Jesse Ha

646-430-2230 | haj@montclair.edu | ORCiD | Google Scholar

CURRENT ROLE

Montclair State University   Montclair, NJ
Assistant Professor of Teaching and Learning   Aug 2023-Current
College of Education and Engaged Learning: Department of Teaching and Learning (75% Appointment)
College of Science and Mathematics: School of Computing (25% Appointment)

EDUCATION

Arizona State University   Tempe, AZ
Ph.D. in Learning, Literacies, and Technologies (LLT)   May 9 2022
Social Science Research Methods Certificate   May 9 2022

Saint John's University   Queens, NY
M.S.Ed. in Adolescent Education – Mathematics 7-12   January 29 2016

Austin Presbyterian Theological Seminary   Austin, TX
M.A. in Theological Studies   May 20 2012

Johns Hopkins University   Baltimore, MD
B.A. in Natural Sciences: Philosophy & Biology Concentrations, Minor in Music   May 22 2008

PUBLICATIONS

Published in Peer-reviewed Journals

Vasquez, A. M., Halliday, T., & **Ha, J.** (2023). My Sister's Locker: Creative Professional Learning for School Climate Improvement Using Collaborative Storying. *Multiple Voices: Disability, Race, and Language Intersections in Special Education*, *23*(1), 32-49. https://doi.org/10.56829/2158-396X-23.1.32

Su, M., **Ha, J.,** Pérez Cortés, L., Bernier, J., Yan, L., Nelson, B., Bowman, J., & Bowman, C. (2023). Understanding museum visitors' question-asking through a mobile app. *Educational Technology Research and Development.* https://doi.org/10.1007/s11423-023-10265-6

Pérez Cortés, L., **Ha, J.**, Su, M., Nelson, B., Bowman, C., & Bowman, J. (2023). Gleaning museum visitors' behaviors by analyzing questions asked in a mobile app. *Educational Technology Research and Development.* https://doi.org/10.1007/s11423-023-10208-1

Ha, J., Pérez Cortés, L., Su, M., Nelson, B., Bowman, C., & Bowman, J. (2021). The impact of a gamified mobile question-asking app on museum visitor group interactions: An ICAP framing. *International Journal of Computer-Supported Collaborative Learning. 16*, 367-401. https://doi.org/10.1007/s11412-021-09350-w

Nelson, B., Bowman, C., Bowman, J., Pérez Cortés, L., Adkins, A., Escalante, E., Owen, B., **Ha, J.**, & Su, M. (2019). Ask Dr. Discovery: The impact of a casual mobile game on visitor engagement with science museum content. *Educational Technology Research and Development, 68*(1), 345-362. https://doi.org/10.1007/s11423-019-09696-x

Book Chapters and Encyclopedia Entry Publications

Vasquez, A. M., Dominguez, A. D., **Ha, J.**, Riske, A., Rylak, D., & Su M. (2023). Confronting white supremacy in higher education through de/re-constructing identity narratives. *Vol. 18, Toward Abolishing White Supremacy on Campus in Higher Education.* Peter Lang Inc.

Chi, M. T. H., Boucher, N.S., & **Ha, J.** (2023). The efficacy of learning strategies from the ICAP perspective. In R.J. Tierney, F. Rizvi, & K. Erkican (Eds.) International Encyclopedia of Education Vol. 6. Elsevier Science. https://doi.org/10.1016/B978-0-12-818630-5.14077-1

Conference Proceedings

Ha, J. (2024, July) Evaluating a university's chemistry course design using the ICAP framework. In Eom, M., Kim, Y., Lee, K., Lee, S., & Oh, H. (Eds.), Proceedings of the 24th International Conference on Education Research 2024 at Seoul National University.

Ha, J., Wei, W., Gomez, K., & Ghosh, A. (2024). A computational thinking and equity-centered urban preservice residency program's impact on STEM teachers. In Hoadley, C., & Wang, C. (Eds.), Proceedings of the 4th International Society of the Learning Sciences - ICLS 2024 (pp. 1674-1677). International Society of the Learning Sciences. https://doi.org/10.22318/icls2024.811455

Su, M., Chi, M.T.H., Nagashima, T., Gole, J., Xin, Y., & **Ha, J.** (2024). Exploration of cognitive engagement patterns in online environments with multiple external representations. In Hoadley, C., & Wang, C. (Eds.), Proceedings of the 4th International Society of the Learning Sciences - ICLS 2024 (pp. 194-201). International Society of the Learning Sciences. https://doi.org/10.22318/icls2024.530792

Wei, W., **Ha, J.**, Gomez, K., & Ghosh, A. (2024) Computational thinking in STEM teaching: Preservice teachers' conceptualizations and practices. Proceedings of 2024 ACM Conference on Computer Science Education. https://doi.org/10.1145/3626253.3635586

Ha, J., Wei, W., & Gomez, K. (2023). Preparing preservice resident teachers for equity-centered computational thinking in STEM (STEMeCT) education. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023 (pp. 2051-2052). International Society of the Learning Sciences. https://repository.isls.org//handle/1/10156

Su, M., Chi, M. T. H., **Ha, J.**, & Xin, Y. (2023). Investigating the efficacy of an ontological framework for teaching natural selection using agent-based simulations. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023 (pp. 106-113). International Society of the Learning Sciences. https://repository.isls.org//handle/1/9841

