

Curriculum Vitae

Melissa Dyehouse

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General Information

University address: FCR-STEM
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Professional Preparation

2009 Ph.D., Purdue University, West Lafayette, Indiana. Major: Educational Psychology. Measurement, Research Methodology, & Assessment. Supervisor: Deborah Bennett.

Dyehouse, M.A. (2009). *A comparison of model-data fit for parametric and nonparametric item response theory models using ordinal-level ratings*. Unpublished doctoral dissertation, Purdue University, West Lafayette, Indiana.

2003 M.S.Ed., Purdue University, West Lafayette, Indiana. Major: Educational Psychology. Supervisor: Deborah Bennett.

Dyehouse, M.A. (2003). *Social adjustment in children with autism and cognitive disabilities: A comparative study*. Unpublished master's thesis, Purdue University, West Lafayette, Indiana.

2000 B.A., Indiana University, Bloomington, Indiana. Major: French, Psychology.

Nondegree Education and Training

2009–2012 Postdoctoral Research Associate, Purdue University.
School of Engineering Education, Institute for Pre-College Engineering (INSPIRE).

- 2011 Applied Multilevel Models Using SAS & SPSS Workshop, Inter-University Consortium for Political & Social Research (ICPSR), Ann Arbor, MI.
- 2010 GIS in Educational Research Workshop, AERA annual conference, Denver, CO.
- 2010 Presenting Data and Information (Edward Tufte) workshop, Pittsburgh, PA.
- 2006–2007 Graduate Certificate in Survey Research, Department of Sociology and Anthropology, Purdue University, West Lafayette, Indiana.

Professional Experience

- 2015–present External Evaluator, School of Engineering Education, Purdue University. NSF PRIME: Contextualized Evaluation Framework for Advanced STEM MOOCs.
- o Attended advisory board meeting and summarized recommendations
 - o Wrote annual evaluation report.
- 2012–present Assistant in Research, Learning Systems Institute, Florida State University.
- o Develops surveys and assessment tools to measure project outcomes
 - o Contributes to all aspects of grant-writing, including leading proposal development, research methodology, program design, and evaluation
 - o Writes evaluation plans for internal and external departments
 - o Analyzes project data and writes evaluation reports
 - o Designs and implements research studies
- Project Manager for the Florida Tax Credit Scholarship program:
- o Manages a high-profile program evaluation project for one of the largest tax credit scholarship programs in the country (Florida Tax Credit Scholarship program)
 - o Plans meetings, organizes tasks, supervises faculty
 - o Communicates with various stakeholders (e.g., over 1,000 private schools, scholarship foundations, Dept. of Education, internal team)
 - o Organizes, writes, and disseminates reports, communications, and timelines
 - o Collaborates with team members to ensure goals are met
- CPALMS STEM & Model-Eliciting Activities Coordinator:
- o Coordinated the Model-Eliciting Activity (MEA) component of the CPALMS project (www.cpalms.org); developed and led professional development workshops for over 350 K-12 educators while supervising full-time faculty, part-time reviewers, and interns
 - o Designed and implemented research studies with teacher and student participants; conducted quantitative and qualitative data analysis and disseminated findings in reports, journals, and at conferences
 - o Developed instructional materials for trainings and workshops that were used for teaching educators to write MEAs, implement MEAs in the classroom, train individuals on reviewing MEAs, and for training employees on job responsibilities
 - o Authored and co-authored several peer and expert-reviewed integrated STEM MEA lessons that are published on CPALMS
 - o Disseminated research findings in conferences and journals.

