

08/2020

Kerrie L. McDaniel, Ph.D.
Pedagogical Associate Professor
Department of Biology
Western Kentucky University

Address:

Department of Biology
Western Kentucky University
1906 College Heights Blvd.
Bowling Green, KY 42101-1080
Email: kerrie.mcdaniel@wku.edu

Education:

Ph.D. in Plant Biology (1997) Southern Illinois University-Carbondale, Carbondale, Illinois
Dissertation title: *Cytokinin Modulation of Gene-specific mRNA Abundance: The Effects of Different Cytokinins in Phaseolus vulgaris L. and Glycine max (L.) Merr.*

M.S. in Biology (1990) Western Kentucky University, Bowling Green, Kentucky
Thesis title: *Short-term Effects of Manganese-toxicity on ribulose 1,5 bisphosphate carboxylase in tobacco.*

B.S. in Biology/Chemistry (summa cum laude- 1988) Western Kentucky University, Bowling Green, Kentucky

Academic Employment:

Assistant Professor (Pedagogical Position), Department of Biology, Western Kentucky University (July 2013-present)

Instructor, Department of Biology, Western Kentucky University (2002 to July 2013)

Instructor, Navitas at WKU (2011-2015)

Adjunct, part-time Faculty, Department of Biology, Western Kentucky University (1994-2002)

High School Science Teacher, Leeton, Missouri (1990-1991)

Teaching Experience (Since joining WKU in Pedagogical Faculty Position):

- Biology 113 General Biology for non-majors (winter 2014, 2015, 2017, 2018, 2019, 2020)
- Biology 114 General Biology Lab for non-majors (winter 2014, 2015, 2016, 2017, 2018, 2020)
- Biology 131 Human Anatomy and Physiology lecture (spring 2015, 2016, 2017, 2018)
- Biology 131 Human Anatomy and Physiology Lab Coordinator (fall 2013, spring and fall 2014, 2015, 2016, 2017, 2018, 2019, 2020)
- Biology 207 Microbiology (2019, 2020)
- Biology 231 Advanced Human Anatomy and Physiology lecture (Fall 2013, 2016, 2017, 2018; spring and fall 2014, 2015)
- Biology 231 Advanced Human Anatomy and Physiology lab (Fall 2013; spring and fall 2014, 2015, 2016, 2017, 2018, 2019, 2020)
- Biology 303 Life Science for Middle School Teachers (Fall 2014; spring 2016, 2017, 2018, 2020)
- Biology 420 Introduction to Toxicology (summer 2015, 2016, 2017, 2018, 2019)
- Biology 579 Mechanistic Toxicology (summer 2019, 2020)

Curriculum Development:

- [Advanced Anatomy and Physiology Laboratories](#), Western Kentucky University (2014-2020)
- [Human Anatomy and Physiology Laboratories](#), Western Kentucky University (2014-2020)
- [Middle School Life Science Curriculum](#), National Stem Scholar Program, Western Kentucky University (2015-2020)
 - Includes Blue Origin, New Shepard Space Launch experiment and curriculum (May 9, 2019)
- Curriculum Modification and Quarantine Procedures written and implemented for COVID19 (2020).
- Elementary School Next Generation Science Standard Curriculum, Green River Regional Educational Cooperative (GRREC), (2013-2016)

Awards:

- Center of Innovative Teaching and Learning Teaching Award Nominee, WKU, May 2019.
- Best Professor Award, Alpha Delta Pi Sorority, WKU, December 2018.
- [Outstanding Junior Faculty Award, Teaching](#), Ogden College, Western Kentucky University, January 2018.
- **Nominated for University Teaching Award**, Western Kentucky University, December, 2015, 2016, 2017, 2018, 2019.
- [Most Enthusiastic Professor Award](#), Alpha Delta Pi Sorority, WKU, December 1, 2015.
- **Nominated for University Service Award**, Western Kentucky University, December, 2015.
- [Hats Off to Women Award](#), Office of Institutional Diversity and Inclusion, March 28, 2014.

Service:

University Service

- **Center for Innovative Teaching and Learning (CITL) Workshop**, Workshop Leader (with Alicia Pennington). Effective Lectures. February 12, 2020.
- **Center for Innovative Teaching and Learning (CITL) Advisory Board**, 2019-2020.
- **Strategic Enrollment Plan (SEP) Colonnade Subcommittee**, (Fall 2019).
- [Professional Education Council](#), University Committee Member, WKU (2008-present).
 - **CAEP/SPA Standards**, Biology Department and Ogden College (2016-2017).
 - **Teacher Education Leadership Committee/Core Curriculum**, 2018.
- **Girls in Science Day**, Professional STEM Panelist, Western Kentucky University, Sept. 22, 2018.
- [Dancing Science-\(Last Chance to Dance\)](#), Gatton Academy and the Department of Dance, (2016-2017).
- **Consultant for Accreditation Review**, Department of Nutrition and Dietetics, WKU, (October, 2015).
- **University Admission and Retention Subcommittee of the Professional Educational Council**, Committee Member, WKU. (Sept. 2008-2017).
- **Ogden College Science Outreach Advisory Committee**, Ogden College, (Spring 2014).
- **Professional Education Annual Report**, WKU, preparer. (2012, 2013, 2014).
- **Noyce Seminar Series**, organizer (Fall 2012; Spring and fall 2013, 2014, 2015).
- **National Science Teacher Association Student Chapter (NSTA)**, Co-Advisors: Kerrie McDaniel and Martha Day. (Aug. 2005-2014).
- **Women in Science and Engineering (WISE)**, WKU. (2013-2014).
- **Regional Noyce Conference**, Lake Cumberland, KY (June 18-19, 2013).
- (Pre-Pedagogical Faculty Position)**-----
- **Girls in Science**, Western Kentucky University. October 13, 2012.
- **WKU Project A.I.M.S. (Activating Interest in Minority Students)**, enrichment leader. (Feb. 2011).