Bernier, J., Figueroa, F., **Ha, J.**, Mak, J., Su, M., Yan, L., Nelson, B., Cabrera, L., Kramarczuk, K., Xin, Y., Ketelhut, D. J., & Shockley, E. T. (2022). Accessible computational thinking in elementary science. In Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.), Proceedings of the 16th International Conference of the Learning Sciences - ICLS 2022 (pp. 2024-2025). International Society of the Learning Sciences. https://repository.isls.org//handle/1/8695

Cortés, L. E., **Ha, J.**, Su, M., & Nelson, B. (2021). GuARdians of Tomorrow: A Compelling Simulation for Understanding Sustainability. In de Vries, E., Hod, Y., & Ahn, J. (Eds.), Proceedings of the 15th International Conference of the Learning Sciences - ICLS 2021. (pp. 1053-1054). Bochum, Germany: International Society of the Learning Sciences. https://repository.isls.org//handle/1/7392

Ha, J., Su, M., Chi, M., & Cullicott, C. (2020). Misunderstandings of teachers applying ICAP theory into practice. In Gresalfi, M. and Horn, I. S. (Eds.), The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 4 (pp. 2407-2408). Nashville, Tennessee: International Society of the Learning Sciences. https://repository.isls.org//handle/1/6584

Su, M., Cho, J., Vanbibber, B., **Ha, J.**, & Chi, M. (2020). Diagnosis of misconceptions with coherent underlying structure in learning diffusion. In Gresalfi, M. and Horn, I. S. (Eds.), The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 4 (pp. 2321-2324). Nashville, Tennessee: International Society of the Learning Sciences. https://repository.isls.org//handle/1/6543

Pérez Cortés, L. E., Nelson, B., Bowman, C., Bowman, J., Owen, B., Danas, J., Escalante, E., Rogers, K., Weibel, A., & **Ha, J.** (2019). Deciphering Dr. Discovery: Data analytics for interpreting museum visitor demographics and engagement with exhibit content. Proceedings of the 9th International Conference on Learning Analytics & Knowledge (LAK '19). Tempe, AZ. 190-192.

REFEREED CONFERENCE PRESENTATIONS

Ha, J., Ku, D. H., Yu, S., Sung, H., Park, K., Lee, Y., Lee, J., Kang, S, & Gong, H. J. (2025, July) *AI integration in teacher education: Exploring technological competencies, challenges, and support strategies using TPACK*. Paper presented at the Seoul National University's <u>International Conference on Education Research</u> 2025 Annual Meeting, Seoul, South Korea.

Ha, J. (2025, June). *Evaluating a university-level introductory chemistry course design using the ICAP framework* . Poster presented at the <u>International Society of the Learning Sciences</u> 2025 Annual Meeting, Helsinki, Finland.

Ha, J., Ku, D. H., Yu, S., Sung, H., Park, K., Lee, Y., Lee, J., Kang, S, & Gong, H. J. (2025, June) *Leveraging AI tools in teacher education: Bridging theory and practice.* Paper presented at the Annual Meeting at <u>International Conference on Learning Sciences and Educational Innovation</u> 2025 Annual Meeting, Seoul, South Korea.

Ha, J., Ku, D. H., Gong, H. J., Kang, S., Lee, J., Lee, Y., Park, K., Sung, H., & Yu, S. (2025, May) *Bridging AI and Instruction: How New Faculty Navigate Technological Integration*. Poster presented at the <u>Korean Society for Educational Technology</u> 2025 Annual Meeting, Denver, CO.

Ha, J., Su, M., Jeong, S., Yan, L., Yoon, S., & Ghosh., A. (2025, April) *Collaborative Learning and Student Outcomes: Evaluating a University Chemistry Course Design With the ICAP (Interactive-Constructive-Active-Passive) Framework*. Paper presented at the <u>American Educational Research Association</u> 2025 Annual Meeting, Denver, CO.

Ha, J., Ku, D. H., Gong, H. J., Kang, S., Lee, J., Lee, Y., Park, K., Sung, H., & Yu, S. (2025, April) *Leveraging AI tools in teacher education: Bridging theory and practice for transformative learning* [Roundtable Session]. Paper presented at the <u>Korean-American Educational Research Association</u> 2025 Annual Meeting, Denver, CO.

Wei, W., Ghosh, A., **Ha, J.**, & Gomez, K. (2025, April) *Designing for Computational Thinking and Equity: Investigating a Residency Program's Impact on Preservice STEM Educators.* Poster presented at the <u>American Educational Research Association</u> 2025 Annual Meeting, Denver, CO.

Yan, L., Bernier, J., Nelson, B.C., Islam, R., & **Ha, J.** (2025, April) *Every voice matters: Revising the Equitable Classroom Discussion Observation Protocol to include all in science* [AERA e-Lightening Ed-Talks]. Poster presented at the <u>American Educational Research Association</u> 2025 Annual Meeting, Denver, CO.

Ha, J. (2024, July). *Evaluating a university's chemistry course design using the ICAP framework.* Paper presented at the Annual Meeting at Seoul National University's <u>International Conference on Education Research</u>, Seoul, South Korea.