- 2013–2015 External Evaluator, School of Engineering Education, Purdue University. NSF TUES: Information Literacy Skill Development & Assessment in Engineering (ILSDAE).
- o Evaluated the development of a new instrument to measure information literacy skills using classical test theory (CTT) and item response theory (IRT) methods
 - o Conducted IRT analysis using R software; difficulty and discrimination with Rasch and 2PL models, conducted DIF analysis using Mantel-Haenzsel, and constructed Wright maps; summarized findings in a report
 - o Inspected draft items and provided feedback and recommendations based on wording and CTT/IRT results
 - o Served on the advisory board and contributed to recommendations
 - o Wrote evaluation report.
- 2009 Graduate Research Assistant, Department of Agricultural Education & Youth Development, Purdue University. Project Equality.
- o Designed a research study to examine factors related to sexual assault myths among middle-school students
 - o Analyzed quantitative survey data from approximately 1,022 participants
 - o Published a peer-reviewed research paper.
- 2009 Graduate Research Assistant, Discovery Learning Research Center, Purdue University.
- o Designed and conducted quantitative and qualitative research studies
 - o Published study results in peer-reviewed journals and presented at conferences
 - o Moderated focus groups for Discovery Learning Research Center projects (e.g., Interns for Indiana)
 - o Wrote evaluation plans for large, interdisciplinary STEM grant proposals (e.g., Nano-cyber GK-12 program).
- 2006–2009 Graduate Research Assistant, Discovery Learning Research Center, Purdue University. Bilsland Strategic Initiatives Fellowship for the Indiana Interdisciplinary GK-12 Project.
- o Internal evaluator for the NSF-funded GK-12 program; designed research studies and analyzed quantitative and qualitative data from three participant groups for three years of data collection
 - o Developed survey instruments (e.g., Confidence in Science and Math Scales)
 - o Wrote internal reports, NSF reports, and manuscripts for publication in refereed journals.
- 2005–2007 Graduate Research Assistant, Department of Agricultural & Biological Engineering, Purdue University. NSF grant "New Learning and Discovery Experiences in Nanoscale Engineering Undergraduate Education".
- o Analyzed quantitative and qualitative data
 - o Performed psychometric analyses to develop a survey instrument measuring undergraduate students' nanotechnology awareness, exposure, and motivation
 - o Published two manuscripts in peer-reviewed journals.

- 2004–2006 Graduate Assistant for Assessment, Student Access, Success and Transition Programs, Purdue University. Enrollment Management.
- o Analyzed quantitative and qualitative data
 - o Performed psychometric evaluations of surveys; analyzed, modified, administered surveys.
- 2004–2005 Graduate Research Assistant, Department of Agricultural & Biological Engineering, Purdue University. NSF grant "Development of a Comprehensive, Fully-Integrated Biological Engineering Curriculum".
- o Conducted program evaluation of the curriculum planning process
 - o Collected relevant evidence of progress towards project goals.
- 2003–2004 Graduate Research Assistant, Department of Curriculum & Instruction, Purdue University. School Mathematics and Science Center.
- o Co-developed an innovative assessment model for complex organizational systems
 - o Published a book chapter detailing the assessment model.
- 2002–2003 Graduate Research Assistant, Department of Educational Studies, Purdue University. Assessment Research Center.
- o Analyzed quantitative and qualitative data, including data collected from an alternate assessment instrument for students with severe disabilities
 - o Wrote and developed online assessment learning modules.
- 2001–2002 Substitute Teacher, Lafayette School Corporation. Grades K-12.

Visiting Professorship(s)

- 2011–2012 Visiting Assistant Professor (Courtesy Appointment), Department of Educational Studies, Purdue University, West Lafayette, Indiana.

Honors, Awards, and Prizes

- College of Engineering Faculty Team Award, Research Institute for Pre-College Engineering (2011). (\$1,000).
- Applied Psychological Measurement graduate student travel grant award, Applied Psychological Measurement association (2009). (\$500).
- American Educational Research Association Grants Program Award, AERA Institute on Statistical Analysis for Education Policy (2008). (\$1,000).
- o Analyzed large scale, longitudinal ELS data using SAS
 - o Practiced using propensity score matching for causal inference with quasi-experimental data.

Fellowship(s)

Bilsland Strategic Initiatives Fellowship, Purdue University (2006–2009).

Current Membership in Professional Organizations

American Educational Research Association
National Science Teachers Association

Teaching

Curriculum Development

- Model-Eliciting Activities (MEAs) with 3D-printed manipulatives for grades 6-12 (2015-2016) (2015)
- Model-Eliciting Activities (MEAs) for grades 9-12 (2012 - 2016) (2012)
- Model-Eliciting Activity (MEA) workshops: Teacher professional development about writing integrated STEM classroom lessons (2012 - 2016) (2012)
- # Life Cycle Assessment (environmental engineering) course module (2010)
- # Workshop Series for Engineering Faculty: "Let K-12 Strengthen Your NSF Grant Proposals" (2010)

Supervision of Student Research Not Related to Thesis or Dissertation

- # Susabura, J. (Jan–May 2012).
- # Stephens, M. (Jan 2010–Dec 2011).
- # Shelley, R. (Jan–May 2010).

