

## Elizabeth Xeng de los Santos

Michigan State University  
250B Erickson Hall | 620 Farm Lane  
East Lansing, MI 48824  
delossa9@msu.edu

1183C Arbor Drive  
East Lansing, MI 48823  
(410) 807-5472  
elizabeth.xeng.delossantos@gmail.com

### EDUCATION

**Ph.D. Curriculum, Instruction, and Teacher Education, Expected May 2017**

Michigan State University, East Lansing, MI  
Dissertation Committee Members: Charles W. (Andy) Anderson (Chair), Alicia Alonzo, Corey Drake, and Kenneth Frank

**M.S. Science Education, Concentration in Secondary Science (Chemistry), 2011**

California State University, Long Beach, CA

**B.A. Earth and Planetary Sciences, 2001**

The Johns Hopkins University, Baltimore, MD

### PUBLICATIONS

Penuel, W. R., de los Santos, E. X., Lin, Q., Marshall, S., Anderson, C. W., Frank, K. A. (In press). Building networks to support implementation of science curriculum in the Carbon TIME project. In S. Yoon (Ed.), *Networked by Design: Interventions for Teachers to Develop Social Capital*.

de los Santos, E. X., Stapleton, S., & Anderson, C. W. (Under review). Developing a learning progression framework for reasoning about sustainability.

Parker, J. M., de los Santos, E. X., & Anderson, C. W. (2015). Learning progressions and climate change. *American Biology Teacher*, 77(4), 232-238.

Parker, J. M., de los Santos, E. X., & Anderson, C. W. (2013). What learning progressions on carbon-transforming processes tell us about how students learn to use the laws of conservation of matter and energy. *Educacion Quimica*, 24(4), 399-406.

### CONFERENCE PAPERS AND PRESENTATIONS

de los Santos, E. X., & Anderson, C. W. (April 2016). Teachers' sensemaking about an innovative curriculum across the settings of professional development and classroom enactment. A poster presented at the annual conference of the *National Association for Research in Science Teaching (NARST)*. Baltimore, MD.

de los Santos, E. X., Schwarz, C. V., Braaten, M. L., Calabrese Barton, A., & Haverly, C. (April 2016). Unexpected moments: Beginning elementary teachers' noticing and responding to their students'

- science ideas. A paper presented at the annual conference of the *American Educational Research Association (AERA)*. Washington, DC.
- Haverly, C., Calabrese Barton, A., Schwarz, C. V., Braaten, M. L., & de los Santos, E. X. (April 2016). Unanticipated opportunities for student sense-making when beginning teachers stall for time in elementary science discussions. A paper presented at the annual conference of the *American Educational Research Association (AERA)*. Washington, DC.
- de los Santos, E. X., & Smith, D. R. (April 2015). Using a learning progression as a tool to inform a physics teacher's practice. A paper presented at the annual conference of the *National Association for Research in Science Teaching (NARST)*. Chicago, IL.
- de los Santos, E. X., Stapleton, S., Freed, A., & Anderson, C. W. (April 2015). Sustainability as decision-making. A paper presented at the annual conference of the *National Association for Research in Science Teaching (NARST)*. Chicago, IL.
- Miller, H., de los Santos, E. X., & Anderson, C. W. (April 2015). Climate change in the community: Reflections from undergraduates in a sustainability semester. A paper presented at the annual conference of the *National Association for Research in Science Teaching (NARST)*. Chicago, IL.
- Alonzo, A. C., de los Santos, E. X., & Kobrin, J. (April 2014). Teachers' interpretations of score reports based upon ordered-multiple choice items linked to a learning progression. A presentation in the symposium, Diagnostic assessment: Recent advances from psychometric modeling to classroom applications. Annual conference of the *American Educational Research Association (AERA)*. Philadelphia, PA.
- de los Santos, E. X., Stapleton, S., & Anderson, C. W. (April 2014). Students' ideas about sustainability for agricultural and fuel production systems. A paper presented at the annual conference of the *National Association for Research in Science Teaching (NARST)*. Pittsburgh, PA.
- Heck, T. J., Merritt, J., & de los Santos, E. X. (April 2014). Developing a mentor model for cross-grade genetics curricula. A paper presented at the annual conference of the *National Association for Research in Science Teaching (NARST)*. Pittsburgh, PA.
- de los Santos, E. X., Gomez Zwiép, S., & Straits, W. (Jan. 2012). Science talk: Students' patterns of interaction in a chemistry classroom. A poster presented at the annual meeting of the *Association for Science Teacher Education (ASTE)*. Clearwater Beach, FL.
- de los Santos, E. X., & Galvan, T. (March 2011). Ocean acidification: A 5E lesson that transforms knowledge into action. A presentation at the annual meeting of the *National Science Teachers Association (NSTA)*. San Francisco, CA.