Ha, J., Wei, W., Gomez, K., & Ghosh, A. (2024, June). *A computational thinking and equity-centered urban preservice residency program's impact on STEM teachers.* Paper presented at the 2024 Annual Meeting at the <u>International Society of the Learning Sciences</u>, Buffalo, NY.

Su, M., Chi, M.T.H., Nagashima, T., Gole, J., Xin, Y., & **Ha, J.** (2024, June). *Exploration of cognitive engagement patterns in online environments with multiple external representations.* Paper presented at the Annual Meeting of the <u>International Society of the Learning Sciences</u>, Buffalo, NY.

Wei, W., **Ha, J.**, & Gomez, K. (2024, April). *Integrating Computational Thinking into STEM Teaching: Understanding Preservice Teachers' Conceptualizations and Practices* [Roundtable Session]. Paper presented at the <u>American Educational Research Association</u> (AERA) 2024 Annual Meeting, in Philadelphia, PA.

Bernier, J., Heyer, N., Su, M., Yan, L., Islam, R., **Ha, J.**, Jordan, M., & Nelson, B. (2024, April). *A Design-Based Approach to Playful Algebra Learning with DragonBox Algebra. In Play, Motivation and Engagement in Math Learning*. Paper presented at the <u>American Educational Research Association</u> (AERA) 2024 Annual Meeting, in Philadelphia, PA.

Wei, W., **Ha, J.**, Gomez, K., & Ghosh, A. (2024, March) *Computational thinking in STEM teaching: Preservice teachers' conceptualizations and practices.* Poster presented at the 2024 <u>ACM SIGCSE</u> Technical Symposium, in Portland, OR.

Ha, J., Wei, W., Gomez, K. (2023, June). *Preparing teachers for equity-centered computational thinking in STEM education.* Poster presented at the Annual Meeting of the <u>International Society of the Learning Sciences</u>, Montreal, CA.

Su, M., Chi, M. T. H., **Ha, J.**, Xin, Y. (2023, June). *Investigating the efficacy of an ontological framework for teaching natural selection using agent-based simulations.* Paper presented at the Annual Meeting of the <u>International Society of the Learning Sciences</u>, Montreal, CA.

Kramarczuk, K., Cabrera, L., Jass Ketelhut, D., Terrell-Shockley, E., Xin, Y., Mak, J., Nelson, B., Bernier, J., **Ha, J.**, Su, M., Yan, L., & Figueroa, F. (2023, January). A *Professional Development Model for Integrating Computational Thinking and Culturally Responsive Teaching Practices into Elementary Science Practice.* Poster presented at the <u>ASTE Annual Conference 2023</u>, Salt Lake City, UT.

Techawitthayachinda, R. I., **Ha, J.**, & Hong, Y. C. (2022). *The effect of collaborative tools in collaborative video viewing (CVV) on learning process and outcome.* Paper presented at the Annual Meeting of the <u>Association for Educational Communications and Technology</u>, Online format.

Bernier, B., Cabrera, L., Figueroa, F., **Ha, J.**, Kramarczuk, K., Mak, J., Su, M., Xin, Y., Yan, L., Ketelhut, D. J., Nelson, B., & Shockley, E. T. (2022, June). *Accessible computational thinking in elementary science.* Poster presented at the Annual Meeting of the <u>International Society of the Learning Sciences</u>, Online format.

Su, M., Pérez Cortés, L. E., **Ha, J.**, Nelson, B., Bowman, C., Bowman, J., Bernier, J., & Yan, L. (2022, April) *Understanding visitors' question-asking quality in science museums through a question-asking mobile app.* Poster presented at the <u>American Educational Research Association Annual Meeting</u>, San Diego, CA.

Pérez Cortés, L. E., **Ha, J.**, Su, M., & Nelson, B. (2021, June). *GuARdians of tomorrow: A compelling simulation for understanding sustainability.* Poster presented at the Annual Meeting of the <u>International Society of the Learning Sciences</u>, Online format.

Ha, J., Su, M., Chi, M. T. H., Cullicott, C. (2020, June). *Misunderstandings of teachers applying ICAP theory into practice.* Poster presented at the 14th biennial <u>International Conference of the Learning Sciences</u>, Nashville, TN.

Su, M., Cho, J. Y., Vanbibber, B., **Ha, J.**, Chi, M. T. H. (2020, June). *Diagnosis of misconceptions with coherent underlying structure in learning diffusion.* Paper presented at the 14th biennial <u>International Conference of the Learning Sciences</u>, Nashville, TN.

Ha, J., Pérez Cortés, L. E., Su, M., Nelson, B., Bowman, C., Bowman, J. (2020, April). *Media-enhanced group inquiry and interaction in museums using ask Dr. Discovery.* Roundtable presented at the <u>American Educational Research Association Annual Meeting</u>, San Francisco, CA.

Pérez Cortés, L. E., Nelson, B., Bowman, C., Bowman, J., Owen, B., Danas, J., Dhuyvetter, E., Escalante, E., Rogers, K., Weibel, A., **Ha, J**. (2019, March). *Deciphering Dr. Discovery: Data analytics for interpreting museum visitor demographics and engagement with exhibit content.* Poster presented at the 9th international <u>Learning Analytics and Knowledge Conference</u>, Tempe, AZ.

