

Eunhye Kim

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Education

- May 2024 **Ph.D. | School of Engineering Education, Purdue University**
Advisors: Dr. Robin Adams & Dr. Senay Purzer
Dissertation: *A behavior-oriented, holistic investigation into team learning for shared empathic understandings through the analysis of design conversations*
** 2024 Distinguished Dissertation Award in the School of Engineering Education*
- February 2012 **M.B.A. | Sogang University, South Korea**
Concentration: General Management
- February 2009 **B.S. in Electronics Engineering | Ewha Womans University, South Korea**
Concentration: Information Electronics Engineering

Journal Publications

- Referred Academic Journal Articles
- **Kim, E.**, Adams, R., & Purzer, S. (under review). A design team's team learning behaviors for shared understandings of users.
 - **Kim, E.**, Luo, W., & Jho, H. (2025). Perception and argumentation in the LK-99 superconductivity controversy: sentiment and argument mining analysis. *Scientific Report*, 15, 1-13.
 - **Kim, E.**, & Han, K. (2025). Empathy-based engineering design education case study: connecting humans, society, and technology through empathic design. *Journal of Engineering Education Research*, 28(2), 13-26
김은혜 & 한경희 (2025). 공감 기반의 공학설계 교육 사례: 인간, 사회, 기술을 연결하며 디자인하다. *공학교육연구*, 28(2), 13-26.
 - **Kim, E.**, Adams, R., & Purzer, S. (2024). A design team's perspective-mixing for shared empathic understandings. *CoDesign*, 20(4), 621-644.
 - Hess, J. L., Fila, N. D., **Kim, E.**, & Purzer, S. (2021). Measuring empathy for users in engineering design. *International Journal of Engineering Education*, 37(3), 733-743.
 - Shao, G., Quintana, J. P., Zakharov, W., Purzer, S., & **Kim, E.** (2021). Exploring potential roles of academic libraries in undergraduate data science education curriculum development. *Journal of Academic Librarianship*, 47(2), 1-9.
 - **Kim, E.**, & Strimel, G. J. (2020). The influence of entrepreneurial mindsets on student design problem-framing. *IEEE Transactions on Education*, 63(2), 126-135.

- Strimel, G. J., Grubbs, M. E., Huffman, T. J., **Kim, E.**, & Gurganus, J. (2020). Establishing a content taxonomy for the coherent study of engineering in P-12 schools. *Journal of Pre-College Engineering Education Research*, 10(1), 23-50.
- Strimel, G. J., **Kim, E.**, Grubbs, M. E., & Huffman, T. (2020). A meta-synthesis of primary and secondary student design cognition research. *International Journal of Technology and Design Education*, 30, 243-274.
- Strimel, G. J., **Kim, E.**, & Bosman, L. (2019). Informed design through the integration of entrepreneurial thinking in secondary engineering programs. *Journal of STEM Education: Innovations and Research*, 19(5), 42-49.
- Strimel, G. J., **Kim, E.**, Bartholomew, S. R., & Zhang, L. (2018). An investigation of engineering design cognition and achievement in primary school. *Journal of STEM Education Research*, 1-29.
- Strimel, G. J., **Kim, E.**, Bartholomew, S. R., & Cantu, D. (2018). Examining engineering design cognition with respect to student performance. *International Journal of Engineering Education*, 34(6).
- Grubbs, M. E., Strimel, G. J., & **Kim, E.** (2018). Examining design cognition coding schemes for P-12 engineering/technology education. *International Journal of Technology and Design Education*, 28(1), 1-22.

Referred
Practitioner
Journal
Articles

- Strimel, G. J., Huffman, T. J., Reid, K. Reeping, D., **Kim, E.**, Honour, S., & Glover, J. (2019). Tests of Engineering Aptitude, Mathematics, and Science (TEAMS): A premier engineering competition. *Technology and Engineering Teacher*, 78(6), 34-39.
- **Kim, E.**, Newman, C., Lastova, M., Bosman, T., & Strimel, G. J. (2018). Engineering the reduction of food waste: Teaching problem framing & project management through culturally situated learning. *Technology and Engineering Teacher*, 78(3).
- Strimel, G. J., Krause, L. A., Hensel, R. A. M., **Kim, E.**, & Grubbs, M. E. (2018). An engineering journey: A high school guide towards the engineering profession. *Technology and Engineering Teacher*, 77(5), 1-11.
- Strimel, G. J., Bartholomew, S. R., & **Kim, E.** (2017). Engaging children in engineering design through the world of quadcopters. *Children's Technology and Engineering Journal*, 21(4), 7-11.

