

David A. Slykhuis, PhD

38 Laurel St. • Harrisonburg, Virginia 22801
Mobile: 540-421-8603 • Twitter: @phdslyk • E-Mail: slykhuda@jmu.edu

Current Position

- Assistant Dean [2017-Present]
College of Natural and Health Sciences
University of Northern Colorado
- Director of the Math and Science Teaching Institute [2017-Present]
University of Northern Colorado
- Professor of Science Education [2016-2017]
Middle, Secondary and Mathematics Education Department
College of Education
James Madison University
- Director of the Content Teaching Academy [2009-2017]
- Interim Department Head, Educational Foundations and Exceptionalities [2015-2016]
College of Education
James Madison University
- Co-Director of the Center for STEM Education and Outreach [2012-2015]
- Associate Professor of Science Education [2010-2016]
Middle, Secondary, and Mathematics Education Department
College of Education
James Madison University
- Assistant Professor of Science Education [2004-2010]
Middle, Secondary, and Mathematics Education Department
College of Education
James Madison University

Education

- Ph.D. **Science Education.** North Carolina State University, Raleigh, NC.
Elected to Phi Kappa Phi
Elected to Sigma Xi
GPA 4.0 / 4.0
- M.S. **Education with an Emphasis in Physical Science.** Eastern Illinois University, Charleston, IL.
GPA 3.91 / 4.0
- B.A. **All-Science Teaching.** University of Northern Iowa, Cedar Falls, IA.
Minor: Coaching
GPA 3.93 / 4.0

Professional Experience

Higher Education

- James Madison University [2004 - Present]
Undergraduate Courses Taught:
GSCI 163 The Matter of Matter

GSCI 164	Physical Science – Learning Through Teaching
MSSE 470S	Middle School Natural Science Teaching Methods
MSSE 471	Practicum II

Graduate Courses Taught:

EDUC 501	Workshop in Education
EDUC 540	Educational Technology
MSSE 570S	Secondary Natural Science Teaching Methods
MSSE 571	Practicum III
MIED 620	Applied Research in Middle Education
MSSE 625	Learning and Assessment in Middle and Secondary Education
EDUC 625	Evaluation in Education
MSSE 630	Inquiry in the Classroom
MSSE 650	Internship Seminar
MSSE 675	Supervision of Student Teachers

North Carolina State University

EMS 477	Instructional Materials in Science	[2002 - 2004]
Supervision of student teachers		

Lake Land Community College, Mattoon, Illinois – Adjunct Faculty Member

Taught general chemistry classes to community college students	[2000 - 2001]
Instructed dual credit chemistry classes to high school students	

Consulting

Microsoft PIL Technology Enriched Instruction (TEI) Board of Directors	[2012 - 2015]
Development and Implementation of TEI program, including events in Austin, TX; Chapel Hill, NC; Washington, DC; and Stockholm, Sweden; Dubai, United Arab Emirates; Bucharest, Romania; Kiev, Ukraine; Doha, Qatar; Chiang Mai, Thailand; and Seoul, Korea.	

Secondary

Wake County Public School System	[2003]
Apex High School, Apex, North Carolina	
Physics Teacher – Part-time (40%)	
Pana Consolidated Unit School District #8	[1996 – 2001]
Pana High School, Pana, Illinois	
Teacher responsibilities included teaching chemistry, advanced chemistry and physics for five years, physical science for two years, and biology for one year. Other responsibilities included varsity girls golf coach, freshman boys basketball coach, science fair sponsor / organizer, academic bowl coach, WYSE coach, class sponsor, and being a member of the district technology committee.	

Invited

[2009 – 2014]

The Smithsonian Associates – Smithsonian Summer Camp
 Washington, DC
 Lego-Bots Camp for grade 7 – 9 students

Scholarship**Honors**

2016 – Madison Scholar- JMU College of Education confers the Madison Scholar award upon professors who have demonstrated excellence and scholarly achievement in their respective disciplines. Professors are nominated by their colleagues, and then one is selected to represent each of JMU's five colleges.

2016 – Named the College of Education Entrepreneur Faculty Fellow

2015- Invited Keynote Address at Society for Information Technology and Teacher Education, March 2014, Las Vegas, NV, "American Innovations in an Age of Discovery: Teaching Science and Social Studies Through 3D-Printed Historical Reconstructions" with Matt Hoffman, Smithsonian Institute and John Lee, North Carolina State University

2014- Invited Keynote Address at UNESCO Regional Seminar for Resource Distribution and Training Centers in Chiang Mai, Thailand.

2014 – Virginia Association of Science Teachers Recognition in Science Education Award for excellence as a University/College Faculty science educator.

2014 – Recipient of the Joseph Henry Engineering Award for Historical Reconstruction of a Key Invention in American History at the National Technology Leadership Summit in Washington, DC

2014 – Recipient of the James Madison University Faculty Emeriti Association Legacy Grant. Given to one JMU faculty member each academic year.

2014 – Invited Keynote Address- Society for Information Technology and Teacher Education, March 2014, Jacksonville, FL "Who, What, Why, When, Where, and How?"

2013 – Association for Science Teacher Education National Technology Fellowship Initiative Award winner for outstanding paper presentation on the use of technology in science education.

