

**Eileen A. O'Connor, Ph.D.**

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Move directly to: [Education](#) / [Work Experience](#) / [Publications](#) / [Presentations](#) / [Workshops Conducted](#)

## **I. Education**

1994-1997      State University of New York (SUNY) at Albany  
Ph.D., Educational Theory and Practice; Curriculum, Instruction and Design; Instructional Technology and Science Education; Dissertation Topic : Students' Use of Atomic and Molecular Models In Learning Chemistry; *Distinguished Dissertation Award*

1976-1981      Polytechnic University of New York  
M.S., Civil Engineering/Environmental Health Science; Minor in Management

1965-1969      The College of New Rochelle  
B. A., Biology Major, Chemistry Minor

## **II. Employment**

**July 2004 – present: Empire State College (ESC) (State University of New York) / Masters of Arts in Teaching (MAT)**  
Associate Professor

**2001- present Interactive Learning Solutions**  
Director of Professional Development and Online Programs; Consultant

**1999 – 2001 Rensselaer Polytechnic Institute: Center for Initiatives in Pre-College Education (CIPCE)**  
Assistant Director

**1997-2009 State University of New York, Albany**  
Part-Time Faculty

**1998-2002 National Science Foundation (NSF) Program Evaluator**  
External evaluator for several higher-education NSF programs

**Fall 1997-Dec 1998 State University of New York, College at Oneonta**  
Faculty Member

**1993-1996 State University of New York, University at Albany**  
Teaching Assistant

**1991- 1997 The College of St. Rose, Albany, NY**  
Adjunct Faculty

**1981-1989 IBM Corporation**  
Corporate contract negotiator: government, science, industry, education – negotiated agreements between the Legal, Business Practices, and Marketing functions in IBM to create contract proposals to IBM large customers  
  
Financial analyst – developed strategic and operational programs to support the staffing and administration of PC direct order centers throughout the country

Technical marketing representative – sold computer and analytical laboratory equipment to IBM customers in the Metropolitan New York area

Marketing programs administrator – developed marketing programs, national seminars, training workshops and promotional and technical brochures that announced IBM products to its sales forces and its customers

Technical writer – wrote technical manuals that explained the use of IBM computers and analytical lab equipment

**1979-1981      Technicon Instruments Inc.**

Analytical instrumentation instructor – trained Technicon customers on the operation of their laboratory equipment; developed instructional materials and technical documents

Applications chemist – developed application methods that customize Technicon’s laboratory equipment to the needs of its customers

**1975-1979      Department of Labs and Research, Westchester County**

Environmental chemist – tested drinking and waste water in Westchester County, NY

**1969-1970      St. Ignatius Elementary School, Montana**

Fourth grade teacher and K-8 science teacher – taught in the elementary school environment, working with the Native American population in St. Ignatius

Community services coordinator – worked with the youth programs in the school and the community in St. Ignatius

**III. Technology Competencies**

Microsoft Office Suite – advanced levels in PowerPoint, Word, Excel and Access

Mathematics / scientific instrumentation: Davis weather station, data probes and computer interface, graphing calculators

Web development, illustration, video media development – Dreamweaver, Flash, FrontPage; Adobe Photoshop; Illustrator; Adobe Premiere Pro; Second Life virtual platform; Captivate; VoiceThread

Course management software: WebCT, Lotus Notes, SUNY Learning Network, CourseSpace, Angel, Blackboard

**IV. Experience**

*Academic Positions / Courses Taught*

*(approximately chronological; overlap because of teaching in several schools in some semesters)*

**State University of New York: Empire State College (2004 – present) :** Assistant Professor: taught the courses listed below:

- Content Course: Earth Science: Topics in Field Meteorology
- Content Course: Earth Science, Chemistry, Physics
- Teaching and Curriculum: Biology
- Teaching and Curriculum: Earth Science, Chemistry, Physics
- Mentored Teaching courses – MT1, MT2, MT3, MT4
- Teaching and Learning: Biology
- Teaching and Learning: Earth Science, Chemistry, Physics
- Teaching and Learning: General
- Teaching Diverse Learners
- Educational Evaluation
- Effective Urban School

**State University of New York, University at Albany.** (Spring 1998 – present). Part-time faculty member: Graduate program in the Department of Education, Educational Theory and Practice. Courses are listed below:

- Educational Computing in the Mathematics and Science Classroom.
- Learning in the Academic Disciplines
- Teachers in Context
- Education Research Seminar
- Educational Telecommunications and Design
- Spreadsheets in the Analysis of Classroom Data. Co-taught

**State University of New York, College at Oneonta.** (Fall 1997-December 1998).

- Methods of Teaching Science
- Field Supervision
- Chemistry

**Rensselaer Polytechnic Institute's Masters in Natural Science Education** (1999 – 2001)

- Introduction to Technology for Science and Mathematics Teachers

**State University of New York, University at Albany.** (Fall 1996 and Fall 1997 - undergraduate level; Spring 1997 - graduate level); Teaching Assistant

- Methods of Science Teaching

**The College of St. Rose, Albany, NY** – adjunct faculty between 1991 – 1997, taught a variety of courses including:

- Introduction to Microcomputing,
- WordPerfect (for DOS and for Windows), Word, Lotus, Excel, dBASE, Access and PowerPoint.
- General Chemistry Laboratory (Using Spreadsheet Analysis).
- Web Page Development for Middle and High School Students
- Multi-media Development for Middle and High School Students
- Methods of Science Teaching: Secondary
- Computer Applications for Middle School Students
- Middle and High School Science Camp: Chemistry

**St. Ignatius Elementary School, St. Ignatius, Montana.** (1969-1970). Ursuline Mission School for Native American children. Taught fourth grade core-courses; developed the science curriculum and taught the science course for the fourth through eighth grades.

