**Thomas Andrew Brush**

Indiana University

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## Last Updated: January, 2025

**EDUCATION** **Ph.D. in Special Education,** 1995

 Indiana University, Bloomington, IN

 Cognate Area: Instructional Systems Technology

 Research Interests: Design of inquiry-oriented learning environments;

 Technology integration and teacher education.

 **Master of Science in Education,** 1988

 Potsdam College of SUNY, Potsdam, NY

 Major: Instructional Technology

 Honors & Awards: Kappa Delta Pi, Education Honor Society

 **Bachelor of Arts in Mathematics,** 1986

 Potsdam College of SUNY, Potsdam, NY

 Minor: Secondary Education

 Teaching Certification: Math 7-12

 Honors: Pi Mu Epsilon, Mathematics Honor Society

**EXPERIENCE** **Barbara B. Jacobs Chair in Education and Technology**

 Indiana University, Bloomington, IN

 Endowed Chair for the School of Education. (7/10 – present)

 **Professor, Instructional Systems Technology**

 Indiana University, Bloomington, IN

 Faculty in School of Education. (7/09 – present)

 **Chair, Instructional Systems Technology Department**

 Indiana University, Bloomington, IN

 Department Chair for IST Department at Indiana

 University’s School of Education. (7/12 – 6/18; 1/19 – 5/19)

 **Associate Dean for Teacher Education**

Indiana University, Bloomington, IN

 Head administrator for teacher education at Indiana

 University’s School of Education. (7/08 – 6/12)

 **Associate Professor, Instructional Systems Technology**

 Indiana University, Bloomington, IN

 Faculty in School of Education. (8/02 – 6/09)

 **Associate Professor and Program Leader, Educational**

 **Technology**

 Arizona State University, Tempe, AZ

 Faculty and program leader for Ed. Technology. (7/01 – 8/02)

 **Assistant Professor, Educational Media/Educational Technology**

Arizona State University, Tempe, AZ

 Junior faculty in Ed. Media/Ed. Technology. (8/98 – 6/01)

 **Assistant Professor, Educational Media**

 EFLT Department, Auburn University, Auburn, AL

 Graduate faculty in Educational Technology. (9/95 – 8/98)

 **Director of Instructional Technology**

 Mt. Clemens Community School District, Mt. Clemens, MI

 Oversaw all aspects of technology and instruction for the

 district. Developed and presented in-service opportunities for

 faculty. Managed technology budget. (1/93 - 9/95)

 **Associate Director for Technology**

 Indiana University, Center for Media and Teaching Resources

 Consulted with faculty and public school clients on technology-based

 instructional development projects. Oversaw administration, design,

 and evaluation of technology-based instructional projects. (1991 –

 1992)

 **Project Director, Instructional Services**

 Indiana University, School of Education

 Developed instructional materials and supervised audio-visual center.

 Consulted with faculty on teaching (1990 – 1991).

 **Research and Development Assistant**

 Indiana University, Department of Special Education

 Developed and field-tested instructional materials.

 Taught field-based classes using distance learning techniques.

 Assisted with communication technology. (1989 - 1992)

**TEACHING Indiana University, Bloomington, IN**

**EXPERIENCE**

Graduate Courses Taught

 J762 – Doctoral Seminar: Inquiry-Based Learning

 R795 – Dissertation Proposal Preparation (*online*)

 R711 – Readings in Instructional Systems Technology *(F2F & online)*

 R695 – Doctoral Research Seminar for EdD Students *(online)*

R695 – Doctoral Research Seminar for PhD Students

 R695 – Doctoral Seminar: Technology Integration in K-12 Settings

 R685 – Technology Training in Pre-Service and Inservice Education

 R622 – Learning Environment Design (*online*)

 R621 – Needs Analysis and Assessment (*F2F & online*)

 R620 – Task Analysis for Performance Improvement (*online*)

 R561 – Evaluation in the Instruct Des/Dev Process (*F2F & online*)

 R541 – Development and Production Processes (*online*)

 R521 – Instructional Design and Development *(F2F & online)*

 R511 – Instructional Technology Foundations *(online)*

 R505 – Leadership Issues in Educational Technology *(online)*

 R505 – Masters Portfolio *(F2F & online)*

 Undergraduate Courses Taught

 W210 – Computers in Education

 W301 – Integrating Technology into Teaching I

 W435 – Leadership Issues in Educational Technology

 **Arizona State University, Tempe, AZ**

 Graduate Courses Taught

 EMC598 – Learning Environments

 EDT531 – Hypermedia

 EDT504 – Development of Computer-Based Instruction

 EDT511 – Technology Applications in Education

 EMC528 – Media Production

 EMC525 – Web-Based Development

 EMC505 – Presentation Technologies

 **Auburn University, Auburn, AL**

 Graduate Courses Taught

 EM630 - Community Information and Reference Sources

 EM651 - Research in Educational Media

 EM670 - Advanced Computer-Based Instructional Design

 EM671 - Computer-Based Instructional Strategies

 EM672 - Emerging Technologies in Education

 EM685 - Computer Graphics in Educational Applications

 EDL750 - Doctoral Seminar in Educational Leadership

 Undergraduate Courses Taught

 EM200 - Teaching with Technology

 EM370 - Microcomputer Concepts and Applications

**AWARDS** 2022 Outstanding Empirical Journal Article Award (co-author

 with Dr. Haesol Bae), *Association for Educational*

 *Communications and Technology*.

2018 Young Researcher Award (co-author with Ms. Suhkyung Shin),

 *Association for Educational Communications and Technology*.

 2014 Young Researcher Award (co-author with Ms. Sungwon Shin),

 *Association for Educational Communications and Technology*.

 2014 NTLI Fellows Award (co-recipient with Dr. Cory Callahan and

 Dr. John Saye). *Presented by the Society for Information*

 *Technology and Teacher Education*.

 2013 Technology Paper Award (co-author with Dr. Cory Callahan and

 Dr. John Saye). *Presented by the College and University Faculty*

 *Assembly of the National Council for Social Studies*.

 2012 Excellence in Education Award, *Presented by the Office of*

 *Disability Services, Indiana University*.

 2011 Leadership Award. *Presented by SIG-Instructional Technology*

 *of the American Educational Research Association*.

 2010 Appointed Barbara B. Jacobs Chair for Education and

 Technology. *Indiana University School of Education*.

2010 Presidential Award for Service. *Presented by the Association for*

 *Educational Communications and Technology.*

2010 Research Paper Award for Excellence (co-author with Ms. Susie

 Gronseth). *SIG-Teacher Education of the International Society for*

 *Technology in Education*.

 2008 Trustees Teaching Award – Nominee. *Indiana University School*

 *of Education*.

2007 Award for Excellence in Mentoring. *Indiana University School*

 *of Education.*

 2007 GPSO Faculty Mentoring Award – Nominee. *Indiana University*.

 2006 Young Scholar Award (co-author with Dr. Khe Foon Hew),

 *Association for Educational Communications and Technology*.

 2003 Best Paper Award – Honorable Mention. *American Educational*

 *Research Association, SIG – Research in Social Studies*.

 1998-99 Best Paper Award, *Arizona Educational Research*

 *Organization*.

1998 Young Scholar Award, *Association for Educational*

 *Communications and Technology*.

 1998 Nominee for best paper, *Eastern Educational Research*

 *Association*.

 1992 Award - Best Field-based Application of Technology. *Society*

 *for Information Technology and Teacher Education*.

**BOOKS** Brush, T. & Saye, J. (2017). *Successfully implementing problem-*

*based learning in classrooms: Research in K-12 and teacher*

 *education*. West Lafayette, IN: Purdue University Press.

**REFEREED** Kwon, K., Brush, T., Kim, K., & Seo, M. (2025). Embodied learning

**PUBLICATIONS** for computational thinking in a mixed reality context. *Journal of*

 *Educational Computing Research, 62*(8), 1939-1960,

 Batchelder, S., Kuratko, D., Brush, T., & Karlin, M. (2024). The

challenge of gender diversity for case-based instruction in

 entrepreneurship education. *Entrepreneurship Education and*

 *Pedagogy, 0*(0). <https://doi.org/10.1177/25151274241247827>

 Feng, C., Bae, H., Glazewski, K., Hmelo-Silver, C., Brush, T., Mott,

 B., Lee, S., & Lester, J. (2024). Exploring facilitation strategies to

 support socially shared regulation in a problem-based learning

 game. *Educational Technology & Society, 27*(3), 318-334.

 Slamet, T., Brush, T., & Kwon, K. (2024). The effects of competition

 in gamified online discussions on learners’ behavioral and

 cognitive engagement. *Technology, Knowledge, and Learning.*

 <https://doi.org/10.1007/s10758-024-09740-7>

 Kwon, K., Jeon, M., Zhou, C., Kim, K., & Brush, T. (2022). Embodied

learning for computational thinking in early primary education.

 *Journal of Research on Technology in Education, 56*(4), 410-430.

 Brush, T., Glazewski, K., Shin, S., & Shin, S. (2021). Implementation

of a technology-supported socioscientific inquiry unit in high

school biology: Impact on student achievement and attitudes.

 *Journal of Computers in Mathematics and Science Teaching,*

 *40*(4), 303-330*.*

Kwon, K., Jeon, M., Guo, M., Yan, G., Kim, J., Ottenbreit-Leftwich,

 A., & Brush, T. (2021). Computational thinking practices: Lessons

 learned from a problem-based curriculum in primary education.

 *Journal of Research on Technology in Education*.

Ottenbreit-Leftwich, A., Kwon, K., Brush, T., Karlin, M., Jeon, M.,

 Jantaraweragul, K., Guo, M., Nadir, H., Gok, F., Bhattacharya, P.

 (2021). The impact of an issue-centered problem-based learning

 curriculum on 6th grade girls’ understanding of and interest in

 computer science. *Computers and Education Open, 2*, 1-11.

Winters, S., Farnsworth, K., Berry, D., Ellard, S., Glazewski, K., &

 Brush, T. (2021). Supporting middle school students in a problem-

 based makerspace: Investigating distributed scaffolding.

 *Interactive Learning Environments.*

Kwon, K., Ottenbreit-Leftwich, A., Brush, T., Jeon, M., & Yan, G.

 (2021). Integration of problem-based learning in elementary

 computer science education: Effects on computational thinking and

 attitudes. *Educational Technology Research and Development*, *69*,

 2761–2787.

 Bae, H., Glazewski, K., Brush, T., & Kwon, K. (2021). Fostering

 transfer of responsibility in the middle school PBL classroom: An

 investigation of soft scaffolding. *Instructional Science, 49*, 337-

 363.

 Ding, A., Qu, P., Glazewski, K., Bae, H., Ergulec, F., Nadir, H., &

 Brush, T. (2021). The dilemmas of teaching dilemmas in a foreign

 language classroom. *International Journal of Designs for*

 *Learning, 12*(3), 86-101.

 Brush, T., Ottenbreit-Leftwich, A., Kwon, K., & Karlin, M. (2020).

Implementing socially relevant problem-based computer science

 curriculum at the elementary level: Students’ computer science

 knowledge and teachers’ implementation needs.*Journal of*

 *Computers in Mathematics and Science Teaching, 39*(2), 109-123.

 Richardson, J., Brush, T., Ottenbreit-Leftwich, A., Karlin, M., Leary,

 H., Shelton, B., Lowell, V., Exter, M., Strycker, J., & Shin, S.

 (2020). Innovation in instructional design and technology

 programs: A view from PIDT 2018. *Tech Trends, 64*, 432-438.

 Shin, S., Brush, T. A., & Glazewski, K. D. (2020). Examining the

 hard, peer, and teacher scaffolding framework in inquiry-based

 technology-enhanced learning environments: Impact on academic

 achievement and group performance. *Educational Technology*

 *Research and Development*, *68,* 2423-2447.

 Shin, S., Brush, T. A., & Glazewski, K. D. (2020). Patterns of peer

 scaffolding in technology-enhanced inquiry classrooms:

 Application of social network analysis. *Educational Technology*

 *Research and Development*, *68,* 2321–2350.

 Kohlmeier, J., Howell, J., Saye, J., McCormick, T., Shannon, D.,

 Jones, C., & Brush, T. (2020). Investigating teacher adoption of

 authentic pedagogy through lesson study. *Theory and Research in*

 *Social Education, 48*(4), 492-528.

 Sadik, O., Ottenbreit-Leftwich, A.T., & Brush, T.A. (2020).

 Secondary computer science teachers’ pedagogical

 needs. *International Journal of Computer Science Education in*

 *Schools, 4*(1), 33-52*.*

 Shin, S., Brush. T., Saye, J., & Zhang, Z. (2019). Integrating

classroom video cases into a teaching methods course: A two-year

 journey of curriculum redesign. *International Journal of Designs*

 *for Learning, 10*(1), 35-52.

 Shin, S., Brush, T., & Saye, J. (2019). Using technology-enhanced

 cases in teacher education: An exploratory study in a social studies

 methods class. *Teaching and Teacher Education, 78*, 151-164.

 Ottenbreit-Leftwich, A., Glazewski, K., Brush, T., Aslan, S., &

Zachmeier, A. (2018). Addressing technology integration

concerns: Asynchronous video mentoring between pre-service

teachers and exemplary technology-using in-service teachers.