Conference Publications

Referred
Papers
Published
In Conference
Proceedings

- **Kim, E.**, Purzer, S., Payne, L., Kong, N., & Vivas-Valencia, C. (2020). Problem reframing and empathy manifestation in the innovation process. American Society for Engineering Education Annual Conference and Exposition. ** Best Paper Award in the Design in Engineering Education Division*
- Vivas-Valencia, C., **Kim, E.**, Kong, N., Payne, L., & Purzer, S. (2020). An assessment instrument for user-centered innovation potential among biomedical engineers. American Society for Engineering Education Annual Conference and Exposition.

- Kong, N., Purzer, S., Payne, L., **Kim, E.**, & Vivas-Valencia, C. (2020). Research initiation: Enhancing the learning outcomes of empathic innovation in biomedical engineering senior design projects. American Society for Engineering Education Annual Conference and Exposition.
- **Kim, E.** (2019). A systematized literature review of the characteristics of team mental models in engineering design contexts. American Society for Engineering Education Annual Conference and Exposition, Tampa, FL.
- Sanchez-Pena, M., Hicks, N., & **Kim, E.** (2019). Assessing the data analysis training of engineering undergraduates. American Society for Engineering Education Annual Conference and Exposition, Tampa, FL.
- **Kim, E.**, & Strimel, G. J. (2018). *Influence of an entrepreneurial mindset on P-12 students' problem framing (Work-in-progress)*. American Society for Engineering Education Annual Conference and Exposition, Salt Lake City, UT.

Presentations

2025 World Engineering Education Forum

Kim, E. & Choi, Y. (September 2025). Empathy through Frame Creation and Iterative Reflection: A Case Study in an Undergraduate Design Thinking Course.

2024 Chungnam National University, Technology Education – Research Seminar

Kim, E. (October 2024). Invention Education Landscape & Design Thinking.

2024 Yonsei University, Our Living Labs – Seminar

Kim, E. (September 2024). Empathy for Social Innovation.

2024 Korean Society for Engineering Education Annual Conference

Kim, E. (September 2024). AI Ethics in Engineering Design Courses.

2024 Ewha Womans University, EduTech Convergence Lab – Research Seminar

Kim, E. (June 2024). Empathy & Learning Experience Design (LXD).

2023 Chungnam National University, College of Education – Research Seminar

Kim, E. (November 2023). Empathic perspective-mixing – Design thinking for technological innovation.

2023 Chungnam National University – Invention and Innovation Fair

Kim, E. (November 2023). Perspective-mixing for empathic understandings of user experiences.

2023 Korean Society for Engineering Education Annual Conference

Kim, E. (September 2023). Empathy training for engineering students.

2022 Science of Team Science

Kim, E. (August 2022). Conceptualizing cross-disciplinary team collaboration processes as team learning for collaborative knowledge construction.

2019 Open Conference

Kim, E., Strimel, G., & Peoples, T. (March 2019). The influence of the integration of an entrepreneurial mindset through co-teaching on students' design problem-framing.

2018 International Technology & Engineering Educators Association Conference

Strimel, G., Bartholomew, S., **Kim, E.**, & Zhang, L. (April 2018). A look into engineering design thinking: Elementary, secondary, and post-secondary.

Awards

Distinguished Dissertation Award, May 2024

School of Engineering Education, Purdue University

Bilsland Dissertation Fellowship, May – December 2023 (Summer & Fall 2023)

School of Engineering Education, Purdue University

Best Paper Award in the Design in Engineering Education Division, June 2020

2020 American Society for Engineering Education Annual Conference

Explore Fellowship, August – December 2018 (Fall 2018)