- **Steering Committee Member, WKU's Professional Education Programs, WKU.** (2008-2010).
- **Biology Departmental Folio for Teach Education, Co-authors Kerrie McDaniel and Heather Johnson** (Nov. 2008-Feb. 2009).
- **Teacher Leader Master's Planned Fifth Year Program Committee, Committee Member, Department of Education, WKU.** (2007-2008).
- **Strike Force** for writing Critical Performances for SKyTeach program (2007-2008).
- **Science Olympiad** (April 2008).
- **Coaching and Observation Strategies Workshop, New Teacher Center, Memphis TN,** (August 27-28, 2007).
- **Teacher Education Model Program (TEMP) Task Force** (2004- 2008).
- **2006 Teacher Quality Summit: Teaching Above the Gathering Storm: Preparing STEM and World Language Teachers for a Global Economy, Louisville, KY,** (Oct. 23-24, 2006).
- **National Boards Workshops for Elementary Teachers** (2005).
- **FACET Workshops for Western Kentucky University Faculty,** (August 2006).
- **Kentucky Internship Program (KTIP)** (2002-2008).
- **Science Alliance Task Force, Ogden College of Science and Engineering, Western Kentucky University** (2002 to 2012).
- **FACET Workshop for Western Kentucky University Faculty, Workshop Presenter** (2004).
- **FACET Workshop for Western Kentucky University Faculty, Workshop Presenter** (2005).

Departmental Service

- **Chair, Program Review and Assessment Committee, Department of Biology, WKU, Bowling Green, KY** (2020-2021)
- **Retention Committee, Department of Biology, WKU, Bowling Green, KY** (2020-2021).
- **Herstory Outreach Event, Department of Biology, Bowling Green, KY, Feb. 8, 2020.**
- **Curriculum Committee, Department of Biology, WKU** (2013-2020).
- **[Pre-Physical Therapy Club](#), WKU, Advisor** (2013-2209).
- **[Advisor, Medical Laboratory Science Program](#), Department of Biology, (2002-2020).**
- **Faculty Mentor, Natalie Mountjoy, Department of Biology, WKU** (2019-2020).
- **Women in Science (WISE) faculty mentor, Blairanne Williams, Department of Chemistry, WKU** (2018-present).
- **Developing Goals, Faculty Workshop, Department of Biology (Natalie Mountjoy), March, 29, 2019.**
- **Temporary Adviser for MAE-Teacher Leader, Department of Biology** (2016-2018).
- **Strategic Plan Development/Maintenance, Assisted, Department of Biology, (2016-2018).**
- **Topper Orientation Program (TOPS), Department of Biology, (2015-2018)**
- **Search Committee (Two Temporary Instructor Positions), Department of Biology, (Summer 2017).**
- **Search Committee (Pedagogy Assistant Professor), Department of Biology, (Fall 2016).**
- **Faculty Workshop Leader, Department of Biology, WKU, (August 2015).**
- **Search Committee (Instructor Position), Department of Biology, (Fall 2014/Spring 2015)**
- **Search Committee (Assistant Professor in Microbiology), Department of Biology, (Spring 2015).**
- **Coordinated data collection of Colonnade courses, Department of Biology, (Spring and fall 2015, 2016, 2017).**
- **Faculty representative for SACS accreditation visit, Ogden College, WKU** (April 8, 2015).
- **Search Committee (Instructor Position), Department of Biology, (Spring/Summer 2014).**
- **Biology Advising Super Sessions (BASS), Department of Biology, (2013-2015)**
- **Master's Degree Committee Member, Department of Biology** (See Student Engagement List).

-----**(Pre-Pedagogical Faculty Position)**-----

- **SACS Accreditation, Biology 113, Department of Biology.** (Fall of 2012).

- **Search Committee, Food Microbiologist, Department of Biology.** (Fall 2011-Spring 2012).
- **Search Committee, Science Education Specialist, SKyTEACH.** (Fall 2011-Spring 2012).
- **Search Committee, 5 Master Teachers, SKyTEACH.** (Spring-Sumer 2012).
- **Medical Technology Club, Advisor.** (Aug. 2002-2012).
- **Western Kentucky University Committee to Address the Common Core Standards,** (2011-2012).
- **Middle School Science Education Program Redesign Committee.** (2010-2012).
- **Search Committee for Lab Technician,** Committee Member, WKU for Lab Technician (Dr. Rodney King laboratory), (Sept. 2008-Nov. 2008).
- **Search Committee,** Science Education Specialist, Department of Education, WKU (2007-2008).
- **Search Committee,** Biology Instructor Glasgow Campus, WKU (2008).

Community/Professional Service

- **[Stem Cell Foundation Scholar Program](#),** Life Science Content Specialist and Workshop Leader/Organizer, Selected, (June 2016- 2021).
 - **International Space Station Downlink Event:** Over 200 middles school students brought to Kentucky Science Center to engage in science and talk to astronauts, September 13, 2019.
 - Represented the National Stem Cell Foundation at the Space X CRS-18 launch of Falcon 9 and Dragon from Cape Canaveral, Fl. (July 25, 2019).
 - **Mennonite Health Outreach,** Collaboration with Department of Nursing, AHEC and the Scottsville Health Department. Presented Lymphatic System, (May 14, 2019).
 - **[Tennessee Board of Regents Digital Engagement Initiative Faculty Workshop](#),** Keynote Speaker, Smyrna TN, Oct. 3, 2018.
 - **Committee on Science Education and Advocacy, Kentucky Academy of Science,** Chair, Elected Position, (Spring 2016-18).
 - **[Kentucky Academy of Science](#),** Executive Committee Member, Social Sciences. Elected position, (Fall 2014-Fall 2018).
 - **Green River Regional Education Cooperative (GRREC),** Workshop Presenter “Fishing With the NGSS”, (January 19, 2016).
 - **Green River Regional Education Cooperative (GRREC),** Workshop, Presenter, (June 2-5, 2015).
 - **Owensboro Medical Health System Advisory Board for the School of Medical Technology,** Advisory Board Member (2007-present). Met with NAACLS accrediting committee (Oct. 21, 2014).
 - **Potter Gray Science Days,** Potter Gray Elementary, Bowling Green, KY, (September 30, 2014).
 - **Verbally and Mathematically Precocious Youths (VAMPY),** Guest Speaker for Biology session, Western Kentucky University, (July 10, 2014).
 - **Green River Education Cooperative (GRREC),** Workshop Presenter, (June 9, 13, 2014).
 - **Science Olympiad,** Coordinator of Anatomy and Physiology Session, Western Kentucky University, (April 12, 2014).
 - **Green River Regional Education Cooperative (GRREC),** Workshop Presenter, (November 5, 2013).
 - **Green River Regional Education Cooperative (GRREC),** Workshop Presenter, (June 28th and July 15th, 2013).
 - **Green River Regional Education Cooperative (GRREC),** Workshop Presenter, (June 4-7, 2013).
 - **Green River Regional Education Cooperative (GRREC),** Workshop Presenter, (February 20, 2013).
- (Pre-Pedagogical Faculty Position)**-----
- **Green River Regional Education Cooperative (GRREC),** Workshop Presenter, (November 18, 2012).
 - **Educational Professional Standards Board (EPSB),** Program Reviewer, (August 2012-June 2013).
 - **McGraw-Hill Publishing Company LabSmart Symposium,** Test group member, (November 8-10, 2012).
 - **Green River Regional Education Cooperative (GRREC),** Workshop Presenter,(June 13-14, 2012).

