ANNE PFITZNER GATLING

Assistant Professor Merrimack College School of Education Austin Hall, Office 227 North Andover, MA 01845 gatlinga@merrimack.edu 978-837-3413

EDUCATION

BOSTON COLLEGE LYNCH SCHOOL OF EDUCATION

May 2010

Chestnut Hill, MA, PhD. Curriculum and Instruction Program Science Education and Educational Policy. Dissertation: Investigating the impact of field versus university-based science methods on preservice teachers' belief and abilities to design inquiry-based science instruction for diverse learners. Chair: Michael Barnett, PhD. Committee Members: Kate McNeill, PhD, Maria Brisk PhD, and Eric Strauss, PhD.

HARVARD UNIVERSITY GRADUATE SCHOOL OF EDUCATION

June 2000

Cambridge, MA, EdM, Concentration in School and Teacher Leadership

MCKENDREE UNIVERSITY

May 1992

Lebanon, IL, Bachelor of Science in Elementary Education Concentration in Biology and Social Studies, Honors Program Student Government Association & Residential Life 3&1/2 years

PROFESSIONAL EXPERIENCE

MERRIMACK COLLEGE, North Andover, MA

Assistant Professor 2010-2016, Associate Professor 2016-present

Director of Undergraduate Kindergarten through Twelfth Grade Licensure

Responsible for teaching Elementary Science, Physical Education and Health, Teaching Social Studies, Children's Literature and a new Early Childhood STEAM (Science, Technology, Engineering, Arts and Math) course for graduate students.

Developed the science education program and created a STEM Education lab within the Biology Lab.

Contributed to the development and continue to maintain the Elementary and Early Childhood STEM Degree for elementary and early childhood preservice teachers.

Collaborate with the Merrimack Stevens Service Learning Center to help prepare Merrimack students to volunteer in an urban afterschool STEM program for middle schoolers in eight different schools.

BOSTON COLLEGE, Chestnut Hill, Massachusetts

Instructor Spring, 2006 and Fall, 2009 ED109 Elementary Science Methods Course. Taught field-based course in an urban elementary school as part of an afterschool science club. Planned and led weekly class sessions and mentored, advised, and encouraged preservice teachers as they taught first and second grade students. Responded weekly to

reflection journals, assessed preservice teachers' assignments and monitored progress. Developed Blackboard Vista interactive course website.

Teaching Assistant 2008-2009

BIO145 Ecology of a Dynamic Planet, (Fall)/ BIO 445 Animal Behavior (Spring). Collaboratively developed a course that served as a core science foundation for undergraduates interested in ecology and sustainability. With grant support provided by the *Massachusetts Improving Teacher Quality Program* and the Boston College *Teachers for a New Era Initiative*, led discussion sections for education students and inservice teachers that emphasized the pedagogy to teach the ecological and animal behavior concepts.

Teaching Assistant 2004-2009

ED109 Elementary Science Methods course. Collaboratively developed and continually revised the science methods course to make it field based in an urban school. Co-taught and developed lessons and advised preservice teachers as they taught first through fifth graders. Assessed preservice teachers' assignments and monitored progress.

Professional Development

2004-2008

Assisted in science and science literacy professional development and curriculum implementation for primary and elementary teachers in the Boston Public Elementary Schools and St. Columbkille School.

Teaching Assistant 2003-2004

Collaborated with Department of Geology and Geophysics professor, Geophysics graduate student, and School of Education professor to develop and implement labs for introductory level Earth Science Seismology and Astronomy courses for Arts and Science and Education undergraduate majors. Assessed students' assignments and monitored progress.

Graduate Research Experience

Summer, 2006

Co-instructor, curriculum developer, and outdoor guide and instructor for middle and high school urban students and teachers participating in our science department's 1.4 million dollar NSF ITEST grant funded Urban Tree Study. Currently ongoing and growing program sustained by students and urban teachers who demonstrate a passion for urban trees in the city. Students developed skills to work with leaders in community to address the lack of variety of trees in low-income neighborhoods.

Pre-Practicum Supervisor

2004-2005

Supervised for 12 student teachers during their practicum placements. Responsibilities included serving as a liaison between the schools and Boston College, working with and encouraging and mentoring cooperating teachers to support the intellectual, professional, and social development of the pre-practicum students. I additionally lead and participated in professional development activities in instruction, English Language Learner instructional strategies. Assisted students with lesson development, observed all student teacher lessons, and provided ongoing assessment of all practicum requirements and activities.

