

Sherri L. Brown

CURRICULUM VITA

College of Education and Human
Development
University of Louisville
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ACADEMIC BACKGROUND

- Doctor of Philosophy - 2002 The University of Tennessee, Knoxville, Tennessee
Major: Science Education
Dissertation Title - Theory to practice: A study of
science teachers' pedagogical practices as measured by
the science teacher analysis matrix (STAM) and teacher
pedagogical interview (TPPI). Dissertation Abstracts
International, 64, 845
- Master of Science - 1996 The University of Tennessee, Knoxville, Tennessee
Major - Curriculum and Instruction
Tennessee Teaching Certification: Biology and
Chemistry
- Bachelor of Science - 1991 The University of Tennessee, Knoxville, Tennessee
Major - Biology (High Honors)
Concentration - Organismal and Systems Biology

ACADEMIC EXPERIENCE

University of Louisville, Louisville, KY

2002-Present Assistant Professor, Science Education
Department of Teaching and Learning

University of Tennessee, Knoxville, TN

1999-2002 Graduate Teaching Assistant, Science Education

Jefferson Middle School, Oak Ridge Public Schools, Oak Ridge, TN

1996-1998 Middle School Teacher – 8th grade physical science

Farragut Middle & High School, Knox County Public Schools, Knoxville, TN

1995-1996 Teaching Intern – 9th, 10th grade Biology & Chemistry

HIGHER EDUCATION TEACHING EXPERIENCE**University of Louisville****August 2002-Present**

College of Education and Human Development Courses Taught

EDTP 324	<i>P-5 Science Methods</i>
EDAP 653	<i>Instructional Procedures in Science at the Zoo</i>
EDTP 605	<i>P-5 Special Methods – Science</i>
EDEM 657	<i>Instructional Procedures in Science</i>
EDTP 501	<i>General Methods</i>
EDAP 694	<i>Physics for Teachers: How Things Work</i>
EDAP 694	<i>Science Beyond the Classroom</i>
EDAP 663	<i>Ethology for K-12 Science Teachers</i>
EDAP 680	<i>Capstone/Action Research</i>

AWARDS

2006 Kentuckiana Metroversity Award for Instructional Development
Proposal: Physics for Teachers: How Things Work

PUBLICATIONS

Brown, S.L., & Votaw, N. L. (In press). Liquid motion lamp: A learning cycle approach to density and solubility. *Science Activities*.

Brown, S.L., & Melear, C.T. (2007). Preservice teachers' research experiences in scientists' laboratories. *Journal of Science Teacher Education*, 18, 573–597.

Brown, S.L., & Melear, C.T. (2006). Investigation of secondary science teachers' beliefs and practices after authentic inquiry-based experiences. *Journal of Research in Science Teaching*, 43(9), 938–962.

Brown, S.L. (2006, April/May). What's bugging you? *Science and Children*, 43, 45–49.

Brown, S.L., & Lashley, T.L. (Fall 2001, Spring 2002). Appalachian rural systemic initiative: An account of a service learning collaboration of two science educators. *Tennessee Education*, 31(2)/32(1), 39–46.

Under Revision

Brown, S.L., & Ronau, R.N. Report of high school students' perceptions of single-gender science and mathematics classroom experiences and confirmatory analysis of Fennema-Sherman Science Instrument. (Encouraged revise & resubmit - *Journal of Research in Science Teaching*)

Tretter, T.R., Brown, S.L., Bush, W.S., Saderholm, J.C., Moore, B.D., & Wilson, V.L.
Valid and reliable science content assessments for middle school teachers.

Brown, S.L. Effects of urban elementary co-teaching experiences on future scientists
and mathematicians

Brown, S.L., Votaw, N.L, Stauble, K.R., & Tretter, T.R. Impact of a summer science
institute on urban middle school students' perceptions of science.

GRANTS

Title	Type (teaching, service, research)	Source/ Amount	Time- frame	My role
Formative Assessments in Science for Elementary Teachers (FASET) S., Brown, & W., Bush, Co-P.I.s	Research	NSF Discovery Research K-12/ \$1,500,000 Not funded 9/2/07 Under Revision for next grant cycle	2007- 2012	Author, P.I., Researcher
Groundwork Education in Mathematics and Science (GEMS) W., Williams, C., Rich, & JCPS, Co-P.Is.	Teaching	NSF Graduate Teaching Fellows in K-12 Education (GK-12) \$1,900,000	2004- 2007	Researcher, Instructor, Pedagogical Mentor
Hands-on, Minds-On Summer Science Camp S., Brown & T., Tretter Co-P.I.s	Teaching	GE Foundation and E.ON.US \$41,000	2006- 2007	Author, Co-P.I., & Researcher
Urban University Partnership for Math and Science Teacher I & II (U ² PMAS) W., Bush, P.I.	Research	NSF/ \$1,200,000	2003- 2006	Researcher, Life Science Team Leader

