

Edna O. Schack, Ed.D., Professor of Education

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- Ed.D., Curriculum & Instruction, Illinois State University, 1987
- Faculty Member, Morehead State University, 1987-present
- Earned tenure and promotion to Associate Professor, 1992
- Promoted to Full Professor, 2003

Highlights

- Serving as Kentucky Center for Mathematics/Morehead State University Faculty Associate, Fall 2020-present.
- Appointed to the Advisory Board, Prichard Committee Kentucky Collaborative for Families and Schools Advisory Council. Lead on Higher Education Task Force, 2020-present.
- Nominated for Morehead State University (MSU) Distinguished Faculty Awards, Teaching, 2017; Research (awarded), 2018; Service, 2020.
- Signed *Seven Trends to Reform U.S. Teacher Education, and the Need to Address Systemic Injustices*, authored by Education Deans for Justice and Equity and the National Education Policy Center, 2019.
- Secured a National Science Foundation Noyce Scholarship with colleagues to provide up to \$20,000 scholarships and other benefits to 34 students with the goal of increasing the quality of STEM teaching in eastern Kentucky. Award \$1.2 million, 2017-present.
- Appointed by Morehead Mayor to the Joint Morehead-Rowan County-Lakeview Heights Planning and Zoning Commission, 2016-present.
- Co-Direct MSUTeach, secondary mathematics and science teacher preparation program at Morehead State University (MSU), most rural of 45 UTeach replication sites. Successfully collaborate with College of Science Co-Director on administrative duties including budget, curriculum, personnel, and recruitment, 2015-present.
- Appointed to the Kentucky Early Learning (K-3) Round Table as a Higher Education Representative (three full-day sessions). Task: to review legislation, research, and data regarding Early Learning and teacher preparation to make recommendations for changes to state statutes and regulations, August 2019.
- Chaired the Kentucky Committee for Mathematics Achievement (CMA) for three terms during which the committee authored multiple white papers advising Kentucky education agencies and legislators on policy related to mathematics achievement in the Commonwealth, 2005-2019.
- Served on the Morehead State University Rankings, Reputation, and Regional Responsiveness Strategic Planning Committee, 2017.
- Awarded the Kentucky Council of Teachers of Mathematics Education Service and Achievement Award, 2012.
- Co-chaired the Rowan County Repair Affair, a community-wide project to repair the homes of low income and families with members with disabilities, 2009 and 2010.
- Engaged with Frontier Housing and their homeowners, writing articles for various venues, Fall 2008.
- Held lead roles in the National Science Foundation-funded Appalachian Mathematics Science Partnership, a central Appalachian multi-state endeavor of six higher education institutions, 60+ school districts, 2003-2008.
- Continue to build a successful record of presentations, workshops, conferences, and professional development evidenced by nearly 90 presentations at international, national, regional, state, and local venues, 1986-present.

Current Positions

Professor, Mathematics Education in Early Childhood, Elementary, and Special Education Department.

Co-Director, MSUTeach

Faculty Associate, Kentucky Center for Mathematics

Education

Illinois State University, Curriculum & Instruction, Ed.D., 1987

Northwestern State University, Child Development, M.S., 1982

Northwestern State University, University Studies, B.A., 1980

Professional Appointments

Morehead State University, Morehead, KY

Professor, 2003; Associate Professor, 1992; Assistant Professor, 1987

Illinois State University, Normal, IL, Assistant Professor, 1985

Lincoln College, Bloomington, IL, Instructor, 1985

Honors

Distinguished Faculty Service Award Nominee (2020), Morehead State University.

Distinguished Researcher Award (2017-18), Morehead State University

Distinguished Teacher Award Nominee (2017-18), Morehead State University, (I declined to be considered for the award because I was an active member of selection committee.)

Recognized by Board of Regents for accomplishments as a Faculty Member (September 2017), Morehead State University

Faculty of the Year Student Choice Award Nominee (2014), Morehead State University Student Government Association.

Distinguished Researcher Award Nominee (2012-13), Morehead State University.

Mathematics Education Service and Achievement (MESA) Award. (2012). Kentucky Council of Teachers of Mathematics.

Outstanding Faculty Award (1992). Epsilon Theta Chapter (student), Kappa Delta Pi, Morehead State University.

Selected Professional Institutes, Workshops, and Trainings completed

Mathematical Practices, Teaching Practices, and Social Justice: Making Connections. (July 20-24, 2020). TeachingWorks 2020 Virtual Summer Institute, University of Michigan, <https://u-m-canvas.it.umich.edu>

Developing a Teacher Education Program Focused on High-Leverage Practices: Principles of Planning. (July 28-31, 2020). TeachingWorks 2020 Virtual Summer Institute, University of Michigan, <https://u-m-canvas.it.umich.edu>

AAQEP: Association for Advancing Quality in Educator Preparation Process and Procedures Online Accreditation Reviewer Training Module. (October 2019). AAQEP Professional Learning Series.

Leading Innovation: A Workshop for Department Chairs, (August 2019). Presented by The Chronicle of Higher Education and Ithaka S+R, Washington, DC.

Association of Mathematics Teacher Educators (AMTE), (May 2018). Presented by The Kentucky Association of Mathematics Teacher Educators, Louisville, KY.

ACCLAIM Mathematics Leadership Institute, (Summer 2003). Institute supported by National Science Foundation Award 0119679, Lexington, KY.

Selected Recent Professional Conferences and Webinars participated

"Get Up, Stand Up": Fighting Systemic Injustice Through Teaching. (July 19, 2020). TeachingWorks 2020 Virtual Summer Institute Keynote, University of Michigan, <https://u-m-canvas.it.umich.edu>

National Forum to Advance Rural Education. 111th National Rural Education Association Convention and Research Symposium. (October 2019). Louisville, KY.

National Inquiry Based Learning and Teaching Conference. (June 2019). Denver, CO.

3rd Annual National Micro-Credential Summit. (June 2019). Hosted by Kentucky Valley Educational Cooperative, Louisville, KY.

Higher Ed Webcast: Demand Trends for Higher Education. (September 26, 2019). Hosted by Gray Associates, Concord, MA

Higher Ed Webcast: Student and Employer Demand Trends (August 22, 2019). Hosted by Gray Associates, Concord, MA

Grants, Fellowships, and Contracts

Submitted, under review

Long, D., Beaudine, G., & **Schack, E. O.** (under review). *Collaborative Research: Developing, Implementing, and Testing an Undergraduate STEM Teacher Intern Program (STIP) Across Multiple Institutions*. National Science Foundation IUSE. Collaborating Institutions: University of Colorado Colorado Springs and Drexel University. Total requested: \$1,997,000; MSU request: \$637,043.

Fellowship, Active

Schack, E. O., (2020). *Appalachian Leadership Institute Fellow, Class of 2020-2021*. (selected September 2020). Appalachian Regional Commission.

Funded Grants and Contracts, Active

Jong, C., Fisher, M. H., Thomas, J., **Schack, E. O. (Senior Personnel)**. (2019). *Microlearning Mathematics Modules Designed to Facilitate Preservice Elementary Teacher Practices Regarding Equity and Responsive Mathematics Instruction*. National Science Foundation IUSE, \$599,875 – funded.

Schack, E. O., Eisenhour, D., Yess, C., Long, D., Senior Personnel: Dobranski, J. M., and Lennex, L. (2017). *Morehead State University Noyce Scholars Program: Secondary Teachers of Mathematics and Science in Rural Districts (1660721)*. National Science Foundation Noyce Scholarship Program. Total award: \$1,199,933 – funded.

DelliCarpini, M., Shaw, J., **Schack, E. O.**, & Dobranski, M. (2015). *MSU Teach: A UTeach Replication*. National Math + Science Initiative and The Volgenau Foundation. Total awarded: \$2,750,000.

Schack, E. O. (2006-present). *Mathematics regional coordinator contract*. Northern Kentucky University and Kentucky Center for Mathematics. \$35,000-\$65,000 annually for 13 years.

Funded Grants, Fellowships, and Contracts, Completed

Long, D., & **Schack, E. O.** (2017). *Identifying Pathways for Effective Elementary STEM Education (IPEESE)*. New Program Proposal Initiative, Morehead State University. Total award: \$5000.

Thomas, J. N., **Schack, E. O.**, Fisher, M. H., & Jong, C. (2014). *Collaborative Research: Project TECHNO: TECHNOlogy-centered mathematical NOTicing. (1431098, 1431133, 1431631)*. National Science Foundation, Improving Undergraduate STEM Education (IUSE). Total award: \$490,804. MSU Award: \$154,517.

