

Jennifer Evarts Lineback, Ph.D.

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Point Loma Nazarene University
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Education:

- 2012 Ph.D. Mathematics and Science Education
University of California, San Diego & San Diego State University, San Diego, CA
Thesis title: *Mrs. Miller's evolution in teaching science as inquiry: A case study of teacher change*
- 1997 M.S. Zoology
Miami University, Oxford, OH
Thesis title: *Spatial and temporal variation in nitrogen and phosphorus release from sediments in a eutrophic reservoir*
- 1995 B.S. Zoology
B.A. Chemistry
Miami University, Oxford, OH

Work Experience:

- Aug. 2019 - present Professor, School of Education & Biology Department
Program Chair, Cross-Disciplinary Studies
Point Loma Nazarene University, San Diego, CA
- Aug. 2015 - Aug. 2019 Associate Professor, School of Education & Biology Department
Point Loma Nazarene University, San Diego, CA
- Jan. 2015 – July 2015 Adjunct Professor, College of Education
San Diego State University, San Diego, CA
- Jan. 2012 - Aug. 2015 Part-time Faculty, School of Education & Biology Department
Point Loma Nazarene University, San Diego, CA
- Aug. 2005 - July 2007 High School Science Teacher
International School of Port of Spain, Trinidad & Tobago
- Aug. 2001 - July 2005 High School Science Teacher
Landon School, Bethesda, MD
- Aug. 1999 – July 2001 Adjunct Professor, Science Department
Miami-Dade Community College, Miami, FL

Aug. 1998 – July 2001 Middle/High School Science Teacher
Palmer Trinity School, Miami, FL

Aug. 1997 – July 1998 High School Science Intern
Miss Porter's School, Farmington, CT

Classes taught:

Undergraduate: BIO 3045 - Genetics (Biology), BIO 4063 - Secondary Science Methods (Biology), EDU 3024 - Elementary Mathematics Methods (Education)

Graduate: BIO 6011 - Learning in Science (Biology), EDU 6012 - Elementary Mathematics Methods, GED 6089 - Research Design (Education)

Publications

Lineback, J. E. (2021). Teaching students how to code qualitative data: An experiential activity sequence for training novice educational researchers. In W. B. James, C. Cobanoglu, & M. Cavusoglu (Eds.), *Advances in global education and research* (Vol. 4, pp. 1–11). USF M3 Publishing. <https://www.doi.org/10.5038/9781955833042>

Lineback, J. E. & Jansma, A. L. (2019). PyMOL as an instructional tool to represent and manipulate the myoglobin/hemoglobin protein system. *Journal of Chemical Education*, 19(11): 2540-2544.

Dorrell, M. I. & **Lineback, J.E.** (2019). Using shapes and codes to teach the central dogma of molecular biology: A hands-on inquiry-based activity. *The American Biology Teacher*, 81, 202-209.

Lineback, J. E. (2015a). The redirection: An indicator of how teachers respond to student thinking. *Journal of the Learning Sciences*. 24(3): 419-460.

Lineback, J. E. (2015b). Methods to assess teacher responsiveness *in situ*. In A. Robertson, R. Scherr, and D. Hammer, (Eds.), *Responsive Teaching in Science and Mathematics* (pp. 203-226). New York: Routledge.

Maskiewicz, A. C. & **Lineback, J. E.** (2013). Misconceptions are so 'yesterday'! *CBE – Journal of Life Science Education*, 12, 352-356.

Fisher, K. M., Williams, K. S., & **Lineback, J. E.** (2011). Osmosis and diffusion conceptual assessment. *CBE – Journal of Life Science Education*, 10, 418-429.

Lineback, J. E. & Goldberg, F. (2010). *Using changes in framing to account for differences in a teacher's classroom behavior*. In K. Gomez, L. Lyons, & J. Radinsky (Eds.),

Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010) - Volume 1, Full Papers (pp. 145-152). International Society of the Learning Sciences: Chicago IL. [Also under Conference Presentations]

Nowlin, W. H., **Evarts, J. L.** & Vanni, M. (2005). Release rates and potential fates of nitrogen and phosphorus from sediments in a eutrophic reservoir. *Freshwater Biology*, 50, 301-322.

Evarts, J. L., Rasweiler, J. J., Behringer, R. R., Hennighausen, L. & Robinson, G.W. (2004). A morphological and immunohistochemical comparison of mammary tissues from the short-tailed fruit bat (*Carollia perspicillata*) and the mouse. *Biology of Reproduction*, 70, 1573–1579.

