NANCY ROMANCE

FAU STEM Collaborative
College of Engineering and Computer Science
Florida Atlantic University
Boca Raton, Florida 33431
(561)-297-3577

916 SW 35 Ct.
Boynton Beach, FL 33435
Home 561-752-0990
Cell 561-716-4000

EDUCATION

Ed.D. 1982	Educational Leadership – Curriculum Design & Learning, Florida Atlantic University
Ed.S. 1980	Administration and Supervision, Florida Atlantic University
M.S. 1970	Biology/Secondary Science, State University College of New York at Buffalo
B.A. 1965	Biology, State University College of New York at New Paltz

PROFESSIONAL EXPERIENCE

2024-Present: Assistant VP: STEM Education Research. Co-PI: USDOE Promise Neighborhoods.

2019-Present: *Affiliate Graduate Faculty*: Florida Atlantic University - College of Engineering and Computer Science. Activities include collaborative grant writing, serving as PI or Co-PI on federally funded grants, collaborative projects across departments, supporting diversity, equity, and inclusion initiatives. serving on college committees.

2018-20: *Director*: *FAU STEM Collaborative* - Florida Atlantic University. Currently collaborating on start-up projects and grant writing with the Colleges of Science, Nursing, Arts & Letters, Engineering and Computer Science and Medicine.

1992-Present: *Professor, Science/Literacy Education, College of Education, Florida Atlantic University.* Currently PI: USDOE Hispanic Serving Institution with College of Engineering; Co-PI: NSF S STEM; Completed Grant Activity– PI on NSF DR K-12: Early Science Learning and Literacy Development (2013-2018); Co-PI: NSF GK12 and NSF RIGEE; Advisory Member on NSF STEM-C, NSF ChemBOND, and NSF Statewide Systemic Initiative. Previous grants: PI USDOE/IES Vocabulary Development (2004-08), NSF/REC/IERI Science and Literacy (2002-09), USDOE/IES Reading Comprehension (2004-09). Other research-related activities: Internal Evaluator – NSF ADVANCE (2016-19); Coordinator-Outreach Programs - $10 mil FLDOE Center of Excellence Grant in Biomedical and Marine Biotechnology; Board Member for Deerfield Beach Hurricane Mitigation Project; Permanent Member - Review Panel for USDOE/IES Grants in Mathematics and Science (2009-16); Reviewer for NSF (IERI, DR-K12, STEM+C); Reviewer for NSF PAEMST - Science Teacher Excellence Selection Committee; Panelist for USDOE/IES Middle School Science Education Committee, Rural Education Centers. Advisory Committee to VP for Research (203-05); Coordination with Scripps for Statewide BioFlorida Career Education Project; Collaboration - Committee of Education and Charter School of University of Chicago; Science/Literacy group at University of Michigan; Collaboration with Faculty in Charles E. Schmidt of Science and College of Engineering and Computer Science; Continued publications, presentations; service to professional organizations; Florida Atlantic University Researcher of the Year (2003); College of Education - Researcher of the Year (1997, 2002, 2003, 2009)

2005-2008: *Professor and Science Education Specialist, Charles E. Schmidt College of Science. 3-Year* appointment for grant initiatives across departments (chemistry, biology, mathematics); Major projects: NSF Peer-Led Team Learning, NSF GK-12 and NSF/IERI grant project activities; Coordinator for VP's Committee on Research and Scripps Induction to FAU Research (see above)

2002-2004 *Interim Research Director, College of Education, Florida Atlantic University.*
Develop and initiate a plan to mentor faculty for research development and acquisition of external support for research.

1996-2003 *Executive Director, Region V Area Center for Educational Enhancement (ACEE),* Florida Department of Education, Region V Area Center for Educational Enhancement (ACEE); Funded project - 6 years in duration- budget $7,100,000; Regional coordinator of the Postsecondary

Mathematics, Science and Technology Group; served as Principal Investigator (1989-96) Eisenhower Title II grant programs. Florida Department of Education Advisory Committee for NSF/Statewide Systemic Initiative Project.

1990-1992 *Associate Professor, Science Education, Curriculum and Instructional Systems, Florida Atlantic University*

1987-1990 *Assistant Professor and Department Chairperson, Florida Atlantic University*
Department Chairperson of Elementary Education (1987-89) and Director - Regional Center of Excellence in Mathematics and Science (1991); member of writing committee for Science Curriculum Framework for Florida; teaching responsibilities include teaching graduate and undergraduate teaching methods courses in science, also secondary science methods for teachers. Teaching responsibilities include graduate courses in Curriculum and Instruction. Chairperson of 7 doctoral committees, directing graduate student research, conducting research in videodisc technology applications to science teacher preparation, conducting cognitive science based research in the improvement of science instruction in elementary schools (K-5).

1980-1986: *K-12 Science Curriculum Supervisor, School District of Broward County, Florida.* Major responsibilities: development, implementation and evaluation of K-12 science program in 150 schools, including management of a 9 million dollar budget, supervision of science specialist staff, district-wide staff development for teachers and Administrators, FPMS training, development of instructional policies and procedures for district, proposal development for external funding, representation of District on National Curriculum, Testing, and Policy Committees, school liaison with community and private sector

1979-1984: Adjunct Faculty: Broward Community College, University of Florida, Nova Southeastern University

1979-1980: Assistant Principal, Ramblewood Middle School, Broward County, Florida

1965-1979: Science Department Chairperson, Science Teacher (K-12) - Buffalo, NY; Ft. Lauderdale, FL; Phoenix, Az.

RESEARCH AND DEVELOPMENT GRANTS

Funded – In Progress

2024-26 **Total: $21,000,000. Co-PI: Romance**
(PI: Gregg Fields, VP – FAU Research). (Co-PIs: Luna, Colvin, & Simpson). U. S. department of Education. Promise Neighborhoods – BrowardUP.

2023-28 **Total: $1,192,757. Co-PI: Romance**
(PI: Kalva; Co-PIs: Zhuang, Neshenko, Sica). *NSF CyberCorps Scholarship for Service*: Building the Next Generation Cybersecurity-Ready Workforce. #2336456.

2020-26 **Total: $1,000,000. Co-PI: Romance**
(PI – Pados, Co-PIs: Hashemi, Zhu, Batalama). *NSF S STEM*: Making the Masters' Degree in AI Accessible to High Achieving Low Income Students.

Completed - Grant-Funded Projects - (1987-2025)

2023-24. **Total: $100,000. Co-PI: Romance**
(PI: Kalva; Co-PI: Zhuang). *NSF DRL-RAPID: AI*: Data Driven Approaches to Integrating AI in K-12 Education Using Social Media Analysis.

2022-23 **Total: $838,494. PI: Romance.** (with Batalama, Persichetti, Neshenko, Kalva). CAREERS in Cybersecurity. Florida Governor's Office and CyberFlorida at USF**.**

2019-24 **Total: $ 569,900. Evaluator: Romance**
NSF GeoPaths: (PI: Z. Xie, **Co-**PI, Rezler, Comas as Co-PIs). Collaborative research: GP Impact: A GeoPathway Utilizing High Tech Geoscience Experiences for Recruitment and Retention – A Collaborative between Palm Beach State College and Florida Atlantic University.

2016-25 **Total: $4,435,000. PI: Romance**
(Co-PI: Zhuang, Vitale). USDOE Title III: Hispanic Serving Institution. An Articulated Community College-University Framework for Increasing Graduation Rates of Hispanic and Low-Income Students in Computer Science. In conjunction with Palm Beach State College and Broward College.

2013-18 Total: **$2,989,254**. **PI: Romance**.
NSF DR K12. *An Integrated Instructional Model for Accelerating Student Achievement in Science and Literacy in Grades 1-2.*

2013-17 Total: **$150,000**. **Co-PI**. **Romance**
NSF RIGEE. (with PI: Sobhan, Co-PIs, An and Maniaci) *Exploring the disconnect between self-determination theory and the engineering classroom environment*.

2008-11 Total: **$1,434,000 PI: Romance**
United States Department of Education – Institute of Education Science. *A Multi-Part Intervention for Accelerating Vocabulary Acquisition through Inductive Transfer.*

2007-15 Total: **$2,558,523: Co-PI Romance**
(PI Chamely-Wiik, Co-PIs: Haky, Louda). National Science Foundation GK-12 Initiative (Co-PI) *Project ChemBOND: The Next Generation. 2004-08*

2004-08 Total: **$789,000 PI: Romance**
United States Department of Education and Institute of the Education Sciences (IES) (R305G04089); *Embedding Knowledge-Focused Reading Comprehension Strategies in Cumulative Content-Area Instruction in Grades 3-5: An Assessment of Immediate, Transfer and Long-Term Impact on Reading Achievement*

2002-12 Total: **$5,969,351. PI: Romance**
Interagency Educational Research Initiative (NSF, NIH, USDOE) (REC 0228363) Title: *Validation of a multi-phase scale up design for a knowledge-based intervention in science and reading comprehension*.

