

CAROL SUZANNE CHISM JOHNSTON, PHD

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ACADEMIC PREPARATION:

Ph.D. in Science Education, University of California, Santa Barbara, 2003

Dissertation: *Community Development in a Research Experience for Teachers (RET) Program: Teacher Growth and Translation of the Experience Back to the Classroom*

Advisor: Dr. Julie Bianchini; Committee Members: Dr. Greg Kelly, Dr. M. Elizabeth Brenner

M.A. in Science Education, University of California, Santa Barbara, 2002

Single Subject Credential in Physical Sciences, California State University, Fullerton, 1987

B.S. in Chemical Engineering, California State University, Long Beach, 1981

CERTIFICATIONS:

California Single Subject Teaching Credential; physical science and mathematics

PROFESSIONAL EXPERIENCE:

Department Chair/Professor of Education, Jan 2007-present, Mount Saint Mary's University, Los Angeles

Teaching responsibilities include methods courses for secondary education. Department Chair since 2018. Activities included member of Academic Leadership Council, Faculty Status Committee, and Graduate Council and researcher for S-STEM grant.

Instructor/Supervisor of Teacher Education, Aug 2004-Dec 2006, California State University, Channel Islands

Taught science methods courses with emphases on High School Science Methods and Middle School Science Methods. Supervised student teachers and interns.

Instructor of Physical Science, Dept. of Chemistry, Jan 2004- Dec 2006, California State University, Channel Islands

Responsible for developing and teaching a laboratory and activities-based physical science course for non-science majors.

Post-Doctoral Researcher, Jun 2004-Jun 2006, University of California, Santa Barbara

Research with the Center for Equity in Mathematics and Science Education (CEMSE).

Instructor/Coordinator/Supervisor, Fall 2003, Teacher Education Program, University of California, Santa Barbara

Responsible for teaching the following courses: Professional Issues in Science Education and the Nature of Science. Both courses included an emphasis on equity and access in science. Other responsibilities included supervising student teachers and bridging the partnership between the Santa Barbara Unified School District and the university.

Research Assistant, 2001-2004, Materials Research Laboratory, University of California, Santa Barbara

Doctoral work sponsored by NSF grant to study research experience for teachers (RET) programs.

Research Assistant, 2000-2002, Gevirtz Graduate School of Education, University of California, Santa Barbara

Qualitative research conducted on student teachers' learning to teach in equitable ways. Responsibilities included data collection, analysis, and writing.

Teaching Assistant, 1999-2001, Physics Department, University of California, Santa Barbara
Coordinated an outreach group that brought physics graduate students and faculty into local elementary and secondary schools for demonstration performances. Involved in grant writing and budgeting.

Science Intern Coordinator, 1999-2000, Community Teacher Fellowships in Mathematics and Science (CTFMS), University of California, Santa Barbara

Taught science methods classes and supervised undergraduate science students during internships in local science classrooms. This program included encouraging successful science students to consider careers in teaching and providing diverse role models in science classrooms, particularly from traditionally underrepresented groups in science.

ASSOCIATED PROFESSIONAL EXPERIENCE:

Teacher, 1990-1999, Villanova Preparatory School, Ojai, CA

Courses: Physics, Calculus, and Geometry

Served as department chair. Wrote and received grant for science department, allowing for computer-aided laboratory investigations. Coordinated WASC review.

Research Assistant, Summer 1997, Stanford Linear Accelerator Center, Stanford, CA

As a participant in a teacher/research program, I designed and implemented a computer data acquisition program using LabView that was used in a neutron energy spectrum experiment.

Research Assistant, Summer 1995, Continuous Electron Beam Accelerator, Norfolk, VA

As part of a teacher/scientist research program, I conducted a study on resonance frequencies and quality factors for the accelerator.

Teacher, 1985-1988, Saddleback Unified School District, Mission Viejo, CA

Courses: Chemistry and Physical Science

Instrumental in setting up the science facilities at a new school, including ordering chemicals and equipment for laboratory exercises.

Technical Specialist, 1983-1985, Betz Industrial, Torrance, CA

Engineering sales and maintenance for \$1 million in industrial accounts; mostly refineries.

Associate Process Engineer, 1981-1983, Ralph M. Parsons, Pasadena, CA

Developed computer simulations for process designs of oil/gas refineries.

