Sumin Hong

Educational Technology
School of Education
Seoul National University

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Education

Seoul National University	Seoul, South Korea
Ph.D. Student, Educational Technology	Mar, 2022 – Present
GPA: 4.16 / 4.3	
Seoul National University	Seoul, South Korea
M.A., Educational Technology	Feb, 2021
GPA: 4.09 / 4.3	
Renmin University of China	Beijing, China
Exchange Student	Set, 2015 – Feb, 2016
Seoul Women's University	Seoul, South Korea
B.A. Chinese Language & Literature	Aug, 2017
GPA: 4.2 / 4.5	

Professional Experience

Indiana University	Mar, 2024 - Feb, 2025.
Visiting Scholar	
Georgia State University	Jun, 2024 - Aug, 2025
Learning Science(AI2 Research Laboratory), College of Education & Human Development	
Visiting Scholar	
Center for Innovation of Future Education, Seoul National University	Mar, 2025 – Present
Research Assistant	
Learning Sciences Research Institute, Seoul National University	Mar, 2022 – Present
Researcher	
Seoul National Academy For Educational Administrators	Oct, 2020 – Feb, 2022
Instructional Designer	

Center for Teaching and Learning Development, Seoul National University	Set, 2019 – Aug, 2020
TA	

Research Experience

Instructional Design

1. **[Google for Education] Study on the Effects of Utilizing Cloud-Based and Artificial Intelligence Tools**

   Research Assistant, Oct 2023 – Feb 2024

2. **[Jeju National University] Development of Guidelines for the Restructuring and Operation of Hi-Edu Classes**

   Research Assistant, Aug 2023 – Dec 2023

3. **[Gangwon State Office of Education] Development of Metaverse Integrated Library Services and Contents**

   Research Assistant, Set 2023 – Dec 2023

4. **[Sejong City Office of Education] Research on the Establishment and Operation of Sejong Metaverse Schools**

   Research Assistant, July 2023 – Nov 2023

5. **[Seoul National University] Development of Virtual Reality Classroom Simulations for Enhancing the Teaching Competencies of Pre-service Teachers at Colleges of Education**

   Researcher, June 2023 – Oct 2023

Online Education

1. **[7days] Research on the Activation of Online Education in Oriental Medicine** Research Assistant, Apr 2023 – Dec 2023

Educational administration

1. **[Korea Foundation for the Advancement of Science and Creativity] 2023 Support Project for Future Education Centers at Teacher Training Institutions**

   Research Assistant, July 2023 – Dec 2023

2. **[Korea Foundation for the Advancement of Science and Creativity] Analysis and Restructuring Research on the Outcomes for Enhancing AI and Digital Competencies of Pre-service and In-service Teachers**

   Researcher, May 2023 – Nov 2023

3. **[Seoul National University] 2022 Educational Consumers Satisfaction Survey FGI**

   Research Assistant, Feb 2023 – Mar 2023

4. **[Ministry of Education] Support for AIEDAP Project to Strengthen Teachers' AI and Digital Competencies**

   Research Assistant, July 2022 – Present

   * The research experience listed is only for projects conducted in 2023.

Books

1. Lim, C., Kwon, K., Kim, G., Park, C., Bae, J., Song, D., Lee, D., Lim, E., Cho, J., Cho, H., **Hong, S.**, Hwang, Y., & Eom, T. (2025). 미래교육의 방향과 실제 2 [Directions and practices of future education, Vol. 2]. Kyoyookbook.
2. Lim, C., Han, S., Gye, B., **Hong, S.**, Lee, D. (2024). Guidelines for educational uses of Metaverse. In Nam, C., S., Song, D., & Jeong, H. (Eds.), Human-centered Metaverse: Concepts, methods, and application (pp. 213-234). Elsevier.
3. Lim, C., Lee, D., Lee, J., Han, O., Ko, B., **Hong, S.**, Lim, E., & Chae, J. (2024). 교수설계 연구를 위한 설계·개발연구 방법론 [Design & development research methodology for instructional design studies]. Kyoyookbook.
4. Park, S.-i., Lim, C., Lee, J., Choi, J., & Jo, Y. (2024). 教育技术与教学 [Educational technology and teaching] (Jang, S., Han, O.-g., Lee, J.-y., & **Hong, S.**, Trans.). Chinese Academy of Social Sciences Press. (Original work published 2021)
5. **Hong, S.** (2022). 온오프라인 수업설계 퀵 모형, AMOS Model [AMOS model: A quick model for online–offline course design]. Pakyoung Story.

