Curriculum Vitae

Michael Giamellaro

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EDUCATION

Ph.D. Educational Leadership & Innovation: Science Education, University of Colorado Denver

Dissertation: *Deep Immersion Academic Learning: An Analysis of Science Learning in Context*, Dr. Deanna Sands, Advisor. 2012.

M.A. Science Curriculum and Instruction, University of Colorado, Denver. 2004.

B.S. Wildlife and Fisheries Biology, University of Wyoming, Laramie. 1997.

TEACHING & PROFESSIONAL EXPERIENCE

2012 – present **Assistant Professor** College of Education, Oregon State University- Cascades

Teach five graduate courses per year. Maintain a research program in contextualized science learning environments. Advise MAT students. Provide program support including curriculum oversight, admissions reviews, etc. Provide service to OSU, regional educational organizations, and professional organizations.

Courses taught:

- SED 407: Intro to Science Education and Outreach (1)
- SED 413/513/514: Inquiry in Science and Mathematics Education (3)
- SED 511: Analysis of Classrooms I (3)
- SED 515: Analysis of Classrooms II (3)
- SED 553: Science Methods: Practicum I (3)
- SED 573: Science Pedagogy & Technology I (4)
- SED 577: Science Pedagogy & Technology II (4)
- SED 599: Developing STEM Content into Project-Based Curricula

2010 – 2012 **Research Assistant** LEARN Lab, University of Colorado Denver

Under the direction of Dr. Maria Ruiz-Primo, The NSF funded DEISA project looked at developing and evaluating instructionally sensitive assessments in elementary science curricula. We have systematically manipulated item development to detect differences in transfer of learning that can reflect differences in quality of instruction. We also explored the role of curriculum mapping in teachers' science concept development.

2009 – 2011	**Adjunct Instructor**	School of Education and Human Development, University of Colorado Denver

Taught *Grand Canyon Science,* an experiential, graduate teacher education field class in which pre-service and practicing teachers learned pedagogical content knowledge related to the geology and ecology of the Grand Canyon while rafting the Colorado River. Participants also received training in experiential, place-based education.

2007 – 2010	**Lead Educator (HS science teacher)**	The Watershed School (TWS), Boulder, CO.
2006 – 2007	**7th and 8th grade science teacher**	Packer Collegiate Institute, New York City
2005 – 2006	**Interim 8th & 12th grade biology teacher**	Friends Seminary, New York City
2003 – 2005	**MS and HS math/science teacher & advisor**	Center for Discovery Learning (CDL), Lakewood, CO
2002– 2003	**Teacher Intern**	Jefferson County Open School (JCOS), Lakewood, CO
1997 – 2002	**Biologist**	U.S. Fish and Wildlife Service, Sybille Canyon, WY

PUBLICATIONS

Giamellaro, M. (2014). Primary contextualization of science learning through immersion in content-rich settings. *International Journal of Science Education, 36:17, 2848-2871*. DOI: 10.1080/09500693.2014.937787

Ruiz-Primo, M.A., Li, M., Wills, K., Giamellaro, M., Lan, M-C., Mason, H., Feehan, J., Orgeron, M., & Sands, D. (2012). An approach for developing and evaluating instructionally sensitive assessments in science. *Journal of Research in Science Teaching*, 49:6, 691-712. DOI: 10.1002/tea.21030

REFEREED PAPER PRESENTATIONS

Giamellaro, M. (2014) *Measuring situated learning.* In J. Settlage & A. Johnston (Eds.), Proceedings of the Science Education at the Crossroads Conference (pp. 36-37). Portland, OR. [Available online at www.sciedxroads.org/proceedings2014.html].

Giamellaro, M. (April, 2014). *Science learning and levels of contextualization*. Paper presented at the National Association for Research in Science Teaching annual international conference, Pittsburgh, PA.

Giamellaro, M. (2013, Sept.) *Student use of facilitated versus peripheral learning opportunities to develop conceptual science knowledge in contextualized, outdoor settings.* Paper presented at the European Science Education Research Association conference, Nicosia, Cyprus.

Giamellaro, M. (2013, April). *The role of the physical environment in contextualizing science learning.* Paper presented at the National Association for Research in Science Teaching annual international conference, Rio Grande, Puerto Rico.

Ruiz-Primo, M.A., Li, M., Birby, E., Edwards, A., Wang, T., Zhao, D.Y., Giamellaro, M. (2013, April). *Looking at quality of instruction and students' performance: Where do the teachers' questions come from?* Paper presented at the National Association for Research in Science Teaching annual international conference, Rio Grande, Puerto Rico.

