

1986-2018

Gary G. Bitter

Revised – January 2, 2018

Educational Technology
Mary Lou Fulton Teachers College
Arizona State University
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Tempe, AZ 85287-2111

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Voice: 480/965-4960

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URL: <http://garybitter.com/>

Present Position:

Professor of Educational Technology

1970-2018

Founder and Executive Director, Technology Based Learning & Research

1986-2017

Senior Technology Advisor Learning Sciences Institute

2013-2015

Original Arizona State University Employment Date:

August 1970

EDUCATION

Ph.D. University of Denver

1969-1970

Mathematics and Computer Education

Dissertation Topic: Computer Applications Related to Student Achievement

University of California (summer)

1968

University of Missouri (summer)

1967

University of Michigan

1965-1966

M.A. Emporia State University

Thesis: Topology-Cut points of a Plane Continua

1963-1965

B.S. Kansas State University

1958-1962

ARIZONA STATE UNIVERSITY RESPONSIBILITIES:

Professor, Educational Technology

Executive Director, Technology Based Learning and Research

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ADMINISTRATIVE EXPERIENCES:

Coordinator, Educational Media and Computers	1986-1999
Acting Director, Arizona State University Computer Institute	1984-1985
Co-Director, Microcomputers in Education Conference (founder)	1980-2000

AREAS OF ACADEMIC AND RESEARCH INTEREST:

Apps for Education
The impact of “Integration of Technology into the Curriculum” on student achievement and attitude.
Research related to successful anytime, anywhere e-Learning: On-line Education—Guidelines—Intellectual Property
National Student and Teacher Technology Standards for the United States.
Online video based Professional Development.
The Future of Technology
Emerging Technologies

ADMINISTRATIVE EXPERIENCES:

Program Leader Educational Technology	2007-2008
Coordinator, Educational Media and Computers	1986-1999
Acting Director, Arizona State University Computer Institute	1984-1985
Director, Microcomputers in Education Conference (founder)	1980-2000

ARIZONA STATE UNIVERSITY EXPERIENCE:

Professor of Education (Sabbatical Leave - Fall 1989, Fall 1996, A/Y 2003-04)	1977-Present
Associate Professor of Education (Sabbatical Leave - A/Y 1976-77)	1973-1977
Assistant Professor of Education	1970-1972
University Senate	2007-2015
University Senate Personnel Committee Chair	2011-2012

PROFESSIONAL EXPERIENCE OTHER THAN AT ASU:

Employer	Location	Year(s)
Fulbright Training	Tempe, AZ	2010
International Society for Technology in Education	Eugene, OR	1999-2002
Miami-Dade Public Schools	Miami, FL	1999
Fresno City Schools	Fresno, CA	1996
California State University	Northridge, CA	1994
Montclair State College	Montclair, NJ	1993
National Council of Teachers of Mathematics,		1985-1987

Microcomputer Mathematics Seminars

Arizona Computer Camp	Prescott, AZ	Summer, 1982
Temple University	Philadelphia, PA	Summer, 1980
Boston University	Boston, MA	Summer, 1980
Tempe Parents for the Gifted	Tempe, AZ	Summer, 1979-1981
ASU Gifted Program	Tempe, AZ	Summer, 1980
Montana State University	Bozeman, MT	Summer, 1975
University of Northern Colorado	Greeley, CO	Summer, 1973
University of Denver	Denver, CO	Summer, 1970
<i>Supervisor of Student Teachers</i>		
Colorado College	Colorado Springs, CO	1967-1970
University of Colorado (P/T)	Colorado Springs, CO	1968-1970
Washburn University	Topeka, KS	1966-1967
Ann Arbor Public Schools	Ann Arbor, MI	1965-1966
U.S. Government, McConnell Air Force Base	Wichita, KS	1963-1965
<i>Lecturer, Math</i>		
Derby Public Schools	Derby, KS	1962-1965

OTHER WORK EXPERIENCES:

Employed As Consultant

Adaptive Curriculum
Digital Directions
Virtual Learning
Adaptive Curriculum
Enslow Publishing
SchoolSoft
Learning Point
The CNA Corporation
Bell and Howell
Milken Foundation
Microsoft
National Science Foundation
U.S. Department of Education
College Board
CTB McGraw Hill
University of Houston
Chicago Public Schools
Educational Testing Service
Media Share
Texas Instruments
William Paterson College of New Jersey
State of Colorado
Texas Instruments
St. Peters College

Type of Work

Research
Assessment
SBIR Evaluator
Math Content Expert
Math Content Expert
Math Content Expert
Standards/Assessment
RTEC Advisory Board
Evaluation
Technology Support
Software Reviewer
Reviewer
Reviewer
Calculator Workshop
Test Reviewer
Calculator Development
Calculator Integration
PPST Advisory Board
Technology Based Math
Involved in Design of SuperSpeak and Math
Helped Develop Masters Degree in Computer Education
Review Advanced Computer Education Degree
Helped Develop & Design Math Explorer Calculator
Technology Research

Date

2010-2012, 2015
2010-2011
2009-2012, 2015
2007-2011
2006-2007
2007-2008
2004-2005
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1993-1996, 2000
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1988-1991
1989-1991

OTHER WORK EXPERIENCES:

Employed As Consultant	Type of Work	Date
Learning Exchange	Microcomputers in Math Instruction	1989
North Carolina Math and Science, Durham, NC	Calculator Assisted Higher Order Thinking	1989
Texas Instruments	Calculator Research	1987-1989
Amphitheatre Public Schools	Computer Education	1987
Cobb County Schools, Atlanta, GA	Computers in Mathematics	1986
Langley Schools, Vancouver, BC	Computer Assisted Math	1986
University of California	Research-Microcomputers In Education	1985
University of California	Microcomputer Based Mathematics	1984
Vancouver District, #39, BC	Computer/Math Curriculum	1984
Albuquerque, New Mexico Public Schools	Proposal Evaluation	1983
Kentucky Superintendent's Consortium	Computer Literacy	1983
Franklin University, Ohio	Computer Infusion Curriculum	1983
New Jersey Department of Education	Computer Literacy	1983
Kankakee, Illinois Public Schools	Computer Literacy	1983
Kilgore, Texas Public Schools	Computer Literacy	1983
Killeen, Texas Public Schools	Computer Literacy	1983
Phoenix College	TV Program	1983
California Elementary Education Association	Computer Literacy Seminars	1983
Educational Testing Service	IBM Secondary Computer Project	1983
University of San Diego	Computer Literacy	1982
Harris Computer, Melbourne, FL	Melbourne Schools Computer Software	1982
Academy for School Executives, Tulsa, OK	Computer Literacy	1982
Lake County, IL	Future Technology & Computer Literacy	1982
LINC, Columbus, OH	Special Education	1981
Scholastic, New York, NY	Workshops - Logo	1981
Developmental Learning Materials	Computer Materials	1981-1984
Deer Valley Schools	Computer Project	1980-1981
Control Data Corporation, Chicago, IL	Basic Skills Computer Curriculum	1980-1981
Welton Schools	Problem Solving	1980
Phoenix Elementary District	Math Curriculum Development	1980-1981
Texas Instruments	Computer and Calculator Research	1980-1981
Broward County, FL	Problem Solving	1980
Tempe Parents for Gifted	Program Development	1979-1980
Prescott Schools	Computer Literacy Project	1979-1981
Washington Elementary District	Gifted Program	1978-1979
Weldon Valley School, Colorado	Calculator Curriculum Computer Training	1978, 1982
Migrant Math Skills Project	Chairperson	1975-1979
Havasupai Indian Program	Math Curriculum Development	1979
Wilson School District	Math Needs Assessment	1977-1978
Hopi Tribal Council	Math Curriculum Development	1972-1979
Reno Public Schools	Future of Math	1978
Idaho State Department	Calculator Inservice	1977-1978

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OTHER WORK EXPERIENCES:

Employed As Consultant	Type of Work	Date
Science Research Associates	Calculator Introduction	1977
Texas Instruments	Calculator Inservice Program	1977
Washington Elementary District	Computer Literacy Training	1976
U.S. Office of Education	National Computerization of Migrant Math Skills	1975-1978
Minnesota State Department	Math Improvement	1975
Hopi Home School Project	Evaluate Home School Plan	1975-1977
Migrant Education	Summer Inservice	1975-1981
State of Arizona	Calculator Research Project	1975
Tempe Parents for the Gifted	Gifted Program	1975, 1979, 1980
Greater Phoenix Curriculum Council	Develop Mathematics Objectives	1973-1975
Bureau of Indian Affairs	Mathematics Curriculum Development	1972-1976
Somerton School	Set-up Migrant Mathematics Lab	1973-1977
Albuquerque Public School	Inservice-mathematics education	1972
Scottsdale Schools	Inservice-mathematics education	1972
Creighton Public Schools	Develop Math Lab Program K-8	1971-1972
Mesa Public Schools	Mathematics - Needs Assessment K-8	1971-1972
Catholic Diocese	Goals Review	1970
Migrant Education	Mathematics Curriculum Development	1971-1981
Kaman Sciences, <i>Research Associate</i>	Computer Consultant Programmer	1967-1970