### ***Industrial Instruction***

Independent Business and Computer Consultant. (1990-1994). Designed and developed customer-specific computer training materials for legal, retail and publishing businesses. Instructed and trained these clients.

IBM Corporation. (1983-1986; total years at IBM 1981-1989). Designed, developed and delivered theoretical and operational training on newly created analytical chemistry laboratory and computer equipment to the IBM marketing staff.

Technicon Corporation. (1979-1981). Designed, developed and delivered theoretical and operational training to Technicon customer on their recently purchased analytical chemistry and computer equipment. Classes conducted at corporate headquarters and customer locations.

### ***Business and Marketing***

IBM Corporation. (1987-1989). Contract negotiator. Created and negotiated complex computer-equipment proposals that integrated both the customer and the corporation requirements. Customers included aerospace, industrial, retail government and educational institutions.

IBM Corporation. (1985-1987). Financial analyst. Created and designed financial programs for the growing network of PC delivery centers that were developed to meet the demands of customers who had large contracts with IBM.

IBM Corporation. (1983-1985). Technical marketing representative. Sold computer and analytical chemistry equipment for the scientific division of the IBM Corporation.

IBM Corporation. (1982-1983). Marketing Programs Administrator. Designed, developed and implemented marketing programs, including a national seminar series and print advertisements, for new computer and analytical products for the scientific division of the IBM Corporation.

IBM Corporation. (1983). Acting Product Manager. Coordinated the introduction of new computer and analytical chemistry equipment involving engineering, scientific and business staff.

#### *Technical and Scientific Responsibilities*

IBM Corporation. (1981-1983; total years at IBM 1981-1989). Designed, coordinated and wrote operations manual, and technical and marketing brochures for analytical chemistry and computer equipment.

Technicon Corporation. (1979). Designed and developed automated/robotics analytical chemistry procedures for pharmaceutical, government and industrial customers of the Technicon Corporation.

Department of Labs and Research, Westchester County. (1975-1979). Conducted chemical and bacteriology laboratory analysis of drinking and waste water.

### **V. Publications, Reviews, Conference Presentations and Conducted Workshops**

#### ***Peer reviewed publications***

**NOTE:** links provided for those with Empire State College (ESC) signons

O'Connor, E. A. (*in press*). Developing effective online collaborative science projects by using course scaffolding, a virtual world, and web 2.0 technologies. *Society for Information Technology & Teacher Education International Conference 2012*.

Abendroth, M.A., Golzy, J., & O'Connor, E.A. (*in press*). Self-created YouTube recordings of microteachings: their effects upon candidates' readiness for teaching and instructors' assessment. *Journal of Educational Technology Systems*.

O'Connor, E. A. (*in press*). A survival guide from an early adopter: how Web 2.0 and the right attitude can enable learning and expansive course design. *Journal of Educational Technology Systems*

O'Connor, E. (2011). Practical considerations when using virtual spaces for learning and collaboration, with minimal setup and support. In H. H. Yang, & S. C. Yuen (Eds.), *Handbook of Research on Practices and Outcomes in Virtual Worlds and Environment*. Hershey PA: IGI Global.

O'Connor, E. (2011). Migrating Towards K12 in Virtual Spaces: Second Life Lessons Learned as Higher Education Meets Middle School Students. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 2192-2198). Chesapeake, VA: AACE. ([Link through ESC](#))

O'Connor, E.A. (June 2010) Using Second Life (a virtual reality) in Language Instruction: Practical Advice on Getting Started; published with the proceedings of the 4<sup>th</sup> International Scientific and Methodological Conference on "Information and Communication Technologies in Foreign Language Teaching"

O'Connor, E. A. (2010- 2011) The effect on learning, communication, and assessment when student-created YouTubes of microteaching were used in an online teacher-education course. *Journal of Educational Technology Systems*, 39(2), pp. 135-154. ([Link through ESC](#))

O'Connor, E. (2010). The Use of a Wiki in Teacher Education: How Does Learning and Instruction Change When Work Can Go Public?. In D. Gibson & B. Dodge (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2010* (pp. 2822-2829). Chesapeake, VA: AACE. ([Link through ESC](#))

O'Connor, E. A. (2009). Instructional and Design Elements that Support Effective Use of Virtual Worlds: What Graduate Student Work Reveals about Second Life. *Journal of Educational Technology Systems*, 38(2), 213-234. doi:10.2190/ET.38.2.j ([Link through ESC](#))

O'Connor, E. A. and Sakshaug, L. (2009) Preparing for Second Life: Two Teacher Educators Reflect on Their Initial Foray into Virtual Teaching and Learning, *Journal of Educational Technology Systems*, 37(3), pp. 259-272. ([Link through ESC](#)).