- **Writing Under the Microscope Workshop for High School Teachers.** Workshop Presenter,(June 13, 2-2012).
- **Green River Education Cooperative (GRREC),** Workshop Presenter,(July 2011, October 2011, January 2012, June 2012).
- **Green River Educational Cooperative (GRREC),** Workshop Presenter, (May 25-26, 2011, Oct. 2011).
- **Green River Educational Cooperative (GRREC),** Workshop presenter, (July 12, 2011).
- **Green River Educational Cooperative (GRREC),** Workshop educator (summer 2010).
- **Kentucky Department of Education, Professional Standards Board,** Content Reviewer (2005-present).
- **Oxford Press,** Reviewer (Feb. 2010-Mar. 2010). Reviewed Chapters 1, 2, 6, 19, 20 and Table of Contents for non-majors textbook entitled “Biology for the informed Citizen”.
- **Green River Regional Educational Cooperative (GRREC),** Workshop Leader for ASK-IT I, ASK-IT II, and ASK-IT III grants (July 2009, March 2010).
- **Potter Gray Elementary School,** Session Leader for Science Days (Feb. 2010).
- **WH Freeman Company,** Reviewer (Nov. 2009-Dec. 2009). Reviewed “What is Life? A Guide to Biology” and “What is Life? A Guide to Biology with Physiology”.
- **Green River Regional Education Cooperative,** Committee Member, (Oct. 2009-Nov. 2009).
- **Kentucky Internship Program (KTIP),** University Educator (Sept. 2008-2009).
- **ACT (College Preparation Readiness Exam),** Reviewer of Topics (Jan. 2009-Feb. 2009).
- **W.R. McNeill Elementary Science Lab,** Developer, (2001-2009).

Internal Grant Proposals:

- **WKU Office of Research and Creativity Student Grant (2019),** Optimization of latent print development on adhesive surfaces using Wet Powder Suspension methods, Anne Carlisle, \$500.
- **Honor’s Development Grant (2015).** This was a travel award to present at National Biology Teacher Association (NABT) in Providence, RI, Honor’s College, WKU. PI: Rebecca Garrison* Supervisor: Dr. Kerrie McDaniel \$400 (Funded).
- **DELO Online Learning Research Office Grant: Evaluation of E-Learning Resources and Flipped Classrooms on Student Learning Outcomes and Faculty Pedagogy in 100 and 200 Level Biology Courses (Fall 2013-2015).** PIs: Kerrie McDaniel and Jerry Daday. \$41,740 Funded.

------(Pre-Pedagogical Faculty Position)-----

- **Ogden College of Science and Engineering Action Agenda Grant (2005, 2006, 2007).** *Workshop Support for High School Biology Teachers Teaching Physical Science.* Kerrie McDaniel and Heather Johnson. \$4724 Funded.
- **Ogden College of Science and Engineering Action Agenda Grant (2005).** *Support for the Western Chapter of the National Science Teacher Association.* Kerrie McDaniel and Heather Johnson. \$3000 Funded.

External Grant Proposals:

- **National Stem Cell Scholar Program** for Middle School Science Teachers, National Stem Cell Foundation. (2016-2021). Partners: [Julia Roberts](#), Rico Tyler, Kerrie McDaniel. \$500,000 (Funded).
- **NSF (National Science Foundation) Robert Noyce Teacher Scholarship Program NSF 09-532: WKU Science and Mathematics Alliance for Recruitment and Retention of Teachers (2009-2015).** PIs: Hope Marchionda, Kerrie McDaniel, Janet Tassell, Vicky Metzger. \$898,791 Funded.