2005-06 Total: **$139, 675. PI: Romance**
Multi-University Reading, Mathematics, and Science Initiative. Learning Systems Institute. Florida State University**.** *A Research-Based Instructional Intervention for Accelerating Vocabulary Acquisition of At-Risk Students in Grade 4*.

2004-05 Total: **$159,073. PI: Romance**
Multi-University Reading, Mathematics, and Science Initiative. Learning Systems Institute. Florida State University**.** *Adaptation of a Knowledge-based Instructional Intervention to Accelerate Student Learning in Science and Early Literacy in Grades K-2*.

2003-04 Total: **$147,518. PI: Romance**
Multi-University Reading, Mathematics, and Science Initiative. Learning Systems Institute. Florida State University**.** *Effect of Embedding Knowledge-Focused Reading Comprehension Strategies in Integrated Science Instruction on Achievement in Science and Reading Comprehension in Grade 5*.

2002-03 Total: **$731,692 PI: Romance**
Florida Department of Education: Region V Area Center for Educational Enhancement.

2002-03 Total: **$100,000. PI: Romance**
Florida Department of Education: *Workforce Development Project*.

2001-02 Total: **$98,819 Co-PI: Romance**
National Science Foundation (DUE 0099458). *Project ChemBOND: Building Opportunities for Meaningful Learning*

2001-02 Total: **$1,456,879 PI: Romance**
Including: Florida Department of Education: *Goals 2000.* $373,126; Florida Department of Education: *Eisenhower*. $385,000*;* National Science Foundation/IERI (USDOE, NIH, NSF) *Planning Grant*: $129,000; *Mathematics & Science Professional Development*. $326,742; *Workforce Development*. $100,000; *Bill & Melinda Gates Foundation.* $67,415*; National Science Foundation $75,000.*

2000-01 Total: **$1,472,340 PI: Romance**
Includes: *Quality Enhancement of Mathematics and Science Teacher Development and Training* -The Florida Department of Education and UCF: $378,340*; FlaRE Grant*: University of Central Florida. Amount: $25,000*; GATES Foundation grant through Florida Department of Education*. $81,000; *Region V Area Center (ACEE)*, Florida Department of Education; $689,000*; Carl E. Perkins School to Work Grant* $99,000*, FlaRE and Gates Grants*, $100,000; Co-PI (with Jerry Haky, Dept. of Chemistry, College of Science) *National Science Foundation grant to improve undergraduate student achievement and retention in first semester chemistry*, *$100,000*

1999-00 Total: **$789,000 PI: Romance**
Includes: *Region V Area Center for Educational Enhancement, Florida Department of Education;* $690,000*; Carl E. Perkins School to Work grant* $99,000*.*

1998-99 Total: **$ 938,000 PI: Romance**
Includes: *Region V Area Center for Educational Enhancement: Florida Department of Education in Conjunction with (2) Eisenhower Title II, Goals 2000 and Carl E. Perkins Federal Flow Through Funds.*

1997-98 Total: **$700,000 PI: Romance**
Includes: *Region V Area Center for Educational Enhancement: Florida Department of Education in conjunction with Eisenhower Title II, Goals 2000 and Carl E. Perkins Federal Flow-Through Funds*

1996-97 Total: **$ 733,000 PI: Romance**
Includes: Area Center for Educational Enhancement: Florida Department of Education in conjunction with Eisenhower Title II and Goals 2000 Federal Flow Through; Workforce Development: Florida Department of Education

1995-96 Total: **$ 124,768. PI: Romance**
Includes: *Eisenhower Title II Grant: Higher Education Consortium for the improvement of Undergraduate Mathematics and Science Teaching*; Florida Department of Education

1994-95 Total: **$ 165,391 PI: Romance**
Includes: *Eisenhower Title II Grant*

1993-94 Total: **$ 165,700 PI: Romance**
Includes: *School improvement in the Teaching and Learning of Elementary Science for Regular and At Risk (grade 2-5) Students: Enhancement of a Continuation Project Incorporating Teacher*

Training/Support and Curriculum Integration within a Two-Hour Daily Time block for Science Instruction. Title II Eisenhower Grant, Florida Department of Education

1992-93 Total: **$100,000. PI: Romance**
Includes: *Using a Thematic Approach to Enhance In service Teachers' Understanding and Teaching of Core Science Concepts: A Model for Increasing the Science Achievement and Attitudes of At Risk and Minority Students in Grades 4 and 5.* Title II Grant, Florida Department of Education

1991-92 Total: **$100,000. PI: Romance**
Includes: *Improving Science and Mathematics Achievement for At Risk Students through Curriculum Revision and Implementation that Directly Enhances the Quality of and Expands Time Allocated for Instruction.* Title II Grant, Florida Department of Education

1990-92 Total: **$43,504. PI: Romance**
Includes: *Partnerships for Advancing Learning in Science for At Risk Students in Grades 4-6:*
A cooperative initiative Among FAU Colleges of Education and Science, Florida Power & Light and the School Board of Broward County, Florida. Title II, Florida Department of Education

1990-91 Total: **$86,000 PI: Romance** Includes: *Regional Center for Excellence in Mathematics, Science and Computers*, Florida Department of Education

1990-91 Total: **$5000 PI: Romance** *Includes: Technology Based Teacher Training to Facilitate Science Core Concept Mastery and Methodological improvements in Teaching Science Concepts to Intermediate Level Grades 4-6 At Risk Students*. FAU Internal Research Grant.

1989-90 Total: **$27,000 PI: Romance**
Includes: *The Elementary Principal as Leader in Building a Sound Elementary Science Curriculum*. Title II Grant, Florida Department of Education

1988-92 Total: **$12,000 PI: Romance**
Includes: *Establishing a PALS Network for Leadership Training of Principals*. National Science Foundation (NSF) Grant through Clarion University

1988-89 Total: **$35,000 PI: Romance**
Includes: *Facilitating Teacher Leadership and Instructional Skills For Improving Science Instruction in Elementary Schools*, Florida Higher Education Project Grant, Title II

1988-89 Total**: $5000 PI: Romance**
Includes: *Utilization of Videodisc Technology and Artificial Intelligence Environments for Enhancing Elementary Teachers Concept Knowledge in Science.* Faculty Development Grant, Office of the Provost

1987-89 Total: **$300 PI: Romance**
Includes: *Multidimensional Scaling Analysis of Pre-service Teachers Perceptions of the Differences between Physical and Chemical Change*s. Dialogue of Education Seed Grant

2015-18 **Advisory Board** - *NSF STEM+C -School District of Broward County*, FL (2015-18)

2013-18 **Advisory Board** - NSF Systemic Initiative - University of Toledo (2013-18)

SELECTED PUBLICATIONS and CONFERENCE PROCEEDINGS

Romance, N. (2025, In press). Constructing and using propositional concept maps for writing and learning in science. In S. Graham, C.B. Olson, & T. Baker, (Eds.), Writing instruction across the disciplines: Evidenced-based best practices in grades 6-12. Pp. 267-294. NY: Guilford.

Zilouchian, A. & Romance, N. (2025). Advancing AI Education: Curriculum Development in Florida's Two-Year State Colleges for Student Career Advancement (#48352).. In the Proceedings of the 2025 ASEE Conference, Montreal, CA.

Romance, N. R., Neshenko, N., & Zad, Samira. (2023). Coalescing all resources for engagement, enrollment, and readiness of students in cybersecurity. Presented at the National Institute for Cybersecurity Education (NICE) Conference. Seattle, WA. June, 2023.

Zilouchian, A., Romance, N., & Vitale, M. (July, 2021). *A university-state college collaborative project for Hispanic student success in STEM*. Virtual Presentation: Annual Meeting of the American Society of Engineering Educators (ASEE), Long Beach, CA.

Romance, N. R., Vitale, M. R. & Zhuang, H. (March, 2021). *Linking technology and computer science trends for motivating STEM students' retention and success*. Presented at the Virtual Conference of AHSIE, Long Beach, CA.

Zilouchian, A., Romance, N., Vitale, M. (June, 2020). *A Collaborative Framework to Advance Student Degree Completion in STEM*. Proceedings of the Annual Conference of the American Society of Engineering Educators (ASEE), Montreal, CA.