RESEARCH FUNDED PROJECTS:**APP DEVELOPMENT FOR ALZHEIMER'S STORY STARTERS AND EYEOBSERVE**

Funding Source: AZTE \$5,452 2014-2016

CLOUD COMPUTING AND THE PROCESSING OF BIG DATA—EYE TRACKER RESEARCH

Funding Source: Massively Parallel Technologies: Blue Cheetah \$2,000,200 2013-2015

PREPARING HIGH SCHOOL TEACHERS FOR SERVICE-ORIENTED COMPUTER SCIENCE EDUCATION

Funding Source: Fund for the Improvement of Higher Education \$583,427 2007-2011

SPALDING RESEARCH PROJECT

Funding Source: Spalding Educational International Foundation \$159,967 2005-2010

READING FIRST VIDEO PROJECT

Funding Source: Arizona Department of Education \$207,000 2005-2006

EXTENDING AND ENHANCING NLVM (NATIONAL LIBRARY OF VIRTUAL MANIPULATIVES AS A NATIONAL TEACHING RESOURCE FOR SCHOOL MATHEMATICS (EVALUATOR)

2004-2006

Funding source: NSF-Utah State University	\$50,000	
NETS DIGITAL VIDEO LIBRARY (CO-PI)		2001-2005
Funding Source: US Department of Education: Preparing Tomorrow's Teachers to Use Technology (PT3)		
	\$1,495,137--\$3.6 million <i>with cost share.</i>	
REGIONAL TRAINING CENTER		1998-2005
Funding Source: State of Arizona -	\$2,632,372	
THE e-LEARNING NETWORK – LEARNING ANYTIME, ANYWHERE!		1999-2004
Funding Source: Fund for the Improvement of Postsecondary Education (FIPSE)		
US Department of Education -	\$1,953,172--\$4.1 million <i>with cost share.</i>	
LINKS (LEARNING INTEGRATING NETWORKING KNOWLEDGE SKILLS)		2000-2004
Funding Source: State of Washington -	\$1,396,000	
TECHNOLOGY IMPROVEMENT		1998-1999
Funding Source: State of Arizona -	\$52,500	
STAR SCHOOLS LEADERSHIP AND EVALUATION ACTIVITIE (CO-PI)		1998-1999
Funding Source: U.S. Department of Education –	\$546,000	
VISUALIZATION FOR SCIENCE AND ENGINEERING EDUCATION (CO-PI)		1997-2000
Funding Source: NSF -	\$2,585,000	
MULTIDISCIPLINARY RESEARCH ON THE NEXT GENERATION MULTIMEDIA TECHNOLOGIES FOR INTERACTIVE DISTRIBUTED LEARNING (Co-PI)		1997-2000
Funding Source: Arizona State University -	\$150,000	
MATH DISCOURSE PROJECT (<i>Math•ed•ology™</i>) (Pryor - Co PI)		1995-1999
Funding Source: NSF -	\$2,300,000	
CD-ROM: <i>Math•ed•ology™</i>		1998
ARIZONA COLLABORATIVE FOR EXCELLENCE IN THE PREPARATION OF TEACHERS		1994
(Wycoff & Keller - Co PI's)		
Funding Source: NSF -	\$100,000	
MATH/SCIENCE TEACHER PREPARATION CD ROM (Flores - Co PI)		1993-1994
Funding Source: Eisenhower Funds - \$50,000		
CD-ROM: The Guide		
INTEL MULTIMEDIA RESEARCH AND DEVELOPMENT (INSTRUCTIONAL MEDIA DESIGN)		1993-1995
Funding Source: Intel -	\$300,000, Equipment Grant \$120,000	
CD-ROM: <i>Instructional Media Design</i> , QUE College Education		1997
TEACHER PREPARATION AND ENHANCEMENT IN THE USE OF AVAILABLE TECHNOLOGY		1992-1995
Funding Source: IBM -	\$322,430; Equipment Grant; \$14,000	
Monograph: Report on the National Study of IBM's Teacher Preparation with Technology Grant Program. <i>Monograph Series of Technology Based Learning and Research</i> , 7 1994.		
Monograph: Report on the National Study of IBM's Teacher Preparation with Technology Grant Program. <i>Monograph Series of Technology Based Learning and Research</i> , 8 1994.		
IBM CONSORTIUM GRANT, IBM		1991-1994
Funding Source: IBM -	\$103,000; Equipment Grant; \$80,000	
ADVANCED TECHNOLOGY RESEARCH GRANT		1991-1992
Funding Source: Texas Instruments -	\$30,000	
COMMODORE EQUIPMENT GRANT		1991

Funding Source: Commodore Business Machines; \$65,000
CHRISTOPHER COLUMBUS CONSORTIUM 1990-1994
Funding Source: Apple Computer - Equipment Grant \$32,000
IBM RESOURCE CENTER 1990
Funding Source: IBM Equipment and Software; \$85,000
ARIZONA STATE UNIVERSITY HISPANIC MATHEMATICS PROJECT (HISPANIC MATH PROJECT) 1989-1993
Funding Source: NSF - \$708,360; IBM-Equipment Grant; \$150,000
Paper: *Using Technology in the Teaching and Learning of Mathematics*
4th Annual, NSBA, "Making Schools More Productive" Conference
November 7-9, 1990.
Monograph: Arizona State University Hispanic Math Project.
Monograph Series of Technology Based Learning and Research, 6, 1993.
CD-ROM: Series of CD's on the topic of Measurement

TEACHING MATHEMATICS METHODS USING INTERACTIVE VIDEODISC 1989-1992
(UNDERSTANDING TEACHING)
Funding Source: NSF; \$403,079; IBM-Equipment Grant; \$250,000
Paper: *Using Technology in the Teaching and Learning of Mathematics*
4th Annual, NSBA, "Making Schools More Productive" Conference,
November 7-9, 1990.
Paper: *Interactive Multimedia (IBM) With Videodisc -- Geoboards and Base-Ten Blocks*
Presented at the 69th Annual Meeting of the NCTM, April 17-20, 1991.
Paper: *Teaching Math Methods Using Interactive Videodisc*
Presented at the CUE Conference, Palm Springs, CA, May 8, 1992
Paper: *Teaching Mathematics Methods Using Interactive Multimedia.*
Presented to the USDE, Washington, D.C., November 23-24, 1991
Monograph: Teaching Mathematics Methods Using Interactive Videodisc
Monograph Series of Technology Based Learning and Research, 4, 1992
Monograph: Teaching Mathematics Methods Using Interactive Videodisc: the TMMUIV research results.
Monograph Series of Technology Based Learning and Research, 5, 1992
CD-ROM: *Understanding Teaching: Implementing the NCTM Professional Teaching Standards*
(Mac and PC Versions), Association for Supervision and Curriculum Development, 1997

ARIZONA STATE UNIVERSITY STAR SCHOOLS PROJECT (Subcontract with TERC) 1998-1990
Funding Source: U.S. Department of Education; \$72,000
Article: Communicating Mathematics (with M. Hatfield) *Mathematics Teacher*, 1991
Monograph: Arizona State University and Technical Education Research Centers
Telecommunicating Mathematics: The Star Schools Project.
Monograph Series of Technology Based Learning and Research, 2, 1992