SOLDOTNA ELEMENTARY, Soldotna, Alaska

Third, 3rd/4th grade Blend Teacher, & Sixth Grade Teacher

1994-1999, 2000-2002

Incorporated Writer's Workshop, math problem solving with manipulatives, student led conferences, and experiential/community based science and social studies activities utilizing cooperative learning in a rural mainstreamed setting. Activities included: After School Music Program (1994-1999); Adopted Soldotna Creek through Alaska Fish and Game's Adopt A Stream Program included monthly visits to collect data (1997-2002); Coordinated development and maintained school gardens through Beautification Community and the Arbor Day Foundation Grant (1995-2002); Peace Corps World Wise Teacher (1992-2002); Science Fair Coordinator (1995-1999); Jason Project Kenai Peninsula Borough School District Facilitator (Spring, 2001) Member of Kenai Peninsula Borough School District's Science Curriculum Committee and facilitated its implementation into school (1996-1997); Alaska's Benchmark Examinations Cut Score Committee, (2002).

ALLAKAKET SCHOOL Allakaket and Alatna, Alaska

Third. Fourth and Fifth Grade Teacher

1992-1994

Worked with students in a rural Native Athabaskan and Inupiat Eskimo villages, using inquiry based methods to explore their natural environment. Sponsored the family math night, special reading programs, salmon incubation, musicals, an after school incentive program and the ski team. Piloted Alaska Department of Fish and Wildlife's Role of Fire in Alaska Curriculum in classroom.

GRANTS, AWARDS and FELLOWSHIPS

Provost Innovation Fund Faculty Led Initiative Grant

2013-2014

"Promoting STEM Discipline Understanding Through Service Learning." Using Atlas of Science Literacy Workshop Scholarship, AAAS Project 2061

2010

Academy of Excellence Honor, McKendree College

2005

United States Senate, Senator Lieberman Senate Staff, Washington D.C.

2002-2003

Education Fellow, Albert Einstein Fellowship

Drafted bills for legislation, conducted meetings with constituents and various educational agencies, and researched issues related to education (particularly Teacher Quality for the Higher Education Reauthorization). Additionally worked with issues investigating No Child Left Behind, service learning, and the media's effect on children. Additionally worked with issues investigating No Child Left Behind, service learning, and the media's effect on children. Wrote the "Children and Media Research Advancement Act" or the "CAMRA Act" with the guidance of a team of children and media researchers.

Carnegie Foundation Carnegie Scholar, Menlo Park, CA

2001-2003

Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) K-12 Program Looking Beyond Themselves: Preparing Students to Become Invested Members of Their Community For a period of two years, I participated in the scholarship of teaching and learning to critically review my teaching with peers and share the results. A dedicated website based on our project based research continues to inform teachers throughout the world and here at Merrimack College.

Youth for Understanding International Exchange (The Congress-Bundestag Youth Exchange Office) I participated in Research comparing the former East Germany and West Germany School Systems and Curriculum through home interviews and visits to schools and alternative education settings in Hamburg, Warnemunde/Rostock, and Berlin.

American Association of University Women (AAUW)

1999-2000

Career Development Grant

Presidential Award in Excellence in Math and Science Teaching, Elementary Science Education

1998

2000

National Science Foundation

Earthwatch Institute Educator Research Grant

1998

Bees and Orchids in the Rainforests of Brazil

PROFESSIONAL SERVICES

Boston Museum of Science

2013 to present

Preparing Tomorrow's Teachers for STEM: Sharing the "BEST" Model. By invitation only. The conference showcased strategies to bridge engineering into courses for preservice teachers. Professors of Science Education in attendance represented several Boston area universities and community colleges. Additionally, teachers excelling in STEM Education spoke. In 2014, I worked with the MOS directors to construct the inaugural School of Education Professors Summit gathering several science educators representing several Boston regional colleges and universities to determine our field's strengths, weaknesses and needs.

Lawrence Math Science Partnership Training

2011 to present

Each semester I present strategies to Merrimack College student volunteers to help inspire and challenge their urban middle school students in STEM education and work with these middle school students to begin to build skills of perseverance, self-monitoring and flexibility. Developed a related two-page handout for Merrimack College student volunteers.