Romance, N., Vitale, M., & Zilouchian, A. (June, 2020). *Combining Academic and Socio-Behavioral Practices for Mentoring Training to Support Transfer Student Success in STEM Degree Programs*. Presented at the 2020 (Virtual) Annual Conference of the American Society of Engineering Educators (ASEE), Montreal, CA.

Romance, N., Zilouchian, A. & Hamadeh, D. (March, 2020). *Development of a comprehensive mentoring model for Hispanic and Low-Income students in STEM.* Presented at the 12th Annual AHSIE Best Practices Conference (Virtual). Fort Lauderdale, FL.

Hapgood, S., Charlene, C. M., Brenneman, K., Clements, D. H., Duschl, R., Fleer, M., Greenfield, D. B., Hadani, H., Romance, R., Sarama, J., Schwarz, C. & VanMeeteren, B. (2020).The importance of early childhood STEM education. In C. Johnson, M. Mohr-Schroeder, T. Moore & L. English (Eds.) p. 87-100, *Handbook of STEM Education Research*. Routledge/Taylor & Francis: London.

Sarama, J., Clements, D., Nielsen, N., Blanton, M., Romance, N., Hoover, M., Staudt, C., Baroody, A., McWayne, C., and McCulloch, C. (2019). *Considerations for STEM education from PreK through grade 3.* Waltham, MA: Education Development Center, Inc. Retrieved from http://cadrek12.org/resources/considerations-stem-education-prek-through-grade-3.

Romance, N., Zilouchian, A., Zhuang, H., Vitale, M., Myers, A., & Maharaj, C. (March, 2019). *Evidenced-based learning practices supporting Hispanic and Low-Income Students performance in STEM*. Presented at the 11th Annual AHSIE Best Practices Conference. Riverside, CA.

Romance, N., Vitale, M., Zilouchian, A, & Miller, C. (June, 2018). *From gateway to pathway: Mentoring the mentors to provide academic and motivational support for struggling STEM majors in required undergraduate mathematics courses*. Proceedings of the Annual Meeting of the American Society of Engineering Educators (ASEE), Salt Lake City, Utah.

Romance, N., Vitale, M., Zilouchian, A, & Miller, C. (June, 2018). *From gateway to pathway: Mentoring the mentors to provide academic and motivational support for struggling STEM majors in required undergraduate mathematics courses*. Proceedings of the American Society of Engineering Educators (ASEE), Salt Lake City, Utah.

Chamley-Wiik, D, Haky, J., Louda, D., Romance, N., Vitale, M. & Campbell, A. (2018). The effects of a university/ secondary school partnership on the communication skills of STEM graduate students. *International Journal of Science Education*.

Romance, N., Vitale, M., Zilouchian, A, & Greenberg, A. (March, 2018). *Transforming engineering majors to math mentors: Promoting mathematical thinking for URM STEM majors*. Abstract published in the Conference Proceedings of the Alliance of Hispanic Serving Institution Educators (AHSIE), University of Illinois, Chicago, IL.

Romance, N., Vitale, M., Zilouchian, A, & Miller, C. (June, 2018). *From gateway to pathway: Mentoring the mentors to provide academic and motivational support for struggling STEM majors in required*

undergraduate mathematics courses. In the Conference Proceedings of the American Society of Engineering Educators (ASEE), Salt Lake City, Utah.

Chamley-Wiik, D, Haky, J., Louda, D., Romance, N., Vitale, M. & Campbell, A. (2018). The effects of a university/ secondary school partnership on the communication skills of STEM graduate students. *International Journal of Science Education*.

Sarama, J., Clements, D., Nielsen, N., Blanton, M., Romance, N., Hoover, M., Staudt, C., Baroody, A., McWayne, C., and McCulloch, C. (2018). *Considerations for STEM education from PreK through grade 3*. Waltham, MA: Education Development Center, Inc. Retrieved from http://cadrek12.org/resources/considerations-stem-education-prek-through-grade-3.

Romance, N., Vitale, M., Zilouchian, A, & Greenberg, A. (March, 2018). *Transforming engineering majors to math mentors: Promoting mathematical thinking for URM STEM majors*. Abstract published in the Conference proceedings of the Alliance of Hispanic Serving Institution Educators (AHSIE), University of Illinois, Chicago, IL.

Romance, N. R., & Vitale, M. R. (2017). Implications of a cognitive science model integrating literacy in science on achievement in science and reading in grades 3-5 with transfer effects to grades 6-7. *International Journal of Science and Mathematics Education,* 15, 979–995.

Brown, N., Sobhan, K., An, P-C., Sherman, R., and Romance, N. (June, 2015). I*nvestigating the relationship between faculty knowledge of self determination theory, the classroom learning environment, and engineering student outcomes*, In the Conference Proceedings of the ASEE 122nd Annual Meeting.

Romance, N., Vitale, M., Zilouchian, A, & Miller, C. (June, 2018). *From gateway to pathway: Mentoring the mentors to provide academic and motivational support for struggling STEM majors in required undergraduate mathematics courses*. In the Conference Proceedings of 125th ASEE, Salt Lake City, Utah.

Romance, N. R., Vitale, M. R. & Miller, C. (2015). Applying a cognitive-science framework for developing reading comprehension through content area learning in grades k-5. In the Proceedings of the *EuroAsianPacific Joint Conference on Cognitive Science*, Torino, Italy.

Chamely-Wiik, D., Haky, J., Louda, D., & Romance. (2014). "SQER3: An Instructional Framework for Using Scientific Inquiry to Design Classroom Demonstrations*." Journal of Chemical Education*, 91 (3), 329–33.

Vitale, M. V., Kaniuka, T. S., &, Romance, N. R. (2013). Aggregating school-based findings to support decision-making: Implications for educational leadership. *Issues in Educational Research,* 23, 69-82.

Chamely-Wiik, D., Louda, D. W., Romance, N. R., & Haky, J. E. (2012). "SQER^3 : A framework for transforming demonstrations from a spectator sport into a scientific experience. *Journal of Chemical Education*. 91(3),

Romance, N. R., & Vitale, M. R. (2012). Science IDEAS: A research-based K-5 interdisciplinary instructional model linking science and literacy. *Science Educator*, 21(1), 1-12.

Romance, N. R., & Vitale, M. R. (2012). Interdisciplinary perspectives linking science and literacy in grades K-5: Implications for policy and practice. In B. J. Fraser, K. G. Tobin, & C. J. McRobbie (Eds.) *Second International Handbook of Science Education* (Part Two) (pp. 1351-1374). NY: Springer.

Romance, N. R. , & Vitale, M. R. (2012). Expanding the role of K-5 science instruction in educational reform: Implications of an interdisciplinary model for integrating science and reading. *School Science and Mathematics. 11*2 (8), 506-515.

Vitale, M. R., & Romance, N. R. (2012). Using in-depth science instruction to accelerate student achievement in science and reading comprehension in grades 1-2. *International Journal of Science, Mathematics and Technology*. 10, 457-472.

Vitale, M. R. & Romance, N. R. (2012). A research-based strategy for inductively accelerating vocabulary acquisition of at-risk students in grade 4. *International Journal of Research Studies in Language Learning.*

Romance, N. R. & Vitale, N. R. (2011). Broadening the ontological perspectives on science learning: Implications for research and practice in science teaching (pp. 414-421). In S. Andrews, S. Polovina, R. Hill & B. Akhar (Eds.), *Proceedings of the 19th International Conference on Conceptual Structures*. UK: Springer.

Romance, N. R. & Vitale, M. R. (2011). A research-based instructional model for integrating meaningful learning in elementary science and reading comprehension: Implications for policy and practice. In N. Stein & S. Raudenbush (Eds.). *Developmental cognitive science goes to school* (pp. 127-148). NY: Routledge.

Vitale, M. R., & Romance, N. R. (2011). Adaptation of a knowledge-based instructional intervention to accelerate student learning in science and literacy in grades 1-2. *Journal of Curriculum and Instruction,* 5, 79-93.