CALCULATOR ASSISTED HIGHER ORDER THINKING: DEVELOPMENT AND RESEARCH	1988-1989
Funding Source: Texas Instruments; \$30,030	
Book:	<i>Sourcebook for Teachers Using the Math Explorer Calculator</i> , (with Jerald Mikesell), Addison-Wesley Publishing Company, Menlo Park, CA, 346 pages, 1990.
Monograph:	Calculator Series 90-1, "Calculator Project," (with Mary M. Hatfield and Judy Lewis) Arizona State University/ Scottsdale Unified School District, Tempe, AZ, 1990.
Monograph:	Integration of the Math Explorer Calculator Into The Mathematics Curriculum: the Calculator Project Report, (with Mary M. Hatfield). <i>Monograph Series of Technology Based Learning and Research</i> , 1, 1992.
Paper:	NCTM and Numerous Organization Meetings. 1988-1991
	Chapter: 1992 NCTM Calculator Yearbook
Paper:	Calculator Conference, <i>Calculator Research Findings</i> , Houston, Texas, May 29, 1992.
Paper:	<i>Using the Math Explorer Calculator: Activities and Research</i> . ICME VII, Quebec City, Canada. August 17, 1992.
MICROCOMPUTER BASED MATHEMATICS	1986-1988
Funding Source: Apple Computer; Equipment grant \$40,000	
Book:	<i>Appleworks in the Classroom Today</i> . McGraw Hill, 1989.
RETRAINING SECONDARY EDUCATION TEACHERS IN LOW DEMAND DISCIPLINES AS COMPUTER LEARNING TEACHERS	1986-1987
Funding: Source Arizona Department of Education for Economic Security; \$48,470.	
Paper:	National Educational Computing Conference, 1987.
MICROCOMPUTER-BASED MATHEMATICS PROGRAM TO STRENGTHEN THE MATHEMATICS COMPETENCE OF PRE-SERVICE TEACHERS (MATH FITNESS PROJECT)	1985-1988
Funding Source: NSF; \$228,235	
Paper:	University of California, Riverside, 1984.
Paper:	International Commission on Mathematics Instruction, Strasburg, France, 1985.
Paper:	National Educational Computing Conference, 1986.
Paper:	World Congress of Education and Technology , 1986.
Paper:	NCTM and numerous State Math Association Meetings
Article:	"Back to Basics with Math for the Future," <i>Electronic Education</i> , January 1987.
Article:	"Computer Assisted Mathematics - A Model Approach," <i>Computers In The Schools</i> , Fall 1987.
Article:	"Educational Technology and the Future of Mathematics," <i>School Science and Mathematics</i> , October 1987.
Article:	"Microcomputer-Based Mathematics Fitness," <i>Technological Horizons in Education Journal</i> , November 1987.
Article:	"Microcomputer Assisted Testing," <i>Journal of Computers in Mathematics and Science Teaching</i> , Summer 1987.
Study Results: <i>Facilitating Academic Software Development</i> , Educom, 1987 Section based on research results of Math Fitness Project.	

MICROCOMPUTER BASED MATHEMATICS	1985-1986
Funding Source: IBM; \$90,000 Equipment Grant	
FEEDBACK TO THE LEARNER	1985-1986
Funding Source: Provost Grant - Research Assistant; \$6,000	
Paper: National Educational Computing Conference, 1986.	
Article: "Microcomputer Feedback to the Student/Learner" (with P. Mulligan) <i>Ideal</i> , Summer 1987. Vol. 2 pp 75-90.	
MICROCOMPUTER BASED LEARNING: REMEDIAL MATH RESEARCH	1982-1985
Funding Source: Apple Foundation; \$161,000	
Paper: AERA New Orleans, Los Angeles, 1984.	
Paper: ICME 5 Adelaide, Australia, 1984.	
Book: <i>Apple LOGO Primer</i> . Reston, VA: Reston Publishing, 1983.	
Book: <i>Using a Microcomputer in the Classroom</i> , Reston, VA; Reston Publishing, 1984.	
Book: <i>Computer Literacy - Awareness, Applications and Programming</i> , Menlo Park, CA: Addison Wesley, 1986.	
Article: "Apple Newsletter."	
Paper: NCTM and numerous computer organizations	
LITERACY TRAINING MODEL	1981-1982
Funding Source: NSF - PreCollege; \$33,049	
Book: <i>Exploring with Computers</i> . New York, NY: Julian Messner, 1981	
Book: <i>Computers in Today's World</i> . New York, NY: John Wiley & Sons, 1984	
Article: "The First Step Utilizing Microcomputers in Education and Preparing Computer Literate Teachers," <i>AEDS Monitor</i> , Vol. 21, No. 5,6 Nov/Dec, 1982	
Article: "Computer Literacy Scope and Sequence Model," <i>ElectronicLearning</i> , September, October, November/December, 1982; January, February, 1983	
Paper: Numerous presentations.	
COMPUTER NEEDS ASSESSMENT	1980
Funding Source: None	
Monograph: Arizona Microcomputer Needs Assessment, 1980	
Article: "Arizona Computer Assisted Instruction Needs Assessment", <i>The Computing Teacher</i> , 8(4): 31-34, 1981	
MATH ANXIETY	1978-1979
Funding Source: College of Education; \$1,000	
Paper: NCTM Meetings.	
MATHEMATICS EDUCATION - FUTURE	1978-1979
Funding Source: Personal, Sabbatical	
Monograph: Mathematics Education in the Future, Cooperative for Science, Math and Social Studies, Arizona State University, Tempe, Arizona, 1987	
Paper: ICME IV Berkeley, CA 1980	
HAND-HELD CALCULATOR RESEARCH	1975-1977
Funding Source: State of Arizona; \$1,700	
Article: <i>Migrant Educator</i> , Summer, 1976	
Article: "Calculator Teacher Attitudes Improved Through Teacher Education," <i>School Science and Mathematics</i> ,	

50 (4): 323-326, April, 1980

Article: "Curriculum Considerations for Use of the Hand-Held Calculator," *Calculators/Computers Magazine*, 2 (6): 15-16, 1978

COMPUTER ASSISTED INSTRUCTION IN THE ELEMENTARY SCHOOL 1972-1974

Funding Source: ASU Faculty Grant; \$2,000

Article: "A Computer Assisted Management System For The Teacher," *Journal of Educational Data Processing*, 10 (5): 16-24, 1973

Article: "Computer Control of Mediated Instructional Presentations," *AEDS Monitor*, 12 (3): 6-8, 1973

Paper: Numerous Mathematics Meetings

MATHEMATICS LABORATORY - ATTITUDINAL AND COGNITIVE GROWTH 1972-1974

Funding Source: None

Article: "Materials, Competence, and Confidence in a District Math Lab," *Arithmetic Teacher*, 20 (6): 86-89, 1974

Paper: NCTM National Meeting

EFFECT OF CAI ON ATTITUDE AND ACHIEVEMENT IN THE TEACHING OF MATHEMATICS 1969-1970

Funding Source: NSF; Denver, Colorado; \$300,000 Research Associate

Paper: AERA, New York, NY, 1971

Article: "Calculus with Computers," *Two Year College Mathematics Journal*, 1 (2): 41-49, 1970

Article: "Computer Oriented Calculus," *Journal of Educational Data Processing*, 7 (3): 193-195, 1970

Book: *Computer Applications for Calculus*, Prindle, Weber, and Schmidt, Boston, 1972, 264 pp.

Article: "Basic Differences in BASIC," *AEDS Monitor*, 10 (7): 8-9, 1972

PUBLISHED APPS, BOOKS, MONOGRAPHS, CD ROMS, ONLINE PROGRAMS, FILMSTRIPS, TAPES, etc:

- Bitter, G. & Legacy, J. (2012) Chinese Simplified Translation of Using Technology in the Classroom, 7th Ed: (336 pages). Beijing, Pearson Education Asia.
- Bitter, G. *Using Technology in the Classroom, 7th Ed:* (with J Legacy), Allyn & Bacon, Needham Heights, MA, 405 pages, 2008.
- Bitter, G. *Using Technology in the Classroom Brief Edition,* (with J Legacy), Allyn & Bacon, Needham Heights, MA, 272 pages, 2006.
- Bitter, G. *Using Technology in the Classroom, 6th Ed:* (with M. E. Pierson), Allyn & Bacon, Needham Heights, MA, 343 pages, 2002, 2005.
- Bitter, G. *Using Technology in the Classroom DVD,* Allyn & Bacon, Needham Heights, MA, 2005, 2008.
- Bitter, G. *Mathematics Methods for Elementary and Middle School,* (Mac and PC CD-ROM), John Wiley & Sons, New York, NY, 2000, 2005, 2007.
- Bitter, G. *Mathematics Methods for Elementary and Middle School Teachers, 7th Ed.:* (with M. Hatfield, N. Edwards and J. Morrow), John Wiley & Sons, New York, NY, 427 pages, 2002, 2004, 2005, 2008.
- Bitter, G. *Math•ed•ology™ Professional Development On-Line Series,* Arizona State University, Tempe, AZ, 2003.
- Bitter, G. *Hispanic Mathematics: On-Line Mathematics Program,* Arizona State University, Tempe, AZ, 2003
- Bitter, G. *Understanding Teaching: On-Line Professional Development Course,* Arizona State University, Tempe, AZ, 2003
- Bitter, G. *National Educational Technology Standards: Connecting Curriculum and Technology:* (with Lajeane Thomas and Peggy Kelly), International Society for Technology in Education, Eugene OR, 375 pages, 2000.
- Mathematics Methods for Elementary and Middle School,* (Mac and PC CD-ROM), John Wiley & Sons, New York, NY, 2000.
- Mathematics Methods for Elementary and Middle School Teachers, 4th Ed.:* (with M. Hatfield, N. Edwards and J. Morrow), John Wiley & Sons, New York, NY, 427 pages, 2002.
- Math•ed•ology™ Series of 25 CDs and on-line Professional Development episodes,* T.H.E. Institute, 1999.
- National Educational Technology Standards for Students,* (with Lajeane Thomas), International Society for Technology in Education, Eugene, OR, 1998.
- Working with Computers* (with Catherine Skintik), Computer Literacy Press, Cincinnati, OH, 303 pages, 1998.
- Using the Explorer Plus™ Calculator,* (with J. Mikesell) Dale Seymour Publications, White Plains, NY, 291 pages, 1998.
- Mathematics Methods for Elementary and Middle School,* (Mac and PC CD-ROM), Allyn & Bacon, Needham Heights, MA, 1997
- Learning Media Design (CD-ROM)* (with Gloria Wilson), QUE College Publishing, Indianapolis, IN, 120 pages, 1996.
- Quickstart ClarisWorks,* QUE College Publishing, Indianapolis, IN, 386 pages, 1996.
- Understanding Teaching: Implementing the NCTM Professional Standards for Teaching Mathematics* (Mac and PC CD-ROM), Association for Supervision and Curriculum Development, Washington, DC, 1997.