Presenter at Cohen Hillel Academy, Marblehead, MA

February 27, 2012

Scientific Inquiry and Engineering Design in the Classroom

In this professional development I worked with a team of 10 1st to 8th grade teachers. I gave a brief overview of STEM education; lead an engineering design activity and an investigation. Afterward, I worked individually with several teachers helping them to think about applications specific to their classrooms. I consulted with the STEM committee of teachers who were working with a STEM education grant. I also provided STEM education related materials and resources for the teachers and administrators.

Presenter and Curriculum Mapper Health Curriculum Inservice for Middle School Teachers, August, 6, 2011
 Kenai Peninsula Borough School District (KPBSD), Kenai, Alaska

I mapped the district's new adopted middle school text to the KPBSD's Middle School Health Standards. I also helped to run a full day professional development session for middle school teachers from throughout the Kenai District. I presented current health issues, news, etc. related to middle school students and their education and helped teachers to become familiar with resources for their instruction from both their textbook as well as resources I had listed in Merrimack College's related Lib Research Guide. At this point, health had not been officially taught at the middle school level for several years.

Presenter at Primary Source, Watertown, MA

Wednesday, March 9, 2011

As part of a Three Day K-12 Teacher Workshop I presented the following workshop: *Using Children's Literature to Teach About the Environment*. It demonstrated ways to use children's literature to teach about the environment and cultivate students' "system thinking skills" or their ability to think holistically and understand relationships and interconnections.

• Science Consultant through Center for Catholic Education, Boston College for the Diocese of Worcester K-8 Schools

-Led a committee of 14 teachers and several school principals representing 6 schools in the

Diocese of Worcester, Ma. in a process that culminated in my writing a complete scope and sequence document of 80 pages, and curriculum map for grades K-8 for the six consortium schools. The document reflects input from the committee members as well as my research and suggested bibliography.

-Presented two full day workshops of the document for the St. Paul Consortium Science Curriculum to more than 80 teachers from eight of the additional schools in Worcester Diocese at the request of the Superintendent.

2009

Reviewer of Conference Proposals

-Association of Science Teacher Educators (ASTE)

2008, 2009, 2012, 2014

-National Association of Research in Science Teaching, (NARST)

2007, 2009, 2012, 2013 2002-2009

Instructor, Curriculum Planning Workshops, James A. Garfield Elementary, Brighton, MA, St. Columbkille's School, Brighton, MA, and Soldotna

Elementary, Soldotna, Alaska

Second and Third International Summit for Leadership in Education,

2004 and 2006

Planning Committee under Professor Andy Hargreaves, Boston College

Harvard University Graduate School of Education

2005

Alumni Panelist for "Considering a Doctorate: Pros & Cons, Myths & Realities"

2005

• Member of Thomas Gardner Elementary's Outdoor Classroom Committee, Boston Public Schools

2003

Field Trainer Jason Project Workshops, Live from Alaska

2002

Harvard Graduate School of Education

2000

Experiential Education Conference - Committee Organizer Student Government Association, Education Committee

1999-2000

• Harvard University

Member of Educating Leaders, Leading Education Colloquium (ELLE)

1999-2000

- Advancing Educator Preparation Massachusetts: Unpacking New Curriculum Standards Summit II. May 28,
 2014 Attended with members of my curriculum committee from the School of Education and Social Policy to learn more about the new state standards and related assessment in an effort further improve our department's new programs.
- The Teaching Professor Conference May 30 June 1, 2014
 Attended the pre-workshop presentation "Turning your Teaching into Scholarship". Attended with a group of
 professors (many from the Teaching Circle) as part of the CETL (Center for Excellence in Teaching and Learning)
 initiative and helped to create a Google drive of conference related notes and documents to share with faculty as part of
 the Innovative Classroom Strategies: A Report for the Teaching Professor Conference Faculty Development
 Workshop Through Merrimack College's Center for Excellence in Teaching and Learning and Mobil Merrimack,
- STEM'2 Summit at Gordon College, MA

 November 4, 2014

 attendee Networked with K-12 teachers, engineers, industry and state/federal politicians related to STEM Education.