## RESEARCH EXPERIENCES

### Current Research Projects

May 2015-present      Carbon TIME, Environmental Science Literacy (NSF), Charles W. Anderson.

### Past Research Projects

Aug 2012-May 2015      Great Lakes Bioenergy Research Center (DOE), POSOH: Place-Based Opportunities for Sustainable Outcome and High Hopes (USDA).

- Aug 2014–Aug 2015      Noticing and Responding to Students’ Scientific Sensemaking (NSF), Christina Schwarz.
- May 2013–May 2014      STEMGenetics (DRK-12), Michelle Williams.
- Jan 2013 –Aug 2013      Teachers’ Interpretations and Projected Use of Student Score Reports Based upon Ordered Multiple-Choice Items (Pearson), Alicia Alonzo.

## TEACHING EXPERIENCES

### Graduate-Level Courses

- Spring 2016      TE804 Reflection and Inquiry in Teaching Practice II
- Summer 2015      TE861C Action Research in K-12 Science and Mathematics Classrooms (online)

### Undergraduate-Level Courses

- Fall 2015      TE403 Teaching of Science to Diverse Learners (Elementary Science)
- Fall 2012      TE401 Teaching of Subject Matter to Diverse Learners—Elementary Science

### K-12 Teaching Experiences

- 2011—2012      Santa Ana Unified School District, CA, McFadden Intermediate School  
Grade 6 Earth Science
- 2010—2011      Tustin Unified School District, CA, Foothill High School  
Grades 10 and 11 Chemistry Honors
- 2010 Jan-June      Orange Unified School District, CA, Canyon High School  
Grade 9 Earth Science
- 2008—2009      Long Beach Unified School District, CA, Jefferson Middle School  
Grade 8 Physical Science
- 2006—2008      Howard County Public Schools, MD, Marriotts Ridge High School  
Grade 9 Earth Science and Chemistry  
Facilitated professional development for staff in Cultural Proficiency
- 2001—2006      Howard County Public Schools, MD, Wilde Lake High School  
Grade 9 Earth Science and Astronomy  
Director of the Maryland Summer Center for Space Science at the Johns Hopkins University Applied Physics Lab (Summers of 2005 & 2006)

### Teacher Certification

- California Clear Single Subject Credential—Geosciences and Chemistry (Specialized)(Examination)
- California Clear Crosscultural, Language, and Academic Development Certificate
- Maryland Standard Professional Certificate II—Earth Science Grades 7—12 (R6)

## AWARDS AND HONORS

- 2012-2017      Dean’s Scholar Award, College of Education, Michigan State University.
- 2015 July      NARST Sandra K. Abell Institute for Doctoral Students, Boulder, CO.
- 2015 April      AERA Division K Seminar for Advanced Graduate Students: Teaching for Equity, Action, and Change in Higher Education (T.E.A.C.H.), Chicago, IL.
- 2012-2013      Academic Achievement Graduate Assistantship Award, The Graduate School, Michigan State University.
- 2010-2011      Departmental Graduate Student Honors Award, Department of Science Education, California State University Long Beach.