Pérez Cortés, L. E., Nelson, B., Bowman, C., Bowman, J., Owen, B., Danas, J., Dhuyvetter, E., Escalante, E., Rogers, K., Weibel, A., **Ha, J**. (2019, February). Deciphering Dr. Discovery: *Data analytics for interpreting museum visitor demographics and engagement with exhibit content.* Paper presented at the 5th annual <u>Teachers College Graduate Research Conference</u>, Tempe, AZ.

MEDIA APPEARANCES AND PRESENTATIONS

ICAP: A Transdisciplinary Framework for Research and Learning Praxis. (2024, August). [Video]
https://youtu.be/DOSnMF9PP6Q

하버드가 찾는 아이는 '이런 공통점'이 있어요 | 하버드, 스탠퍼드 아이비리그 수백명 보낸 입시전문가 인터뷰. (2024, July). [Video] https://youtu.be/fr5hziwq8yw

Evaluating a University Chemistry Course using the ICAP Framework. (2024, July). [Video]
https://youtu.be/W0KtuARsXyc

Professor Michelene Chi | 2023 Yidan Prize for Education Research Laureate. [Video]
https://youtu.be/MggYSlW8pMA

Kramarczuk, K., Cabrera, L., Ketelhut, D. J., Terrell-Shockley, E., Xin, Y., Mak, J., Nelson, B., Bernier, J., & **Ha, J**. (2022, April) *A professional development model for integrating computational thinking and*

culturally relevant teaching practices into elementary science practice. [Webinar]. The Association for Science Teacher Education.

Gates Notes Deep Dive: How data can improve education. (2021, June). [Blog and Video].
https://www.gatesnotes.com/Education/Gates-Notes-Deep-Dive-education-data

INVITED PRESENTATIONS AND TALKS

Seoul National University: Learning Sciences Institute   July 19 2024
ICAP: A Transdisciplinary Framework for Research and Learning Praxis

Montclair State University: Critical Scholarship @ CEEL Lecture Series   Dec 4 2024
Making "Active Learning" a Reality: Designing and Evaluating Instruction for Cognitive Engagement

GRANT EXPERIENCE

National Science Foundation (NSF): Pending   **co-PI**
Conference: Advancing Early Childhood Computer Science Education: Theory, Practices, and Pathways Forward. Submitted 6/2024. $199,990. PI: Minsun Shin. co-PIs: Jesse Ha, Elliot Hu-Au, Vaibhav Anu, & Sumi Hagiwara.

National Science Foundation (NSF): Declined   **co-PI & Director (Effectively PI)**
Collaborative Research: CUE-T: Equity-centered, Inquiry-based Pedagogies and Sustainable Communities of Practice for Shifting Cultural Institutional Mindsets in CS Education. Submitted 5/2024. $2,000,000. PI: Scott Kight. co-PIs: Jesse Ha, Rebecca Goldstein, Elliot Hu-Au, & Colleen Bamford.

National Science Foundation (NSF): Funded - Award #1660719   **co-PI**
Preparing the Effective Elementary Mathematics Teacher. Funded 2017-2025. $1,449,992. PI: Steven Greenstein. co-PIs: Diana Aria, Joseph DiNapoli, & Jesse Ha.

National Science Foundation (NSF): Declined   **co-PI**
HSI Implementation and Evaluation Project: The XR STEM Pipeline. Submitted 2/2024. $499,630. PI: Elliot Hu-Au. co-PIs: Jesse Ha & Rui Li.

New Jersey Department of Education: Funded - Award #22E00173   **Senior Personnel**
Montclair State University Computer Science Education Hub. 2024-2025. $300,000.
PI: Katherine Herbert-Berger & co-PIs: Sumi Hagiwara & Minsun Shin.

U.S. Department of Education, TQP: Funded - Award #U336S190038   **Postdoctoral Fellow & Consultant**
UCLA STEM+C3 Teacher Residency: Preparing and Sustaining the Next Generation of Effective STEM Educators for Urban Schools. 2020-2025. $7,493,437. PI: Annamarie Francois. co-PI: Emma Hipolito.

National Science Foundation (NSF): Funded - Award #2101039   **Research Assistant**
Accessible Computational Thinking (ACT) in Elementary Science Classes within and across Culturally and Linguistically Diverse Contexts. 2021-2024. $931,000. PIs: Diane J. Ketelhut & Brian C. Nelson. co-PI: Ebony T. Shockley.

National Science Foundation (NSF): Declined   **Grant Writer**
Collaborative Research: GuARdians of Tomorrow: A Compelling Simulation for Understanding Climate Change. Submitted 1/2021. $850,000. PI: Brian C. Nelson & Diane J. Ketelhut.

National Science Foundation (NSF): Declined   **Grant Writer**
Teacher Tracks: Embodied Understanding and Ownership of Immersive Environments for Science Learning. Submitted 11/2019. $929,093. PI: Brian C. Nelson

Institute of Education Sciences (IES): Declined   **Grant Writer**
The ICAP National Center on Improving Teaching and Learning in Postsecondary Institutions. Submitted 9/2019. $10,000,000. PI: M. T. H. Chi & co-PI: Kurt VanLehn.

