

JUNG Y. COLEN

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502-272-8371

EDUCATION

- Ph.D. in Curriculum and Instruction (with an emphasis in Mathematics Education)
The Pennsylvania State University (2013-2019)
Graduate Student Online Teaching Certificate
- M.Ed. in Elementary and Middle School Mathematics Education
Indiana University of Pennsylvania (2010-2011)
- B.A. in Educational Technology
Ewha Womans University, South Korea (1993-1998)
Teaching Credential: South Korea (grades 7 to 12)

PROFESSIONAL EXPERIENCE

- Associate Professor of Mathematics Education (Aug. 2023-Present) – Bellarmine University
- Associate Professor of Mathematics Education (Aug. 2022-Aug. 2023, with tenure) – Chadron State College
- Assistant Professor of Mathematics Education (Aug. 2020-2022)
- Mathematics Teacher (July 2019-July 2020) – St. Margaret's School (grades 8 to 12)
- Mathematics Instructor (Aug. 2015-Dec. 2018) – Indiana University of Pennsylvania
- Graduate Instructor (Aug. 2013-May 2015) – The Pennsylvania State University
- Graduate Assistant (Aug. 2010-May 2011) – Indiana University of Pennsylvania
- Mathematics Teacher (1995-1998) – Sung Ji Academy (grades 5 to 10)
- Student Teacher (1996) – Ewha Womans University Junior High School (grades 7 to 9)
- Mathematics and Science Workbooks Editor (1996) – Jung Il Academy (grades 7 to 9)
- Private Mathematics and English Tutor (1993-1996)

COURSES TAUGHT

AT BELLARMINE UNIVERSITY (2023-present)

- EDRE 800 Research Methods
- MAT 582 Teaching Secondary Mathematics I
- MAT 582 Teaching Secondary Mathematics II
- MAT 580 Teaching Mathematics in Middle School I
- MAT 581 Teaching Mathematics in Middle School II
- MAT 555 Teaching Mathematics in Elementary School
- MAT 509 Creating Classroom Environment
- EDUG 683 Assessment in STEAM
- EDUC 356 Teaching Mathematics for Middle School
- EDUC 355 Secondary Classroom as Learning Environment
- EDUC 347 Teaching Mathematics: Secondary
- EDUC 336 Teaching Mathematics for Elementary School
- MATH 105 College Algebra

AT CHADRON STATE COLLEGE (2020-2023)

- EDCI 634 Improvement of Instruction in Mathematics in Elementary/Middle School (2020-2023)
- MATH 655 Scholarly Project (2023)
- MATH 540/440 Mathematics Education Standards (2021, 2023)
- MATH 238 Mathematics for Prospective Elementary and Middle School Teachers II (2020-2023)
- MATH 235 Mathematics for Prospective Elementary and Middle School Teachers I (2020-2023)
- MATH 137 Mathematics Topics for the Elementary Teachers (2020-2023)

AT ST. MARGARET'S SCHOOL (2019-2020)

- Geometry (2019-2020)

- Advanced Algebra (2019-2020)
- Precalculus (2019-2020)

AT INDIANA UNIVERSITY OF PENNSYLVANIA (2016-2019)

- MATH 101 Foundations of Mathematics (2017-2019)
- MATH 151 Elements of Mathematics (2019)
- MATH 100 Intermediate Algebra(2017-2018)
- DVST 083 Introduction to College Mathematics (2015-2018)
- DVST 093 Developmental Mathematics, Elements of Algebra (2015-2018)

AT PENNSYLVANIA STATE UNIVERSITY (2013-2015)

- MTHED 420 Teaching Mathematics in the Elementary Schools (2013-2015)