Mathematics Methods for Elementary and Middle School: A Comprehensive Approach (with M. Hatfield and N. Edwards),
 Allyn & Bacon, Needham Heights, MA, 521 pages, 1989, revised 1993, 1997.

Understanding and Using Microsoft Works for Windows,
 West Publishing Company, St. Paul, MN, 502 pages, 1994.

Understanding and Using Microsoft Works on the Macintosh,
 West Publishing Company, St. Paul, MN, 378 pages, 1991. Revision 1994.

Understanding and Using Microsoft Works on the IBM PC,
 West Publishing Company, St. Paul, MN, 394 pages, 1991. Revised 1994.

The National Study of IBM's Teacher Preparation with Technology Grant Program.
Monograph Series of Technology Based Learning and Research, 8, 1994.

The National Study of IBM's Teacher Preparation with Technology Grant Program (Abridged Version).
Monograph Series of Technology Based Learning and Research, 7, 1994.

Understanding and Using Claris Works
 West Publishing Company, St. Paul, MN, 378 pages, 1993.

West Computer Literacy System, (with L. Hardman, C. Melnyk and S. Mandell),
 West Publishing Company, St. Paul, MN, 1993.

Arizona State University Hispanic Math Project.
Monograph Series of Technology Based Learning and Research, 6, 1993.

PUBLISHED APPS,

Bitter, Gary G. et al. 2011-2017

Android Apps designed, developed & completed:

1. *The Ultimate IQ Test*
2. *General Overview of the SAT Reasoning Test*
3. *Detailed Overview of the SAT Reasoning Math Test*
4. *SAT Reasoning Math Review - Numbers and Operations*
5. *SAT Reasoning Math Review - Algebra and Functions*
6. *SAT Reasoning Math Review - Geometry*
7. *SAT Reasoning Math Review - Data Analysis, Statistics and Probability*
8. *SAT Reasoning Math - Model Test 1*
9. *SAT Reasoning Math - Model Test 2*
10. *SAT Reasoning Math - Model Test 3*
11. *SAT Reasoning Math - Model Test 4*
12. *SAT Reasoning Math - Model Test 5*
13. *PT3 NETS Video Library*
14. *Stress-Less TRE*
11. *eyeObserve*

iOS (Apple) Apps designed, developed & completed:

1. *Hispanic math*
2. *The Ultimate IQ Test*
3. *General Overview of the SAT Reasoning Test*
4. *Detailed Overview of the SAT Reasoning Math Test*
5. *SAT Reasoning Math Review - Numbers and Operations*

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6. *SAT Reasoning Math Review - Algebra and Functions*
7. *SAT Reasoning Math Review - Geometry*
8. *SAT Reasoning Math Review - Data Analysis, Statistics and Probability*
9. *PT3 NETS Video Library (5 APPS)*
10. *Stress-Less TRE*
11. *eyeObserve*

Bitter, Gary G. 2010

- *MathReady Grade K App# 1*
- *MathReady Grade K App# 2*
- *MathReady Grade K App# 3*
- *MathReady Grade 1 App# 1*
- *MathReady Grade 1 App# 2*
- *MathReady Grade 1 App# 3*
- *MathReady Grade 2 App# 1*
- *MathReady Grade 2 App# 2*
- *MathReady Grade 2 App# 3*
- *MathReady Grade 3 App# 1*
- *MathReady Grade 3 App# 2*
- *MathReady Grade 3 App# 3*

(<http://teacherpower.net/index.html>) , Apple Computer, Cupertino, CA, 2010

Published Articles:

Bitter, G.G. Et.Al. (2018) Technology past—present. **NCSM Yearbook**.

Bitter, G.G. and R. Meylani, (2016). The Effects of an m-Learning English Speaking Software App on Students in the Chiang Rai Municipality Schools 6 and 7 in Thailand. *International Journal for Innovation Education and Research*, 4 (12): 82-100

Bitter, G. G., et al., (2016). The effects of an online collaborative elementary math program using team-based games to improve student math achievement, attitude and motivation. *International Journal for Innovation Education and Research*, 4(6). 114-138. www.ijer.net

Bitter Gary G. & Corral, A. (2015). Analysis of Learning Outcomes from Mobile Mathematics Applications. *International Journal for Innovation Education and Research*, Vol.3-3. <http://www.ijer.net/>

Bitter, G. G., & Corral, A. (2015). Emerging Educational Technologies. In M. J. Spector, *The SAGE Encyclopedia of Educational Technology* (pp. 262-268). Los Angeles: SAGE Publications, Inc.

Meylani, R., Bitter, G. G. & Legacy, J. (2015). Desirable Characteristics of an Ideal Online Learning Environment. *Journal of Educational and Social Research*. Vol. 5, No 1.

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PAPERS PRESENTED:

Organization	Topic	Date
MasterCard Foundation scholars Tempe, AZ	Integrating Tech Into Education	01/14/2017
2nd ASU Learning Innovation Showcase Tempe, AZ	Design and Create Your own App	01/11/2017
Kansas State University Math Banquet speaker Manhattan, KS	A Quick Look at the Last 70 Years of Math Education	04/14/2016
Kansas State University Math Department Manhattan, KS	Careers in Math and Technology Education	09/28/2015
National Supervisors of Mathematics Boston, MA	Integrating Mobile Technology into the Mathematics Classroom	04/15/2015
Arizona State University-MLFTC Tempe, AZ	Desirable Characteristics of an Ideal Online Learning Environment	12/11/2014
National Supervisors of Mathematics New Orleans, LA (Co-speaker-- Rusen Meylani)	Using video-based APPs for Coaching and Professional Development	04/07/2014
National Council of Teachers of Mathematics Denver, CO (Co-speaker-- Rusen Meylani)	Creating Higher-Achieving Math Students in the APP Generation	04/18/2013
International Society for Technology in Education (ISTE) San Diego, CO (Co-speaker-- Jane Legacy)	Using Free NETS Video-Based APPs for Professional Development	06/26/2012
National Supervisors of Mathematics Philadelphia, PA (Co-speaker-- Rusen Meylani)	Identifying, Reviewing, Selecting, Creating, Developing & Applying Math Assessment Apps with Educational Value to Support Assessment of Student Learning of Mathematics 4-23-2012	04/23/2012
National Council of Teachers of Mathematics Philadelphia, PA (Co-speaker-- Rusen Meylani)	“APPs Boom” Using Math APPs to Teach and Learn Math	04/28/2012
The Computer-Based Math Education Summit London, England	State-of-the-Art Technology for Computer Based Learning and Teaching of Mathematics	11/11/2011
International Society for Technology in Education (ISTE) Philadelphia, PA	The Future of Technology in Education	08/30/2010
Fulbright Orientation Tempe, AZ	Traditional and Emerging Technologies in Support of Foreign Language Instruction	06/29/2010
National Educational Computing Conference Denver, CO (ISTE) Panel	Strategic ED Tech Thinking	06/30/2010
National Educational Technology Conference Denver, CO (ISTE)	Technology Tools for Visual Learning in Mathematics	04/23/2010
National Council of Teachers of Mathematics San Diego, CA	Activities on Data Analysis and Probability Using Technology	01/14/2010
Florida Educational Technology Conference(FETC) Orlando, FL	Future of Educational Technology	07/01/2009
National Educational Computing Conference Washington D.C NECC Panel	Creating Online Mathematics Objects	05/23/2009
International Conference on Living Theorists Budur, Turkey	Online Technology Applications Can Be Used to Teach Middle School Mathematics	04/25/2009
National Council of Teachers of Mathematics Washington D. C.	Using Technology to Teach Mathematics and Science	01/23/2009
Florida Educational Technology Conference(FETC) Orlando, FL	Using Online Digital Activity Objects to Teach Math and Science	06/30/2008
National Educational Computing Conference (NECC) San Antonio, TX	Technology in a Math Classroom	