------(Pre-Pedagogical Faculty Position)-----

- **CPE (Council for Post-Secondary Education): Writing Under the Microscope: Content Area Writing for the Sciences 293776-2 (2011-2012).** PIs: David Lee, Dean Potter College of Arts and Letters, Chris Ervin and Kerrie McDaniel. \$25,000 Funded.
- **NSF (National Science Foundation) MSP Start Grant, Western Kentucky Math/Science Partnership (2008-2010).** PIs Heather Johnson and Rico Tyler. Key Personnel: Kerrie McDaniel and Roger Pankratz \$257,000 Funded.
- **KDE (Kentucky Department of Education) Grant, Learning Capacity Advancement of Middle School Science and Mathematics (EXPLORE grant).** PI: Roger Pankratz. Supporting Personnel: Janet Tassell, Rico Tyler, Hope Marchionda and Kerrie McDaniel. This grant provided training and mentoring for middle school science teachers to improve Explore scores. \$140,000 Funded.
- **STEP Grant (TNE Learning Network, Academy for Educational Development): Engaging Arts and Science Faculty in the Redesign of Key Academic Courses Required for Elementary Education Teacher Candidates.(2007-2008)** Roger Pankratz and Kerrie McDaniel. \$10,000 Funded.
- **Carnegie New Teacher Center Learning Network Grant: Train Teacher Educators, Arts and Science Faculty, and School Practitioners in Processes and Skills of Mentoring New Teachers. (2007-2008).** Roger Pankratz, Kerrie McDaniel, Rico Tyler. \$10,000 Funded.
- **STEP Grant (TNE Learning Network, Academy for Educational Development): A Standards-based Assessment Program to Further Develop Western Kentucky University's Performance Accountability System with the Purpose of Linking Teacher Preparation Processes, Teacher Content Knowledge and Instructional Performance to P-12 Student Learning of State/National Content_(2005-2008).** Worked with Roger Pankratz, Wanda Weidemann, Sam Evans and Toby Daniel Funded
- **Improving Educator Quality State Grant Program: Kentucky Council of Postsecondary Education: East-West Collaborative to Increase the quality of Physical Science Teachers in High-need Middle Schools (SEXTANT).** (2006-2008). Rico Tyler, Kerrie McDaniel, Roger Pankratz and Middle School Teachers. Funded
- **Carnegie Grant: Mentoring Program for Second Year Elementary-school Teachers.** (2006-2007). Roger Pankratz, Kerrie McDaniel and Wanda Weidemann. Funded

Publications:

Novak, E., McDaniel K., & Daday J. (submitted). Are E-Textbook Frustrating to Students? An Empirical Study Identifying Aspects of E-text Use that Frustrate Students in Undergraduate Biology Courses. Computers & Human Interactions.

McDaniel, K. (2019)-Invited Contributor, Opportunities with the National STEM Scholar Program, The Challenge Magazine for The Center for Gifted Studies, No. 47, pp.20-21.

[McDaniel, K., & Daday, J. \(2018\).](#) Varied Student Perception of E-text Use Among Student Populations in Biology Courses. European Journal of Science and Mathematics Education, 6(1), 24-36.

[Novak, E., Daday, J., & McDaniel, K. \(2018\)](https://doi.org/10.1007/s11423-018-9599-5). Using a Mathematical Model of Motivation, Volition and Performance to Examine Students' E-Text Learning. Educational Technology Research and Development <https://doi.org/10.1007/s11423-018-9599-5>

[Novak, E., Daday, J., & McDaniel, K. \(2018\)](https://doi.org/10.1093/iwc/iwy001). Assessing the Intrinsic and Extraneous Cognitive Complexity of E-textbook Learning. Interacting with Computers, <https://doi.org/10.1093/iwc/iwy001>.

[McDaniel, K., & Daday, J. \(2017\)](#). An Undergraduate Anatomy Lab Revision Success Story. Human Anatomy and Physiology Society Educator 21 (2): 8-18.

[McDaniel, K. \(2018\)](#). Do Your Ears Hang Low? In: Antonetti, J. & Stice, T. Powerful Task Design 1st Ed., Corwin Press Inc., Thousand Oaks, CA. ISBN-13: 978-1506399140 ISBN-10: 1506399142

[Garrison, Rebecca*, McDaniel, Kerrie & Jerry Daday \(November 2015\)](https://nabt.org/2015-Research-Symposium). The Effects of Introducing E-texts and E-materials in 100 and 200-level Biology Courses on Teaching Pedagogy. Proceedings of National Association of Biology Teachers. <https://nabt.org/2015-Research-Symposium>

[Tyler, R., McDaniel, K. Evans, S., and Day, M. \(2015\)](#). Next Generation Science Standards (NGGSC), General Education and Teacher Preparation. in *Meet Me in the Commons: A Field Guide to Common Core Standards in Higher Education* edited by Dorie Combs, New Forum Press. ISBN 9781581072785
----- (Pre-Pedagogical Faculty Position) -----

Tassell, Janet, **McDaniel, Kerrie**, Johnson, Heather, Pankratz, Roger, Norman, Tony, Tyler, Rico (2012). EXPLORE Performance in Mathematics and Science: Why are Middle School Students Unprepared for Success in Mathematics and Science? International Journal of Innovations in Science and Math Education (20)-1, p. 1-23.

Van Der Meer, B.W., Alletto, J.J., Bryant, D., Carini, M., Elliott, L., Gelderman, R., Mason, W., **McDaniel, K.**, McGruder, C.H., Rinehart, C., Tyler, R., Walker, L., (2000). Astrobiology as a tool for getting high school students interested in science. In R.B. Hoover Editor. *Instruments, Methods, and Missions for Astrobiology III* (pp. 106-112). Bellingham, Washington, The International Society for Optical Engineering.

McDaniel, Kerrie, Lightfoot, David. (1997). Accumulation of a gene specific mRNA in response to Cytokinin treatment of leaves in *Phaseolus vulgaris*. Plant Physiology and Biochemistry, 35, (5).

Lightfoot, David, **McDaniel, Kerrie**, Ellis, J., Hammerton, R.,; Nicander N. (1997). Methods for the analysis of cytokinin content, metabolism, and response. In W. V. Dashek Editor. *Methods in Plant Biochemistry and Molecular Biology* (pp.133-152). Boca Raton: CRC Press.

McDaniel, Kerrie, Toman, Frank (1994). The Short-term effects of manganese toxicity on ribulose 1,5 bisphosphate carboxylase in tobacco chloroplasts. Journal of Plant Nutrition, 17, 523-536.

McDaniel, Kerrie, Lightfoot, David (1994). Cytokinin responsive genes in *Phaseolus vulgaris* L. and *Glycine max* (L.) Merr. Plant Physiology, 105, 68.

Presentations (* denotes student presenter):

Mountjoy, N. & **McDaniel, K.** (Nov.8, 2019). It Takes a Department to Shift a Paradigm: Starting in the Lab! AAC&U's *Transforming STEM Higher Education* conference, Chicago, IL.