PEER-REVIEWED SCHOLARSHIP

- **Colen, J.**, Cho, H., Pak, B., Colen, Y., Yeo, S., Kwon, N., Kim, J., & Park, J. Teacher's talk moves and students' proficiency in constructing viable arguments and critiquing the reasoning of others. *Journal of Mathematical Behavior*. [Manuscript submitted for review].
- **Colen, J.** (in press). Chapter 4: Teaching and learning & assessment. In Kim, J. et al., Teacher Manual for Mathematics in Grade 1 & Grade 2 (pp. 55-81). South Korea Ministry of Education.
- **Colen, J.** & Lein, A. (in press) Embarking on authentic and creative professional growth. *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education* [Special Issue: Mathematical Creativity].
- **Colen, J.**, Colen, Y. & Park, B. (in press). "Enhancing STEM Education through Collaborative Game Nights." In L. Sun, & C.Y. Lin (Eds.), Cases on Informal Learning for Science and Mathematics Education. IGI Global Scientific Publishing. [10.4018/979-8-3693-1894-2](https://doi.org/10.4018/979-8-3693-1894-2)
- **Colen, J.** & Colen, Y. (2024). Fostering empowerment of students with low self-confidence in mathematics. *Indiana Mathematics Teacher*, (2), 14-18.
- Litster, K., Kang, B., Corven, J., Krejci, B., Kirshner, S., Bui, M., Swartz, M., **Colen, J.**, & Falahola, B. (2024). Intentionality of diagnostic interview designs for math and pedagogical knowledge. In K.W. Kosko, J. Caniglia, S.A. Courtney, M. Zolfaghari, & G.A. Morris (Eds.), *Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 548-553).
- **Colen, J.**, & Colen, Y. S. (2024). Exploring preservice teachers' mathematical identities across ethnic backgrounds: Insights from mathematical autobiographies. In K.W. Kosko, J. Caniglia, S.A. Courtney, M. Zolfaghari, & G.A. Morris (Eds.), *Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 239-244).
- Pak, B., **Colen, J.**, Kwon, N., Yeo, S., Park, J., & Kim, J. (2024). Teacher perspectives on harnessing AI in mathematics classrooms [Special Issue: Artificial Intelligence in Mathematics Teacher Education]. [Connections](#).
- Kwon, N., **Colen, J.**, Yeo, S., Cho, H., & Kim, J. (2023). Mathematics teacher educators' noticing on microteaching. *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education*, 26(4), 311-331.
- Yeo, S., **Colen, J.**, Kwon, N., Cho, H., Kim, J., & Lim, W. (2022). Development of mathematical task analytic framework: Proactive and reactive features. *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education*, 25(4), 285-309.
- **Colen, J.**, Yeo, S., Kwon, N., Cho, H., & Kim, J. (2021). Teaching moves for students' mathematical proficiencies in multiplication lessons. *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education*, 24(4), 279-312.
- Colen, Y. & **Colen, J.** (2021). Where's the procedural fluency? U.S. fifth graders' demonstration of the standard multiplication algorithm. *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education*, 24(1), 1-27.
- **Colen, J.**, Kwon, N., Yeo, S., Kim, Cho, H., Lim, W., & Kim, J. (2020). Mathematics teacher educators' shared vision on microteaching. *Proceedings of the International Conference of the Korean Society of Mathematical Education*, Seoul, South Korea, 97-200.