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National Educational Computing Conference (NECC) San Antonio, TX	Strategic Ed Technology Thinking: Panel	07/01/2008
Bahceshir University Istanbul, Turkey	Emerging Technologies in Education Preparing for the Future	05/15/2008
American Educational Research Association (AERA) New York, NY	Using Multimedia to Teach Standards-Based Democratic Discourse	03/26/2008
American Educational Research Association (AERA) New York, NY	Using Multimedia to Teach Standards-Based Discourse: Considerations for Program Design	03/25/2008
Greater San Diego Math Conference San Diego, CA	Using Online Digital Activity Objects to Teach Math	02/01/2008 01/23/2008
Florida Educational Technology Conference(FETC) Orlando, FL	Using Online Digital Activity Objects to Teach Math	11/26/2007
Software Information Industry Association (SIIA) Panel New, NY	Technologies Impact on Education	
EDNET 2007 (with P. Skiera) Chicago, IL	Technologies for Professional Development	09/10/2007
National Educational Computing Conference (NECC) Panel San Diego	Will Technology Change Education As We See It Today?	06/27/2007 01/25/2007
Florida Educational Technology Conference(FETC) Orlando, FL	Gaming and Education	03/26/2006
Florida Educational Technology Conference(FETC) Orlando, FL	Online Professional Development	
Greater San Diego Mathematics Council San Diego, CA	Digital (DVD/Online) Math Lessons: Connecting Technology with the Teaching of Mathematics	02/03/2005
Florida Educational Technology Conference Orlando, FL	Using Digital Technologies to Enhance Teaching and Learning	01/28/2005
NSBA: Technology and Learning Conference Denver, CO	The NETS Digital Video Library	10/27/2004
Society for Applied Learning Technology® (SALT) Interactive Technologies Arlington, VA	Meeting Teacher Quality Standards with Technology: The NETS Digital Video Library	08/18/2004
National Educational Computing Conference (NECC)	Video Cases as a Catalyst for Change	06/21/2004
Milken Institute Global Conference	Breakout Session: Understanding the Next Wave of Technology in Education	04/28/2004
American Educational Research Association (AERA) San Diego, CA	Evaluating the Effectiveness of e-Learning Modules	04/15/2004
Society for Information Technology and Teacher Education (SITE) Atlanta, GA	Investigating Students' Perceptions of an Online Learning Environment Implementing Video Cased in Faculty Professional Development	03/03/2004
Society for Applied Learning Technology® (SALT) New Learning Technologies Orlando, FL	Developing an Online Instructional Media Design Course/Training Module	02/19/2004

Greater San Diego Mathematics Council San Diego, CA	Math Applications: Using the National Digital Video Library to Improve the Teaching of Mathematics	02/06/2004
Society for Applied Learning Technology® (SALT) Interactive Technologies Arlington, VA	A Web-based Authoring Tool for eLearning	08/06/2003
Society for Applied Learning Technology® (SALT) Interactive Technologies Arlington, VA	Video Cases as Learning Tools	08/06/2003
Global Connections World Technology Conference Phoenix, AZ	Mathedology™: Online Professional Development Using Streaming Video	07/30/2003
National Educational Computing Conference (NECC) Seattle, WA (co-Speaker)	Achieving “Digital Equity”	07/01/2003
American Educational Research Association (AERA) Chicago, IL (co-speaker)	Evaluation of the National Educational Technology Standards Digital Video Library	04/22/2003
Society for Information Technology and Teacher Ed Albuquerque, NM (co-speaker)	Portrait of Digital Equity-The IT Fundamentals Curriculum	03/28/2003
Society for Applied Learning Technology® (SALT) Orlando, FL (co-speaker)	From Portals to Knowledge Brokers	02/20/2003
Greater San Diego Math Council San Diego, CA	Lesson Plans For Integrating Technology Into the Teaching of Mathematics	02/08/2003
Florida Educational Technology Conference Orlando, FL	Technology’s Role in the Education of Today’s Student	02/04/2003
Fund for the Improvement of Postsecondary Education Washington D.C.	How to Turn Lemons into Lemonade!	11/23/2002
League for Innovation in the Community College Conference on Information Technology Long Beach, CA (co-speaker)	Taking the Pain Out of Information Technology: A Model Course	11/17-20/2002
Association of Educational Communication & Tech Dallas, TX (Co-Speaker)	The NETS Digital Library: Creating A Digital Video Database To Promote Technology Integration	11/14/2002
NSBA: Technology and Learning Conference Dallas, TX	Integrating Technology into the Curriculum	11/13/2002
Virtual Learning: Academic and Corporate Conference Columbia University (co-speaker)	Guidelines for Designing and Developing Online e-Learning Courses Including Intellectual Property Considerations	07/11/2002
American Educational Research Assoc (AERA) New Orleans, LA (Co-Speaker)	Investigating Instructional Utility and Implementation Needs in an Online Environment: A Theory-guided Evaluation	04/02/2002
United Arab Emirates University Al-Ain, United Arab Emirates	Integrating Technology into the Curriculum	03/17/2002
Florida Educational Technology Conference (FETC) Orlando, FL (Co-Speaker)	The NETS Digital Video Library	03/08/2002
Florida Educational Technology Conference (FETC) Orlando, FL	Online Digital Solutions for Establishing New Teaching and Learning Environments	03/06/2002
Greater San Diego Mathematics Council San Diego, CA	National Educational Technology Standards (NETS) for Teachers: Math Integration—Essential Conditions, Resources, Assessment Strategies	02/01/2002

Greater San Diego Mathematics Council San Diego, CA	National Educational Technology Standards (NETS): A Math Perspective	02/01/2002
Fund for the Improvement of Postsecondary Education (FIPSE) San Diego, CA	Building Scenario-Driven, Real-World Online Courses	11/18/2001
World Conference on Educational Multimedia, Hypermedia & Telecommunications Tampere, Finland	KEYNOTE: Guidelines for Designing and Developing Online e-Learning Courses Including Intellectual Property Considerations	06/30/2001
American Educational Research Association (AERA) Seattle, WA	Educational Reform in the Era of Cyber Space Discussant Evaluation of a Course in the e-Learning Network: The Perspectives of Instructors	04/11/2001
Society for Information Technology and Teacher Education Orlando, FL	ISTE NETS for Teachers: Integration of Technology into Teacher Preparation	03/07/2001
Greater San Diego Math Council San Diego, CA	National Educational Technology Standards: A Math Perspective	02/02/2001
Florida Educational Technology Conference Orlando, FL	Anytime, Anywhere: Virtual e-Learning	01/12/2001
Northern California Math Council Monterey, CA	Web-Based Professional Development for Teachers	12/01/2000
Fund for the Improvement of Post Secondary Education San Diego, CA	Using Technology to Work with Underserved Populations	11/18/2000
Computer Using Educators Conference Sacramento, CA	National Educational Technology Standards for Teaching Guidelines for Designing and Developing Online Courses	11/10/2000
International Congress on Mathematical Education Tokyo, Japan	Web-based Multimedia Professional Development in Mathematics Education: Mathedology™	07/29/2000
National Educational Computing Conference (NECC) Atlanta, GA	National Educational Technology Standards	06/26/2000
Computer Using Educators Conference Palm Springs, CA	Guidelines for Designing and Developing On-line Courses The National Educational Technology Standards (NETS) Project: Implications and Resources	05/12/2000
American Educational Research Association (AERA) New Orleans, LA	Transforming Formative Evaluation Data: Comparative Content Analysis to Determine Learner Variability Professional Development and Technology— New Approaches and Outcomes Recent Research on Math-ed-ology: An Interactive Multimedia CD-ROM	04/24/2000
Florida Educational Technology Conference Orlando, FL	Guidelines for Designing and Developing Online Courses	03/01/2000
Association of Teacher Educators Orlando, FL	<i>Math•ed•ology™</i> : Interactive Multimedia for Learning National Teaching Standards	02/16/2000
11 th Annual Society for Information Technology and Teacher Education Conference San Diego, CA	National Educational Technology Standards (NETS) Project – Preservice Teacher Education Standards	02/08/2000