Schack, E. O. (2012). *Developing preservice teachers' professional noticing: Content and construct validity of instruction and assessment materials*. Morehead State University. \$4880.

Schack, E. O., & Koontz, K. (2012). *Stages of Early Arithmetic Learning: A Context for Learning to Professionally Notice*. Morehead State University Undergraduate Research Fellowship. Award: Approximately \$1500.

Schack, E. O., Thomas, J. N., Fisher, M. H., & Eisenhardt, S. (2011). *Collaborative Research: Noticing Numeracy (N^3) (1043656, 1043667, 1043831)*. National Science Foundation, Transforming Undergraduate Education in STEM (TUES I). MSU's award: \$102,907; Total award: \$199,920.

Puckett, W., Manis, R., Watkins, D., **Schack, E. O.**, et al. (2008 & 2009). *Morehead-Rowan County Repair Affair*. Kentucky Housing Corporation. Related to Regional Engagement Sabbatical (Fall 2008). Award: \$20,000 annually.

Schack, E. O., & Watkins, D. (2008). *Morehead-Rowan County Repair Affair*. MSU Center for Regional Engagement. Related to Regional Engagement Sabbatical (Fall 2008). Award: \$3,883.

Schack, E. O., (2008). *Change a Light, Change the World: Start with ENERGY STAR®*. Kentucky NEED Project mini-grant. Related to Regional Engagement Sabbatical (Fall 2008). Award: Approximately \$500.

- McGatha, M., & **Schack, E. O.** (2006-07). *Kentucky's statewide coaching*. Kentucky Center for Mathematics. Total award: \$12,578.
- Miriti, L., Ratliff, M., **Schack, E. O.**, & Coen, P. (2005). *Lesson study for college faculty*. Appalachian Math Science Partnership Mini-grant. Total Award: \$500 approximately.
- Schack, E. O.**, Miriti, L., Lindsey, J., & Murray, S. (2004-2005). *Content-focused Coaching*. Appalachian Collaborative Center for Learning, Assessment, and Instruction in Mathematics (ACCLAIM). Total award: \$25,000.
- McGatha, M., Darcy, P., **Schack, E. O.**, & Allen, R. (2003). *Considering New Curricula: Kentucky Seminar*. K-12 Mathematics Curriculum Center of the Education Development Center (EDC). Total award: \$30,000.
- Schack, E. O.**, Teager, A., & Brown, N. (2003). *Developing Mathematical Ideas: Building a system of tens: Professional development workshop for classroom teachers*. Appalachian Collaborative Center for Learning, Assessment, and Instruction in Mathematics (ACCLAIM). Total award: \$5000.
- Schack, E. O.** (2002). *Improving Mathematics Subject-Matter Preparation of Elementary School Teachers*. Ruth Boggs Shannon and E.L. Shannon, Jr. Endowed Professor. Award: Approximately \$5000.
- Saxon, J., & **Schack, E.** (2001). *Improving the Mathematics Preparation of Elementary School Teachers: Mathematics Resource Centers*. Morehead State University. Approx. \$5000.
- Schack, E. O.** (2001). *Technology for Mathematics Learning and Teaching*. Commercial Bank of Grayson Foundation Grant. Total award: \$4,540.
- Schack, E. O.** (2001-2005). *Professors in the Schools Fellowship*. Morehead State University. Award: Approximately \$4000.
- Cain, J., Neeper, C., & **Schack, E.** (2000). *Implementing Renzulli's Schoolwide Enrichment Clusters at Morehead Elementary*. Morehead Elementary Parent Teacher Organization. Award: Approximately \$500.
- Schack, M., & **Schack, E.** (1991). *Upgrade for Education Computer Laboratory and Software Library*. Morehead State University. Total award: \$47,277.

Submitted, Not Funded

- Schack, E. O.**, Davison, R., Schroeder, K., & Neeper, M. C. (submitted March 2020). *Creating inclusive classrooms: Disrupting the effects of poverty*. Eagle Diversity and Inclusion Team: Diversity, Equity and Inclusion Grants. Total requested: \$685.60 – not funded, invited to re-submit.
- Schack, E. O.**, Thomas, J. N., Fisher, M. H., & Jong, C. (submitted January 2019). *Collaborative Research: Categorizing Decision Making in Mathematical Moments (Cat-DM3)*. National Science Foundation EHR Core Research (ECR). Total amount requested \$499,026 – not funded.
- Long, D., VanNess, B., Wright, C., & **Schack, E. O.** (submitted March 2019). *The App-STEM Network: Supporting and Growing STEM Career Futures in 21st Century Central Appalachia*. National Science Foundation Scholarships in Science, Technology, Engineering, and Math (S-STEM). Collaborative (with two community colleges) approximate amount requested: \$4,900,000 – not funded.
- Long, D., VanNess, B., Wright, C., & **Schack, E. O.** (submitted March 2018). *The App-STEM Network: Supporting and Growing STEM Career Futures in 21st Century Central Appalachia*. National Science Foundation Scholarships in Science, Technology, Engineering, and Math (S-STEM). Collaborative (with two community colleges) approximate amount requested: \$4,820,000 – not funded.
- Jong, C., **Schack, E. O.**, Lavery, M., Fisher, M. H., & Thomas, J. (submitted September 2017). *Collaborative Research: Categorizing Decisions in Mathematical Contexts (Cat-DMC)* submitted to National Science Foundation EHR Core Research (ECR) – Level 2. Amount requested: \$1,307,163 – not funded.

- Long, D., **Schack E. O.**, Hare, J. (submitted September 2016). *Identifying Pathways for Effective Elementary STEM Education (IPEESE)* submitted to National Science Foundation Noyce 4. Amount requested: \$592,634 (not funded).
- Schack, E. O.**, Yess, C. D., Eisenhour, D., Dobranski, J. M., and Lennex, L. (submitted August 2015). *Morehead State University Noyce Scholars Program: Secondary Teachers of Mathematics and Science in Rural Districts* submitted to the National Science Foundation Noyce Scholarship Program. Amount requested: \$1,199,908 (not funded).
- Thomas, J. N., **Schack, E. O.**, Fisher, M. H., & Jong, C. (2013). *Collaborative Research: Project TECHNO: TEChnology-centered mathematical NOticing*. National Science Foundation, Transforming Undergraduate Education in STEM (TUES II). Total request: \$599,331 (not funded).

Publications

Published Book

- Schack, E. O.**, Fisher, M. H., & Wilhelm, J. (Eds.) (2017). *Teacher noticing: Bridging and broadening perspectives, contexts, and frameworks*. A volume in the Research in Mathematics Education Series. Springer International Publishing AG. ISBN 978-3-319-46752-8. (Editors Schack, Fisher, Wilhelm managed two stage blind review process by two or more peer reviewers for all research chapters).

Published Book Review

- Schack, E. O.**, Fisher, M. H., and Thomas, J. N. (May 2015). Multiple perspective of teacher noticing: An emerging area of research [Review of the book *Mathematics Teacher Noticing: Seeing Through Teachers' Eye*. Sherin, M. G., Jacobs, V. R., & Philipp, R. A. (Eds.) (2011). New York, NY: Routledge, 250 pp. ISBN: 978-0-415-87863-0]. *Journal for Research in Mathematics Education*, 46(3), 371-375.

Special Issue Journal Editorship

- Choy, B. H., Dindyal, J., **Schack, E. O.**, & Sherin, M. G. (Eds.). (Projected publication February 2021). *ZDM Mathematics Education Special Issue: Mathematics Teacher Noticing: Exploring and Expanding the Terrain*.

Refereed Articles and Chapters

- Jong, C., **Schack, E. O.**, Thomas, J., Fisher, M. H., & Dueber, D. (accepted for Feb 2021). Exploring intersections between professional noticing and affective domains among preservice elementary teachers. *ZDM Mathematics Education*.
- Thomas, J., Marzilli, T., Sawyer, B., Jong, C., **Schack, E. O.**, & Fisher, M. H. (2020). Investigating the manifestations of bias in professional noticing of mathematical thinking among preservice teachers. *Journal of Mathematics Education at Teachers College*, 11(1), 1-11.
- Thomas, J., Dueber, D., Fisher, M. H., Jong, C., & **Schack, E. O.** (2019). Professional noticing into practice: An examination of inservice teachers' conceptions and enactment. *Investigations in Mathematics Learning*. DOI: [10.1080/19477503.2019.1681834](https://doi.org/10.1080/19477503.2019.1681834)
- Fisher, M. H., Thomas, J., Jong, C., **Schack, E. O.** & Dueber, D. (2019). Comparing preservice teachers' professional noticing skills in elementary mathematics classrooms. *School Science and Mathematics*, 119(3), 142-149.
- Fisher, M. H., Jong, C., Thomas, J., & **Schack, E. O.** (2018). Noticing pre-service teachers' attitudes toward mathematics in traditional and online classrooms. In Polly, D., Putnam, M., Petty, T. M., & Good, A. J. (Eds.). *Innovative Practices in Teacher Preparation and Graduate-Level Teacher Education Programs*, (pp. 123-133). Hershey, PA: IGI Global. ISBN: 978-1-522-53069-5.