Additional Teaching Not Reported Elsewhere

- # Dyehouse, M. (2011–2012). *Introduction to Educational Research I: Methodology (EDPS 533)*. Department of Educational Studies, Purdue University.
- # Strobel, J., Dyehouse, M., & Weber, N. (2011). *Issues and Methods in Learning Systems Design Research (EDCI 673)*. Department of Curriculum & Instruction, Purdue University.
- # Dyehouse, M., & Weber, N. (2010). *Transforming Ideas to Innovation (ENGR 131)*. School of Engineering Education, Purdue University.

- # Mukerjee, B., & Dyehouse, M. (2004). *Experimental Statistics I (STAT 501)*. Department of Statistics, Purdue University.

Research and Original Creative Work

Publications

Refereed Journal Articles

- Dyehouse, M., Weber, N., Fang, J., Harris, C., David, R., Hua, I., & Strobel, J. (2017). The effects of resistance to change on undergraduate engineering students' environmental knowledge and attitudes. *Studies in Higher Education, 42*(2), 390-409. doi:<http://dx.doi.org/10.1080/03075079.2015>
- Dyehouse, M., & Pilat, M. (2016). The prevalence of rape myths among middle school students across gender and socioeconomic background. *Journal of Youth Development, 11*(3), 42-56. doi:<http://dx.doi.org/10.5195/jyd.2016.459>
- Razzouk, R., Dyehouse, M., Santone, A., & Carr, R. L. (2014). Plants versus Pollutants: An interdisciplinary model-eliciting activity to bring engineering design practices and real-world context to the science classroom. *The Science Teacher, 81*(9), 43-49.
- Weber, N., Strobel, J., Dyehouse, M., Harris, C., David, R., Fang, J., & Hua, I. (2014). First-year engineering students' environmental awareness and conceptual understanding through a pilot sustainable development module. *Journal of Engineering Education, 103*(1), 154-181.
- Yoon, S. Y., Dyehouse, M., Lucietto, A., Diefes-Dux, H., & Capobianco, B. (2014). The effects of integrated science, technology, and engineering education on elementary students' knowledge and identity development. *School Science and Mathematics, 114*(8), 330-391.
- Strobel, J., Wang, J., Weber, N., & Dyehouse, M. (2013). The role of authenticity in design-based learning environments: The case of engineering education. *Computers & Education, 64*, 143-152.
- Weber, N., Dyehouse, M., Fang, J., Miller, C., Hua, I., & Strobel, J. (2013). Impact of household location on first-year engineering students' environmental awareness and resistance to change. *Journal of Engineering Education, 102*(4), 603-625.
- # Weber, N., Duncan, D., Dyehouse, M., Strobel, J., & Diefes-Dux, H. (2011). The development of a systematic coding system for elementary students' drawings of engineers. *Journal of Pre-College Engineering Education Research, 1*(1), 49-62.

- # Dyehouse, M., Detweiler, J., Li, J., Madden, K., Bennett, D., Harbor, J., & Childress, A. (2010). Practical ways to assess and change your students' perceptions of scientists. *Science Scope*, 33(9), 45-51.
- # Dyehouse, M., Bennett, D., Harbor, J., Childress, A., & Dark, M. (2009). A comparison of linear and systems model approaches for program evaluation illustrated using the Indiana Interdisciplinary GK-12. *Evaluation and Program Planning*, 32, 187-196.
- # Dyehouse, M., Diefes-Dux, H., Bennett, D., & Imbrie, P. K. (2008). Development of an instrument to measure undergraduates' nanotechnology awareness, exposure, motivation, and knowledge. *Journal of Science Education and Technology*, 17(5), 500-510.
- # Diefes-Dux, H., Dyehouse, M., Bennett, D., & Imbrie, P. K. (2007). Nanotechnology awareness of first-year food and agriculture students following a brief exposure. *Journal of Natural Resources and Life Sciences Education*, 36, 58-65.
- # Dyehouse, M., & Bennett, D. (2006). Validity evidence for a computer-based alternate assessment instrument. *Assessment for Effective Intervention*, 31, 11-31.