McDaniel, K. (April 13, 2019). I-Pad Microscope Escape Room: Creating Escape Room Experiences for Hands-on Science. In conjunction with the National STEM Scholar Sharathon. National Science Teacher Association (NSTA), St. Louis, MO.

McDaniel, K. (April 12, 2019). Information Processing: Simplifying Everyone's Least Favorite Standard. National Middle Level Science Teacher Association (NMLSTA) in conjunction with National Science Teacher Association (NSTA), St. Louis, MO.

Daday, J., Novak, E., & **McDaniel, K.** (April 5, 2019). An Empirical Investigation of Student Frustration with E-Textbooks in Undergraduate General Biology Classes. American Educational Research Association (AERA), Peer-reviewed, Toronto, CAN.

Novak, E., Daday, J. & **McDaniel, K.** (April 13-April 17 2018). Examining Factors Influencing E-text Learning Using a Mathematical Model of Motivation, Volition, and Performance. American Educational Research Association (AERA), Peer-review selection out of 13,000 submissions, New York, NY.

McDaniel, K., Tyler, R., Clark, T., & Stem Scholars. (March 14-17, 2018). National Stem Scholar Sharathon for Middle School Teachers. National Science Teacher Association (NSTA), Atlanta, GA.

Novak, E., Daday, J. & **McDaniel, K.** (April 27-May 1, 2017). Assessing Intrinsic and Extraneous Cognitive Complexity of E-textbook Learning, American Educational Research Association (AERA), Peer-review selection out of 13,000 submissions, San Antonio, TX.

Novak, E., Daday, J. & **McDaniel, K.** (Oct. 19-22, 2016). Using Mathematical Model of Motivation, Volition, and Performance to Examine Students' E-text Learning, Featured Research, Featured Presentation, Association for Educational Communications Technology, Los Vegas, NV.

Novak, Elena, **McDaniel, Kerrie** & Daday, Jerry (Nov. 3-7, 2015). Undergraduate Biology Students' Use and Attitude Towards Digital Textbooks. Association for Educational Communications and Technology (AECT), Indianapolis, IN.

McDaniel, Kerrie, Fuller, Amanda & Gabe Draper (November 7, 2015). What Floats Your Boat? A NGSS Lesson Presented by the Kentucky Academy of Science. Kentucky Science Teacher Association, Lexington, KY.

Garrison, Rebecca* (**Kerrie McDaniel**, mentor), (March 28, 2015). The Effects of New Material on Teaching Methodology in General Biology Courses. Student Research Conference, Western Kentucky University, Bowling Green, KY.

Garrison, Rebecca*, **McDaniel, Kerrie** & Jerry Daday (November 2015). The Effects of Introducing E-texts and E-materials in 100 and 200-level Biology Courses on Teaching Pedagogy. National Association of Biology Teachers (NABT), Providence, RI.

McDaniel, Kerrie, Johnson, Heather & Crystal Ingle (Dec. 6-9 2014). Reduce DWFIs in Your High DWFI Courses Now Without Lowering Standards: Approaches From Two Institutions in STEM Disciplines. Southern Association of Colleges and Schools Commission on Colleges Annual Meeting. Nashville, TN.

McDaniel, Kerrie, DaDay, Jerry & Thomas Patterson* (Oct. 29-31 2014). Assessing the Impact E-text, Flipped Classroom and ipad Usage in an Anatomy and Physiology Course. Twentieth Annual Online Learning Consortium International Conference on Online Learning (formally Sloan-C). Lake Buena Vista, FL.

------(Pre-Pedagogical Position)-----

McDaniel, Kerrie and Noyce Scholars* (April 12, 2013). The Foundations of Living Things: Cells for Elementary Students. National Science Teacher Association National Conference, San Antonio, TX.

McDaniel, Kerrie and Noyce Scholars* (October 20, 2012). Standards and Content and Inquiry, Oh my! Louisville, KY.

McDaniel, Kerrie and Noyce Scholars* (March 31, 2012). Breaking It Down! Making Energy Transformations in Life Science Easy and Fun!. National Science Teacher Association (NSTA) National Conference, Indianapolis, IN.

McDaniel, Kerrie, Crawford, Kathryn*, Spinks, & Joye Beth*, (March 12, 2011). Photosynthesis Strategies: Foundations of Ecological Food Webs. National Science Teacher Association (NSTA) National Conference, San Francisco, CA.

McDaniel, Kerrie, Marchionda, Hope, & Tassell, Janet. (March 11, 2011). Western Kentucky University Science and Mathematics Alliance for Recruitment and Retention of Teachers (WKU SMARRT): Recruiting, Preparing and Retaining Math and Science Teachers for High Needs Areas, The Society for College Science Teaching, San Francisco, CA.

McDaniel, Kerrie, Crawford, Kathryn* & Spinks, Joye Beth*, (Dec. 3, 2010). It's Alive! Promoting Critical Thinking on the First Day of Biology Class. National Science Teacher Association (NSTA) Area Conference on Science Education, Nashville, TN.

McDaniel, Kerrie, Marchionda, Hope, Tassell, Janet, & Metzgar, Vicky. (Nov. 13, 2010), Year One Success and Frustrations: Robert Noyce Scholarship Program to Recruit, Prepare and Retain STEM Teachers for High Needs Areas. Kentucky Academy of Science, Western Kentucky University, Bowling Green, KY.

Marchionda, Hope, **McDaniel, Kerrie**, Tassell, Janet, Metzgar, Vicky. (July 8, 2010), invited presentation. Western Kentucky University Science and Mathematics Alliance for the Recruiting and Retention of Teachers. NSF (National Science Foundation) Robert Noyce Scholarship Program Conference: Building Excellence in STEM Teaching, Washington, D.C.

Johnson, Heather, **McDaniel, Kerrie**. (Jan. 25, 2010). Western Kentucky Math Science Partnership. Math/Science Partnership Learning Network Conference, National Science Foundation, Washington, D.C.

McDaniel, Kerrie (presenter), Weidemann, Wanda, Pankratz, Roger, Johnson, Heather. (March 2008). Using Content Area Assessment Data in Math and Science to Impact Course Development and Program Changes for the Preparation of Elementary Teachers. NSTA Conference, Boston, MA (Seaport Hotel).

