

Amy E. Ryken

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EDUCATION

Ph.D.	University of California, Berkeley, CA Graduate School of Education Policy, Organization, Measurement, Evaluation Research	1997-2001
M.P.H.	University of California, Berkeley, CA School of Public Health Health Education	1988-1990
B.A.	Mills College, Oakland, CA Biochemistry Professional Clear Teaching Credential Chemistry/Biology	1981-1985

EXPERIENCE

Associate Professor 2001-present

University of Puget Sound, Tacoma, WA

- Teach courses and advise students in a Master of Arts in Teaching program
Elementary Curriculum and Instruction in Mathematics and Science
Secondary Endorsement Seminar in Mathematics and Science
Multiple Perspectives on Classroom Teaching and Learning
Seminar in Educational Experience, Context and Meaning
- Facilitate curriculum and program development for the Environmental Studies minor
- Chair W.W. Seymour Botanical Conservatory Education Committee

Program Evaluator 2006-2009

Museum of Glass, Tacoma, WA

- Evaluate the implementation and assessment of the Science of Art Program

Education Director 1994-2001

Berkeley Biotechnology Education, Inc., Berkeley, CA

- Supervised 80 high school and community college students annually in laboratory placements
- Trained science teachers through consultation, site visits and laboratory curriculum development
- Co-wrote grants that funded operating budget of \$500,000 per year
- Planned and facilitated meetings for students, teachers, industry personnel, and parents
- Implemented student support services including tutoring, youth development activities, crisis intervention, and scholarships

EXPERIENCE cont.

Co-Principal Investigator & Instructor 1996-2001
Laney Community College, Oakland, CA

- Co-wrote \$750,000 National Science Foundation Advanced Technological Education grant to develop a process laboratory and articulate curriculum with California State University, Hayward
- Taught biotechnology cooperative education and study skills for the sciences
- Trained college science instructors through consultation, site visits and laboratory curriculum development
- Facilitated meetings for instructors, college administrators and industry representatives
- Assisted students with the job search process, including contacting employers, resume development and interviewing skills

Science Teacher 1990-1994, 1985-1988
Berkeley High School, Berkeley, CA

- Taught chemistry and biology courses
- Developed, wrote and taught integrated science courses
- Worked as Teacher Intern (Assistant Process Development Scientist) at Bayer Corporation
- Trained chemistry teachers through workshops, meetings and one-on-one consultation
- Wrote grant for program, and supervised trip, to take 50 9th graders to the Yosemite National Forest to plant trees for four days
- Facilitated English/history/science core teacher planning group

Health Educator 1989-1990
Richmond Unified School District, Health Education Office

- Contra Costa County Health Department, Youth Violence Prevention Project**
- Organized community groups to develop a comprehensive health program at three elementary schools
 - Developed violence prevention curriculum materials for high school students

Student Teacher 1984-1985
Berkeley High School, Berkeley, CA

- Taught chemistry to 11th and 12th graders
- Wildwood Elementary School, Piedmont, CA**
- Designed and taught environmental science program for 3rd graders
- Piedmont Middle School, Piedmont, CA**
- Taught human physiology to 7th graders
- Montera Junior High School, Oakland, CA**
- Tutored 7th through 9th grade math students in algebra

