhanced by self-study research. *National Association for Research in Teaching, Baltimore, MD.* |
|  | Gilles, B. (2016). Comparing the Beliefs and Pedagogy of Two Urban High School Science Teachers while Implementing Argumentation. *Indiana University Science Education Symposium, Bloomington, IN.* |
|  | Gilles, B. (2015). Promoting Scientific Argumentation in a Secondary Setting. *Indiana University Science Education Symposium, Bloomington, IN.* |
| Teacher Presentations  |
|  | Gilles, B., Britton, S., & Hawig, T. (2023). Increasing Career Awareness in STEM. *National Science Teaching Association, Atlanta, GA.* |
|  | Britton, S., Gilles, B., Cox, A., & Hawig, T. (2023). How to use your schoolyard utilizing community partnerships. *National Science Teaching Association, Atlanta, GA.* |
|  | Britton, S., Gilles, B., & Cox, A. (2023). Using streams to increase scientific “literacy.” *National Science Teaching Association, Atlanta, GA.*  |
|  | Gilles, B., Hawig, T., & Scasny, K. (2020). Promoting literacy through argumentation. *Georgia Science Teacher Association, Columbus, GA.* |
|  | Shade, J.A., & Gilles, B. (2020). 3D teaching + steam= 21st century science classroom. *Georgia Science Teacher Association, Columbus, GA.* |
|  | Hawig, T., Gilles, B., Britton, S. (2019). Engaging stream engineering, STEM, and more. *Georgia Science Teacher Association, Columbus, GA.* |
|  | McCormack, S., Allen, J., and Gilles, B. (2015). A Comparison of National and State Secondary Science Graduation Trends. *Hoosier Association of Science Teachers, Inc., Indianapolis, IN.* |
|  | Gilles, B. and Buck, G. (2015). Using Scientific Argumentation in your Classroom. *Hoosier Association of Science Teachers, Inc., Indianapolis, IN.* |
| Grants |
|  | Buck, G.A., Akerson, V., Gilles, B., Fouad, K. (not funded, 2021). Preparing rural educators to teach locally-tailored and globally-focused science, subcontract, $347,047, National Science Foundation. |
|  | Arrington, L., Gilles, B., Branyon, A., Cao, L., Chen, Y., Grant, P., Lee, S. (not funded, 2020). Using failure to advance instruction and learning (UFAIL) in middle school STEM, $440,400, funded by the National Science Foundation. |
|  | Gilles, B., & Gault, R. (not funded, 2020). Lit-ing the STEM: Engaging Students in Math and Science Literacy, $10,000, funded byIda Alice Ryan Charitable Trust. |
|  | Hoff, D., Gaquere, A., Gilles, B., & COE team (2019). MAT impact fellows: A Robert Noyce scholarship program for developing teachers and emerging teacher leaders in science and mathematics, $1,373,831, Funded by the National Science Foundation, May 2019-May 2025. |
|  | Gilles, B., Britton, S., Gault, R. (2018). What are the eco-educational resources for water, $12,227, Funded by C.S. Britton Inc., October 2018-May 2019. |
|  | Britton, S., Gilles, B., & Gault, R. (Not funded, 2018). STREAM initiative, $10,000, Community Foundation. |
|  | Britton, S., Gilles, B., Scasny, K. (Not funded, 2017). Experiential Learning through Aquatic Environments, $93,212, funded by the Cedar Tree Foundation. |
|  | Gilles, B. (2015), Investigating Scientific Argumentation Professional Development Outcomes in the Classroom, $3,125.00, Funded by E. Wayne Gross Fellowship Program, August 2015-May 2016. |
|  | Gilles, B. (2014), Fostering Scientific Argumentation in a High School Classroom, $2,150.00, Funded by E. Wayne Gross Fellowship Program, August 2014-May 2015.  |
| **Service to University of West Georgia** |
|  | Personnel Committee (College, 2022-present)* Chair (AY 2023-2024)

Graduate Program Committee (University, 2021-2023)Rules Committee (University, 2018-2020)Engage West Survey Committee (University, 2018-2019)Innovations Lab Advisory Board (College, 2018-2022)Dissertation Committee Chair (College, 2018-2020)Dag Folgers Speaker Committee (College, 2018-2020)MAT Comprehensive Exam Evaluator (Department, 2017-present)Search Committee (Department, 2019; 2021; 2022)Advisor for Ed.S. program (Department, 2018-present) |
| **Service to Organizations** |
|  | Reviewer for The Electronic Journal in Science and Mathematics Education (2019-Current)Reviewer for Connected Science Learning (2020-Current)ASTE membership committee (2019-2022)Review proposals for ASTE International Conference (2017-2023)Review proposals for NARST International Conference (2016-2018) |
| Memberships & Affiliations |
|  | Association for Science Teacher Education (ASTE)Southeastern Association for Science Teacher Education (SASTE)National Science Teachers Association (NSTA)Georgia Science Teachers Association (GSTA) |