Yeonjoo Ko, Ph.D.

Assistant Professor of Physics Education
Department of Science Education
Jeju National University
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EDUCATION

Ph.D. in Science Education   2013 – 2017
Ewha Womans University (EWHA), Seoul, South Korea

M.Ed. in Learning, Design, and Technology   2017 – 2019
Department of Career and Information Studies
The University of Georgia at Athens (UGA), GA, USA

B.S. in Physics Education (Graduated first class honor)   2009 – 2013
Dual majors: General Science Education
Ewha Womans University, Seoul, South Korea

PROFESSIONAL POSITIONS

Assistant Professor   2023 – Present
Department of Science Education, Specializing in Physics Education
Jeju National University (JNU), Jeju, South Korea

Postdoctoral Researcher   2021 – 2023
Research Center for Hazard Literacy Education
Ewha Womans University, Seoul, South Korea

Lecturer   2019 – 2023
Department of Science Education
Ewha Womans University, Seoul, South Korea

- 35549 General Science Curricular Materials & Teaching Methods
- 35548 Theoretical Foundation of Teaching Integrated Science
- 35621 Theory and Practice in Teaching Science at Secondary School
- 35508 Method of Teaching Science at Secondary School

AREA OF INTEREST

Science education, socio-scientific issues, integrated STEM education, artificial intelligence-based education, social responsibility of scientists and engineers, visual representation, argumentation

RESEARCH EXPERIENCE

Principle-Investigator (PI), Korean National Research Foundation Project   2022 – present
Redesigning direction for integrating artificial intelligence into science education:
Development and implementation of teacher education program
- Funder: Korean National Research Foundation (KNRF)
- Funding: ₩ 210,000,000 (3-year) ($55k/year, $164k/3yr)

Co-Investigator (Co-I), UK-South Korea Connection Grants   2022 – present
Exploring directions for post-pandemic disaster education through
interdisciplinary collaboration between the UK and South Korea
- Funder: UK Economic and Social Research Council
  (PI: Wonyong Park, University of Southhampton, UK)
- Role: Analyzed the Korean National curriculum and textbooks regarding
  disasters education; managed the Korean version of the website
- Website: https://www.teachdisasters.com/

Postdoctoral Fellow, Research Center for Hazard Literacy Education   2021 – 2022
Development, implementation, and evaluation of effectiveness of
socioscientific issues for participatory citizens program
- Funder: Korean National Research Foundation (PI: Hyunju Lee)
- Role: Developed and validated a scale to measure social responsibility
  of scientists and engineers; implemented ENACT program on
  preservice science teachers; provided professional development
  workshops for secondary teachers; managed weekly meetings and
  mentoring program
- Website: http://enactproject.com/

Research Fellow, Chuncheon National University of Education   2020 – 2022
The role of visual representation in scientific reasoning
- Funder: Korea National Research Foundation (PI: Hyegyeong Yoon)
- Role: Investigated preservice science teachers' use of visual
  representation in Physics teaching; developed virtual reality (VR) based
  science lesson plans

Research Fellow, Department of Science Education, EWHA   2019 – 2021
Artificial Intelligence-based STEAM education
- Funder: Korea Foundation for the Advancement of Science and
  Creativity (PI: Hyojung Kim)
- Role: Supported science and arts teachers with AI-based STEAM
  education; evaluated the effectiveness of the program

Teacher competency for integrated education
- Funder: Korea Foundation for the Advancement of Science and
  Creativity (PI: Jae Young Chung)

Graduate Researcher, The Research and Innovation Learning (RAIL), UGA   2017 – 2019
Developing a competence-based career coaching system for health professions
- Funder: National Institute of Health (NIH) (PIs: Ikseon Choi & Linda
  McCauley)
- Role: Identified types of clinical research coordinators using cluster
  analysis of survey data; Literature review on competency-based
  education and core competencies for clinical research professionals;

Assisted with the creation of the digital prototypes of the system for career navigation

SAVE4Youth: A Scenario-based Authentic Virtual Environment (SAVE) for child pedestrian safety education (PI: Ikseon Choi)
- Role: Designed prototypes of Virtual Reality (VR) child pedestrian safety education program; Implemented the VR program to elementary school students