O'Connor, E. (2008). Becoming a Virtual Instructor: How Can Higher Education Faculty Prepare for Second Life?. In G. Richards (Ed.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2008* (pp. 1144-1149). Chesapeake, VA: AACE. ([Link through ESC](#))

O'Connor, E. A. (2008). Initial Study of Pre-Service Teachers' Comments on a Reality-Based, Urban-Student Video Streamed within an Online Course. *Journal of Educational Technology Systems*, 37(2), 139-157. Retrieved from EBSCOhost. ([Link through ESC](#))

O'Connor, E. A. (2008) Moving Beyond Text Interactions: The Use of Streaming Video in Internet-Based Courses. Published with the 3<sup>rd</sup> International Scientific and Methodological Conference on "Information and Communication Technologies in Foreign Language Teaching"

Sakshaug, L. and O'Connor, E.A. (2008) Pedagogical, cultural and epistemological shifts: The dynamics of learning to teach in the Master of Arts in Teaching (MAT) Program at SUNY Empire College – published with 2009 National Conference proceedings of the National Center for Alternative Certification; [http://www.teach-now.org/Sakshaug\\_OConnor.doc](http://www.teach-now.org/Sakshaug_OConnor.doc) - retrieved on 7/22/09

O'Connor, E. (2007). Using Reality-Based, Authentic Streamed-Videos and Online Conversations to Prepare Pre-Service Teachers for Urban Classrooms: A Pilot Study. In T. Bastiaens & S. Carliner (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2007* (pp. 1179-1184). Chesapeake, VA: AACE. ([Link through ESC](#))

O'Connor, E. A. (2007). A Case Study of the Approach to Teaching and to Technology of Three New Teachers in an Alternative Teacher Certification Program. *Journal of Educational Technology Systems*, 35(3), 357-382. Retrieved from EBSCOhost. ([Link through ESC](#))

O'Connor, E. A. (2006). Encouraging community: Why, when, and how to structure online interactions to support collegiality and honesty. Published with the 2nd International Scientific and Methodological Conference on "Information and Communication Technologies in Foreign Language Teaching" (<http://distance.ffl.msu.ru/cdo/conf0606/oconnor.doc> - retrieved August 2007)

Participated in an International Electronic Collaboration on "Scientific Models in Chemistry and Physics"; April 1999. Contributors were from Germany, Australia, and Israel as well as from New York.

Champagne, A. B., Eisan, W. and O'Connor, E. A. (1996). Assessment and the Reform of Mathematics and Science Education. Eisenhower Clearing House.

### **Reviews**

Peer-reviewed book-chapter submissions to the Handbook of Research on Practices and Outcomes in Virtual Worlds and Environment for IGI Global publishers.

Reviewed educational materials for the Eisenhower National Clearinghouse and The Teacher Materials Project (TMAT), a database of professional development materials.

Reviewed conference submissions for the 1999 American Education Research Association (AERA) national conference.

### **Presentations & Papers Delivered at Conferences**

Collaborating at a distance through virtual and web-mediated approaches. The 5<sup>th</sup> International Scientific and Methodological Conference on "Information and Communication Technologies in Foreign Language Teaching" (June 2012). Eileen O'Connor. To be presented via virtually via Skype to the Moscow conference attendees on June, 2012 – *invited speaker*

Emerging educational uses of virtual learning environments. Eileen A. O'Connor and Elizabeth Siriotis. Technologies in Education 2012 at the College of St. Rose in May 2012 -- *accepted presentation*

Designing for community and continuity in virtual environments: consideration when bridging *beyond the course*. Eileen A. O'Connor. Conference in Instructional Technology (CIT 2012; SUNY Stony Brook), SUNY. (May 2012) - *accepted presentation*

Virtual ESC Affinity Group: A faculty-led initiative that leverages, supports, and continues virtual education Ken, Ferree, Eileen A. O'Connor, Nicola Martinez, Audeliz Matias, Hope Adams. Conference in Instructional Technology (CIT 2012; SUNY Stony Brook), SUNY. (May 2012) -- *accepted presentation*

Using YouTube in Online Courses to Observe and Evaluate Pre-Service Teacher Performance, John Golzy, Mark Abendroth, Eileen O'Connor – taped presentation and videoconference discussion at Virtual Faculty Academic Conference at Empire State College, November 17, 2011

Fostering collaboration, ownership, and professional networks—in online and distance environments, Eileen O'Connor – taped presentation and videoconference discussion at Virtual Faculty Academic Conference at Empire State College, November 17, 2011

SER/VE (the STEM Exploratory Real/Virtual Environment) and the Engagement of Urban Youth; a poster session presented at the 2011 SUNY STEM Conference at the Crowne Plaza in Albany, NY on November 2011

SER/VE (STEM Exploratory Real/Virtual Environment) –*virtually* connecting science education and urban youth; a 75-minute workshop presented at the 2011 SUNY STEM Conference at the Crowne Plaza in Albany, NY on November 2011

[Overview of Research and Development](#) in Second Life; the Creation of SER/VE (STEM (Science, Technology, Engineering, Mathematics) Exploratory Real/Virtual Environment); presented remotely through this link at the [International Council for Open and Distance Education 2011](#) – October 2011.

Building New Programs in Emerging Technologies and Learning: Hope Adams, Diane Gal, Donna Mahar, Eileen O'Connor, Denise Snyder, Lisa Snyder. Empowering Next Generation Learning: 4<sup>th</sup> Annual International Symposium, Sloane-C, San Jose, CA, July 2011.