PAPERS

- Gatling, A. (2016). Engineering encounters: Engineering adaptations. In Froschauer, L. (Ed.), *Bringing STEM to the Elemetnary Classroom*. *NSTA Press*.
- Gatling, A. (2016). Technology's role in supporting elementary preservice teachers as they prepare and teach elementary students in an urban STEM afterschool club. In Urban, M. & Falvo, D. (Ed.), *Improving K-12 STEM education outcomes through technological integration*. *IGI Global*.
- Gatling, A. (2015). Preparing elementary preservice science teachers to work with diverse learners. *Manuscript submitted for publication*.
- Gatling, A. & Houle Vaughn, M. (2015). Engineering encounters: Engineering adaptations. *Science and Children*, September, 74-79.
- Houle Vaughn, M. & Gatling, A. (2013). Seeing the science: A rubric helps to examine written science observations of second-grade English language learners. *Science and Children*, November, 64-69.
- Barnett, M., Anderson, J., Houle, M., Higginbotham, T., Gatling A. (2012). The process of trust building between university researchers and urban school personnel. *Urban Education* 45(5), 630-660.
- Gatling, A. (2012). Building strong elementary science teachers. In J. Settlage and A. Johnston (EDs.), *Proceedings of the Science Education at the Crossroads Conference* (pp. 26-27). Providence, RI.
- Barnett, M., Gatling, A., & Martin, D. (accepted with revisions) Challenges in supporting pre- service teachers learning to teach science in Urban Elementary Schools. *Journal of Science Teacher Education*.
- Barnett, M., Wagner, H., Gatling, A., Anderson, J., Houle, M., & Kafka, A. (2006). The impact of science fiction film on student understanding of science. *Journal of Science Education and Technology*, 15(2), 179-191.
- Barnett, M., Kafka, A., Pfitzner, A., & Syzmansky, E. (2005). The living earth: Inviting students into the world of scientific research through seismology. *Journal of College Science Teaching*, 34(6), 50-54.

RESEARCH PROJECTS

Co- Principal Investigator: The Role of Noticing ELL Student Ideas in Elementary Teacher Development
This study is examining how a scaffolded activity in which preservice teachers work to interpret the science and engineering ideas of elementary English Language Learner's writing influences their professional noticing of science ideas. 2014-2015 Co-Principal Investigator Dr. Meredith Houle Vaughn, PhD San Diego State University

Co- Principal Investigator: Lawrence Math Science Partnership Volunteer Service Learning Study This study is examining the impact of curriculum enhancements on their middle school student's attitudes; motivation and interest in Science and STEM related careers in an effort to determine the quality of the training and preparation of our Merrimack student mentor volunteers. We will use this research to determine what more could we provide to support volunteers in their work with middle school students. 2014-2015 (a continuation of a long term study) Co-Principal Investigator Mary McHugh, Steven's Learning Center Director

Co-Principal Investigator: Lawrence Math and Science Partnership Pilot Program

The Lawrence Math Science Afterschool Partnership (LMSP) Pilot Study is examining the impact of curriculum enhancements on their middle school students' attitudes, motivation and interest in Science and STEM related careers. This research is also in partnership with PEAR (Program in Education, Afterschool and Resiliency) using the Dimensions of Success (DoS) and Common Instrument (CI) measurement tools developed by PEAR. These tools provide information on our program quality and student interest in STEM. 2014-2015 Co-Principal Investigators, Mary McHugh, Steven's Learning Center Director and Katie Donnell, Steven's Learning Center Coordinator.

PEAR received IRB approval for the two surveys from McLean Hospital: Protocol # 2012-P 001190/1; Harvard/McLean Hospital, contact: (Gil Noam, Ed.D, Ph.D., Director of PEAR)