2013 – Panelist at the Microsoft Regional Summit and Expert Group Meeting on Youth for Global Competitiveness under the Patronage of HH Sheikh Bin Mubarak Al Nahyan, Minister of Culture, Youth and Community Development, Dubai, UAE

2013 – Distinguished Faculty Fellow, Microsoft TEI-PIL

2010 – Madison Scholar – JMU College of Education confers the Madison Scholar award upon professors who have demonstrated excellence and scholarly achievement in their respective disciplines. Professors are nominated by their colleagues, and then one is selected to represent each of JMU's five colleges.

Reviewed Publications

- Trumble, J., Farah, Y. N., & Slykhuis, D. A. (2017). Teaching Exceptional Children with Mobile Technologies in a General Education Classroom. In Mills, M., & Wake, D. (Eds) *Empowering Learners with Mobile Open-Access Learning Initiatives* IGI Global
- Foulger, T.S., Graziano, K.J., Slykhuis, D., Schmidt-Crawford, D. & Trust, T. (2016). Invited Commentary: The Time is Now! Creating Technology Competencies for Teacher Educators. *Journal of Technology and Teacher Education*, 24(3), 249-256. Chesapeake, VA: Society for Information Technology & Teacher Education.
- Slykhuis, D. A., Martin-Hansen, L., Thomas, C. D., & Barbato S. (2015). *Teaching STEM through historical reconstructions: The future lies in the past*. Contemporary Issues in Technology and Teacher Education, 15(3). Retrieved from <http://www.citejournal.org/vol15/iss3/editorial/article1.cfm>
- Slykhuis, D. A., & Lee, J. (2015). Using Two Frameworks to Promote E-Leadership and Teacher Development. In Huang, R., & Kinshuk (Eds.) *ICT in education in global context: comparative reports of K-12 schools innovation*. New York, NY: Springer
- Hofer, M., Lee, J., Slykhuis, D. A., & Ptaszynski, J. (2015). Opportunities and Challenges of TPACK-based Professional Development on a Global Scale. In Herring, M. C., Mishra, P., & Koehler, M. J. (Eds.) *Handbook of Technological Pedagogical Content Knowledge (TPACK) for Educators, Second Edition*. New York, NY: Taylor & Francis/Routledge
- Bull, G., Slykhuis, D., Martin-Hansen, L., & Robinson, S. (2015). Reflections on two educational technology pioneers: John Park and Terry Markwart. *Contemporary Issues in Technology and Teacher Education*, 15(4). Retrieved from <http://www.citejournal.org/vol15/iss4/editorial/article1.cfm>
- Tillman, D., An, S., Boren, R. & Slykhuis, D. (2014). Building Model NASA Satellites: Elementary Students Studying Science Using a NASA-themed Transmedia Book Featuring Digital Fabrication Activities. *Journal of Computers in Mathematics and Science Teaching*, 33(3), 327-348. Chesapeake, VA: AACE.
- Foulger, T. S., Burke, D., Williams, M. K., Waker, M. L., Hansen, R., & Slykhuis, D. A. (2013). Innovators in teacher education: Diffusing mobile technologies in teacher preparation curriculum. *Journal of Digital Learning in Teacher Education*, 30(1), 21-29.
- Foulger, T. S., & Slykhuis, D. A. (August 2013). TPACK as a tool for professional learning. *Learning & Leading with Technology*, 41(1), 20-21.
- Bull, G., George, M., Shoffner, M., Bolick, C., Lee, J., Anderson, J., Slykhuis, D., Garofalo, J., Angotti, R., McKenna, M., West, E., Dexter, S., Herring, M., Hofer, M., & Brown, A. (2012). Editorial: Implementing the teacher education initiative. *Contemporary Issues in Technology and Teacher Education*, 12(2).
- Slykhuis, D. A., & Krall, R. M. (2012). Successful implementation of technology to teach science: Research implications. In R. N. Ronau, C. R. Rakes, & M. L. Niess (Eds.), *Educational technology, teacher knowledge, and classroom impact: A research handbook on frameworks and approaches*. IGI Global.