Johnson, Heather, **McDaniel, Kerrie** (March 2008). Bringing STEM (Science, Technology, Engineering and Mathematics) Role Models to Every Classroom in Kentucky. NSTA Conference, Boston, MA (Convention Center).

Pankratz, Roger, **McDaniel, Kerrie** (presenters), Evans, Sam, Kessler, Bruce, Lee, David, Murley, Tim (Discussants) (February 2008). An Education Partnership with Science and Engineering, Arts and Humanities, and Two School Districts That Prepare Teachers to Impact P-12 Learning. Symposia at AACTE (American Association of Colleges for Teacher Education), New Orleans, LA.

Kessler, Bruce, Weidemann, Wanda, **McDaniel, Kerrie**, Pankratz, Roger, Evans, Sam. (2007) A (Successful) Example of How Data on Student Learning Can Impact Program Change in Context Areas Unit: AACTE (American Association of Colleges for Teacher Education) session, New York Hilton (Sutton Complex) Feb. 25 3:15-4:30

McDaniel, Kerrie, Weidemann, Wanda; Pankratz, Roger, Evans, Sam, Kessler, Bruce. (2007). Connecting Candidate Assessment to Measure of Student Learning (Preconference-session: Participants are charged a fee to attend), AACTE (American Association of Colleges for Teacher Education), Sat., Feb. 24 9:00-12:00. Hilton, New York (Sutton Complex), New York. (I was the main speaker representing WKU on this project).

Johnson, Heather & **McDaniel, Kerrie**. (2007). Standards-based Assessment-aligned Microtube Experiments. National NSTA (National Science Teacher Association) meeting, St. Louis, MO. (March 29- Apr. 1, 2007).

McDaniel, Kerrie & Johnson, Heather (2007). Content Standards and Inquiry: A Formula for Incorporating Inquiry into any Standards-based lesson. National NSTA (National Science Teacher Association) meeting, St. Louis, MO. (Mar. 29- Apr. 1).

McDaniel, Kerrie (Sept. 2006). Presented data to the AACTE STEP-committee on our data from our STEP grant. AACTE meeting, Chicago, IL.

McDaniel, Kerrie, Johnson, Heather, Ayers, Robin, Weidemann, Wanda. (2005). Teacher Education Model Program (TEMP): A Standards-based Master's Degree Program in Elementary Education. Kentucky Academy of Science, November 2005, Richmond, KY.

Johnson, Heather & **McDaniel, Kerrie** (2005). Partnering Home School Science Students with University Resources. Kentucky Academy of Science, November 2005, Richmond, KY.

McDaniel, Kerrie, Elliott, Larry, Clauson, John Mark (2004). Use of Standard Surface Motility Plates for Demonstration of Motility in Introductory Micro Teaching Laboratories. American Society for Microbiology Branch Meeting, October 2005, Bowling Green, KY.

McDaniel, Kerrie, Meier, Ouida. (2003). Impacting Elementary Science Education through Hands-on Science Labs. Kentucky Academy of Science, November 2003, Bowling Green, KY.

Professional Development

- **CITI Program Course (Basic Refresher Course)- Human Subjects Research/Social Behavioral Research Course**-February 21, 2020- Collaborative Institutional Training Initiative
- **Student Success Summit**, Western Kentucky University, January 23, 2020.
- **Association of American Colleges and Universities (AAC&U)**, Project Kaleidoscope-Transforming STEM Higher Education Conference, Chicago, IL, Nov. 7-9, 2019.
- **Online Learning Consortium- Accelerate** Conference, Orlando, FL, Nov. 19-22, 2019.
- **ACUE-** Association of College and University Educators, Effective College Teaching Certificate Course, Jan.-Nov., 2019).
- **Brain-based Learning**, Dr. John Medina, National STEM Scholar Program, Mary Nixon Speaker/Workshop Program, Bowling Green, KY (June 5, 2019).
- **Title IX Training (Catharsis)**, Western Kentucky University Human Resources via IT, Fall 2019.
- **National Science Teacher Association (NSTA) National Conference.** Sponsored by NSTA, St. Louis, MO, (April 10-14, 2019).
- **American Education Research Association (AERA)**, Toronto, Canada, April 5-9, 2019.
- **McGraw-Hill Symposium**, Nashville, TN (Jan. 31-Feb. 2, 2019)
- **Online Learning Consortium-Accelerate (OLC)**, Orlando, FL, Nov. 14-16, 2018.
- **Evidence-based, Interactive and Peer-Instruction Methods**, [Dr. Eric Mazur](#), National STEM Scholar Program, Mary Nixon Speaker/Workshop Program, Bowling Green, KY (June 6, 2018).
- **Respondus Training**, Information Technology, Western Kentucky University, (January 16-17, 2018).
- **National Science Teacher Association (NSTA) National Conference.** Sponsored by NSTA, Atlanta, GA,(March 14-17, 2018).
- **Kentucky Academy of Science (KAS)**, Annual meeting, Murray, KY Nov. 3-4, 2017.
- **National Science Teacher Association (NSTA)**, National Conference, Los Angeles, CA, (March 27- April 1, 2017).
- **Small Teaching: From Minor Changes to Major Learning**, Dr. James Long, Center for Innovative Teaching and Learning, (July 27, 2017).
- **HIPS-High Impact Performance Strategies for the Classroom**, Center For Faculty Development, Western Kentucky University, (October 30, 2016).
- **Association for Educational Communications and Technology (AECT) Annual Conference.** Sponsored by the AECT, Los Vegas, NV, (October 19-22, 2016).
- **Kentucky Academy of Science (KAS) Annual meeting**, Louisville, KY, (Nov. 4-5, 2016).
- **National Science Teacher Association (NSTA) National Conference.** Sponsored by NSTA, Nashville, TN, (March 31-April 3, 2016).
- **NABT Professional Development Conference.** Sponsored by the National Biology Teacher Association (NABT), Providence, RI, (November 11-14, 2015).
- **Association for Educational Communications and Technology (AECT) Annual Conference.** Sponsored by the AECT, Indianapolis, IN, (November 4-6, 2015).
- **Kentucky Science Teacher Association Annual Meeting.** Sponsored by the KSTA/NSTA, Lexington, KY, (November 6-8, 2015).
- **The Impact of Senate Bill (2009) on Assessment and Accountability**, tutorial, Feb. 19, 2015.
- **The Next Generation Science Standards Crossing Divides and Cutting into the Future**, webinar, (February 8, 2015).
- **Title IX Training for Sexual Harassment**, WKU online training, (Jan. 2015).
- **Southern Association of Colleges and Schools (SACS)**, Nashville, TN, (December 6-9, 2014).