National Science Foundation (NSF): Declined   **Grant Writer**
Teacher Tracks: Embodied Understanding and Ownership of Immersive Environments for Science Learning. Submitted 11/2018. $1,163,247. PI: Brian C. Nelson

Institute of Education Sciences (IES): Funded - Award #R305A150432   **Research Assistant**
Developing and Revising Instructional Activities to Optimize Cognitive Enhancement. 2015-2019. $1,456,185. PI: M. T. H. Chi & co-PI: Joi Merritt & Glenda Stump.

Institute of Education Sciences (IES): Funded - Award #R305A150336   **Research Assistant**

      Teaching Crosscutting Concept of Emergent Cause-and-Effect to Overcome Misconceptions. 2015-2019. $1,456,431. PI: M. T. H. Chi & co-PI: Joi Merritt.

National Science Foundation (NSF): Funded - Award# 1438825   **Research Assistant**

      Facilitating Museum Evaluation with Real-Time Data Mining (Dr. Discovery). 2014-2018. $797,972. PI: Judd Bowman & co-PI: Brian Nelson.

Arizona State University: Funded   **Research Assistant**

      Port of Mars. 2017-present. (funding not disclosed) PI: Lance Gharavi. Co-PI: Brian Nelson.

UNIVERSITY TEACHING EXPERIENCE

Montclair State University   Montclair, NJ

ECEL 417/427/517: Problem Solving in STEM in Early Childhood   Fall 2023, Spring & Fall 2024

- Interdisciplinary STEM, Project-based Learning, Culturally Responsive Pedagogy, ChatGPT and AI integration, and Computational Thinking.
- Instructor Evaluation: 4.7/5.0 (Fall 23); 4.5/5.0 (Spring 24)

TLRN 502: Methods of Inclusive CS Teaching   Fall 2023 & 2024

- ISTE Standards, UDL, Culturally Responsive Pedagogy, Inquiry-based, Transdisciplinary, and Learning through play.
- Instructor Evaluation: 5.0/5.0 (Fall 23)

CSIT 500: Computer Science Principles   Spring & Summer 2024

- Computational Thinking and Problem Solving. Introduce CS to students in teacher programs and prepare them for teaching AP Computer Science courses.
- Instructor Evaluation: 5.0/5.0 (Spring 24)

STAT 109: Statistics   Spring & Summer 2024

- Introductory Statistics taught through the lens of research and entrepreneurship via a Project-based Learning Experience.
- Instructor Evaluation: TBD

Arizona State University   Tempe, AZ

EDP 310: Topic: Understanding the Brain: Adjunct Instructor   Fall 2021

- Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.
- Redesigned and developed the course in Summer 2021 and taught the first iteration in Fall 2021.
- Instructor Evaluation: 3.8/4.0

EPA 556: Data Analysis for Education Decision Makers: Teaching Assistant   Fall 2020

- Prepares educators to use sources of information to make educational decisions.
- Designed and implemented generative learning activities involving quantitative data analysis.

EDP 554: Analysis-of-Variance Methods (ANOVA): Teaching Assistant   Spring 2020

- Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.
- Held office hours to assist students with ANOVA, graded assignments, and assisted instruction.

UNIVERSITY & COMMUNITY SERVICE

Grant-level: CS Resource Hub

Curriculum Hackathon   10/24/23

- Facilitated 9-12 teachers in hacking their curricula to include CS/computational thinking.

Day of Computing w/ Glen Ridge School District   12/5/23

- Facilitated students from Glen Ridge during their visit for the day of computing.

CWC School District Visit   12/6/23

- Facilitated discussion among district administrators about their experiences with the CS Hub.

Kibo PD   12/8/23

- Facilitated students and parents in learning how to operate Kibo.

Social Media: The Platforms, the Myths and the Legends   1/29/24

- Facilitated breakout session discussions.

AI in the Classroom Trench: How to Use Artificial Intelligence with Students　　　　2/5/24
- Presented a segment on bias in AI.

PLC 8　　　　2/7/24
- Facilitated and presented on how to evaluate and design curricula for CT and equity.

Computer Science Praxis Workshop　　　　7/15-18/24
- Facilitated two 90 minute office hour sessions.

CS Summer Institute　　　　8/20/24
- Facilitated two sessions on Algorithms and Computational Thinking for K-3 and 3-5 grade bands.

POCS: Computer Systems　　　　9/24/24
- Facilitated breakout working sessions

Hackathon: Infuse AI　　　　10/23/24
- Facilitated a hardware experience session with Makey-Makey and Micro Bits

CS Week Buddy Programming　　　　12/10/24
- Facilitated a session for using unplugged games such as Code Master for teaching CT.