Research Assistant, Department of Career and Information Studies, UGA   2017 – 2018
- Funder: UGA – Augusta Medical Partnership Project (PI: Janette Hill)
- Role: Identified main themes of first/second/third-year medical school students' perceptions of newly developed curriculum; Longitudinal data analysis of medical school students' recognition on small group-based curriculum

Research Assistant, Department of Science Education, EWHA
Drawing students' ideas of science in Australian and Korean schools   2016 – 2017
- Funder: Australian and Korean Foundation Grant (PI: Mihye Won, Curtin University)
- Role: Observed science classroom which has a video-conferencing between classes in Australia and Korea and collected student data including scientific drawings and explanations; Explored differences in scientific models between Korean and Australian students.

1) Design and implementation of instructional strategies for collective Intelligence-based reasoning on socioscientific issues   2013 – 2017
2) Conceptualization of a PCK framework for teaching SSIs and exploration of the dynamic mechanism and its progression among PCK components
- Funder: Korea National Research Foundation (PI: Hyunju Lee)
- Role: Designed and implemented instructional strategies for SSI instruction focusing on learning strategies; Examined interactions among elements of SSI-PCK (Socio-Scientific Issues Pedagogical Content Knowledge) framework

Establishment of Education System of Enhancing Scientific Literacy for 21st Century   2013
- Funder: KNRF World Class University (PI: Kyunghee Choi)
- Role: Co-author of the book series A scientific story for global citizen for 21st century; organizing staff of international seminars and workshops

Korea Education and Research Information Science (KERIS) Project   2012
- Role: Designed lesson plans and developed teaching materials using digital textbook on unit of Force and Motion for 7th grade students; developed and implemented instructional models for science digital textbook

TEACHING EXPERIENCE

Assistant Professor, Department of Science Education, JNU   2023 – Present
Undergraduate courses
- 271307 Physics Curricular Materials and Teaching Methods
- 271306 Physics Written and Verbal Argument Instruction
- 271106 General Physics Instruction II
- 271208 Modern Physics Education

Lecturer, Department of Science Education, EWHA   2019 – 2023
Undergraduate courses (teaching in-person, online, and hybrid modalities)
- 35548 Theoretical Foundation of Teaching Integrated Science
(Overall Evaluation: 5.00/5.00, 4.98/5.00, 4.98/5.00, 4.88/5.00,
4.84/5.00, 4.84/5.00, 4.82/5.00)
- 35549 General Science Curricular Materials & Teaching Methods
(Overall evaluation: 5.00/5.00, 4.97/5.00, 4.95/5.00, 4.91/5.00,
4.85/5.00, 4.83/5.00, 4.82/5.00, 4.61/5.00)

Co-facilitator, Department of Science Education, EWHA   2021 – 2022
Extracurricular courses: Co-facilitated with Dr. Hyunju Lee
- Online faculty-led program: Learning science with culture, Winter 2021
- Solving societal problems by scientific/engineering practices, Spring 2021

Co-Instructor, Department of Career and Information Studies, UGA   2018
Graduate courses: Co-designed and facilitated with Dr. Janette Hill
- EDIT 6100E Introduction to Instructional Technology: Fall 2018
- EDIT 8100 Foundations in Learning, Design, and Technology: Fall 2018

Teaching Intern, Department of Career and Information Studies, UGA   2018 – 2019
Undergraduate courses
- EDIT 2000 Teaching with Technology: Spring 2018, Spring 2019

Teaching Assistant, Department of Science Education, EWHA   2014 – 2015
Undergraduate courses
- 21878 General Physics I: Spring and Fall 2014
- 35968 Mathematics for Science Teacher: Spring 2015

OTHER PROFESSIONAL EXPERIENCE

Editorial Assistant, Journal of Research in Curriculum and Instruction (Korean)   2020 – 2021
Sponsored by Research Institute of Curriculum and Instruction
- Contacted the editorial boards, reviewers, applicants, and publishers
- Managed the JAMS online journal submission website of JRCI
- Reviewed and edited the manuscripts to be published