Romance, N. R. & Vitale, M. R. (2008). *Perspectives for improving school instruction and learning: An interdisciplinary model for integrating science and reading in grades K-5*. University of Chicago

Committee on Education – Workshop on Education Series (Invited paper). Chicago, IL.
Vitale, M. R., & Romance, N. R. (2008). Broadening perspectives about vocabulary instruction: Implications for classroom practice. *New England Reading Association Journal*. 44, 15-22.
Vitale, M. R., & Romance, N. R. (2007). A knowledge-based framework for unifying content-area reading comprehension and reading comprehension strategies. In D. McNamara (Ed.), *Reading comprehension strategies: Theory, interventions, and technologies.* NY: Erlbaum.
Vitale, M. R., & Romance, N. R. (2007). A research-based instructional intervention for accelerating the vocabulary acquisition of at-risk students in grade 4. *Proceedings of the 29th Meeting of the Cognitive Science Society*, 23-24.
Grossen, B. J., Carnine, D. W., Romance, N. R. & Vitale, M. R. (2007). Effective strategies for teaching science. In M. D. Coyne, E. J. Kameenui & D. W. Carnine (Eds.). *Effective Teaching Strategies that Accommodate Diverse Learners*. (3rd Ed). Upper Saddle River, NJ: Pearson/Merrill.
Vitale, M. R., & Romance, N. R. (2006). Research in science education: An interdisciplinary perspective. In J. Rhoton & P. Shane (Eds.). *Teaching science in the 21st century.* (pp. 329-351). Arlington, VA: NSTA Press.
Vitale, M. R., Romance, N. R. & Dolan, M. F. (2006). A knowledge-based framework for the classroom assessment of student science understanding. In M. McMahon, P. Simmons, R. Sommers, D. DeBaets, & F. Crawly (Eds.). *Assessment in science: Practical experiences and education research (pp. 1-14).* Arlington, VA: NSTA Press.
Romance, N. R. & Vitale, M. R. (2006). Making the case for elementary science as a key element in school reform: Implications for changing curricular policy. In R. Douglas, M. Klentschy, M. & K. Worth (Eds.). *Linking Science and Literacy in the K-8 Classroom (pp. 391-407)*. Arlington, VA: NSTA Press.
Romance, N. R. & Vitale, M. R. (September, 2006). Concept mapping as a means for binding knowledge to effective content area instruction: An interdisciplinary perspective. In *Proceedings of the Second International Conference on Concept Mapping*, San Jose, Costa Rica.
Romance, N. R., Vitale, M. R., & Dolan, M. F. (2004). Scientifically based research in science education. *U.S. Department of Education Invited Monograph.*
Romance, N. R. & Vitale, M. R. (2002). Knowledge-based instructional models as a framework for developing ontological perspectives in science learning: Implications for research and practice in science teaching and teacher education. *Proceedings of the First International Conference on Philosophical, Psychological, Linguistic Foundations for Language and Science Literacy Research.* Victoria, British Columbia.
Grossen, B. J., Carnine, D. W., Romance, N. R. & Vitale, M. R. (2002). Effective strategies for teaching science. In E. J. Kameenui & D. W. Carnine (Eds.). *Effective Teaching Strategies that Accommodate Diverse Learners*. (2nd Ed). Upper Saddle River, NJ: Merrill.
Haky, J. E., Louda, D. W., Carraher, C. E., Huchital, D. & Romance, N. (2002). *BONDing: Activities for General Chemistry I*. Eden Prairie, MN: Outernet Publishing.
Romance, N. R. & Vitale, M. R. (2001). Implementing an in-depth expanded science strategy in elementary schools: Multi-Year longitudinal findings, research issues and policy implications. *International Journal of Science Education.* 23 (4), 373-404.
Romance, N. R., Vitale, M. R., Widergren, P. & Hameister, J. (2001). Building content-area reading and literacy through an integrative curriculum strategy using reading, writing, and concept mapping strategies. Pp. 267-230. In *Proceedings of the 12th European Conference on Reading*. Dublin, Ireland.
Romance, N. R., Vitale, M. R. & Haky, J. (2000). Concept mapping as a knowledge-based strategy for enhancing student understanding. *The Workshop Project Newsletter -Progressions: Peer-Led-Team Learning.* 2(1), 5-9.
Vitale, M. R. & Romance, N. R. (2000). Portfolios in science assessment: A knowledge-based topology for classroom practice. (pp. 168-197). In J. J. Mintzes, J. H. Wandersee, & J. D. Novak (Eds.). *Assessing Science Understanding*. San Diego, CA: Academic Press: Educational Psychology Series.
Romance, N. R. (2000). *Reading in science.* New York: McGraw-Hill School Division.
Romance, N. R & Vitale, M. R. (1999). Broadening the framework for student-centered Instruction: Using concept mapping techniques as a tool for knowledge-based learning. *College Teaching*. 47, 74-79.
Vitale, M. R. & Romance, N. R. (1999). Considering instructional alternatives for classroom adoption: Research-based standards for science teachers. *Florida Science Teacher.* (13), 18-21.
Romance, N. (1998). Seeing the BIG PICTURE: Florida's educational initiatives and their relationship to science.

The Florida Science Teacher. 12-14.

Romance, N. R., Vitale, M. R., Kajstura, A., & O'Karma, L. (June, 1998). Knowledge-Structuring Tools: Hypermedia-Based Learning Environment for Building Conceptually Rich Concept Maps for Undergraduate Mathematics and Science Teaching and Learning. In the *Proceedings of the ED-MEDIA: World Conference on Educational Multi-Media and Hypermedia.* Freiberg, Germany.

Romance, N. R. & Vitale, M. R. (1997). Implications of an instructional strategy emphasizing structured conceptual knowledge: Addressing causes of learning problems in undergraduate science. In *Proceedings of the 4th International Conference: From Misconceptions to Constructed Understanding*. Cornell University. Ithaca, NY.

Romance, N. R. (1997). Hypermedia-Based learning environment: An instructional tool for building conceptually rich concept maps. In the *Proceedings of the 14th International Conference on Technology and Education*. Oslo, Norway.

O'Karma, L. & Romance, N. R. (1997). So many sites: so little time. In the *Proceedings of the 14th International Conference on Technology and Education*. Oslo, Norway.

Grossen, B., Carnine, D., Romance, N. R. & Vitale, M. R. (1996). Effective strategies for teaching science to diverse learners. In E. Kameenui & D. Carnine (Eds.). *Effective Teaching Strategies that Accommodate Diverse* Learners. Upper Saddle River, NJ: Prentice-Hall.

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Vitale, M. R. & Romance, N. R. (1995). Technology-based assessment in science: Issues underlying teacher advocacy of testing policy. *Journal of Science Education and Technology*. 5(2), 35-44).

Vitale, M. R. & Romance, N. R. (1995). Evolution of a model for teaching in-depth science in elementary schools: longitudinal findings and research implications. *Abstracts of Presented Papers, National Association for Research in Science Teaching: 68th Annual NARST Conference.*

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Vitale, M. R. & Romance, N. R. (1994). Using artificial intelligence technology to support action research in schools: Methodological strategies and issues. *Resources in Education.* [ERIC Document # 363006].

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Romance, N. R. (1993). Hard evidences of success in the K-12 classrooms. In Florida's Title II Higher Education Effectiveness Assessment Program: Catalog of Mathematics and Science Education Projects Identified as

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Romance, N. R., Matamoros, A., & Vitale, M. R. (1993). Sounds of science: K-5 elementary science program. In R. Yager (Ed.). *Promising Practices in Elementary School Science.* Exemplary Practice Series, Center for evaluation, Development and Research, Phi Delta Kappa, Bloomington, IN.
Romance, N. R. & Vitale, M. R. (1992). A curriculum strategy that expands time for in-depth science instruction by using science-based reading strategies: Effects of a year-long study in grade four. *Journal of Research in Science Teaching*, 29(6), 545-554.
Vitale, M. R. & Romance, N. R. (1992). Content knowledge and methodology in teacher preparation. (pp 219-238). In D. Carnine & E. Kameenui (Eds.) *Higher Order Thinking: Designing Curriculum for Mainstreamed Students*. Austin, Texas: PRO-ED, Inc.
Vitale, M. R. & Romance, N. R. (1992). Using videodisk technology in an elementary science methods course to remediate science knowledge deficiencies and facilitate science teaching attitudes. *Journal of Research in Science Teaching*, 29(9), 915-928.
Bristor, V & Romance, N. (1992). Bye bye basal: Reading instruction through science. *The Florida Reading Quarterly*, 28(4), 9-10.
Vitale, M. R. & Romance, N. R. (1992). Directions for research in teaching: Implications from some cognitive science perspectives. *North Carolina Journal of Teacher Education*. 5(2), 1-7.
Romance, N. R. & Vitale, M. R. (1991). Enhancement of teacher education and practice in elementary science through applications of videodisc technology. *Computers in the Schools*. 8(½/3), 259-270.
Romance, N. R. & Vitale, M. R. (1991). A practical curriculum integration strategy for combining reading with expanded science. *Iowa Educational Leadership*. 7(5), 12-18.
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Vitale, M. R. & Romance, N. R. (1991). Expert systems technology in teacher education: Applications and implications. *Computers in the Schools*. 8(½/3), 259-270.
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Vitale, M. R. & Romance, N. R. (1991). Videodisc-based science training of elementary pre-service teachers: A strategy for classroom implementation. *Proceedings of the Eighth International Conference on Technology in Education*. Toronto, Canada: CEP LTD.Vitale, M. R. & Romance, N. R. (1991). Using in-service training to facilitate technology applications that enhance elementary school science teaching. *SIGTC: Connections,* 7(3), 9-12.
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Vitale, M. R., Romance, N. R., & Meshbane, A. (1989). Using expert system technology to develop science teaching and problem-solving skills. *Proceedings of the Sixth International Conference on Technology and Education*. Orlando, FL: CEP LTD.
Vitale, M. R., Romance, N. R. & Medland, M. (1989). Using prosthetic motivational statements to facilitate the attitudes and computer usage of beginning LOGO teachers. *Journal of Educational Technology Systems*, 18, 245-251.
Vitale, M. R. & Romance, N. R. (1988). Using PROLOG and expert systems environments to enhance declarative and procedural knowledge in elementary science instruction. *Proceedings of the Fifth International Conference on Technology and Education*, Edinburgh, Scotland: CEP LTD.