Adapting Emerging Technologies to STEM Learning, Eileen O'Connor, Hope Adams, Pauline Carrico, Mary Mawn, Kim Stote and Betty Lawrence. Conference in Instructional Technology (CIT 2011), SUNY. (May 2011)

Integrating multiple, collaborative, and communication technologies—how can online, teacher education benefit from 21<sup>st</sup> century skills and pedagogies? Eileen A. O'Connor & Denise Snyder. Conference in Instructional Technology (CIT 2011), SUNY. (May 2011)

Can YouTube help teacher education? Four distance teacher educators evaluate the implementation of student-created, microteaching YouTubes. Abendroth, Golzy, Mahar, & O'Connor. Conference in Instructional Technology (CIT 2011), SUNY. (May 2011)

Ongoing K12 Research within a Virtual Island and Social Network. Eileen A. O'Connor. Tec 2011 at the College of St. Rose in May 2011

Adapting Emerging Technologies to STEM Learning, Eileen O'Connor, Hope Adams, Pauline Carrico, Mary Mawn, Kim Stote and Betty Lawrence; Poster session at Educating in the Open: Philosophies, Innovations, and Stories; Educause Learning Initiative, Washington, DC. February 2011

ePortfolios Project at All Areas of Study, Empire State College, Drs. Travers & O'Connor. October 29, 2010

Emerging Technologies for Learning and Leadership, poster session at All Areas of Study, Empire State College, Drs. Adams, Gal, Mahar, & O'Connor. October 28, 2010

Using Technologies to Expand Communication and Instruction: Digital Storytelling/YouTube at All Areas of Study, Empire State College, Drs. Mahar, & O'Connor. October 27, 2010

Using YouTube to Extend Microteaching Sessions and to Enhance Instructor Assessment of Pre-Service Teacher Practice; Conference entitled: An Inclusive Vision for Teacher Education: Exploring Issues of Engagement presented by the New York State Association of Teacher Educators and the New York Association of Colleges for Teacher Education in Saratoga, New York (October 2010)

Using Second Life (a virtual reality) in Language Instruction: Practical Advice on Getting Started; at 4<sup>th</sup> International Scientific and Methodological Conference on "Information and Communication Technologies in Foreign Language Teaching" (June 2010); presented via virtually via Skype to the Moscow conference attendees on June 10, 2010

Developing Ways to Increase Faculty Use of Technology to Improve Pedagogy: Spiders and their Web; Drs. Clougherty, Adams, Rufer, Gal, Mahar, & O'Connor. Conference in Instructional Technology (CIT 2010), SUNY. (May 2010)

The use of YouTube within an online course to assess pre-service teachers teaching skill and to develop peer networks. Eileen O'Connor. Conference in Instructional Technology (CIT 2010), SUNY. (May 2010)

Using emerging technologies to foster STEM interactions and professionalism in K12 environments, Drs. Clougherty, Adams, Rufer, Gal, Mahar, & O'Connor, STEM 2010 – Ballston Spa

Graduate Students in Second Life: The Roller Coaster Ride of a Shifting Paradigm. Eileen O'Connor & Heather Meyer. Conference in Instructional Technology (CIT 2009), SUNY. (May 2009)

Agile Manifesto and the Concept of Openness as the New Paradigm for Education. Robert Clougherty, Hope Adams & Eileen O'Connor. Conference in Instructional Technology (CIT 2009), SUNY. (May 2009)

Becoming a Virtual Instructor: How Can Higher Education Faculty Prepare for Second Life? Eileen O'Connor. World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education (November 2008), Las Vegas, NV

Moving Beyond Text Interactions: The Use of Streaming Video in Internet-Based Courses. Presented virtually at the 3rd International Scientific and Methodological Conference on "Information and Communication Technologies in Foreign Language Teaching" (May 2008); presented via Skype to the Moscow conference attendees; <http://distance.ffl.msu.ru/cdo/conf08/persons.htm> retrieved June 2009

Considerations, constraints, and epiphanies: teacher educators reflect on their initial foray into Second Life. Eileen O'Connor & Lynae Sakshaug. Conference in Instructional Technology (CIT 2008), SUNY. (May 2008).

Lessons Learned When Using Peer-Designed Discussion Boards As An Element Of New Teacher Support. Eileen O'Connor (April 2008) at the conference entitled From Preservice to Inservice: A Seamless Transition sponsored by the New York State Association of Teacher Educators and the New York Association of Colleges for Teacher Education in Saratoga, New York.

Mentors Reflect on Technology Integration and Learning: Technology Development Fund (TDF). Empire State College: All College Conference (2008), Jianhao Chen, Anne Cobb, Eileen O'Connor, Michael Stone, and Betty Wilde-Biasiny

Challenges of Transitioning to Teaching. Lynae Sakshaug & Eileen O'Connor (February 2008) - at the conference on Effective Pathways to Teaching sponsored by the National Center for Educational Information and the National Center for Alternative Teacher Certification in New Orleans.

Using Reality-Based, Authentic Streamed-Videos and Online Conversations to Prepare Pre-Service Teachers for Urban Classrooms: A Pilot Study. Eileen O'Connor (October 2007) – *a paper delivered at the e-Learn 2007 conference in Quebec City*

The Politics and Policies of Technology Deployment, Use, and Maintenance (Panel). Francis Murage, John Hughes, Eileen O'Connor (CIT 2007), SUNY. (May 2007).