Presentations

- Gatling, A. (2015). Exploring the Design and Theory Behind a Field Based Elementary Science Methods Course in an Urban Elementary School presented at the Association of Science Teacher Educators (ASTE) International Conference, Portland, OR.
- Gatling, A. (2014). Exploring the Design and Theory Behind a Field Based Elementary Science Methods Course in an Urban Elementary School presented at Bi-Annual meeting of the Massachusetts Association of Colleges for Teacher Education Commonwealth Teacher Education Consortium (MACTE/COMTEC/MAECTE) Conference, College of the Holy Cross, Worcester, MA.
- Gatling, A. (2014). NSTA National Science Education Conference Informal Science Day Share-a-Thon, Boston, MA April 4, 2014. Three STEM Education students and I brought curriculum and an investigation that had been done as part of the Lawrence Math/Science Partnership to share with other informal educators.
- Gatling, A. (2014). Seeing the Science: Using a Rubric to Examine Written Science Observations of English Language Learners, NSTA (National Science Teacher Association) National Science Education Conference Presentation Boston, MA.
- Gatling, A. (2013). Get your force in motion: Force and motion activities for elementary teachers. National Science Teacher Association (NSTA), Presentation accepted but I declined, unable to travel. National Conference in San Antonio, TX.
- Gatling, A. (2012). An urban field based science methods course with ELL student work to analyze and assess as a means to inform instruction. Paper and student work and coding presented at Bi-Annual meeting of the Massachusetts Association of Colleges for Teacher Education Commonwealth Teacher Education Consortium (MACTE/COMTEC/MAECTE) Conference, Worcester, MA.
- Gatling, A. (2012). Building strong science teachers. Research shared and discussed at the Science Education at the Crossroads Conference, Providence, RI.
- Gatling, A. (2012). Investigating the impact of field verses university based science methods on preservice teachers' belief and abilities to design inquiry based science instruction for diverse learners. Paper presented at the annual meeting of the Association for Science Teacher Educators (ASTE), Tampa, FL.
- Gatling, A. (2012). Comparison of field and university based science methods courses' impact on preservice teacher's belief and abilities to design instruction for diverse learners. Paper presented at the annual meeting of the

- National Association for Research in Science Teaching (NARST). Indianapolis, IN.
- Gatling, A. (2012). Building strong elementary science teachers. Paper presented at the annual meeting of Science Education at the Crossroads, Providence, RI.
- Gatling, A. (2009). A comparison study of the impacts field and university based science methods courses have on preservice teachers views on how diverse students learn. Paper presented at the Harvard Graduate School of Education 2009 Student Research Conference, Cambridge, MA.
- Gatling, A. (2009). Emily: A case study describing the challenges, struggles, and successes a preservice teacher encountered in a field based science methods course. Paper presented at the annual meeting of the Association of Science Teacher Educators (ASTE) Conference, Hartford, CT.
- Gatling, A., & McNeill, K. (2008). A comparison of field and university based science methods courses impact on preservice teacher's view of how students learn science. Paper presented as part of panel at the annual meeting of the National Association of Research in Science Teaching, (NARST) Conference, Baltimore, MD.
- Gatling, A. (2008). Connecting teacher preparation more closely to practice and diverse learners. Paper presented at the annual meeting of the Association of Science Teacher Educators (ASTE) Conference, St. Louis, MO.
- Houle, M., Gatling, A., & Barnett, M. (2007). The birds and the trees: Leveraging technology to engage urban youth. Paper presented at the annual meeting of the North American Association for Environmental Education (NAAEE) Conference, Virginia Beach, VA.
- Gatling, A., & Barnett, M. (2007). Learning by doing: Teaching through authentic experiences in an elementary science methods course. Paper presented at the annual meeting of the Association for Science Teacher Educators (ASTE) Conference, Clearwater, Florida.
- Gatling, A., Barnett, M., & Martin, D. (2007). Impacts of a field based science methods course on pre-service teacher preparedness to teach in urban settings. Paper presented at the annual meeting of the American Association of Colleges for Teacher Education (AACTE), New York, NY.
- Gatling, A., Barnett, M., & Martin, D. (2007). Preparing elementary teachers to teach science in urban elementary schools: The impact of intensive field experiences, curriculum implementation, and beliefs. Interactive Poster Session at the National Association of Research in Science Teaching, (NARST), New Orleans, LA.
- Barnett, M., Wagner, H., Anderson, A., Gatling, A., (2006). The impact of popular film on student understandings of Earth science concepts. Interactive Poster Session at the annual conference for the National Association of Research in Science Teaching (NARST), San Francisco, CA.
- Barnett, M., Wagner, H., Kafka, A., & Pfitzner, A. (2006). Impact of popular science fiction movies on student understanding of science content and process. Paper presented at the 2006 annual meeting of the National Association of Science Teaching (NARST), San Francisco, CA.
- Pfitzner, A., & Barnett, M. (2006). Challenges in supporting pre-service teachers' learning to teach science in urban elementary schools. Paper presented at the annual meeting of the Association of Science Teacher Educators (ASTE), Portland, OR.
- Gatling, A., Barnett, M. (2005). Pre-service teachers' dependency on literature as a base for their science lesson despite experiences in inquiry based content and method's course. Paper presented at the National Association of Science Teaching (NARST), Dallas, TX.
- Bellegarde, H., Barnett, M., Pfitzner, A., Anderson, J. Houle, M. and Kafke, A. (2005). Inviting students into the world of seismology research: impact on student understanding of seismological concepts. Paper presented at the National Association of Research in Science Teaching Conference (NARST), Dallas, TX.
- Dresden, K., Pfitzner, A., and Scopinich, K. (2000). Culture of change: Three effective schools in the greater Boston