 *Australasian Journal of Educational Technology*, *34*(4), 1-15.

 Kwon, K., Shin, S., Brush, T., Glazewski, K., Edelberg, T., Park, S.,

Khlaif, Z., Nadiruzzaman, H., & Alangari, H. (2018). Inquiry

 learning behaviors captured through screencasts in problem-based

 learning. *Interactive Learning Environments*, *26*(6), 839-855.

Liao, Y-C., Ottenbreit-Leftwich, A., Karlin, M., Glazewski, K., &

 Brush, T. (2017). Supporting change in teacher practice:

 Examining shifts of teachers’ professional development

 preferences and needs for technology integration. *Contemporary Issues in Technology and Teacher Education, 17*(4). Retrieved

from <http://www.citejournal.org/volume-17/issue-4-17/general/supporting-change-in-teacher-practice-examining-shifts-of-teachers-professional-development-preferences-and-needs-for-technology-integration>.

Saye, J. W., Kohlmeier, J., Howell, J. B., McCormick, T. M., Jones, R.

C., & Brush, T. (2017). Scaffolded lesson study: Promoting

professional teaching knowledge for problem-based historical

 inquiry. *Social Studies Research and Practice, 12*(1), 95-112.

 Wallace, S., Banks, T., Sedas, M., Glazewski, K., Brush, T., &

 McKay, C. (2017). What will keep the fish alive? Exploring the

 intersections of designing, making, and inquiry among middle

 school learners. *International Journal of Designs for Learning*,

 *8(*1), 11-21.

 Shin, S., Brush, T., & Glazewski, K. (2017). Designing and

implementing web-based scaffolding tools for technology-

 enhanced socioscientific inquiry. *Educational Technology and*

 *Society, 20*(1), 1-12.

 Brush, T., Shin, S., Shin, S., Jung, J., Gensic, J., & Glazewski, K.

 (2016). Design and implementation of a technology-supported

 socioscientific inquiry unit in high school biology. *International*

 *Journal of Designs for Learning, 7*(2), 1-10.

 Callahan, C., Saye, J., & Brush, T. (2016). Interactive and

 collaborative professional development for in-service history

 teachers. *The Social Studies, 107*(6), 227-243.

 vanLeusen, P., Ottenbreit-Leftwich, A., & Brush, T. (2016).

 Interpersonal consulting skills for instructional technology

 consultants: A multiple case study. *TechTrends, 60*(3), 253-259.

 Callahan, C., Saye, J., & Brush, T. (2015). Supporting in-service

teachers' professional teaching knowledge with educatively

 scaffolded digital curriculum. *Contemporary Issues in Technology*

 *and Teacher Education*, *15*(4). Retrieved from

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 Zhang, Z., Brush, T., & Shin, S. (2014). Open source software in

 development of functional education website: Concepts and

 practice [published in Chinese]. *The Chinese Journal of ICT in*

 *Education, 336*, 87–89. **Published in 2015**.

 Brush, T. & Saye, J. (2014). An instructional model to support

 problem-based historical inquiry: The Persistent Issues in History

 Network. *Interdisciplinary Journal of Problem-Based Learning,*

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 Glazewski, K., Shuster, M., Brush, T. & Ellis, A. (2014).

 Conexiones: Fostering socioscientific inquiry in graduate teacher

 preparation. *Interdisciplinary Journal of Problem-Based Learning,*

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 Shen, Y.W., Reynolds, T., Bonk, C., & Brush, T. (2013). A case study

 of applying blended learning in an accelerated post-baccalaureate

 teacher education program. *Journal of Educational Technology*

 *Development and Exchange, 6*(1), 59-78.

 Callahan, C., Saye, J., & Brush, T. (2013). Designing web-based

 educative curriculum materials for the social studies.

 *Contemporary Issues in Technology and Teacher Education*,

 *13*(2). Retrieved from

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 Ottenbreit-Leftwich, A., Brush, T., Strycker, J., Gronseth, S., Roman,

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 programs and practicing teachers align in their use of technology

 to support teaching and learning? *Computers & Education, 59*(2),

 399-411.

 Kale, U., Brush, T., Bryant, A., & Saye, J. (2011). Online

 communication patterns of teachers. *Journal of Interactive*

 *Learning Research, 22*(4), 489-520.

 Kohlmeier, J., Saye, J., Mitchell, L., & Brush, T. (2011). Using

 mentoring to support a novice teacher using problem based

 historical inquiry with “low achieving” students. *The Journal of*

 *Social Studies Research, 35*(1), 56-79.

 Gronseth, S., Brush, T., Ottenbreit-Leftwich, A., Strycker, J., Abaci,

 S., Easterling, W., Roman, T., Shin, S., & van Leusen, P. (2010).

 Equipping the next generation of teachers: Technology preparation

 and practice. *Journal of Digital Learning in Teacher Education,*

 *27*(1), 20-26.

 Hur., J., Cullen, T., & Brush, T. (2010). Teaching for application: A

 model for assisting pre-service teachers with technology

 integration. *Journal of Technology and Teacher Education*, *18*(1),

 161-182.

 Callahan, C., Saye, J., & Brush, T. (2009-2010). Educative curriculum

 materials to develop social studies teachers' professional

 teaching knowledge. *International Journal of Social Education,*

 *24*(2), 5-33. **Published in 2013**.

 Saye, J., Kohlmeier, J., Brush, T., Howell, J., & Maddox, L. (2009-

 2010). Assessing the effects of a teacher education program on

 pre-service secondary social studies teachers' instructional

 decision-making. *International Journal of Social Education, 24*(2),

 35-76. **Published in 2013**.

 Brush, T., & Saye, J. W. (2009). Strategies for preparing preservice

 social studies teachers to integrate technology effectively:

 Models and practices. *Contemporary Issues in Technology and*

 *Teacher Education* [Online serial], *9*(1). Retrieved from

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. Brush, T., Saye, J., Kale, U., Hur, J., Kohlmeier, J., Yeasimou. T.,

 Guo, L., & Symonette, S. (2009). Evaluation of the Persistent

 Issues in History Laboratory for Virtual Field Experience (PIH-

 LVFE)*. Journal of Interactive Online Learning* [Online serial],

*8*(1). Retrieved from <http://www.ncolr.org/jiol/issues/viewarticle.cfm?volID=8&IssueID=25&ArticleID=128>.

 Hur, J. & Brush, T. (2009). Teacher participation in online

 communities: Why do teachers want to participate in self-

 generated online communities of K-12 teachers? *Journal of*

 *Research on Technology in Education*, *41*(3), 279-303.

 Kale, U., Brush, T., & Saye, J. (2009). Assessing teachers thinking and

 participation online. *Journal of Educational Computing Research,*

 *41*(3), 287-317.

 Saye, J., Kohlmeier, J., Brush, T., Mitchell, L., & Farmer, C. (2009).

 Using mentoring to develop professional teaching knowledge for

 problem-based historical inquiry. *Theory and Research in Social*

 *Education, 37*(1), 6-41.

 Brush, T. & Saye, J. (2008). The effects of multimedia-supported

 problem-based inquiry on student engagement, empathy, and

 assumptions about history. *Interdisciplinary Journal of Problem-*

 *Based Learning*, *2*(1), 21-56.

 Brush, T., Glazewski, K., & Hew, K. (2008). Development of an

 instrument to measure pre-service teachers’ technology skills,

 technology beliefs, and technology barriers. *Computers in the*

 *Schools*, *25* (1-2), 112-125.

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 learning, social presence, and satisfaction in a blended learning

 environment: Relationships and critical factors. *Computers &*

 *Education, 51*, 318-336.

Hew, K. & Brush, T. (2007). Integrating technology into K-12

 teaching and learning: Current knowledge gaps and

 recommendations for future research. *Educational Technology*

 *Research and Development, 55*(3), 223-252.

 Saye, J. & Brush, T. (2007). Using technology-enhanced learning

 environments to support problem-based historical inquiry in

 secondary school classrooms. *Theory and Research in Social*

 *Education, 35*(2), 196-230.

 Cullen, T., Brush, T., Frey, T., Hinshaw, R., & Warren, S. (2006).

 NCLB technology and a rural school: A case study. *The Rural*

 *Educator, 28*(1), 9-16.

 Saye, J. & Brush, T. (2006). Comparing teachers’ strategies for

 supporting student inquiry in a problem-based multimedia-

 enhanced history unit. *Theory and Research in Social Education,*

 *34*(2), 183-212.

Hur, J., Tan, A., Brush, T., Saye, J., & Chen, L. (2005). Redesigning

 the Persistent Issues in History (PIHNet) online forum and journal

 to promote interaction and reflection. *TechTrends, 49*(6), 63-66.

Saye, J.W. & Brush, T. (2005). The persistent issues in history

 network: Using technology to support historical inquiry and civic

 reasoning. *Social Education, 69*(4), 168-171.

 Brinkerhoff, J., Klein, J., Brush, T., & Saye, J. (2005). The effects

 of advisement and small groups on learning from a multimedia

 database. *International Journal of Instructional Media, 32*(4),

 409-418.

 Brush, T. & Saye, J. (2004). Supporting learners in technology-

 enhanced student-centered learning environments. *International*

 *Journal of Learning Technology, 1*(2), 191-202.

 Saye, J. & Brush, T. (2004). Scaffolding problem-based teaching in a

 traditional social studies classroom. *Theory and Research in Social*

 *Education, 32*(3), 349-378.

 Simons, K., Klein, J., & Brush, T. (2004). Instructional strategies

 utilized during the implementation of a hypermedia, problem-

 based learning environment: A case study. *Journal of Interactive*

 *Learning Research*, *15*(3), 213-233.

Wolf, S.E., Brush, T., & Saye, J. (2003). Using an information

 problem-solving model as a metacognitive scaffold for

 multimedia-supported information-based problems. *Journal of*

 *Research on Technology in Education, 35*(3), 321-341.

Wolf, S.E., Brush, T., & Saye, J. (2003). The Big Six information

 skills as a metacognitive scaffold: A case study. *School Library*

 *Media Research, 6*(1). [On-line]. Available:

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 Publications\_and\_Journals/School\_Library\_Media\_Research/

 Contents1/Volume\_6\_(2003)/Big\_Six\_Information\_Skills.htm.

Brush, T., Glazewski, K., Rutowski, K., Berg, K., Stromfors, C.,

 Hernandez-Nest, M., Stock, L., & Sutton, J. (2003). Integrating

 technology into a pre-service teacher training program. The

 PT3@ASU project. *Educational Technology Research and*

 *Development, 51*(1), 57-72.

Brush, T. & Saye, J. (2002). A summary of research exploring hard

 and soft scaffolding for teachers and students using multimedia-

 supported learning environments. *Journal of Interactive Online*

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 history and social issues in multimedia-supported learning

 environments. *Educational Technology Research and*

 *Development, 50*(3), 77-96.

Brush, T. & Saye, J. (2001). The use of embedded scaffolds in a

 technology-enhanced student-centered learning activity. *Journal of*

 *Educational Multimedia and Hypermedia, 10*(4), 333-356.

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 into preservice teacher education. *Journal of Computing in*

 *Teacher Education, 17*(4), 16-20.

 Brush, T. & Saye, J. (2000). Implementation and evaluation of a

 student-centered learning unit: A case study. *Educational*

 *Technology Research and Development, 48*(3), 79-100.

 Brush, T. & Uden, L. (2000). Using computer-mediated

 communications to enhance instructional design classes: A case

 study. *International Journal of Instructional Media, 27*(2), 157-

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 Brush, T. (2000). Using an ILS to help students at-risk of school

 failure. *Journal of Research in Education, 10*(1), 28-31.

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 a multimedia-supported learning environment. *Theory and*

 *Research in Social Education, 27*(4), 472-504.

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 and delivery of Integrated Learning Systems: Their impact on

 student achievement and attitudes. *Journal of Educational*

 *Computing Research*, 21(4), 475-486.

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 schools: A five-state comparison. *Computers in the Schools,*

 *15*(2), 11-23.

Scott, B. & Brush, T. (1998). Teaching instructional technology: A

 problem-based learning approach. *Canadian Journal of*

 *Educational Communications*, *27*(1), 1-18.

 Brush, T. (1998). Embedding cooperative learning into the design of

 Integrated Learning Systems: Rationale and guidelines.

 *Educational Technology Research and Development, 46*(3), 5-18.

Brush, T. (1998). Teaching pre-service teachers to use technology in

 the classroom. *Journal of Technology and Teacher Education*,

 *6*(4), 243-258.

 Brush, T. & Bannon, S. (1998). Characteristics of technology

 leaders: A survey of school administrators in the United States.

 *International Studies in Educational Administration, 26*(2), 47-

 56.

Brush, T. (1997). The effects on student achievement and attitudes

 when using integrated learning systems in cooperative pairs.

 *Educational Technology Research and Development*, *45*(1), 51-

 64.

Brush, T. (1997). The effects of group composition on achievement

 and time-on-task for students completing ILS activities in

 cooperative pairs. *Journal of Research on Computing in*

 *Education*, *30*(1), 2-17.