Conference Presentations

Lineback, J.E. (April 2022). *The impact of participating in reciprocal peer review on students' writing*. Round table presented at the American Education Research Association international meeting, San Diego, CA.

Lineback, J. E. (June 2021). *Teaching students how to code qualitative data: An experiential activity sequence for training novice educational researchers*. Paper presented at the Global Conference on Education and Research, held virtually.

Lineback, J.E. (May 2019). *Peer review as a vehicle to develop student writing*. Poster presented at: MSED 25th year reunion – San Diego, CA

Lineback, J.E. (October 2018). *Mutagenesis Part II: Design your own experiment*. Round table presented at American Society of Human Genetics – Undergraduate workshop, San Diego, CA.

Lineback, J.E. (April 2018). *Improving graduate student literature reviews through writing workshop-embedded peer review*. Round table presented at the American Education Research Association international meeting, New York, NY.

Lineback, J.E. (May 2017). *The effectiveness of experiential coding activities on novice qualitative researchers*. Paper presented at the American Education Research Association international meeting, San Antonio, TX.

Williams, K.S., Fisher, K.M., & Lineback, J.E. (August 2012) *BioHUB: An internet HUB for the Conceptual Assessment in Biology (CAB) community*. Paper presented at the Ninety-seventh Annual Meeting of the Ecological Society of America, Portland, OR.

Goldberg, F., Bendall, S., Hammer, D., McKean, M., Coffey, J., Maskiewicz, A., Lineback, J., & Jabar, L. (June 2012). *Browser-based resource for responsive teaching in science: A*

product of the Learning Progressions in Scientific Inquiry Project. Poster presented at: DRK-12 PI meeting – Washington, D.C.

Lineback, J.E. (January 2012). *Characterizing “redirections”: A method to describe teacher change.* Poster presented at: A Tribute to the Career of Dr. Judith Sowder: Linking Research and Practice in Mathematics Education – San Diego, C.A.

Lineback, J.E. & Lardy, C. (March 2011). *Using authentic activities in the classroom.* Paper presented at the National Science Teachers of America National Conference on Science Education, San Francisco, CA.

Coffey, J.E., Maskiewicz, A.C., Hammer, D., Jaber, L., Finkelstein, C., Radoff, J., Bendall, S., Goldberg, F., & Lineback, J. (December 2010). *The Dynamics of Progress: A case study of elementary teachers’ engagement in science.* Poster presented at: DRK-12 PI meeting - Washington, D.C.

Lineback, J. E. & Goldberg, F. (June 2010). *Using changes in framing to account for differences in a teacher’s classroom behavior.* Paper presented at the Ninth International Conference of the Learning Sciences, Chicago, IL.

Goldberg, F., Bendall, S., Winters, V. Lineback, J.E., Hammer, D., Coffey, J., Sikorski, T.R., Cunningham, J.M., Finkelstein, C., Radoff,, J. & Maskiewicz, A. (November 2009). *Learning Progressions in Scientific Inquiry.* Poster presented at: DRK-12 PI meeting – Washington, D.C.

Williams, K.S., Fisher, K.M., Lineback, J. (July 2009). *Learning how students think about science: Developing diagnostic questions.* Poster presented at: Transforming Undergraduate Education in Biology: Mobilizing the Community for Change Conference – Washington, D.C.

Williams, K.S., Fisher, K.M., Anderson, D.L., Smith, M.U., & Lineback, J.E. (January 2008). Using diagnostic test items to assess conceptual understanding of basic biology ideas: A plan for programmatic assessment. Paper presented at the Second Conceptual Assessment in Biology (CAB II) meeting, Asilomar, CA.

Barnett, T., Botti, J., & Evarts, J. L. (November 2004). Ethics in the classroom. Presentation at the Association of Independent Maryland Schools (AIMS) Annual Fall Conference, Baltimore, MD.

Evarts, J. L. & Vanni, M. J. (May 1997). Sediment release of phosphorus in Acton Lake. Paper presented at the Ohio Lake Management Society’s first annual Ohio Limnology Conference, Delaware, OH.

Evarts, J. L. (November 1996). Nutrient release from sediments to open waters in Acton Lake. Paper presented at the Ohio River Basin Consortium for Research and Education's Twelfth Annual Scientific Symposium, Oxford, OH.