Editorial Assistant, Journal of Qualitative Inquiry (Korean)   2015 – 2016
Sponsored by The Korean Association for Qualitative Inquiry
- Contacted the editorial boards, reviewers, applicants, and publishers
- Reviewed and edited the manuscripts to be published

REFEREED JOURNAL ARTICLES

Liu, C., So, W. W.-M., Chen, Y., Antuni, W., Chiu, W. K. S., **Ko, Y.**, Hsu, Y.-S., Lee, H., Tan, A. L., & Tho, S. W. (under review). School students' aspirations for STEM careers: the influence of self-efficacy, parental expectations, outcome expectations, and perceptions of STEM professionals. Submitted to *International Journal of STEM Education*.

Kim, H., Shim, H., Lee, H., & **Ko, Y.** (under review). Factors affecting student learning outcomes in the context of science and art integrated program with artificial intelligence (AI). Submitted to the. [SSCI]

Park, W., Lee, H., **Ko, Y.**, & Lee, H. (2023). 'Safety' and 'integration': Examining the introduction of disaster in the science curriculum in South Korea. *Journal of Curriculum Studies*. [SSCI].

Hwang, Y., **Ko, Y.**, Shim, S. S., Ok, S.-Y., & Lee, H. (2023). Promoting engineering students' social responsibility and willingness to act on socioscientific issues. *International Journal of STEM Education*, 10(11). doi:10.1186/s40594-023-00402-1 [SSCI]

Ko, Y., Choi, Y., & Lee, H. (2022). Secondary school students' understanding of socioscientific issues and their views of social responsibility of STEM professionals through ENACT project. *Journal of Research in Curriculum and Instruction*, 26(6), 556-572. [KCI]

Lee, H., & **Ko, Y.** (2022). Engineering students' ethical sensitivity on artificial intelligence. *Journal of Engineering Education Research, 25*(6), 23-37. [KCI]

Ko, Y., Shim, S. S., Hwang, Y., Choi, Y., Ok, S.-Y., Nam, C.-H., & Lee, H. (2022). Exploring the views of college students in STEM fields on the social responsibility of scientists and engineers. *Journal of Engineering Education Research, 25*(2), 42-56. [KCI]

Lee, H., **Ko, Y.**, Hong, J. (2022). ENACT project: Promoting pre-service science teachers' views on the social responsibility of scientists and engineers. *Journal of the Korean Association for Science Education, 42*(1), 111-125. [KCI]

Ko, Y., Shim, S., & Lee, H. (2021). Development and validation of a scale to measure views of social responsibility of scientists and engineers (VSRoSE*). International Journal of Science and Mathematics Education*. Online first. doi:10.1007/s10763-021-10240-8 [SSCI]

Yoon, J., Lee, H., & **Ko, Y.** (2021). Virtual and open integration of culture for education (VOICE) with science teacher candidates from Korea during COVID-19. *Asian-Pacific Science Education*. Online first. doi:10.1163/23641177-bja10031 [SCOPUS]

Kim, G., Ok, S., Lee, H., **Ko, Y.**, Hwang, Y. (2021). A case study of an ENACT model-based engineering design course for fostering social responsibility of engineers*. Journal of Engineering Education Research*, 24(6), 3-19. [KCI]

Choi, Y., **Ko, Y.**, Hong, Y., Lee, H., & Hwang, Y. (2021). Changes of pre-service technology teachers' views and educational needs on social responsibility of science/technology/engineering through the ENACT program. *Journal of Research in Curriculum and Instruction, 25*(2), 1-13. [KCI]

Jo, S., **Ko, Y.**, & Lee, H. (2021). Patterns of student evaluation on media information regarding socioscientific issues. *Journal of the Korean Association for Science Education, 41*(1), 59-70. [KCI]

Park, S., **Ko, Y.**, & Lee, H. (2020). Video production as an instructional strategy for socioscientific issues: Its impact on middle school students' media literacy and understanding of SSI. *Journal of Research in Curriculum and Instruction, 24*(5), 511-522. [KCI]