Refereed Book Chapters

- # Dyehouse, M., Baek, J., & Lesh, R. (2009). Multi-tier design assessment in the development of complex organizational systems. In C. Schreiner (Ed.), *Handbook of Research on Assessment Technologies, Methods, and Applications in Higher Education* (pp. 1-21). Hershey, PA: IGI Global.

Refereed Proceedings

- Hess, J., Pan, R., Klingler, L., Sprowl, J., Wachter-Morris, C., Dyehouse, M., Weber, N., & Strobel, J. (2012). Empathy and caring as conceptualized inside and outside of engineering: Extensive literature review and faculty focus group analyses. In *American Society for Engineering Education (ASEE) annual conference*. San Antonio, TX.
- Wang, J., Dyehouse, M., Weber, N., & Strobel, J. (2012). Conceptualizing authenticity in engineering education: A systematic literature review. In *American Society for Engineering Education (ASEE) annual conference*. San Antonio, TX.
- # Duncan, D., Dyehouse, M., & Strobel, J. (2011). Engineering in an elementary setting: An analysis of context maps. In *Research in Engineering Education Symposium (REES)*. Madrid, Spain.
- # Dyehouse, M., Diefes-Dux, H., & Capobianco, B. (2011). Measuring the effects of integrating engineering into the elementary school curriculum on students' science and engineering

design content knowledge. In *American Society for Engineering Education (ASEE) annual conference*. Vancouver, BC.

- # Dyehouse, M., Weber, N., Kharchenko, O., Duncan, D., Strobel, J., & Diefes-Dux, H. (2011). Measuring pupils' perceptions of engineers: Validation of the Draw-an-Engineering (DAET) coding system with interview triangulation. In *Research in Engineering Education Symposium (REES)*. Madrid, Spain.
- # Strobel, J., Wachter-Morris, C., Klingler, L., Pan, R., Dyehouse, M., & Weber, N. (2011). Engineering as a caring and empathetic discipline: Conceptualizations and comparisons. In *Research in Engineering Education Symposium (REES)*. Madrid, Spain.
- # Weber, N., Dyehouse, M., David, R., Harris, C., Fang, J., Hua, I., & Strobel, J. (2011). First-year engineering students' environmental awareness and conceptual understanding through a pilot sustainable development module. In *American Society for Engineering Education (ASEE) annual conference*. Vancouver, BC.
- # Dyehouse, M., Weber, N., Fang, J., Harris, C., Tomory, A., & Strobel, J. (2010). First-year engineering students' environmental awareness and conceptual understanding with participatory game design as knowledge elicitation. In *International Conference of the Learning Sciences (ICLS)*. Chicago, IL.
- # Weber, N., Duncan, D., Dyehouse, M., Diefes-Dux, H., & Strobel, J. (2010). The development of a systematic coding scheme for elementary students' drawings of engineers. In *P-12 Engineering and Design Education Research Summit*. Seaside, OR.

Nonrefereed Journal Articles

- Dyehouse, M., Razzouk, R., Roddenberry, J., & Carr, R. L. (2014). Teachers publishing STEM lessons: Highlights from the CPALMS model-eliciting activity (MEA) resource collection. *The Florida Science Teacher Journal*, 1-3.
- # Strobel, J., Weber, N., Dyehouse, M., & Gajdzik, E. (2011). Recommendations to realign the national STEM education agenda. *American Society for Quality (ASQ) Higher Education Brief*, 4(1), 1-7.

Presentations

Refereed Papers at Conferences

For refereed papers at conferences, 10.0% were international, 90.0% were national in scope.

- Dyehouse, M., Yoon, S. Y., Lucietto, A., & Diefes-Dux, H. (presented 2012, April). *The effects of an engineering teacher professional development program on elementary*

students' science/engineering content knowledge and engineering identity. Paper presented at 2nd P-12 Engineering and Design Education Research Summit, Institute for Pre-College Engineering, Washington, DC. (National)

Dyehouse, M., Weber, N., Fang, J., Harris, C., David, R., Hua, I., & Strobel, J. (presented 2012, April). *The effects of resistance to change on students' environmental knowledge and attitudes when leaving high school*. Paper presented at 2nd P-12 Engineering and Design Education Research Summit, Institute for Pre-College Engineering (INSPIRE), Washington, DC. (National)