Li, M., Ruiz-Primo, M.A. Wang, T., Giamellaro, M., Wills, K., Zhao, D.Y. (2013, April). *Comparing Item Formats of Instructionally Sensitive Assessments.* Paper presented at the National Association for Research in Science Teaching annual international conference, Rio Grande, Puerto Rico.

Giamellaro, M., Ruiz-Primo, M. A., & Li, M. (2012, March) *Quality elementary science teaching as reflected in productive failure.* Paper presented at the National Association for Research in Science Teaching annual international conference, Indianapolis.

Giamellaro, M., Sands, D., Wills, K., Ruiz-Primo, M. A., & Li, M. (2012, April). *Is this testing what was taught? Teachers' and students' perceptions of instructionally sensitive assessments.* Paper presented at the American Educational Research Association annual meeting, Vancouver, B.C.

Lan, M-C., Li, M., Ruiz-Primo, M.A., Wang, T., Giamellaro, M., & Mason, H. (2012, April). *Linking quality of instruction to instructionally sensitive assessments.* Paper presented at the American Educational Research Association annual meeting, Vancouver, B.C.

Li, M., Lan, M-C., Ruiz-Primo, M.A., Giamellaro, M., & Wang, T. (2012, March). *Supporting students to make conceptual connections.* Paper presented at the National Association for Research in Science Teaching annual international conference, Indianapolis.

Li, M., Ruiz-Primo, M.A., Giamellaro, M., & Wills, K. (2012, April). *Instructionally sensitive assessments across three science units.* Paper presented at the American Educational Research Association annual meeting, Vancouver, B.C.

Li, M., Ruiz-Primo, M.A., Giamellaro, M., Wills, K., M., Mason, H., & Feehan, J. (2012, April). *Sensitivity and transfer of learning at different distances: Close, proximal and distal assessment items.* Paper presented at the American Educational Research Association annual meeting, Vancouver, B.C.

Mason, H., Ruiz-Primo, M.A., Giamellaro, M., & Li, M. (2012, March) *What do students' science notebooks reflect about the quality of teaching students received?* Paper presented at the National Association for Research in Science Teaching, annual international conference, Indianapolis.

Ruiz-Primo, M. A., Li, M., Giamellaro, M., Wills, K., Mason, H., Lan, M-C, & Sands, D. (2012, April) *Instructionally sensitive assessments and curricula characteristics: Learning goals, opportunities to achieve them, and opportunities to transfer them.* Paper presented at the American Educational Research Association, annual meeting, Vancouver, B.C.

Ruiz-Primo, M.A., Li, M, Giamellaro, M., Wills, K. (2012, April). *An approach to develop and evaluate assessments at different distances to a curriculum*. Paper presented at the annual meeting of the National Council on Measurement in Education, Vancouver, B.C.

Wang, T., Lan, M-C., Giamellaro, M., Zhao, D.Y., Birkby, D., Ruiz-Primo, M.A., & Li, M. (2012, March). *Knowledge of learning goals as a navigation tool in curriculum implementation.* Paper presented at the National Association for Research in Science Teaching annual international conference, Indianapolis.

Giamellaro, M., Lan, M-C, Ruiz-Primo, M. A., Li, M., & Tasker, T. (2011, April). *Mapping science curricula: A method for supporting teachers in the articulation of learning goals*. Paper presented at the American Educational Research Association annual meeting, New Orleans.

Giamellaro, M., Lan, M-C, Ruiz-Primo, M. A., & Li, M. (2011, April). *Addressing elementary teacher misconceptions in science and supporting peer learning through curriculum mapping.* Paper presented at the National Association for Research in Science Teaching annual international conference, Orlando.

Ruiz-Primo, M.A., Li, M., Sands, D., Wills, K., Giamellaro, M., & Jones, A. (2011, April) *Developing instructionally sensitive assessments: Lessons learned about the manipulation of close and proximal item characteristics*. Paper presented at the National Association for Research in Science Teaching annual international conference, Orlando, FL.

Luce, A., Giamellaro, M., Calcote, M., & Marlow, M. (2007, October) *iPods in education: A reflective tool for experiential education.* Paper presented at the annual meeting of the Northern Rocky Mountain Educational Research Association, Jackson Hole, WY.

INTERNATIONAL PRESENTATIONS

English Language Learners: Integrating STEM, Freak The Mighty. Presentation & Workshop at the NSTA STEM Symposium and Conference, Minneapolis, MN, May 2015. Prevenas, P., VanAstlyne, H., Giamellaro, M.