JOURNAL PUBLICATIONS:

Grier, J., & Johnston, C. C. (2012). STEM Professionals Entering Teaching: Navigating Multiple Identities. *Journal of Science Teacher Education*. 23 (1) 19-44.

Grier, J., & Johnston, C. C. (2009). An inquiry into the development of teacher identities in STEM career changers. *Journal of Science Teacher Education*. 20 (1) 57-75.

Johnston, C. C. & Goodchild, F. (2004). Realistic Roles for Scientists in K-12 Education. *Journal of Materials Education*, 26, 333-340.

Bianchini, J. A., Johnston, C. C., Oram, S. & Cavazos, L. (2003). Learning to teach science in contemporary and equitable Ways: The successes and struggles of first-year science teachers. *Science Education*, 87, 419-443.

Goodchild, F. & Johnston, C. C. (2001). Scientists as mentors to science teachers. *Journal of Materials Education*, 23, 33-38.

OTHER PUBLICATIONS:

A Report on the Status of Women and Girls in California, Prepared by Mount Saint Mary's University, March 2015. (Editor)

A Report on the Status of Women and Girls in California, Prepared by Mount Saint Mary's College, March 2014. (Author/Editor)

A Report on the Status of Women and Girls in California, Prepared by Mount Saint Mary's College, March 2013. (Author/Editor)

A Report on the Status of Women and Girls in California, Prepared by Mount Saint Mary's College, March 2012. (Author/Editor)

Grier, J.M. & Johnston, C. C. (2008). STEM Career-changers Transition to Teaching: I Have to Become a Student Again? *ERIC Document ED 501492*.

Johnston, C.C. & Grier, J.M. (2006, January). *A study of scientists and engineers as second-career secondary teaching professionals*. Proceedings for the meeting of the Association for Science Teacher Educators, Portland, OR.

PRESENTED PAPERS:

Johnston, C. C. & Ravkic, I. (2020, February). *Recruiting and Retaining Scholars through Quarterly Meetings.* Presented at the Noyce Conference in Portland, OR.

Johnston, C. C. (2020, January). *Challenging the Relationship Dynamics between STEM Education and Special Education Teachers through Co-Teaching in a Pre-Service Secondary Education Program.* Presented at the Hawaii International Conference on Education (HICE) in Honolulu, HI.

Johnston, C. C. (2019, January) *Choosing Not to Teach: Parental Advice on Career Choices for First Generation STEM Majors.* Presented at the Association of Science Teacher Educators (ASTE) in Savannah, GA.

Johnston, C. C. (2018, March). *Attracting and Supporting First-Generation Female STEM Undergraduates through an NSF-Funded Program.* Presented at the National Association for Research in Science Teaching, Atlanta, GA

Johnston, C. C. (2016, April) *Travel through the Lens of an Environmental Educator.* Presented at the Mount Academic Symposium.

Johnston, C. C. (2016, January) *Making Science Relevant with Environment-Based Lessons in a Pre-Service Elementary Science Methods Course.* Presented at the Association of Science Teacher Educators (ASTE) in Reno, NV.

Johnston, C. C. (2015, October) *Making Science Relevant to Elementary Science Pre-Service Teachers to Reduce their Fears of Teaching Science.* Presented at the North American Association of Environmental Educators (NAAEE) in San Diego, CA.

Javeri, M., Osisoma, I. , Johnston, C.C. (2014, October) *Campus as a Living Lab: Learning Community of Environment and Sustainability Educators.* Presented at the North American Association of Environmental Educators (NAAEE) in Ottawa, ON, CA.

Johnston, C.C., Javeri, M., Osisoma, I. (2014, October) *Engaging College Students Using Environmental Sustainability in Diverse Content Areas.* Presented at the Research Symposium for the North American Association of Environmental Educators (NAAEE) in Ottawa, ON, CA.

Johnston, C. C. (2014, January). *Using Environmental Issues in a Pre-Service Elementary Science Methods Course to Model Inquiry Teaching and Reduce Fears of Teaching Science.* Presented at the Association of Science Teacher Educators (ASTE) in San Antonio, TX.

Johnston, C. C., Javeri, M., Osisoma, I. (2013, October) *Educating for Informed Participation in the Move Toward Environmental Sustainability.* Presented at the North American Association of Environmental Educators (NAAEE) in Baltimore, MD.