- Slykhuis, D. A., Cline, T. (2012) *iMAGINETICspace: Where Imagination, Magnetism, and Space Collide*. NASA. http://mms.gsfc.nasa.gov/epo_imagineticspace_book.html
- Slykhuis, D. A. (2009). Seven steps to teaching with inquiry. *The Science Teacher*, 76(8), 8-9.
- Park, J. C., & Slykhuis, D. A. (2008). Framing research on technology and student learning in the content areas. In L. Bell, L. Schrum, & A. Thompson (Eds.), *Research Practice on Technology and Student Learning in Science Education*. Charlotte, NC: Information Age Publishing.
- Park, J. C., Carter, G., Butler, S., Slykhuis, D.A., & Griffen-Reid, A. (2008). Re-dimensional thinking in earth science: From 3-D virtual reality panoramas to 2-D contour maps. *Journal of Interactive Learning Research*, 19(1), 75-90.
- Annetta, L.A., Slykhuis, D.A., & Wiebe, E. (2007). Evaluating gender differences of attitudes and perceptions toward PowerPoint™ for preservice science teachers. *Eurasia Journal of Mathematics, Science & Technology Education*, 3(4), 297-304.
- Wiebe, E., Slykhuis, D.A., & Annetta L.A. (2007). Evaluating the effectiveness of scientific visualization in two PowerPoint™ delivery strategies on science learning for preservice science teachers. *The International Journal of Science and Mathematics Education*, 5(2), 329-348.
- Park, J.C., & Slykhuis D. A. (2006). Guest editorial: Technology proficiencies in science teacher education. *Contemporary Issues in Technology and Teacher Education*, 6(2), 218-229.
- Slykhuis, D.A., & Park, J.C. (2006). Correlates of achievement with classroom-based and online MBL physics activities. *Journal of Computers in Mathematics and Science Teaching*, 25(2), 147-163.
- Slykhuis, D.A., & Park, J.C. (2006). The efficacy of online physics activities. *Journal of Interactive Online Learning*, 5(1), 14-31.
- Slykhuis, D.A., Wiebe, E., & Annetta, L.A. (2005). Eye-tracking students' attention to PowerPoint photographs in a science education setting. *Journal of Science Education and Technology*, 14(5/6), 509-520.
- Slykhuis, D.A., & Park, J.C. (2005). High school physics student's conception of position, velocity, and acceleration during a computer-based unit on kinematics. *Journal of Physics Teacher Education Online*, 2(4), 23-30.
- Slykhuis, D.A., & Haase, D.G. (2005). Instruction on motion in North Carolina: Does it align with national standards on paper and in practice? *Journal of Physics Teacher Education Online*, 2(3), 12-18.
- Slykhuis, D.A. (2004). Science teachers' interest in online, self-directed professional development opportunities. *Meridian: A Middle School Computer Technologies Journal*, 7(1).

Other Publications

- Patel, Y., Slykhuis, D., & Wayne, T. (2015). Secondary science (physics). In M. Hofer, L. Bell, & G. Bull (Eds.), *Practitioner's guide to technology, pedagogy and content knowledge (TPACK): Rich media cases of teacher knowledge*. Waynesboro, NC: Association for the Advancement of Computing in

Education.

Hoffman, M., Slykhuis, D. A.; (2014) *Teaching Science and Engineering through Historical Reconstructions*. News on ICT Education, UNESCO Regional Newsletter, Bangkok Office.

Ptaszynski, J., Hofer, M., Lee, J. & Slykhuis, D. (2014). *Technology Enriched Instruction: Instructor Manual for Faculty Development with Technology*. Microsoft Corporation. Second Edition. Retrieved from <http://1drv.ms/1DbcoAV>

Ptaszynski, J., Hofer, M., Lee, J. & Slykhuis, D. (2014). *Technology Enriched Instruction: Participant Manual for Faculty Development with Technology*. Microsoft Corporation. Second Edition. Retrieved from <http://1drv.ms/1DbcoAV>

Slykhuis, D. A. (2011). Forward. In L. Lennox, & K. Nettleton (Eds.), *Cases on Inquiry Through Instructional Technology in Math and Science: Systemic Approaches*. IGI Global.

Invited Presentations

Psalti, E., Slykhuis, D. A. Nunez Martinez, A. N., Machain, M. M. (2014, December 17) Technologies for Education Panel. Presented to the 1st International Conference on Educational Innovation, Mexico City, Mexico.

Slykhuis, D. A., Psalti, E. (2014, December 16). Agora Session 1. Presented to the 1st International Conference on Educational Innovation, Mexico City, Mexico.

Lee, J., George, M., Garofalo, J., Park, J. & Slykhuis, D. A. (2014, March 20) Revisiting the First CITE Journal and the State of Promoting and Preparing Teachers to Use Technology in the Content Areas. Invited Panel at the SITE Conference, Jacksonville, FL.

Slykhuis, D. A., & Cline, T. (2013, March 28). iMAGINETICspace: Implementing a STEM trans-media book. *ASTE NTLI Fellow Invited Paper Presentation*. Presentation presented at the SITE Conference, New Orleans, LA.

Hewett, M., Resta, P., Rosen, D., & Slykhuis, D. A. (2009, February 16). Preparing teachers for the 21st century. *ATE Conference*. Presentation presented at the Dallas, TX.

Slykhuis, D. A. (2007, December 7). An education on biology education. *Biology Symposium*. Presentation presented at James Madison University, Harrisonburg, VA.

Park, J. C., Slykhuis, D. A., & Dotger, S. (2004, March 4). Researching students' use of school science images. *NTLI Invited Fellows Presentation*. Presentation presented at the SITE International Conference, Atlanta, GA.

Conference Presentation

Slykhuis, D. A., Foulger, T., Graziano, K. J., and Schmidt-Crawford, D. (2017, March 9). Big Reveal: Teacher Educator Technology Competencies. Paper presented at the Society for Information Technology and Teacher Education Conference in Austin, TX.