Implementing Inclusive STEM across a Rural K-12 District. Led this Experiential session that included other researchers and teachers involved in the project. Presented at the Annual International Meeting of the Association for Science Teacher Educators. Portland, OR, January 2015.

Using pathfinder networks to model conceptual change of students participating in field science classes. Poster presented at the Symposium on Network Science in Biological, Social, and Geographic Systems. University of Wyoming, Laramie. April 2012.

REGIONAL PRESENTATIONS AND OUTREACH

Rigorous and relevant: Supporting English language learners through STEM. Presentation at the annual conference of the Oregon Association for Career and Technical Education (OACTE), Sunriver, OR. April, 2015. Prevenas, P., VanAstlyne, H., Giamellaro, M.

The EdTPA Experience: Lessons from an Early Adopter. Presentation at the annual conference of the Oregon Association of Teacher Educators (ORATE), Portland, OR, March 2015. Platt, C. & Giamellaro, M.

STEM + ESL = Learning. Annual EL Alliance Conference of the Confederation of Oregon School Administrators. Eugene, OR, March 2015. Prevenas, P., VanAstlyne, H., Giamellaro, M.

Data and directions forward: The state of the Culver/OSU STEM project. Lecture presented to the Culver School District, Culver, OR. February 2015. Giamellaro, M.

Teaching for Contextualization. Lecture presented to Black Butte School Board and Curriculum Committee, Camp Sherman, OR. December 2014. Giamellaro, M.

STEM Summer Institute. Organized and led a week-long summer institute for K-12 teachers to support them in the development of STEM-focused, Project-Based Learning curriculum units. Giamellaro, M.

Aligning integrated curricula to the Next Generation Science Standards. Workshop presented to the staff of Culver School District, Culver OR, February, 2014. Giamellaro, M.

Using clicker technology for formative assessment. Guest lecturer in Dr. Carolyn Platt's graduate level "assessment to improve instruction" course. October, 2014. Giamellaro, M.

Using lesson study to build professional learning communities for curriculum reform. Workshop presented to the staff of Culver School District, Culver OR, October, 2013. Giamellaro, M.

Integrating curricula with a STEM approach. Workshop presented to the staff of Culver School District. Bend, OR, August, 2013. Dollar, N. & Giamellaro, M.

Science: Out of the classroom and into the real world. Public Lecture presented at Oregon State University- Cascades' "It's in the Bag Lunchtime Lecture Series." Bend, OR, May 2013. Giamellaro, M

What exactly is inquiry? Workshop presented to staff of Bear Creek Elementary School, Bend, OR, April, 2013. Giamellaro, M

Science immersion experiences: Contextualized learning and Its impact on conceptual understanding in high school students. Seminar presented to the Science and Math Education Department, Oregon State University, Corvallis. June 2012. Giamellaro, M

Guest Lecturer, graduate-level experiential education pedagogy class at the University of Colorado, Denver. Sept. 2009. Michael Marlow, Professor. Giamellaro, M

GRANT ACTIVITY

Giamellaro, M (PI) & Gess-Newsome, J. (OSU). *Connections to Context: Examining the Situatedness of STEM Contextualization for Learners in Rural Settings*. Submitted to NSF EHR 2/15. $654,759, 3 yrs.

Platt, C. & Giamellaro, M. *Supporting 21st century teachers at OSU-Cascades.* Funded through the internal OSU Learning Innovation Grant. **Funded for 2015: $20,000.**

Francis, C. (Cal Poly), Barber, J.(Boise State), Giamellaro, M. (Co-PI). *Collaborative Research: RUI: Direct and indirect effects of natural sounds on the structure of vertebrate insectivore communities.* OSU role is broader impacts and RET support and evaluation. NSF. $1,131,999, 4 years. Invited for proposal following pre-proposal. Unfunded.

Giamellaro, M. (PI), Kudlac, B. (Culver School District), Gess-Newsome, J. (OSU), Dollar, N. (OSU). *The Cascades STEM Lab School Cooperative.* Oregon Department of Education STEM Lab School Grant. $475,964, 1.2 years. **Funded for 2014-15: $475,964**

Whitelaw, D (High Desert Museum), Giamellaro, M., Bermudez, L. (Bend Science Station), Wopschall, K. (High Desert Museum). *Central Oregon STEM Hub.* Oregon Department of Education STEM hub initiative. **Funded for 2014-15: $123,843.**

Barber, J.R. (Boise State), Francis, C. (Cal Poly), Giamellaro, M., Monz, C. (Utah State), Newman, P. (Penn State) *Soundscapes as coupled systems of biodiversity and human experience* (OSU role is broader impacts support and evaluation). NSF. $1,499,970, 4 years. **Funded at $600,000** but broader impacts (OSU Role) cut**.**

Giamellaro, M. (PI), Gess-Newsome, J. (OSU), Dollar, N. (OSU), Garber, S. (Culver Schools), Kudlac, B. (Culver). *Cultivating a STEM learning community in rural Oregon: A K-12/ university partnership*. Oregon University/School Partnership program supported by the U.S. Dept. of Education (Title II-a). **Funded for 2014-15: $240,000**.