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 development in rural communities using distance education and

 communication technology.  *Rural Special Education Quarterly*,

 *13*(2), 19-24.

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 technology in the field-based preparation of teachers.

 *Journal of Technology and Teacher Education, 2*(1), 91-102.

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 survey. *Hypermedia, 2*, 91-107.

**BOOK** Liao, Y., Ottenbreit-Leftwich, A. & Brush, T. (2025). Integrating

**CHAPTERS** technology into K-12 education. In R. Reiser, A.Carr-Chellman,

 and J. Dempsey (Eds.), *Trends and issues in instructional design*

 *and technology* (5th Ed). New York: Pearson.

 Uttamchandani, S., Bae, H., Feng, C., Glazewski, K., Hmelo-Silver,

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 orchestration systems supported by AI: Theoretical possibilities

 and practical considerations. In F. Ouyang, P. Jiao, B.M. McLaren, &

 A.H. Alavi (Eds.)., *Artificial intelligence in STEM education: The*

 *paradigm shifts in research, education, and technology.*

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 education: Applied competencies within multi-level systems. In M.

 Savin-Baden & G. Tombs (Eds.), *Threshold Concepts in Problem-*

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**PROJECTS** *Education*. (2024 – 2025). Proposal funded by the Indiana

 Department of Education, One year grant, approximately

 $481,000. **Co-project director**.

*Designing for Impact: Next Level Computer Science*. (2023 – 2024).

 Proposal funded by the Indiana Department of Education, One year

 grant, approximately $312,000. **Co-project director**.

*Integrating AI learning into middle school science through natural*

 *language processing.* (2022 – 2025). Proposal funded by the

 National Science Foundation. Three year grant, approximately

 $380,000. **Co-principal investigator**.

 *Supporting early learning of computational thinking using mixed*

 *reality technology*. (2021 – 2024). Proposal funded by the National

 Science Foundation. Three year grant, approximately $725,000.

 **Co-principal investigator**.

 *National computer science education preservice case studies.*

 (2019 – 2021). Proposal funded by the Google Foundation. One

 year grant, approximately $140,000. **Co-principal investigator**.

 *Augmented cognition for teaching: Transforming teacher work with*

 *intelligent cognitive assistants*. (2018 –2023). Proposal funded by

 the National Science Foundation. Three year grant, approximately

 $1.5 million. **Co-principal investigator**.

 *Examining the impact of socially relevant problem-based learning*

 *curriculum at the elementary level: Students’ CS interest/*

 *knowledge and teachers’ implementation needs*. (2018 – 2020).

 Proposal funded by the Google Foundation. One year grant,

 approximately $100,000. **Co-principal investigator**.

 *The Mendel Sherman Video Case Database*. (2014 - ). Proposal

 funded by the estate of the late Dr. Mendel Sherman. Ongoing

 award, approximately $550,000. **Project director**.

 *Wise practice cases to support complex information problem-solving*.

 (2015 - 2018). Proposal funded by private donor. Ongoing award,

 approximately $40,000. **Co-project director**.

 *The Problem-Based Learning Virtual Case Laboratory*. (2014 – 2015).

 Proposal funded by the Office of the Vice-Provost for Research,

 Indiana University. One year grant, approximately $25,000. **Co-**

 **project director**.

*PBL-Tech: Using Web 2.0 Resources to Support Problem-Based*

 *Curricular Innovations in Pre-Service Teacher Education*. (2010 –

 2014).Proposal funded by the Fund for the Improvement of

 Postsecondary Education (FIPSE). Three year grant,

 approximately $750,000. **Project director**.

 *Evaluation of Indiana’s Enhancing Education Through Technology*

 *(EETT) Program*. (2010 – 2011). Proposal funded by the Indiana

 Department of Education. One year contract, approximately

 $325,000. **Principal investigator*.***

 *Conexiones: Fostering technology-enhanced socioscientific inquiry in*

 *graduate teacher preparation*. (2010 – 2011). Proposal funded by

 the Fund for the Improvement of Postsecondary Education

 (FIPSE). Two year grant, approximately $200,000. **Project**

 **evaluator**.

 *Plowing Freedom’s Ground*. (2009 – 2012). Proposal funded by the

 United States Department of Education, Teaching American

 History grant competition. Five year grant, approximately $1.7

 million. **Co-project director**.

 *Leveraging Technology to Keep America Competitive*. (2007 – 2009).

 Proposal funded by the United States Department of Education.

 Two year contract, approximately $3,000,000. **Co-task leader**.

*The Persistent Issues in History Laboratory for Virtual Field*

 *Experience*. (2004 – 2007). Proposal funded by the Fund for the

 Improvement of Post-Secondary Education (FIPSE). Three-year

 grant, approximately $550,000. **Principal investigator**.

*Researching the Persistent Issues in History Network*. (Summer,

 2004). Proposal funded by the Proffitt Internal Research Grant

 Competition, Indiana University. Summer fellowship,

 approximately $10,000. **Principal investigator**.

 *Scaffolding disciplined inquiry about history and social issues in*

 *multimedia-supported learning environments*. (2003 – 2004).

 Proposal funded by the Proffitt Internal Research Grant

 Competition, Indiana University. Two-year grant, approximately

 $40,000. **Principal investigator**.

*Reasoning about critical issues of the Civil Rights Movement*. (2002 –

 2004). Proposal funded by the National Endowment for the

 Humanities. Two-year grant, approximately $230,000. **Co-**

 **principal investigator**.

 *A field-based model for integrating technology into preservice*

 *teacher education*. (2000 – 2003). Proposal funded by the US

 Department of Education, Preparing Tomorrow’s Teachers to Use

 Technology competition. Three-year grant, approximately

 $1,150,000. **Principal investigator**.

 *Video cases of ISTE NETS standards*. (2001 – 2004). Proposal

 funded by the US Department of Education, Preparing

 Tomorrow’s Teachers to Use Technology competition. Three-year

 grant, approximately $1,800,000. **Co-principal investigator**.

 *Learning anytime, anywhere partnership*. (1999 - 2003). Proposal

 funded by the Fund for the Improvement of Post-Secondary

 Education. Four-year grant, approximately $4,000,000. **Co-**

 **principal investigator**.

 *Arizona Teacher Excellence Coalition (AzTEC).* (1999 – 2004).

 Proposal funded by the US Department of Education, Title II

 competition. Five-year grant, approximately $15,000,000. **Co-**

 **principal investigator**.

 *Daniel F. Breeden endowment for faculty enhancement and*

 *competitive teaching grant-in-aid*. (1996). Proposal funded by

 Auburn University. One-year grant, approximately $10,000.

 **Principal investigator**.

**INVITED** Brush, T., Glazewski, K., Kwon, K., Ottenbreit-Leftwich, A., Shin, S.,

**SESSIONS/PAPERS** Bae, H., Seo, M., Kadirova, D., Hmelo-Silver, C., Lester, J., &

**AND KEYNOTES** Mott, B. (2023, October). *The use of multimedia technologies to*

 *support student-centered teaching practices*. Invited panel

 discussion at the Association for Educational Communication and

 Technology Conference, Orlando, FL.

 Leary, H., Measom, E., Glazewski, K., Kopcha, TJ, Brush, T., &

 Ottenbreit-Leftwich, A. (2023, October). *Using research-practice*

 *partnerships for collaborative research for change in education*.

 Invited panel discussion at the Association for Educational

 Communication and Technology Conference, Orlando, FL.

 Brush, T., Glazewski, K., Ottenbreit-Leftwich, A., Callison, M., Shin,

 S. (2015, November). *Cultivating university-school partnerships to*

 *support research and practice: The Jacobs Educator Program*.

 Invited panel discussion at the Association for Educational

 Communication and Technology Conference, Indianapolis, IN.

 Brush, T. Glazewski, K., Ertmer, P., Belland, B., Ottenbreit-Leftwich,

 A., & Leary, H. (2012, October). *Problem-based learning and*

 *teacher education*. Invited panel discussion at the Association for

 Educational Communication and Technology Conference,

 Louisville, KY.

 Perichitte, K., Herring, M., Smaldino, S., & Brush, T. (2012, October).

 *Teacher education programs under attack! A panel of teacher*

 *education administrators and experts discussing their curriculum*

 *changes*. Invited panel discussion at the Association for

 Educational Communication and Technology Conference,

 Louisville, KY.

 Kopcha, T., Ottenbreit-Leftwich, A., Brush, T., and others. (2012,

 October). *Crafting a dossier that effectively represents yourself*

 *and your scholarship*. Invited panel discussion at the Association

 for Educational Communication and Technology Conference,

 Louisville, KY.

 Brush, T., Glazewski, K., Hennessey, M., Martin, J., Saye, J., &

 Sherwood, R. (2011, April). *Successful grantmanship in*

 *instructional technology: A panel discussion*. Invited session at the

 annual meeting of the American Educational Research

 Association, New Orleans, LA.

 Brush, T. & Klein, J. (2010, April). *Expert roundtable: Job searching*

 *and professional development*. Invited session at the annual

 meeting of the American Educational Research Association,

 Denver, CO.

 Brush, T. & Ottenbreit-Leftwich, A. (2009, April). *Expert roundtable:*

 *Technology and Teacher Education*. Invited session at the annual

 meeting of the American Educational Research Association,

 San Diego, CA.

 Brush, T. (2008, November). *Panel discussion on management of*

 *educational software development: Strategies for different*

 *educational audiences*. Presentation at the annual conference of the

 Association for Educational Communications and Technology,

 Orlando, FL.

 Saye, J., Hess, D., Parker, W., Brush, T., & Maddox, L. (2008,

 November). *Envisioning powerful social studies teaching: PIH*

 *wise practice videocases*. Presentation at the annual meeting of the

 College and University Faculty Assembly, National Council for

 the Social Studies, Houston, TX.

 Brush, T. & Ottenbreit-Leftwich, A. (2008, March). *SITE forum*

 *discussion: A U.S. Department of Education national study of*

 *preservice technology integration programs*. Paper presented at the

 2008 Society for Information Technology and Teacher Education

 conference, Las Vegas, NV.

 Black, L. & Brush, T. (2007, March). *Opening the lid to*

 *KnowledgeBox: Increasing student achievement and teacher*

 *enthusiasm*. Paper presented at the 2007 Pearson Digital Learning

 User’s Conference, Orlando, FL.

 Brush, T. (2005, April). *Integrating problem-based learning into*

 *secondary social studies: The Persistent Issues in History Network*.

 Keynote address for the Problem-Based Learning SIG, American

 Educational Research Association, Montreal, Canada.

 Brush, T. (2004, November). *Problem-based learning: What is it?*

 *Why do it?* Keynote address for the annual Tech-Know-Build

 Seminar Program, Crawfordsville, IN.

 Saye, J. & Brush, T. (2003, May). *Promoting civic competence*

 *through problem-based history learning environments*. Paper

 presented at the Third Annual Freeman Butts Institute on Civic

 Learning in Teacher Education, Indianapolis, IN.

**CONFERENCE** Brush, T., Kwon, K., Shin, S., Seo, M., & Kim, H. (2024, October). **PAPERS AND** *Redesign of the Wise Practice Case Database: Multimedia*

**PRESENTATIONS** *resources to support inquiry-based teaching practices*. Paper

presented at the annual meeting of the Association for Educational

 Communications and Technology, Kansas City, MO.

 Kadirova, D., Leftwich, A., Brush, T., Kwon, K., Hmelo-Silver, C.,

 Drumm, S., & Chu, L. (2024, October). *Elementary preservice*

 *teachers’ conceptions of computer science education and*

 *preparedness to teach computer science*. Paper presented at the annual meeting of the Association for Educational

 Communications and Technology, Kansas City, MO.

 Seo, M., Kwon, K., Brush, T., Kim, H., & Kim, K. (2024, October).

 *Integrating**augmented reality and collaborative activities to*

 *enhance computational thinking in K-12 classrooms*. Paper

 presented at the annual meeting of the Association for Educational

 Communications and Technology, Kansas City, MO.

 Feng, C., Bae., H., Hong, D. Glazewski, K., Hmelo-Silver, C., Zou,

 X., Wang, T., Brush, T., Lee, S., Mott, B., & Lester, J. (2024,

 June). *An investigation of dashboard in collaborative inquiry: The*

 *dynamic interplay between technology and pedagogy in classroom*

 *orchestration*. Paper presented at the annual meeting of the

 International Society of the Learning Sciences, Buffalo, NY.

 Bae, H., Glazewski, K., Hmelo-Silver, C., Brush, T., Mott, B., &

 Lester, J. (2024, April). *Designing orchestration assistants:*

 *Examining orchestration practices in elementary, middle, and*

 *high school PBL (Problem-Based Learning) classrooms*. Paper

 presented at the annual meeting of the American Educational

 Research Association, Philadelphia, PA.

 Zhou, C., Kwon, K., Kim, K., Brush, T., Muralidharan, A., Seo, M.,

 Kim, Y., & Hwang, J. (2023, October). *Embodied programming*

 *experiences in computational thinking development: Examination*

 *of effectiveness of augmented reality and bee-bots*. Paper presented

 at the annual meeting of the Association for Educational

 Communications and Technology, Orlando, FL.