- Semenov, M., Colen, Y. & **Colen, J.** (2020). An introduction to the Edumatrix and its didactic capabilities, *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education*, 23(1), 47-62.
- **Colen, J.**, & Colen, Y. (2019). *Liberal Arts Mathematics*. Dubuque, IA: Kendall Hunt Publishing Company.
- **Colen, J.** (2019). Elementary school teachers' beliefs of the Common Core State Standards for Mathematical Practice, *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education*, 22(1), 47-82.
- **Colen, J.** (2019). Elementary school teachers' conceptions of the Common Core State Standards for Mathematical Practice, [Doctoral dissertation, Pennsylvania State University]
https://etda.libraries.psu.edu/files/final_submissions/19095
- Chapin, S., O'Connor, C., & Canavan, N. (2016). Classroom discussions in math: A teacher's guide for using talk moves to support the Common Core and more, grades K-6. (J. Kim, J. Lee, **J. Colen**, S. Kim, & D. Lee, Trans.). Math Solutions. (Original work published 2013)
- Colen, Y., **Colen, J.**, & Kim, J. (2015). The common core mathematics standards and implications for the South Korean curriculum. In J. Kim, I. Han, M. Park, & J. Lee (Eds.), *Mathematics education in Korea: Contemporary trends in research in Korea* (pp. 191-232). World Scientific Publishing Company.
- **Colen, J.**, Colen, Y., & Kim, J. (2015). Elementary school teachers' facilitation of math talk. *Proceedings of the Jangjeon Mathematical Society*, 18(4), 579-591.
- Colen, Y., & **Colen J.** (2014). *Intermediate algebra: Learning through classroom discourse*. Kendall Hunt Publishing Company.
- Kim, J., Colen, Y., & **Colen, J.** (2012). Reform-based instruction in Korea: Looking over its promises to discover its successes. In J. Kim, I. Han, M. Park, and J. Lee (Eds.), *Mathematics Education in Korea: Curricular and Teaching and Learning Practices* (pp. 104-129). World Scientific Publishing Company.
- Colen, Y., Navaratna, C., **Colen, J.**, & Kim, J. (2012). Power indices and U.S. presidential elections. *Mathematics Teacher*, 106(3), 184-190.

SCHOLARLY PRESENTATIONS

- "AI-Integrated Mathematics Teacher Education: Perspectives from Preservice Teachers" proposal at the 2025 American Education Research Association (AERA). Denver, CO (April 23-27, 2025).
- "Exploring Diagnostic Interviews as Tools to Integrate Specialized Mathematics Content and Pedagogical Content Knowledge" proposal at the 2025 Association of Mathematics of Teacher Educators (AMTE) Annual Conference, Reno, NV (February 6-8, 2025).
- "Exploring Preservice Teachers' Mathematical Identities across Ethnic Backgrounds: Insights from Mathematical Autobiographies" at the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA) 46, Cleveland, OH (November 7-10, 2024).
- "Intentionality of Diagnostic Interview Designs for Math and Pedagogical Knowledge" at the PME-NA 46. Cleveland, OH (November 7-10, 2024).
- "Ethnic Identity and Mathematical Development: Narratives from Preservice Teachers" at the 2024 School Science and Mathematics Association (SSMA) Convention. Knoxville, TN (November 7-9).
- "Effects of an Informal Education Internship Experience on STEM Majors' Interest in Teaching" at the 2024 SSMA Convention. Knoxville, TN (November 7-9).
- "Noyce Knights Scholars Program (NKSP): Preparing and Supporting Certified STEM Teachers in Kentucky" at Kentucky Academy of Science (KAS). Frankfort, KY (November 1-2).
- "Fostering Mathematical Knowledge For Teaching Through Professional Development" at Bellarmine University, Louisville, KY (September 26, 2024)
- "Teachers' Talk Moves: How Are They Associated with CCSSM's Standards for Mathematical Practices?" at 2024 AMTE Annual Conference, Orlando, FL, (February 8-10, 2024)
- "Professional Development for Pedagogical Content Knowledge in Mathematics" at the 2024 AILACTE Annual Meeting and Conference.
- "Mathematics Teacher Educators' Noticing of Preservice Teachers' Micro-teaching" at 2023 Research Conference, Washington D.C. (October 24-25, 2023)
- "Math Coach's Mathematical Knowledge for Teaching Geometry" at the School Science and Mathematics Association 2023 Annual Convention, Colorado Springs, CO (October 19-21, 2023)