Department-level

Admissions Interviewer for Mathematics Education	Fall 2023 - Present
Admissions Interviewer for Science Education	Spring 2025 - Present
MAT Comprehensive Exam Evaluator	Fall 2024 - Present

College-level

Montclair State University Representative, CAHSI	Fall 2023 - Present
Improving Practices in STEM Teacher Prep TAG, AACTE	Fall 2023 - Present

- Chair (2024-Present); Co-Chair (2023-24)

Social Chair, College for Education and Engaged Learning	Spring 2024 - Present
Montclair Network for Educational Renewal (MSUNER)	2023 - Present
Caldwell/West Caldwell PD	4/17/24

- "Talking about the "why" behind your culturally responsive curriculum"

Rekindled Sister-school relationship with Busan National University of Education (BNUE)	Jul 2024
Follow-up Conversation about transfer partnership with BNUE	Jan 2025
Hosted Delegation from BNUE @Montclair	Jan 2025
Montclair CEEL Assistant Dean Search Committee Member	Fall 2024

University-level

Vice President, APIC	2023 - Present

- Immigration Under Pressure: Insights from two legal experts - Webinar　　　　4/17/25
- AAPI Heritage Month Flag Raising Ceremony and Reception　　　　4/1/25
- The Victoria Lee Story: Know your rights - Webinar　　　　2/6/25
- Lunar New Year Potluck Celebration　　　　1/21/25
- Fireside Chat: Oiyan Poon - Book Talk　　　　10/17/24
- APIC Tasting Event Potluck　　　　9/13/24

Generative AI Working Group	2023 - 2024
Liaison to University of Seoul	2024 - Present
Liaison to Korea University	2024 - Present
Liaison to Busan National University of Education	2024 - Present
Liaison to Seoul National University	2024 - Present
Liaison to Gongju National University of Education	2025 - Present

Public Scholarship and Service to Local Community

Korean-American Education Research Association	2024 - Present

- Annual Meeting Mentoring Roundtable Facilitator [Publication: Strategy & Impact] (2025)

Korean-American Scientists and Engineers Association (KSEA)	2023 - Present

- Northeast Regional Conference Planning Committee (2024)
  - NJ Young Professionals Chapter Leader

- Smart Science and Engineering Technical Session Chair

Duageeso Center   2024-Present
- Navigating ADHD & AUDHD - Neurodivergent Workshop   11/12/24

Service to Broader Professional Community

Scholarly Journal Peer Review Board Member

[Educational Media International](#)   2024 - Present
[Current Issues in Education](#)   2020

Conference Proposal Reviewer

ISLS Conference   2024, 2025
ACM SIGCSE Technical Symposium   2024
AERA Conference - Division C   2021

Conference Volunteer

2020 AMTE conference   2020
2019 LAK conference   2019

AREAS OF INTEREST & SPECIALIZATION

Learning Design and Educational Technology
Learning Sciences
STEM/CS Education
Asset-Based Pedagogies
Computational Thinking
Neurodivergence

PRIOR RESEARCH EXPERIENCE

University of California, Los Angeles   Jul 2022-Sep 2024
Graduate School of Education & Information Studies
- Working with Dr. Kimberley Gomez as a postdoctoral scholar on the STEM+C3 grant ($7,493,437), a federal Teacher Quality Partnership program with the US Department of Education.
- Responsibilities include mentoring graduate students, leading weekly research meetings, formulating research questions, conducting individual and focus group interviews, developing assessments and surveys, writing research papers, conducting literature reviews, observing teachers within their classrooms, analyzing qualitative data via grounded theory and discourse analysis, and presenting at monthly partner and semi-annual advisory board meetings.

Arizona State University - Mary Lou Fulton Teachers College   Aug 2018-May 2022
Designing Equitable Learning, Teaching, and Assessments (DELTA) Lab
- Worked with Dr. Brian Nelson on research projects including an NSF grant ($931,000) on computer science education for K-6 students, an Arizona State University and University of Maryland project that focuses on computational thinking and culturally responsive practices, and Dr. Discovery, an NSF grant ($797,972) that developed and implemented an innovative mobile app for gathering visitor data from museums.
- Responsibilities included collecting data, analyzing quantitative and qualitative data via coding, multiple regression, and analysis of variance, conducting methodological literature reviews, writing research papers, and writing grants.
- Co-authored three refereed journal articles and five conference presentations.

Learning and Cognition Lab   May 2019-May 2022
- Assisted Dr. Michelene Chi for 10 hours per week in the fall and spring semesters of 2019-2021 (20 hours, summer 2019 and 2020) on two IES funded research projects that focused on the ICAP ($1,456,185) and PAIR-C ($1,456,431) frameworks.
- Responsibilities include post-hoc data analysis via multiple regression and analysis of variance as well as writing and editing research papers. In addition, wrote and edited portions of an IES grant.
- Co-authored an encyclopedia entry, two conference papers, and two conference presentations.

Dr. Margarita Pivovarova   Aug 2020-May 2021
- Assisted Dr. Margarita Pivovarova 10 hours per week for a research project on a learning science rubric as well as TA for a course entitled: Data analysis for education decision makers.
- Responsibilities include analyzing data and writing a research paper.

Office of Scholarship and Innovation   Aug 2018-May 2019
- Assisted Dr. Punya Mishra for 10 hours per week
- Responsibilities included collecting data, analyzing data, conducting methodological literature reviews, editing research papers, and writing grants.

OTHER WORK EXPERIENCE

Ark Academy (arkacademy.io)   Seoul, South Korea (Remote)
Chief Research Officer   Dec 2022-Present
- Direct the design and implementation of curricula that focuses on experiential active learning, technology (including AI search tools such as ChatGPT, read.ai, etc.), 21st century skills, social-emotional learning, and problem-based learning.
- Direct the design of research with the goal of showing the validity and reliability of the curricula for promoting student critical thinking, language development, and soft skills.