TEXTBOOKS

Romance, N. R., et al. (2009-2013). *Elementary Science K-6 Science Textbook Series.* Scott Foresman (Pearson Education). Glenview, IL.

Romance, N. R. (1988). *Administrators Handbook for Elementary Science.* New York: Macmillan Publishing Company.

Shymansky, J. A., Romance, N. R. & Yore, L. D. (1988). *Journeys in Science.* K-6 Elementary Science Textbook Series (Teacher Editions), New York: Macmillan Publishing Company. (Total of seven books)

Shymansky, J. A. Romance, N. R., & Yore, LD. (1988). *Journeys in Science*. K-6 Elementary Science Textbook series (Student Editions) New York: Macmillan Publishing Company. (Total of seven Books)

Romance, N. R. & LaHart, D. E. (1987). *Prentice Hall Earth Science - Florida Blackline Masters for Laboratory Activities*. Englewood-Cliffs, N.J.: Prentice Hall.

CREATIVE ACTIVITIES: INSTRUCTIONAL MATERIALS, TELEVISION, AUDIOVISUAL AND PRINT MATERIALS

Romance, N. R. (2003). *Reading in Science* (Supplement to Prentice Hall Explorer Science Series). Needham, MA: Prentice Hall/Pearson Education.

Romance, N. R., et al. (1995). *IDEAS Handbook: Integrated Approach for Teaching Elementary Science and Language Arts to Elementary Students*: Title II Eisenhower Project; Florida Department of Education.

Romance, N. R. (1993). *Science Activities Teachers Guide to Accompany Breakthroughs: Strategies for Thinking* - (42 titles), Columbus, OH. Zaner-Blosser, Inc.

(Editorial Science Consultant) (1991). *Breakthrough: Strategies for Thinking: Marijuana-Could You Go Up in Smoke?* Columbus, Ohio: Zaner-Bloser, Inc.

Romance, N. (Editorial Science Consultant) (1991). *Breakthroughs: Strategies for Thinking: Cocaine: It's Not It's All Cracked Up to Be*. Columbus, Ohio: Zaner-Bloser, Inc.

Romance, N. R. (Editorial Science Consultant) (1991). *Breakthroughs: Strategies for Thinking: Electricity-A Current Event*. Columbus, Ohio: Zaner-Bloser, Inc.

Romance, N. R. & Bernard, L. (1987). *Water Resources in Florida* (Science Resource Unit). Newspaper in Education Project: Fort Lauderdale News/Sun Sentinel.

AUDIOVISUAL MATERIALS DEVELOPED

Preparing for Science - Four 50-minute Videotape Telecasts (Geology, Astronomy, Simple Machines, Chemistry) for In-service Science Teachers, Dade County Public Schools and Channel 17 Miami, 1988

Science Innovations Science Series - Seventeen 30–60-minute filmstrips and audio cassette tapes for Middle and High Schools, Science Innovations, 1982-88.

A) Planning and Organizing a Science Fair
B) Science Projects for Middle Schools, 5-9
C) Science Projects for High Schools, 9-12
D) Research and Project Construction, 5-12
E) Safety Procedures for Lab and Classroom
F) Understanding Chemical Labels
G) Chemical Handling: Practices and Procedures
H) Basic Laboratory Equipment: Part 1
I) Basic Laboratory Equipment: Part 2
J) Lab Safety Training for Teachers
K) Use and Care of the Monocular Microscope
L) Use and Care of the Stereo Microscope
M) Preparation of Wet and Dry Mounts

N) Project Apollo: Man on the Moon
O) Satellites: A New Perspective of the Earth
P) Space Shuttle: A New Idea Comes of Age
Q) At Home in Space: Life Aboard the Space Shuttle

SERVICE TO PUBLIC SCHOOLS IN FLORIDA

2004-18: Professional development Institutes for Principals and Teachers within Broward and Palm Beach County; Collaborative grant writing; Director Summer Science Institutes; school visitations.

2000-18: *Sample* activities include: (a) 2-day Professional Development Workshop (70) Dade County Teachers and Principals; (b) Building Professional Learning Communities with College of Science; (c) Curriculum Meeting, School Board of Palm Beach County; (d) Palm Beach Coalition for Science Literacy; (e) 3-hour Presentation to 120 Mathematics and Science Faculty at Miami-Dade Community College; (f) Collaborative grant writing FlaRE Grant for Family Literacy and Reading Excellence, (g) collaborative grant writing with Broward, Palm Beach, Martin and Monroe School Districts for mathematics and science teacher enhancement, (h) presentation to curriculum staff and directors, Palm Beach County Schools, (i) invited to serve on the NSF planning committee for Broward Schools for writing the application for the Urban Systemic Initiatives grant.

Other activities include: (a) Meeting with Broward Consortium of Schools and Office of Strategic Planning; (b) Planning with Palm Beach County district staff for professional development; (c) On-going collaborative projects with Department of Chemistry and Department of Educational Leadership; (d) 1-hour presentation Leadership for Learning principal Group in collaboration with Department of Educational Leadership; (e) Curriculum planning and coordination with Lantana Elementary Principal and staff; (f) 5-hour Professional Development (Sat.) Workshop for classroom teachers in Belle Glade.

1999-02: Professional development and technical assistance to critically low performing schools in Broward, Palm Beach and Martin County school districts.

1996-02: Professional Development Workshops for Teachers, administrators and other Stakeholders in the Florida Curriculum Frameworks, Sunshine State Standards and Quality Assessment in 6 south Florida School Districts.

1996-98: Technical Assistance to Critically Low Schools in 6 Florida School Districts.

1995-96: Eisenhower Title II Workshops for Teachers in Broward, Palm Beach, Martin and Escambia Counties.

1993-95: In-service Professional Development Institutes for the National Science Foundation Statewide Systemic Initiative DISCOVER SCHOOLS in select Florida School Districts.

1987-95: In-service Professional Development Institutes for elementary classroom teachers in the following Florida School Districts: Broward, Dade, Palm Beach, Martin, St. Lucie, Collier, Pinellas, Charlotte, and the Panhandle Area Educational Consortium.

1985-86: Development of Florida Statewide Biology Test for High School State Curriculum Framework. Florida Department of Education, $20,000.

1985-86: Training and Research Methods for Science Teachers of the Gifted and Talented Student. Florida Department of Education, $20,000.

1985-86: Training Middle School Teachers in the Processes and Content of Science. Florida Department of Education, Title II, $25,000.

1984-86: Teacher Training in the Methods of Scientific Research. National Science Foundation, $79,000.

1982-86: Summer Science Institutes for Teacher Training. Florida Department of Education, $4,000,000.

1981-86: Development of Environmental Education Concepts. Florida Department of Education Environmental Mini-grants, $100,000.

1985: Middle School Teacher Training in Energy Use and Conservation. Chevron USA, Inc., $35,000.

1984-85: Summer Camp in Mathematics, Science, and Computers for K-12 Students. Florida Department of Education, $800,000.

HONORS AND RECOGNITION

Awards for Research, Scholarly Papers, Grant Project Activities

Research

2009: College of Education "*Researcher of the Year" - Category* - Full Professor, Florida Atlantic University

2003: Florida Atlantic University "*University Researcher of the Year"* – Category - Full Professor

2002: College of Education "*Researcher of the Year"* – Category - Full Professor, Florida Atlantic University

1997: College of Education "*Researcher of the Year"* – Category - Full Professor, Florida Atlantic University

1996: *Outstanding Paper on Conference Theme*. Presented at the annual meeting of the *Association of Educators of Teachers of Science*, Atlanta, GA.