- “Empowering Low Self-Confident Math Learners through Improv Teaching” at the 2023 Annual AMTE Conference, New Orleans, LA (February 2-4, 2023)
- “Improv Teaching: Fostering Empowerment through Purposeful Learning” at the National Council of Teachers of Mathematics (NCTM) Research Conference, Los Angeles, CA (September 28 - 29, 2022)
- “Teaching Moves for Students' Mathematical Proficiencies in Multiplication Lessons” at the 2021 Nebraska Association of Teachers of Mathematics (NATM) Conference, Younes Conference Center, Kearney, NE (March 28, 2022)
- “Development of Mathematical Task Enactment Framework” at the 2022 AMTE Conference, Las Vegas, NV (February 10-12, 2022)
- “Mathematics teacher educators’ shared vision on microteaching.” Session to be presented at the International Conference of the Korean Society of Mathematical Education, Seoul, Korea (December 12, 2020).
- “The Banzhaf and Shapley-Shubik power indices and the 2020 U.S. presidential election.” Chadron State College Mathematics Seminar, Chadron, NE (October 26, 2020).
- “Development of enacted task framework in mathematics classroom” at the Spring Conference of Korean Society of Mathematics Education Conference on Education, Seoul, Korea (August, 21, 2020).
- “The Development of Constructive Mathematics Task Framework” at the Hawaii International Conference on Education, Honolulu, HI (January 4, 2020).
- “Elementary school teachers’ understanding of mathematical modeling” at the Hawaii International Conference on Education, Honolulu, HI (January 4, 2020). Served as a session chair.
- “Developing pedagogical content knowledge: The Singapore model” at Tomsk State University, Russia (November 22, 2019)
- “‘Plickers’ as a formative assessment tool” at the Ohio-PKAL Annual Conference in Alliance, OH (May 19, 2018)
- “How do teacher journals integrate mathematics with other subjects?” at the Annual NCTM Research Conference in San Francisco, CA (April 12, 2016)
- “Is STEM education a ‘thing’?: The integration of mathematics with other subjects in teacher journals” at the AERA Annual Meeting in Washington, DC (April 10, 2016)
- “Power indices and U.S. presidential elections” at the Regional NCTM Conference and Exposition in Atlantic City, NJ (October 22, 2015)
- “Elementary school teacher’s facilitation of mathematical talk” at the 27th International Conference of the Jangjeon Mathematical Society in Daejeon, South Korea (August 4, 2014)
- “Elementary school teacher’s knowledge of geometry in the context of art” at the Pennsylvania Association of Mathematics Teacher Educators (PAMTE) Symposium in Shippensburg, PA (May 15, 2014)
- “Parents’ reflections in working with a 4th-grader and his mathematical learning” at the Annual Pennsylvania Council of Teachers of Mathematics (PCTM) Conference in Camp Hill, PA (November 11, 2011)
- “Discrete mathematics in the elementary grades” at the Annual Mathematics Association of America (MAA) Allegheny Mountain Sectional Meeting in Clarion, PA (April 9, 2011)
- “Teaching map coloring to elementary students” at the PA State System of Higher Education Mathematics Association (PA-SSHEMA) Annual Conference in Canonsburg, PA (April 2, 2011)
- “A lesson on the Pythagorean Theorem with the Geometer’s Sketchpad” at the Regional Teachers Teaching with Technology Conference in Indiana, PA (March 7, 2009)
- “Solving quadratic equations like the Greeks: A Geometer’s Sketchpad activity” at the Regional Teachers Teaching with Technology Conference in Indiana, PA (March 18, 2006)
- “Instructional technology” at the Annual Educational Technology Exhibition in Seoul, South Korea (October 30, 1995)

PROFESSIONAL OUTREACH ACTIVITIES

DEPARTMENTAL

- Kappa Delta Pi Counselor (2024-present)
- SOE Initial Certification Awards Committee member (2024-present)

- Educators of Color (2023-present)
- Volunteer for Major Day (2024)
- Volunteer to meet with high school students (2024)