 Slamet, T., Brush, T., & Kwon, K. (2023, October). *The effects of*

 *competition in gamified online discussions on learners’ behavioral*

 *and cognitive engagement*. Paper presented at the annual meeting

 of the Association for Educational Communications and

 Technology, Orlando, FL.

 Seo, M., Kim, K., Zhou, C., Sridhar, A., Kwon, K., Brush, T., Kim, Y.,

 & Hwang, J. (2023, October). *Designing pathfinding tasks for*

 *young students in augmented reality for computational thinking*.

 Paper presented at the annual meeting of the Association for

 Educational Communications and Technology, Orlando, FL.

Feng, C., Bae, H., Glazewski, K., Hmelo-Silver, C., Brush, T., Mott,

 B., & Lester, J. (2023, October). *Exploring participation patterns*

 *in problem-based learning through an epistemic lens*. Paper

 presented at the annual meeting of the Association for Educational

 Communications and Technology, Orlando, FL.

 Feng, C., Bae, H., Chen, Y., Uttamchandani, S., Wang, T., Hong, D.,

 Glazewski, K., Hmelo-Silver, C., Brush, T., Lee, S., Mott, B.,

 Lester, J. (2023, April). *Rethinking troubleshooting: Transforming*

 *technology troubleshooting into critical facilitation moments in*

 *problem-based learning implementation*. Paper presented at the

 annual meeting of the American Educational Research

 Association, Chicago, IL.

 Bae, H., Glazewski, K., Hmelo-Silver, C., & Brush, T. (2023, April).

 *Scaffolding problem-based learning: Expert teacher strategies*

 *differ across grade levels*. Paper presented at the annual meeting of

 the Association for Educational Communications and Technology,

 Orlando, FL.

 Zhou, C., Kim, K., Kwon, K.., Brush, T., and others. (2022, October).

 *Promoting young students’ embodied interaction with cutting-edge*

 *technologies in computational tasks*. Paper presented at the annual

 meeting of the Association for Educational Communications and

 Technology, Las Vegas, NV.

 Bae, H., Glazewski, K., Brush, T., & Hmelo-Silver, C. (2022,

 October). *Exploring orchestration practices and orchestration*

 *load in elementary, middle, and high school PBL classrooms.*

Paper presented at the annual meeting of the Association for

 Educational Communications and Technology, Las Vegas, NV.

 Kim, J. Lee, H., Koressel, J., Chu, L., Ottenbreit-Leftwich, A., Brush,

 T., and others. (2022, October). *How to prepare elementary*

 *preservice teachers to teach CS: Multiple case studies.* Paper

 presented at the annual meeting of the Association for Educational

 Communications and Technology, Las Vegas, NV.

 Feng, C., Saleh, A., Bae, H., Glazewski, K., Hmelo-Silver, C.,

 Brush, T., Fahid, F. M., Acosta, H., Lee, S., Carpenter, D., Mott,

 B. & Lester, J. (2022). Multimodal behavioral disengagement

 detection for collaborative game-based learning. In *Proceedings of*

 *the International Conference on Artificial Intelligence in*

 *Education*. 218-221.

Uttamchandani, S., Saleh, A., Bae, H., Glazewski, K., Hmelo-Silver,

C. E.,  Brush, T., Mott, B. W., & Lester, J. (2022, June). Human-

centered automation and deliberately limited labels as design

principles of ambitious learning practices. In *Proceedings of International Conference of the Learning Sciences (ICLS).* 525-532.

 Feng, C., Saleh, A., Bae, H., Glazewski, K., Hmelo-Silver, C., Brush,

 T., Mott, B., & Lester, J. (2021, November). *Exploring strategies*

 *to redirect disruptive talk in middle-school collaborative inquiry*

 *discourse.* Paper presented at the annual meeting of the

 Association for Educational Communications and Technology,

 Chicago, IL.

 Ottenbreit-Leftwich, A., Brush, T., Childs, J., Kim, J., Koressel, J.,

 Lee, H., DeLyser, L., & Yadav, A. (2021, November). *How are we*

 *preparing our preservice teachers to teach CS? A National*

 *perspective*. Paper presented at the annual meeting of the

 Association for Educational Communications and Technology,

 Chicago, IL.

 Buggs, C., Uttamchandani, S., Glazewski, K., Hmelo-Silver, C.,

 Brush, T., Mott, B., & Lester, J. (2021, November). *Teacher goals*

 *and supported orchestration through intelligent-augmented*

 *dashboard support*. Paper presented at the annual meeting of the

 Association for Educational Communications and Technology,

 Chicago, IL.

 Bae, H., Saleh, A., Feng, C., Glazewski, K., Hmelo-Silver, C.,

 Brush, T., Mott, B., & Lester, J. (2021, November). *“just vote*

 *yes.\*sigh\*”: Facilitating scientific discussion in a collaborative*

 *problem and game-based learning environment*. Paper presented at

 the annual meeting of the Association for Educational

 Communications and Technology, Chicago, IL.

 Brush, T., Ottenbreit-Leftwich, A., & Kwon, K. (2021, August).

 *Implementing a problem-based computer science curriculum with*

 *elementary students: Impact on knowledge, skills, and attitudes.*

 Paper presented at the 2021 Pan-PBL conference, Aalborg,

 Denmark (conference moved to virtual format).

 Brush, T. Glazewski, K., Kwon, K., & Ottenbreit-Leftwich, A. (2021,

 August). *Supporting PBL practice in K-12 education: The Wise*

 *Practice Video Case Database*. Paper presented at the 2021 Pan-

 PBL conference, Aalborg, Denmark (conference moved to virtual

 format).

 Glazewski, K., Brush, T., Banks, T., Wallace, S., Hmelo-Silver, C.,

 Mott, B., & Lester, J. (2021, August*). From physical to the virtual*

 *and everything in-between: Local implementations and*

 *adaptations of PBL in a multi-year middle school/university*

 *partnership*. Paper presented at the 2021 Pan-PBL conference,

 Aalborg, Denmark (conference moved to virtual format).

Guo, M., Yan, G., Kim, J., Jeon, M., Kwon, K., Leftwich, A., &

 Brush, T. (2021, April). *Coding patterns and techniques in sixth-*

 *graders’ block based programming projects*. Paper presented at the

 annual meeting of the American Educational Research Association

 (conference moved to virtual format).

 Bae, H., Chen, Y., Saleh, A., Glazewski, K., Hmelo-Silver, C., Brush,

 T., Lee., S., Mott, B., & Lester, J. (2021, April). *"How big is a*

 *tilapia?" Negotiating collaborative inquiry in a game-based*

 *learning environment*. Paper presented at the annual meeting of the

 American Educational Research Association (conference moved to

 virtual format).

Rodgers, K., Feng, C., Bhimdiwala, A., Gok, S., Glazewski, K.,

 Hmelo-Silver, C., Brush, T., Lee, S., Mott, B., & Lester, J. (2020,

 November). *Supporting teacher orchestration of collaborative*

 *inquiry in game-based learning with intelligent assistants.* Paper

 presented at the annual meeting of the Association for Educational

 Communications and Technology, Jacksonville, FL (conference

 moved to virtual format).

Bae, H., Saleh, A., Feng, C., Glazewski, K., Hmelo-Silver, C., Chen,

 Y., Scribner, A., Brush, T., Mott, B., Lee, S., & Lester, J. (2020,

 June). *Designing intelligent cognitive assistants with teachers to*

 *support classroom orchestration of collaborative inquiry*. Paper

 presented at the annual conference of the International Society of

 the Learning Sciences, Nashville, TN (conference moved to virtual

 format).

 Kwon, K., Ottenbreit-Leftwich, A., Brush, T., & Jeon, M. (2020,

 April). *Effects of problem-based learning curriculum for computer*

 *science education in an elementary school*. AERA Annual

 Meeting, San Francisco, CA (Conference canceled).

 Ottenbreit-Leftwich, A., Kwon, K., & Brush, T. (2020, April).

 *Teaching computational thinking with socially relevant problems*

 *at the elementary level*. AERA Annual Meeting, San Francisco,

 CA (Conference canceled).

 Kwon, K., Ottenbreit-Leftwich, A., Brush, T., Jeon, M., Zhu, M., &

 Gok, F. (2019, October). *Exploring 6th-grade students’ CT*

 *concepts and practices.* Paper presented at the annual meeting of

 the Association for Educational Communications and Technology,

 Las Vegas, NV.

 Ottenbreit-Leftwich, A., Brush, T., Kwon, K., Karlin, M., and others.

 (2019, October). *Inspiring the next generation of learners: Using*

 *socially relevant computer science (CS) problem-based learning*

 *curriculum at the 6th grade level*. Paper presented at the annual

 meeting of the Association for Educational Communications and

 Technology, Las Vegas, NV.

 Nadir, H., Glazewski, K., Brush, T., & Kwon, K. (2019, April). *When*

 *middle school kids make: Understanding the roles of scaffolding*

 *for troubleshooting to support inquiry*. Paper presented at the

 annual meeting of the American Educational Research

 Association, Toronto, Canada.

 Brush, T., Ottenbreit-Leftwich, A., Kwon, K., & Karlin, M. (2019,

 March*). Implementing socially relevant problem-based computer*

 *science curriculum at the elementary level: Students’ computer*

 *science knowledge and teachers’ implementation needs*. Paper

 presented at the annual meeting of the Society for Information

 Technology and Teacher Education, Las Vegas, NV.

 Bae, H., Glazewski, K., Brush, T., & Kwon, K. (2018, October).

 *Investigating scaffolding as social interaction: Looking closely at*

 *fading through conversation analysis*. Paper presented at the

 annual meeting of the Association for Educational

 Communications and Technology, Kansas City, MO.

 Farnsworth, K., Winters, S., Ellard, S. Berry, D., Glazewski, K., &

 Brush, T. (2018, October). *Scaffolding middle school students in a*

 *PBL makerspace unit: Scaffolding means versus scaffolding*

 *intentions*. Paper presented at the annual meeting of the

 Association for Educational Communications and Technology,

 Kansas City, MO.

 Nadir, H., Glazewski, K., Brush. T., & Kwon, K. (2018, October).

 *Understanding a middle-school teacher’s scaffolding and*

 *troubleshooting practices to support student inquiry during*

 *making*. Paper presented at the annual meeting of the Association

 for Educational Communications and Technology, Kansas City,

 MO.

 Bae, H., Glazewski, K., Brush, T., & Kwon, K. (2018, April).

 *Fostering transfer of responsibility in the middle school problem-*

 *based learning classroom. An investigation of dialogic scaffolds*.

 Paper presented at the annual meeting of the American Educational

 Research Association, New York, NY.

 Brush, T., Glazewski, K., Wallace, S., & Banks, T. (2017, November).

 *Making history come alive! Integrating history, ecology, and*

 *makerspaces*. Presentation at the annual meeting of the National

 Council for Social Studies, San Francisco, CA.

 Brush, T., Glazewski, K., Shin, S., & Shin, S. (2017, November).

 *Implementation of a socioscientific inquiry unit in high school*

 *biology: Results of a multi-year design project*. Paper presented at

 the annual meeting of the Association for Educational

 Communications and Technology, Jacksonville, FL.

 Karlin, M., Bae, H., Aslaif, M., Basdogan, M., Edelberg, T.,

 Nadiruzzaman, H., Sari, A., Zhu, M., Brush, T., & Glazewski, K.

 (2017, May). Examining reflective thinking in middle school

 design problem-solving in a maker environment. Paper presented

 at the annual meeting of the American Educational Research

 Association, San Antonio, TX.

 Shin, S. & Brush, T. (2017, April). *Promoting preservice teacher*

 *reflection: Implementation of classroom video cases in a teaching*

 *methods course.* Paper presented at the annual meeting of the

 American Educational Research Association, San Antonio, TX.

 Glazewski, K., Gomoll, A., Hmelo-Silver, C., Brush, T., & Jung, J.

 (2017, April). *“We are a nonlinear dynamic system”: Problem-*

 *based design in engineering at a Hispanic-serving institution*.

 Paper presented at the annual meeting of the American Educational

 Research Association, San Antonio, TX.

 Alangari, H., Brush, T., & Boling, E. (2017, April). *Factors*

 *contributing to the use of technology for Saudi female K-12 ESL*

 *teachers*. Paper presented at the annual meeting of the American

 Educational Research Association, San Antonio, TX.

 Shin, S., Brush, T., & Glazewski, K. (2017, April). *Peer scaffolding*

 *patterns in inquiry-based collaborative learning tasks supported*

 *by mobile devices*. Paper presented at the annual meeting of the

 American Educational Research Association, San Antonio, TX.

 Shin, S., Brush, T., & Glazewski, K. (2016, October). *Identifying peer*

 *scaffolding types and interaction patterns in inquiry-based*

 *learning*. Paper presented at the annual meeting of the Association

 for Educational Communication and Technology, Las Vegas, NV.

 Shin, S., & Brush, T. (2016, October). *Promoting reflective practice in*

 *teacher education: Technology-enhanced case-based instruction*.

 Paper presented at the annual meeting of the Association for

 Educational Communication and Technology, Las Vegas, NV.