- Thomas, J., Jong, C., Fisher, M. H., & **Schack, E. O.** (2017). Noticing and knowledge: Exploring theoretical connections between professional noticing and mathematical knowledge for teaching. *The Mathematics Educator*, 26(2), 3-25.
- Fisher, M. H., Thomas, J., **Schack, E. O.**, Jong, C., & Tassell, J. (2017). Noticing numeracy now! Examining changes in preservice teachers' noticing, knowledge, and attitudes. *Mathematics Education Research Journal*, 30(2), 209-232. <https://doi.org/10.1007/s13394-017-0228-0>
- Jong, C., Thomas, J. N., Fisher, M. H., **Schack, E. O.**, Davis, M. A., & Bickett, M. E. (2017). Decimal dilemmas: Interpreting and addressing misconceptions. *Ohio Journal of School Mathematics*, 75, 13-21.
- Thomas, J., Fisher, M. H., Jong, C., **Schack, E. O.**, Krause, L., Kasten, S. (November 2015). Professional noticing: Learning to teach responsively. *Mathematics Teaching in the Middle School*, 21(4), 238-243.
- Thomas, J. N., Eisenhardt, S., Fisher, M. H., **Schack, E. O.**, Tassell, J., & Yoder, M. (December 2014/January 2015). Professional noticing: Developing responsive mathematics teaching. *Teaching Children Mathematics*, 21(5), 294-303.
- Eisenhardt, S., Fisher, M.H., Thomas, J., **Schack, E. O.**, Tassell, J., & Yoder, M. (April 2014). Is It Counting or Is It Adding? *Teaching Children Mathematics*, 20(8), 499-507.
- Fisher, M. H., **Schack, E. O.**, Thomas, J., Jong, C., Eisenhardt, S., Tassell, J. & Yoder, M. (2014). Examining the relationship between preservice elementary teachers' attitudes toward mathematics and professional noticing capacities. In J-J. Lo, K. R. Leatham, & L. R. Van Zoest, (Eds.). *Research Trends in Mathematics Teacher Education*, (pp. 219-238). Switzerland: Springer.
- Schack, E. O.**, Fisher, M. H., Thomas, J. N., Eisenhardt, S., Tassell, J., & Yoder, M. (2013). Prospective elementary school teachers' professional noticing of children's early numeracy. *Journal of Mathematics Teacher Education* (16), 379-397. DOI: 10.1007/s10857-013-9240-9.
- Schack, E.** & Whitehead, V. (2002, Summer). Simple machines: Integrating math & physics in primary grades using K'NEX (intuitive foundations of formal thinking). *Kaleidoscope*, 17.
- Schack, E.**, & Schack, M. (1990, Spring). Inexpensive software resources for math education. *The Kentucky Journal for Teachers of Mathematics*, 3(1).
- Schack, E.**, Brown, L., Behounek, K., Rosenbaum, L., & Burcalow, J. (1987, Winter). Cooperative learning groups: Increasing composite time on task. *Catalyst for Change*, 16(2).

Refereed Conference Proceedings

- Choy, B. H., Dindyal, J., Lee, M. Y., & **Schack, E. O.** (2017). Mathematics teacher noticing: Expanding the terrains of this hidden skill of teaching. In Kaiser, G. (Ed.). *Proceedings of the 13th International Congress on Mathematical Education (ICME-13 Monograph)*. Springer International AG, 641-642.
- Fisher, M. H., Jong, C., Thomas, J. N., & **Schack, E. O.** (January 2016). Implementing an online professional noticing module and its influence on attitudes toward mathematics. *Proceedings of the Association of Mathematics Teacher Educators Annual Conference*, Irvine, CA.
- Schack, E. O.**, Fisher, M. H., Jong, C., & Thomas, J. N. (November 2015). Flowcharts to evaluate responses to video-based professional noticing assessments. *Proceedings of the 37th Annual Psychology of Mathematics Education-North American Chapter Conference*. East Lansing, MI.
- Thomas, J. N., Jong, C., **Schack, E. O.**, Fisher, M. H., Wilhelm, J., McNall-Krall, R., & Stockero, S. (November 2015). Teacher noticing: Measuring a hidden skill of teaching. *Proceedings of the 37th Annual Psychology of Mathematics Education-North American Chapter Conference*. East Lansing, MI.
- Schack, E. O.**, Fisher, M.H., Thomas, J., Jong, C., & Eisenhardt, S., (2013). Learning to Professionally Notice: Preservice Elementary Teachers' Attitudes Toward Mathematics in Context. In Martinez, M. V. & Superfine, A. C. (Eds.). *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago, IL: University of Illinois at Chicago.

- Fisher, M. H., **Schack, E. O.**, Thomas, J., Eisenhardt, S., Yoder, M., & Tassell, J. (2012). The Stages of Early Arithmetic Learning: A Context for Learning to Professionally Notice. In Van Zoest, L. R., Lo, J.-J., & Kratky, J. L. (Eds.). *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Kalamazoo, MI: Western Michigan University.
- Eisenhardt, S., Fisher, M.H., **Schack, E.**, Tassell, J., & Thomas, J. (2011). Noticing Numeracy Now (N³): A collaborative research project to develop preservice teachers' abilities to professionally notice children's mathematical thinking. In *Proceedings of the Research Council on Mathematics Learning Annual Conference*. Cincinnati: OH: Research Council on Mathematics Learning.

Position Statements of Kentucky Committee for Mathematics Achievement under my Leadership as Chair

- (Note: The Kentucky Committee for Mathematics Achievement was legislated in 2005 by the Kentucky General Assembly (KRS 158.842) to “have the ongoing responsibility for providing advice and guidance to policymakers in the development of statewide policies and in the allocation of resources to improve mathematics achievement.”)
- Kentucky Committee for Mathematics Achievement. (February 2012). Mathematical fluency and Response to Intervention (RtI).
- Kentucky Committee for Mathematics Achievement. (July 2011). The Standards for Mathematical Practice are Essential to Mathematics Understanding.
- Kentucky Committee for Mathematics Achievement. (March 2010). Recommendations to the Kentucky Department of Education regarding March 10 Common Core State Standards for Mathematics and related professional development.

Non-Peer Reviewed Publications and Presentations Related to Regional Engagement Sabbatical (Fall 2008)

- Schack, E.** (Fall 2008). Robert’s story: Energy efficient manufactured housing. *Frontier Housing Quarterly Board of Directors Meeting*. Morehead, KY.
- Schack, E.** (Fall 2008). Not Your Grandfather’s Trailer: Energy Efficient Manufactured Housing. *Rural Voices*, national publication of the Housing Assistance Council.
- Schack, E.** (Fall 2008). *Cold weather, heat pumps, and thermostats*. Retrieved February 23, 2013 from <http://www.frontierhousing.org/energy120508.htm> Also appeared in The Morehead News.
- Schack, E.** (Fall 2008). *Earth- and sky-friendly outdoor lighting*. Retrieved February 23, 2013 from <http://www.frontierhousing.org/energy112108.htm> Also appeared in The Morehead News.
- Schack, E.** (Fall 2008). *Frontier Housing awarded Change a Light mini-grant*. Retrieved February 23, 2013 from <http://www.frontierhousing.org/energy110608.htm> Also appeared in The Morehead News.
- Schack, E.** (Fall 2008). *Leaks and drafts: Closing gaps in energy efficiency*. Retrieved February 23, 2013 from <http://www.frontierhousing.org/energy102408.htm> Also appeared in The Morehead News.
- Schack, E.** (Fall 2008). *Compact Fluorescent Lamps (CFLs): What is all the excitement?* Retrieved February 23, 2013 from <http://www.frontierhousing.org/energy100908.htm> Also appeared in The Morehead News.
- Schack, E.** (Fall 2008). *Energy audits, insulation, and R-values: Staying comfortable while saving energy and money*. Retrieved February 23, 2013 from <http://www.frontierhousing.org/energy1008.htm> Also appeared in The Morehead News.
- Schack, E.** (Fall 2008). *ENERGY STAR: What does that blue sticker mean?* Retrieved February 23, 2013 from <http://www.frontierhousing.org/energyStar0908.htm> Also appeared in The Morehead News.