Creating and Using Reality-Based, Urban Student Videos with Pre-Service Teachers. Conference in Instructional Technology (CIT 2007), SUNY. (May 2007). (based on O'Connor's instruction and research study).

Using Internet Effectively for Different Types of Courses: A practical guide from almost 10 years of online course development and instruction. Presented virtually at the 2nd International Scientific and Methodological Conference on "Information and Communication Technologies in Foreign Language Teaching" (May 2006)

Following New Teachers into Their Classrooms (Alternative Teacher Certification): From small steps to a complex course. Conference in Instructional Technology (CIT 2006), SUNY. (May 2006). Considered the process and supports new teachers needed to become personally committed to technology integration and to effective classroom teaching. (based on O'Connor's research study)

Empire State College's Alternative Teacher Education Program: Preparing Adults with Technology -- presented at the Conference for Instructional Technology (CIT 2005) in May 2005, explaining the ways that technology were integrated into the MAT program and, in particular, into Teaching and Learning course -- as a means of building a cohort group and as a means of developing teacher-candidates skills in "tool" technologies

The Urban Teachers Community-Space: a "Community of Practice" model for mentoring and professional development – presented (along with Dr. Rodrigues) at the National Center for Alternative Teacher Certification Conference in Orlando, Florida in Feb. 2005

NYS Science Assessment Test Item Analysis; Implications for Standards-Based Assessment and Curriculum (Datag – Data Analyst Group) (December 2003)

STANYS (Science Teachers Association of New York State) Conference (*October 2003*) NYS Science Assessment Test Item Analysis and Its Implications for Curriculum

NYSCATE (New York State Computers and Technology in Education) Conference (*March 2003*) Evaluating Technology Professional Staff Development: What Worked, What Didn't, and How Can We Improve?. Presented a lecture then conducted a working session to examine the assumptions underlying much of present day technology instruction for education professionals.

Third Virtual Conference on Sustainability of Systemic Change (*May 2003*) – served as a discussant to support the Poster Session for the Capital Region Science Education Partnership at this National Science Foundation conference (conference listed below)

Conference in Instructional Technology, SUNY FACT. (*May 1998*). Conducted a 75-minute demonstration of instructional technology projects; brought students from SUNY Oneonta who participated in the computer-mediated instruction initiative that involved laptop computers.

American Education Research Association (*April 1998*). Poster session and round-table discussion on "The Students' Use of Atomic and Molecular Models in Learning Chemistry" at the annual convention.

National Science Teacher Association (*April 1998*). Lecture and paper presentation on "The Students' Use of Atomic and Molecular Models in Learning Chemistry" at the annual convention.

Cornell University Education Symposium (June 1997). Using Atomic and Molecular Models More Effectively in Chemistry Education. Paper presentation/ group discussion.

Conference in Instructional Technology, SUNY FACT. (1996). Hypermedia in General Chemistry. Poster session.

### ***Workshops, Seminars, Programs, and Institutes Conducted***

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Summer 2011) / University at Albany – will create and present a two-day, over-time workshop where students work within a virtual platform (a private island within Second Life) to learn how to design three-dimensional items and then to participate in a contest for best three-dimensional work by the end of the workshop; the first day is early in the summer program and the second day is two weeks later after the students have worked independently

Technology Idea Exchange (TIE) workshop – October 12, 2010; co-developed and co-presented the virtual portion of this workshop; supported the larger workshop efforts; this workshop was designed to provide participants (ESC staff and faculty and invited local schools) with opportunities to learn and plan-with web 2 / 3 technologies

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Summer 2010) / University at Albany – created and presented a one-day workshop where students working in teams used satellite images and instructional website information to learn about different man made or natural important points within the world (Taj Mahal, Eiffel Tower, Grand Canyon, and New York City) then casting their learning into a game-like formation and presenting to the youth group and counselors in a PowerPoint presentation

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Summer 2009) / University at Albany – created and presented a one-day workshop where students working in teams developed a physical model of a shopping mall, used spreadsheets to determine the financial aspects of their business plans, and presented their work for peer review within a PowerPoint presentation; five students from the MAT program supported the workshop effort

“Teaching in a Virtual World”: a one-hour, interactive workshop for SUNY faculty on ways to bring Second Life into their instruction; SUNY Plattsburgh Conference on Teaching Excellence (April 2009)

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Summer 2008) / University at Albany – created and presented a one-day workshop where students working in teams developed a physical model of a shopping mall and used spreadsheets to determine the financial aspects of their business plans

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Summer 2007) / University at Albany – created and presented a one-day workshop where students working in teams conceived of a game show that would involve world travel, researched these locations throughout the world, and created and presented via PowerPoint their concept and their locations

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Spring 2007) / University at Albany – presented a workshop where students first conceived of their own shopping mall concept (from demographic data and their own understanding) and then developed the concepts using mathematical approaches for the floor plan and for the overall model (using flexible straws to create models); developed by O’Connor from Empire State College and supported by her students from ESC.

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Summer 2006) / University at Albany – presented a morning workshop session to middle school and high school students using the concept of solving a school-files crime through various scientific tests; the workshop was co-developed and supported by students of O’Connor from Empire State College.

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Spring 2005) / University at Albany – presented a one-day workshop session to middle school and high school students using various mapping representations of the Albany area and centered around the development of a theoretical community center using local resources.