Ko, Y., & Lee, H. (2020). Analyzing college students' dialogic argumentation in the context of nanotechnology issues based on idiocentrism and allocentrism. *Journal of the Korean Chemical Society, 64*(5), 291-303. [KCI]

Kim, G., **Ko, Y.**, & Lee, H. (2020). The effects of community-based socioscientific issues program (SSI-COMM) on promoting students' sense of place and character as citizens. *International Journal of Science and Mathematics Education, 18*, 399-418. doi:10.1007/s10763-019-09976-1 [SSCI]

Choi, J., **Ko, Y.**, & Lee, H. (2019). Comparative analysis of socioscientific issues presented in the 2015 integrated science and social studies textbooks. *Journal of Learner-centered Curriculum and Instruction, 19*(16), 1233-1256. [KCI]

Rojewski, J. W., Choi, I., Hill, J., **Ko, Y.**, Walters, K. L., Kwon, S. J., & McCauley, L. (2019). Career orientation and perceived professional competence among clinical research coordinators. *Journal of Clinical and Translational Science, 3*(5), 234-244. doi: 10.1017/cts.2019.385 [Impact Factor: 1.954]

Park, D., **Ko, Y.**, & Lee, H. (2018). Flipped learning in socioscientific issues instruction: Its impact on middle school students' key competencies and character development as citizens. *Journal of the Korean Association for Science Education, 38*(4), 467-480. [KCI]

Ko, Y., & Lee, H. (2017). Comparison of the effects of socioscientific issues instruction on promoting college students' character and values: Based on idiocentrism and allocentrism. *Journal of the Korean Association for Science Education, 37*(3), 395-405. [KCI]

Kim, J., **Ko, Y.**, & Lee, H. (2017). Enhancing student key competencies through socioscientific issues instruction. *Journal of Learner-centered Curriculum and Instruction, 17*(8), 339-362. [KCI]

Ko, Y., Kim, Y., Lee, H., & Lim, K. (2017). Research trends in teacher learning community in Korea: A thematic analysis of Korean journal publications. *Journal of Learner-centered Curriculum and Instruction, 17*(4), 429-457. [KCI]

Park, S., **Ko, Y.**, & Lee, H. (2017). Use of digital storytelling approaches to enhance the educational effects of SSI instructions. *Journal of the Korean Association for Science Education, 37*(1), 181-192. [KCI]

Kim, J., **Ko, Y.**, & Lee, H. (2016). Effects of socioscientific issues instruction on elementary school students' character and values as global citizens*. The Journal of Elementary Education, 29*(3), 1-25. [KCI]

Ko, Y., Choi, Y., & Lee, H. (2015). Development of an analytical framework for dialogic argumentation in the context of socioscientific issues: Based on discourse clusters and schemes*. Journal of the Korean Association for Science Education, 35*(3), 509-521. [KCI]

Ko, Y., Lee, H., & Kim, S.-W. (2015). Gender differences of physics major college students' conceptual understanding and its degree of certainty in the subject of quantum mechanics. *New Physics: Sae Mulli, 65*(8), 812-824. [SCOPUS, KCI]

Lee, H., Choi, Y., & **Ko, Y.** (2015). Effects of collective intelligence-based SSI instruction on promoting middle school students' key competencies as citizens. *Journal of the Korean Association for Science Education, 35*(3), 431-442. [KCI]

Ko, Y., & Lee, H. (2014). Pre-service science teachers' understanding of students' misconceptions in physics and perceptions on "teacher as a researcher" through the research experience. *Journal of the Korean Association for Science Education, 34*(5), 449-457. [KCI]

Lee, H., Choi, Y., & **Ko, Y.** (2014). Designing collective intelligence-based instructional models for teaching socioscientific issues. *Journal of the Korean Association for Science Education, 34*(6), 523-534. [KCI]

MANUSCRIPTS IN PREPARATION

Ko, Y., & Yoon, H. (in writing). Pre-service teacher's use of visual representations in their Physics teaching.