Publications, invited or non-refereed

- Schack, E. O.** & Burton, M. (Summer 2020). Hidden costs: Deterrents to teacher recruitment. *Association of Mathematics Teacher Educators Connections Newsletter*.
<https://amte.net/connections/2020/04/hidden-costs-deterrents-teacher-recruitment>
- Schack, E.** (1991). Statistical “raising” for primary grades. In C. Nicholson and P. Oakes (Eds.), *The Developmentally Appropriate Series: Vol. 5. Math: Making Connections. Indiana Association for the Education of Young Children*.
- Schack, E.** (1991). Sums in a sack. In C. Nicholson and P. Oakes (Eds.), *The Developmentally Appropriate Series: Vol. 5. Math: Making Connections. Indiana Association for the Education of Young Children*.
- Schack, E.,** & Schack, M. (1989). Online data retrieval using Boolean logic. *Small Computers in Libraries* (May 1987). Reprinted in *Online and CD-ROM Databases in School Libraries: Readings*. Compiled by Ann Lathrop. Englewood, CO: Libraries Unlimited, 1989. 99-101.
- Schack, E.,** & Schack, M. (1989, Winter). Keep Your Balance: From balancing scales to balancing equations. *The Elementary Mathematician*, 3(4).
- Schack, M., & **Schack, E.** (1989, Summer). Public domain software resources for elementary mathematics education. *The Elementary Mathematician*, 3(2).
- Schack, E.,** & Schack, M. (1989, April). Online information services and your school’s budget. *The Computing Teacher*, 16(7).
- Schack, E.,** & Schack, M. (1989, April). Information online for higher education. *On-Cue*, 2(7).
- Schack, E.,** & Schack, M. (1989, Spring). Guide to online databases for higher education. *Collegiate Microcomputer*, 7(1).
- Schack, M., & **Schack, E.** (1989, January/February). Full-text access available for Link-up. *Link-up*, 6(1).
- Schack, M., & **Schack, E.** (1988, Winter). Gears: A computer simulation to exercise elementary mathematics and problem-solving skills. *The Elementary Mathematician*, 2(4).
- Schack, E.** (1988, November). Using SCIL Online. *Computers in Libraries (formerly Small Computers in Libraries)*, 8(10).
- Schack, E.,** & Schack, M. (1988, March). Teaching and learning Logo in Jamaica, West Indies: A cross-cultural experience. *The Logo Exchange*, 6(7).
- Schack, E.** (1988, February). The application of electroencephalography to computer assisted instruction: A conceptual framework. (ERIC Document Reproduction Service No. ED 301 149).
- Schack, E.,** & Schack, M. (1987, May). Online data retrieval using Boolean logic. *Computers in Libraries (formerly Small Computers in Libraries)*, 7(5).

Published monographs

- Lovell, N., Piland, W., & **Schack, E.** (1984). *The status of collective bargaining in Illinois community colleges, 1983-84*. Springfield, IL: Illinois Community College Trustees Association and Illinois State University.
- Piland, W., Batsche, C., Klitzke, P., & **Schack, E.** (Project staff) (1984). *Community college linkages: Impact of the DAVTE Special Needs Addendum on the delivery of support services at the community college*. Springfield, IL: Illinois State Board of Education, Department of Adult, Vocational and Technical Education.

Published reviews

- Schack, E. (2002, Summer). Software review: Mia’s Math Adventure: Just in Time. *Science Activities*, 39(2).
- Schack, E. (2001, Summer). Software review: Mia2: Romaine’s New Hat. *Science Activities*, 38(2).

- Schack, E. (1999, Winter). Book review: Ross C., SQUARES: Shapes in Math, Science, and Nature and TRIANGLES: Shapes in Math, Science, and Nature. *Science Activities*, 35(4).
- Schack, E. (1998, October). Book review: Nayer, J. Early Math Program: What's the Shape. *Teaching Children Mathematics*, 5(2).
- Schack, E. (1998, Summer). Book review: Greens C., et al. MEGA Projects: Math Explorations and Group Activity Projects. *Science Activities*, 35(2).
- Schack, E. (1997, Spring). Book review: McConnell, H. The search for .7854. *Science Activities*, 34(1).
- Schack, M., & Schack, E. (1991, September/October). Databases: Going online for audiovisual information. *Media & Methods*, 28(1).
- Schack, M., & Schack, E. (1991, May/June). Databases: CompuServe's Gulf Crisis Forum. *Media & Methods*, 27(5).
- Schack, E., & Schack, M. (1991, March/April). Databases: ERIC Calendar of Education-Related Conferences on GTE Education Services. *Media & Methods*, 27(4).
- Schack, M., & Schack, E. (1991, January/February). Databases: EdLINC. *Media & Methods*, 27(3).
- Schack, M., & Schack, E. (1990, November/December). Databases: The Education Directory. *Media & Methods*, 27(2).
- Schack, M., & Schack, E. (1990, September/October). Databases: CompuServe's Education Forums. *Media & Methods*, 27(1).
- Schack, M., & Schack, E. (1990, May/June). Databases: Finding microcomputer software online. *Media & Methods*, 26(5).
- Schack, M., & Schack, E. (1990, March/April). Databases: Department of Education online service. *Media & Methods*, 26(4).
- Schack, E., & Schack, M. (1990, January/February). Databases: The Academic Index. *Media & Methods*, 26(3).
- Schack, M., & Schack, E. (1989, November/December). Databases: Investigating NASA Spacelink. *Media & Methods*, 26(2).
- Schack, M., & Schack, E. (1989, September/October). Databases: Audio-visual materials online. *Media & Methods*, 26(1).
- Schack, M., & Schack, E. (1989, May/June). Databases: Book-browsing online. *Media & Methods*, 25(5).
- Schack, M., & Schack, E. (1989, March/April). Databases: Popular magazines and journals. *Media & Methods*, 25(4).
- Schack, M., & Schack, E. (1989, January/February). Databases: Peterson's college selection service. *Media & Methods*, 25(3).

Refereed and Invited Presentations

International

- Choy, B. H., Dindyal, J., Lee, M. Y., & Schack, E. O. (July 2016). *Mathematics teacher noticing: Expanding the terrains of this hidden skill of teaching*. 13th International Congress on Mathematical Education. Hamburg, Germany.
- Fisher, M. H., Schack, E. O., Thomas, J. N., & Jong, C. (July 2016). *Changes in pre-service teachers' attitudes toward mathematics: Differences in traditional and online approaches*. Poster. 13th International Congress on Mathematical Education. Hamburg, Germany.
- Fisher, M. H., Schack, E. O., Wilhelm, J., Thomas, J., McNall-Krall, R., & Jong, C. (July 2014). *Teacher Noticing: A Hidden Skill of Teaching*. Working Session to be facilitated at the International Conference of The International Group of the Psychology of Mathematics Education. Vancouver, British Columbia.