Center for Urban Youth and Technology (CUYT) and The Science Technology Entry Program (Spring 2004) / University at Albany – presented a one-day workshop session to middle school and high school students using various mapping representations of the Albany area and using motion detector science probes as ways of engaging urban students in science activities.

Mathematics / Science and NYS Test Item Analysis: Implications for Instruction (three school districts 2004) – created and implemented a professional development program to guide teachers engage in a “dialog” about instructional improvement including a guided test-item analysis of the relevant NYS assessment, a post analysis caucus with teachers; these sessions were conducted in a number of school districts. Following these opening sessions, worked with the Questar BOCES to review the results from each district and then design a continuum of professional development programs that could address areas of needed growth that became evident.

Mathematics Institute (2003-2004) – developed and implemented an on-site professional-development, Mathematics Institute designed to provide intermediate level mathematics teachers with research-based, student-centered approaches to mathematics. Mindful of the National Council of Teachers of Mathematics (NCTM) directives, teachers were encouraged to explore mathematical relevance within the local school environment and culture, to embed mathematical exercises within an inductive-deductive-application instructional model (guided through a development process), and to assess students learning with novel student-centered, as well as traditional, methods. Began with teachers developing a reform-based mathematic unit and continued with bi-monthly visits to support teachers, both after school and in their classroom visits.

Online Technology Skill Development and Classroom Integration: created an online program designed to increase school’s effective use of technology in educational and bookkeeping endeavors; used web-delivery of text and animations (Flash); these courses have been used in professional development of K12 teachers and in the support of higher education classes; courses are currently being licensed to school districts so they can

conduct their own professional development (courses meet the high-quality standard established by No Child Left Behind) (2001 – 2010)

Workshop and Online Program delivery for the Questar Board of Cooperative Education Services (BOCES): advanced animation programs and educational statistical analysis using spreadsheets (online and workshop components)

Content and program developer (and web master) of an online professional development program in middle school mathematics for the Questar BOCES; program developer of an mathematics tutoring program for the Questar BOCES that will use an innovative combination of in-person inquiry mathematics activities and virtual mathematics communities (BOCES succeeded in securing the right to provide these services in February 2003)

Information Technology / Data Driven Decisions (IT/D3) – Summer 2001 / Summer 2002 (two different workshops) – was one of a group of higher education presenters/participants who designed and delivered a one-week BOCES conference to help principals and superintendents understand and use educational testing data (from the New York State Assessments); developed and conducted an online course that supported the institute; this course (delivered through Interactive Learning Solutions) taught how to use Excel for the statistical analysis.

Leadership Development Program with a Focus on Educational Statistics – Summer-Fall 2000 / Spring 2001 (two different workshops) – while working at RPI, worked with Dr. Raymond O’Connell from SUNY Albany to develop and implement a program to help present and prospective principals become more effective school leaders, focusing on the use of statistical analysis to inform decision making.

Mathematics and Science Institute (Spring 2001, funded through Title III) – while working for RPI, designed, developed, taught and evaluated an online professional development program for mathematics and science teacher that offered instruction in Excel followed by online discussions of actual classroom implementation of the teacher-designed spreadsheet-supported programs (RPI continues to run this program)

Excel for the Classroom (Summer 2001) – while working at RPI, created and implemented an in-person workshop on the uses of Excel for educational applications; workshop was hosted by the Questar BOCES.

Technology Coordinator Online Professional Development (Spring 2001) – while working at RPI, created and implemented an online program for the technology coordinators within the Questar BOCES, helping them learn and use PowerPoint and Excel.

Web Online Discussion Extension (Summer 2000) – while working at RPI, worked with interested parties from the Developing a School Web Site course and extended the discussion about application, institutional, and educational issues about web site development within schools.

Technology Workshops (Spring 2000) – while working at RPI, created and conducted in-person one week workshops in Developing a School Web Site; conducted three different one week workshops.

IBM Corporation. (1985). Fourier Transform Infrared Spectrophotometer and Scientific Computing in Biological Measurements. Developed and coordinated an education, information seminar for education, industry and government professionals.

IBM Corporation. (1984). Multi-dimensional Gas Chromatography. Developed and coordinated an education, information seminar for education, industry and government professionals. Presented an overview of the equipment.

IBM Corporation. (1982-3). Computing in Scientific Applications. Developed and coordinated a six-month nation-wide education, information seminar series for education, industry and government professionals and IBM scientific computer and analytical laboratory products.

### ***Committee and Program Memberships***

ePortfolio Study Committee (fall 2010 – present)

Center Personnel Committee (fall 2010 - present)

Emergent Technology: Master's Program Development Committee (fall 2010 – present)

Educational Technology Committee (2009-present; 2010 – 2011 committee co-chair)

Teaching Readiness Committee (2009 – 2010) – MAT committee; committee chair

TEAC Accreditation Steering Committee (2008 - present)

Middle States Accreditation Steering Committee (2007-2009)

Committee on Undergraduate Studies and Policies (CUSP) (2007-2008). A governance committee within Empire State College that considers policies and practices that effect both faculty and student performance.

Angel Advisory Committee (2007-2008). A standing committee within Empire State College that considers implementation and dissemination issues surrounding the use of Angel.

Search committees: as appointed

AAOS Education Co-Convener (2005 – 2008); member from 2005 - 2010. Establishes and conducts the fall meeting for the education area of study during the November All Areas of Study meeting.

