NATHANIEL J. S. BROWN

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POSITIONS

Lynch School of Education and Human Development, Boston College

Associate Research Professor, Measurement, Evaluation, Statistics, and Assessment — 2015—present
Visiting Assistant Professor, Educational Research, Measurement, and Evaluation — 2012—2015

School of Education, Indiana University Bloomington

Assistant Professor, Learning Sciences — 2010—2012
Acting Assistant Professor, Learning Sciences — 2007—2010

AREAS OF SPECIALIZATION

Classroom assessment; formative feedback; assessment for learning; alternative grading practices

Learning progressions and conceptual change in STEM education and the learning sciences

Quantitative methods, including statistics, measurement, and psychometrics

Qualitative methods, including video analysis, interaction analysis, and conversation analysis

EDUCATION

Ph.D. in Science and Mathematics Education — 2009

Graduate Group in Science and Mathematics Education (SESAME), University of California Berkeley

Dissertation: *Information performances and illative sequences: Sequential organization of explanations of chemical phase equilibrium*

Committee: Angelica Stacy (chair), Andrea diSessa, Rogers Hall, Mark Wilson

M.Sc. in Chemistry — 2004

Department of Chemistry, Cambridge University

Dissertation: *^{13}C-Labelled synthesis of possible intermediates in the biosynthesis of chloroeremomycin*

Supervisor: Jonathan Spencer

B.S. in Chemistry — 1998

Department of Chemistry, Harvey Mudd College

Dissertation: *3-Iminobis(acetic acid)salicylaldehyde: A key intermediate in the synthesis of a photoreversible calcium chelator*

Supervisor: Alison McCurdy

AWARDS

Illumination Award, Boston College Career Center — 2022
Spencer Foundation Dissertation Fellow — 2004—2005
National Science Foundation Graduate Research Fellow — 1999—2002
Winston Churchill Foundation Fellow — 1998—1999

GRANTS

EXTERNAL

"VideoReView: Support for Teachers' Collection and Interpretation of Classroom Video to Improve Science Understanding and Argumentation" (DRL-1415898)

PIs: Doubler, S., TERC; Guler, S., intuVision, Inc.; **Brown, N. J. S.**, Boston College
Funding source: Discovery Research K-12 (DRK-12) Program, National Science Foundation
Dates: 9/1/2014—8/31/2016 (continuing to 8/31/2018 under Russell, M., Boston College)
Total award: $2,296,031
Boston College sub-award (PI: **Brown, N. J. S.**): $390,395

"Focus on Energy: Preparing Elementary Teachers to Meet the NGSS Challenge" (DRL-1418052)

PIs: Lacy, S., TERC; **Brown, N. J. S.**, Boston College; Tobin, R., Tufts University
Funding source: Discovery Research K-12 (DRK-12) Program, National Science Foundation
Dates: 9/1/2014—8/31/2016 (continuing to 8/31/2018 under Russell, M., Boston College)
Total award: $1,999,836
Boston College sub-award (PI: **Brown, N. J. S.**): $143,827

"Psychometric and Growth Modeling of Complex Patterns of Learning Resulting From the Interrelationships Between Multiple Learning Progressions" (DRL-1109714/DRL-1313513)

PI: **Brown, N. J. S.**, Indiana University Bloomington
Funding source: Research and Evaluation on Education in Science and Engineering (REESE) Program, National Science Foundation
Dates: 8/1/2011—8/31/2016
Total award: $951,997
Boston College transfer award (PI: **Brown, N. J. S.**): $707,775

"What Mathematics Do Students Know? Implications From NAEP for Curriculum and Policy" (DRL-1008438)

PIs: Kloosterman, P. W., Indiana University Bloomington; Walcott, C., Indiana University-Purdue University Columbus; Mohr, D. J., University of Southern Indiana; **Brown, N. J. S.**, Indiana University Bloomington
Funding source: Research and Evaluation on Education in Science and Engineering (REESE) Program, National Science Foundation
Dates: 7/15/2010—6/30/2015
Total award: $1,356,030
Boston College sub-award (PI: **Brown, N. J. S.**): $54,462

"Promoting Equitable and Accessible Science Instruction: Extending the Seeds of Science/Roots of Reading Curriculum to Middle School"

PI: Barber, J., University of California Berkeley
Funding source: Bill & Melinda Gates Foundation
Dates: 1/1/2010—12/31/2012
Total award: $2,999,730
Indiana University Bloomington sub-award (PI: **Brown, N. J. S.**): $21,688