National

- Fisher, M. H., Jong, C., Thomas, J., **Schack, E. O.** (February 2020). *Mathematical teacher decisions: The analytical lens matters*. Association of Mathematics Teacher Educators Annual Conference. Phoenix, AZ.
- Jong, C., Dueber, D., **Schack, E. O.**, Fisher, M. H., Thomas, J. (November 2019). *What role does professional noticing play? Exploring connections to affect and pedagogical content knowledge*. Psychology of Mathematics Education – North America Annual Conference. St. Louis, MO.
- Thomas, J. N., Brown, D., Reeves, K., Jong, C., Fisher, M., **Schack, E. O.** (November 2019). *Perceived ethnicity and gender influences on professional noticing of children's mathematical thinking*. Poster. Psychology of Mathematics Education – North America Annual Conference. St. Louis, MO.
- Schack, E. O.**, Simpson, T. L., Granger, E., Marshall, J., & Petrosino, A. (May 2019). *Navigating the accountability landscape: Teacher preparation past and future*. UTeach 13th Annual Conference. Austin, TX.
- Schack, E. O.**, Jong, C., Dueber, D., Thomas, J., & Fisher, M. H. (April 2019). *Computer-programmed decision trees for assessing teacher noticing*. American Educational Research Association Annual Meeting. Toronto, CA. doi: 10.3102/1433600
- Fisher, M.H., Thomas, J., Jong, C., **Schack, E. O.**, Dueber, D. (November 2018). *Professional noticing in complex mathematical contexts: Examining preservice teachers' changes in performance*. North American Chapter of the Psychology of Mathematics Education Annual Conference. Greenville, SC.
- Long, D., Schack, E. O., Odell, M., McGuire, P., & Buchanan, M. (May 2018). *Overcoming the challenges of UTeach replication in rural settings*. UTeach 12th Annual Conference. Austin, TX.
- Thomas, J., Dueber, D., **Schack, E. O.**, Jong, C., & Fisher, M. H. (April 2018). *Professional noticing into practice: An examination of inservice teachers' conceptions and enactment*. American Educational Research Association Annual Meeting, New York, NY.
- Fisher, M.H., Davis, M., Thomas, J., Jong, C., **Schack, E. O.** (November 2017). *Analyzing preservice elementary teachers' content knowledge using the TEDS-M assessment*. School Science and Mathematics Association Conference. Lexington, KY.
- Schack, E. O.** (June 2017). *Teacher noticing and practice-based experiences*. Southeast Regional Noyce Summit. Kennesaw, GA. (invited).
- Jong, C., **Schack, E. O.**, Thomas, J. N., & Fisher, M. H. (April 2017). *Developing an Adaptable Instrument to Measure Professional Noticing Skills*. National Council for Teachers of Mathematics Research Conference, San Antonio, TX.
- Schack, E. O.**, Thomas, J. N., Fisher, M. H. (April 2017). *Decimal Operations: Making Meaningful Moves from Misconceptions*. National Council for Teachers of Mathematics Annual Conference and Exposition, San Antonio, TX.
- Fisher, M. H., Jong, C., Thomas, J. N., & **Schack, E. O.** (January 2016). *Implementing an online professional noticing module and its influence on attitudes toward mathematics*. Association of Mathematics Teacher Educators, Irvine, CA.
- Schack, E. O.**, Thomas, J. N., & Fisher, M.H. (April 2015). *Look Before You Leap: Developing Responsive Mathematics Teaching*. National Council of Teachers of Mathematics Annual Conference, Boston, MA.
- Jong, C., **Schack, E.O.**, Thomas, J. N., & Fisher, M.H. (April 2015). *Flowcharts to Assess Professional Noticing: Methods for Coding Open-ended Responses*. National Council of Teachers of Mathematics Research Conference, Boston, MA.
- Thomas, J. N., Fisher, M.H., Jong, C., **Schack, E.O.**, & Tassell, J. (Feb 2015). *Trajectory-Based Measures of Professional Noticing Capacities*. Association of Mathematics Teacher Educators. Orlando, FL.

- Schack, E. O.**, Eisenhardt, S., Fisher, M. H., Jong, C., Tassell, J., & Thomas, J. (April 2014). *An Instructional Model to Develop Preservice Teachers' Professional Noticing Skills*. National Council of Teachers of Mathematics Research Conference, New Orleans, LA.
- Fisher, M. H., Thomas, J., Eisenhardt, S., **Schack, E. O.**, Jong, C., & Tassell, J. (April 2014). *Correlating Professional Noticing and Mathematics Knowledge for Teaching*. National Council of Teachers of Mathematics Research Conference, New Orleans, LA.
- Schack, E. O.**, Fisher, M. H., Thomas, J., & Eisenhardt, S. (November 2013). *Learning to Professionally Notice: Pre-Service Elementary Teachers' Attitudes Toward Mathematics in Context*. Chicago, IL: Psychology of Mathematics Education – North American Chapter.
- Schack, E. O.**, Fisher, M. H., & Thomas, J. (November 2013). *Look before you leap: Using children's thinking to target instruction*. National Council of Teachers of Mathematics, Louisville, KY.
- Eisenhardt, S., Fisher, M. H., **Schack, E. O.**, Thomas, J., Tassell, J., & Yoder, M. (April 2013). *The impact of a professional noticing numeracy module on elementary preservice teachers' attitudes toward mathematics*. Paper. American Educational Research Association, San Francisco, CA.
- Schack, E. O.**, & Fisher, M. H. (January 2013). *Collaborative Research: Noticing Numeracy Now (N³)*. Poster. American Association for Advancement of Science and National Science Foundation CCLI/TUES PI Conference. Washington, DC.
- Fisher, M. H., **Schack, E. O.**, Thomas, J., Eisenhardt, S., Yoder, M., & Tassell, J. (November 2012). *The Stages of Early Arithmetic Learning: A context for learning to professionally notice*. Paper. North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA). Kalamazoo, MI.
- Thomas, J. N., **Schack, E.**, Fisher, M., Eisenhardt, S., Yoder, M. & Tassell, J. (April 2012). *Noticing Numeracy Now (N³): Pre-service Teachers' Abilities to Attend to Children's Mathematical Thinking*. American Educational Research Association (AERA), Vancouver, BC.
- Thomas, J., Fisher, M., & **Schack, E.** (February 2012). *Noticing Numeracy Now (N³): Developing preservice teachers' professional noticing of children's mathematical thinking*. Association of Mathematics Teacher Educators (AMTE) Sixteenth Conference, Fort Worth, TX.
- Thomas, J., **Schack, E.**, Tassell, J., & Yoder, M. (April 2011). *Noticing Numeracy Now (N³): Focusing on children's mathematical thinking*. National Math Recovery Council Conference, Louisville, KY.
- Eisenhardt, S., Fisher, M. H., **Schack, E. O.**, Tassell, J., & Thomas, J. (March 2011). *Noticing Numeracy Now (N³): A collaborative research project to develop pre-service teachers' abilities to professionally notice children's mathematical thinking*. Research Council on Mathematics Learning Annual Conference, Cincinnati, OH.
- Whitehead, V., & **Schack, E.** (April 2001). *Simple machines: Integrating math and physics in primary grades using K'Nex*. National Council of Teachers of Mathematics Conference, Orlando, FL.
- Schack, E.** (April 1992). *Mathematical connections for algebra readiness: "Keep Your Balance!"* National Council of Teachers of Mathematics, Nashville, TN.

Regional, State, and Local

- Schack, E. O.** & Thomas, J. N. (November 2015). *Children's Mathematical Thinking: Teaching Responsively*. *Kentucky Council for Exceptional Children Conference*. Louisville, KY.
- Schack, E. O.** (February 2015). *Clinical Initiatives: Near, Far, Today, Tomorrow*. *College of Education Winter Retreat*, Morehead, KY. (invited).
- Schack, E. O.** (June 2015). *Experiencing Research*. *EDD 800 Symposium*, Morehead, KY. (invited).
- Eisenhardt, S. & **Schack, E. O.** (November 2012). *Preparing preservice elementary teachers to attend, interpret, and make instructional decisions related to children's early numeracy development*. Poster. *Mid-South Educational Research Association (MSERA)*. Lexington, KY.

- Fisher, M. H., & **Schack, E. O.** (November 2012). Measuring professional noticing: Rubric development and calibration. Poster. *Mid-South Educational Research Association (MSERA)*. Lexington, KY.
- Elam, K., **Schack, E. O.**, Hunter, A. E., & Hunter, S. (March 2012). *The Standards for Mathematical Practice are essential for mathematics proficiency*. Kentucky Center for Mathematics Annual Conference, Lexington, KY.
- Fisher, M., Thomas, J. N., **Schack, E.** & Eisenhardt, S. (October 2011). *Noticing Numeracy Now: Focusing on children's mathematical thinking*. National Council of Teachers of Mathematics Regional Conference, St. Louis, MO.
- Thomas, J., Fisher, M.H., **Schack, E.O.** (April 2011). *Noticing Numeracy Now (N³): A collaborative research project to develop pre-service teachers' abilities to professionally notice children's mathematical thinking*. University of Kentucky STEM Education Research Conference, Lexington, KY.
- Schack, E. O.**, Thomas, J., Fisher, M.H., Tassell, J., & Yoder, M. (February 2011). *Noticing Numeracy Now (N³): A collaborative research project to develop pre-service teachers' abilities to professionally notice children's mathematical thinking*. Kentucky Center for Mathematics Conference, Lexington, KY.
- Schack, E. O.**, Fisher, M.H., & Eisenhardt, S. (October 2010). *N³: Noticing Numeracy Now*. Kentucky Council of Teachers of Mathematics, Somerset, KY.
- Schack, E. O.** (January 2006). *Report of the Appalachian Math Science Partnership: Math for Teacher Group*. Kentucky Council on Postsecondary Education 2 + 2 Meeting, Frankfort, KY. (invited).
- Ewers, M., & **Schack, E.** (November 2005). *Exploring Assessment for Differentiation*. Kentucky Council of Teachers of Mathematics Conference, London, KY.
- Lindsey, J., & **Schack, E.** (November 2005). *Content-Focused Coaching in Mathematics*. Kentucky Council of Teachers of Mathematics Conference, London, KY.
- Ratliff, M., & **Schack, E.** (November 2005). *Introduction to Japanese-style Lesson Study*. Kentucky Council of Teachers of Mathematics Conference, London, KY.
- Schack, E.** (August 2005). *Status of Committee on Mathematics Achievement*. Kentucky Board of Education Meeting, Frankfort, KY.
- Lindsey, J., McGatha, M., Miriti, L., Murray, S., & **Schack, E.** (September 2005). *Content-focused Coaching in Mathematics*. Appalachian Association of Mathematics Teacher Educators Conference.
- Schack, E.** & Miriti, L. (September 2004). *AMSP Math for Teachers Group: Summary and Next Steps*. Pre-Service Teacher Transition Workshop: Preparing Students for Success as Mathematics and Science Educators, Prestonsburg, KY.
- Schack, E.** (July 2004). *Mathematics Content for Elementary and Middle School Teachers: Follow-up session*. Joint AMSP/ARSI Summer Academy, Kingsport, TN.
- Thompson, K., & **Schack, E.** (May 2004). *Assessment: Examining Pre-service Teacher Work in Probability and Statistics*. AMSP Math for Teachers Workshop, Richmond, KY. (invited)
- Schack, E.** (December 2003). *Resources for selecting and evaluating mathematics curricula*. Considering New Curricula Seminar, Lexington, KY. (invited)
- Schack, E.**, Thompson, K., & Yoder, M. (July 2003). *Mathematics Content for Elementary and Middle School Teachers*. Joint AMSP/ARSI Summer Academy, Lexington, KY.
- Schack, E.** (February 2003). *Simple machines: Integrating math and physics in primary grades using K'Nex*. The Ohio Schoolnet State Technology conference. Columbus, OH.
- Schack, E.** (November 2002). *Simple machines: Integrating math and physics in primary grades using K'Nex*. Conference of the Illinois Science Teachers Association, St. Charles, IL.
- Schack, E.** & Freeland, K., Hammons, K. Willis, M. (March 1999). *Instructional formats for curriculum integration*. Southern Early Childhood Association Conference, Nashville, TN.