- **Online Learning Consortium International Conference on Online Learning**, Lake Buena Vista, FL, (Oct. 29-31, 2014).
- **Human Anatomy and Physiology Annual Conference (HAPS)**, Jacksonville, FL (May 24-29, 2014).
- **McGraw-Hill Symposium on Human Anatomy and Physiology**, Laguna Beach, CA (March 6-9, 2014).
- **McGraw-Hill Training**, Bowling Green, KY (November 11, 2013).
- **Institutional Technology Training (IT)**, WKU, Bowling Green, KY (July 1, 2013).
- **McGraw-Hill Training** (July 29, 2013: August 20 and 22).
- **Anatomy in Clay Workshop, Denver, CO** (June 19-23, 2013).
- **McGraw-Hill Training**, Bowling Green, KY (May 8, 2013).

-----**(Pre-Pedagogical Faculty Position)**-----

- **National Science Teacher Association Conference on Science Education**, San Antonio, TX (April 10-13, 2013).
- **National Science Teacher Association Conference on Science Education**, Louisville, KY (Nov. 18-20, 2012).
- **Collaborative Institutional Training Initiative (CITI) training: Social/Behavioral Research Refresher Course** (August 21, 2012).
- **National Science Teacher Association National Conference on Science Education**, Indianapolis, IN (March 28- 31, 2012).
- **Architecture for Implementing the Core Standards: Strategies, Partnerships and Progress Council for Post-Secondary Education**, Louisville, KY (Feb. 27-29, 2012).
- **Literacy Design Collaborative Training for the Kentucky Department of Education Workshop**, Lexington, KY (August 8-10, 2011).
- **National Science Teacher Association National Conference on Science Education**, San Francisco, C (March 10-13).
- **The Society for College Science Teaching (SCST) annual meeting**, San Francisco, CA (March 10-13, 2011).
- **National Science Teacher Association Area Conference on Science Education**, Nashville, TN (Dec. 2-4, 2010).
- **Kentucky Academy of Science Annual meeting**, Bowling Green, KY (Nov. 12-13, 2010).
- **NSF Robert Noyce Teacher Scholarship Program Conference: Building Excellence in STEM teaching**, Washington D.C. (July 7-9, 2010).
- **MSP Learning Network conference, National Science Foundation**, Washington D.C. (Jan. 23, 2010-Jan. 26, 2010).
- **Tutorial “Online Research Ethics Course”, Practical Ethics Center**, University of Montana, Montana, USA, (Dec. 1, 2009-Dec. 2, 2009).
- **Tutorial “Social/Behavioral Research Course, Basic Course”, Collaborative Institutional Training Initiative**, (Nov. 14, 2009-Nov. 15, 2009).
- **Tutorial “Social and Behavioral Responsible Conduct of Research Basic Course 1”, Collaborative Institutional Training Initiative Program**, (Nov. 13, 2009-Nov. 14, 2009).
- **Workshop “Identifying Students and Scholarships for Deserving Students”, Office of Sponsored Programs/Ogden Dean Office**, WKU (Aug. 26, 2009).
- **Workshop “Nuts and Bolts of Advising”, Academic Advising and Retention Center/Office of Dean**, Ogden College, WKU (Aug. 26, 2009).
- **Workshop “Curricular Implications of the President’s Task Force Report on Access and Quality”, Office of the Provost**, WKU (Aug. 21, 2009).
- **Workshop “Engaging Their Spirits and Helping Students Connect: What the Core and Liberal Education Curriculum Can and Must Do”, Office of the Provost**, WKU (Aug. 21, 2009).

- **Tutorial “IT-Blackboard Grade Center Training (for new upgrade)**, Institutional Technology (IT), WKU, (Aug. 21, 2009).
- **Seminar, “The Impact of Mathematics Teaching Environment Through Establishing Developing and Maintaining and Sustaining Professional Learning Communities”, Teachers Assisting Students to Excel in Math-MSP**, National Science Foundation, Washington D.C. (Jan. 27, 2009).
- **MSP Learning Network conference, National Science Foundation**, Washington D.C. (Jan. 24-27, 2009).
- **Seminar “Five Realities of Math/Science Today” by Arthur Levine**, National Science Foundation, Washington D.C. (Jan. 26, 2009).
- **Seminar “Supporting and Evaluating Professional Collaboration Among Secondary Mathematics and Science Teachers”, Project Pathways-MSP**, National Science Foundation, Washington D.C. (Jan. 26, 2009)

Professional Affiliations:

- [Human Anatomy and Physiology Society](#) (HAPS)
- [National Science Teacher Association](#) (NSTA)
- [The Society for College Science Teaching](#) (SCST)
- [Kentucky Academy of Science](#) (KAS)
- America Educational of Research Association (AERA)
- [Association for Educational and Communication Technology](#) (AECT)
- [Online Learning Consortium](#) (OLC)

Student Engagement/ Mentoring/Supervision:

Undergraduate Student Mentoring

Honor Thesis Students

- Anne Carlisle, Optimization of latent print development on adhesive surfaces using Wet Powder Suspension methods.
- Rebecca Garrison, Honor’s Thesis Advisor. Title: The Effects of New Materials and Teaching Methodologies on Low-level Biology Courses”. Defended May 1, 2015 (passed).
- Ka Wang Li, Second Reader Honor’s Thesis. Title: Quality Change and Thermal Inactivation of *Escherichia coli O157:H7* in Non-intact Beef and Veal Patties by Double Pan Broiling. Defense: Nov. 19, 2014 (passed).