1993: *Outstanding Research Paper for the Year 1992* in the *Journal of Research in Science Teaching* for 1992, presented at the annual meeting of the National Association for Research in Science Teaching, Atlanta. GA.

1993: Title II Projects for the Years 1990-91, 1991-92 and 1992-93: Selected as *Outstanding and Exemplary Projects* by the Florida Department of Education.

1992: Title II Project Selected as an *Exemplary Mathematics and Science Program* in Postsecondary Education by the Florida Postsecondary Education Planning Commission and the Florida Chamber of Commerce.

1991: *Distinguished Research Paper Award* (with M. R. Vitale) Presented by the National Association for Research in Science Teaching (NARST).

1989: *Distinguished Paper Award* (with M. R. Vitale). Presented by the Florida Educational Research Association (FERA)

Teaching

2001: Finalist, Distinguished Teacher Award, College of Education

1995: Teaching Incentive Program Award (TIP) for Undergraduate Teaching. FAU College of Education.

1995: Finalist, Outstanding Teaching Award, College of Education, Florida Atlantic University

1992: Outstanding Undergraduate Teaching Award, College of Education, Florida Atlantic University

1991: Finalist, Outstanding Teaching Award, College of Education, Florida Atlantic University

1990: Finalist, Outstanding Teaching Award, College of Education, Florida Atlantic University.

Service

1992: Recognition by Florida's Postsecondary Education Commission and the Florida Chamber of Commerce for the Outstanding Eisenhower Title II Project.

1986: Recognition for Outstanding Performance, School Board of Broward County.

1985: Florida Science Educator of the Year, Florida Association of Science Teachers.

1985: Search for Excellence Awards for Outstanding Science Programs (Elementary Science, Chemistry, Inquiry), (SESE) National Science Teachers Association.

1985: Recognition of Outstanding Performance, Broward Chapter - Florida Engineering Society.

1978: Outstanding High School Science Teacher, Southern Bell Company.

1978: Recognition of Outstanding Service and Performance, Rogers Middle School Parent Teacher Association.

SELECTED PAPER PRESENTATIONS

Czerniak, C. & Romance, N. (2025). Sustaining and scaling up evidenced-based pre-k 5 STEM innovations: Conceptualizing factors for success. Presented at the European Science education Research Conference (ESERA). Copenhagen, Denmark.

Romance, N. R., Vitale, M. R., Nobles, K., and Foy, A. (2018, November). Expecting the unexpected: How Florida's curricular emphasis on content area reading and writing will positively impact reading comprehension achievement. Presented at the Annual Meeting of the Florida Literacy Association (FLA). Orlando, FL.

Romance, N. Vitale, M. & Foy, A. (2018, October). Concept mapping: A tool to visualize knowledge and build meaningful understanding and comprehension. Presented at the Annual Meeting of the Florida Science Teachers Association (FAST). Miami, FL.

Romance, N. Vitale, M. & Foy, A. (2018, October). Helping learners really understand expository text in science : Easy to use strategies that work. Presented at the Annual Meeting of the Florida Science Teachers Association (FAST). Miami, FL.

Romance, N. R. (2018, May). *Science IDEAS: Combining science and literacy for diverse learners throughout Florida's elementary schools*. Invited Presentation to the Annual Meeting of the Florida Organization of Instructional Leaders (FOIL), Orlando, FL.

Romance, N. R. & Vitale, M. R. (2018, May). Science IDEAS – an integrated instructional model that impacts K-5 reading comprehension: Learn why! An invited presentation to the Annual Meeting of the Florida Organization of Instructional Leaders (FOIL). Orlando, FL.

Romance, N. R. & Vitale, M. R. (2018, May).Using content area reading to develop reading comprehension proficiency in grades K-5. Invited Keynote presentation to the Annual Meeting of the Florida Organization of Instructional Leaders (FOIL). Orlando, FL. (http://www.fldoe.org/schools/k-12-public-schools/FOIL.stml).

Romance, N. R. (2018, April). Webinar: Science IDEAS and the 5 E's: Learning with Science. Invited presentation to the Florida Department of Education – Florida's 67 School Districts. Tallahassee, FL.

Romance, N. R. & Vitale, M. R. (2018, March). Expanding Science Learning Opportunities for Grade 1-2 Students: Impact on Science and Literacy Achievement Outcomes. Paper presentation to the Annual Meeting of the National Association for Research in Science Teaching (NARST).

Romance, N. R. & Vitale, M. R. (2018, January). Linking grade 1-2 achievement and transfer to grade 3 data in science and literacy to promote reform in curricular policy and practice in elementary schools. Presented at the Annual Meeting of the Association of Science Teacher Educators (ASTE).

Romance, N. R. & Vitale, M. R. (2017, December). Direct and transfer effects of a model integrating reading and science in grades 1-2: Results, broader impact and policy implications. Presented at the Annual Conference of the International Literacy Research Association (LRA), Tampa, FL.

Romance, N. R., Vitale, M. R. (2015). Applying a Multidisciplinary Framework to the Design of Instructional Practices as the Means to Advance Student Achievement in Science and Literacy – Grades K-5. Conference on Learning and the Learner. Madrid, Spain.

Romance, N. R., Samarapungavan, Al, Bryan, L., Borko, H., Hanuscin, Dr., Staudt, C. & Vitale, M. (2014). *Toward Building a Foundation for Teaching and Learning in Elementary Science: Highlighting Five NSF Projects*. A Symposium presented at the Annual Conference of the National Association for Research in Science Teaching (NARST).

Sobhan, K., An, P-C., Sherman, R., Romance, N., and Brown, N. (2014). *Exploring the disconnect between self determination theory and the engineering classroom environment*, 121st ASEE Conference and Exposition, American Society of Engineering Education, Indianapolis, June 15-18.

Kaniuka, T., Vitale, M. R., & Romance, N. R. (2012). *Making research relevant: An example of aggregating school-based findings in support of decision-making with implications for educational leadership*. Annual Meeting of the American Educational Research Association, Vancouver, Canada.

Vitale, M. R., Kaniuka, T. S., & Romance, N. R. (2011). *Using quasi-experimental multiple-baseline designs as a framework for selecting instructional interventions: Alternatives to limitations of randomized field trials in*

educational decision-making. Presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Vitale, M. R., & Romance, N. R. (2011). *Implications of cognitive-science-based model for integrating science and literacy in grades 3-5: Replication of multiyear direct and transfer effects in science and reading from grades 3-5 to 6-7*. Paper presented at the Fall Conference of the Society for Research on Educational Effectiveness, Washington, DC.

Vitale, M. R., Romance, N. R., & Kaniuka, T. S. (2011). *Some methodological enhancements for assessing school improvement through accountability*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA

Romance, N. R., & Vitale, M. R. (2011, December). *Enhancing student reading comprehension through a cognitive science based inductive vocabulary model in grades 3-5*. Paper Presented at the Annual Meeting of the National Reading Conference, Jacksonville, FL

Vitale, M. R., Kaniuka, T. S., & Romance, N. R. (2011, April). *Using quasi-experimental multiple-baseline designs as a framework for selecting instructional interventions: Alternatives to limitations of randomized field trials in educational decisionmaking*. Paper presented at the Annual Meeting of the *American Educational Research Association, New Orleans, LA.*

Vitale, M. R., Romance, N. R., & Kaniuka, T. S. (2011, April). *Some methodological enhancements for assessing school improvement through accountability.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Romance, N. R., & Vitale, M. R. (2011, March). *An interdisciplinary model for accelerating student achievement in science and reading comprehension across grades 3-8: Implications for research and practice*. Paper presented at the Annual Meeting of the Society for Research in Educational Effectiveness. Washington, DC.

Romance, N. R., & Vitale, M. R. (2011, April). *Interdisciplinary perspectives for linking science and literacy: Implications from multi-year studies across grades K-5.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Vitale, M. R., & Romance, N. R. (2010, December). *Accelerating reading comprehension in grades 1-2 by enhancing reading instruction with content-area learning in science: Effects of a year-long study*. Paper presented at the Annual Meeting of the National Reading Conference, Ft. Worth, TX.

Vitale, M. R., & Romance, N. R. (2010, April). *Effects of an integrated instructional model for accelerating student achievement in science and reading comprehension in grades 1-2*. Paper presented at the Annual Meeting of the American Educational Research Association, Denver, CO.