Greater San Diego Mathematics Annual Conference San Diego, CA	Web-based Professional Development: <i>Math•ed•ology™</i>	02/04/2000
Computer Using Educators Conference Sacramento, CA	National Educational Technology Standards (NETS) Project: Implications and Resources for the Classroom	10/28/1999
National Educational Computing Conference (NECC) Atlantic City, NJ	National Education Technology Standards (NETS): Unleashing the Power of Technology for Learning The Hidden Costs of Software Upgrades and How to Avoid Them	06/23/1999
Computer Using Educators Conference Palm Springs, CA	The 5 Components that a Pre-Service Technology Education Course Cannot Live Without	05/08/1999
National Council Of Supervisors of Math Conference San Francisco, CA	The ISTE National Educational Technology Standards	05/07/1999
American Educational Research Association (AERA) Montreal, Canada	Web-based Professional Development- <i>Math•ed•ology™</i>	04/20/1999
	Evaluation as Both Formative and Summative: A Study of Teachers' Use of Interactive Multimedia To Learn National Teaching Standards	04/22/1999
	Multiple Perspectives from Four Stakeholder Groups On Interactive Multimedia	04/19/1999
Florida Educational Technology Conference Orlando, FL	Professional Development, Anytime, Anywhere: <i>Math•ed•ology™</i>	03/17/1999
Pacific Asia Conference on Expert Systems Los Angeles, CA (Co-Speaker)	Comparison of Development Methods of a Multimedia Knowledge Base System: Authoring Tool vs. Web-based Version	02/11/1999
Greater San Diego Mathematics Council San Diego, CA	Professional Development Emphasizing Teacher/Student Discourse Including Bilingual Examples	02/05/1999
American Evaluation Association Chicago, IL (Co-Speaker)	Investigating the Relative Utility of Electronic Data Collection for Evaluation of Interactive Multimedia	11/06/1998
Technology Leadership Conference Athens, GA	Surviving Technology (Opening General Session, Keynote)	10/28/1998
National Educational Computing Conference (NECC) San Diego, CA	National Educational Technology Standards (NETS) Project: Defining Technology Standards for preK-12 Students	06/22/1998
Computer Using Educators Conference Palm Springs, CA	A Multimedia Professional Development Seminar for Math Teachers: Grades K-8	05/09/1998
American Educational Research Association (AERA) San Diego, CA	Studies on Computer/Technological Innovations in Data Collection, Assessment, and Instructional Practices: Evaluating Electronic Data Collection	04/14/1998
Association for Supervision and Curriculum San Antonio, TX	Understanding and Implementing the NCTM Teaching Standards Through a Multimedia Professional Development Seminar	03/22/1998
Florida Educational Technology Conf. (FETC) Orlando, FL	The Hispanic Math Project: Area and Perimeter	03/06/1998
Greater San Diego Mathematics Council San Diego, CA	Emphasizing Math Discourse in Your Teaching	02/06/1998
Computer Using Educators Conference Santa Clara, CA	<i>Math•ed•ology™</i> —A Multimedia Approach to Professional Development	10/17/1997
EdNET 97 Scottsdale, AZ	Issues of Concern to the Higher Ed Market	09/24/1997

National Educational Computing Conference (NECC '97), Seattle WA	National Educational Technology Standards (NETS) Project	07/01/1997
National Council of Supervisors of Mathematics (NCSM), Minneapolis-St. Paul, MN	<i>Math●ed●ology™</i>	04/15/1997
The Multidisciplinary Initiative on Distance Learning (MIDL), Tempe, AZ	Research Issues with Electronic Multimedia Courseware	04/11/1997
American Educational Research Association (AERA) Chicago, IL	Writer's Solution: An Interactive Media Program for Building Writing Proficiency Skills for Middle School Students	03/25/1997
Association for Supervision and Curriculum Development Baltimore, MD	Using a CD-ROM Seminar for Professional Development in Mathematics	03/24/1997
Association of Mathematics Teacher Educators Washington, D.C.	Using Technology to Support Teachers' Understanding of the Teaching and Learning of Mathematics	02/16/1997
Greater San Diego Mathematics Council San Diego, CA	Professional Development for the NCTM Curriculum and Professional Teaching Standards	02/07/1997
Computer Using Educators Conference Santa Clara, CA	<i>Math●ed●ology™</i> : A Multimedia Approach to Professional Development	10/25/1996
National Council of Teachers of Mathematics Kansas City, MO	Implementing the NCTM Professional Standards for Teaching Mathematics: A Multimedia Approach	10/10/1996
International Council Mathematics Education (ICME) Seville, Spain	Understanding Teaching: Implementing the NCTM Professional Standards for Teaching Mathematics	07/20/1996
	<i>Math●ed●ology™</i> : A Multimedia Approach to Professional Development (Presented by Dr. Harold Frederick	07/16/1996
National Educational Computing Conference Minneapolis, MN	Teaching Milestones for K-12 Education: Building Standards for all Students	06/13/1996
American Educational Research Association (AERA) New York, NY	Toward Guidelines for the Development and Research of Interactive Multimedia: Experiences of US & Canadian Projects Symposium	04/09/1996
Teachers Teaching with Technology (T3) Los Angeles, CA	Technology and the Teaching of Mathematics	02/23/1996
Quest for the Best FETC/FATIC Conference	A Multimedia Approach to Professional Development	02/17/1996
16 th Annual Texas Computer Education Association Austin, TX	A Multimedia Approach to Professional Development Using Streaming Video	02/09/1996

Research and Editorial

- *Scientific Board, Computers in Human Behavior, 1995-present.*
- *Editorial Board, Journal of Research on Technology in Education, 1999-present*
- *Educational Evaluation and Policy Analysis (EEPA) 2014-2015*
- *Journal of Mathematical Research and Application (JMRA), 2014*
- *Journal of Research in Mathematics Education, reviewer 2013, 2014, 2015, 2016, 2017, 2018*
- *Journal of Educational Computing Research 2013-2015*
- *Journal of Information Technology Education, International Board of Reviewers 2011-present*
- *American Educational Research Journal, reviewer-2011, 2012,2013, 2014, 2015, 2016*

- *NSF Panel Review Team* 2015, 2016
- *Journal of Teacher Education*, reviewer 2013, 2014, 2015
- *University of Malaysia dissertation reviewer PhD reviews* 2013, 2014, 2015, 2017
- *Journal of Research in Mathematics Education*, reviewer 2010, 2011, 2015, 2016
- *Journal of Information Technology Education*, International Board of Reviewers 2011-present
- *Journal of Teacher Education*, reviewer 2008-2010, 2011, 2016, 2017
- *Investigations in Mathematics Learning* 2007-2010
- *University of Malaysia dissertation review* 2009
- *International Association of Science and Technology for Development (IASTED) Program Reviewer* 2006, 2013
- Editorial Board *American Educational Research Journal* 2003-2005
- Editorial Board, *Information Technology in Childhood Education*, 1989-1993, 2000-2004
- Hardware and Software Editor, *Computers in the Schools Journal*, 1983-2004.
- Technology Advisory Committee, *NCATE*, 1996-1997.
- Editorial Board, *Journal of Computers in Mathematics and Science Teaching* 1981-1993.
- Advisory Committee, *National Educational Technology Standards for Students Project*, 1995-2000.
- Advisory Board, Microsoft, 1997.
- Advisory Board, Eisenhower National Clearing House, 1995-1998.
- Reviewer, *World Conference Computers in Education*, 1994-1995.
- Reviewer, *Asia Pacific Information Technology in Training Conference*, 1993.
- PPST Advisory Board, *Educational Testing Service*, 1992-1995.
- Advisory Board Member, *MediaShare Technology Program*, 1991-1993.
- Test Reviewer, *CTB, College Board Review*, 1991.
- Contributing Editor, *Educational Technology*, 1989-1993.
- Editor-in-Chief, *Macmillan Encyclopedia of Computers*, 1990-1992.
- Test Reviewer, *Educational Testing Services*, 1990-1993.
- Reviewer, *AERA Educational Researcher*, 1989, 1991, 1992.
- Editor, *School Science and Mathematics*, 1982-1988.
- Executive Editor, *Technology on Campus*, 1988-1990.
- Software Reviewer, Software Publishers Association, 1988-1990.
- Software Editor, *Journal of Computers in Mathematics and Science Training*, 1989-1993.
- Contributed chapter to *SIGCUE Outlook*, Vol. 20, No. 1, Fall 1988, pp. 115-130.
- *Guidelines for the Continuing Mathematical Education of Teachers*, (Contributor)
- Mathematical Association of Teachers (Committee on the Mathematical Education of Teachers - COMET), 1988.
- Software Review: Math Utilities: Curves, Surfs, and Diffs, *The College Mathematics Journal*, Vol. 18, No. 4, September 1987.
- Contributed chapter to *Planning and Evaluating Computer Education Programs*, Merrill Publishing Company, 1987. Editorial Board,
- *Australian Computer Education Journal*, 1985-1987
- Editorial Board, *Electronic Education*, 1984-1987.
- Instructional Computer Editor, *AEDS Monitor*, 1985-1986.
- Article Reprint "RUN": *Computer Education*, 1985.
- Arizona Governor's Task Force on Computer Education, 1984.
- Fact Sheets - Computer Literacy, National School Board Association, 1984.
- Advisory Council, *Scholastic*, Weekly Reader, 1983-1984.