 Brush, T., Glazewski, K., & Saye., J. (2016, June). *The PBL-Tech*

 *project: Web 2.0 tools and resources to support PBL in teacher*

 *education*. Paper presented at the 2016 PBL Congress, Zurich,

 Switzerland.

 Glazewski, K., Brush, T., Shin, S., & Shin, S. (2016, June).

 *Implementing socioscientific inquiry in high school biology:*

 *Teacher and student perspectives*. Paper presented at the 2016 PBL

 Congress, Zurich, Switzerland.

 Gomoll, A., Glazewski, K., Brush, T., Hmelo-Silver, C., & Jung, J.

 (2016, June). *What do instructors want other instructors to know?*

 *Making experiences usable through PBL Virtual Case Laboratory*

 *(VCL)*. Paper presented at the 2016 PBL Congress, Zurich,

 Switzerland.

 Ergulec, F., Brush, T., Glazewski, K., Shin, S., Shin, S., Hogaboam,

 P., & Guo, M. (2016, April*). Teacher scaffolding strategies*

 *for socioscientific inquiry-based learning in a high school biology*

 *classroom*. Paper presented at the annual meeting of the American

 Educational Research Association, Washington, DC.

 Ergulec, F., Brush, T., Glazewski, K., Shin, S., Shin, S., Hogaboam,

 P., & Guo, M. (2016, March). *Teacher scaffolding for inquiry-*

 *based learning in a technology-enhanced student-centered high*

 *school biology classroom: A case study*. Paper presented at the

 annual meeting of the Society for Information Technology and

 Teacher Education, Savannah, GA.

 Brush, T., Glazewski, K., Shin, S., & Shin, S. (2016, March). *The*

 *effects of technology-supported socioscientific inquiry (SSI) on*

 *student achievement and attitudes towards science*. Paper

 presented at the annual meeting of the Society for Information

 Technology and Teacher Education, Savannah, GA.

 Brush, T., Glazewski, K., Shin, S., Shin, S., Saye, J., & Zhang, Z.

 (2016, March). *The Mendel Sherman wise practice video case*

 *database*. Paper presented at the annual meeting of the Society for

 Information Technology and Teacher Education, Savannah, GA.

 Shin, S., Brush, T., & Saye, J. (2015, November). *Integrating*

 *technology-enhanced cases in a secondary social studies methods*

 *course: A three-semester long experience of a teacher educator*.

 Presented at the annual meeting of the College and University

 Faculty Assembly of the National Council for the Social Studies,

 New Orleans, LA.

 McCormick, T., Morowski, D., & Brush, T. (2015, November).

 *Elementary methods professors, don’t throw in the towel!*

 Presented at the annual meeting of the College and University

 Faculty Assembly of the National Council for the Social Studies,

 New Orleans, LA.

 Shin, S., Brush, T., & Saye, J. (2015, November). *Integrating*

 *technology-enhanced cases into a teaching methods course: A*

 *teacher educator’s perspective*. Paper presented at the annual

 meeting of the Association for Educational Communication and

 Technology, Indianapolis, IN.

 Shin, S., Shin, S., Brush, T., & Glazewski, K. (2015, November).

 *Identifying the relationship between group communication*

 *behavior and student learning style in collaborative learning: A*

 *case of inquiry-based learning classrooms*. Paper presented at the

 annual meeting of the Association for Educational Communication

 and Technology, Indianapolis, IN.

 Shin, S., Brush, T., & Glazewski, K. (2015, November). *An analysis*

 *of scaffolding patterns in a technology-enhanced inquiry-based*

 *classroom*. Paper presented at the annual meeting of the

 Association for Educational Communication and Technology,

 Indianapolis, IN.

 Liao, Y., Ottenbreit-Leftwich, A., Glazewski, K., Brush, T., & Karlin,

 M. (2015, November). *Supporting change in teacher practice:*

 *Examining teachers’ professional development for technology*

 *integration*. Paper presented at the annual meeting of the

 Association for Educational Communication and Technology,

 Indianapolis, IN.

 Anderson, G. & Brush, T. (2015, November). *Emerging perspectives*

 *in multimedia use for learning*. Paper presented at the annual

 meeting of the Association for Educational Communication and

 Technology, Indianapolis, IN.

 Edelberg, T. & Brush. T. (2015, November). *Characteristics of*

 *technology leaders 2.0: A survey of school administrators and*

 *teachers in Indiana*. Paper presented at the annual meeting of the

 Association for Educational Communication and Technology,

 Indianapolis, IN.

 Shin, S., Brush, T., Jung, J., Glazewski, K., Shin, S., Ergulec, F.,

 Hogaboam, P., & Gensic, J. (2015, April). *Towards designing and*

 *implementing socioscientific inquiry: Scaffolding students’*

 *inquiry-based learning*. Paper presented at the Annual Meeting of

 the American Educational Research Association, Chicago, IL.

 Kohlmeier, J., Saye, J., Howell, J., McCormick, T., Jones, R., &

 Brush, T. (2015, April). *Promoting problem-based historical*

 *inquiry through scaffolded lesson study*. Paper presented at the

 Annual Meeting of the American Educational Research

 Association, Chicago, IL.

 Gensic, J., Shin, S., Jung, J., Glazewski, K., & Brush, T. (2015,

 March*). Improve student argumentation and engagement with*

 *socio-scientific inquiry*. Presented at the annual meeting of the

 National Science Teachers Association, Chicago, IL.

 Kohlmeier, J., Saye, J., McCormick, T. Howell, J., Jones, C. & Brush,

 T. (2014, November). *Promoting professional teaching knowledge*

 *with scaffolded lesson study*. Presented at the annual meeting of the

 College and University Faculty Assembly of the National Council

 for the Social Studies, Boston, MA.

 Shin, S. & Brush, T. (2014, November). *Designing case-based*

 *learning experiences for pre-service teachers in a teaching*

 *methods course*. Paper presented at the annual meeting of the

 Association for Educational Communication and Technology,

 Jacksonville, FL.

 Shin, S., Brush, T., Jung, J., & Glazewski, K. (2014, November).

 *Scaffolding 8th graders’ socioscientific inquiry in technology-*

 *enhanced classrooms: Towards designing and implementing*

 *distributed scaffolding*. Paper presented at the annual meeting of

 the Association for Educational Communication and Technology,

 Jacksonville, FL.

Brush, T., Glazewski, K., Shin, S., Shin, S., Jung, J., & Hogaboam, P.

 (2014, November). *Iterative implementation of socioscientific*

 *inquiry in high school biology: A teacher’s perspective*. Paper

 presented at the annual meeting of the Association for Educational

 Communication and Technology, Jacksonville, FL.

 Shin, S. & Brush, T. (2014, November). *Supplementing field-based*

 *experiences through the use of technology-enhanced cases*. Paper

 presented at the annual meeting of the Association for Educational

 Communication and Technology, Jacksonville, FL.

 Brush, T., Glazewski, K., Shin, S., Shin, S., & Jung, J. (2014, April).

 *Implementation of a socioscientific inquiry unit in a high school*

 *biology classroom: A teacher’s perspective*. Paper presented at the

 Annual Meeting of the American Educational Research

 Association, Philadelphia, PA.

 Glazewski, K., Brush, T., Jung, J., Shin, S., & Shin, S. (2014, April).

 *SSI-Net: Design, development, and practice of web- and mobile-*

 *based tools to scaffold socioscientific inquiry*. Paper presented at

 the Annual Meeting of the American Educational Research

 Association, Philadelphia, PA.

 Shen, Y. & Brush, T. (2014, April). *Digital-native preservice*

 *teachers’ technology skills, technology beliefs, and perceived*

 *technology barriers*. Paper presented at the Annual Meeting of the

 American Educational Research Association, Philadelphia, PA.

 Shin, S. & Brush, T. (2014, April). *A case study of implementing*

 *technology-enhanced cases in a social studies methods course*.

 Paper presented at the Annual Meeting of the American

 Educational Research Association, Philadelphia, PA.

 Shin, S., Brush, T., Jung, J., Glazewski, K., & Shin, S. (2014, April).

 *Implementing scaffolding for socioscientific inquiry in the*

 *secondary science classroom: A case study*. Paper presented at the

 Annual Meeting of the American Educational Research

 Association, Philadelphia, PA.

 Saye, J., Kohlmeier, J., McCormick, T., Howell, J., Jones, R.,

 Shannon, D., & Brush. T. (2013, November). *Scaffolded lesson*

 *study: Promoting professional teaching knowledge for problem-*

 *based historical inquiry*. Paper presented at the annual meeting of

 the College and University Faculty Assembly of the National

 Council for Social Studies, St. Louis, MO.

 Shin, S., Brush, T., & Saye, J. (2013, November). *Social studies*

 *teacher educators’ use of hypermedia-enhanced cases in teacher*

 *education programs*. Paper presented at the annual meeting of the

 College and University Faculty Assembly of the National Council

 for Social Studies, St. Louis, MO.

 Brush, T., Glazewski, K., Ottenbreit-Leftwich, A., Shin, S., Jung, J.,

 Shin, S., Saye, J., Kohlmeier, J., & Howell, J. (2013, October).

 *The PBL-Tech project: Web 2.0 tools to support problem-based*

 *learning in science and social studies*. Paper presented at the

 annual meeting of the Association for Educational Communication

 and Technology, Anaheim, CA.

 Shin, S. & Brush, T. (2013, October). *Preparing preservice teachers*

 *for meaningful teaching and learning using a hypermedia-*

 *enhanced case-based learning approach*. Paper presented at the

 annual meeting of the Association for Educational Communication

 and Technology, Anaheim, CA.

 Uzan, M., Uzan, E., Glazewski, K., & Brush, T. (2013, October). *Use*

 *of mobile devices to foster inquiry-based learning: A case of*

 *exemplary teachers*. Paper presented at the annual meeting of the

 Association for Educational Communication and Technology,

 Anaheim, CA.

 Jung, J., Shin, S., Lu, Y., Glazewski, K., & Brush, T. (2013, October*).*

 *A collaborative curriculum design project: Major events, roles,*

 *and issues*. Paper presented at the annual meeting of the

 Association for Educational Communication and Technology,

 Anaheim, CA.

 Hoey, B., Aslan, S., Zachmeier, A., Sadik, O., Glazewski, K.,

 Leftwich, A., & Brush, T. (2013, October). *Technology*

 *integration concerns: Expanding the dialogue between pre-service*

 *teachers and exemplary technology-using in-service teachers*.

 Paper presented at the annual meeting of the Association for

 Educational Communication and Technology, Anaheim, CA.

 Shin, S., Brush, T., & Saye, J. (2013, April). *Social studies teacher*

 *educators’ purposes in using hypermedia-enhanced cases in*

 *methods courses*. Paper presented at the Annual Meeting of the

 American Educational Research Association, San Francisco, CA.

 Shin, S., Brush, T., Zhang, Z., Shin, S., Kim, M., & Lu, Y. (2013,

 April). *Evaluation of the new construction tools in the Persistent*

 *Issues in History Network*. Paper presented at the Annual Meeting

 of the American Educational Research Association, San Francisco,

 CA.

 Saye, J., Kohlmeier, J., McCormick, T., Howell, J., Jones, R.,

 Shannon, D., & Brush, T. (2013, April). *Supporting problem-*

 *based historical inquiry for elementary and secondary teachers:*

 *Scaffolded lesson study*. Paper presented at the Annual Meeting of

 the American Educational Research Association, San Francisco,

 CA.

 Brush, T., Glazewski, K., Ottenbreit-Leftwich, A., Saye, J., Zhang, Z.,

 & Shin, S. (2013, March). *The PBL-Tech project: Web-based tools*

 *and resources to support problem-based learning in preservice*

 *teacher education*. Paper presented at the annual meeting of the

 Society for Information Technology and Teacher Education, New

 Orleans, LA.

 Shin, S. & Brush, T. (2013, March). *“I think this is really beneficial.*

 *You should do this again”: A case study of implementing authentic*

 *K-12 classroom cases in a social studies methods course*. Paper

 presented at the annual meeting of the Society for Information

 Technology and Teacher Education, New Orleans, LA.

 Jia, X., Jung, J., Huh, Y., Min, M., Shin, S., Ottenbreit-Leftwich, A.,

 Glazewski, K., & Brush, T. (2012, October). *Breaking barriers for*

 *technology integration in K-12 classrooms: Success stories from*

 *exemplary in-service teachers*. Paper presented at the Association

 for Educational Communication and Technology Conference,

 Louisville, KY.

 Shin, S., Kim, M., & Brush, T. (2012, October). *The redesign of the*

 *Persistent Issues in History Network*. Paper presented at the

 Association for Educational Communication and Technology

 Conference, Louisville, KY.

 Shin, S., Kim, M., & Brush, T. (2012, October). *The redesign of the*

 *Wise Practice Case Database*. Paper presented at the Association

 for Educational Communication and Technology Conference,

 Louisville, KY.

 Brush, T. & Saye, J. (2012, April). *An instructional model to support*

 *problem-based historical inquiry: The Persistent Issues in History*

 *Network*. Paper presented at the Annual Meeting of the American

 Educational Research Association, Vancouver, BC.

 Brush, T. & Ottenbreit-Leftwich, A. (2012, April). *The PBL-TECH*

 *project. Using Web 2.0 tools and resources to support problem-*

 *based curricular innovations in preservice teacher education*.