PUBLICATIONS

- Ryken, A. E. (2009). Multiple representations as sites for teacher reflection about mathematics learning. *Journal of Mathematics Teacher Education*.
- Ryken, A. E. (2009). Interpreting nature: Connecting to visitor thinking. *Roots: Botanic Gardens Conservation International Education Review*, 6 (1), 9-13.
- Ryken, A. E., Bowers, L.F., Tudor, M., & Koehler, G. (2008). Cougars and the community. *The Science Teacher*, 75 (4), 36-40.
- Ryken, A. E., Otto, P., Pritchard, K., & Owens, K. (2007). *Field investigations: Using outdoor environments to foster student learning of scientific processes*. Olympia, WA: Pacific Education Institute.
- Windschitl, M., Dvornich, K., Ryken, A. E., Tudor, M., & Koehler, G. (2007). A comparative model of field investigations: Aligning school science inquiry with the practices of contemporary science. *School Science and Mathematics*, 1 (107), 367-390.
- Ryken, A. E. (2006). “Goin’ somewhere”: How career technical education programs support and constrain urban youths’ career decision-making. *Career and Technical Education Research*, 31 (1), 49-71.
- Hamel, F. L., Ryken, A. E., Kokich, M., Lay, O., & King, J. (2006). Intentional partnerships: Generating learning within and across institutional contexts. *Association of Independent Liberal Arts Colleges for Teacher Education (AILACTE) Journal*, 3 (1), 41-59.
- Ryken, A. E. (2006). Multiple choices, multiple chances: Fostering re-entry pathways for first generation college students. *Community College Journal of Research and Practice*, 30 (8), 593-607.
- Ryken, A. E. & Senn, H. A. (2005). *Sculpture Tour*. Tacoma, WA: Metro Parks W.W. Seymour Botanical Conservatory. <http://www.metroparkstacoma.org/page.php?id=562>
- Ryken, A. E. (2004). The holding power of internships: Analyzing retention in a school-to-career program. *The Community College Enterprise: A Journal of Research and Practice*, 10 (2), 37-46.
- Beck, T. A., Kline C., Ryken, A. E., & Hamel, F. L. (2004). Mirror accountability: Using data to see ourselves and to show ourselves to others. *Association of Independent Liberal Arts Colleges for Teacher Education (AILACTE) Journal*, 1 (1), 69-89.
- Ryken, A. E. (2004). A spider and a fly in a web: Seeing myself in the details of praxis. *Reflective Practice*, 5 (1), 111-123.

PUBLICATIONS cont.

- Ryken, A. E. (2001). *Motivational effects of using occupations as themes for instruction*. National Academy of Sciences National Research Council Committee for Increasing High School Students' Engagement and Motivation to Learn. Commissioned paper.
- Ryken, A. E. (2001). *Content, pedagogy, results: A thrice-told tale of integrating work-based and school-based learning*. Unpublished doctoral dissertation, University of California, Berkeley. Committee Members: W. Norton Grubb (Chair), David Stern, Meredith Minkler.
- Ryken, A. & Lee, J. (2001). *Biotechnology education program operations manual*. Berkeley, CA: Berkeley Biotechnology Education, Inc.
- Alscher, P., & Ryken, A. (2000). *Inorganic chemistry laboratory manual*. Oakland, CA: Laney College Bioscience Career Institute.
- Hubbard, D. W., & Ryken, A. (1994). *Ninth grade integrated science curriculum units*. Berkeley, CA: Berkeley High School.

BOOK REVIEWS & ARTICLES

Ryken, A.E. (2007, Spring). Educator open house brings teachers to the Conservatory. *Botanical Prints*, 11(1), 1.

Edgoose, J., & Ryken, A. (2007, February 23). Exploring the limits of disciplinary thinking. *The Trail*, 7.

Ryken, A.E. (2005, Summer). Take a sculpture tour at the Conservatory. *Botanical Prints*, 9, 1.

Ryken, A.E. (2005, Spring). Three self-guided tours now available. *Botanical Prints*, 9, pp. 1, 3.

Ryken, A. E. (2004). [Review of the book *Reading work: Literacies in the new workplace*]. *Education Review*. <http://edrev.asu.edu/reviews/rev326.htm>

Ryken, A.E. (2004, September). The education committee. *Botanical Prints*, 8(2), pp.1, 4.

Ryken, A. E. (2004). [Review of the book *The science education of American girls*]. *Education Review*. <http://edrev.asu.edu/reviews/rev244.htm>.

Ryken, A. E. (2003). [Review of the book *A vision for science education: Responding to the work of Peter Fensham*]. *Education Review*. <http://edrev.asu.edu/reviews/rev242.htm>.

Ryken, A. (2003). [Review of the book *Living things: Science works for kids series*]. *Science and Children*, 41(1), 65. <http://www.nsta.org/recommends/product.asp?id=13461>.

Ryken, A. (2003). [Review of the book *Nature of life: Readings in biology*]. *The Science Teacher*, 70(3), 96-97. <http://www.nsta.org/recommends/product.asp?id=13699>.