INTERNAL

"Video Tutorials for Statistical Software to Support Student Learning in Introductory Statistics"

PI: **Brown, N. J. S.**, Boston College
Funding source: Teaching, Advising, and Mentoring Grant
Dates: 6/1/2025—5/31/2026
Total award: $5,000

"Adapting Standards-Based Reporting to Incorporate Assessment for Learning Principles While Meeting the Disparate Needs of Stakeholders"

PIs: **Brown, N. J. S.**, Boston College; Power, C., Medfield Public Schools; Vaughn, N., Medfield Public Schools (co-PI)
Funding source: Boston College Collaborative Fellows Program
Dates: 6/1/2022—5/31/2025
Total award: $120,000

PUBLICATIONS

JOURNAL ARTICLES

Dray, A. J., **Brown, N. J. S.**, Diakow, R., Lee, Y., & Wilson, M. R. (2019). A construct modeling approach to the assessment of reading comprehension for adolescent readers. *Reading Psychology*, 40, 191-241.

Brown, N. J. S., Afflerbach, P. P., & Croninger, R. G. (2014). Assessment of critical-analytic thinking. *Educational Psychology Review*, 26, 543-560.

Brown, N. J. S., & Wilson, M. (2011). A model of cognition: The missing cornerstone in assessment. *Educational Psychology Review*, 23, 221-234.

Brown, N. J. S., Furtak, E. M., Timms, M., Nagashima, S. O., & Wilson, M. (2010). The Evidence-Based Reasoning Framework: Assessing scientific reasoning. *Educational Assessment*, 15, 123-141.

Brown, N. J. S., Nagashima, S. O., Fu, A., Timms, M., & Wilson, M. (2010). A framework for analyzing scientific reasoning in assessments. *Educational Assessment*, 15, 142-174.

Baker, S. M., Smith, G. S., **Brown, N. J. S.**, Nastasi, M., & Hubbard, K. (1997). Observation of nonstandard Fickian diffusion at the interface of isotopically pure amorphous ^{11}B on ^{10}B by neutron reflectometry. *Physical Review B*, 55, 7255-7263.

EDITED VOLUMES

diSessa, A. A., Levin, M., & **Brown, N. J. S.** (Eds.). (2016). *Knowledge and interaction: A synthetic agenda for the learning sciences*. New York, NY: Routledge.

Brown, N. J. S., Duckor, B., Draney, K., & Wilson, M. (Eds.). (2011). *Advances in Rasch measurement* (Vol. 2). Maple Grove, MN: JAM Press.

BOOK CHAPTERS

Brown, N. J. S., Maderer, S. S., & Wood, J. (2016). Assessing physical and earth and space science in the context of the NRC Framework for K-12 Science Education and the Next Generation Science Standards. In H. Braun (Ed.), *Meeting the challenges to measurement in an era of accountability* (pp. 349-386). New York, NY: Routledge.

Brown, N. J. S., Danish, J. A., Levin, M., & diSessa, A. A. (2016). Competence reconceived: The shared enterprise of Knowledge Analysis and Interaction Analysis. In A. A. diSessa, M. Levin, & N. J. S. Brown (Eds.), *Knowledge and interaction: A synthetic agenda for the learning sciences* (pp. 11-29). New York, NY: Routledge.

DeLiema, D., Lee, V. R., Danish, J. A., Enyedy, N., & **Brown, N. J. S.** (2016). A microlatitudinal/ microlongitudinal analysis of speech, gesture, and representation use in a student's repeated scientific explanations of phase change. In A. A. diSessa, M. Levin, & N. J. S. Brown (Eds.), *Knowledge and interaction: A synthetic agenda for the learning sciences* (pp. 133-159). New York, NY: Routledge.

Brown, N. J. S. (2016). Feedback-relevant places: Interpreting shifts in explanatory narratives. In A. A. diSessa, M. Levin, & N. J. S. Brown (Eds.), *Knowledge and interaction: A synthetic agenda for the learning sciences* (pp. 403-425). New York, NY: Routledge.

diSessa, A. A., Levin, M., & **Brown, N. J. S.** (2016). Reflections: The KAIA project and prospects. In A. A. diSessa, M. Levin, & N. J. S. Brown (Eds.), *Knowledge and interaction: A synthetic agenda for the learning sciences* (pp. 570-582). New York, NY: Routledge.