 Paper presented at the Annual Meeting of the American

 Educational Research Association, Vancouver, BC

 Shin, S., Brush, T., & Saye, J. (2012, March). *Social studies teacher*

 *educators’ use of the Wise Practice Case Database in teacher*

 *education courses*. Paper presented at the Society for Information

 Technology and Teacher Education Conference, Austin, TX.

 Callahan, C., Saye, J. & Brush, T.  (2012, March). *Designing more*

 *effective educative curriculum materials for the social studies*.

 Paper presented at the Society for Information Technology and

 Teacher Education Conference. Austin, TX.

 Callahan, C, Saye, J. & Brush, T. (2011, December). *Designing more*

 *effective educative curriculum materials for the social studies.*

 Paper presented at the annual meeting of the College and

 University Faculty Assembly of the National Council for the

 Social Studies. Washington, DC.

 Gronseth, S. & Brush, T. (2011, April). Expanding opportunities for

 secondary students with mild disabilities: A national study of

 assistive technology use. Paper presented at the annual meeting of

 the American Educational Research Association, New Orleans,

 LA.

 Ottenbreit-Leftwich, A., & Brush, T. (2011, March). *Comparing how*

 *teachers use technology and teacher education programs prepare*

 *teachers to use technology*. Paper presented at the Society for

 Information Technology & Teacher Education International

 Conference, Nashville, TN.

 Brush, T., Ottenbreit-Leftwich, A., Saye, J., Glazewski, K.,

 McCormick, T. (2011, March). *PBL-TECH: Using web 2.0*

 *tools and resources to support problem-based curricular*

 *innovations in pre-service teacher education*. Paper presented at

 the Society for Information Technology & Teacher Education

 International Conference, Nashville, TN.

 Brush, T. & Saye, J. (2010, November*). Using digital resources to*

 *facilitate professional practice and community among elementary*

 *social studies teacher educators*. Paper presented at the College

 and University Faculty Assembly of the National Council for

 Social Studies, Denver, CO.

Ottenbreit-Leftwich, A.T., & Brush, T.A. (2010, October).

 *Comparison of technology topics and experiences: A national*

 *study of teacher education programs and K-12 teachers*. Paper

 presented at Association for Educational Communications and

 Technology International Convention, Anaheim, CA.

 Roman, T.A., Ottenbreit-Leftwich, A.T., Brush, T.A., & TeachTech

 (2010, October). *How Elementary and Secondary Teachers Use*

 *Technology Differently: A National Study of Accomplished*

 *Technology-Using Teachers*. Paper presented at Association for

 Educational Communications and Technology International

 Convention, Anaheim, CA.

 Strycker, J., Brush, T.A., & Ottenbreit-Leftwich. (2010, October).

 *Comparing Computer Self-Efficacy and Technology Requirements*

 *between Traditional and Alternative TEP Students at Four*

 *Institutions*. Paper presented at Association for Educational

 Communications and Technology International Convention,

 Anaheim, CA.

 Brush, T., Saye, J., Kohlmeier, J., Maddox, L., & Howell, J. (2010,

 April). *Assessing pre-service teachers’ knowledge of implementing*

 *problem-based inquiry strategies in social studies*. Paper presented

 at the annual conference of the American Educational Research

 Association, Denver, CO.

 Saye, J., Kohlmeier, J., Howell, J., Maddox, L., & Brush, T. (2009,

 November). *Assessing programmatic effects on pre-service social*

 *studies teachers’ instructional decision-making*. Paper presented at

 the College and University Faculty Assembly of the National

 Council for Social Studies, Atlanta, GA.

 Brush, T. & Ottenbreit-Leftwich, A. (2009, October). *A national study*

 *comparing how teacher education programs prepare teachers to*

 *use technology and how teachers use technology*. Paper presented

 at the annual meeting of the Association for Educational

 Communications and Technology, Louisville, KY.

 Saye, J., Kohlmeier, J., Howell, J., Maddox, L., Brush, T., Wang, Y.,

 & Lee-Watson, S. (2009, April). *Assessing program effectiveness*

 *for promoting professional teaching knowledge about problem-*

 *based historical inquiry*. Paper presented at the annual conference

 of the American Educational Research Association, San Diego,

 CA.

 Ottenbreit-Leftwich, A., Brush, T, & Plucker, J. (2009, April).

 *Technology experiences in teacher preparation: A national study*

 *of teacher education programs and teachers*. Paper presented at

 the annual conference of the American Educational Research

 Association, San Diego, CA.

 Brush, T. & Ottenbreit-Leftwich, A. (2008, November).*Supporting*

 *the use of emerging technologies in schools: Research and*

 *implications*. Presentation at the annual conference of the

 Association for Educational Communications and Technology,

 Orlando, FL.

 Brush, T. & Saye, J. (2008, March). *How do preservice social studies*

 *teachers implement problem-based historical inquiry strategies: A*

 *scenario-based survey study*. Paper presented at the annual

 conference of the American Educational Research Association,

 New York, NY.

 Saye, J., Kohlmeier, J., Brush, T., Maddox, L., & Howell, J. (2008,

 March). *Developing a professional knowledge culture of problem-*

 *based historical inquiry: Scaffolded lesson study*. Paper presented

 at the annual conference of the American Educational Research

 Association, New York, NY.

 Hur, J. & Brush, T. (2008, March). *Reasons for participation in online*

 *communities of K-12 teachers*. Paper presented at the annual

 conference of the American Educational Research Association,

 New York, NY.

 Hur, J. & Brush, T. (2008, March). *Emotional support in online*

 *communities of teachers*. Paper presented at the 2008 Society for

 Information Technology and Teacher Education conference, Las

 Vegas, NV.

 Brush, T. & Saye, J. (2007, December). *Strategies for preparing pre-*

 *service social studies teachers to effectively integrate technology:*

 *Models and practices.* Paper presented at the College and

 University Faculty Assembly of the National Council for Social

 Studies, San Diego, CA.

 Kohlmeier, J., Mitchell, L., Saye, J., & Brush, T. (2007, December).

 *Meeting the challenges of issues-centered instruction with “low*

 *achieving” students*. Paper presented at the College and University

 Faculty Assembly of the National Council for Social Studies, San

 Diego, CA.

 Saye, J., Kohlmeier, J., Brush, T., Maddox, L., & Howell, J. (2007,

 December). *Using lesson study to build a professional knowledge*

 *community for problem-based history study*. Paper presented at the

 College and University Faculty Assembly of the National Council

 for Social Studies, San Diego, CA.

 Kale, U., Yerasimou, T., & Brush, T. (2007, October). Can they use it

 to learn? Usability testing with pre-service teachers learning

 through video cases. Paper presented at the Annual Meeting of the

 Association for Educational Communications and Technology,

 Anaheim, CA.

Brush, T., Saye, J., Kohlmeier, J., and others. (2007, October).*The*

 *Persistent Issues in History Laboratory for Virtual Field*

 *Experience (PIH-LVFE)*. Demonstration/presentation at the first

 annual Design and Development Showcase at the Annual Meeting

 of the Association for Educational Communications and

 Technology, Anaheim, CA.

 Brush, T., Saye, J., and others. (2007, April). *Evaluating the Persistent*

 *Issues in History Laboratory for Virtual Field Experience (PIH-*

 *LVFE)*. Paper presented at the Annual Meeting of the American

 Educational Research Association, Chicago, IL.

 Cullen, T. & Brush, T. (2007, April). *Preservice teachers’ inclusion of*

 *technology in their visions of their future classrooms*. Paper

 presented at the Annual Meeting of the American Educational

 Research Association, Chicago, IL.

 Hur, J. & Brush, T. (2007, April). *From learning to implementing*

 *technology: Helping preservice teachers with technology*

 *integration*. Paper presented at the Annual Meeting of the

 American Educational Research Association, Chicago, IL.

 Stirling, D. & Brush. T. (2007, April). *The impact of open-ended,*

 *computer-based courseware on student achievement and attitudes*

 *in mathematics, reading, and language*. Paper presented at the

 Annual Meeting of the American Educational Research

 Association, Chicago, IL.

 Saye, J. & Brush, T. (2006, November). *Supporting problem-based*

 *historical inquiry with technology-enhanced learning*

 *environments*. Paper presented at the annual meeting of the

 College and University Faculty of the National Council for Social

 Studies, Washington, DC.

 Cullen, T. & Brush, T. (2006, October). *The use of preservice*

 *teachers’ drawings of future classrooms to inform teacher*

 *educators and facilitate reflection about classroom beliefs*. Paper

 presented at the Annual Conference of the International Visual

 Media Association, Fort Worth, TX.

 Kale, U., Hur, J., Yerasimou, T., & Brush, T. (2006, June). *A model*

 *for video-based virtual field experience*. Presentation at the 2006

 International Conference of the Learning Sciences, Bloomington,

 IN.

 Brush, T. & Saye, J. (2006, April). *Scaffolding critical reasoning in*

 *history and social studies: Tools to support problem-based*

 *historical inquiry*. Paper presented at the annual meeting of the

 American Educational Research Association, San Francisco, CA.

 So, H. J., & Brush, T. (2006, April). *Student perceptions of*

 *cooperative learning in a distance learning environment:*

 *Relationships with social presence and satisfaction*. Paper

 presented at the annual meeting of the American Educational

 Research Association, San Francisco, CA.

 Saye, J. & Brush, T. (2005, November). *Technology as a lever for*

 *expanding investigations of the development of problem-based*

 *civic inquiry*. Paper presented at the annual meeting of the College

 and University Faculty of the National Council for Social Studies,

 Kansas City, MO.

 Brush, T., Saye, J., and the PIHNet Development Team. (2005,

 October). *Modeling problem-based inquiry in social studies. The*

 *Persistent Issues in History Laboratory for Virtual Field*

 *Experience*. Paper presented at the annual meeting of the

 Association for Educational Communications and Technology,

 Orlando, FL.

 Brush, T. & Saye, J. (2005, April). *The effects of multimedia-*

 *supported problem-based historical inquiry on student*

 *engagement, empathy, and assumptions about history*. Paper

 presented at the annual meeting of the American Educational

 Research Association, Montreal, Canada.

 Saye, J., Kohlmeieir, J., Brush, T., Mitchell, L., & Farmer, C. (2005,

 April). *Nurturing a professional community of practice for*

 *promoting problem-based historical inquiry*. Paper presented at the

 annual meeting of the American Educational Research

 Association, Montreal, Canada.

 Brush, T., Saye, J., & the PIHNet Development Team. (2005, March).

 *Tools to promote problem-based inquiry in social studies: The*

 *Persistent Issues in History Network*. Paper presented at the annual

 meeting of the Society for Information Technology and Teacher

 Education, Phoenix, AZ.

 Hur, J., Brush, T., Kim, K., Tan, A., Dysard, G., Liu, X., Feng, Y.,

 Kale, U., Chen, L., & Saye, J. (2005, March). *Online forum:a tool*

 *that can foster teachers’ collaborative reflection*. Paper presented

 at the annual meeting of the Society for Information Technology

 and Teacher Education, Phoenix, AZ.

 Brush, T. & Simons, K. (2004, October). *Scaffolding disciplined*

 *inquiry in online learning environments*. Presentation at the annual

 meeting of the Association for Educational Communications and

 Technology, Chicago, IL.

 Brush, T. & Saye, J. (2004, April). *The effects of multimedia-*

 *supported problem-based historical inquiry on student*

 *engagement, empathy, and historical reasoning*. Paper presented at

 the annual meeting of the American Educational Research

 Association, San Diego, CA.

 Saye, J. & Brush, T. (2004, April). *Using technological affordances to*

 *facilitate problem-based historical inquiry*. Paper presented at the

 annual meeting of the American Educational Research

 Association, San Diego, CA.

 Brush, T. & Saye, J. (2004, March). *PIHNet: A web-based*

 *environment for supporting student historical thinking*. Paper

 presented at the annual meeting of the Society for Information

 Technology and Teacher Education, Atlanta, GA.

 Saye, J. & Brush, T. (2004, March). *Supporting problem-based*

 *historical inquiry in the high school history classroom*. Paper

 presented at the annual meeting of the Society for Information

 Technology and Teacher Education, Atlanta, GA.

 Saye, J. & Brush, T. (2003, November). *Supporting problem-based*

 *historical inquiry in a web-based learning environment*. Paper

 presented at the annual meeting of the College and University

 Faculty of the National Council for Social Studies, Chicago, IL.

 Brush, T. & Saye, J. (2003, October). *Decision Point!: A web-based*

 *environment for supporting student historical thinking*. Paper

 presented at the annual meeting of the Association for Educational

 Communication and Technology, Anaheim, CA.

 Brush, T., Saye, J., and others. (2003, October). *Supporting problem-*

 *based historical inquiry with digital resources*. Paper presented at

 the annual meeting of the Association for Educational

 Communication and Technology, Anaheim, CA.

 Glazewski, K., Brush, T., Sutton, J. & Ozogul, G. (2003, October).

 *The impact of integrated field-based technology courses on*

 *preservice teachers' beliefs and practices*. Paper presented at the

 annual meeting of the Association for Educational Communication

 and Technology, Anaheim, CA.