PROFESSIONAL PRESENTATIONS

Kline, C. & Ryken, A. E. *Integrated inquiry units: Preparing pre-service teachers for assessment-focused unit design and teaching.*

6th Annual OSPI/Higher Education Assessment Conference
Seattle, WA, April 16, 2009

Woodward, J., & Ryken, A. E. *What matters? Translating college learning into public school teaching.*

Thompson Hall Science and Mathematics Seminar, University of Puget Sound
Tacoma, WA, April 2, 2009

Ryken, A. E. *Knowledge and wonder: Learning in botanic gardens.*

Daedalus Society, University of Puget Sound
Tacoma, WA, February 23, 2009

Ryken, A.E., Yuckert, C., & Schmutz, M. *Science of art: Glass in classrooms and at the Museum of Glass.*

National Science Teachers Association (NSTA) Western Regional Conference
Portland, OR, November 21, 2008

Ryken, A.E., & Otto, P. *Field Investigations: Taking inquiry outside.*

National Science Teachers Association (NSTA) Western Regional Conference
Portland, OR, November 20, 2008

Ryken, A. E., & Otto, P. *Field investigations: Taking science inquiry outside.*

IslandWood's 5th Annual Teacher Education Conference
Bainbridge, WA, July 31-August 2, 2008

Ryken, A. E. *Knowledge and wonder: What counts as evidence of learning?*

Symposium: The Role of Botanic Gardens in the 21st Century
Linnean Society of London and Gardens for Learning
London, May 15, 2008

Ryken, A. E. *Recreating the world: Botanical conservatories as science education sites.*

Royal Botanic Gardens, Kew
London, May 9, 2008

Ryken, A. E. *Getting kids to do real science.*

Puget Sound Association of Phi Beta Kappa
Tacoma, WA, November 3, 2007

PROFESSIONAL PRESENTATIONS cont.

Ryken, A. E. & Hamel, F. *Literacy in action: Understanding how students analyze visual representations.*

Washington Science Teachers Association (WSTA) 2007 Conference
Tacoma, WA, October 12, 2007

Ryken, A. E. *Unit planning frameworks.*

Teachers of Teachers of Science (TOTOS) Integration Workshop
Tacoma, WA, October 11, 2007

Woodward, J. & Ryken, A. E. *Understanding calculus or becoming quantitatively literate?*

Seminar Series in Mathematics and Computer Science, University of Puget Sound
Tacoma, WA, April 18, 2007

Ryken, A. E. *Field investigation as inquiry: Comparing descriptive, comparative, and correlative studies.*

55th National Science Teacher Association (NSTA) National Conference on Science Education
St. Louis, MO, March 31, 2007

Ryken, A. E., Edgoose, J., Estrada, O., & Livingston, G. *The consequences of disciplinary thinking.*

Gender Studies Panel Discussion, University of Puget Sound
Tacoma, WA, March 22, 2007

Ryken, A. E., Kokich, M., & McCullough, J. *Intentional partnerships: Supporting the intersection of school and university voices in teacher education.*

Northwest Association of Teacher Educators (NWATE) 2007 Conference.
Seattle, WA, March 16, 2007

Hamel, F., & Ryken, A. E. *Intentional partnerships as an alternative to professional development schools: Programmatic school-university collaboration for the small teacher education program.*

59th American Association of Colleges of Teacher Education (AACTE) Annual Meeting
New York, NY, February 25, 2007

Ryken, A. E. *Reflect, renew, reinvent: Making mathematics teaching visible through multiple representations.*

Annual Meeting of the American Educational Research Association (AERA)
San Francisco, CA, April 10, 2006

PROFESSIONAL PRESENTATIONS cont.

Hamel, F. L., Ryken, A. E., Kokich, M., Lay, O., & King, J. *Intentional partnerships: Generating learning within and across institutional contexts.*
Teacher Development: The Key to Education in the 21st Century, Simon Fraser University
Vancouver, BC, Canada, March 4, 2006

Kline, C., Ryken, A. E., Beck, T., & Hamel, F. *Artifacts as windows: Looking together at student thinking.*
Washington Educational Research Association (WERA) & Office of the Superintendent of
Public Instruction (OSPI) 20th Annual Washington State Assessment Conference
Seattle, WA, December 2, 2004

Baxter, M., Matthews, L., Schmutz, M., Sternadel, L. & Ryken, A. E. *Thinking like an assessor: New teachers facing assessment dilemmas.*
National Science Teachers Association (NSTA) Western Regional Conference
Seattle, WA, November 18, 2004

Ryken, A. E. *Keynote address.*
Lavender Graduates' Celebration, University of Puget Sound
Tacoma, WA, May 14, 2004

Ryken, A. E. "Goin' somewhere now:" *How structured academic and vocational programs support and constrain career decision-making.*
Annual Meeting of the American Educational Research Association (AERA)
San Diego, CA, April 15, 2004