- Contributed chapter to *Computer Education for Colleges of Education*, Association of Computing Machinery, January 1983.
- Contributed to Encyclopedia of Computer Science and Engineering, 2nd Edition, 1983.
- Contributed two chapters to *Microcomputers Applications in Vocational Education*, University of Wisconsin, Madison, WI, 1983.
- Contributed chapter in *Microcomputer for Teachers*, School Science and Mathematics Association, 1982.
- Editorial Board, *AEDS Monitor*, 1982-1984.
- Monthly column (Bittersweet), *Educational Computer Magazine*, 1981-1984.
- Contributed article in *Microcomputers in Education Proceedings*, Arizona State University, 1981-1984, 1986.
- Editorial Board, *Electronic Learning*, 1981-1983.
- Consulting Editor, *Computer and Mathematics Education Series*, Holt, Rinehart & Winston, 1981.
- Electronic Education Column (bi-monthly), *Instructor Magazine*, 1980-1984.
- Associate Editor, *School Science and Mathematics*, 1980-1981.
- "Calculator Corner" (monthly), *Teacher Magazine*, 1980-1981.
- Advisory Board Member, *Teacher Magazine*, 1977-1979.
- "Metric Corner," monthly column in *Teacher Magazine*, 1976-1980.
- Contributed chapter in *Measurement in School Mathematics* yearbook, Reston, VA, National Council of Teachers of Mathematics, 1976, 244 pp.
- Editorial Board, 1970-1979, *Two Year Mathematics Journal*, Creator and Editor of "The Computer Corner," 1973-1979.
- Consulting Mathematics Editor, General Cassette Corporation, 1970-1975.

ONLINE COURSES DEVELOPED:

EDT440/540: Conceptualizing, Creating & Marketing APPS 2012-2017—Developed and taught.

Developed and taught 20 three-semester hour online courses based on my NETS National Video Digital Library PT3 grant. Each course includes student and teacher video from the PT3 grant.

- **EDT530 A:** English-Language Arts-Integrating Technology into Teaching Pre-K--2
- **EDT530 B:** Social Studies-Integrating Technology into Teaching Pre-K--2
- **EDT530 C:** Mathematics-Integrating Technology into Teaching Pre-K--2
- **EDT530 D:** Science-Integrating Technology into Teaching Pre-K--2
- **EDT530 E:** Multidisciplinary-Integrating Technology into Teaching Pre-K--2
- **EDT530 F:** English-Language Arts-Integrating Technology into Teaching Grades 3-5
- **EDT530 G:** Social Studies-Integrating Technology into Teaching Grades 3-5
- **EDT530 H:** Mathematics-Integrating Technology into Teaching Grades 3-5
- **EDT530 I:** Science-Integrating Technology into Teaching Grades 3-5
- **EDT530 J:** Multidisciplinary-Integrating Technology into Teaching Grades 3-5
- **EDT530 K:** English-Language Arts-Integrating Technology into Teaching Grades 6-8
- **EDT530 L:** Social Studies-Integrating Technology into Teaching Grades 6-8
- **EDT530 M:** Mathematics-Integrating Technology into Teaching Grades 6-8
- **EDT530 N:** Science-Integrating Technology into Teaching Grades 6-8
- **EDT530 O:** Multidisciplinary-Integrating Technology into Teaching Grades 6-8
- **EDT530 P:** English-Language Arts-Integrating Technology into Teaching Grades 9-12
- **EDT530 Q:** Social Studies-Integrating Technology into Teaching Grades 9-12

- **EDT530 R:** Mathematics-Integrating Technology into Teaching Grades 9-12
- **EDT530 S:** Science-Integrating Technology into Teaching Grades 9-12
- **EDT530 T:** Multidisciplinary-Integrating Technology into Teaching Grades 9-12

PROFESSIONAL STANDING AND RECOGNITION:

Memberships, Professional Organizations, Scholarly Societies

NATIONAL	DATES
American Association of University Professors (Colorado College Acting Chair - 1969)	1967-2011
American Educational Research Association <i>Editorial Board American Educational Research Journal</i>	1970-2016 2003-2005
Special Interest Group-Computer Applications in Education-Chair	1990-1993
Symposium Chair and Organizer	1988-1991
Reviewer for Instructional Technology Papers	1986, 1998/1999
Chair/Critic - Computers for Mathematics Education, Technology in Education	1986, 2000
Reviewer – Computer Applications in Education	1995-1997
Professional Development and Technology Chair	4/10/2001
Educational Reform in the Era of Cyberspace – Discussant	4/11/2001
International Society for Technology in Education (ISTE)	1990 -lifetime
Past President	1991-1992
President	1990 -1991
President Elect	1989-1990
Paul Pair Lifetime Technology Achievement Award	2000
<i>International Society for Technology in Education Lifetime Achievement Award</i>	1989
Vision: TEST Advisory Board	1990-1991
Co-P.I. – NASA Grant to Develop Technology Standards	1996-1997
Co-P.I. – USDE Grant to Develop Technology Standards	1997-1980
Teaching Mathematics with Calculators Advisory Board Funded by: MAA/NCTM/NSF/TI	1989-1994
National Educational Computing Conference (NECC)	
Steering Committee	1988-1992
Conference Chair, Phoenix, AZ, June, 1991	1991
International Association of Computer Educators (IACE)	1968-1989
Annual Meeting Program Chair	1987-1988
National Board of Directors (Elected)	1974-1975, 1986-1989
Director of International Computer Programming Contest	1974-1975
National Convention Committee, Treasurer Adams Hotel, Phoenix, AZ, May 7-10, 1976	1975-1976
International Council of Computer Educators (ICCE)	1982-1989
National Board of Directors (Elected)	1988-1989
Association for Development of Instructional Systems	1968-1976

California Mathematics Association	1990-1995
Futuristic Society	1976-1979
National Council of Teachers of Mathematics (NCTM)	1962-present
<i>Lifetime Achievement Award</i>	2006
Chapter in Professional Standards Yearbook	1994
Chapter in Teaching Math	1999
Chapter in Calculator Yearbook	1992
Math Counts Committee	1988-1990
Open Ended Problem Solving Committee	1987
Computer Mathematics Seminars	1986-1987
Program Committee, Phoenix, AZ	1986-1987
Technology Chair, NCTM National, San Antonio, TX	1985
Houston Regional NCTM Meeting - NCTM representative	1984
Regional Services Committee	1981-1985
Phoenix Regional NCTM Meeting - NCTM representative	1982
Technology in the Classroom, Monograph	1982
Developed Computer Literacy Seminar Series	1981-1982
El Paso Regional NCTM Meeting - NCTM representative	1981
Convention and Conference Committee	1980-1983
Program Director, NCTM Phoenix Meeting	1976
National Council Supervisors of Math (NCSM)	1978-Present
Phi Delta Kappa	1969-2011
Computer Seminars	1983
Research Council for Diagnostic and Prescriptive Mathematics	1977-2001
Mathematical Association of America	1967-1999
School Science and Mathematics Association	1962-2007
Editor, <i>School Science and Mathematics Journal</i>	1981-1988
Chapter in Yearbook - <i>Microcomputers for Teachers</i>	1982
U.S. Metric Association	1975-1982

ACADEMIC ACHIEVEMENTS:

Nature of Distinction	Awarded By	Date
Distinguished Mathematics Alumnus Award	Kansas State University	2016.
NCTM Lifetime Achievement Award	National Council of Teachers of Mathematics	2006
2001 Faculty Achievement Award	Arizona State University	2001
Paul Pair Lifetime Technology Achievement Award	International Society for Technology in Education	2000
Outstanding Service Award	Arizona State University – College of Education	2000
Distinguished Alumnus	Kansas State University	1994
International Society of Technology in Education Lifetime Achievement Award	ISTE	1990
Affirmative Action Administrator of the Year	Arizona State University; Educational Media and Computers	1990
Outstanding Technology Educator of the Year	International Society For Technology in Education	1989
Masters of Innovation	Zenith Data Systems	1989