- Lafferty, K., & **Schack, E.** (April 1996). *Integrated Learning and Mathematics Concepts: What, How, and When*. Presentation delivered by Lafferty, K. based on material created by Schack, E. National Council of Teachers of Mathematics, San Diego, CA.
- Schack, E.,** & Schack, M. (March 1995). *Computer software appropriate for multi-learning styles of prereading and emergent reading children*. Clearinghouse for School Services Cultural Diversity Conference: All Children Learning, Morehead, KY.
- Schack, E.** (February 1995). *Strategies for Job Sharing: One Couple's Experience*. Growth & Research Organization for Women Annual "GROW" Conference, Lexington, KY.
- Schack, E.,** Moderator. (November 1994). *Learning and communicating math and science*. Wilma E. Grote Symposium for the Advancement of Women, Morehead, KY.
- Schack, E.** (October 1994). *Mathematics software for early childhood*. Kentucky Council of Teachers of Mathematics Fall Conference, Union, KY.
- Schack, E.** (September 1993). *How much of a peanut is edible? Measurement with a simple balance scale*. Kentucky Council of Teachers of Mathematics Conference, Lexington, KY.
- Schack, E.** (August 1993). *Effective questioning techniques in K-4 mathematics: Conducting informal interviews*. District VI Math and Science Alliance Conference, Morehead, KY.
- Schack, E.** (October 1991). *Mathematical connections for pre-algebra: "Keep Your Balance!"* National Council of Teachers of Mathematics Central Regional Conference, Louisville, KY.
- Schack, E.** (April 1991). *Connecting the Concrete to the Abstract of Algebra: "Keep Your Balance!"* West Virginia Council of Teachers of Mathematics Annual Conference, Huntington, WV.
- Schack, E.** (March 1991). *Manipulatives and Software for Algebra Readiness*. Annual Kentucky Educational Technology Conference, Lexington, KY.
- Schack, E.** (November 1990). *"Keep Your Balance!": Mathematical connections for pre-algebra*. Kentucky Council of Teachers of Mathematics Annual Conference, Lexington, KY.
- Schack, M., & **Schack, E.** (March 1990). *Computer-mediated communications and information retrieval for education*. Midwest Education & Technology Conference, St. Louis, MO.
- Schack, E.,** & Schack, M. (February 1990). *Problem solving software for K-12 math: Commercial and public domain*. Kentucky Educational Technology Conference, Louisville, KY.
- Schack, M., & **Schack, E.** (February 1990). *Online computer-mediated information retrieval for education*. Kentucky Educational Technology Conference, Louisville, KY.
- Schack, M., & **Schack, E.** (March 1989). *Electronic proofreading software for education*. Kentucky Educational Computing Conference, Lexington, KY.
- Schack, E.** (October 1988). *Computer assisted writing*. Fall Conference of the Eastern Kentucky Council of Teachers of English, Prestonsburg, KY.
- Schack, E.** (February 1988). *The application of electroencephalography to computer assisted instruction: A conceptual framework*. Growth & Research Organization for Women Conference, Morehead, KY.
- Schack, M., & **Schack, E.** (October 1987). *Electronic proofreading software for your personal computer: What it can do for you and your students*. Eastern Kentucky Council of Teachers of English, Prestonsburg, KY.
- Schack, M., & **Schack, E.** (February 1987). *Microcomputer software for technology education*. Achieving Technological Literacy, Illinois Industrial Education Association, Peoria, IL.
- Schack, E.,** & Schack, M. (November 1986). *Software that teaches higher order thinking skills*. Illinois State University Computer Services' Computers in Education Conference, Normal, IL.
- Schack, E.,** & Schack, M. (October 1986). *LOGO, the computer language for teaching and learning*. Better Teaching, Better Mathematics: The Perfect Mix for '86, the 38th Annual Conference of the Illinois Council of Teachers of Mathematics, Champaign, IL.

- Schack, M., & **Schack, E.** (October 1986). *Computer mediated communications and information retrieval: A live demonstration*. 15th Annual Quincy Conference for Educators, Quincy, IL.
- Schack, M., & **Schack, E.** (October 1986). *Information online for technology education*. Technology: A Global Influence, the 19th Annual National Conference of the National Association of Industrial Technology, Normal, IL.
- Schack, E.**, & Schack, M. (July 1986). *Telecomputing and problem-solving software: A series of workshops*. Summer Institute for Computer Learning, Springfield, IL.
- Schack, E.**, & Schack, M. (July 1986). *Problem solving software*. Mathematics Summer Institute for Elementary Teachers, Decatur, IL.
- Schack, M., & **Schack, E.** (April 1986). *Computer-mediated communications: A live demonstration of online information retrieval*. Illinois State University Computer Conference, Normal, IL.
- Schack, M., & **Schack, E.** (March 1986). *Computer-mediated communications*. Annual Accent on Better Curriculum Conference for Educators of the Gifted, Peoria, IL.
- Schack, E.**, & Schack, M. (March 1984). *LOGO, the computer language for learning*. Annual Accent on Better Curriculum Conference for Educators of the Gifted, Decatur, IL.
- Schack, E.** (December 1983). *LOGO, the computer language for learning: A hands-on workshop*. Graduate level educational computing courses at Illinois State University, Normal, IL.
- Ray, S., & **Schack, E.** (March 1982). *Computers in early childhood education*. Sixth Annual Early Childhood Conference, Birmingham, AL.

Seminars and Workshops Planned and Facilitated

- Dobranski, M., Rowe, A., & **Schack, E. O.** (June 15-18, 2016). *MSUTeach Replication Faculty Staff Workshop*. Morehead, KY.
- Sheffield, L., McGatha, M., & **Schack, E.** (June 12-14, 2006). *Kentucky Coaches Institute: Kentucky Days*. Newport, KY.
- Schack, E.**, Yoder, M., Teager, A. & et al. (June 4-8, 2006). *Elementary School Math Core Content Institute: Professional Development for Inservice Teachers*. Richmond, KY.
- Miriti, L., Ratliff, M., **Schack, E.**, & Coen, P. (May and November 2005). *Lesson Study Research Lessons*. Richmond, KY.
- Lindsay, J., Miriti, L., & **Schack, E.** (October 2005). *Conceptual Approach to Elementary School Math Institute: An Institute for Inservice Teachers, Follow-up Session*. Lexington, KY.
- Schack, E.**, & Schack, M. (July 2005). *Early Childhood Teacher Academy: Mathematics*. Morehead, KY.
- Lindsay, J., Miriti, L., & **Schack, E.** (June 2005). *Conceptual Approach to Elementary School Math Institute: An Institute for Inservice Teachers*, Richmond, KY.
- Schack, E.**, & Cebulla-Thompson, K. (May 19-21, 2005). *Math Content for Elementary and Middle School Preservice Teachers: Appalachian Math Science Partnership (AMSP) College Faculty Seminar*. Morehead, KY.
- Schack, E.** (January 2005). *Appalachian Math Science Partnership (AMSP) Lesson Study Workshop: Dr. Tom Judson, Harvard University, Speaker*. Lexington, KY.
- Schack, E.** (June 2004). *K-2 Mathematics Professional Development Workshop*. Estill County, KY.
- Schack, E.**, & Dickson, T. (June 2004). *Investigations in Number, Data, and Space: Putting Together and Taking Apart: Professional development workshop for classroom teachers*. Morehead, KY.
- Schack, E.**, & Cebulla-Thompson, K. (May 17-20, 2004). *Math Content for Elementary and Middle School Preservice Teachers: Appalachian Math Science Partnership (AMSP) College Faculty Seminar*. Richmond, KY.