Brown, N. J. S., Dai, S., & Svetina, D. (2016). Analyzing NAEP data at the item level. In P. Kloosterman, D. Mohr, & C. Walcott (Eds.), *What mathematics do students know and how is that knowledge changing? Evidence from the National Assessment of Educational Progress* (pp. 33-44). Charlotte, NC: Information Age.

Brown, N. J. S., Svetina, D., & Dai, S. (2016). Analyzing NAEP data at the construct level. In P. Kloosterman, D. Mohr, & C. Walcott (Eds.), *What mathematics do students know and how is that knowledge changing? Evidence from the National Assessment of Educational Progress* (pp. 315-334). Charlotte, NC: Information Age.

Kloosterman, P., Walcott, C., **Brown, N. J. S.**, Mohr, D., Pérez, A., Dai, S., Roach, M., Wilson, L. D., & Huang, H.-C. (2015). Using NAEP to analyze eighth-grade students' ability to reason algebraically. In J. A. Middleton, J. Cai, & S. Hwang (Eds.), *Large-scale studies in mathematics education* (pp. 179-207). New York, NY: Springer.

PROCEEDINGS

Banach, M., **Brown, N. J. S.**, Carroll, C., Gillespie, N. M., Glaser, D., Hall, R., & Ryu, A. J. (2002). Constituting "missing objects" in learning conversations. In P. Bell, R. Stevens, & T. Satwicz (Eds.), *Keeping learning complex: The proceedings of the fifth international conference of the learning sciences (ICLS)* (pp. 606–610). Mahwah, NJ: Lawrence Erlbaum.

OTHER PUBLICATIONS

Brown, N. J. S. (2005). *The multidimensional measure of conceptual complexity* (BEAR Center Report 2005-04-01). Berkeley: University of California, Berkeley.

Brown, N. J. S. (2005). Measuring conceptual understanding of chemical equilibrium: A case study. In M. Wilson, *Constructing measures: An item response modeling approach* (supplemental material). Mahwah, NJ: Lawrence Erlbaum.

Brown, N. J. S. (2004). *Interpreting Ordered Partition Model parameters from ConQuest* (BEAR Center Report 2004-10-02). Berkeley: University of California, Berkeley.

PRESENTATIONS

INVITED TALKS

Brown, N. J. S. (April, 2019). Developing reflective learners: Assessment for learning. Parent Workshop, Thomas A. Blake Middle School.

Laski, E., McNeill, K., **Brown, N. J. S.**, & Blustein, D. (February, 2019). Design for learning and change. Faculty Scholars Luncheon, Lynch School of Education and Human Development, Boston College.

Brown, N. J. S. (December, 2018). Assessment for learning: Designing an alternative to grades. Learning Sciences Speaker Series, Center for Teaching and Learning, Boston University.

Brown, N. J. S. (May, 2018). Progress profiles. Excellence in Teaching Day, Center for Teaching Excellence, Boston College.

Brown, N. J. S. (May, 2017). Better reading assignments and class discussions: Using Poll Everywhere Surveys to enhance engagement, inclusion, and efficiency. Excellence in Teaching Day, Center for Teaching Excellence, Boston College.

Brown, N. J. S. (May, 2016). Poll Everywhere in small class discussions. Excellence in Teaching Day, Center for Teaching Excellence, Boston College.

Brown, N. J. S. (January, 2013). Embodied cognition and conceptual change in science. Faculty Scholars Program on STEM Education, Lynch School of Education, Boston College.

Brown, N. J. S. (November, 2012). A model of cognition: The missing cornerstone of assessment. Educational Research, Measurement, and Evaluation (ERME) Brown Bag Lunch Discussion, Boston College.

Brown, N. J. S. (March, 2012). Conceptual change in science: Theoretical discord and methodological solutions. TERC Brown Bag, TERC, Cambridge, MA.

Brown, N. J. S. (October, 2008). Measuring constructs. Learning Sciences Professional Seminar, School of Education, Indiana University, Bloomington.

Brown, N. J. S. (April, 2007). Methodology in conceptual change research: Characterizing and measuring explanations of chemical phenomena. Berkeley Evaluation and Assessment Research (BEAR) Center Colloquium, University of California, Berkeley.

Brown, N. J. S. (September, 2006). Modeling and testing ordered coding schemes using Rasch measurement. Center for Research in Mathematics and Science Education (CRMSE) Brown-Bag Seminar, San Diego State University.