- Hofer, M., Lee, J. K., and Slykhuis, D. A. (2017, March 9). Designing Online Professional Development to Meet the Teacher Education Technology Competencies. Roundtable session presented at the Society for Information Technology and Teacher Education Conference in Austin, TX.
- Doubet, K., Slykhuis, D. A., Carbaugh, E., Purcell, S., Clemens, R. (2017, March 8). Technology for Fostering Student Engagement in Face-to-Face, Blended, or Online Environments. Paper presented at the Society for Information Technology and Teacher Education Conference in Austin, TX.
- Graziano, K. J., Foulger, T., Schmidt-Crawford, D., Slykhuis, D. A. (2017, March 8). Technology Integration and Teacher Preparation. Paper presented at the Society for Information Technology and Teacher Education Conference in Austin, TX.
- Bull, G., Slykhuis, D. A., Schmidt-Crawford, D., Hoffman, M., Tyler-Wood, T., Standish, N., Wagner, R. (2017, March 8). FabNet Invention Kit Symposium. Presented at the Society for Information Technology and Teacher Education Conference in Austin, TX.
- Sadera, W., Schmidt-Crawford, D., Foulger, T. S., Graziano, K. J., Parrish, A., Slykhuis, D. A., Nworie, J. (2017, March 7). Employing the Delphi Methodology in Educational Technology Research. Paper presented at the Society for Information Technology and Teacher Education Conference in Austin, TX.
- Riley, B., Spector, J. M., Meier, E., Slykhuis, D. A., South, J., Bull, G., Kinshuk. (2017, March 7). Panel on Efficacy Research. Panelist at the Society of Information Technology and Teacher Education Conference in Austin, TX.
- Rutter, J., Standish, N., Slykhuis, D. A., Bull, G. (2017, March 6) Improving Conceptual Understanding of Electricity and Magnetism with the Solenoid Invention Kit. Paper presented at the Society for Information Technology and Teacher Education Conference in Austin, TX.
- Voogt, J., Knezek, G., Christensen, R., Lai, K. W., Pratt, K., Albion, P., Tondeur, J., Webb, M., Ifenthaler, D., Gibson, D., Resta, P., Laferriere, T., Slykhuis D. (2017, March 6). International Handbook of Information Technology in Primary and Secondary Education. Discussant for Panel Presentation at the Society for Information Technology and Teacher Education Conference in Austin, TX.
- Rutter, J., Standish, N, and Slykhuis, D. A. (2017, January 13). Using Hands-on Learning Modules to Address Challenging Concepts in Electricity and Magnetism. Paper presentation at the Association of Science Teacher Education Conference at Des Moines, IA.
- Slykhuis, D. A. (2016, November 18). Everyday Inquiry. Presentation at the Virginia Association of Science Teachers Professional Development Institute in Williamsburg, VA.
- Standish, N., Slykhuis, D. A., & Bull, G. (2016, March 25). Science Gains in an Engineering Unit using Digital Fabrication. Paper presentation at the Society for Information Technology and Teacher Education Conference in Savannah, GA.
- Clemens, R., Purcell, S., & Slykhuis, D. A. (2016, March 24). Implementing Augmented Reality in K-12 Education- Analyzing Current Trends. Paper presentation at the SITE Conference in Savannah, GA.
- Doubet, K, Carbaugh, E., Slykhuis, D. A., Clemens, R., Purcell, S. (2016, March 22). Using Flipped Instruction to Proactively Meet the Needs of Students. Paper presentation at the SITE Conference in Savannah, GA.

- Standish, N., Bull, G., Slykhuis, D. A. (2016, January 7). Teaching Science and Engineering through Historical Reconstruction paper presentation at the Association for Science Teacher Education Conference in Reno, NV.
- Slykhuis, D. A. (2015, November 20). Improving Science Instruction with a 3D Printer presented at the Virginia Association of Science Teacher Professional Development Institute in Chantilly, VA.
- Donnelly, S., Slykhuis, D. A., & Wendt, J. (2015, November 20). Colleges and Universities Share Session presented at the VAST Professional Development Institute in Chantilly, VA.
- Slykhuis, D. A., Spector, J. M., Branch, R. M., Persichitte, K. (2015, November 6). Surveying the Educational Technology Landscape: Updates from the National Technology Leadership Summit (NTLS) and EduSummit. Presidential Panel presented at the Association for Educational Communications and Technology International Convention in Indianapolis, IN.
- Slykhuis, D. A., Lee, J., Hofer, M. (2015, March 6). Technology Enriched Instruction. Workshop presentation at the SITE Conference in Las Vegas, NV.
- Searson, M., Bull, G., Foulger, T., Hansen, R., Lee, J., Graziano, K., Slykhuis, D. A., (2015, March 5). National Technology Leadership Summit 2014: Make It! Wear It! But do so informally! Panel presentation at the SITE Conference in Las Vegas, NV.
- Slykhuis, D. A., Hofer, M., Lee, J., Ptaszynski, J. (2015, March 5). Using the TPACK Framework to Increase Technology use in Higher Education Around the World. Paper presented at the SITE Conference in Las Vegas, NV.
- Bull, G., Slykhuis, D., Lee, J., Standish, N. (2015, March 5). National Technology Leadership Summit for SITE SIG Leaders. Workshop presented at the SITE Conference in Las Vegas, NV.
- Carbaugh, E., Doubet, K., Slykhuis, D. A., Purcell, S. (2015, March 5). Flipping for Flexibility: Tools for Differentiating Instruction Within the Flipped Environment. Paper presented at the SITE Conference in Las Vegas, NV.
- Tillman, D., Smith, S., An, S., Mishra, P., Henriksen, D., Cohen, J., Slykhuis, D. A., Alexander, C., Asing-Cashman, J., Paez, C., Siemssen, A., Wilson, C., Romo, S., Jones, W. M. (2015, March 3) Creating Creative Classrooms: Field-Tested Best Practices. Roundtable session presented at the SITE Conference, Las Vegas, NV.
- Slykhuis, D. A. (2014, November 21). Assembling Inquiry-Based Lesson Plans with Online Resources. Session presented at the VAST Professional Development Institute at Roanoke, VA.
- Utter, B., Pyle, E., Slykhuis, D. A. (2014, November 21). Enhancing Teacher Effectiveness Through Modeling Instruction. Session presented at the VAST Professional Development Institute at Roanoke, VA.
- Hofer, M., Lee, J., Slykhuis, D. A. & Ptaszynski, J. (2014, March 20). Faculty Development for Technology Integration: Opportunities and Challenges on a Global Scale. Panel presented at the SITE Conference, Jacksonville, FL.
- Slykhuis, D. A., Clemens, R., Purcell, S. & Carbaugh, E. (2014, March 19). Enabling Technology Use for Teacher Education. Poster presented at the SITE Conference, Jacksonville, FL.
- Slykhuis, D. A. (2014, March 19) Who, What, Why, When, Where, and How? Conversations with the Keynote presented at the SITE Conference, Jacksonville, FL.