School of Engineering Education, Purdue University

Teaching Experience

Instruction	Assistant Professor	
	Dasan University College, Ajou University, South Korea	
	<ul style="list-style-type: none">• What is Education (Undergraduate level, Fall 2025)• Enterprise & Society (Undergraduate level, Fall 2025)	
Instruction	Part-time Instructor	Fall 2024 – Spring 2025
	College of Education, Chungnam National University, South Korea	
	<ul style="list-style-type: none">• Invention & Problem Solving (Graduate level, Fall 2024)• Design thinking & education innovation (Undergraduate level, Spring 2025)• Industrial, engineering, & technology education research (Graduate level, Spring 2025)	
Instructional Design	Graduate Assistant	May 2019 – August 2019
	School of Engineering Education, Purdue University, West Lafayette, IN	
	Participated in a project to develop an online graduate-level course (ENE 503: Engineering Education Inquiries) (Supervisor: Dr. Senay Purzer)	
	Graduate Assistant	May 2018 – August 2018
	Technology Leadership & Innovation, Purdue University, West Lafayette, IN	
	Participated in a project to develop a minor problem in Design and Innovation (Supervisor: Dr. Greg Strimel)	

Research Experience

Educational
Research

Post-doctoral Researcher

September 2024 – Present

Institute of Knowledge Integration & Design, Dankook University, South Korea

Participated in NRF-funded research projects

- Innovations in teaching and learning through artificial intelligence: Automated generation of learning materials and assessments with an analysis of performance including emotion in learning
- The development and application of generative AI in science teaching and learning: A study on the impact of artificial intelligence on learners' academic achievement and emotion

Graduate Research Assistant

August 2018 – August 2022

School of Engineering Education, Purdue University, West Lafayette, IN

Participated in small projects as an ENE explorer

- August – September 2018 (Supervisor: Dr. Isabel Jimenez-Useche)
First-Year Engineering students' course registration and advising
- September – December 2018 (Supervisor: Dr. Matilde Sanchez-Pena)
Data analysis training for undergraduate engineering students

Participated in research projects

- January 2019 – May 2020 (Supervisor: Dr. Senay Purzer)
Biomedical engineering students' empathic design abilities
(NSF DUE #1738214)
- September 2019 – May 2020 (Supervisor: Dr. Wei Zakharov)
Data science education
- May 2020 – August 2022 (Supervisor: Dr. Robin Adams)
Using engineering principles of design to advance elementary teacher
education (NSF DUE #1626197)

Graduate Research Assistant

August 2016 – August 2018

Technology Leadership & Innovation, Purdue University, West Lafayette, IN

Participated in projects about P-12 engineering design cognition and learning
(Supervisor: Dr. Greg Strimel)

Service

- 2025 - Present **Paper Reviewer**
Journal of Engineering Education Research
- 2017 – Present **Conference Reviewer**
American Society for Engineering Education
Divisions: Design in Engineering Education
– Reviewed abstracts and draft papers for the annual conference of the American Society for Engineering Education.
- 2017 – 2018 **Project Contributor**
International Technology & Engineering Educators Association
Project: Advancing Excellence in P-12 Engineering Education (AEEE)

Membership

- 2023 – Present **Korean Society for Engineering Education**
- 2017 – Present **American Society for Engineering Education**
– Design in Engineering Education Division
– Entrepreneurship & Engineering Innovation Division
– Student Division
- 2016 – 2018 **International Technology and Engineering Educators Association**

Professional Experience

IT Strategic
Planning

Junior Associate

January 2012 – August 2015

Business IT Service Division, Amorepacific, Seoul, South Korea

Amorepacific Corp. is the largest cosmetic company having over 30 brands in South Korea and globally operates R&D and production centers, business offices and stores in Asia, Europe and North America.

- IT Project Planning & Management
 - Examined business organizations' need for IT systems and service quarterly.
 - Planned projects to develop or improve software applications, surveying users and translating business and user needs into technical requirements with technical consultants
 - Documented and reported project implementation plans
 - Managed the projects.
- IT Service Process Management
 - Participated in a project to standardize IT service delivery processes for overseas offices and stores.
 - Developed the manual describing the new processes.
- IT Strategic Plan Development
 - Participated in a project to formulate the IT strategic plans for 2015 – 2020
 - Examined organizations business plans, the organizations including supply chain management, design, marketing and sales, human resource management units.
 - Assisted consultants to interview people in the organizations, preparing interview questions and documenting interview answers.

Engineering

Hardware Development Engineer

January 2009 – February 2010

Mobile Division, Samsung Electronics, Suwon, South Korea

- New Mobile Phone Development Projects
 - Planed and managed the schedules to manufacture and test prototypes with manufacturing teams.
 - Tested and did troubleshooting for Bluetooth and GPS modules with software development teams.
 - Technically evaluated multiple suppliers' materials for Bluetooth and GPS modules with procurement teams.