PROFESSIONAL MEETINGS

Panagakou, E., Laski, E. V., & **Brown, N. J. S.** (May, 2020). Teaching practice is congruent with some cognitive learning principles more than others. Poster presented at the Association for Psychological Science Annual Convention (virtual).

Tobin, R. G., Lacy, S. J., Crissman, S., Haddad, N., **Brown, N. J. S.**, Gurkan, G., & Castle, C. (April, 2017). Learning a system of practices of science through energy: A fourth-grade case study. Presentation at the Annual International Conference of the National Association for Research in Science Teaching (San Antonio, TX).

Brown, N. J. S. (April, 2016). Assessing physical and earth and space science in the context of the NRC Framework for K-12 Science Education and the Next Generation Science Standards. Paper presented at the Annual Meeting of the National Council on Measurement in Education (Washington, DC).

Dai, S., Svetina, D., & **Brown, N. J. S.** (April, 2015). Predicting skipping behavior in NAEP mathematics assessment: A multi-level and multi-group confirmatory factor analysis approach. Paper presented at the Annual Meeting of the National Council on Measurement in Education (Chicago, IL).

Brown, N. J. S., Svetina, D., & Dai, S. (April, 2014). Impact of methods of scoring omitted responses on achievement gaps. Presentation at the Annual Meeting of the National Council on Measurement in Education (Philadelphia, PA).

Brown, N. J. S., Dai, S., & Svetina, D. (April, 2014). Predictors of omitted responses on the 2009 NAEP Mathematics Assessment. Poster presented at the Annual Meeting of the American Educational Research Association (Philadelphia, PA).

Brown, N. J. S., Castle, C., & Chappe, S. (April, 2014). Within-item multidimensional modeling of the heteroscedastic interactions between multiple constructs. Presentation at the International Objective Measurement Workshop (Philadelphia, PA).

Smith, C., & **Brown, N. J. S.** (April, 2014). The affordances and challenges of comparative longitudinal designs in matter LP research: Lessons from the Inquiry Project. Paper presented at the Annual International Conference of the National Association for Research in Science Teaching (Pittsburgh, PA).

Brown, N. J. S. (October, 2013). Assessing critical analytic reasoning in science. Presentation at the AERA-funded research conference "Seeking Common Ground: A Multidisciplinary Examination of Critical Analytic Thinking in Learning and Development" (College Park, MD).

Saenz, L., & **Brown, N. J. S.** (October, 2013). Using construct modeling to measure cultural responsivity in STEM education. Presentation at the Annual Meeting of the American Evaluation Association (Washington, DC).

Brown, N. J. S., & Corrigan, S. (October, 2011). Psychometric and growth modeling of complex patterns of learning resulting from the interrelationships between multiple learning progressions. Poster presented at the Annual PI Meeting for NSF REESE recipients (Washington, DC).

Kloosterman, P., **Brown, N. J. S.**, Walcott, C., & Mohr, D. (October, 2011). What mathematics do students know? Implications from NAEP for curriculum and policy. Poster presented at the Annual PI Meeting for NSF REESE recipients (Washington, DC).

Brown, N. J. S., & Haltom, A. (April, 2011). Conceptual change research: Theoretical discord and methodological solutions. Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA).

Brown, N. J. S., & Haltom, A. (April, 2011). A process model for the co-construction of knowledge during explanations of scientific phenomena. Poster presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA).

Corrigan, S., Brodsky, L., Loper, S., **Brown, N. J. S.**, Curley, J., Baker, J., Goss, M., Castek, J., & Barber, J. (December, 2010). Use of the attribute hierarchy method for development of student cognitive models and diagnostic assessments in geoscience education. Poster presented at the American Geophysical Union Fall Meeting (San Francisco, CA).

Brown, N. J. S. (June, 2010). Interaction analysis. Presentation at the Knowledge in Pieces Workshop, International Conference of the Learning Sciences (Chicago, IL).

Brown, N. J. S., Dray, A., & Lee, Y. (April, 2010). Measurement of increased student literacy over four years and across multiple content areas. Presentation at the Annual Meeting of the American Educational Research Association (Denver, CO).

Brown, N. J. S., Kulikowich, J. M., & Wilson, M. R. (April, 2010). Where do we go from here? Modeling and measuring learning progressions. Presentation at the Annual Meeting of the American Educational Research Association (Denver, CO).