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Distinguished Alumnus	Emporia State University	1987
Outstanding Faculty Member (COE)	Arizona State University	1985
International Educator	UNICEF	1984
Outstanding Children's Book	National Science Teachers Association	1979, 1981, 1993
National Migrant Educator of the Month	Migrant Education News	1976
Outstanding Children's Book	National Science Teachers Association	1975
Fellowship	National Science Foundation	1970
Fellowship	National Science Foundation (Summer)	1968
Fellowship	National Science Foundation (Summer)	1967
Fellowship	National Science Foundation	1965-1966
Fellowship	National Science Foundation (Summer)	1963-1965
American Men and Women of Science		1970-1979
Community Leaders and Noteworthy Americans		1975
Dictionary of International Biography		1975
Leaders in Education		1971

EDUCATIONAL PLANS IMPLEMENTED:

Computer Literacy Scope and Sequence Model
Numerous Computer Related School Programs
Idaho Migrant Pocket Calculator Project
Migrant Mathematics Laboratory - Model
Migrant Mathematics Diagnosis and Remediation Program
Creighton Math Laboratory
Mesa School District - District-wide Mathematics Program Improvement Project
Mesa School District - Teacher Center Program
Bureau of Indian Affairs Math Program - Math Lab Model

PROFESSIONAL CONTRIBUTIONS

	DATE
National Science Foundation SBIR Review Panel	2013, 2015
Chinese University of Hong Kong Faculty Promotion and Tenure review	2011-2012
USDE Hispanic Serving Institutions Panel reviewer	2010
Global Educational Assessment team—(CISCO/Intel/Microsoft)	2008-2010
FIPSE GANN Panel Review	2010
Social Sciences & Humanities Research Council of Canada	2009
FIPSE US--Russia Panel review	2009
FIPSE College Digital Data Panel Review	2009
FIPSE Panel Review	2008
National Science Foundation SBIR Review Panel	2008, 2015
Nortel Advisory Board	2008
CompuGirls Advisory Board	2007-2011
Reviewer Journal of Teacher Education	2006
Advisory Board Princeton Review	2001-present
Reviewer - Journal of Educational Computing Research	2003-2006
Reviewer - FOCUS on Learning Problems In Mathematics	2004-2006
Reviewer for McGraw Hill	2004

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Review for Kluwer the Language of Science-- <i>Education and Information Technologies</i>	2002
USDE – Site Visit	2000
Detroit Public Schools – USI/NSF Site Visit	1997
Arizona Technology Council – State of Arizona	1996-1997
State of Louisiana Southern University Ph.D. Review	1997
Program Development Advisory Committee, Assoc. for Supervision and Curriculum Development	1997-
Syracuse University – Ed. Tech. Program Review	1997
NCATE Technology Advisory Committee	1996-1997
National Science Foundation Review Panels	1981-1997
	1999-2000
U.S. Department of Education Review Panels	1991-1996
	2000-2002
Software Consortium - Review Panel (Host)	1984-1995
Dissertation Review Panel - University of Malaya	1995
National Science Scholarship Program Panel	1994-1995
Advisory Board, NSF/TI/MAA Calculator Project	1991-1994
Advisory Board, Eisenhower National Clearing House, Ohio State University	1993-1998
Director, Arizona State University Conference, "Microcomputers in Education"	1980-2000

SUPERVISION OF GRADUATE RESEARCH, THESIS, DISSERTATIONS

Number	Degree - Chair	Degree	Year
39	Masters-Arizona State University	Educational Media and Computers	1996-2006
63	Masters-Arizona State University	Educational Technology	1996-2016

Number	Degree-- Committee	Degree
85	PhD- Arizona State University	Educational Technology

CHAIR OF DOCTORAL COMMITTEES:

1. Dennis Nelson (Ed. D.)
(Graduated 1976) Elementary Education - Mathematics Education
(Director, BASIC Skills - Mesa Public Schools)
2. Charles Geer (Ph.D.)
(Graduated 1977) Elementary Education - Mathematics Education
(Professor, Texas Tech University)
3. Randy Souviney (Ph.D.)
(Graduated 1977) Elementary Education - Mathematics Education
(Professor, University of California, San Diego)
4. Marilyn Ford (Ph.D.)
(Graduated 1984) Elementary Education - Math & Computer Education
(Professor, University of Nevada, Las Vegas)
5. Donna Craighead (Ph.D.)
(Graduated 1985) Elementary Education - Computer Education
(Editor, Computer Software - Southwestern Publishing)
6. Sharman Pitcher (Ph.D.)
(Graduated 1986) Elementary Education - Computer Education
(U.S. Air Force - Videodisc research, development)
7. Gordon Reimer (Ph.D.) Elementary Education - Math & Computer Education

- (Graduated 1987)
8. Patty Mulligan (Ph.D.)
(Graduated 1987)
 9. Nancy Watson (Ph.D.)
(Graduated 1987)
 10. Nancy Martin (Ph.D.)
(Graduated 1989)
 11. Allen Cameron (Ph.D.)
(Graduated 1991)
 12. Janie Hydrick (Ph.D.)
(Graduated 1993)
 13. Wayne Hartschuh (Ph.D.)
(Graduated 1994)
 14. Barbara Clark (Ph.D.)
(Graduated 1995)
 15. Charles Savitt (Ph.D.)
(Graduated 1996)
 16. Mike Charles (Ph.D.)
(Graduated 1997)
 17. Amy Bradshaw(Ph.D.)
(Graduated 1997)
 18. Vito Amato(Ph.D.)
(Graduated 1999)
 19. Leah Sutton
(Graduated 2000)
 20. Jon Storslee
(Graduated 2001)
 21. Deborah Stirling
(Graduated 2002)
 22. Mark Jowett
(Graduated 2003)
 23. Helen Padgett
(Graduated 2004)
 24. Donna Benson
(Graduated 2005)
 25. Qi Dunsworth
(Graduated 2005 Co-Chair)
 26. Eric Miller
(Graduated 2005 Co-Chair)
 27. Rene Castaneda
(Graduated 2008)
 28. Steve Salik
(Graduated 2010)
 29. Todd Kisiciki (Co-Chair)
- (Professor, Brandon University, Manitoba, Canada)
Elementary Education - Computer Education
(Professor, San Jose State University)
Elementary Education - Computer Education
(Consultant, New Zealand Technology Education)
Elementary Education - Computer Education
(Professor, California State University, U.S. Defense Schools – Panama Canal)
Elementary Education - Computer Education
(Coordinator/Teacher - Carl Hayden Magnet School)
Elementary Education - Computer Education
(Past President, National Council of Teachers of English, Mesa Schools)
Educational Media and Computers
(Technology Coordinator - State of Delaware)
Educational Media and Computers
(Professor, University of Nebraska)
Educational Media and Computers
(Instructional Technologist Chicago State University)
Educational Media and Computers
(Professor, Pacific University)
Educational Media and Computers
(Professor, University of Oklahoma)
Educational Media and Computers
(Manager, Curriculum Development-Cisco Systems)
Educational Media and Computers
(Technology –Quest Communications)
Educational Media and Computers
(Faculty-Maricopa Community College)
Educational Media and Computers
(Research Science Director- Pearson Digital Learning)
Educational Media and Computers
(Dept. of Technology Coordinator-Davenport University – Dearborn)
Elementary Education - Computer Education
(Arizona State University WEST-Adaptive Curriculum)
Educational Media and Computers
(Arizona State University—Student Services)
Educational Technology
Educational Media and Computers
(Arizona State University-Hispanic Math Center)
Educational Media and Computers
(Technology Director Isaac School District)
Educational Media and Computers
(Director of Technology, Online Academic Services
W.P. Carey School of Business)
Educational Technology

- (Graduated 2012)
30. Justin Shewell
(Graduated 2013)
31. Caroline Savio-Ramos
(Graduated 2016)
32. Alpay Bicer
(Graduated 2016)
33. Rusen Meylani
(Graduated 2016)
34. Jim Cunningham
(Graduated 2017)
35. Elaine Rettger
(Graduated 2017)
- Faculty Arizona State University
Educational Technology
Faculty Arizona State University
Educational Technology
Hewlett Packard
Educational Technology
Adaptive Curriculum
Math & Technology Education
Instructor of Mathematics and Engineering, Country Gardens Charter Schools
Learning Literacies and Technologies
Big Data Researcher ED PLUS
Educational Technology
Instructional Designer-ASU