University of California, Los Angeles   Los Angeles, CA (Hybrid)
Postdoctoral Fellow ('22 - Aug '23) & Grant Consultant (Aug '23 - '24)   Jul 2022-Sep 2024
- Design sound research protocols, safely perform techniques necessary to conduct and analyze data, and navigate the UCLA webIRB, grant application and scientific publishing processes.
- Communicate effectively with colleagues, students, the research community, and the general public.
- Manage and create structures to organize, analyze and disseminate, present and publish research within a research team.
- Travel to/from partner schools in the Centinela Valley Unified High School District (CVUHSD) & LAUSD to conduct potential participant support and research activities (interviews & observations).
- Work with, inform and engage in appropriate District Partner Protocols regarding research activities.
- Coordinate and lead/co-lead research meetings in collaboration with the Evaluation Team
- Work with, coordinate, and ensure relevant exchange of data, protocols, theoretical frames, and dissemination approaches with the Evaluation Team
- Collaborate with pre-service and/or beginning STEM teachers, including lesson observation and feedback cycles.

Global Christian Foreign School   Seoul, South Korea (Remote)
Math Teacher of Record   Dec 2022-Mar 2023
- Taught AP Statistics, Pre-Calculus, and Algebra II using Google Jamboard and digital whiteboards.
- Implemented culturally responsive pedagogy, computational thinking, project-based learning, and flipped instruction.

Arizona State University - Mary Lou Fulton Teachers College   Tempe, AZ
Graduate Research Assistant & Adjunct Instructor   Aug 2018-May 2022
- Responsibilities included collecting data, analyzing quantitative and qualitative data via coding, multiple regression, and analysis of variance, conducting methodological literature reviews, writing research papers, and writing grants.
- Designed and taught: EDP 310: Understanding the Brain

EPIC High School North   South Richmond Hill, NYC, NY
Founding Teacher, UFT Chapter Leader, Hiring Manager, Technology SPOC   Aug 2014-Aug 2018
- Innovated and implemented self-paced, project-based, mastery-based, blended-learning, culturally responsive and relevant, flipped mathematics, computer science, and physics instruction.
- Designed and taught Pre-calculus, AP Computer Science, AP Physics, and AP Statistics curricula.
- Spearheaded the implementation of AP Computer Science Principles (CSP) as an offered course.
- Represented UFT members through delegation assemblies, the school leadership team (SLT), PD committee, building response team, school safety committee, consultation committee, and the Progressive Reform of Schools of Excellence (PROSE) program.
- Facilitated professional development workshops at the school and network levels.

- Managed Google and Schoology (LMS) accounts as well as all school technology equipment.
- Served on the school's data team, which worked to find and address problems of practice.
- Designed and managed the school's domain and website

NYC Teaching Fellows   New York, NY
Cohort 25 Teaching Fellow   May 2014-May 2016
- Participated in a rigorous program that focuses on continuous feedback and practice-based learning.
- Training specialized in serving high need populations.

Premier Education Center   Queens, NY
SAT Program Director & Teacher   Apr 2015-Jan 2016
- Restructured the logistics of the program including scheduling, curriculum, and teacher training.
- Interviewed, hired, trained, and managed teachers at the Little Neck branch.
- Taught SAT I Critical reading, Writing, and AP Physics 1.

Self-employed Edupreneur   Seoul, South Korea
Education Consultant, Teacher, Freelance Copyeditor   Aug 2012-May 2014
- Consulted over 20 students in maximizing their college application potential.
- Taught SAT I, AP Calculus, AP English Composition/Literature, AP U.S. History, AP Physics B in traditional classrooms and long distance via Skype and a Wacom tablet to over 50 students.
- Copyedited English translations for Korean textbook companies & Korean medical journals.

Edumost Academy   Seoul, South Korea
Academic and Curriculum Director & Teacher   Nov 2008-Aug 2012
- Revamped the entire school curriculum: organizing existing textbooks, searching the market for the best materials, creating customized tests and study guides, and compiling a final set of textbooks.
- Interviewed, hired, trained, and managed teachers.
- Taught SAT I, AP Calculus, AP Physics B, SAT 2 Math 2C, and SAT 2 Physics preparation courses.
- Distinguished with the 'Best Teacher Award' every year among peers from top 15 universities.
- Summer camp academic director at Hallym University in Chuncheon, South Korea.

PROFESSIONAL DEVELOPMENT

NSF Grants Conference   Jun 2024
- Attended the 2024 NSF Grant Conference to enhance understanding of funding opportunities, proposal development, and grant management processes.

Training Researchers to Use PIAAC to Further Multidisciplinary Research: ETS & IES   Oct 2019
- Participated in a three-day workshop that consisted of lectures and hands-on opportunities to practice with the large PIAAC data set with the support of trainers.

Beauty and Joy of Computing: CS4ALL Initiative Cohort 2 Fellow   April 2017-Aug 2018
- Participated in 150 hours of professional development series with UC Berkeley's computer science staff in order to gain content knowledge and pedagogical strategies for implementing APCSP.

District Charter Collaborative   Feb 2015-Aug 2018
- Participated in 100 hours of professional development targeted at designing solutions around restorative practices and cultural responsiveness by collaborating among district and charter schools.

Mastery Collaborative   Feb 2015-Aug 2018
- Collaborated with other active chapters in best practices in individualized pathways, socratic seminars, student-driven inquiry-based instruction, and mastery-based grading practices.