- Smith, S., Tillman, D., Mishra, P., Slykhuis, D. A., Alexander, C., Henriksen, D., Church, R. & Goodman, A. (2014, March 19). Building Multidisciplinary Connections: Intersections of Content, Creativity, and Digital Fabrication Technologies. Symposium presented at the SITE Conference, Jacksonville, FL.
- Ingram, R. & Slykhuis, D. A., (2014, March 17). Building the Educational Media Exchange (EMX) – a Pilot Study of the Use of a contextualized Content Assets Hub in Support of Teacher Preparation and Preservice Instruction. Virtual paper presented at the SITE Conference, Jacksonville, FL.
- Tillotson, J. & Slykhuis, D. A., (2014, January 18). Video-based teaching modules as a vehicle for promoting effective technology integration in secondary classrooms. Paper Presentation presented at the ASTE Conference, San Antonio, TX.
- Utter, B., Mahler, J., & Slykhuis, D. A., (2013, November 16). PhysTEC: Mentoring the Next Generation of Physics Teachers. Session presented at the VAST Professional Development Institute, Norfolk, VA
- Slykhuis, D. A. (2013, November 15). Increasing Rigor with Technology. Hands-on Session presented at the VAST Professional Development Institute, Norfolk, VA.
- Clemens, R., Purcell, S., & Slykhuis, D. A. (2013, March 28). Augmented education: How can augmented reality be incorporated into pre-service teacher education to help K – 12 students? Roundtable presentation presented at the SITE Conference, New Orleans, LA.
- Searson, M., Slykhuis, D. A., Lee, J., Hofer, M., & Bull, G. (2013, March 28). National technology leadership coalition TPACK initiative: Illustrating TPACK through video-based teaching cases. Panel presentation presented at the SITE Conference, New Orleans, LA.
- Slykhuis, D. A., & Cline, T. (2013, January 11). iMAGINETICspace: Implementing a STEM trans-media book. Paper presentation presented at the ASTE Conference, Charleston, SC.
- Slykhuis, D. A. (2012, November 8). iTeach: Using iPads to teach science. Hands on presentation presented at the VAST Professional Development Institute, Williamsburg, VA.
- Slykhuis, D. A., Cline, T., Kjellstrom, W., Bell, R., Tillman, D., Lenk, C., Thornburg, D., Spector, M., & Barbieri, S. (2012, March 5). Implementing simulations as an initial field experience for pre-service teachers. Roundtable presentation presented at the SITE Conference, Austin, TX.
- McBride, R., Searson, M., Slykhuis, D. A., Brown, V., & Lee, J. (2012, March 5). SITE SIG chairs: What you need to know as a SIG leader. Roundtable presentation presented at the SITE Conference, Austin, TX.
- Slykhuis, D. A. (2011, November 18). Putting the 5E's in action: Step away from PowerPoint! Hands on presentation presented at the VAST Professional Development Institute, Roanoke, VA.
- Donnelly, S., McDonough, J., Peters, E., Berube, C., Bowman, A., Slykhuis, D.A., Meadows, G., Horne, P., Dickerson, D., McKenzie, W., Sluss, D., Sterling, D., & Cox, R. (2011, November 18). Learning within a community: Focus on inquiry. Hands on presentation presented at the VAST Professional Development Institute, Roanoke, VA.
- McNall, R. K., & Slykhuis, D. A. (2011, April 5). A review of the research on successful implementation of technology to teach science. Paper presentation presented at the NARST Annual International Conference, Orlando, FL.