Ko, Y. (in preparation). Preservice science teachers' perceptions of integration of artificial intelligence in science education.

CONFERENCE PRESENTATIONS

Ko, Y., Lee, H.,& Lee, H. (2023, August). *Addressing disasters in science education: How are disasters represented in Korean science textbooks?* Symposium titled Connecting disaster and risk studies with science education research at the 15th 2023 ESERA conference. Cappadocia, Turkey.

Ko, Y. (2023, June). *Contemporary use and future directions of artificial intelligence in science education.* Poster presentation at the ASERA conference, Cairns, Australia.

Lee, H., Hwang, Y., **Ko, Y.**, Choi, Y., Ok, S.-Y., Nam, C.-N., Shim, S. S., Hong, J. (2022, June). *ENACT project as an integrated approach focusing on the resolution of socioscientific issues.* Symposium at the 49th Spring Conference of the Korean Association for Learner-centered Curriculum and Instruction, online conference.

Ko, Y., Lee, H., & Hong, J. (2022, March). *ENACT project: Promoting pre-service science teachers' perceptions on social responsibility of scientists and engineers.* Paper presented at the 95th annual meeting of NARST: Unity and inclusion for global scientific literacy: Invite as a community, unite as a community, Vancouver, BC.

Lee, H., Choi, Y., Ok, S.-Y., Nam, C.-N., Shim, S. S., Hwang, Y., **Ko, Y.**, & Lee, K. (2022, March). *Exploring the perception of college students in STEM fields on social responsibility of scientists and engineers.* Paper presented at the 95th annual meeting of NARST: Unity and inclusion for global scientific literacy: Invite as a community, unite as a community, Vancouver, BC.

Cho, Y. S., Hwang, Y., **Ko, Y.**, & Lee, H. (2022, January). *Effects of AI-integrated science classes on promoting middle school students' attitudes towards AI technology and data literacy.* **[Outstanding Presentation Award]**, Poster presentation, The 80th KASE Academic

Conference, online conference.

Ko, Y., Shim, S., & Lee, H. (2021, July). *Development of a scale to measure views of social responsibility and analysis of STEM college students' views on social responsibility*. Panel presentation, The 80th KASE Academic Conference, online conference.

Hwang, Y., **Ko, Y.**, & Lee, H. (2021, July). *ENACT project for STEM college majors: Its design and cases*. Panel presentation, The 80th KASE Academic Conference, online conference.

Hwang, Y., Choi, Y., Ok, S., Nam, C.-H., **Ko, Y.**, Lee, H., Lee, K., & Hong, J. (2021, July). *Effects of ENACT-based program on college students' social responsibility of scientists and engineers*. Panel presentation, The 80th KASE Academic Conference, online conference.

Ko, Y., & Yoon, H. (2021, June). *Characteristics of interaction using visual representation in pre-service teachers' physics teaching*. Oral presentation, International Science Education Conference (ISEC) 2021, Singapore, online conference.

Ko, Y., Shim, S., & Lee, H. (2021, February). *Development and validation of a scale of social responsibility for scientists and engineers*. Oral presentation, International Organization for Science and Technology Education (IOSTE) 2020, online conference.

Ko, Y. (2021, January). *Discussion on teacher perceptions and practices in inclusive science education*. General Discussion, Korean Association for Science Education 2021, online conference.

Ko, Y. (2020, November). *Korean K-12 Education during COVID19 pandemic period*. Online invited speech for EDIT 2000 course, The University of Georgia.

Ko, Y., Shim, S., & Lee, H. (2020, September). *Development and validation of questionnaire to measure social responsibility of STEM professionals*. Symposium presentation, 2020 Korean Society for Engineering Education, Jeju, Korea.

Choi, I., Kwon, S., Walters, K., & **Ko, Y.** (2019, October). *A scenario-based authentic virtual environment (SAVE) for child pedestrian safety education: Its design and learning benefits*. **[Outstanding Practice Award sponsored by the Design & Development Division**], Paper presented for **Featured Research Session** at the annual conference of the Association for Educational Communications and Technology, Las Vegas, NV.