Ryken, A. E., Beck, T., Kline, C., & Hamel, F. *Developing a shared culture: Creating a collective "we" through self-study.*
Annual Meeting of the American Educational Research Association (AERA)
San Diego, CA, April 14, 2004

Hamel, F., Kline, C., Ryken, A. E., & Beck, T. *Progressive ways to present knowledge? Learning from tensions in pre-service teachers' thinking about reform practice.*
Annual Meeting of the American Educational Research Association (AERA)
San Diego, CA, April 13, 2004

Beck, T. A., Kline, C., Ryken, A. E., & Hamel, F. L. *Mirror accountability: Using data to see ourselves and to show ourselves to others.*
Annual Meeting of the Association of Independent Liberal Arts Colleges of Teacher Education (AILACTE)
Chicago, IL, February 7, 2004

PROFESSIONAL PRESENTATIONS cont.

Ryken, A. E. Discussant. *Documenting and assessing effective teaching practices in math and science.*

Annual Meeting of the American Educational Research Association (AERA)
Chicago, IL, April 25, 2003

Ryken, A. E. *Scientific skill building: Linking high school, college, and work.*

Annual Meeting of the American Educational Research Association (AERA)
Chicago, IL, April 23, 2003

Ryken, A. E. *Scientific labor market diversity: Education and career path options.*

National Science Teachers Association Western Regional Conference (NSTA)
Portland, OR, November 14, 2002

Ryken, A. E. *Envisioning a future in science: Embarking on the biotechnology educational and career pathway.*

Center for the Studies in Higher Education, University of California, Berkeley
Careers of Women in Science: Issues of Power and Control Conference
Berkeley, CA, May 13, 2001

Ryken, A. E. *What does success look like?: Analyzing persistence and attrition in a model biotechnology school-to-work program.*

Annual Meeting of the American Educational Research Association (AERA)
Seattle, WA, April 13, 2001

Ryken, A. E. *Community college students' perspectives on schooling and scientific work.*

Annual Meeting of the American Educational Research Association (AERA)
Seattle, WA, April 11, 2001

Ryken, A. E. Invited Participant.

Annual PI Meeting of the NSF Advanced Technological Education Grantees
Washington, DC, October 26-28, 2000

Ryken, A. E. *Overlaps and disjunctures: Integrating work-based and school-based learning.*

Center for Research on Education and Work, University of California, Berkeley
Career Academies Seminar
Berkeley, CA, October 5, 2000

Ryken, A. E. Panel Moderator. *Bioscience industry overview and career pathways.*

Diablo Valley College Symposium: Cutting-Edge Science, Cutting-Edge Curriculum
Walnut Creek, CA, April 14, 2000

PROFESSIONAL PRESENTATIONS cont.

Ryken, A. E. Invited Participant.

Learning Network of the Community Network for Youth Development (CNYD)
San Francisco, CA, October 1999 – January 2000

Ryken, A. E. Invited Participant.

Annual PI Meeting of the NSF Advanced Technological Education (ATE) Grantees
Washington, DC, October 21-23, 1999

Ryken, A. E., Denoga, R., Jamison, A., & Kirkland, D. *School and industry partnerships in the sciences.*

Annual Meeting of the California Science Teachers Association
San Jose, CA, October 10, 1998

Ryken, A. E. Invited Participant.

Educational Development Center Bioscience Implementation Guidelines Workshop
Newton, MA, May 30-31, 1997

Ryken, A. E. Invited Participant.

National Center for Research in Vocational Education
Beyond 8th Grade: A Workshop on Mathematical and Occupational Skill Standards
Harriman, NY, November 7– 9, 1997

Long, E., & Ryken, A. E. *A model industry/school collaboration: Bio-tech job training.*

Annual Meeting of the Association of California Community College Administrators (ACCCA)
San Francisco, CA, March 13, 1997

van Zee, E. H., Hubbard, D., & Ryken, A. E. *Collaborative research in innovative contexts for science learning and teaching: Developing a two-year integrated science course in an urban high school.*

International Conference for Teacher Research
University of California, Davis, CA, April 15, 1995

Ryken, A. E. *Measuring CO₂ in air, breath and car exhaust.*

Bay Area Mathematics Project and Bay Area Science Project
Environmental Mathematics and Science Seminar
Albany, CA, April 1, 1995

Ryken, A. E. Invited Participant.

Lawrence Hall of Science, University of California, Berkeley
Global Systems Science Summer Institute for Teacher Leaders
Berkeley, CA, July 7-27, 1993

PROFESSIONAL PRESENTATIONS cont.