Title	Type (teaching, service, research)	Source/ Amount	Time- frame	My role
Middle and Early High School Forces & Motion T., Tretter & S. Brown, Co-P.I.s	Teaching	Kentucky Dept. of Education/ \$60, 000	2005	Instructor & Researcher
Single Gender Classroom for Secondary Science and Mathematics R., Ronau, P.I.	Teaching	JCPS/UofL Partnership/ \$11,500	2002	Researcher
Louisville Area Science and Mathematics Alliance for Recruitment in Teacher Education Reform (LA-SMARTER) R., Ronau, P.I.	Research	NSF/ \$850,000	2002- 2005	How Things Work Course Co-Planner and Co-Instructor; Middle School Professional Development Team Leader

Grant Activity

Under Revision

Formative Assessments in Science for Elementary Teachers (FASET)

Collaborate with FOSS, DELTA, and STC curriculum developers, A&S Science Faculty, early childhood faculty, and JCPS science specialist to 1) design formative assessments for K-2 selected modules and 2) provide professional development on using the assessments.

Ongoing

Hands-on, Minds-On Summer Science Camp

Collaborated with community organizations (e.g., Mill Creek Power Plant, Louisville Metropolitan Sewer District, Louisville Water Company, Bernheim Arboretum, The Louisville Zoo, Rauch Planetarium, and Mammoth Cave) and current secondary science teachers to provide real world

January 2006

Present

science connections to academically talented rising, low SES
7th grade students recruited by the Lincoln Foundation

U²PMAST Project

Collaborated with a team of science teacher educators,
scientists, and science teachers to research and design
diagnostic content assessments for middle grade science
teachers

August 2002-
Present

Completed

Groundwork in Education in Mathematics and Science
(GEMS) NSF GK-12 Program Grant

Co-planned and co-taught a 2-week Summer Course
Workshop and 15 (2-hour) seminar meetings with
A&S Mathematics and Chemistry faculty, JCPS
Math/Science Specialists, and a mathematics teacher
educator to provide professional development of science
and mathematics Fellows and elementary teachers on using
current NSF curricular materials

April 2004-
June 2007

Middle and Early High School Forces & Motion

Co-planned and co-taught a weekly summer institute for
middle grade inservice teachers regarding motion and force
concepts using the Cambridge Physical Outlet curriculum
materials; teachers retained curriculum resources for use
in their classrooms.

May 2005
June 2005

Jefferson County Public Schools/U of L Partnership

Collaborated with Associate Dean for Research, a
mathematics education doctoral candidate, and a high
school physical science teacher to gather data on the
possible effects of single gender mathematics and
science classes

May 2003-
June 2004

LA-SMARTER

Collaborated with local middle school science faculty
as a professional development team; co-designed and co-
instructed a course to address teachers' content knowledge
in physical science – *How Things Work*

December 2002-
May 2006

Kentucky Education Professional Standards Board

Evaluated Kentucky Teacher Internship Program pilot
portfolios; co-authored and presented technical report
of findings to EPSB and UTK external evaluators

July 2003-
August 2005

Nia (Kiswahili for "purpose") Creative Day Camp

March 2003-

Evaluation July 2003
Collaborated with three professors, Speed Art
Museum staff, and the director of *NIA Creative Day*
Camp to design assessment measures

Teacher Quality Enhancement Grant Committee January 2003-
Faculty Leader for Teacher Performance Assessment May 2003
(Strand 3)

REFEREED PRESENTATIONS – INTERNATIONAL AND NATIONAL

*Accepted 2008 Presentations

*Brown, S.L., Votaw, N.L., & Tretter, T.R. (2008, March). *Impact of a summer science institute on urban middle school students' perceptions of science. (Year II)*. Paper to be presented at the annual meeting of American Education Research Association (AERA), New York, NY.

*Ardasheva, Y.Y., & Brown, S.L. (2008, January). *Motivation of K-12 teachers seeking training in educating English Language Learners*. Paper to be presented at annual meeting of the Association for Science Teacher Education (ASTE), St. Louis, MO.

*Brown, S.L., Votaw, N.L., & Tretter, T.R. (2008, January). *Impact of a summer science institute on urban middle school students' perceptions of science. (Year II)*. Paper to be presented at the annual meeting of ASTE, St. Louis, MO.

