

SUSAN LOWES
Institute for Learning Technologies
Teachers College/Columbia University
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PROFESSIONAL EXPERIENCE

RESEARCH AND EVALUATION

- **Director, Research and Evaluation, Institute for Learning Technologies, Teachers College, Columbia University, 1999-present**

Direct evaluations of, and research on, projects at the K-12, university, and community levels. Current and recent evaluations of projects funded by NSF include: ITEST, MSP, STEP, C-PATH, GK-12, CCLI, IGERT, REU, BPC, and K-12 outreach initiatives from the EMSI, MRSEC, NSEC, and Genomics centers at Columbia University. Current and recent evaluations of projects funded by the U.S. Department of Education include 21stCCLC, FIPSE, AEMDD, PT-3 and TICG. Current and recent evaluations also funded by the National Institutes of Health, the Environmental Protection Agency, the New York City Dept. of Education, the New Jersey Dept. of Education (MSP), the International Baccalaureate Organization, the National Geographic Education Foundation, and other private foundations.

- **Senior Researcher, co-PI STEPS, NextGenU, 2020 – present**

Manage implementation and research for STEM Teacher/student Education for Primary Schools, a primary school Math and Science curriculum development project in Cameroon, Benin, and the Democratic Republic of the Congo.

UNIVERSITY TEACHING

- **Teachers College, Columbia University, Adjunct Professor, 2010-present; Adjunct Associate Professor, 2004-2010; Adjunct Assistant Professor, 2000-2004**

Researching Technology in Educational Environments

Teach course for M.A., Ed.M., and Ed.D. students on methodologies for educational technology research. Course delivered synchronously online.

Online Schools and Online Schooling

Teach course for M.A., Ed.M., and Ed.D. students on K-12 virtual schools and schooling. Course delivered asynchronously online.

Department of Math, Science and Technology, Program in Computers, Communication, Technology, and Education, and Department of Human Development: Advisor to Ed.M. and Doctoral students.

- **Hunter College School of Education, City University of New York, Adjunct Assistant Professor, 1997-2003**

Education and Technology in the Elementary School

Taught courses for M.A. students in the Dept. of Curriculum and Teaching with focus on how technology can enhance constructivist learning and project-based curriculum.

PROJECT ADMINISTRATION

- **Manager, Professional and Curriculum Development, Institute for Learning Technologies, Teachers College, Columbia University, 1996-2001**

Responsible for professional and curriculum development activities for elementary, middle, and high school teachers participating in the Eiffel Project, a five-year Dept. of Education Technology Innovation Challenge Grant <<http://eiffel.ilt.columbia.edu/>>.

- **Assistant Director, Classroom Applications, Institute for Learning Technologies, Teachers College/Columbia University, 1996-1997**

Managed the Living Schoolbook Project, a three-year (1994-1997) collaboration with the Department of Education at Syracuse University, funded by a grant from NYNEX; and Reinventing Libraries, a digital library project funded by IBM.

PUBLICATIONS AND PRESENTATIONS ON TEACHING AND LEARNING

Online Teaching and Learning

Lowes, S. & Lin, P. (2018). "A Brief Look at the Methodologies Used in Researching Online Teaching and Learning." In R. E. Ferdig & K. Kennedy (Eds.), *Handbook of Research on K-12 Online and Blended Learning*, 2nd. Ed. Pittsburgh, PA: ETC Press, pp. 91-110.

Lowes, S. & Lin, P. (2017). *Student pathways through online algebra 1 courses*. Lansing, MI: Michigan Virtual Learning Research Institute.

Lowes, S., Lin, P., & Kinghorn, B. (2016). "Gender Differences in Online High School Courses." *Online Learning* 20(4).

Lowes, S., Lin, P., & Kinghorn, B. (2015). "Exploring the Link Between Online Behaviours and Course Performance in Asynchronous Online High School Courses." *Journal of Learning Analytics* 2(2), 169-194.

Lowes, S. & Lin, P. (2015). "Learning to Learn Online: Using Locus of Control to Help Students Become Successful Online Learners," *Journal of Online Learning Research* 1(1).