Ryken, A. E. Conference Organizer. *Chemistry and food*.
California Association of Chemistry Teachers (Northern Section) Annual Meeting
San Luis Obispo, CA, February 18-20, 1989

STUDENTS' PUBLICATIONS & PROFESSIONAL PRESENTATIONS

Kim, M., Murray, J., & Stockdale, Z. *Poster session: Thinking like an assessor*.
Washington Science Teachers Association (WSTA) 2007 Conference
Tacoma, WA, October 13, 2007

McCullough, J., Kokich, M., & Ryken, A. E. *Intentional partnerships: Supporting the intersection of school and university voices in teacher education*.
Northwest Association of Teacher Educators (NWATE) 2007 Conference.
Seattle, WA, March 16, 2007

Archer, H., Bennett, A., Lindberg, G., Matson, L., & Shelton, C. *Student Poster Session*.
Race and Pedagogy Conference, University of Puget Sound
Tacoma, WA, September 15, 2006

Baxter, M., Matthews, L., Schmutz, M., Sternadel, L. & Ryken, A. E. *Thinking like an assessor: New teachers facing assessment dilemmas*.
National Science Teachers Association Western Regional Conference (NSTA)
Seattle, WA, November 18, 2004

Sternadel, L. (2004). Inquiry and developing interpretations from evidence. *The Science Teacher*, 71(4), 38-41.

MEMBERSHIPS AND OFFICES

University of Puget Sound

Environmental Policy and Decision Making Interdisciplinary Minor Executive Committee (Curriculum Chair) Advisory Board	2007-present 2003-2007
Slater Museum of Natural History Exhibits Advisory Committee Museum Review Committee	2008-present 2004
Phi Beta Kappa, Delta of Washington President Vice President Webmaster	2007-2009 2005-2007 2005-present
Faculty Marshal	2009-present
LGBT Leadership Scholarship Committee	2003-present
Faculty Senate	2006-2009
Prelude Committee	2006-2009
Orientation Planning Committee	2006-2009
Health Professions Advising Committee	2003-2007
Gender Studies Advisory Board	2002-2007
University Enrichment Committee Chair Secretary	2002-2005 2004-2005 2003-2004

MEMBERSHIPS AND OFFICES cont.

Professional Organizations

Botanic Gardens Conservation International (BGCI)	2008-present
American Educational Research Association (AERA)	1997-present
Annual Meeting Proposal Reviewer	2002-present
National Council of Teachers of Mathematics (NCTM)	2001-present
Teaching Children Mathematics Journal Manuscript Referee	2004-2007
National Science Teachers Association (NSTA)	2001-present
Washington Science Teachers Association (WSTA)	2002-present
East Bay Association for Women in Science	1995–2001
Northern California Association of Chemistry Teachers	1987–1989
President	1988-1989

Community Organizations

W.W. Seymour Botanical Conservatory	
Education Committee Chair	2004-present
Foundation Board Member	2006-2009
Education Committee Member	2001-2004
Pride Foundation Scholarship Committee	2009
Tacoma Public Schools Strategic Planning Team	2002-2005
Leadership and Assistance for Science Education Reform (LASER)	
Children’s Museum of Tacoma Science Advisory Committee	2002-2005
Science Fair Judge	
Mt. Tahoma High School	2003-2007
Wilson High School	2004-2006

MEMBERSHIPS AND OFFICES cont.

Other Organizations

University of California, Berkeley, Graduate School of Education	
Center for Research on Education and Work	1998-2001
Graduate Student Representative to Faculty	1999-2000
Berkeley High School Staff Senate	1991-1994, 1986-1988
Science Department Representative	
Mills College Alumnae Association, Oakland Branch Board	1986-1990
President	1989-1990

ACADEMIC AND PROFESSIONAL HONORS

John Lantz Sabbatical Enhancement Award, University of Puget Sound	2008
President's Teaching Award, University of Puget Sound	2007
Thomas A. Davis Teaching Award, University of Puget Sound	2004
Distinguished Professional Award, Association for Women in Science	2000
Graduate Research Fellowship, University of California, Berkeley	1998-2001
Best Female Teacher, Berkeley High School	1994
Who's Who of American Teachers	1993
Honors in Major, Mills College	1985
Phi Beta Kappa, Mills College	1984
Jackson Berry Prize in Chemistry, Mills College	1984