Wang, J., Dyehouse, M., Weber, N., & Strobel, J. (presented 2012, April). *A framework for authenticity in K-12 engineering education*. Paper presented at 2nd P-12 Engineering and Design Education Research Summit, Institute for Pre-College Engineering (INSPIRE), Washington, DC. (National)

Dyehouse, M., & Diefes-Dux, H. (presented 2012, March). *Elementary student knowledge tests: A grade-level specific pre/post assessment of science, technology, and engineering design process concepts*. Paper presented at the meeting of National Association for Research in Science Teaching (NARST), Indianapolis, IN. (National)

Weber, N., Dyehouse, M., Fang, J., Miller, C., Hua, I., & Strobel, J. (presented 2011, April). *Impact of household location on first-year engineering students' environmental knowledge and awareness*. Paper presented at the meeting of American Educational Research Association (AERA), New Orleans, LA. (National)

Liu, W., Carr, R., Dyehouse, M., & Strobel, J. (presented 2011). *Assessing impact of teacher attributes and collaboration on student outcomes*. Paper presented at the meeting of Association for Educational Communications and Technology International Convention (AECT), Jacksonville, FL. (International)

Adedokun, O., Dyehouse, M., Bessenbacher, A., & Burgess, W. (presented 2010, April). *Exploring faculty perceptions of the benefits and challenges of mentoring undergraduate research*. Paper presented at the meeting of American Educational Research Association (AERA), Denver, CO. (National)

Dyehouse, M., Adedokun, O., & Burgess, W. (presented 2010, April). *Participation in undergraduate research experiences: Satisfactions and challenges*. Paper presented at the meeting of American Educational Research Association (AERA), Denver, CO. (National)

Dyehouse, M., & Bennett, D. (presented 2009, April). *A comparison of model-data fit for parametric and nonparametric IRT models using ordinal-level ratings*. Paper presented at the meeting of American Educational Research Association (AERA), San Diego, CA. (National)

- # Dyehouse, M., Bennett, D., Harbor, J., Childress, A., & Dark, M. (presented 2009, April). *The comparison of linear and systems approaches for program modeling: The Indiana Interdisciplinary GK-12 Program Evaluation*. Paper presented at the meeting of American Educational Research Association (AERA). (National)

Refereed Presentations at Conferences

For refereed presentations at conferences, 20.0% were international, 80.0% were national in scope.

- Purzer, S., Douglas, K., Dyehouse, M., Van Epps, A., Fosmire, M., & Mihalec-Adkins, B. (presented 2015). *Use of DIF analysis to examine fair assessment of information literacy*. Presentation at National Association for Research in Science Teaching (NARST) 2015 Annual Conference, National Association for Research in Science Teaching (NARST), Chicago, IL. (National)
- Carr, R. L., Razzouk, R., & Dyehouse, M. (presented 2014, November). *Behind CPALMS: Florida's resource for teacher designed and expert reviewed standards-based lessons and resources – Model eliciting activity (MEA) development*. Presentation at the meeting of Association for Educational Communications & Technology (AECT), Jacksonville, FL. (International)
- # Strobel, J., Hua, I., Harris, C., Fang, J., Naik, G., Dyehouse, M., & Weber, N. (presented 2011, March). *Incorporate environmental engineering into science classrooms with this project-based activity*. Presentation at National Science Teachers Association (NSTA) National Conference, National Science Teachers Association (NSTA), San Francisco, CA. (National)
- # Strobel, J., Dyehouse, M., & Weber, N. (presented 2010, November). *Engineering as a caring discipline: Theoretical foundation for a profession to change*. Presentation at the meeting of National Women's Studies Association (NWSA), Denver, CO. (National)
- # Harbor, J., Bennett, D., Dyehouse, M., Walls, L., & Childress, A. (presented 2008, April). *PhD students meet the realities of "visiting scientists" in middle schools: Learning to teach, teaching to learn*. Presentation at the meeting of Association of American Geographers (AAG), Boston, MA. (National)

Nonrefereed Presentations at Conferences

For nonrefereed presentations at conferences, 11.1% were international, 11.1% were national, 16.7% were regional, 55.6% were state, 5.6% were local in scope.