INSTITUTIONAL

- Credit for Prior Learning Portfolio Review Committee member (2024-present)
- Faculty Development Committee member (2023-present)
- Grievance Committee (2023-present)
- Bellarmine Black Caucus (BBC) (2023-present)
- SOE Representative for Honors and Awards Committee (2024; 2025)
- Volunteer for orientations– Traffic Guide (2024)

PROFESSIONAL

- 2025 Educators Rising Kentucky State Conference and Competitions judge (February 2025)
- Kentucky High Quality Instructional Resources Numeracy Cohort (February 2024-present)
- Editorial Board Member of *Journal of the Korean Society of Mathematics Education, Series A: The Mathematics Education* (2025-present)
- Editorial Board Member of *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education* (2022-present)
- 2025 Special Issue Editor of *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education* (2023-present)
- South Korea Mathematics Textbook Revision Team (September 2022-2024): As a contributor, I wrote “Chapter 4 Methodology and Assessment of Teaching and Learning” in the Teachers’ Manual for Grade 1 Mathematics & Teachers’ Manual for Grade 2 Mathematics.
- Manuscript Reviews:
 - Reviewed submissions for the AERA Annual Meeting proposal (e.g., 10 proposals in 2024) (2024-present)
 - Reviewed submissions for the AMTE Annual Meeting proposal (e.g., 6 proposals in 2024) (2021-present).
 - Reviewed submission for *Journal of the Korean Society of Mathematics Education, Series D: Research in Mathematics Education* (2018-present)
 - Reviewed submission for *Education Sciences Journal* article (Manuscript ID: education-3058446 (2024).
 - Reviewed submission for IGI Global Book chapter (2024).
 - Reviewed submissions for the 2025 AERA Annual Meeting proposal (2024).
 - Reviewed submissions for the 2024 PME-NA Annual Meeting Proposal (All-Academic Code: 2154316; All-Academic Code: 2154301) (2023).
 - Reviewed submissions for the 2024 NCTM Annual Meeting proposal (2023).
 - Reviewed submissions for the *Review of Educational Research* (2023)
 - Reviewed submissions for NCTM 2023 Research Conference Reviewer (2022)
 - Manuscript Referee for NCTM’s *Mathematics Teacher*, *Mathematics Teaching in the Middle School*, and *Teaching Children Mathematics* (2014-2019)
- Reader of the College Board AP Statistics Exams (Kansas City, MO, 2017-2023)
- Moderator for International Plenary Panel Discussion at the International Conference of the Korean Society of Mathematical Education (Seoul, Korea, December 11, 2020)

COMMUNITY

- Facilitator of Mathematics Learning Program (professional development), Saint Agnes Catholic School, Louisville, KY (2023-2024)
- Organizing Team Member, Maker Fair (2023-2024)
- Volunteer for Korean School of Louisville Fundraiser (2024)
- ILead Academy Representative, School of Education and STEAM Education (2023)
- Mathematics Game Nights Organizer, Chadron School District (August 2022-2023)
- Afterschool Mathematics Program Facilitator, Chadron School District (August 2021-2023)
- Bell choir player (2017-2023)

- Vocal choir member (1993-2013)
- Sunday school teacher (1993-2013)
- Korean language teacher (2006-2013)

PROFESSIONAL MEMBERSHIPS

- Association of Mathematics Teacher Educators
- National Council of Teachers of Mathematics
- Kentucky Association of Mathematics Teacher Educators
- Mathematics Council of Western Pennsylvania
- American Educational Research Association
- Korean Society of Mathematics Education
- Kappa Delta Pi (International Honor Society)
- Kappa Mu Epsilon (National Mathematics Honor Society)
- Phi Eta Sigma (National Honor Society)