Publications

6. **Hong, S.**, Moon, J., Eom, T., Awoyemi, I. D., & Hwang, J. (2025). Generative AI-enhanced virtual reality simulation for pre-service teacher education: A mixed-methods analysis of usability and instructional utility for course integration. *Education Sciences, 15*(8), 997. https://doi.org/10.3390/educsci15080997
7. Lim, C., Park, S., Eom, T., & **Hong, S.** (2025). Developing an instructor-learner-AI collaborative instructional design strategies for middle school English writing using AI and digital tools. *Journal of Educational Information and Media, 31*(3), 1073-1099.
8. Lim, C., Han, Y., Kim, S., Lee, C., **Hong, S.**, & Jeong, J. (2025). Development of an AI and digital competency assessment instrument for in-service teachers using the behaviorally anchored rating scale (BARS). *Journal of Educational Information and Media, 31*(3), 945–969. http://dx.doi.org/10.15833/KAFEIAM.31.3.945
9. Lim, C., Han, Y., Choi, J., **Hong, S.**, Go, B., & Lim, E. (2025). Research Trends and Future Directions in Artificial Intelligence-Integrated Education. *Journal of Educational Technology, 41*(1), 363-395.
10. Han, Y., **Hong, S.**, Lee, Z., & Lim, C. (2025). Defining and Classifying the Roles of Intelligent Learning Companion Systems: A Scoping Review of Literature. *TechTrends*. https://doi.org/10.1007/s11528-025-01058-0
11. Lim, E., **Hong, S**., & Lim, C. (2025). Analyzing Perceptions and Educational Needs of Elementary School Teachers for AI-integrated Education. *The Journal of Korean Association of Computer Education, 28*(2), 49-60. https://doi.org/10.32431/kace.2025.28.2.005
12. Lim, C., Park, S., Eom, T., Lim, M., & **Hong, S.** (2024). A Study on Developing a Learning Environment Model for School Libraries in the Virtual World. *Journal of Educational Technology, 40*(4), 995-991.

13. **Hong, S.**, Yoon, I, Moon, Y., & Lim, E. (2024). Analysis and evaluation of teacher training for enhancing teachers' AI and digital competence. *The Journal of Educational Information and Media, 30*(5), 1421-1446.

14. Park, S., **Hong, S.**, Lim, E., & Lim, C. (2024). Analysis of the state of instructional research using AI and exploration key lesson design stages through a systematic literature review. *The Journal of Educational Information and Media, 30*(4), 1135-1158.

15. Lee, S., Song, J., & **Hong, S.** (2024). Development and Effectiveness of an Educational Program Using ChatGPT for Instructional Designers: Focusing on Middle-aged and Older Instructional Designers. *The Journal of Yeolin Education, 32*(4), 85-110.

16. **Hong, S.**, Min, H., & Lee, D. (2024). Study on Consulting and Effectiveness Evaluation for the Distance Education of University Courses. *Journal of Learner-Centered Curriculum and Instruction, 24*(12), 737-747.

17. **Hong, S.**, Eom, T., & Park, J. (2024). Exploratory study on the learning activities data in virtual worlds through a scoping literature review: Focusing on Roblox. *The Journal of Educational Information and Media, 30*(3), 861-884.

18. Lim, C., Han, H., Lim, E., Go, B., Eom, T., Kim, S., & **Hong, S.** (2024). Developing a comprehensive framework for constructing and operating edu-metaverse in K-12 education. *Journal of Educational Technology, 40*(2), 361–398.

19. **Hong, S.**, Eom, T., Lee, H., & Hong, J. (2024). Analysis of educational needs and priorities on competencies for the doctors of Korean medicine. Journal of Learner-Centered Curriculum and Instruction, 24(7), 339–349.

20. Han, S., Shin, Y., **Hong, S.**, Park, J., Lim, E., Park, S., Eom, T., Jeong, Y., & Cho, J. (2024). Case study on development and operation of an educational metaverse using rapid prototype development methodology: A focus on D University. *Journal of Learner-Centered Curriculum and Instruction, 24*(4), 1019–1039.

21. Lim, C., Han, S., Kye, B., Lee, D., Park, J., Eom, T., Choi, J., Jeon, M., Kim, E., Kwon, M., & **Hong, S.** (2023). Development of instructional strategies for metaverse class in K-12 education. *Journal of Educational Technology, 29*(4), 1007–1036.

22. Lim, C., **Hong, S.**, Lim, E., Park, S., Kim, H., & Han, H. (2023). Development of conceptual models and instructional design strategies for hybrid learning in higher education. *Journal of Educational Technology, 29*(4), 821–850.