Lowes, S. (2014). "How Much "Group" Is There in Online Group Work?" *Journal of Asynchronous Learning Networks* 18(1). Online at <http://sloanconsortium.org/jaln/v18n1/how-much-group-there-online-group-work>

Kennedy, K., Lowes, S., DeBruler, K., Freidhoff, J. & Lin, P. (2014). Panel on Research in the K-12 Online Learning Environments. In M. Searson & M. Ochoa (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2014* (pp. 1545-1546). Chesapeake, VA: AACE.

Lowes, S., Lin, P., Tirthali, D., & Turkay, S. (2013). "Digital Pile Sorts: An Engaging Way to Assess Understanding." Workshop conducted at the AEA Annual Conference, Washington, DC, 17 October.

Lowes, S., Hamilton, G., Hochstetler, V. & Paek, S. (2013). "Teaching Communication to Medical Students in a Virtual World." *The Journal of Interactive Technology & Pedagogy*, 3. Online at <http://jitp.commons.gc.cuny.edu/teaching-communication-skills-to-medical-students-in-a-virtual-world/>.

Lowes, S. (2010). "Beyond the Counts: Teacher Beliefs and Teaching Styles in Asynchronous Online Classrooms." Paper presented at the Virtual School Symposium of the International Association for K-12 Online Learning (iNACOL), Phoenix, AZ, November.

Lowes, S. (2010). "The Teacher as Migrant: How Teaching Online Can Change Classroom Practice." *Distance Learning* (US Distance Learning Association publication), June 2010.

Lowes, Susan. (2008). "Online Teaching and Classroom Change: The Trans-Classroom Teacher in the Age of the Internet." *Innovate: Journal of Online Education*, 4 (3). <http://innovateonline.info>. (Research funded by the U.S. Department of Education to Learning Point Associates.)

Lowes, S. (2007). "Trends in Professional Development for K-12 Virtual Schools." Chapter in C. Cavanaugh and R. Blomeyer, eds., *What Works in K-12 Online Learning?* Washington, DC: The International Society for Technology in Education (ISTE).

Lowes, S., Lin, P., and Wang, Y. (2007). "Studying the Effectiveness of the Discussion Forum in Online Professional Development Courses." *Journal of Interactive Online Learning*, 6 (3).

STEM Education

Baxter, G. P., Sheppard, K.G., Lowes, S. (2021). "Foundations--Integrating Evidence-Based Teaching and Learning into the Core Engineering Curriculum: Retrospective on the Progress of Teaching-Track Faculty Participants." Paper presented at the 2021 ASEE Virtual Annual Conference, July.

Baxter, G. P., Sheppard, K. G., Fisher, F. T., & Holahan, P. J., Lowes, S., Metz, S. S. (2020). "Integrating Evidence-based Teaching and Learning Practices into the Core Engineering Curriculum: Student Perceptions of the Instructional Practices." Paper presented at 2020 ASEE Virtual Annual Conference, June. <https://peer.asee.org/34843>

Streim, N., Lowes, S., Herbert-Wasson, E., Colon-Leon, Yan, Vasudevan, L., Ahn, J-H., & Sung, W. (2019). "Developing Elementary Students' Problem Solving, Critical Thinking, Creativity, and Collaboration Through a University-School Partnership." Chapter in R.M. Reardon & J. Leonard, eds., *Integrating Digital Technology in Education*. Charlotte, NC: Information Age Publishing.

Baxter, G., Fisher, F., Holahan, P., Sheppard, K., Lowes, S., and Metz, S. (2019). "FOUNDATIONS: Integrating Evidence-based Teaching and Learning Practices into the Core Engineering Curriculum." American Society for Engineering Education.

McKay, M., Lowes, S., Tirthali, D., & Camins, A. (2015). "Student Learning of STEM Concepts Using a Challenge-based Robotics Curriculum." Paper presented at 2015 ASEE Annual Conference & Exhibition, Seattle, WA, June 2015.

Holahan, P., McKay, M., Sayres, J., Lowes, S., Camins, A., & McGrath, B. (2015). *WaterBotics: A Novel Engineering Design Curriculum for Formal and Informal Educational Settings*. Hoboken, NJ: Stevens Institute of Technology.