Johnston, C. C. (2012, October). *Embedding Environmental Education in Our Schools and Communities*. Presented at the North American Association of Environmental Educators (NAAEE) conference in Oakland, CA.

Johnston, C. C. & Grier, J. (2011, January). *If there is a STEM teacher shortage, why did I get a pink slip?* Presented at the Association for Science Teacher Educators (ASTE) International Conference, Minneapolis, MN.

Invited speaker at the California State University Long Beach, *Science Teaching And Research (STAR) Seminar Series*, April 13, 2010. Presented overview of our research on STEM career-changers and their sense of identity.

Johnston, C. C. & Grier, J. (2010, March). *Toward retaining second career STEM teachers: The Influence of Transitioning Professional Identities*. Presented at the National Association for Research in Science Teaching, Philadelphia, PA

Grier, J. & Johnston, C. C. (2010, January). *Non-STEM Career Changers as Biology Teachers: Developing a STEM Teacher Identity*. Presented at the Association of Science Teacher Educators Conference, Sacramento, CA.

Johnston, C. C. & Grier, J. (2009, April). *STEM career-changers in their first years of teaching: A follow-up study*. Presented at the National Association for Research in Science Teaching, Garden Grove, CA.

Johnston, C. & Grier, J. (2008, January). *Personal Narratives and Professional Identities of Second Career STEM Teachers: Perspectives on Retention*. Presented at the Association of Science Teacher Educators Conference, St. Louis, MO.

Johnston, C. & Grier, J. (2008, April). *STEM Career-changers Transition to Teaching: I Have to Become a Student Again?* Presented at the National Association for Researchers of Science Teaching Conference, Baltimore, MD.

Johnston, C. & Goodchild, F. (2007, April). *Scientists in the Secondary Classroom: Effects on Middle School Students' Future Enrollments in Science Classes*. Presented at the National Association for Researchers of Science Teaching Conference, New Orleans, LA.

Grier, J. & Johnston, C. (2007, January). *Second Career Teachers: Translating STEM Identities into the Classroom*. Presented at the Association of Science Teacher Educators Conference, Clearwater, FL.

Johnston, C.; Goodchild, F.; Lenaburg, L. (2005, July). *Scientists in Middle School Classrooms: Effect of a GK-12 Project on Students' Perceptions of Science*. A paper presented at The Eighth International History, Philosophy, and Science Teaching Conference, Leeds, UK.

Brenner, M. E., Bianchini, J. A., Cavazos, L. M., Johnston, C., Courtright, A. & Kelly, G. J. (2005, April). *Professional Development Strategies for Promoting Discourse About Equity in*

Mathematics and Science Teachers. Presented at American Educational Research Association, Montreal, Canada.

Bianchini, J.; Brenner, M.; Courtright, A.; Johnston, C.; Robertson, L. (2005, April). *Working toward Equity through Professional Development: Changes in Science and Mathematics Teachers' Conceptions and Self-Reported Practices*. A paper presented at the National Association for Researchers of Science Teaching Conference, Dallas, TX.

Johnston, C. C., Goodchild, F. (2005, January). *Scientists in the Secondary Classroom*. A paper presented at the Association for the Education of Teachers of Science International Conference, Colorado Springs, CO.

Johnston, C. C. (2004, April). *Building Better Collaborations Between Science Teachers & Research Scientists: Lessons from an RET*. A paper presented at the National Association for Researchers of Science Teaching Conference, Vancouver, BC, Canada.

Johnston, C. C., Goodchild, F. (2004, January). *Translation of a Research Experience for Teachers (RET) Program back to the secondary classroom*. A paper presented at the Association for the Education of Teachers of Science International Conference, Nashville, TN.

Johnston, C. C. (2003, April). *Community development in a research experience for teachers (RET) program: Teacher growth and translation of the experience back to the classroom*. A paper presented at the National Association for Researchers of Science Teaching Conference, Philadelphia, PA.

Bianchini, J. A., Johnston, C. C. (2003, April). *Learning to teach in equitable and excellent ways: An examination of science student teachers' views and practices*. A paper presented at the National Association for Researchers of Science Teaching Conference, Philadelphia, PA.