- Dyehouse, M. (presented 2016, June). *Model-Eliciting Activities: Applying STEM to Real-World Problem-Solving in K-12*. Presentation at CCPS Full STEAM Ahead to Student Success!, Charlotte County Public Schools, Port Charlotte, FL. (Local)

- Carr, R., & Dyehouse, M. (presented 2015). *Integrated STEM and Mathematical Modeling in Elementary Classrooms*. Presentation at FCR-STEM Conference, FCR-STEM. (State)
- Dyehouse, M., & Carr, R. (presented 2015). *Bring Real-World/ Engineering Contexts to the Middle-and High-School Classroom with Integrated STEM Model-Eliciting Activities*. Presentation at FCR-STEM Conference, FCR-STEM, Orlando, FL. (State)
- Dyehouse, M., Razzouk, R., Roddenberry, J., Santone, A., & Carr, R. L. (presented 2014, November). *Integrating STEM in the Science Classroom: Design, Engineering Practices, and Real-world Context via Model-Eliciting Activities*. Presentation at National Science Teachers Association (NSTA) Regional Conference, National Science Teachers Association (NSTA), Orlando, FL. (Regional)
- Dyehouse, M., Carr, R. L., & Roddenberry, J. (presented 2014, May). *Standards-based integrated STEM lessons: Model-eliciting activities (MEAs) bring real-world/engineering contexts to the K-12 classroom*. Presentation at FCR-STEM Conference, FCR-STEM, Ft. Lauderdale, FL. (State)
- Dyehouse, M., Santone, A., & Razzouk, R. (presented 2014). *Interdisciplinary model-eliciting activities bring design, engineering practices, and real-world context to the science classroom*. Presentation at the meeting of National Science Teacher's Association (NSTA) National Conference, Boston, MA. (National)
- Martone, R., Hill-Russ, K., King, L., Tazaz, A., Dyehouse, M., & Schoen, R. (presented 2012, December). *Utilizing model eliciting activities to merge science, engineering, mathematics, and English Language Arts*. Presentation at FCR-STEM Conference, FCR-STEM, St. Petersburg, FL. (State)
- Sherdan, D., & Dyehouse, M. (presented 2012, June). *CPALMS tools and resources to support teaching and learning math grades 6-12*. Presentation at Florida Department of Education 2012 Common Core State Standards Summer Institutes, Florida Department of Education, Palm Beach Gardens, Orlando, Ft. Lauderdale, FL. (State)
- Dyehouse, M. (presented 2012). *CPALMS Innovative Approaches Initiative: Integrating CCSS with engineering-based model eliciting activities*. Presentation at the meeting of Florida Council of Teachers of Mathematics, Orlando, FL. (State)
- Dyehouse, M., & Hauptli, M. (presented 2012). *Integrating mathematics and literacy with a problem-based approach*. Presentation at the meeting of Florida Department of Education 2012 Common Core State Standards Summer Institutes, Palm Beach Gardens, Orlando, and Ft. Lauderdale, FL. (Regional)
- Dyehouse, M., & Lengacher, R. (presented 2012). *Improving word problems through realistic problem-solving: Model-eliciting activities as a formative assessment and learning tool*. Presentation at the meeting of FCR-STEM Conference, St. Petersburg, FL. (State)

- Dyehouse, M., & Santone, A. (presented 2012). *Modeling: Applying science to real-world problem solving*. Presentation at the meeting of Florida Association of Science Teachers (FAST), Orlando, FL. (State)
- # Dyehouse, M., Bennett, D., Childress, A., Harbor, J., Walls, L., & Burgess, W. (presented 2009, February). *Practical ways to assess and change your students' perceptions of scientists*. Presentation at Hoosier Association of Science Teachers, Inc. (HASTI) Annual Conference, Hoosier Association of Science Teachers, Inc. (HASTI), Indianapolis, IN. (State)
- # Dyehouse, M., Bennett, D. E., Harbor, J., Childress, A. L., & Walls, L. (presented 2009). *The impact of graduate researchers on middle school students' perceptions of scientists*. Presentation at the meeting of Hawaii International Conference on Education, Honolulu, HI. (International)
- # Bennett, D. E., & Dyehouse, M. (presented 2008). *The evaluation of the Indiana Interdisciplinary GK-12 Project*. Presentation at the meeting of Hoosier Association of Science Teachers, Inc. (HASTI), Indianapolis, IN. (State)
- # Dyehouse, M., Rausch, N. A., & Pistilli, M. D. (presented 2006). *Enhancing student experiences and retention through multicultural learning communities*. Presentation at the meeting of First-Year Experience (FYE) Conference, Atlanta, GA. (National)
- # Pistilli, M. D., & Dyehouse, M. (presented 2006). *Entrepreneurial learning communities at Purdue: Enhancing learning through innovative opportunities*. Presentation at the meeting of ACPA College Student Educators International, Indianapolis, IN. (International)
- # Pistilli, M. D., Dyehouse, M., & Koch, A. K. (presented 2006). *Multicultural learning communities: Making a difference in students' education*. Poster presentation at the meeting of Lumina President's Fund conference, Indianapolis, IN. (Regional)