AP Summer Institute: AP Physics 1 Program Participant   Aug 2016
- Participated in a 40 hour continuing education experience in order to update and improve pedagogy.

Google Educator Workshops   April 2016-Aug 2016
- Participated in a series of workshops that culminated in certifications: Google Educator Level 1, Google Educator Level 2, and G-Suite Administrator.

Superintendent's District Math Leadership Committee   Sept 2015-June 2016
- Served on the Mathematics Leadership Committee as the representative for District 27.
- Shared best practices and collaborated to share project-based curriculum development tools and strategies to colleagues within the Queens and Brooklyn districts.

Codesters   Mar 2016
- Participated in a hands-on professional development series on the basics of Python.

Breaker   Jan 2015
- Participated in a 16-hour design-based thinking workshop for educators in which we brainstormed and iterated solutions towards tackling various issues in NYC.

PROFESSIONAL ORGANIZATION MEMBERSHIPS

American Educational Research Association (**AERA**)

     Division C; Division K; Learning Sciences SIG;

     Research in Mathematics Education SIG; Science Teaching and Learning SIG

Korean American Educational Research Association (**K-AERA**)

International Society of the Learning Sciences (**ISLS**)

American Association of Colleges for Teacher Education (**AACTE**)

     Topical Action Group (TAG): Improving Practices in STEM Teacher Prep

Association for Computing Machinery (**ACM**)

Korean-American Scientists and Engineers Association (**KSEA**)

The Korean Society for Educational Technology (**KSET**)

AWARDS AND SCHOLARSHIPS

K-AERA Michael B. Salwen Scholarship - Korean American Educational Research Association	Apr 2025
Thank a Professor Certificate - Montclair State University Office for Faculty Excellence	Apr 2025
K-AERA Fellowship, Cohort 2 - Korean American Educational Research Association	2024 - 2025
CEEL Internal Grant Award - Montclair State University - $1000	Apr 2024

CERTIFICATIONS AND SKILLS

Professional Certificate in Secondary Mathematics – NY State
iZone Blended Learning Certificate
Statistical Software Proficiency: SPSS, R
Languages: Intermediately Fluent in Korean (speaking, reading, and writing)
Multimedia/Tech Skills: Photography, videography, sound engineering, IT service, web designing

PRIOR AWARDS AND SCHOLARSHIPS

MLFTC Research Support Mini-Grant - Arizona State University - $180	Apr 2022
MLFTC Travel Grant - Arizona State University - $800 - AERA	Meb 2022
University Graduate Fellowship - Arizona State University - $4000	Mar 2022
LLT Dissertation Grant Award – Arizona State University - $1350	Feb 2022
LLT Dissertation Grant Award – Arizona State University - $1000	Jan 2021
University Graduate Fellowship – Arizona State University - $2000	Jan 2021
MLFTC Research Support Mini-Grant - Arizona State University - $320	Oct 2020
University Graduate Fellowship – Arizona State University - $2000	Aug 2020
University Graduate Fellowship – Arizona State University - $2200	Mar 2020
MLFTC Travel Grant - Arizona State University - $750 - ICLS	Feb 2020
MLFTC Travel Grant - Arizona State University - $750 - AERA	Feb 2020
University Graduate Fellowship – Arizona State University - $2,000	Apr 2019
MLFTC Travel Grant - Arizona State University - $750 - AERA	Feb 2019
University Graduate Fellowship – Arizona State University - $15,000	Aug 2018
MLFTC Graduate Scholarship - Arizona State University - $3,000	Aug 2018
Certificate of Excellence, Physics Praxis – ETS	May 2017
Certificate of Academic Excellence – St. John's University	May 2016
Austin Korean Presbyterian Church Scholarship – Austin Seminary - $25,000 each year	2009-2011
Best Teacher Award – Edumost Academy - $1000 each year	2008-2012
Charles D. Miller Scholarship – Johns Hopkins University - $15,000 each year	2004-2008

PRIOR COMMUNITY LEADERSHIP AND SERVICE

ASU Learning Literacy and Technology (LLT) - Program Committee Member	2021-2022
Teachers College Doctoral Council – LLT Representative	2019-2020
Koreans at Austin Presbyterian Theological Seminary - President	2009-2012
Inter-Asian Council at Johns Hopkins University - Social Chair	2006-2008
Bodybuilding & Fitness Club at Johns Hopkins University - Founder and President	2005-2008
Chinese Students Association - Historian	2004-2005
Korean Students Association - Member at Large	2004-2005

REFERENCES

Dr. Kimberley Gomez
Professor of Urban Schooling
University of California, Los Angeles
KimGomez@ucla.edu

Dr. Michelene T. H. Chi
Dorothy Bray Endowed Professor of Science and Teaching and Regents Professor
Arizona State University
Michelene.Chi@asu.edu

Dr. Brian C. Nelson
Professor of Educational Technology
Arizona State University
Brian.Nelson@asu.edu

Dr. James P. Gee
Mary Lou Fulton Presidential Professor of Literacy Studies and Emeritus Professor
Arizona State University
James.Gee@asu.edu

Dr. Margarita Pivovarova
Associate Director of Doctoral Programs and Associate Professor of Economics
Arizona State University
Margarita.Pivovarova@asu.edu