Grants, Fellowships, and Awards

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| 2022 | PLNU's Center for Teaching and Learning (CTL) Writing Retreat recipient |
| 2021 | PLNU's Center for Teaching and Learning (CTL) Writing Retreat recipient |
| 2020 | Excellence in Teaching Award, PLNU |
| 2018 | PLNU's Center for Teaching and Learning (CTL) Writing Retreat recipient |
| 2018 | RASP grant recipient (PLNU) to fund attendance at AERA conference in New York City |
| 2017 | SOE Dean's grant recipient (PLNU) to fund attendance at AERA conference in San Antonio, TX |
| 2016-2017 | IDEA Impact Grant recipient (Co-Pi with Jo Clemmons, Ph.D.) to implement and research progressive instructional pedagogies with fellow science faculty |
| 2007 | San Diego State University College of Sciences Fellowship to assist with biology education research with Drs. Kathy Williams and Kathleen Fisher |
| 2002 | HHMI Teacher Fellowship to assist with molecular biology research (NIDDK) at the National Institutes of Health, summer 2002 |
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Invited Talks

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| 2016 | Science/Faith Alliance (San Diego, CA): Gave talk and led discussion with local science educators about teaching responsively in a science classroom, October 2016 |
| 2014 | Mission Hills, United Church of Christ (San Diego, CA): Gave talk and led discussion entitled " <i>Reconciling Faith and Biological Evolution</i> " with colleague April Cordero Maskiewicz (PLNU), June 2014 |
| 2014 | University City, United Church of Christ (San Diego, CA): Gave talk and led discussion entitled " <i>Reconciling Faith and Biological Evolution</i> " with colleague April Cordero Maskiewicz (PLNU), April 2014 |

2011 Johnson STEM Magnet School (San Diego, CA): Shared thoughts about being a scientist and a science educator with second graders for Career Day, June 2011.

External Service

Dissertation Committee member: Lauren Stewart, Mathematics and Science Doctoral Program, offered jointly through San Diego State University & University of California, San Diego. *Dissertation defense, May 2021.*

California Commission on Teacher Credentialing (CTC) program reviewer [BIR] for institutional preliminary alignment (November 2017, November 2018)

Reviewer for scholarly journals: *BioScience*, *International Journal of STEM Education*, *Journal of Research in Mathematics Education [JRME]*, *Teacher Education Quarterly (TEQ)*

Honors/Master's projects directed:

- 2021 Ferraras, G. The sound of science music: Utilizing music to teach science. Undergraduate honors project, Point Loma Nazarene University, San Diego, AY 2021-2022.

- 2017 Andrade, J. Promoting the implementation of high school parent educational workshops among the Hispanic community. Master's thesis, Point Loma Nazarene University, San Diego, CA, December 2017.

- 2017 Christiansen, L. Competition in middle school physical education. Master's thesis, Point Loma Nazarene University, San Diego, CA, August 2017.

- 2017 Rodgers, E. Teachers' attitudes towards visual arts assessment: A study examining the state of current visual arts assessment in high schools. Master's thesis, Point Loma Nazarene University, San Diego, CA, August 2017.

- 2017 Sanders, R. The effect of drawing (as a writing tool to construct meaning) on the reading comprehension of third graders. Master's thesis, Point Loma Nazarene University, San Diego, CA, August 2017.

- 2017 Coletti, M. Implementation of differentiation in inclusive classrooms. Master's thesis, Point Loma Nazarene University, San Diego, CA, March 2017.

- 2016 Malapit, K. Effects of a self-monitoring intervention on homework completion and accuracy. Master's thesis, Point Loma Nazarene University, San Diego, CA, December 2016.

- 2016 Booth, C. Student perspectives of motivation in math review. Master's thesis, Point Loma Nazarene University, San Diego, CA, August 2016.
- 2016 Clabaugh, C. Traditional vs. digital literacy methods and their effect on early childhood literacy development. Master's thesis, Point Loma Nazarene University, San Diego, CA, August 2016.
- 2016 Lopez, R. Early childhood education programs' correlation to student behavior. Master's thesis, Point Loma Nazarene University, San Diego, CA, May 2016.
- 2016 Vallo, V. The effects of flashcard drilling on sight word recognition in kindergarten. Master's thesis, Point Loma Nazarene University, San Diego, CA, May 2016.
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Professional organizations

- American Educational Research Association (AERA)
- American Association of Colleges for Teacher Education (AACTE)
- Board of Institutional Review (BIR), State of California
- National Association of Biology Teachers (NABT)
- National Council of Teachers of Mathematics (NCTM)
- National Science Teachers of America (NSTA)