INVITED PRESENTATIONS

Gatling, A. (2005) Education: A Gift for Life. Keynote Speaker at McKendree College Founder's Day Celebration. Awarded Academy of Excellence Honor Lebanon, IL.

Courses Taught

Teaching Elementary Science, Health and Physical Education (Undergraduate level - Designed course, STEM ED lab and related Merrimack College STEM Club at Wetherbee Elementary, Lawrence, MA).

Curriculum, Instruction and Assessment in Science, Health and Physical Education (Graduate Level)

Early Childhood STEAM, Health and Physical Education (Graduate level – Designed course for Spring 2015)

Teaching Social Studies

Children's Literature

Introduction to Early Childhood Education (Undergraduate and Graduate Level)

Differentiated Instruction for the Inclusive Classroom

Behavioral Management

SERVICE

Curriculum Committee Member, Merrimack College School of Education and Social Policy	2013-2014
Merrimack College CEPC Curriculum Education Policy Committee	2010-2012
UCC Undergraduate Curriculum Committee (formally CEPC)	2012-2014
STEM Education Major Co-Chair	2011-present
Library Committee	2012-2013 Chair 2013-2014

Chair of Hiring committee for our new tenure track Special Education position

Spring, 2014-15

School of Education and Social Policy.

Massachusetts STEM Summit, Gillette Stadium Foxborough, MA.

November 13, 2013

Brought 3 Merrimack Students (2 STEM Education Students) to learn of state efforts in STEM Education.

Massachusetts STEM Summit, DCA, Worcester, MA

Brought 7 Merrimack STEM ED Students and 1 Middle School Science Teacher to learn of state efforts in STEM Education. (attend w/ STEM ED students each year, presented with faculty and students in 2016, and have a table with Merrimack STEM each year)

Thomson Elementary, North Andover, MA

Taught science lessons in Kindergarten (Adaptations) and 1st grade classrooms (Matter and Sound) 3rd grade (Properties of Materials).

Wetherbee Elementary, Lawrence, MA

2011-present

Bring 22-26 Preservice teachers to develop and teach a STEM unit to 44-50 3rd and 5th graders during the school's Enrichment portion of the day.

Merrimack College's Alpha Eta Kappa Chapter of Kappa Delta Pi (KDP) Education Honor Society Counselor, Worked with students to initiate a new Chapter here at Merrimack Chapter Spring, 2014 2014-to present

Faculty Sponsor for the Education Club

2014-2016

North Andover Merchant's Fall Festival Volunteer

October 2014

They raised \$7000 for the STEM education program at the North Andover Middle School. I also helped to gather 16 Merrimack Freshmen from the First Year program to volunteer at the various stations for 3 hours that day.

Merrimack College Choir Member (2011-present)

CRAM JAM Merrimack Student Study Break for finals volunteer 2011-2013 Mack Gives Back Day 2012-2014

Join the Merrimack College community to volunteer in the community.

MACK CALLS 2011-2014

Part of the Freshmen First Year program where we visit Freshmen fall and spring in their dorm rooms to see how the semester is going.

PROFESSIONAL AFFILIATIONS

Association for Science Teacher Educators (ASTE)
Albert Einstein Fellowship (AEF)
National Association for Research in Science Teaching (NARST)
Policy Committee Member – elected (2013)
Attended policy meeting at the international conference in Pittsburg, PA (2014)
Northeast STEM Advisory Committee, Massachusetts (2012-present)
National Science Teachers Association (NSTA)
100K in 10