- Schack, E.**, Teager, A., & Brown, N. (Spring 2004). *Developing Mathematical Ideas: Building a system of tens: Professional development workshop for classroom teachers (seven session workshop)*. Morehead, KY.
- McGatha, M., Darcy, P., **Schack, E.**, & Allen, R. (December 7-9, 2003). *Considering New Curricula Seminar*. Lexington, KY.
- Schack, E.** & Schack, M. (July 2002). *Mathematics session*, Graduate Gifted Education Practicum, directed by Dr. Adele Moriarity, Morehead, KY.
- Ahmadi, D., Schack, M., & **Schack, E.** (1997-2007, annually). *Family Mathematics and Computer Night, MSU Mathematics Week*, Morehead, KY.
- Schack, E.** & Schack, M. (1987-2002, periodically). Computer workshops and mathematics workshops for various public elementary school groups, Morehead Montessori, Rowan County Gifted students, Cub Scouts and others as requested.

Textbook Reviews

- Reviewed Middle School Mathematics Methods, Allyn & Bacon, June 2003.
- Reviewed Teaching Elementary School Mathematics: A Resource for Field Experiences by Nancy L. Smith, et al, John Wiley & Sons, 2002.
- Reviewed Learning to Solve Problems with Technology: A Constructivist Approach, 2nd ed., by Jonassen et al, Merrill Prentice Hall, 2002.
- Reviewed six-chapter proposal for textbook: Elementary Mathematics Methods, McGraw-Hill, 2000.
- Reviewed best-selling math methods text, Elementary and Middle School Mathematics: Teaching Developmentally, 3rd ed., by John A. Van de Walle, Addison Wesley Longman, 1997. Excerpt from my review appears on the back cover of the third edition.
- Reviewed three textbook proposals: Introduction to Computers & Technology, Learning with Technology, and Integrating Computer Technology into the Classroom for Prentice-Hall, 1995 (with Mark Schack).
- Reviewed textbook, A Mac for the Teacher, West Educational Publishing, 1993.
- Reviewed prospectus for Principles of Teaching and Learning Mathematics, an interactive multimedia text for Merrill/Macmillan Publishing Company (June 1990).
- Reviewed prototype of LOGO language software for Tandy Corporation (1985).

Professional Memberships

- American Educational Research Association
 - Rural Education Special Interest Group
 - Division K: Teaching and Teacher Education
 - Division C: Learning and Instruction
 - Learning Sciences Special Interest Group
- Association of Mathematics Teacher Educators Appalachian Association of Mathematics Teacher Educators (Charter Member and First President) (organization shifted to state level Kentucky Association of Mathematics Teacher Educators, 2014)
- Kentucky Association of Mathematics Teacher Educators
- National Council of Teachers of Mathematics
- Psychology of Mathematics Education North America

Service

Ongoing service to professional organizations:

- Journal Article Reviewer (review approximately 6-8 articles per year)

Journal of Mathematical Behavior
Journal of Mathematics Teacher Education
Journal for Research in Mathematics Education
Mathematics Teacher Educator
Mathematics Teacher: Learning & Teaching PK-12
Mathematics Thinking and Learning
School Science and Mathematics
The Mathematics Educator
ZDM: Mathematics Education

- Conference Proposal Reviewer
Association of Mathematics Teacher Educators Annual Conference
Psychology of Mathematics Education – North America Conference

National

- National Science Foundation Grant Reviewer, 2016.
- Education Deans for Justice and Equity (EDJE), a nationwide alliance of leaders in colleges and schools of education, one of over 350 signatories of *Seven Trends to Reform U.S. Teacher Education, and the Need to Address Systemic Injustices*, authored by EDJE and the National Education Policy Center, 2019.
- Member of Advisory Board for “Effective Use of Mathematics Instructional Materials,” a National Science Foundation Grant awarded to Educational Development Center, Inc. of Boston, MA. 2004-2007.

Regional

- Appalachian Mathematics Science Partnership Reflective Conference Planning Committee, 2010.
- Chair, Nomination Committee, Appalachian Association of Mathematics Teacher Educators, 2008.
- Reviewer, Partnership Enhancement Project Grant proposals, May 2007
- President, Appalachian Association of Mathematics Teacher Educators, 2005-2007.
- Appalachian Mathematics Science Partnership Mathematics Advisory Council, 2004-2006.
- Higher Education Representative, Appalachian Math Science Partnership Mathematics Advisory Council, 2003-2006.
- External Evaluator for Partnership Enhancement Project Grant awarded to Powell and Lewis Counties and Eastern Kentucky University, Spring 2005.
- Speaker selection committee for the ACCLAIM Conference on the Math Content Preparation of Pre-service Teachers, Lexington, KY, September 2005.
- Planning Committee, Joint AMSP/ARSI Summer Academy, Spring 2004.
- Speaker Selection Committee, ACCLAIM Conference on the Math Content Preparation of Pre-service Teachers, 2004.
- Planning Committee, Joint AMSP/ARSI Summer Academy, Spring 2003.
- Annual Judge, Northeast Regional Science Fair, 1988 - 1995.

State

- Prichard Committee Kentucky Collaborative for Families and Schools Advisory Council. Lead on Higher Education Task Force, 2020-present.
- Prichard Committee Equity Coalition, 2020-present.
- Kentucky Early Learning (K-3) Round Table Higher Education Representative, August 2019, three full-day sessions). Convened by the Kentucky Department of Education and facilitated by SREB, Atlanta, GA. Task: to review legislation, research, and data regarding Early Learning and teacher preparation to make recommendations for changes to state statutes and regulations.

- Chair, Kentucky Committee for Mathematics Achievement, 2010-2012; Co-Chair, 2016-2018; Member, 2005-2019. In 2019, Kentucky Governor disbanded the committee through executive order and redesigned the committee structure eliminating all but one higher education representative.
- Chair, Kentucky Committee for Mathematics Achievement, Communications Subcommittee, 2015-2016.
- Executive Committee, Vanguard East/Kentucky Rising, 2013-2016.
- Chair, Kentucky Elementary Mathematics Specialist Committee, 2010.
- Higher Education Faculty Representative, Senate Bill 1 College Readiness Task Force, 2009.
- Higher Education Faculty Representative, Race to the Top Teacher Effectiveness Task Force, 2009-2010.
- Regional University Representative, KCTCS Mathematics Curriculum Committee, 2004-2006.
- Invited participant to the Collaborating Partners Meeting to discuss and suggest revisions to two proposed mathematics legislation bills for Kentucky, December 2004.

University

- General Education Council, 2020-2021.
- Faculty Senate, President-Elect, 2020-2021.
- Faculty Senate, Academic Issues Chair, 2020-2021.
- Undergraduate Curriculum Committee, August 2020-August 2022.
- Gray Associates Review Team, 2020-present.
- University Promotion Committee, 2019-present.
- University Research and Creative Productions Committee, 2019-2020.
- Provost Search Committee, 2018.
- Strategic Planning Committee, Subcommittee: Rankings, Reputation, and Regional Responsiveness, Fall 2017.
- Open House and SOAR events, ongoing.
- Teacher Education Council, 2013-2018.
- Celebration of Student Scholarship Committee, ongoing.
- Celebration of Student Scholarship Judge, multiple years
- Craft Academy Advisory Board, 2015-2019.
- Pac-26 Reconciliation Committee, Spring 2017.
- Excellence in Teaching Committee, 2016-2019.
- Faculty Senate, 2016-present.
- Faculty Senate Faculty Welfare & Concerns Subcommittee, 2017-2020.
- Faculty Senate Issues Subcommittee, 2016-17.
- Title IX Hearing Board, 2017-present.
- Panel Member, New Faculty Workshop, 2013-2014.
- Celebration of Student Scholarship Planning Committee, 2013-present.
- Teacher Education Council, 2012-2014.
- Chair, Teacher Education Council Dispositions Workgroup, 2012-2013.
- Field Experience Ad Hoc Committee, 2011.
- Student Media Board, 2010-2011.
- Graduate Committee, 2010-2011.
- MSU Sustainability and Green Committee, 2009-2010.
- General Education Council, 2009-2011.
- University Promotion Committee, 2007-2008.