 Saye, J. & Brush, T. (2003, April). *Supporting student inquiry about*

 *social issues: Three teachers’ implementations of a problem-based*

 *multimedia-enhanced unit*. Paper presented at the annual meeting

 of the American Educational Research Association, Chicago, IL.

 Rutowski, K. & Brush, T. (2003, April). *A comparison of two models*

 *of technology education for preservice teachers: Stand-alone*

 *courses and field-based courses*. Paper presented at the annual

 meeting of the American Educational Research Association,

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**DISSERTATIONS** Gok, F. (2025). *Examining pair programming interactions and their*

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 Committee member.

 Kim, J. (2025). *Animate your story: Exploring the impact of narrative*

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 *writing skills*. Indiana University. Committee member.

 Hikmatilla, U. (2024). *Intercultural pedagogy in less commonly taught*

 *language classrooms: Teacher perceptions and practices*. Indiana

 University. Dissertation chair.

 Jantaraweragul, K. (2024). *Examining teachers’ project-based*

 *learning experiences*. Indiana University. Dissertation chair.

 Slamet, T. (2024). *A study of learners’ behavior, cognition, and*

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 University. Dissertation chair.

 Abramenka, V. (2024). *Teaching presence and social presence in an*

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 Indiana University. Dissertation chair.

Lee, H. (2024). *Examining the effectiveness of personalized learning*

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 chair.

 Giupponi, L. (2024). *An evaluation of an online Masters degree for*

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 chair.

 Harper, C. (2024). *A case study of the perceptions of faculty*

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 May, T. (2024). *Supporting collaborative learning for students with*

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 chair.

 Spinda, B. (2024). *Faculty selection and use of active learning*

 *techniques in didactic courses in medical laboratory science*

 *education*. Indiana University. Dissertation chair.

 Bailey, K. (2024). *Instruction for sustainability: How expansive*

 *framing impacts behavior change*. Indiana University. Committee

 member.

 Dixon, K. (2024). *Teacher perceptions and professional development*

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 Dissertation chair.

 Cooper, S. (2024). *The invisible impact: Collaboration with teaching*

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 Dissertation chair.

 Marcelle, P. (2024). *Self-regulated learning in an online micro-*

 *credential: An explanatory sequential mixed methods case study*.

 Indiana University. Committee member.

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 Farnsworth, K. (2023). *Scaffolding systems in high school science*

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 member.

 Chen, Y. (2023). *Exploring Inquiry learning and facilitation in*

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 *investigation*. Indiana University. Committee member.

 Huber, J. (2023). *Elements of professional development that impact*

 *technology integration in the classroom*. Indiana University.

 Committee member.

 Alghamdi, K. (2023). *Instructional strategies for teaching*

 *computational thinking in secondary school computer science*

 *introductory courses*. Indiana University. Committee member.

 Hansel, C. (2023). *Examining instructional designers’ and faculty*

 *members’ relationship building and perception of co-design higher*

 *education partnerships*. Indiana University. Committee member.

 Zhao, M. (2023). *A study of scaffolding practices for enhanced*

 *learning engagement in Coursenetworking, an academic social*

 *networking site*. Indiana University. Committee member.

 Hatfield, J. (2023). *A case study of student perceptions of online*

 *course design features and success in a Bachelor of Health*

 *Sciences program*. Indiana University. Dissertation chair.

 Cockrum, T. (2023). *Student perceptions of self-reflection on video*

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 Kozak, C. (2022). *U.S Army intelligence training personnel attitudes,*

 *beliefs, and perceptions toward adoption of virtual reality (VR): A*

 *case study*. Indiana University. Dissertation chair.

 Park, J. (2022). *The relationships among sustainable work*

 *environment, human agency, openness to change, and innovative*

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 Jia, K. (2022). *Strategies to support student reflection in service-*

 *learning: A tale of two parties.* Indiana University. Committee

 member.

 Easterling, L. (2022). *Collaborative faculty development activities in*

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 Indiana University. Committee member.

 Shao, Z. (2022). *The adoption of digital badges in higher education:*

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 Indiana University. Committee member.

 Walker, F. (2022). *An exploration of the attributes of computer-*

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 Indiana University. Dissertation chair.

 Batchelder, S. (2022). *Case-based instruction in entrepreneuship*

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 Sankaranarayanan, R. (2022). *Influence of microlearning approach on*

 *introductory database programming concepts*. Indiana University.

 Committee member.

 Hoffmann, G. (2022). *Intercultural communicative competence (ICC)*

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 *elective Chinese language course*. Indiana University. Committee

 member.

 McCracken, K. (2022). *An analysis of higher education faculty*

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 *initiative*. Indiana University. Dissertation chair.

 Campbell, A. (2022*). Practice what you preach: An evaluation of U.S.*

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 *learning organization*. Indiana University. Dissertation chair.

 Garcia, K. (2021). *Instructor preservice training in U.S. Air Force’s*

 *Special Warfare Training Wing: A needs assessment*. Indiana

 University. Committee member.

 Wilgenbusch, B. (2021). *The application of case-based learning on*

 *the development of clinical judgment skills in undergradaute*

 *nursing students*. Indiana University. Committee member.

 Stockstell, C. (2021). *Problem-solving and planning for school*

 *improvement during a global pandemic*. Indiana University.

 Committee member.

 Bae, H. (2021). *How teachers engage within PBL classroom*

 *environment: A multiple case study of elementary, middle, and*

 *high school teachers orchestration and scaffolding practice*.

 Indiana University. Committee member.

 Howard, J. (2021). *An evaluation of a new hire training program for*

 *mental health staff in a non-profit organization*. Indiana

 University. Committee member.

 Ray, J.J. (2021). *Multimodal analysis of cultural assumptions in*

 *American Sign Language print and online curricula*. Indiana

 University. Committee member.

 Olmstead, A. (2021*). Instructional designers’ identity and perceptions*.

 Indiana University. Committee member.

 Wavle, S. (2021). *An exploratory mixed methods study of persistence*

 *patterns in online undergraduate programs and perspectives of*

 *returning online undergraduate students*. Indiana University.

 Committee member.

 Nadir, H. (2021). *Investigating a teacher’s scaffolding for design*

 *problem solving in project-based learning*. Indiana University. Co-

 chair with Dr. Krista Glazewski.

 Aslaif, M. (2021). *Exploring knowledge construction phases and*

 *facilitating factors in an online community*. Indiana University.

 Committee member.

 Parker, C. (2020). *Instructional design perception and practice in*

 *United States Army training organizations: A case study*. Indiana

 University. Dissertation chair.

 Edelberg, T. (2020). *Rural school district leadership: Supporting*

 *technology integration for instructional spaces*. Indiana University.

 Dissertation chair.

 Lachheb, A. (2020). *Design failure in instructional design practice:*

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member.

 Barber, R. (2020). *A case study of communications between*

 *school administrators and teachers in an urban middle school*.

 Indiana University. Committee member.

 Alangari, H. (2019). *Parents as stakeholders in the use of digital*

 *technology in elementary classrooms*. Indiana University.

 Dissertation chair.

 Leuchtmann, A. (2019). *New teacher induction: Perspectives from*

 *participants of a new teacher mentoring program*. Indiana

 University. Dissertation chair.

 Barnette, J. (2018). *Instructor presence in online education: An*

 *analysis of student perceptions and performance*. Indiana

 University. Dissertation chair.

 Liao, Y-C. (2018). *Coaching in teacher professional development for*

 *technology integration: Examining teacher practices and*

 *perceptions*. Indiana University. Committee member.

 Rodriguez, O. (2018). *A study of the effectiveness of computer-aided*

 *instruction for the improvement of hands-on engineering*

 *technology education*. Indiana University. Dissertation chair.

 Ding, A-C. (2018). *Language teachers’ reflection on using technology*

 *in language education through an online video-embedded*

 *reflective inquiry process*. Indiana University. Committee member.

 Drumm, S. (2018). *Parent perceptions of an elementary one-to-one*

 *initiative: First year reflections*. Indiana University. Dissertation

 chair.

 Wise, S. (2018). *Collective participation professional development in*

 *standards-based instruction: An investigation of teacher and*

 *administrator perceptions*. Indiana University. Dissertation chair.

 Callison, M. (2017). *A case study examining how school leaders*

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 *in a comprehensive public high school*. Indiana University.

 Dissertation chair.

 Sadik, O. (2017). *What do secondary computer science (CS) teachers*

 *need? Examining curriculum, pedagogy, and contextual support.*

 Indiana University. Dissertation co-chair with Anne Ottenbreit-

 Leftwich.

 Jung, J. (2017). *Case-based instructional practices: A multiple case*

 *study from torts, marketing, and online instructional design*

 *classes*. Indiana University. Committee member.

 Shin, S. (2016). *Scaffolding students’ inquiry-based learning in a*

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 *patterns of scaffolding*. Indiana University. Dissertation chair.

 Kim, M. (2016). *Formative research on instructional overlay for*

 *collaborative project-based learning*. Indiana University.

 Committee member.

 Goodrum, D. (2016). *Relative utility of three models for user*

 *evaluation of learning management systems: A higher-ed*

 *institution decision context*. Indiana University. Dissertation chair.

 Shin, S. (2015). *The use of technology-enhanced cases in teacher*

 *education: A case study of a social studies methods course*. Indiana

 University. Dissertation chair.

 Anderson, G. (2015). *An exploration of multimedia use in an online*

 *RN-BSN program*. Indiana University. Dissertation chair.

 Song, D. (2015). *Scaffolding student-generated questioning for*

 *improving reading comprehension*. Indiana University. Committee

 member.

 Hsieh, Y. (2015). *The nature of peer-peer interaction in Internet-*

 *supported collaboration: A case study in a freshman English class*

 *in Taiwan*. Indiana University. Committee member.

 Barrett, A. (2014). *Facilitating variable-length computerized*

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 Indiana University. Committee member.

 Cao, K. (2014). *Exploring users’ goals and behaviors in two*

 *commercial games*. Indiana University. Committee member.

 Chang, J.Y. (2013). *The effects of agent-based lecturers on student*

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 *learning environment*. Indiana University. Committee member.

 Van Leusen, P. (2013). *Interpersonal consulting skills among*

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 University. Dissertation chair.

 Lara, M. (2013). *Personality traits and performance in online game-*

 *based learning: Collaborative versus individual settings*. Indiana

 University. Committee member.

 Lin, C.Y. (2013). *Instructional theory for using a class wiki to support*

 *collaborative learning in higher education*. Indiana University.

 Committee member.

 Studebaker, J. (2011). *Online education and high school students: A*

 *mixed methods investigation into performance, access, and*

 *perception*. Indiana University. Committee member.

 Strycker, J. (2011). *A comparison of technology experiences included*

 *in alternative and traditional teacher education programs*. Indiana

 University. Dissertation chair.

 Sheu, Feng-Ru. (2011). *Understanding expertise from elite badminton*

 *coaches*. Indiana University. Committee member.

 Gronseth, S. (2011). *Factors that impact the use of assistive*

 *technologies to support secondary students with mild disabilities*.

 Indiana University. Dissertation chair.

 Feng, Yu. (2010). *A discourse analysis of five experienced secondary*

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 *deliberative discussion*. Indiana University. Dissertation chair.

 Yerasimou, T. (2010). *Examining interactivity and flow in a blended*

 *course to advance blended learning practices*. Indiana University.

 Dissertation chair.

 Kim, N. (2010). *Scaffolding critical thinking in wikibook creation*

 *across international institutions*. Indiana University. Committee

 member.

 Pereira-Leone, M. (2010). *Constraints, resources, and interpretive*

 *schema: Explorations of teachers’ decisions to utilize, under-*

 *utilize, or ignore educational technologies*. Indiana University.

 Committee member.

 Marquis, J. (2009). *Children without toys: How home computer use*

 *impacts school achievement, behavior, and attitudes*. Indiana

 University. Dissertation chair.

 Wang, Y. (2009). *A case study of an accelerated blended teacher*

 *education program*. Indiana University. Dissertation chair.

 Lee-Watson, S. (2008). *Somebody’s gotta fight for them: A*

 *disadvantaged and marginalized alternative school’s culture of*

 *learning and its case of change*. Indiana University. Committee

 member.

 Scott, B. (2008). *The role of teacher epistemology in integrating*

 *student-centered instructional software: A case study in social*

 *studies education*. Auburn University. Committee member.

 DeFazio, J. (2008). *Designing with precedent: A cross-disciplinary*

 *inquiry into the design process*. Indiana University. Committee

 member.

 Kelly, M. (2008). *The use of multimedia technology to enhance self-*

 *determination skill and encourage student leadership in*

 *educational goal planning for post-secondary students with*

 *Asperger syndrome*. Indiana University. Committee member.

 Richter, K. (2007). *Integration of a decision-making process and a*

 *learning process in a newly formed leadership team for systemic*

 *transformation of a school* *district*. Indiana University. Committee

 member.

 Hinshaw, R. (2007). *Universal design for learning procedures in*

 *special education teacher education*. Indiana University.

 Committee member.

 Kale, U. (2007). *Online communication patterns in a teacher*

 *professional development program*. Indiana University.