GRANT & AWARDS

- Bellarmine grant funded, Educating Character Community Of Practice participant (2024-2025)
- National Science Foundation (NSF) Noyce Track 1 Co-PI, Noyce Knights Scholars Program (2023-present)
- Bellarmine Faculty Development Fellowships: “Master of Arts in Teaching Program Students’ Mathematical Knowledge for Teaching” (2023-2024)
- National Science Foundation and Nebraska EPSCoR Outreach Funding Grant Award (2022-2023)
- JMM PUI Faculty Travel Grant Award supported by American Mathematical Society (2022)
- Chadron State College Dean’s Council Award (2021, 2022)
- Chadron State College Research Institute Grant (2021)
- A fellow for AMTE STaR (Service Teaching and Research) in Mathematics Education Fellows Program (2021)
- American Mathematical Society Travel Grant to Attend the 2018 International Congress of Mathematicians at Rio de Janeiro, Brazil (2018)
- American Mathematical Society Travel Grant to Attend the 2018 SACNAS (Success of Chicanos/Hispanics and Native Americans) at San Antonio, Texas (2018)
- Heid-Blume-Zbiek Graduate Endowment Scholarship from the Pennsylvania State University (2018)
- Certification of Recognition from the College Board and ETS (2017-2022)
- American Mathematical Society Travel Grant to Attend the 2017 SACNAS (Success of Chicanos/Hispanics and Native Americans) at Salt Lake City, Utah (2017)
- Pommersheim Scholarship in Education from the Pennsylvania State University (2016)
- The Pennsylvania State University Graduate Student Assistantship (2013-2015)
- Frederick Douglass Human Development Award from the African American Cultural Center of Indiana University of Pennsylvania (2011)
- Outstanding Student Award from the African American Cultural Center of Indiana University of Pennsylvania (2011)
- Dr. Willard Hennemann Jr. Memorial Scholarship from the Mathematics Department of Indiana University of Pennsylvania (2011)
- Indiana University of Pennsylvania Graduate Student Assistantship (2010-2011)
- Jung Il Academy Scholarship (1996-1997)
- Ewha Womans University Student Affairs Scholarship (1995)

SELECTIVE CONFERENCE & WORKSHOP PARTICIPATIONS

- *Simons Laufer Mathematical Sciences Institute* (former *Mathematical Sciences Research Institute*) sponsored “Critical Issues in Mathematics Education: Mentoring for Equity” (Berkeley, CA, March 2023), “Initiating, Sustaining, and Researching Mathematics Department Transformation of Introductory Courses for STEM Majors” (March 2022), “Mathematical Modeling in K-16: Community and Cultural Contexts” (March 2019), “Access to Mathematics by Opening Doors for Students Currently Excluded from Mathematics” (February 2018), “Observing for Access, Power, and Participation in Mathematics Classrooms as a Strategy to Improve Mathematics Teaching and Learning” (March 2017), “Observing,

Evaluating and Improving Mathematics Teaching from the Early Grades through the University” (February 2016), “Developmental Mathematics: For Whom? Toward What End?” (March 2015), and “Teacher Education in View of the Common Core” (March 2012).

- *Mathematics Teacher Education Partnership (MTEP) and AMTE Get the Facts Out (GFO)* sponsored “Transforming Secondary Mathematics Teacher Preparation: Focus on Recruitment and Equity” (New Orleans, LA, 2023; Orlando, FL, 2024).
- *AMTE Service Teaching and Research (STaR) in Mathematics Education Fellows Institute Meeting* at Park City, Utah (June 2022)
- *The Statistical and Applied Mathematical Sciences Institute (SAMS-I)* sponsored “Modern Math Workshop” & “SACNAS: The National Diversity in STEM Conference” (San Antonio, TX, October 2018).
- *American Mathematical Society* sponsored the “International Congress of Mathematicians” (Rio de Janeiro, Brazil, August 2018).
- *The Charles A. Dana Center at the University of Texas at Austin* sponsored “International Facilitation Fellows Academy” (May 2018).