- Slykhuis, D. A., & McNall, R. K. (2011, March 10). Teaching science with technology: A decade of research. Paper presentation presented at the SITE International Conference, Nashville, TN.
- Slykhuis, D. A., & McNall, R. K. (2011, January 21). Successful implementation of technology to teach science: Research implications. Paper presentation presented at the ASTE Conference, Minneapolis, MN.
- Slykhuis, D. A. (2010, November 19). Need a model? Make it! Hands-on presentation presented at the VAST Professional Development Institute, Hampton, VA.
- McDonough, J., Sterling, D., Slykhuis, D. A., Easterling, T., Bell, R., Meadows, G., Berube, C., McCall, V., Dickerson, D., McKenzie, W., Granger, J., Vinion-Dubiel, A., Burton, E., & Frazier, W. (2010, November 19). Learning within a community. Hands on presentation presented at the VAST Professional Development Institute, Hampton, VA.
- Slykhuis, D. A. (2010, April 2). Physics curriculum as a (free!) playlist: The Virginia physics flexbook. Brief paper presentation presented at the SITE International Conference, San Diego, CA.
- Slykhuis, D. A., & Swayne, N. (2010, March 12). We did math? Using Lego robots to engage students in mathematics. Hands on presentation presented at the VCTM Annual Conference, Harrisonburg, VA.
- Slykhuis, D. A. (2009, November 6). Enhancing experiments with digital video. Hands on presentation presented at the VAST Professional Development Institute, Herndon, VA.
- Sterling, D., Berube, C., Dickerson, D., Sypolt, S., Bell, R., McKenzie, W., McDonnough, J., Peters, E., Slykhuis, D. A., Meadows, G., Flannagan, J. S., Schimmoeller, P., Sheldon, Pl, Easterling, T., & Frazier, W., (2009, November 6). Fostering a community of university-based teacher educators. Hands on presentation presented at the VAST Professional Development Institute, Herndon, VA.
- Slykhuis, D. A., & Kidd, J. B. (2009, March 5). Comparing technology integration across two different professional development models. Brief paper presentation presented at the SITE International Conference, Charleston, SC.
- Slykhuis, D., A., (2009, January 8). Lego robotics and science achievement in sixth grade students. Interactive paper presentation presented at the ASTE Conference, Hartford, CT.
- Slykhuis, D. A., (2008, November 15). Increasing physical science achievement with Lego. Paper presentation presented at the SSMA Conference, Raleigh, NC.
- Slykhuis, D. A., (2008, November 14). Legos and physical science learning. Poster presentation presented at the VAST Professional Development Institute, Hampton, VA.
- Slykhuis, D. A., (2008, November 14). Whirly birds and SOL 1. Demonstration presentation presented at the VAST Professional Development Institute, Hampton, VA.
- Slykhuis, D. A., (2008, March 5). Using Legos to increase science learning in middle school. Paper presentation presented at the SITE International Conference, Las Vegas, NV.
- Slykhuis, D. A., & Stern, B. A. (2008, March 5). Whither our wiki? Paper presentation presented at the SITE International Conference, Las Vegas, NV.

- Dickerson, D. D., Slykhuis, D. A., & Dawkins, K. (2007, April 16). Examining cultural understandings of the relationship between intelligent design and nature of science. Paper presentation presented at the NARST Conference, New Orleans, LA.
- Dickerson, D. D., Slykhuis, D. A. (2007, April). Middle-level, preservice science teachers' understanding of the relationship between intelligent design and the nature of science. Paper presentation presented at the AERA, Chicago, IL.
- Slykhuis, D. A. (2007, March 28). iMovie as a vehicle for self-reflection of teaching practices. Paper presentation presented at the SITE International Conference, San Antonio, TX.
- Stern, B., S., & Slykhuis, D. A. (2007, March 27). Building a community of new and pre-service teachers the wiki way. Paper presentation presented at the SITE International Conference, San Antonio, TX.
- Slykhuis, D. A., & Annetta, L. A. (2007, January 4). Creating visually appealing and relevant research-based PowerPoint presentations. Workshop presentation presented at the ASTE Conference, Clearwater Beach, FL.
- Dickerson, D. D., & Slykhuis, D. A. (2007, January). The use of comparative reading regarding intelligent design and NOS. Paper presentation presented at the ASTE Conference, Clearwater Beach, FL.
- Dickerson, D. D., & Slykhuis, D. A. (2006, November 18). NOS and intelligent design in the science cl. Paper presentation presented at the VAST Conference, Richmond, VA.
- Slykhuis, D. A., & Dickerson, D. D. (2006, October). Science and religious faith in middle-level science teacher education. Paper presentation presented at the Mid-Atlantic ASTE Regional Conference, Hungry Mother State Park, VA.
- Slykhuis, D. A. (2006, March 23). Have an iPod? Then you need to know this about how to use it in your classroom. Poster presentation presented at the SITE International Conference, Orlando, FL.
- Slykhuis, D. A. (2006, January 14). Science education MAT attrition. Poster presentation presented at the ASTE Conference, Portland, OR.
- Wiebe, E. N., Slykhuis, D. A., & Savage, D. (2005, April 6). Answering questions with 2D and 3D topographic maps: Use of eye-tracking to understand representational reasoning. Paper presentation presented at the NARST Conference, Dallas, TX.
- Slykhuis, D. A., Wiebe, E. N., & Annetta, L. (2005, April 6). Eye-tracking student's use of science related PowerPoint presentations. Paper presentation presented at the NARST Conference, Dallas, TX.
- Slykhuis, D. A., & Park, J. C. (2005, April 6). The efficacy of online microcomputer-based lab (MBL) activities. Paper presentation presented at the NARST Conference, Dallas, TX.
- Slykhuis, D. A., & Annetta, L. (2005, March 4). What are your looking at? An investigation into the relationship of text, graphics, and audio of a PowerPoint presentation, student eye movements and science learning. Paper presentation presented at the SITE International Conference, Phoenix, AZ.