McKay, M., Lowes, S., Tirthali, D., McGrath, E., Sayres, J. & Peterson, K. (2013). "Transforming a Middle and High School Robotics Curriculum from Formal Classrooms to an Informal Learning Environment: Strategies for Increasing Impact in Each." American Society for Engineering Education Annual Conference, Atlanta, GA, June 2013.

Hotaling, L., Lowes, S., Stolkim, R., & Lin, P. (2012). "SENSE IT: Teaching STEM Principles to Middle and High School Students Through the Design, Construction and Deployment of Water Quality Sensors," *Advances in Engineering Education* 3 (2). Online at: <http://advances.asee.org/vol03/issue02/index.cfm>.

McGrath, E.W., Lowes, S., McKay, M., Sayres, J., & Lin, P. (2012). "Robots Underwater! Learning Science, Engineering and 21st Century Skills: The Evolution of Curricula, Professional Development and Research in Formal and Informal Contexts." In B. Barker, G. Nugent, N. Grandgenett, and V.I., Adamchuk, eds., *Robotics in K-12 Education* (Hershey, PA: IGI Global).

McGrath, E. W., Lowes, S. (2011). "Infusing Non-Traditional Engineering Projects into Traditional Classrooms: Where Do They Fit? How Are They Assessed?" Paper presented at the ASEE 2011 Annual Conference & Exposition, Vancouver, Canada, July.

McGrath, E. W., Lowes, S., Jurado, C., Squires, A. (2011). "SE Capstone: A Pilot Study of 14 Universities to Explore Systems Engineering Learning and Career Interest through Department of Defense Problems." Paper presented at the ASEE 2011 Annual Conference & Exposition, Vancouver, Canada, July.

Hotaling, L., Stokim, R., Lowes, S. (2011). "Student-Created Water Quality Sensors." Paper presented at the ASEE 2011 Annual Conference & Exposition, Vancouver, Canada, July. (Best paper Honorable Mention.)

Macalalag, A.Z., Tirthali, D., McGrath, E., McKay, M., & Lowes, S. (2011). "Teacher Professional Development Programs in Grades 3-8: Promoting Teachers' and Students' Content Knowledge in Science and Engineering." Paper Presented at the National Science Foundation's Mathematics and Science Partnerships Learning Network Conference, Washington, D.C.

Macalalag, A., Lowes, S., Guo, K., and McKay, M. (2010). "Teacher Professional Development in Grades 3-5: Fostering Teachers' and Students' Content Knowledge in Science and Engineering." Paper presented at the American Society for Engineering Education Annual Conference, Louisville, KY, June.

Macalalag, A.Z., Lowes, S., Guo, K., Tirthali, D., McKay, M., and McGrath, E. (2010). "Advancing Science and Engineering in Elementary Schools: Fostering Teachers' Knowledge and Scientific Inquiry." National Association for Research in Science Teaching Annual Conference, Philadelphia, PA, March.

McGrath, E., Lowes, S., Lin, P., Sayres, J. (2009). "Analysis of Middle- and High-School Students' Learning of Science, Mathematics, and Engineering Concepts Through an Lego Underwater Robotics Design Challenge." Paper presented at the American Society for Engineering Education Annual Conference, June.

McGrath, E., Lowes, S., Lin, P., Sayres, J., Hotaling, L., Stolkin, R. (2008). "Build IT: Building Middle and High School Students' Understanding of Engineering, Science and IT through Underwater Robotics." *American Society for Engineering Education Annual Conference Proceedings*, Pittsburgh, PA, pp. 2008-781.

McKay, Mercedes, Lowes, Susan, and McGrath, Beth. (2006). "Do 'Real World' Learning Objects Make a Difference?" In C. Crawford et al. (eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2006*, pp. 2975-2980. Chesapeake, VA: AACE, 2006.

Geography Education

Lowes, S. (2008). "Mapping the World: Freehand Mapping and Children's Understanding of Geography Concepts." *Research on Geography Education*, 10 (2). (Research funded by the National Geographic Education Fund.)