Hill, J., Walters, K., **Ko, Y.**, Kwon, S., Rojewski, J., Fisher, E., Choi, I., & McCauley, L. (2019, June). *Who are these people? Using progressive personas to guide STELLAR development*. Round table, EdMedia + Innovate Learning 2019, Amsterdam, Netherlands.

Ko, Y. (2019, May). *"Poco a poco": Autoethnographic writing on a journey to become a lifelong music learner*. Panel presentation, The 15th International Congress of Qualitative Inquiry, The University of Illinois at Urbana-Champaign, IL.

Choi, I., Kwon, S., Walters, K., **Ko, Y.**, Hill, J., Rojewski, J., & McCauley, L. (2019, February). *Conceptual framework of the self-directed training, education, life-long learning advancement resource system*. Poster presentation, The 2nd Annual Georgia Clinical & Translational Science Conference, Pine Mountain, GA.

Hill, J., Walters, K., **Ko, Y.**, Kwon, S., Rojewski, J., Fisher, E., Choi, I., & McCauley, L. (2019, February). *Who are these people? Creating personas to guide STELLAR development*. Poster presentation, The 2nd Annual Georgia Clinical & Translational Science Conference, Pine

Mountain, GA.

Rojewski, J., **Ko, Y.**, Kwon, S., Walters, K., Hill, J. Fisher, E., Choi, I., & McCauley, L. (2019, February). *Typology of clinical research coordinators using career orientations and perceived professional competence.* Poster presentation, The 2nd Annual Georgia Clinical & Translational Science Conference, Pine Mountain, GA.

Kwon, S., Walters, K., **Ko, Y.**, Melendez, L., Wilson, C., Yang, T., Cho, R., Han, K., Chung, C., Kim, D., Song, S., & Choi, I. (2018, October). *A scenario-based virtual reality (VR) learning environment for child pedestrian safety education.* **[Outstanding Award in Design and Development Division]**, Design and Development Showcase, The annual Association for Educational Communications and Technology conference, Kansas City, MO.

Ko, Y., & Lee, H. (2018, October). *Character development of college students through socio-scientific issues instruction.* Paper presented at the annual Association for Educational Communications and Technology conference, Kansas City, MO.

Mun, K., Hwang, Y., Ha, M., **Ko, Y.**, & Kwon, S. (2018, July). *Exploring the motivation for science learning of engineering majors.* Poster presentation, The 74th KASE Academic Conference, Daegu National University of Education, Daegu, Korea.

Ko, Y., Kim, G., & Lee, H. (2018, July). *Community-based socio-scientific issues instruction: Relationship between sense of place and character development.* Paper presented at the 2018 International Korean Association for Learner-centered Curriculum and Instruction Conference, Ewha Womans University, Seoul, Korea.

Walters, K., Kwon, S., **Ko, Y.**, Melendez, L., Wilson, C., Yang, T., Cho, R., Han, K., Chung, C., Kim, D., Song, S., & Choi, I. (2018, April). *SAVE4Youth: Scenario-based virtual reality (VR) learning environment for child pedestrian safety education.* Poster Presentation, IRIS 2018: Integrative Research and Ideas Symposium, Athens, GA.

Ko, Y., Kim, Y., & Lim, K. (2016, July). *Research trends in teacher learning community in Korea: Implications on science education.* Poster presentation, The 70th KASE Academic Conference, Chonbuk National University, Korea.

Park, D., **Ko, Y.**, Lee, H. (2016, July). *The effects of a flipped learning based SSI instruction on student key competencies.* Poster presentation, The 70th KASE Academic Conference, Chonbuk National University, Korea.

Park, S., **Ko, Y.**, Lee, H. (2016, July). *Student perceptions of the effects of SSI program using a digital storytelling approach.* Poster presentation, The 70th KASE Academic Conference, Chonbuk National University, Korea.

Kim, J., **Ko, Y.**, & Lee, H. (2016, July). *The effects of socioscientific issues instruction on elementary school students' character and values as global citizens.* Paper presented at the 70th Meeting of KASE, Chonbuk National University, Jeonju, Korea.