Dray, A., **Brown, N. J. S.**, & Lee, Y. (April, 2010). The nature of "embedded assessment": The development of a measure of reading comprehension for struggling adolescent readers. Presentation at the Annual Meeting of the American Educational Research Association (Denver, CO).

Brown, N. J. S., Nagashima, S., Fu, A., Timms, M., & Wilson, M. (April, 2010). Analyzing scientific reasoning in assessments: Using construct modeling and the Evidence-Based Reasoning Framework. Paper presented at the International Objective Measurement Workshop (Boulder, CO).

Dray, A. J., Lee, Y., Diakow, R., **Brown, N. J. S.**, & Wilson, M. (April, 2010). The San Diego Striving Readers Assessment Project: Creating measures of reading comprehension for adolescent readers. Presentation at the International Objective Measurement Workshop (Boulder, CO).

Corrigan, S., Loper, S., Barber, J., **Brown, N. J. S.**, & Kulikowich, J. (June, 2009). The juncture of supply and demand for information: How and when can learning progressions meet the information demands of curriculum developers? Paper presented at the Learning Progressions in Science Conference (Iowa City, IA).

Brown, N. J. S., Wilson, M. R., Dray, A., & Lee, Y. (March, 2008). Assessing literacy in the classroom: The BEAR Assessment System. Presentation at the Striving Readers Local Evaluator Conference, United States Department of Education (Washington, DC).

Brown, N. J. S., Wilson, M. R., Nagashima, S. O., Timms, M., Schneider, S. A., & Herman, J. L. (March, 2008). A model of scientific reasoning. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY).

Nagashima, S. O., Wilson, M. R., **Brown, N. J. S.**, Timms, M., Arnold, S. A., & Herman, J. L. (March, 2008). Application of a model of scientific reasoning to written assessments. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY).

Brown, N. J. S., Wilson, M. R., Dray, A., & Lee, Y. (March, 2008). Assessing literacy in the classroom: The BEAR Assessment System for SLIC. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY).

Kennedy, C. A., **Brown, N. J. S.**, Draney, K., & Wilson, M. (April, 2006). Using progress variables and embedded assessment to improve teaching and learning. Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA).

Brown, N. J. S., Kennedy, C. A., Draney, K., & Wilson, M. (April, 2006). Assessing a learning progression in science: Solving psychometric issues. Presentation at the International Objective Measurement Workshop (Berkeley, CA).

Brown, N. J. S. (April, 2005). A multidimensional framework for measuring conceptual understanding: Undergraduate student explanations of chemical equilibrium. Paper presented at the Annual Meeting of the American Educational Research Association (Montréal, Canada).

Brown, N. J. S. & Duckor, B. (July, 2004). The development and refinement of construct maps: What we are learning about the BEAR Assessment System in the field. Presentation at the International Objective Measurement Workshop (Cairns, Australia).

Wilson, M. & **Brown, N. J. S.** (July, 2004). Measurement as struggle. Presentation at the International Objective Measurement Workshop (Cairns, Australia).

Brown, N. J. S. (April, 2004). Performance analysis: Characterizing knowing in a clinical interview. Paper presented at the Annual Meeting of the American Educational Research Association (San Diego, CA).

Gillespie, N. M., Ryu, A. J., **Brown, N. J. S.**, & Loper, S. J. (April, 2004). Integrating situated perspectives and interactional analysis: Knowing and learning in science and math education. Presentation at the Annual Meeting of the American Educational Research Association (San Diego, CA).

Brown, N. J. S., Draney, K., Kennedy, C., Liu, L., & Wilson, M. (November, 2003). Measuring student progress: Buoyancy concepts and explanations. Presentation at the DFG-NSF Workshop on Research and Development in Mathematics and Science Education (Washington, DC).

Ryu, A. J., Gillespie, N. M., Loper, S. J., & **Brown, N. J. S.** (October, 2003). Knowing as an activity, part 1: Producing explanatory accounts and negotiating standards of accountability. Presentation at the Research in Undergraduate Mathematics Education Conference (Scottsdale, AZ).

Brown, N. J. S., Loper, S. J., Gillespie, N. M., & Ryu, A. J. (October, 2003). Knowing as an activity, part 2: Argumentation and the negotiation of technical terms. Presentation at the Research in Undergraduate Mathematics Education Conference (Scottsdale, AZ).