Platt, C., Giamellaro, M. *Supporting 21st century teachers at OSU-Cascades.* Funded through the internal OSU Technology Resources Fund (TRF). **Funded for 2013: $24,075.**

Giamellaro, M. Internal OSU internationalization grant funded travel to Cyprus for ESERA conference and collaboration. **Funded for 2013: $2500**.

Miller, J.R. (U. Kansas), Hirmas, D.R. (U. Kansas), Slocum, T.R. (U. Kansas), Reuter, R.J. (OSU-Cascades), Giamellaro, M. (OSU-Cascades). *Collaborative research: SoilKit: Developing a virtual soil monolith database to enhance high school science education*. Grant proposal submitted to the NSF's Discovery Research K-12 program. $379,352, 3 years. 2012, unfunded.

Barber, J.R. (Boise State U.), Goldstein, J. (Colorado State U.), Newman, P. (Colorado State U.), Monz, C. (Utah State U.), Taff, D. (Colorado State U.), McClure, C. (Boise State U.), Giamellaro, M. (OSU-Cascades), Francis, C. (Nat'l Evolutionary Synthesis Center), Fristrup, K. (Nat'l Park Service), Chalfoun, A, (U. of Wyoming). *Reciprocal connections between humans, soundscapes and wildlife: Understanding the coupled impacts of reduced listening area.* Grant proposal submitted to the NSF's Dynamics of Coupled Human and Natural Systems (CNH) Program. $1,375,000, 4 years. 2012, unfunded.

Giamellaro, M., Jones, S., Starek, P., Herman, S., Scully, D. with Barber, J. *Impact of passive recreation on ecological communities as assessed through acoustic inventory.* Grant proposal submitted to Boulder County Parks and Open Space Small Grants Program. Project was proposed as a collaboration between an ecologist at Colorado State U. and a high school ecology class. 2009. Unfunded.

PROFESSIONAL AFFILIATIONS

AERA, American Educational Research Association

NARST, National Association for Research in Science Teaching (reviewer)

NSTA, National Science Teachers Association

ASTE, Association for Science Teacher Education

ESERA, European Science Education Research Association

AEE, Association for Experiential Education

AACTE, American Association of Colleges for Teacher Education

ORATE, Oregon Association of Teacher Educators

CERTIFICATIONS

Colorado Department of Education: Secondary Science Professional Teaching License (expires 2/28/2017).

SERVICE

Co-founder and Co-Director, Central Oregon STEM Hub (2014-present)
Designed, obtained IRB approval, and conducted survey for Deschutes Children's Forest (~2000 teacher recipients) 2014, 2015.
Consultation and Support: Black Butte School District: Curriculum design and structure (2014-present)
OSU-Cascades Campus Culture Committee (2014-15)
Consultation and Support: Culver School District conversion to STEM curriculum, (2013-present)
OSU SMILE (Science & Math Investigative Learning Experiences) campus facilitator (2015)
Search Committees: Elementary and Secondary Full Time Instructors in MAT Program (2014-15)
NARST conference proposal reviewer (2012, 2013, 2014)
Oregon STEM Summit (2014), invited representative.
Session presider/chair: AERA Annual Meeting (2014), NARST annual international conference (2014)
Oregon Department of Education, State Science Standards and Assessment Panel (2014-2016)
OSU Cascades, Peer Review of Teaching (PROT) committees (2013, 2014)
OSU Cascades new campus committees (technology, architecture, lab spaces)
AERA conference proposal reviewer (2013)
Search Committee: HR administrator (2013)
OSU-Cascades library technology committee (2012, 2013)
OSU STEM Center for Lifelong Learning, broader impacts invitational (2012)

AWARDS AND HONORS

2004**,** Outstanding Graduate Award, University of Colorado Denver

NON-ACADEMIC PUBLICATIONS

Giamellaro, M. (2005). Source to sea. *Paddler*. July/Aug.
Also associated lectures at various universities.

Giamellaro, M. (2001). Paddling to the center of Asia. *Paddler*. Sept./Oct.
Also associated lectures at various universities.