Ko, Y., Choi, Y., & Lee, H. (2016, April). *A comparison of college students' character development and socioscientific argumentation based on their orientations: Individualism-collectivism.* Paper presented at the 89th annual meeting of NARST: Toward equity and justice: Many different voices, cultures, and languages in science education research for quality science learning and teaching, Baltimore, MD.

Mun, K., Choi, Y., Mun, J., & **Ko, Y.** (2015, October). *Methodological research trends of science education in Korea*. Paper presented at the 4th International Conference of East-Asian Association for Science Education: Promoting Science Education Reform through Research, Beijing Normal University, China.

Ko, Y., Choi, Y., & Lee, H. (2015, July). *Analysis of patterns of college students' socioscientific argumentation based on their orientations*. Paper presented at the 68th Meeting of KASE, KAIST, Daejeon, Korea.

Ko, Y., Lee, H., & Choi, Y. (2015, April). *Development of framework for assessing the quality of socioscientific argumentation*. Paper presented at the 88th Annual Meeting of NARST: Becoming Next Generation Science Educators in an Era of Global Science Education Reform, Chicago, IL.

Choi, Y., **Ko, Y.**, & Lee, H. (2015, April). *Enhancing Korean middle school students' 21st century skills through collective intelligence based SSI instruction*. Paper presented at the 88th Annual Meeting of NARST: Becoming Next Generation Science Educators in an Era of Global Science Education Reform, Chicago, IL.

Ko, Y., & Kim, S.-W. (2015, April). *Exploring the gender difference in Korean university students' conceptual understanding and confidence on Quantum Mechanics*. Paper presented at 2015 Korean Physical Society Spring Meeting, Daejeon Convention Center, Korea.

Choi, Y., Lee, H., & **Ko, Y.** (2014, July). *Effects of collective intelligence-based SSI instruction on science gifted students' 21st century skills and the attitudes toward science and technology*. Paper presented at 2014 The 67th KASE International Conference, Chuncheon National University of Education, Korea.

Ko, Y., Lee, H., & Choi, Y. (2014, July). *Designing collective intelligence-based instructional models for teaching socioscientific issues*. Poster presentation, The 67th KASE Academic Conference, Chuncheon National University of Education, Korea.

Ko, Y., & Lee, H. (2014, April). *Promoting Korean pre-service science teachers' understanding of students' misconceptions in Physics through the research experience*. Paper presented at the 87th Annual Meeting of NARST: A worldwide organization for improving science teaching and learning through research, Pittsburgh, PA.

Lee, H., & **Ko, Y.** (2014, April). *Enhancing science teachers' understanding of teaching socioscientific issues through collaborative action research*. Paper presented at the 87th Annual Meeting of NARST: A worldwide organization for improving science teaching and learning through research, Pittsburgh, PA.

Ko, Y., Kim, E., Lee, H., & Noh, J. (2013, July). *Development and implementation of instructional models for digital textbook-based science teaching*. Poster presentation, The 3rd International Conference of East-Asian Association for Science Education, The Hong Kong Institute of Education, China.

HONORS AND AWARDS

Scholarships
Samsung Card Scholarship, Ewha Womans University   2016

International Committee Scholarship	2014 & 2015
National Association for Research in Science Teaching (NARST)	
Scholarships for New Excellent Graduate Students, EWHA	2013
Scholarships for Excellent Undergraduate Students, EWHA	2009 – 2012

Awards

Ewha Teaching Excellence Award	2023
Ewha Womans University	
Outstanding Presentation Award	2022
Korean Association for Science Education (KASE)	
Outstanding Practice Award sponsored by the Design & Development Division	2019
Association for Educational Communications & Technology (AECT)	
Design and Development Showcase Outstanding Award	2018
Association for Educational Communications & Technology (AECT)	
Best Paper Award Nominee	2014
National Association for Research in Science Teaching (NARST)	
Best Tutor Award	2012
Tutoring General Physics I for freshmen, Ewha Womans University	

CERTIFICATION

Secondary Teaching Certificate in South Korea
- Physics (K27672)
- General Science (K27673)