Brown S.L. (2007, April). *Change in fellows' beliefs, attitudes, and self-efficacy and change in elementary teachers' content knowledge as a result of collaborative experiences in an urban elementary school setting*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST), New Orleans, LA.

Tretter, T.R., Brown, S.L., Saderholm, J.C., Wilson, V.L., Moore, B.D. & Bush, W.S. (2007, April). *Valid and reliable physical, life, and earth science content assessments for middle school teachers*. Poster presented at NARST, New Orleans, LA.

Tretter, T.R., Brown, S.L., Saderholm, J.C., Wilson, V.L., Moore, B.D. & Bush, W.S. (2007, April). *Valid and reliable physical, life, and earth science content assessments for middle school teachers*. Paper presented at AERA, Chicago, IL.

Brown, S.L., Tretter, T.R., Votaw, N.L., & Stauble, K.R. (2007, January). *Impact of a summer science institute on urban middle school students' perceptions of science*. Paper presented at the annual meeting of ASTE, Clearwater, FL.

Brown S.L., & DeNeve, L. (2007, January). *Change in fellows' beliefs, attitudes, and self-efficacy and change in elementary teachers' content knowledge as a result of collaborative experiences in an urban elementary school setting*. Paper presented at the annual meeting of ASTE, Clearwater, FL.

- Tretter, T.R., Brown, S.L., Saderholm, J.C., Wilson, V.L., Moore, B.D. & Bush, W.S. (2007, January). *Valid and reliable physical, life, and earth science content assessments for middle school teachers*. Paper presented at the annual meeting of ASTE, Clearwater, FL.
- Brown, S.L., & Ronau, R.N. (2006, April). Urban public high school students' perceptions of single-gender *science and mathematics classroom experiences*. Paper presented at the annual meeting of AERA, San Francisco, CA.
- Brown, S.L., & Ronau, R.N. (2006, April). *Attitudes and learning scales of urban public high school students with regard to single-gender integrated science and mathematics class experiences*. Poster presented at the annual meeting of NARST, San Francisco, CA.
- Brown, S.L., Davis, K., Van Sickle, M., & Weiss, T. (2006, April). *Fellows, teachers and students making connections*. Related Paper Set presented at the annual meeting of NARST, San Francisco, CA. (organized by S.L. Brown)
- Brown, S.L., Tretter, T.R., Bush, W.S., Saderholm, J.C., Moore, B.D., & Kemp, A.C. (2006, April). *Valid and reliable physical, life, and earth science content assessments for middle school teachers*. Paper presented at the annual meeting of NARST, San Francisco, CA.
- Brown, S.L., & Ronau, R.N. (2006, January). *Attitudes and learning scales of urban public high school students with regard to single-gender integrated science and mathematics class experiences*. Paper presented at the annual meeting of ASTE, Portland, OR.
- Brown, S.L. (2006, January). *Change in beliefs, attitudes, and self-efficacy of post-secondary science and mathematics students immersed in urban elementary teaching experiences*. Paper presented at the annual meeting of ASTE, Portland, OR.
- Tretter, T.R., Votaw, N.L., & Brown, S.L. (2006, January). *Focused professional development to enhance specific teacher content knowledge*. Paper presented at the annual meeting of AETS, Portland, OR.
- Brown, S.L., & Ronau, R.N. (2005, April). *Students' and teacher's attitudes of single gender science classes in an urban public high school*. Paper presented at the annual meeting of NARST, Dallas, TX.
- Brown, S.L., & McNall, R.L. (2005, April). *Teaching science with technology for grades K-8*. Paper presented at the annual meeting of the National Science Teaching Association (NSTA), Dallas, TX.
- Brown, S.L., & Ronau, B. (2005, January). *Study of the effects of single gender mathematics and science classes on students' attitudes in an urban public high school*. Paper presented at the annual meeting of AETS (currently ASTE) Annual Meeting, Colorado Springs, CO.
- Tretter, T.R., Brown S.L., & Saderholm, J.C. (2005, January). *Structure and characteristics of physical science assessments designed for middle school teachers*. Paper presented at the annual meeting of AETS, Colorado Springs, CO.
- Brown, S.L., & Kemp, A.C. (2004, January). *Diagnostic teacher assessments for middle grades science teachers*. Paper presented at the annual meeting of AETS, Nashville, TN.