Educational Technology Committee (alternate) (2005 – 2007). A standing committee within Empire State College that examines and advises-on issues related to technology on campus, privacy and security, faculty implementation, and current issues facing the college-wide community as it seeks to expand and improve technology implementation.

Data Analyst Group – (2001 to present). An organization of data analysts (individuals who help school districts interpret assessment data), administrators and educators who meet four times a year to discuss issues of testing and instruction. Between sessions communication is extended through a listserv / discussion environment.

Distance Learning Advisory Committee (1997-2000). A committee of K-12 principals, superintendents, teachers, and the Board of Cooperative Education Services (BOCES) who determine programs and policies regarding computer implementation in school in the NYS Capital Region.

Technology Steering Committee (1997-1998). A SUNY Oneonta committee of faculty and administration that addressed strategic issues concerning computer implementations at the college.

Teaching, Learning, and Technology Center: steering committee member at SUNY Oneonta (summer and fall1998). A governing body for this newly-developed facility that offered special services to support faculty computer initiatives; developed grant programs to encourage faculty participation.

The Educational Technology Committee (1997- Dec. 1998). A SUNY Oneonta committee of faculty and administration that addressed tactical and strategic issues concerning computer implementations at the college.

### ***Grants and Fellowships***

National Science Foundation funds solicited under the Innovative Technology Experiences for Students and Teachers (ITEST) to develop SER/VE (the STEM (Science, Technology, Engineering and Mathematics) Exploratory Real/Virtual Environment) to help K12 students and their teachers learn the STEM content areas through the use of a game-like virtual platform that integrates real-world experiences; within this grant, funding

has been requested to assess (and improve) the learning potential and the participation of all students, regardless of gender, ethnicity, or economic background – *not funded*

National Science Foundation; funds solicited the creation and implementation of a GeoScience Professional Development extended experience for K12 teachers of minority students – *not funded*

The Technology Development Fund of the Empire State College's Office of Educational Technology (OET) (spring 2008) awarded O'Connor a grant to support her project of developing a science teaching environment in Second Life that will be co-developed with students that would ultimately be geared towards a K12 audience.

The Technology Development Fund of the Empire State College's Office of Educational Technology (OET) (fall 2006) awarded O'Connor a grant of \$1,500 to support her project of developing then digitizing and integrating video materials into her teaching and research efforts.

Supplemental Education Services (part of the No Child Left Behind federal legislation) (February 2003) – developed the educational component (as an independent contractor) for the tutoring program proposal from the Questar BOCES that has been accepted by the New York State Education Department; this program acceptance allows the Questar BOCES to provide a tutoring program for school “in need of improvement” in the Capital Region of New York. This program couples inquiry-based mathematics instruction with online, technology-based extensions of tutoring experiences.

Title III (Federal technology in education funding) – Mathematics and Science Institute – (Spring 2001) : while Assistant Director at RPI, developed a proposal (and secured the funding) for an online institute that coupled technology instruction (Excel for math and science applications) with online peer-review and collaboration about educational applications and implementation of quantitative technologies into middle school and high school mathematics and science classes.

Faculty Fellowship of Technology Implementation (Summer and Fall 1998). Award to enable the development of programs, information, and materials that would help teachers create technology applications for the classroom.

Laptop Pilot Program Grant (Spring semester 1998). Awarded the use of laptop computers for the "science methods" course for the instructor and *all* students.

Faculty Fellowship from the Center for Social Responsibility. (Spring semester, 1998). Award to enable the development of a computer-mediated service-learning project. The award funded the hiring of an adjunct faculty to allow the release from teaching one class and funded expenses related to the development and dissemination of information about the project.

Benevolent Foundation Research Grant. (1996) Funding for dissertation research and the payment for test subjects.

### ***Research, Theoretical, and Evaluation Reports***

August 2002. Evaluation Report for Physics K12 Teacher Program (working with Dr. Audrey Champagne); evaluated the professional development program for the Physics Project (funded by the National Science Foundation) that prepared K12 teachers for effective teaching of physics coupling computer technology and data probes; reported finding to the Principal Investigators and to the NSF (through the publication of the evaluation findings).

March 2001. Evaluation Report for the Science, Technology, Engineering and Mathematics Teacher Education Consortium (STEMTEC); conducted interviews of science, mathematics, and engineering faculty (as a form of evaluation) who had participated in the STEMTEC programs efforts to introduce college faculty to research-based models of teaching (funded by the National Science Foundation, NSF); reported finding to the Principal Investigators and to the NSF (through the publication of the evaluation findings).

June 1998. Comprehensive Report on the Integration of Laptop Computers into the "Teaching of Secondary Science" Course.; addresses the educational findings and reproducible aspects of the laptop pilot program in Science Education (the preparation of future high school science teachers); Dr. O'Connor had received a grant that allowed all students to have laptop computers for the semester.

June 1998. Comprehensive Report on the Use of Laptop Computers to Facilitate Service Learning in the "Teaching of Secondary Science"; addresses the educational findings and reproducible aspects of the above mentioned pilot program focusing on the way these students assisted high school and middle school science teachers using laptop computers.

1997. Dissertation Study: Students Use of Atomic and Molecular Models in Learning Chemistry. (Studied how students learn to use these scientific models in a computer-mediated environment.); *Received a Distinguished Dissertation Award from SUNY Albany.*

1996. Survey Report: Newly Hired Science Teachers in the NY State Capital Region. Uses a statistical analysis to evaluate recent hiring trends within the NY State Capital Region.