- University Professional Development Committee, 2006-2007.
- Ad Hoc Committee on University scheduling, 2006-2007.
- Ad Hoc Committee on Campus Bicycling, 2006.
- Ad Hoc Committee on Alternative Admissions, 2005-2007.
- Chair, Academic Policies Senate Subcommittee and member of Faculty Senate Executive Committee, 2003-2006.
- Faculty Senate Representative, 2002 - 2006.
- Academic Policies Senate Subcommittee, 2002 - 2006.
- Undergraduate Curriculum Committee, 2004- 2005.
- International Advisory Committee, 2003-2005.
- Graduate Committee, 2002-2004.
- NCATE Faculty Qualifications Committee, 2002 -2003.
- Ad Hoc Committee for the Improvement of Mathematics and Science Teaching, 1999 - 2001.
- President's Task Force: Teaching the Teachers for the Twenty-First Century and the Teacher Education Recruiting subcommittee, 1999 - 2000.
- Committee for Carnegie Teaching Academy Campus Program, 1998 -1999.
- NCATE & SACS Assessment Committees, 1997.
- Associate Counselor, Epsilon Theta Chapter, Kappa Delta Pi, 1994-1996.
- Chair, Ad Hoc Committee to raise Teacher Education Program Admission Standards, 1994 - 1995.
- University Press of Kentucky Committee, 1994 - 1995.
- Ad Hoc Faculty Software Committee, 1994.
- Institutional Animal Care and Use Committee, 1993 - 1995.
- Chair, Ad Hoc Committee to define Computer Competency for Teacher Education, 1993.
- NCATE Governance Committee, 1993.
- Teacher Education Council, 1992 - 1995.
- Chair, Program Committee, Wilma E. Grote Symposium for the Advancement of Women, 1994.
- Paper presentation referee, Wilma E. Grote Symposium for the Advancement of Women, 1992-1994.
- Keynote Speaker Committee, Wilma E. Grote Symposium for the Advancement of Women, 1993.
- Assistant Chair, Teacher Education Council, 1992 - 1993.
- Intercollegiate Athletic Committee, 1990.
- Oversight Committee for the IBM Lab for Enhancement of Teacher Education and consulted with College of Arts & Sciences administration and faculty regarding appropriate courseware for elementary education for the IBM Lab for Enhancement of Teacher Education, Spring, 1990.

College

- Undergraduate Curriculum Committee, 2019-2020.
- Middle Grades and Secondary Education Promotion Committee, 2019.
- edTPA Ad Hoc, 2018-2019.
- KACTE Day on the Hill, March 2016 and March 2017.
- Rural Teacher Residency Ad Hoc, Summer 2016.
- Dean Search Committee, 2013.
- Ed.D. Capstone Committees
 - Donovan M. Hawkins
 - Bethany Inman
 - Stacie Slusher
- Promotion Committee, 2013-2014.
- Middle and Secondary Education Tenure and Promotion Committee, 2010-11.

- Promotion Committee, 2004 – 2006.
- Search Committee for Clinical & Field Experience Coordinator resulting in the successful hiring of Mr. Jerry Brunner, Fall 2005.
- Graduate Curriculum Committee, 2000 - 2001.
- Ad Hoc Committee to make recommendations to the President regarding Kentucky Education Reform Act, Spring, 1990.

Department

- Sabbatical Committee, Chair, 2020.
- Mathematics Education Faculty Member Search Committee, Chair, 2020.
- Faculty Mentor for Rebecca Roach, 2019-present.
- Academic and Professional Standards Committee, 2019-present.
- CAEP Program Coordinators, 2017-2019.
- P-5 Program Coordinator
- Partnership Liaison with Tygart Creek Elementary, Carter County Schools, 2014-present.
- ECESE Department Tenure/Promotion Committee, Chair, 2017-2018.
- Reading & Language Arts Faculty Member Search Committee, Chair, 2017.
- Teacher Education Program Interview Committees, annual through 2016-2017.
- Teacher Performance Assessment Capstone Review Committees, 2012-present.
- P-5 Program Revision Committee, 2011-2012.
- General Education Capstone Course Revision Committee, Spring 2011.
- Curriculum Audit Chair, P-5 Education Program, 2008.
- P-5 Education Program Area Coordinator, 2006-2007.
- Faculty mentoring team for Dr. Mattie Decker, 2005-2007.
- Chair or member, TEP Interview Committees, 1987-2017.
- Department Advisory Committee, Fall 2005.
- Faculty mentoring team for Dr. Mee-Ryoung Shon, 2001-2006.
- Counseling, Leadership, Adult and Higher Education Tenure Review Committee, 2006.
- Faculty mentoring team for Dr. Diana Haleman, 2001-2005.
- Chair, Search Committee resulting in successful hiring of Dr. Sara Jane Lindsey, Spring 2005.
- Chair, Department Tenure Committee, including coordinating Tenure Review meetings and letter writing for six tenure track faculty and four faculty emeriti, 2004-2005.
- P-5 Program Assessment Committee, 2003-2004.
- Fixed term faculty evaluation, 2003-2008.
- Chair, Program Review Committee for P-5 Fifth Year and P-5 Master's Degree, 2002.
- Undergraduate Curriculum Committee, 2001-2002.
- Dispositions Implementation Committee, 2001-2002.
- P-5 Undergraduate SACS Assessment Committee, 2000 - 2002.
- Chair, faculty search committee resulted in successful hiring of three faculty members, 1999 - 2000.
- Chair, faculty search committee, 1998 - 1999.
- Co-chair, faculty search committee resulted in successful hiring of one faculty member, 1995.
- Faculty mentoring team for Dr. Karen Lafferty, 1995 - 2001.
- Faculty mentoring team for Dr. Cathy Barlow, 1995 - 1996.
- Treasurer, Social Committee, 1993 - 1994.
- Tenure and Promotion Committee, 1992-present, except in years on College or University level committee)
- Ad Hoc K-4 Enrollment Reduction Planning Committee, 1993.

- Graduate Curriculum Committee, 1993.
- Search committee for Department Chair, 1992.
- Chair, Ad Hoc Field Experience Committee, Fall 1990 - Spring 1991.
- Strategic Planning Committee, Spring, 1990.
- Ad Hoc Field Experience Committee, Spring, 1989 - Spring, 1991.
- Faculty Advisory Committee, 1989-90.

Community Service rendered as a citizen

- Facilitator, Prichard Committee Community Conversations 2.0, Morehead Region, Higher Education Breakout Room, May 27, 2020.
- Appointed by Morehead Mayor to the Joint Morehead-Rowan County-Lakeview Heights Planning and Zoning Commission, 2016-present.
- Senior Housing presentation to various Morehead entities and Farley and Lockett, December 2019.
- Chair, Morehead Rowan County Repair Affair, 2010; Member, 2011.
- Board member, Morehead Area Habitat for Humanity, 2009-2011.
- Citizen member, NewCity Morehead, 2009.
- Sabbatical position, Frontier Housing, non-profit low-income housing organization, Fall 2008.
- Mentor, Rowan County Senior High School Kentucky Youth Assembly Mock Bill Team, November 2008.
- Member of the Morehead United Methodist Church Medical Mission Team, Huamantanga, Peru, June 2007.
- New Cities Initiative, April and May 2006.
- Volunteer, Cave Run Storytelling Festival, 1998-2016.

Early Career Consulting

- Educational consultant, Morehead Montessori, (1998-2002)
- Mathematics education consultant, Breathitt County, June 1990.
- Mathematics education consultant, Rowan County, August 1990, February 1990, September 1989.
- Educational computing consultant, Knott County, July 1989.
- Mathematics education consultant, computer consultant, and visiting teacher to Lucea Elementary and Rusea's High School, Lucea, Jamaica through University of Texas-sponsored international project (1988).
- Educational computing consultant, St. Clement's School, St. Louis, MO (1987).
- Educational computing consultant, Morris School District, IL (1986).
- Educational computing consultant, Yates City School District, IL (1986).
- Educational computing consultant, Central Illinois Educational Service Center, Springfield, IL (1986).
- Computer consultant and visiting teacher to Rusea's High School, Lucea, Jamaica through University of Texas-sponsored international project (1985).