- Melear, C., Baird, B., Bricker, P., Guffey, S., Stinger-Barnes, P., Brown, S.L., Howick, T., & Melear, N. (2004, January). *Situated wilderness education on an ocean beach: Meeting national standards goals for scientific and environmental literacy with funding opportunity for AETS Members*. Paper presented at the annual meeting of AETS, Nashville, TN.
- Brown, S.L., Melear, C., & Suters, L. A. (2003, April). *Teachers' beliefs and classroom practice after completing an authentic research-based inquiry course*. Paper presented at the annual meeting of NARST, Philadelphia, PA.
- Lucy E., Melear, C., Gilmer, P., Wilson, J., Westerland J., Schwartz, R., & Brown, S. (2003, April). *Where is the science in science teacher education and science teaching?* Panel discussion presented at the annual meeting of AETS, St. Louis, MO.
- Brown, S.L., & Lashley, T. (2002, April). *Appalachian rural systemic initiative: An account of a service learning collaboration of two science educators*. Paper presented at the annual meeting of AERA, New Orleans, LA.
- Melear, C.T., Suters, L.A., & Brown, S.L. (2002, April). *Community agency - Field experiences followed by co-teaching in the urban secondary science classroom*. Poster presented at the annual meeting of AERA, New Orleans, LA.
- Brown, S.L., Bolton, K., Chadwell, N., & Melear, C.T. (2002, April). *Pre-service secondary science teacher apprenticeship experience with scientists*. Paper presented at the annual meeting of NARST, New Orleans, LA.
- Suters, L.A., Brown, S.L., & Melear, C.T. (2002, April). *Preparing for urban science classrooms by community immersion, co-teaching and co-generative dialogue*. Paper presented at the annual meeting of NARST, New Orleans, LA.
- Brown, S.L., Bolton, K., Chadwell, N., & Melear, C.T. (2002, January). *Preservice secondary science teacher apprenticeship experience with scientists*. Paper presented at the annual meeting of AETS, Charlotte, NC.
- Melear, C.T., Suters, L.A., & Brown, S.L. (2002, January). *Community agency field experiences followed by co-teaching in the urban science classroom*. Paper presented at the annual meeting of AETS, Charlotte, NC.

REFEREED PRESENTATIONS – REGIONAL

- Ardasheva, Y.Y., & Brown, S.L. (2007, April). *Mainstream classroom teachers seeking training in educating English language learners: A case study*. Poster presented at the Spring Research Conference, Lexington, KY.
- Votaw, N.L., Tretter, T. R., & Brown, S. L. (2005, October). *Professional development targeting teachers' physical science content and pedagogical knowledge of motion and forces*. Paper presented at the annual meeting of Mid-Atlantic Association for Science Teacher Education (ASTE), Breaks Interstate Park, VA.
- Brown, S.L. (2005, October). *Change in beliefs, attitudes, and self-efficacy of post-secondary science and mathematics students immersed in urban elementary teaching experiences*. Paper presented at the annual meeting of Mid-Atlantic ASTE, Breaks Interstate Park, VA.

- Moore, B. D., Tretter, T. R., Brown, S. L., & Saderholm, J.C. (2005, October). *Development of content knowledge assessments for science teachers: Ensuring validity*. Paper presented at the annual meeting of Mid-Atlantic ASTE, Breaks Interstate Park, VA.
- Brown, S.L. (2004, November). *Using science notebooks as an assessment tool*. Paper presented at the regional meeting of the National Science Teachers' Association (NSTA), Indianapolis, IN.
- Brown, S.L. (2004, October). *Students' attitude of single gender science and mathematics classes in an urban public high school*. Paper presented at the annual meeting of the Mid-Atlantic ASTE, Roane Mountain, TN.
- Tretter, T. R., Moore, B. D., Brown, S. L., Kemp, A. C., Saderholm, J.C., & Bush, W. S. (2004, October). *What middle school teachers need to know about physical science*. Paper presented at the annual meeting of the Mid-Atlantic ASTE, Roane Mountain, TN.
- Brown, S.L., & Kemp, A. (2003, October). *Designing science content tests for middle grade teachers*. Paper presented at the annual meeting of the Mid-Atlantic ASTE, Lake Lure, NC.

REFEREED PRESENTATIONS – STATE

- Phillipson-Mower, T., Griffin, D., Brown, S., Drury, G., Crimm, L., & Sanders, J. (2007, November). *Literacy through science and environmental education*. Presentation made at the annual meeting of Kentucky Science Teachers' Association (KSTA), Lexington, KY.
- Brown, S., & Tretter, T.R. (2006, November). *Going with the flow: Activities to teach fluid flow*. Hands-on presentation at the annual meeting of KSTA Lexington, KY.
- Votaw, N., Tretter, T.R., & Brown, S.L. (2005, November). *Gravity with breakfast*. Hands-on presentation at the KSTA, Lexington, KY.
- Kemp, A., Huddleston, L.E., Kemp, H., & Brown, S. L. (March 2004). *Literacy and Science: Making the connection in intermediate grades*. Hands-on presentation at the Kentucky Teaching and Learning Conference (KTLC) Louisville, KY.
- Brown, S.L. (2003, November). *Entomology in the classroom*. Hands-on presentation at the annual meeting of KSTA, Lexington, KY.