1996. Evaluation Report: Voohresville Central School District's Computer Science Department. (Part of a larger school district evaluation)

1995. Qualitative Study of a Material's Chemistry Laboratory at Rennselaer Polytechnic Institute.

1995. Experimental Study of the Learning of Selected Chemistry Concepts when Mediated by a Multi-media Program.

1995. Computers in the Curriculum. Literature and expository review of productive use of computers in a diverse range of applications.

1994. Concept Learning in Chemistry. Literature review of research regarding student difficulties with learning abstract concepts in the sciences, particularly chemistry.

#### ***Technical Publications and Operations Manuals***

IBM Corporation. 1981-1983 Specifications Brochures: Liquid Chromatography; Gas Chromatography; Electrochemistry; and Chromatography Applications Program.

IBM Corporation. 1982. Automatic Sample Handler Operations Manual.

IBM Corporation. 1982. Electrochemistry Operations Manual.

IBM Corporation. 1981. Liquid Chromatography Operations Manual.

IBM Corporation. 1981. Chromatography Application Program Operations Manual.

#### ***Membership in Professional Organizations***

New York Computer and Technology in Education (NYSCATE) (2001 to present)

American Educational Research Association (1994 to present)

National Science Teacher Association (1997 to present)

Science Teachers' Association of New York State (1997 to present)

American Waterworks Association (1976-1979)

#### **VI. Scholarships, Honors, and Awards**

Academic reappointment – 25% reassignment for research purposes – Fall 2010 – Summer 2011

Distinguished Doctoral Dissertation Award, State University of New York, 1998.

Teaching Assistantship, State University of New York, University at Albany, 1994-1997.

IBM Corporation. 1986. Excellence Award. Financial and honorary award for developing an automated computer applications program for the financial projections for the PC order centers.

IBM Corporation. 1983. Excellence Award. Financial and honorary award for successful development and coordination of a national seminar series that introduced a new scientific computer.

Regents Academic Scholarship, 1965-1969.

College of New Rochelle Academic Scholarship, 1965-1969.

Tri-Beta Biology Honor Society, 1966-1969.

(See grants and fellowships above for other competitive awards)

## **VII. Other Activities**

### *Professional Reviewer of Educational Materials*

Review of chapters for a Virtual Learning Encyclopedia (2010)

Review technology in education proposals for the American Educational Research Association. 1998

Review science education materials for The Teacher Materials Project, an on-line database of teacher materials (1998)

### *Additional Courses*

State University of New York, University at Albany. 1991. Management Information Systems.

Manhattan College, Bronx, NY. 1977. FORTRAN.

College of New Rochelle. 1975. Instrumental Methods of Analysis.

### *Workshops/Conferences Attended, without presenting--conferences with presentations start on page 6*

Games in Education Conference (August 2009) – the first day of two day conference on the role and use of interactive gaming in K12 student learning. Hudson Valley Community College

SUNY COCID – Second Life and Virtual Worlds; SUNYIT (April 2009)

NSF Day – January 2009; University at Binghamton / SUNY; attended this one day presentation on NSF funding opportunities and on the process of applying for funds

Games in Education Conference (August 2008) – a two day conference on the role and use of interactive gaming in K12 student learning. Schenectady, NY

Angel Users Conference – May 2007; Indianapolis, IN

Angel Users Conference – Indianapolis, Indiana (May 2007)

NYSSTATE (New York State Computers Association of Teacher Educators) Summer Leadership Summit (July 2006)

NSTA (National Science Teacher Association) National Conference (spring 2006) – also attended a data-probe workshop given by the Concord Consortium within this conference

Teaching and Managing Your Online Course/Study – SUNY Learning Network training (February 2006)

Opening Gates in Teacher Education: 2006 Meeting the Challenges in Education and Teaching (February 2006) – an international virtual conference sponsored by Mofet Institute in Israel

Presentation about New Teacher Mentoring and NYS Mandates – NYC (August 2005)

Alternative Teacher Certification – NYC Support Group Meeting (March 2005)

Alternative Teacher Education Conference – Albany Marriott; October 2004

Third Virtual Conference on Sustainability of Systemic Change (May 2003) – participated in a one week online conference (with keynote speakers, panel discussion and poster session) on sustaining large-scale science education projects that are funded by the National Science Foundation.

NYSCATE (New York State Association for Computers and Technology in Education) – Spring 2003; reviews of technology integration into education and instruction

Instructional Design Workshop – Winter 2002; conducted by the SUNY Learning Network; preparation of SUNY faculty for effective teaching of graduate courses through online course distribution

Comprehensive District Education Planning – Summer 2002; one week workshop on effective school district strategic planning

Second Virtual Conference on Sustainability of Systemic Change (May 2002) – participated in a one week online conference (with keynote speakers, panel discussion and poster session) on sustaining large-scale science education projects that are funded by the National Science Foundation.

Member of the Data Group of New York State data analyst who study district performance on state assessment and help school districts develop curriculum and remediation programs to improve standards-based instruction; ongoing workshop

Science Teacher Association of New York State (STANYS), October 1997. Regional conference at Siena College.

NYSTEP Workshop, hands-on science activities (1996)

Project Wild sponsored by the Western Regional Environmental Education Council (1996)