Internships

- Brooke Walden, Internship Medical Laboratory Science, Owensboro Medical Health Park, Owensboro, KY (May 14- June 1, 2018).
- Pamela Tackett, Internship in Medical Laboratory Science, Owensboro Medical Health Health Park, Owensboro, KY (May 19-June 5, 2015).
- Tim Maniere, Biology 369 Teaching Project. Teaching Assistant in Human Anatomy and Physiology. (Spring 2015).

Professional Committee Member

- Ashley Johnson, Pre-Medical Committee, Western Kentucky University, (2018)
- Kathryn Thompson, Dental School Committee, Western Kentucky University, (2015)

Student Presentations

- Rebecca Garrison, Western Kentucky Student Research Conference, poster presentation. Title: The Effects of New Materials and Teaching Methodologies on Low-level Biology courses. (March 29, 2015).
- Garrison, Rebecca*, **McDaniel, Kerrie** & Jerry Daday (November 2015). The Effects of Introducing E-texts and E-materials in 100 and 200-level Biology Courses on Teaching Pedagogy. National Association of Biology Teachers (NABT), Providence, RI.
- **McDaniel, Kerrie**, DaDay, Jerry & Thomas Patterson* (Oct. 29-31 2014). Assessing the Impact E-text, Flipped Classroom and iPad Usage in an Anatomy and Physiology Course. Twentieth Annual Online Learning Consortium International Conference on Online Learning (formally Sloan-C). Lake Buena Vista, FL.

------(Pre-Pedagogical Faculty Position)-----

- Stephanie Burba, Amanda Keith & Shelby Overstreet (March 31, 2012). Breaking It Down! Making Energy Transformations in Life Science Easy and Fun!. National Science Teacher Association (NSTA) National Conference, Indianapolis, IN.
- Joye Beth Spinks, Noyce Scholar, Robert Noyce Scholarship Program. Attended regional Noyce Scholarship meeting in Indianapolis and presented a poster, “Promoting Professionalism in Pre-service teachers”, (April 2011).
- Kathryn Crawford and Joy Beth Spinks, Noyce Scholars, Robert Noyce Scholarship Program. National Science Teacher Association, Nashville, TN, “It’s Alive! Promoting Critical Thinking on the First Day of Biology Class” (Dec. 3, 2010).

Undergraduate Research (Pre-Pedagogical Faculty Position)

- Shoap, D., Undergraduate research supervisor, Interdisciplinary Studies Department, “Factors Affecting Teacher Attrition Rates”, (Jan. 28, 2010-May 2010).
- Ritter, N., Undergraduate Research Supervisor, College of Education and Behavioral Science Department, “Research in Middle Grades Education”, Completed (Aug. 26, 2008-March 2009).

Graduate Student Mentoring

Non-thesis Committee Chair

- Felicia Wright Skinner (2018-present). Master’s non-thesis advisor, Department of Biology
- Ciera Gary (2017-2018)- Master’s non-thesis advisor, Department of Biology
- Ruth Ann Boyd (2013-2016). Master’s non-thesis advisor, Department of Biology, passed oral exam Fall 2016.
- April West, (2013-2016). Master’s non-thesis advisor in Biology. Project title: Motivation of Low Achieving High School Biology Students to Learn Science.
- Graduate Committee member for Roliera West (Spring/Summer 2014).

Doctoral Committee Member

- Kerri Adkins (2016-2019). Doctoral Candidate in Educational Leadership. Oral Exam passed Fall 2016, Thesis Defense October 16, 2019.

Teaching Assistant Supervisor/Mentor

- Supervised Anatomy and Physiology Lab Instruction:
 - Fall 2013: Five undergraduate students, two graduate Teaching Assistants (TAs), and two Instructors
 - Spring 2014: Three graduate Teaching Assistants (TAs), four Instructors and four undergraduate students.
 - Fall 2014: Three undergraduate TAs, three graduate TAs, and three instructors.
 - Spring 2015: Three undergraduate TAs, three graduate TAs, and three instructors

- Fall 2015: Two undergraduate TAs, one graduate TA, and five instructors
- Spring 2016: One undergraduate TA, two graduate TAs, and five instructors
- Fall 2016: One undergraduate TA, three graduate TAs, and three instructors
- Spring 2017: Four graduate TAs and two instructors
- Fall 2017: Four graduate TAs and four instructors
- Spring 2018: Four graduate TAs and three instructors
- Fall 2018: Two graduate TAs, and three Instructors
- Spring 2019: Four graduate TAs, and two Instructors
- Fall 2019: Three graduate, two undergraduate TAs and two Instructors.
- Spring 2020: Four graduate TAs and two instructors

Advisee Success

- Twenty-three students have been accepted into a Medical Laboratory Science Program and earned degrees in Medical Laboratory Science since 2013.
- Twenty-one were accepted into an MLS program and earned degrees prior to 2013.
- Two students have completed internships in Medical Laboratory Science since 2013 with a total of twenty-one students completing these internships at rural hospitals since 2003. Host hospitals include: Hardin Memorial Hospital, Elizabethtown, KY, Columbia Logan Memorial Hospital, Russellville, KY, Owensboro Health System, Owensboro, KY, and T.J. Sampson Hospital, Glasgow, KY.

Collaborators (last 24 months)

Tyler Clark, Executive Administrator- World Council for Gifted Studies; **Jerry Daday**, Executive Director of Center of Innovative Teaching and Learning and Associate Professor of Sociology; **Paula Grisanti**, Chairman and CEO of National Stem Cell Foundation; **Elena Novak**, Assistant Professor Educational Technology- Kent State University; **Julia Roberts**, Mahurin Professor of Gifted Studies, Executive Director, The Center for Gifted Studies and The Carol Martin Gatton Academy of Mathematics and Science, President, World Council for Gifted and Talented Children; **Rico Tyler**, Professional In-Residence, Teacher Education.