INVITED SPEECHES AND PRESENTATIONS

- Brown, S.L., & Hunt, K. (2005, October). *Possibilities and Capabilities of Electronic Portfolios for Faculty and Students*. Presentation made at the annual Delphi Celebration of Teaching and Learning Facilitating Student Success, Louisville, KY.
- Martin, N. Ivey, E., Brown, S. (2005, May). Topic: *Women in Science*. State of Affairs Program Broadcast, WFPL Public Radio Station, Louisville, KY.
- Brown, S. L. (2004, June). *Use of technical drawings and assessing science notebooks*. Teaching Science in the Elementary and Middle Schools. University of Tennessee, Knoxville, TN.

Brown, S.L. (2003, June). *Nature of science*. Teaching Science in the Elementary and Middle Schools. University of Tennessee, Knoxville, TN.

Brown, S.L. (2002, July). *Theory to practice: Science teachers' pedagogical practices as measured by the science teacher analysis matrix (STAM) and as related to their preservice preparation, personal philosophy, and years experience*. Dupont Corporation Symposium on Inquiry-Based Instruction in Science and Mathematics, Knoxville, TN.

PROFESSIONAL SOCIETY MEMBERSHIP

American Education Research Association (AERA)

National Association for Research in Science Teaching (NARST)

Association for Science Teacher Educators (ASTE) – formerly AETS

National Science Teachers Association (NSTA)

Kentucky Science Teachers Association (KSTA)

NATIONAL SERVICE

American Education Research Association (AERA)

Co-Chair Division C Graduate Student Research Award, 2006-2008

Division C Proposal Reviewer, 2007

SIG Science Teaching and Learning, 2007-2008

National Association for Research in Science Teaching (NARST)

Strand 3A (Teaching Elementary) Co-Coordinator, 2005 & 2006

Conference Chair/Discussant, 2005-2007

Conference Proposal Reviewer, 2005-2007

Association for Science Teacher Educators (ASTE) – formerly AETS

Conference Proposal Reviewer, 2005-2007

Women in Science Education Listserve Organizer, 2003

Association of Teacher Education (ATE)

Conference Proposal Reviewer, 2004

GUEST JOURNAL REVIEWER

Journal of Science Teacher Education

Date

February 2005

May 2006

November 2006

Journal of Research in Science Teaching

October 2006

March 2007

September 2007

Science Education

November 2007

LOCAL SERVICE

JCPS – Preservice Redesign Research & Development Team, 2006-present
Meyzeek Middle School Science Fair Judge, 2003-2006
Newburg Middle School Science Fair Judge, 2007 & 2008
Wheeler Elementary School Science Fair Judge, 2005
Junior Science and Humanities Symposium Judge, 2004 & 2005
JCPS Technology Alliance Co-Coordinator, 2002-2006

UNIVERSITY

Undergraduate Council Committee Member, 2007-2008
General Education Curriculum Committee, 2005-2006
Table Leader/Trainer General Education Course Evaluation, 2005-2006

COLLEGE SERVICE

Research and Faculty Development Committee, 2007-2010
Standards and Admissions Committee, 2003-2009
NCATE Standard 1 Committee Member, 2004-present
NCATE Program Review Document (x3) Author, 2006-2007

DEPARTMENT OF TEACHING AND LEARNING SERVICE

Honors and Awards Committee Chair, 2007-2008
Honors and Awards Committee Member, 2005-2007
Nominator/Organizer for Faculty Advising Award, 2004-2007
Search Committee Co-Chair for Science Educator, 2006-2007
Search Committee for Planetarium Director, 2007-present
Search Committee for Science Educator, 2006-2007
Search Committee for Technology Educator, 2005-2006
Search Committee for Planetarium Science Educator, 2005-2006
Search Committee for Mathematics Educator, 2003-2004
Elementary Program Committee, 2002-present

Doctoral Committees (Graduation Date)

Art Thacker (August 2006)
Jon Saderholm (August 2007)
Pam Jett
Nikki Votaw
Karla Stauble
Michael Martin
Leslie Wigglesworth