Vitale, M. R., & Romance, N. R. (2010, April). *Toward a curricular policy for advancing school reform by integrating reading comprehension within time-expanded science instruction in grades K-5.* Paper Presented at the Annual Meeting of the National Association for Research in Science Teaching, Philadelphia, PA.

Vitale, M. R., Romance, N. R., & Crawley, F. (2010, April). *Trends in science education research published in the Journal of Research in Science Teaching: A longitudinal policy perspective*. Paper presented at the Annual Meeting of the National Association for Research in Science Teaching, Philadelphia, PA.

Romance, N. R., & Vitale, M. R. (2010, April). *Linking science and reading across grades 3-8: Strategies and results*. Paper presented at the 12th Annual Literacy Symposium, University of Central Florida, Orlando, FL.

Vitale, M. R., & Romance, N. R. (April, 2009). *Transfer effects of a reading comprehension strategy on achievement and teacher judgments Across grades 3-7.* Paper presented to the Annual Meeting of the American Educational Research Association, San Diego, CA.

Romance, N. R. & Vitale, M. R. (April, 2009). *A research-based model for integrating elementary science and reading comprehension: Implications for research and practice.* Presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Romance, N. R. & Vitale, M. R. (May, 2009). *Digging deeper into content: Combining strategies to understand expository text in middle and high school science.* Research Institute Presentation: Literacy as a tool for learning in content areas, Annual Meeting of the International Reading Association. Minneapolis, MN.

Romance, N. R., & Vitale, M. R (June, 2009). *Problems and Issues: Scaling up research-based interventions.* Presentation at the Fourth Annual USDOE Institute of Education Sciences Conference, Washington, DC.

Romance, N. R., & Vitale, M. R (March, 2009). *Science IDEAS: Making a case for integrating reading and writing in elementary science as a key element in K-12 school reform*. Presented at the Research Dissemination

Conference, the Annual Meeting of the National Science Teachers Association, New Orleans, LA.

Romance, N. R. & Vitale, M. R. (May, 2009). *Transfer effects of a reading comprehension strategy on achievement and teacher judgments across grades 3-7.* Presented at the Annual Meeting of the *American Educational Research Association*, Denver, CO.

Romance, N. R. & Vitale, M. R. (May, 2009). *A research-based model for integrating elementary science and reading comprehension: Implications for research and practice*. Presented at the Annual Meeting of the *American Educational Research Association*, Denver, CO.

Romance, N. R. & Vitale, M. R. (December, 2008). *Emphasizing content-area reading in science in grades 3-5: A model for enhancing reading comprehension and science learning.* Presented at the National Meeting of the National Reading Conference, Orlando, FL.

Romance, N. R. & Vitale, M. R. (April, 2008). S*cience IDEAS: A knowledge-based model for accelerating reading/literacy through in-depth science learning*. Presented at the Annual Meeting of the American Educational Research Association, New York: NY.

Vitale, M. R., & Romance, N. R. (April, 2008). *A Multi-Part Instructional Strategy for accelerating vocabulary acquisition as an inductive process.* Paper presented at the Annual Meeting of the American Educational Research Association, New York: NY.

Vitale, M. R., & Romance, N. R. (December, 2007). Approaching vocabulary acquisition as an inductive process: An exploratory study. Presented at the 2007 Annual Meeting of the National Reading Conference, Austin, TX.

Vitale, M. R., & Romance, N. R. (August, 2007). *A research-based intervention for accelerating the vocabulary acquisition of at-risk students in grade four*. Presented at the Annual Meeting of the Cognitive Science Society. Nashville, TN.

Romance, N. R. & Vitale, M. R. (July, 2007). *Meaningful learning in science with reading comprehension and writing*. (Symposia: Reading to learn about physical science: A developmental perspective.). Presented at the Annual Meeting of the Society for Text and Discourse. Glasgow, Scotland.

Vitale, M. R., & Romance, N. R. (April, 2007). *Adaptation of a knowledge-based instructional intervention to accelerate student learning in science and early literacy in grades 1-2.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Romance, N. R., & Vitale, M. R. (May, 2007). *Interdisciplinary thinking about content area reading comprehension.* Invited Keynote Address at the Pre-Conference Institute "Content-area reading instruction for teachers and literacy coaches: Helping students develop content-area reading comprehension strategies to help them succeed in a competitive world., at the Annual Meeting of the International Reading Association, Toronto, CA.

Romance, N. R., & Vitale, M. R. (December, 2006). *Exploring the effect of knowledge-based reading strategies on science content-area comprehension and learning in grade 5.* Paper Presented at the Annual meeting of the National Reading Conference, Los Angeles, CA.

Romance, N. R., & Vitale, M. R. (May, 2006). *A comparison of the effectiveness of a multi-part reading comprehension strategy in content vs. non-content-oriented environments in grade 5*. Paper Presented at the Annual Meeting of the International Reading Association, Chicago, IL.

Romance, N. R., & Vitale, M. R. (May, 2006). *A knowledge-based framework for developing content area reading comprehension.* Paper Presented at the Annual Meeting of the International Reading Association, Chicago, IL.

Vitale, M. R. & Romance, N. R. (May, 2006). *Interdisciplinary perspectives on content area reading comprehension: Implications for school practitioners.* Presented at the Featured USDOE/IES Research Symposium: "Using knowledge to improve comprehension instruction and assessment- Helping all readers succeed", at the Annual Meeting of the International Reading Association, Chicago, IL. (Invited Keynote Presentation)

Romance, N. R., Vitale, E., & Greene, E. (May, 2005). *A knowledge-focused method for building knowledge and reading comprehension in upper elementary readers*. Paper Presented at the annual meeting of the International Reading Association. San Antonio, TX.

Vitale, M. R., Romance, N. R., Greene, E., Hamstra, J. (April, 2005). *A multi-phase model for scaling up a research-validated instructional intervention: Implications for leadership of systemic educational reform*.

Paper Presented at the Annual Meeting of the American Educational Research Association, Montreal, Canada.

Romance, N. R., & Vitale, M. R. (April, 2005). *Building teacher expertise and leadership as a form of scale-up capacity development in school reform*. Paper Presented at the Annual Meeting of the American Educational Research Association, Montreal, Canada.

Vitale, M. R., & Romance, N. R. (October, 2005). *The role of context in programmatic research design: AN interdisciplinary perspective.* Paper Presented at the Second International Conference on Foundations for Language and Science Literacy Research: Gold Standards of Quality Research in Science Literacy, University of Victoria, Victoria, BC.

Romance, N. R., Vitale, M. R., & Dolan, M. F. (April, 2003). *Interdisciplinary perspectives for broadening the scientific research base in science education.* Paper Presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Dolan, M. F., Pisapia, J., Vitale, M. R., & Romance, N. R. (April, 2003). *The call for scientific research in education: A broader perspective for school reform.* Paper Presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Romance, N. R., Vitale, M. R., & Dolan, M. F. (April, 2003). *Interdisciplinary perspectives for broadening the scientific research base in science education.* Paper Presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Vitale, M. R., Romance, N. R. & Dolan, M. (2003). *A knowledge-based framework for the classroom assessment of student science understanding*. Paper Presented at the Annual Meeting of the National Association for Research in Science Teaching, Chicago, IL.

Romance, N. R., Vitale, M. R., & Dolan, M. (June, 2003). *A research-based perspective for expanding time for teaching science in elementary schools: Implications for changing curricular policy and practice.* Paper Presented at the European Science Education Research Association, Noordwijkerhout, The Netherlands.

Vitale, M., Romance, N. R., & Dolan, M (April, 2002). *A rationale for improving school reform by expanding time for science teaching: Implications and opportunities for changing curricular policy and practice in elementary schools*. Paper Presented at the National Association for Research in Science Teaching, New Orleans, LA.

Romance, N. R., Vitale, M. R. (2002). *Knowledge-based instructional models as a framework for developing ontological perspectives in science learning: Implications for research and practice in science teaching and learning.* Paper Presented at the First Invitational International Conference on the Philosophical, Psychological, and Linguistic Foundation for Language and Science Literacy Research. University of Victoria, Victoria, BC.

Vitale, M. R., Romance, N. R. & Dolan, M. (2002). *A rationale for improving school reform by expanding time for science teaching: Implications and opportunities for changing curricular policy and practice in elementary schools.* Paper Presented at the Annual Meeting of the National Association for Research In Science Teaching. New Orleans, LA.

Romance, N. R., Vitale, M. R., Haky, J., Mayer, G. & Bleicher, R. (2002). *Improving student performance in introductory college biology and chemistry using conceptually based models for learning*. Paper Presented at the Annual Meeting of the National Association for Research In Science Teaching. New Orleans, LA.