Other Education

Hamilton, G., Lowes, S., Hochstetler, V., Pierson, K., & Volk, K. (2021). "This experience changed my life': Inspiring college students to pursue careers caring for persons living with dementia." *Educational Gerontology*, DOI: 10.1080/03601277.2020.1864703

McKay, M., Lowes, S., McGrath, B. et al. (2007). *Use of Real-World Data and Information in the Classroom: Evolution of a K-14 Teacher Preparation Model*. Phoenix, AZ: The League for Innovation in the Community College. (Research funded by the U.S. Dept. of Education.)

Pfirman, S., Collins, J., Lowes, S., & Michaels, A. "To Thrive and Prosper: Hiring, Supporting, and Tenuring Interdisciplinary Scholars." (2005). *The Chronicle of Higher Education*, 11 February 2005; expanded version online at <http://www.pkal.org/documents/Pfirman_et-al_To-thrive-and-prosper.pdf>

WRITING ON THE WEST INDIES

Lowes, S. (2020). "Guilty or Innocent? A Situational Analysis of the Murder Trial of Two Chinese Immigrants to Antigua in 1883." Paper to be presented at the Association of Caribbean Historians Annual Conference, June 2021. Part of an ongoing study of the Chinese in Antigua.

Lowes, S. (nd--ongoing). "The U.S. Bases in Antigua and the New Winthropes Story." Online at <http://antiquahistory.net/research-on-antigua.html>

Lowes, S. (2003). "Rum and Coca-Cola: The Arrival of the Americans and the Restructuring of Social Relations in Antigua in the 1940s." Paper presented to the University of the West Indies Conference on

Multi-Disciplinary Perspectives on Antigua and Barbuda, November 13-15. Online at:
<http://www.uwichill.edu.bb/bnccde/antigua/conference/papers/lowes.html>

Lowes, S. (1996). *West Indian-American Day Carnival*. New York: Brooklyn Historical Society, 1996.

Lowes, S., Berleant-Schiller, R., and Benjamin, M. (1995). *Antigua and Barbuda. Volume 182, World Bibliographical Series*. Oxford, England: Clio Press. Online at <http://antiquahistory.net/research-on-antigua.html>

Lowes, S. (1995). "They Couldn't Mash Ants: The Decline of the White and Nonwhite Elites in Antigua, West Indies, 1834-1900." In Karen Fog Olwig, ed., *Small Islands, Large Issues* (London: Frank Cass). Also online at <http://antiquahistory.net>

Lowes, S. (1995) "'Them Planters Got Well Shook Up': The 1918 Riots in Antigua, West Indies." Paper presented to the Antigua and Barbuda Museum, 1995, and published online at: <http://antiquahistory.net>.

Lowes, S. (1994). "The Peculiar Class: The Formation, Collapse, and Reformation of the Middle Class in Antigua, West Indies, 1834-1940." Ph.D. diss., Columbia University. Online at Columbia University Academic Commons, <https://academiccommons.columbia.edu/doi/10.7916/sygy-dr18>

Lowes, S. (1978). "Social and Economic Change in St. Maarten, Netherlands Antilles, 1868-1968, as Seen Through Land Transfer Deeds." Online at <http://antiquahistory.net/research-on-st-maarten.html>

Lowes, S. (1977). "The Friendly Island: A Report on How Tourism Development in St. Maarten, Netherlands Antilles." Online at <http://antiquahistory.net/research-on-st-maarten.html>

Other papers presented at meetings of the American Historical Association and the American Anthropological Association, and book reviews contributed to *Slavery and Abolition*, *Journal of Social History*, *The Americas*, *Ethnicity*, and *Nieuwe West-Indische Gids*.

DEGREES

Ph.D., Anthropology, Columbia University, 1994, with Distinction. Research area: West Indies. Research interests: Ethnicity, gender, race, class, and culture. Dissertation research supported by Social Science Research Council International Doctoral Fellowship and National Science Foundation Dissertation Improvement Grant.

M.Phil., Teachers' College, Columbia University, 1993. Tinker Foundation Field Training Fellowship, 1977.

M.A. Program, Anthropology, Hunter College, New York; Scholarship Award for Superior Achievement, 1976.