Brown, N. J. S. (April, 2003). Students as bystanders: Didactic instruction as a privileged dialogue with a non-existent student surrogate. Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL).

TEACHING

PROFESSIONAL DEVELOPMENT WORKSHOPS

Millis Public Schools

Assessment for learning: Giving our students a map to success 1/17/2020

Thomas A. Blake Middle School

Creating a progress profile	5/10/2019
Progress profiles: Revising our rubrics and scoring guides	2/06/2019

Emmaus Series for Catholic School Leaders, Roche Center for Catholic Education

Assessment for learning: Fostering a growth mindset	11/07/2018
Assessment for learning: Charting a path for our students and teachers	11/16/2016
Leading effective school assessment	11/19/2014
Interpreting student assessments for academic excellence	4/10/2013

Cardinal Spellman High School

Assessment for learning: From partial credit to progress profiles	8/29/2018

Two-Way Immersion Network for Catholic Schools, Roche Center for Catholic Education

Is there anyone on board who knows how to fly a plane?	6/27/2018
Assessment for learning: The power of fostering a growth mindset	6/21/2017

Dr. Philip O. Coakley Middle School

Assessment for learning: Knowing where you're going and how to get there	12/05/2017

Olin College of Engineering

Assessment for learning: Fostering a growth mindset in students	10/17/2017

Boston College High School

Frankenstein's assessment: The abomination of testing	6/17/2014

Saint Joseph Elementary School

Assessments with purpose: Measuring the 4Cs	1/27/2014 & 2/10/2014

Massachusetts Bay Community College

Developing course objectives and outcomes for STEM educators	11/19/2013
Recent trends in STEM assessment	11/05/2013

GRADUATE

Lynch School of Education and Human Development, Boston College

Introductory Statistics	F12, S14, S18, Su20, F20, S21, F21(×2), S22(×2), F22(×2), S23, F23(×2), S24, F24(×2), S25
Intermediate Statistics	S25
Assessment and Test Construction	F13, F14
Measuring Educational and Psychological Constructs	S13
Fundamentals of Data and Assessment Literacy	Su15
Mixed Methods Research: Issues in Theory & Practice	F17
Assessment of and for Learning	Su20

School of Education, Indiana University Bloomington

Learning and Cognition in Education	S08, F08, S09, F09, S10
Learning Sciences Apprenticeship	S10, F11
Capturing Learning in Context	S09, S10, S12
Educational Assessment and Psychological Assessment	F08, F09

Graduate School of Education, University of California Berkeley

Design and Scoring of Classroom Assessments	S04

UNDERGRADUATE

Lynch School of Education and Human Development, Boston College

Classroom Assessment F15, S16, F16, S17, F17, S18, F18, S19, F19, S20, F23, S24

School of Education, Indiana University Bloomington

Learning: Theory into Practice F07

College of Chemistry, University of California Berkeley

General Chemistry 1A F00, F01, F02

General Chemistry 1B S01

Multicultural Engineering Program, University of California Berkeley

Chemistry Academic Boot Camp Su02, Su03

SERVICE

ADMINISTRATION

Program Director, M.A. in Research and Evaluation Methods 2024

Program Director, M.A. in Learning Engineering 2018—2020

ADVISORY BOARDS

NSF Cyberlearning and Future Learning Technologies Grant 2015—20

"Promoting Learning Through Annotation of Embodiment (PLAE)"
PIs: Danish, J., Enyedy, N., & Burke, J.

COMMITTEES

Lynch School of Education and Human Development, Boston College

Institutional Review Board 2022—25

Faculty Awards Committee 2017—19

School of Education, Indiana University Bloomington

Graduate Studies Committee & Recruitment and Financial Aid 2008—11

Dissertation Award Subcommittee (Chair) 2009—10

Beechler Award Subcommittee 2008—09

Counseling and Educational Psychology Department, Indiana University Bloomington

Department Awards 2010—11

Learning Sciences Faculty Search Committee 2007—08

Learning Sciences, Indiana University Bloomington

Qualifying Examinations (Chair) 2011—12

Orientation Weekend (Chair) 2011—12

Admissions 2011—12

Graduate Student Association 2011—12

Recruitment Weekend (Chair) 2009—10

Minor & Service Courses (Chair) 2008—10

CONFERENCE ORGANIZATION

AERA research conference: "Integrating knowledge and interaction in analyses of cognition" 2011