Johnston, C. C. (2002). *Community development in a research experience for teachers (RET) program: Teacher growth and translation of the experience back to the classroom*. A poster presented at an alumni fundraising event, Legacy and Leadership, UC Santa Barbara.

Bianchini, J. A., Oram, S.Y., Johnston, C. C. & Cavazos, L. M. (2002, March). *Learning to teach in equitable and diverse Ways: A qualitative study of preservice science education courses*. A paper presented at the American Educational Research Association Conference, New Orleans, LA.

Johnston, C. C. (2002, April). *A professional community for communicating science*. A poster presented at a Conference for Bringing Research into Science Classrooms, San Francisco, CA.

Bianchini, J. A., Johnston, C. C., Oram, S.Y. & Cavazos, L. M. (2001, April). *Learning to teach science in contemporary and equitable ways: The successes and struggles of first-year science teachers*. A paper presented at the American Educational Research Association Conference, Seattle, WA.

Johnston, C. C. (2001, April). *Scientists as mentors to science teachers*. A paper presented at the Materials Research Society Conference, San Francisco, CA.

WORKSHOP PRESENTATIONS:

Los Angeles Teacher Preparatory High School Faculty Workshop. “Reading in the Content Areas—All Teachers Teach English”, Feb 7, 2012

Environmental Educators and Sustainability Learning Community Workshops. Collaboration between California State University Los Angeles, California State University Dominguez Hills, and Mount Saint Mary’s College. Presented workshop series on “Introduction to Environmental Science and Sustainability”. Feb 2, Feb 23, Mar 23, Apr 27, 2013, Jul 12, 2014, Aug 2, 2014, and Aug 23, 2014.

Webinar Presentation with EE Capacity Webinar Series for Professors of Education, “Creating an Online Community to Support Integrating Environmental Issues in Diverse Curricula”. <http://www.eecapacity.net/pre-service-webinars.html>, May 7, 2014.

GRANTS AND AWARDS:

NSF STEM Grant, researcher and team member for grant to support scholars to succeed in STEM, Mount Saint Mary’s University, April 2016.

Robert Noyce Teaching Scholarship, PI for 5-year grant to support STEM majors who will commit to teaching in a high needs school, Mount Saint Mary’s University, July 2016

Outstanding Teaching Assistant, Physics Department, UC Santa Barbara, 2000-2001

Block Grant Fellowship awarded by Teaching and Learning Emphasis, UC Santa Barbara, 1999-2000

Outstanding High School Teacher Award, UC San Diego Teacher Recognition, 1999; 2001

COMMUNITY SERVICE AND MENTORING:

Reviewer for papers submitted to Innovations in Science Teacher Education, 2016-2020.

Committee Member for California Commission on Teacher Credentialing Program Completer Working Group, 2012-13

Advisory Panel Member for California Subject Examinations for Teachers (CSET) in mathematics alignment of teacher exams to common core standards, 2013.

Board of Directors for LAUSD pilot school, Los Angeles Teacher Preparatory School, 2011-present.

Awards Committee Member for California State Science Fair Teacher of the Year, 2010-13

Transitions Scholarship Mentor. MSMC Title V mentor for 2 Graduate students, 2011-13

Reviewer for papers submitted the National Association for Research in Science Teaching 2012 annual conference.

Awards Committee Member for the *Journal of Research in Science Education*, 2006-2008.

Board of Directors for the Education Consortium of Central Los Angeles, 2007- present.

Co-Chairman- Program Committee, Education Consortium of Central Los Angeles, 2010-11

Treasurer for Education consortium of Central Los Angeles, 2012-2014.

Presentation Reviewer for Association for Science Teacher Education conference, 2006-2007.

Reviewer for papers submitted to *Journal of Research in Science Education*, 2005, 2006

Mentor for Undergraduate student in research experience program (ARC), 2002

Reviewer for paper submitted to *Science Education*, 2001

Brighter Horizons Workshop Leader (Program to encourage women in science), 2001; 2002

PROFESSIONAL AFFILIATIONS:

California Council of Teacher Education

National Association for Research in Science Teaching

National Science Teachers' Association

Association for Science Teacher Education

Beginning Teachers Support Association/Institutes of Higher Education Board

Association of Independent California Colleges and Universities