- Slykhuis, D. A., & Park, J. C. (2005, March 4). Correlates of achievement with online and classroom-based MBL activities. Paper presentation presented at the SITE International Conference, Phoenix, AZ.
- Annetta, L. & Slykhuis, D. A. (2005, January 21). What are you looking at? Tracking eye-movements on PowerPoint. Paper presentation presented at the ASTE International Conference, Colorado Springs, CO.
- Wiebe, E., Slykhuis, D. A., & Park, J. C. (2004, April 4). Contributions of the HCI paradigm to science education software. Paper presentation presented at the NARST Conference, Vancouver, BC.
- Slykhuis, D. A., & Banks, A. J. (2004, April 4). On-line homework in university chemistry class: Predictors of success and results of modification. Poster presentation presented at the NARST Conference, Vancouver, BC.
- Slykhuis, D. A., & Park, J. C. (2004, January 10). Evolution of educational technology. Paper presentation presented at the AETS International Conference, Nashville, TN.
- Slykhuis, D. A., Reid-Griffin, A., Park, J. C., Carter, G., Butler, S., Wiebe, E., Parsons, E. C., Haefner, L., Flynn, L., & Dickerson, D. (2004, January 8). 3-D GeoMapping earth science modules. Paper presentation presented at the AETS International Conference, Nashville, TN.
- Slykhuis, D. A., & Haase, D. (2003, November 13). A study of the proposed and actual treatment of the topic of motion in NC schools. Paper presentation presented at the NCSTA Professional Development Institute, Greensboro, NC.
- Slykhuis, D. A., & Haase, D. (2003, October 24). Does NC adequately address the physics concept of motion? A K-16 investigation. Paper presentation presented at the Mid-Atlantic AETS Regional Conference, Lake Lure, NC.
- Park, J. C., Slykhuis, D. A., Flynn, L., & McBroom, R. (2003, March 28). Constructing evaluation tools to assess earth science concepts using web-based VR panoramas and contour maps. Paper presentation presented at the SITE International Conference, Albuquerque, NM.
- Park, J. C., Butler, S., & Slykhuis, D. A. (2003, March 26). Re-dimensional thinking: From 3-D worlds to 2-D representations. Paper presentation presented at the NARST Conference, Philadelphia, PA.
- Park, J. C., & Slykhuis, D. A. (2003, January 30). Creating, editing and exporting digital video. Paper presentation presented at the Pre-Conference Workshop at AETS International Conference, St. Louis, MO.
- Butler, S. M., Carter, G., Reid-Griffin, A., Haefner, L. A., Park, J. C., Parsons, E., Slykhuis, D. A., & Wiebe, E. (2003, January 31). Science teacher educators establish a local community of practice: Experiences at North Carolina State University. Paper presentation presented at the AETS International Conference, St. Louis, MO.
- Slykhuis, D. A. (2002, November 14). An investigation of the interests of North Carolina science teachers' self-directed professional development. Paper presentation presented at the NCSTA Conference, Greensboro, NC.
- Flynn, L., Reid-Griffin, A., Slykhuis, D. A., & Tran, L. (2002, November 14). Graph interpretation: Seeing into the private universe of a pre-service teacher. Paper presentation presented at the NCSTA Conference, Greensboro, NC.

Slykhuis, D. A. (2002, October 5). Survey of North Carolina science teachers interests in new technology and methodology. Paper presentation presented at the Mid-Atlantic AETS Regional Conference, Natural Bridge, VA.

Grant Experience

- 2017 PI- Content Teaching Academy- Adapted Physical Education. Funded by the Virginia Department of Education, \$100,000
- 2017 PI- Content Teaching Academy- Augmenting Science and Special Educator Teams- Teaching Inquiry Learning Together. Funded by the Virginia Department of Education, \$54,800
- 2017 PI- Content Teaching Academy- Best Practices Institute. Funded by the Virginia Department of Education, \$76,400
- 2017 PI- Content Teaching Academy- Augmenting Mathematics and Special Educator Teams. Funded by the Virginia Department of Education, \$54,800
- 2016 PI- Content Teaching Academy: Adapted Physical Education. Funded by the Virginia Department of Education, \$100,000
- 2016 PI- Content Teaching Academies: Augmenting Science and Special Educator Teams (ASSET) and Augmenting Mathematics and Special Educator Teams (AMSET). Funded by the Virginia Department of Education, \$127,000
- 2016 PI- Content Teaching Academy: Early Childhood Adapted Physical Education (ECAPE). Funded by the Virginia Department of Education, \$30,000
- 2015 PI- National Science Foundation ITEST, American Innovation in an Age of Discovery: Teaching Science and Engineering through 3d-printed Historical Reconstructions. Sub-grant at James Madison University, \$30,392
- 2015 4Va Collaboration Grant with George Mason University. Energy Education for Virginia Preservice Teachers. \$2,313.50
- 2015 PI- Content Teaching Academies: Augmenting Science and Special Educator Teams (ASSET) & Adapted Physical Education (APE). Funded by the Virginia Department of Education. \$200,000
- 2014 PI- CLC State Meeting Professional Development Workshop. Funded by Old Dominion University Research Foundation. \$34,000
- 2014 PI- Inclusion Science Academies at the Content Teaching Academy. Funded by the VA Department of Education. \$89,100
- 2013 Co-PI on a funded Math/Science Partnership grant from the Virginia Department of Education, "Enhancing Student Achievement Across Virginia through Modeling Instruction." \$235, 819
- 2012 Co-PI on a funded PhysTEC Grant, \$277,311.
- 2010 Received \$25,000 grant for K-8 SB-IEP math CTA Academy