13th International Objective Measurement Workshop (Chair) 2006

CONFERENCE LEADERSHIP

Discussant

AERA Annual Meeting, SIG—Rasch Measurement 2012

Session Chair

NCME Annual Meeting 2014

AERA Annual Meeting, SIG—Rasch Measurement 2009

CONSULTING

Education Development Center 2020—21

Assessment development and validation for a grant: "Computational Sciences Pathway Option for Massachusetts' High School Students"

Scheller Teacher Education Program, Massachusetts Institute of Technology 2020—21

Assessment development and validation for a grant: "Making Sense of Models: Investigating Mechanistic Reasoning as a Bridge for Connecting 6th Grade Mathematics and Science Learning"

Lynch School of Education and Human Development, Boston College 2020

Assessment development and validation for a grant: "Developing AI Literacy (DAILy)"

Lynch School of Education and Human Development, Boston College 2013, 2017, 2018

Pre-submission grant review

Massachusetts Bay Community College 2014

Developing program and course learning outcomes for the STEM Learning Faculty Assessment Learning Community

TERC 2013

Developing instruments for assessing STEM learning in elementary school

COURSE DEVELOPMENT

Lynch School of Education and Human Development, Boston College

Introductory Statistics (online) 2021—2022, 2025

MEMBERSHIPS

American Educational Research Association 2003—2020

International Society of the Learning Sciences 2008—2020

National Council on Measurement in Education 2014—2020

PROGRAM DEVELOPMENT

Lynch School of Education and Human Development, Boston College

M.A. in Learning Engineering 2018—2020

REVIEWING

Journals

Cognition and Instruction 2011, 2013, 2014, 2015

Educational Measurement: Issues and Practice 2013, 2016, 2017

Educational Policy 2017

Journal of Educational Measurement 2018

Journal of Research in Science Teaching 2025

Journal of the Learning Sciences 2005

Measurement 2019

Pensamiento Educativo: Revista de Investigación Educacional Latinoamericana 2015

Edited Volumes

diSessa, A. A., Levin, M., & Brown, N. J. S. (Eds.). (2016). *Knowledge and interaction: A synthetic agenda for the learning sciences*. New York, NY: Routledge.

Alonzo, A. C., & Gotwals, A. W. (Eds.). (2012). *Learning progressions in science: Current challenges and future directions*. New York, NY: Springer.

Brown, N. J. S., Duckor, B., Draney, K., & Wilson, M. (Eds.). (2011). *Advances in Rasch measurement* (Vol. 2). Maple Grove, MN: JAM Press.

Conferences

American Educational Research Association Annual Meeting

Division C, Section 6 (Cognitive, Social, and Motivational Processes)	2005, 08, 09, 12
Division G, Section 1 (Local Contexts of Teaching and Learning)	2005
SIG—Rasch Measurement	2005, 08, 09, 11, 13

Society for Research on Educational Effectiveness Conference

Section on Mathematics and Science Education in the Secondary Grades	2011

Curricula & Assessments

Models of Matter, Seeds of Science/Roots of Reading® Curriculum	2011

STUDENT ADVISING

Boston College

David Jackson, Ph.D. in Curriculum & Instruction	2022
Kevin Holbrook, Ph.D. in Measurement, Evaluation, Statistics, and Assessment	2022
2021 PSAP Cohort, Ed.D. in Educational Leadership	2022
Michael Kelly, Ph.D. in Measurement, Evaluation, Statistics, and Assessment	2021
Romita Mitra, Ph.D. in Measurement, Evaluation, Statistics, and Assessment	2021
2019 PSAP Cohort, Ed.D. in Educational Leadership	2020
Allison Nannemann, Ph.D. in Curriculum & Instruction	2019
Courtney Castle, Ph.D. in Educational Research, Measurement, and Evaluation (Acting Chair)	2018
2017 PSAP Cohort, Ed.D. in Educational Leadership	2018
2015 PSAP Cohort, Ed.D. in Educational Leadership	2016
Amanda Knight, Ph.D. in Curriculum & Instruction	2015

Indiana University Bloomington

Reuel Smith, Ed.D. in Mathematics Education	2013
Aaron Haltom, M.S. in Learning and Developmental Sciences (Chair)	2012
Jeremy Kinser, Ph.D. in Counseling Psychology	2012
Guang Yang, M.A. in Chinese Language Pedagogy	2009