Romance, N. R., Vitale, M. R., Widergren, P., & Hameister, J. (July 2001). *Building content-area comprehension and literacy through an integrative curriculum strategy Using reading, writing and concept mapping strategies.* Paper Presented at the 12th European Conference on Reading. Dublin, Ireland.

Romance, N. R., Haky, J, Vitale, M. R., Carraher, C. and. Bleicher, R,. (April, 2000). *Improving student achievement and retention in first semester chemistry: Building bridges between science and science education communities.* Paper Presented at the Annual Meeting of the National Association for Research in Science Teaching, New Orleans, LA.

Romance, N. R., Vitale, M. R., Haky, J., and Brooks, R. (July, 1999). *Concept mapping as a strategy to enhance student understanding and application of science: A knowledge-based model.* Paper Presented at the 8th International Conference on Thinking. Edmonton, Alberta, Canada.

Vitale, M. R. & Romance, N. R. (April, 1998). *How should children's alternative conceptions be considered in teaching and learning science concepts? Research-based perspectives*. Paper Presented at the Annual

Meeting of the National Association for Research in Science Teaching. San Diego, CA.

Romance, N. R. & Vitale, M. R. (April, 1998). *Improving the teaching and learning of science with knowledge representation computer tools.* Paper Presented at the 9th International Conference on College Teaching and Learning. Jacksonville, FL.

Romance, N. R. & O'Karma, L. (August, 1997). *Hypermedia-based learning environment: an instructional tool for building conceptually rich concept maps*. Paper Presented at the 14th International Conference on Technology and Education. Oslo, Norway.

O'Karma, L. & Romance, N. (August, 1997). *So Many Sites: So little time*. Paper Presented at the 14th International Conference on Technology and Education. Oslo, Norway.

Romance, N. R. & Vitale, M. R. (1997). *Constituents of instructional environments for enhancing the construction of conceptual understanding in science*. Paper Presented at the 4Th International Conference: From Misconceptions to Constructed Understanding. Cornell University.

Romance, N. R. & Vitale, M. R. (March 1994). *Using laser video disc technology to prepare teachers to implement a conceptually based expanded science curriculum: The IDEAS Project.* Paper Presented at the 11th International Conference on Technology and Education, London, England.

Romance, N. R. & Vitale, M. R. (April, 1990): *Effects of a curriculum strategy that expands time for in-depth science instruction by using science-based reading strategies yearlong study in grade four.* Paper Presented at the Annual Meeting of the National Association for Research in Science Teaching (NARST).

[Selected as the 1990 Distinguished Paper for practical applications of research to teaching award at the 1991 Annual Meeting at Lake Geneva, Wisconsin.]

Romance, N. R. & Vitale, M. R. (November, 1989). *Science teaching reading through expanded in-depth science instruction in grade 4: Findings and implications of a year-long study*. Paper Presented at the Annual Meeting of the Florida Educational Research Association (FERA), Tallahassee, Florida.

[Selected as the 1989 Distinguished Paper and invited to present the same at the Annual Meeting of the American Educational Research Association, Boston, MA. 1990.]

Romance, N. R. & Vitale, M. R. (April 1989). *Technology Applications to the preparation of elementary pre-service teachers in science.* Paper Presented at the Annual Meeting of the National Science Teachers Association (NSTA), Seattle, Washington.

Vitale, M. R., Medland, M. B., Romance, N. R., Meshbane, A. (1988). *Remediating reading and thinking skills of elementary students: Implications for curricular change.* Paper Presented at the Annual Meeting of the Florida Educational Research Association (FERA), Sarasota, Florida.

Romance, N. R. (1988). *Bringing research and practice into alignment to enhance student reading and cognitive skills development.* Paper Presented at the Florida Department of Public Schools Annual Conference, Miami, Florida.

Romance, N. R. (1988). *Reading and science: An exciting educational mix.* Paper Presented at the National Catholic Educational Association Annual Meeting, New York, N.Y.

Vitale, M. R. & Romance, N. R. (1988). *Using artificial intelligence environments to enhance declarative and procedural knowledge.* Paper Presented at the National Educational Computing Conference, Dallas, Texas.

Romance, N. (1987). *Five-star elementary school institute for principals: strategies for implementing a quality elementary science program*. Workshop Presented at the National Science Teachers Association (NSTA) Regional Meeting, Salt Lake City, Utah.

OTHER LEADERSHIP/PROFESSIONAL EXPERIENCE

2009- 15: USDOE/IES: Invited to Serve a Permanent Member of the IES Panel Review Team for: Mathematics & Science; Mathematics & Science Teacher Quality, and Technology Innovation (June, 2009), and Rural Education (2018)

2009- : National Science Foundation - Chair: Panel Review - NSF/ITEST panel Proposal Review (April, 2009); STEM+C (2018)

2009- : National Science Foundation: Invitation to serve as a special panelist for the NSF DR K-12 grant evaluation committee, early learning in science.

2007: *United States Department of Education/Institute of Education Sciences*: Special Invitational Panel on

Status of Middle School Science Education in American Middle Schools

2006-07: *United States Department of Education/Institute of Education Sciences*: Panel Review Mathematics and Science (November 2006, March 2007)

2006-07: *National Science Foundation*: Discovery K-12 Panel Review.

2005-07: Board of Directors and Educational Chairperson: City of Deerfield Beach Hurricane Mitigation Project

2005-07: Director: BioScience Career and Education Exposition. In conjunction with BioFlorida, Inc, Scripps,

2005-06: Chairperson: Education Committee, Scripps Collaborative, FAU.

2002-03: Member: NARST Research Committee

2002: NSF Panel review for NSF – Interagency Educational research Initiative (NSF/IERI)

2001: Nominated: Research Director for *National Association for Research in Science Teaching (NARST)*

1996-01: Executive Director: Region V Area Center for Educational Enhancement (ACEE).

1998-01: Member: Board of Directors. Florida Association for Supervision and Curriculum Development

1998-99: Chairperson-Elect; Florida Higher Education Consortium in Mathematics and Science

1996-98: Director: Region V Higher Education Consortium

1997-99: Editorial Board: The Florida Science Teacher. Journal of the Florida Association of Science Teachers (Interim Editor - 1997)

1994: Blueprint 2000: State Assessment for Goal 3 Writing Committee

1994: Advisory Committee: Region 5 Higher Education Consortium (HEC)

1994: Advisory Council: NSF/SSI

1994: Advisory Council: Regional Center of Excellence for Mathematics, Science and Technology

1994: Superintendent's Ad Hoc Committee for Development of Broward Schools Standards of Service and Policy, School Board of Broward County

1993-94: Chairperson: Region V Higher Education Consortium for Teacher

1993-94: State Science Curriculum Framework writing committee; Florida Department of Education

1993-94: Broward County Schools Project for Improving Academic Performance for At Risk and Chapter I students in reading and science learning.

1992-93: Florida Science Framework Committee for Development of Florida's science framework for K-12 schools

1992-93: Consultant, Broward Community College FACEE Grant, Summer Environmental Science Program in Grades 4-5

1992-93: Consultant, Palm Beach Community College Title II Grant, Elementary Teacher Training in Mathematics

1991-92: Curriculum Committee, Teacher Education Alliance: Broward School System, Broward Community College, Florida Atlantic University

1988-92: Director, PALS Network, NSF Project with Clarion University

1991: Financial Committee, National Association for Research in Science Teaching

1991: International Conference Planning Committee National Science Teachers Association

1990-91: South Florida Regional Center of Excellence in Science, Mathematics, and Computers

1987-90: Dade County (Miami) Public Schools Science Advisory Task Force: Member

1980-88: Florida Foundation for Future Scientists: Board of Directors

1987: State of Florida School Science and Engineering Fair: Steering Committee and Judging Chairperson

1982-90: Discovery Science Center, City of Ft. Lauderdale (Florida): Board of Directors

1985-87: *Journal of the Florida Association of Science Teachers*: Editor

NANCY ROMANCE

1985-86: State of Florida Curriculum Framework Development Committee: Chairperson of Secondary Science Area

1985-86: Florida Association of Science Supervisors: President

1974-86: Broward County Regional Elementary and Secondary Science Fairs: Director

1980:85: Florida League of Middle Schools: Steering Committee

1984-85: Support Services Personnel Association, Broward County Schools: President

1983-85: Florida State Advisory Council on Science Education: Member

1983-85: State Curriculum Committees for the Development of State Standards and Skills of Excellence and Minimum Performance Standards in Science.