 Dissertation chair.

 Hur, J.W. (2007). *Understanding teacher participation in online*

 *communities: Why do teachers want to participate in online*

 *communities of teachers?* Indiana University. Dissertation chair.

 Kirkley, J. (2006). *An exploratory study on designing expert and*

 *novice scaffolds to support decision making and learning in a set*

 *of simulation vignettes*. Indiana University. Committee member.

 Hew, K. (2006). *Knowledge sharing among professionals in three*

 *online communities*. Indiana University. Dissertation chair.

 Tan, A. (2006). *Does scaffolded blogging promote preservice teacher*

 *reflection? Examining the relationships between learning tool and*

 *scaffolding in a blended learning environment*. Indiana University.

 Dissertation chair.

 Cullen, T. (2006). *The role of technology in preservice teachers’*

 *images of their future classroom*. Indiana University. Dissertation

 chair.

 Gottschall, H. (2006). *Faculty and student attitudes towards group*

 *work in higher education and why faculty use groups*. Indiana

 University. Committee member.

 Su, B. (2006). *Experiences of and preferences for interactive*

 *instructional activities in an online learning environment*. Indiana

 University. Committee member.

 Sung, L. (2006). *How methods and technology instructors think about*

 *good practice: An exploration for transforming pre-service*

 *curriculum*. Indiana University. Committee member.

 del Valle, R. (2005). *Online learning: Learner characteristics and*

 *their approaches to managing learning*. Indiana University.

 Committee member**.**

 Liu, X. (2005*). Socio-cultural factors affecting the success of an*

 *online MBA course: A case study viewed from activity theory*

 *perspective*. Indiana University. Committee member.

#  Frey, T. (2005). *Investigating the impact of an on-line practicum*

#  *experience for in-service special education teachers*. Indiana

#  University. Committee member.

#  Kim, M. (2005). *Concerns of teacher education methods instructors*

#  *and strategies for integrating technology into methods courses*.

#  Indiana University. Dissertation director.

#  So, H. (2005). *Examining the relationships among collaborative*

#  *learning, social presence, and satisfaction in a distance learning*

#  *environment*. Indiana University. Dissertation chair.

 Hixon, E. (2005). *Collaborative online course development: The*

 *faculty experience*. Indiana University. Committee member.

 Keller, J. (2003). *A systems view of professional development in a K-*

 *12 school district*. Indiana University. Committee member.

 Glazewski, K. (2003). *The impact of scaffolding and student ability in*

 *a hypermedia, problem-based learning unit*. Arizona State

 University. Committee member.

 Jowett, M. (2003). *Integrating technology into instruction: Relative*

 *effects of two types of mentoring models*. Arizona State University.

 Committee member.

 Judson, E. (2002). *Relationship among instructional beliefs, attitudes*

 *toward technology, and constructivist practices of technology*.

 Arizona State University. Committee member.

 Batarelo, I. (2002). *Educational technology promises as perceived by*

 *secondary special education teachers*. Arizona State University.

 Committee member.

 Smith, T.C. (2002). *An analysis of teacher educators and technology*

 *integration projects at four universities*. Arizona State University.

 Co-chair with Dr. Nicholas Appelton.

 Niemczyk, M. (2002). *The effects of prompting and advisement on*

 *student learning from an open-ended database*. Arizona State

 University. Committee member.

 Stirling, D. (2002). *Towards new norms of professional interaction:*

 *Facilitating teacher talk using multimedia*. Arizona State

 University. Committee member.

 Rich, D. (2001). *Creating meaningful computer instruction for young*

 *children through transactional tutoring*. Arizona State University.

 Chair.

#  Brinkerhoff, J. (2001). *The effects of advisement and informal*

#  *cooperative groups on learning from a multimedia database*.

#  Arizona State University. Co-chair with Dr. James Klein.

#  Ku, H.Y. (2001). *The effects of personalization on comprehension*

#  *of word problems for students in Taiwan.* Arizona State

#  University. Committee member.

#  Wolf, S. (2000). *The big six information skills as a metacognitive*

#  *scaffold in solving information based problems*. Arizona State

#  University. Chair.

#  Sutton, L. (2000). *Vicarious interaction in a course enhanced*

#  *through the use of computer-mediated communication.* Arizona

#  State University. Committee member.

#  Miltiadou, M. (2000). *Motivational constructs as predictors of*

#  *success in the online classroom*. Arizona State University.

#  Committee member.

#  Mahesh, V. (2000). *The nature and purpose of feedback in a dialogic*

#  *online learning community*. Arizona State University. Committee

#  member.

#  Winograd, D. (2000). *The effects of trained moderation in online*

#  *asynchronous distance learning*. Arizona State University.

#  Committee member.

#  Koroghlanian, C. (2000). *Animation, audio, and spatial ability:*

#  *Optimizing multimedia for scientific explanations*. Arizona State

#  University. Committee member.

 Vrasidas, C. (1999). *Meanings of online and face-to-face interactions*

 *in a graduate course*. Arizona State University. Committee

 member.

 Amato, V. (1999). *The effect of learner control on knowledge gain in*

 *an interactive multimedia instructional environment*. Arizona State

 University. Committee member.

**SERVICE** *Co-Director, Persistent Issues in History Summer Seminar*

**ACTIVITIES**(2003 – 2013)

 Co-director of summer institutes in which 20 social studies

 teachers from around the country came to Auburn University to

 learn about problem-based historical inquiry strategies in

 secondary social studies.

 *Coordinator, Professors of Instructional Design and Technology*

 *(PIDT) Conference* (2018 – 2019)

 Coordinator and leader of planning for annual conference with

 approximately 40 faculty and graduate student attendees.

 *AERA SIG – Instructional Technology*

 Chair (2009-2010)

 Chair-elect (2008-2009)

 *AECT Young Researcher Award*

 Coordinator (2004 – 2011)

 Member of Selection Committee (2002 – 2022)

*Educational Technology Research and Development*

 Editorial Board (2001 – 2004)

 Consulting Editor (1997 – present)

 Guest Editor, Issue *51*(1)

###  International Journal of Learning Technology

 Editorial Board (2004 – 2010)

 Guest Editor, Issue *1*(2)

 *Tech Trends*

Editorial Board (2005 – 2014)

 Consulting Editor (2004 – present)

###  International Journal of Web Engineering and Technology

 Editorial Board (2003 – 2010)

###  Computers & Education

Consulting Editor (2008 – 2022)

###  Interdisciplinary Journal of Problem-Based Learning

 Consulting Editor (2005 – present)

 Guest Editor, Issue *8*(1)

###  Teacher College Record

 Consulting Editor (2003 – 2021)

###  Theory and Research in Social Education

 Consulting Editor (2003 – 2022)

*Journal of Educational Computing Research*

 Consulting Editor (1999 – 2022)

 *Educational Leadership*

 Consulting Editor (2000 – 2022)

 *Arizona Educational Research Organization*

 Board Member (2001 – 2002)

*Association for Educational Communications and Technology*

Board Member, Research and Theory Division (1997 - 2000)

 *Eastern Educational Research Association*

 Alabama, Kentucky, Louisiana, Mississippi, and Tennessee

 Regional Representative (1997 - 1998)

 *Allyn and Bacon Publishers*

 Book reviewer for educational technology publications (1997)

###  Indiana University

 Program Leader, IST Program (2023 – present)

Search Committee Member, Hasselbring Chair (2023 – 2024)

Member, ELPS Chair Evaluation Committee (2023 – 2024)

 Chair, Associate Dean for Graduate Studies Evaluation

 Committee (2021)

 Member, School of Education Space Usage Task Force (2021)

 Co-Chair, School of Education Long Range Planning Committee

(2021 – 2022)

Member, School of Education Long Range Planning Committee

(2023 – 2024)

Chair, School of Education Research and Development Committee

(2021)

 Member, School of Education Research and Development

 Committee (2002 – 2003; 2005 – 2006; 2007 – 2008; 2019 –

 2021)

Interim Department Chair, Instructional Systems Technology

(Spring 2019)

Coordinator, IST EdD Program (2018 – 2022)

Member, IST EdD and Online Masters Self-Study Committee

(2020)

Member, School of Education Tenure and Promotion Committee

(2018 – 2020; 2023 - present)

Member, School of Informatics and Computer Science

Collaboration Committee (2019 – 2022)

Member, Otting Chair Selection Committee (2018)

 Member, School of Education Policy Council (2018 – 2019)

 Member, IU-Bloomington Technology Policy Committee (2018 –

2019; 2020 – 2021)

Member, Associate Dean for Teacher Education Review

Committee (2020).

 Chair, Associate Dean for Teacher Education Evaluation

 Committee (2017 – 2018)

 Chair, Center for Research on Learning and Technology Review

 Committee (2016 – 2017)

 Chair, ELPS Department Chair Evaluation Committee (2013 –

 2014)

 Member, Indiana University Learning Technologies Steering

 Committee (2017 – present)

Member, Alliance for Distinguished and Titled Professors

 (2011 – 2016)

 Member, Scholarship of Teaching and Learning Advisory

 Committee (2011 – 2016)

 Search Committee Co-Chair, joint IST/Informatics search

 (2011 -2012)

 Chair, General Education Social and Historical Subcommittee

 (2009 – 2014)

 Member, General Education Evaluation System Committee (2009-

 2014)

 Member, Lumina Foundation Tuning Project Committee (2009)

 Member, General Education Social and Historical Subcommittee

 (2008-2009, 2014 – 2015)

 Chair, Committee for Teacher Education (2005-2006, 2008)

 Faculty Advisor, GIST – Graduate Students in Instructional

 Systems Technology (2005 – 2012)

 Member, Committee on Writing (2007 – 2008)

 Member, Secondary Education Council (2007 – 2008)

 Member, Associate Dean Search Committee (2008)

 Search Committee Chair, IST (2005-2006; 2010-2011; 2023-2024)

 Member, Staff Merit Awards Committee (2004 – 2015)

 Member, IST Portfolio Committee (2012 – present)

 Member, IST Admissions Committee (2002 – 2019; 2023-present)

 Member, IST Undergraduate Curriculum Committee (2002 –

 present)

 Member, IST Graduate Curriculum Committee (2021 – present)

 Member, Structural Reorganization Committee (2003)

 Member, Jacobs and Armstrong Chair Selection Committee (2003)

 Member, Committee for Teacher Education (2003 – 2008)

 *Arizona State University*

 Program Leader, Educational Technology (2001 – 2002)

 Secretary, College Council (2001 – 2002)

 Search Committee Chair, Educational Technology (2001 – 2002)

 Search Committee Member, Learning (2001 – 2002)

 Search Committee Member, Educational Technology (2000 –

 2001)

 Search Committee Member, Learning (2000 – 2001)

 Search Committee Member, Learning (1998 – 1999)

 *Auburn University*

 Search Committee Chair, Educational Media (1997 – 1998)

 Search Committee Member, Educational Media (1996 – 1997)

 Member, Equipment Committee (1995 – 1998)

 *State of Arizona*

 Member, State Technology Plan Steering Committee

 (2000 – 2002)

 *State of Alabama*

 Member, Technology Planning Advisory Committee (1996 –

 1998)

 Member, Technology for Alabama Teachers Standards Committee

 (1996 – 1998)

 *Army Research Institute, Fort Benning, GA*

 Design/evaluation consultant (1995 – 1998)

 *US Army*

 Trainer/developer for the Army Infantry School at Ft. Benning,

 GA and the Chemical School at Ft. McLellan, AL (1996 – 2000)

 Design/evaluation consultant for the Army Intelligence School, Ft.

 Huachuca, AZ (1999 – 2002)

 Trainer for Air Force personnel, Goodfellow AFB, San Angelo,

 TX (2020)

 Trainer for TRADOC personnel, Ft. Rucker, AL (2006 – present)

 Trainer for TRADOC personnel, Redstone Arsenal, AL (2008)

 Trainer for TRADOC personnel, Ft. Benning/Ft. Moore, GA

 (2008 – present)

 Trainer for TRADOC personnel, Ft. Sill, OK (2008 - 2010)

 Trainer for TRADOC personnel, Ft. Eustis, VA (2015)

 Trainer for TRADOC personnel, Ft. Lee, VA (2017)

 Trainer for TRADOC personnel, Ft. Bliss, TX (2018)

 *US Department of Education*

 Member, external advisory board, Charter School grant program

 (2016 – present)

 *Pearson Digital Learning, Scottsdale, AZ*

 Design/evaluation consultant (2004 – 2011)

 *Program reviewer for the following universities*:

 Wayne State University, Detroit, MI

 Keiser University, Ft. Lauderdale, FL

 University of Tennessee, Knoxville, TN

 Florida State University, Tallahassee, FL

 Old Dominion University, VA

 Sam Houston State University, TX

 *Educational technology consultant/trainer for the following schools*:

 Mount Clemens Schools, Mount Clemens, MI

 L’Anse Creuse Schools, Harrison Township, MI

 South Lyon Schools, South Lyon, MI

 Auburn City Schools, Auburn, AL

 Opelika City Schools, Opelika, AL

 Monroe County Community Schools, Bloomington, IN

 Cristel House Academy, Indianapolis, IN

 El Paso School District, El Paso, TX