- 2009 Received Early Childhood Special Education Content Teaching Academy Grant from the Virginia Department of Education
Co-PI- \$23,000
- 2008 Received PRISM II grant from SCHEV
Co-PI- \$210,000
- 2007 Received College of Education Mini-grant
- 2006 Received College of Education Mini-grant
- 2005 Received College of Education Mini-grant
- 2004 Received College of Education Mini-grant
- 2004 Received College of Education Collaborative Grant
- 2003 – 2004 Research Assistant, GSK Grant
Sole graduate student on a large grant designed to investigate the creation and usage of science visualizations.
- 2003 Research Assistant, Investigation Viruses with Tough, NSF Grant
Investigated ideas of elementary, middle, and high school students' ideas about scale
- 2001 – 2003 Research Assistant, MentorNet Grant
Inventoried, maintained, and checked-out equipment to undergraduate and graduate students.
- 2002 Science Education Research Group
Created ways to visualize and present research data collected from a computer-based visualization activity.

Service Experience

Professional Organizations

- AACE-SITE Association for the Advancement of Computing in Education- Society for Information Technology and Teacher Education
 - Past-President
 - President
 - President-Elect
 - Vice-President and Co-Chair of Teacher Education Council
 - Chair of the Science Education Special Interest Group for SITE.
 - Member SITE Teacher Education Council
 - Member SITE Leadership Council
 - Reviewer for CITE (Science) Journal
- ASTE Association for Science Teacher Educators- Member
 - Nominated for the Board of Directors
 - Elected to the Elections Committee
 - Technology Strand Coordinator

- Member of the Technology Forum
- Reviewer for Conference Proposals

NARST	National Association for Research in Science Teaching- past member <ul style="list-style-type: none"> • Reviewer for Conference Proposals in Technology Strand
NSTA	National Science Teachers Association- past member
SSMA	School Science and Math Association- past member
ATE	Association of Teacher Educators- past member
VAST	Virginia Association of Science Teachers- Member <ul style="list-style-type: none"> • Reviewer for Virginia Journal of Science Education
VSTE	Virginia Society for Technology in Education- member
VSELA	Virginia Science Education Leadership Association- member

Committee Memberships

Leadership Team, College of Natural and Health Sciences, University of Northern Colorado, 2017-Present

Hiring Authority, Elementary Science Education Search Committee, College of Natural and Health Sciences, University of Northern Colorado, 2017-2018

Middle, Secondary, and Mathematics Education Search Committee Chair- English Education Search- James Madison University- 2017

Data Advisory Committee, James Madison University, 2016-2017

Dean's Advisory Committee, College of Education James Madison University, 2015-2016

Interdisciplinary Learning Studies Steering Committee, James Madison University, 2015-Present

Department Heads, James Madison University, 2015-2016

Professional Education Coordinating Council, James Madison University, 2015-2016

Council for the Accreditation of Educator Preparation Advisory Committee, 2015-2016

Technology Committee, College of Education, James Madison University, 2009-2017

Curriculum Development, Implementation, and Review Committee Chair, College of Education, James Madison University, 2007-2009

Middle, Secondary, and Math Education Search Committee Chair- Mathematics Education Faculty Search- James Madison University- 2007-2008.

Middle, Secondary, and Math Education Search Committee Chair- General Teaching Methods Faculty Search- James Madison University- 2007

Middle, Secondary, and Math Education Search Committee Chair- Educational Research Faculty
Search- James Madison University- 2006-2007

Inter-Disciplinary Learning Studies- Math/Science/Technology Steering Committee- James Madison
University- Member 2006-2017

Environmental Science Studies Work Group- James Madison University- Member 2006-2007

Undergraduate Research Conferences Selection Committee- James Madison University- Member 2004-
2015

Faculty Development and Recognition Committee- College of Education, James Madison University-
2005-2006

Teacher Education Program/Assessment and Evaluation Committee- College of Education, James
Madison University- 2005-2006

Math Education (elementary) Search Committee- College of Education, James Madison University-
Member 2005-2007

Graduate Studies Committee- College of Education- North Carolina State University- Member- 2003-
2004

Department of Math, Science and Technology Education Search Committee- North Carolina State
University- Member 2003-2004

Curriculum Review Committee- North Carolina Department of Public Instruction- Reviewed and
revised Physics Curriculum- 2003

Additional Service

Editorial Review Board for Cases on 3D Technology Application and Integration in Education to be
published by IGI Global

Editorial Advisory Board for Cases on Inquiry Through Instructional Technology in Math and Science:
Systemic Approaches, IGI Global, December 2011

Reviewer for the International Journal of Science Education, from 2009-Present

Reviewer for the Contemporary Issues in Technology and Teacher Education Journal: Science
education strand

Member of the Editorial Review Board of the Journal of Interactive Online Learning, Sponsored by the
National Center of Online Learning Research, from 2005-Present

Reviewer for the Journal of Science Education and Technology, from 2005-Present

Member of Editorial Review Board of Meridian- A Middle School Technologies Journal, from 2001-
2004.