Refereed Workshops

For refereed workshops, 100.0% were national in scope.

- # Strobel, J., Weber, N., Dyehouse, M., Carr, R., & Gajdzik, E. (2011, April). *AERA Professional Development and Training Course: Help STEM researchers strengthen their NSF proposals by integrating K-12 STEM education*. Workshop delivered at American Educational Research Association (AERA), New Orleans, LA. (National)

Nonrefereed Workshops

For nonrefereed workshops, 100.0% were local in scope.

- # Weber, N., Dyehouse, M., & Strobel, J. (2010). *Let K-12 Strengthen Your NSF Grant Proposals*. Workshop delivered at Institute for P-12 Engineering Research & Learning, Purdue University. (Local)

Contracts and Grants

Contracts and Grants Funded

- Razzouk, R., Kisa, Z., & Dyehouse, M. (2016–2017). *3D Printing In The Middle School Classroom: Use And Attitudes Among Teachers And Students*. Funded by US Robert Bosch - Dremel. Total award \$30,000.
- Strobel, J., & Dyehouse, M. (2012–2013). *STEM-HOPE – A Psychometric Instrument to Measure the Effect of STEM Education on HOPE in K-12 Students*. Funded by Morgridge Family Foundation. Total award \$30,000.
- # Strobel, J., Hua, I., Dyehouse, M., & Weber, N. (2010–2011). *Pilot study: Creating a Concerned Engineer in a Changing Environment*. Funded by Purdue's Engineer of 2020 Seed Grant Program. Total award \$40,000.

Contracts and Grants Denied

- Dyehouse, M., Bourassa, M., & Kisa, Z. (2016). *CT-Earth: Computational Thinking in Earth Science Applications*. Submitted to STEM + Computing (STEM+C).
- Bourassa, M., Griffin, M., Razzouk, R., Zierden, D., & Dyehouse, M. (2015). *RELI on NOAA: Reliance and Environmental Literacy Initiative*. Submitted to National Oceanic and Atmospheric Administration Environmental Literacy Grants (NOAA ELG).
- Santone, A., Dyehouse, M., & Carr, R. (2015). *CPALMS Plant Biology Week: Targeted Development and Online Promotion of Innovative K-12 Educational Resources*. Submitted to American Society of Plant Biologists Plant Biologists Learning Objectives, Outreach Materials & Education Grant (ASPB BLOOME).
- Shih, C., Dyehouse, M., & Razzouk, R. (2015). *RET Site: Transforming Physical Science Teaching Through an Engineering-Inspired Curriculum*. Submitted to NSF Research Experiences for Teachers in Engineering and Computer Science (RET).

Dyehouse, M., Schoen, R., & Razzouk, R. (2014). *Integrating Literacy, Argumentation, and STEM through Model-Eliciting Activities*. Submitted to Department of Education's Institute of Education Sciences (IES).

Service

The Profession

Guest Reviewer for Refereed Journals

- # *Journal of P-12 Engineering Education Research* (2011–16).
- Computers & Education* (2013–14).
- Journal of Science Education & Technology* (2012).
- # *Advances in Engineering Education Journal* (2011).
- # *Evaluation Review Journal* (2011).

Reviewer or Panelist for Grant Applications

National Science Foundation, ITEST program (2015).

Service to Professional Associations

- Conference paper reviewer, Research in Engineering Education Symposium (REES) (2015–present).
- # Conference paper reviewer, American Educational Research Association annual conference (2010–2015).
- # Session moderator, Assessing Engineering and Engineering Design, P-12 Engineering and Design Education Research Summit (2010).
- # Session moderator, Program Assessment, NSF GK-12 Regional Conference (2008).

Professional activities that occurred prior to my employment at FSU.