23. Lim, E., **Hong, S.**, Park, S., & Lim, C. (2023). Exploring the improvement of rapid prototyping to instructional systems design(RPISD) Model. *Journal of Educational Technology, 39*(3), 749-785. http://dx.doi.org/10.17232/KSET.39.3.749

24. **Hong, S.**, Eom, T., Jeong, Y., & Han, S. (2023). Design and operation of metaverse based learning in higher education: Focus on pre-service teachers. *Journal of Digital Contents Society, 24*(8), 1717-1727. https://doi.org/10.9728/dcs.2023.24.8.1717

25. **Hong, S.**, & Han, H. (2023). Analyzing perceptions and educational needs of elementary school teachers for using ChatGPT in education. *The Journal of Korean Association of Computer Education, 26*(4), 51-63. https://doi.org/10.32431/kace.2023.26.4.006

26. **Hong, S.**, Yoo, J., Kim, H., Lim, Y., & Lim, C. (2023). A study on the utilization and effect of online communication channels to promote learner questions in engineering education. *Journal of Engineering Education Research, 26*(4), 11-21. http://doi.org/10.18108/jeer.2023.26.4.11

27. **Hong, S.**, Go, B., Rho, J., An, S., Lim, C., Seo, D., & lhm, J. (2023). A blended approach of in-person closed-book and online open-book exams for dental students in Korea. *BMC Medical Education*. https://doi.org/10.1186/s12909-023-04014-9

28. **Hong, S.**, Kim, H., Lim, C. & Lim, Y. (2022). Strategies and effects of questioning methods based on anonymity/openness in remote engineering education. J*ournal of Engineering Education Research, 25*(3), 16-24. https://doi.org/10.18108/jeer.2022.25.3.26

29. **Hong, S.**, Kwon, H., & Han, H. (2022). An exploratory study on online education scaffolding strategy and effect at the university using a systematic review. *Journal of Digital Convergence, 20*(4), 63-72. https://doi.org/10.14400/JDC.2022.20.4.063
30. Min, H., & **Hong, S.** (2022). A study on instructor satisfaction with non-face-to-face education: focusing on the case of S university. *Journal of Teaching & Learning research, 15*(1), 1-21.
31. **Hong, S.**, & Lim, C. (2021). Development of language educators' scaffolding strategies using an artificial intelligence speaker. *Journal of Educational Technology, 37*(2), 309-341. http://dx.doi.org/10.17232/KSET.37.2.309
32. Lim, C., Han, H., **Hong, S.**, Song, Y., & Lee, D. (2020). Design principles for improving creative thinking competency in corporate education. *The Journal of Educational Information and Media, 26*(3),477-510. http://dx.doi.org/10.15833/KAFEIAM.26.3.477
33. Lim, C., Song, Y., **Hong, S.**, & Park, C. (2020). A study on the application and improvement of the rapid prototyping to instructional systems design (RPISD) model. *Journal of Educational Technology, 36*(3), 589-617. http://dx.doi.org/10.17232/KSET.36.3.589

Presentation

1. Song, Y., **Hong, S.**, Park C., Liu K. Lim C. (2019, Oct 17-18). *A study on the improvement of RPISD (rapid prototyping to ISD)*. International Conference on Education Research. Seoul, South Korea.
2. Song, Y., **Hong, S.**, Park, C., Liu, K. & Lim, C. (2019, Nov 2). *A Study on the Application and Improvement of the Rapid Prototyping to Instructional Systems Design (RPISD) Model*. Joint Conference of Korean Society of Educational Technology, Association for Educational Information and Media. Seoul, South Korea.
3. Lim, C., Han, H., Lee, D., Song, Y., & **Hong, S.** (2019, Nov 2). *Development and Application of Educational Methodologies for Improving Creative Thinking Competency in Corporate Education*. Joint Conference of Korean Society of Educational Technology, Association for Educational Information and Media. Seoul, South Korea.
4. Song, Y., **Hong, S.**, Park, C., Liu, K. & Lim, C. (2019, Nov 23). *Research on the Improvement of Rapid Prototyping Models for the Development of Corporate Education*. Joint conference of Human Resources Development. Seoul, South Korea.
5. Lim, C., Song, Y., **Hong, S.**, Lee, D., & Han, H. (2020, Oct 29-30). *Design Principles for Improving Creative Thinking Competency in Corporate Education*. 2020 AECT Conference, Virtual Convention.
6. **Hong, S.**, & Lim, C. (2021, May 30). *Development of Language Educators' Scaffolding Strategies Using an Artificial Intelligence Speaker*. Conference of Korean Society of Educational Technology. Virtual Convention.
7. Lim, C., Kim, M., & **Hong, S.** (2021, May 30*). Development of Instructional Design Models for Flipped Learning Curriculum in Corporate Education*. Conference of Korean Society of Educational Technology. Virtual Convention.
8. Lim, C., **Hong, S.**, Lee, D., Kim, H., Yoo, J., Lee, H., & Lim, E. (2022, May 21). *Research on Optimization Strategies and Effectiveness Evaluation for Remote Teaching: A Case Study of S University*. Conference of Association for Educational Information and Media. Virtual Convention.
9. **Hong, S.**, Lim, C., Kim, H., & Lim, Y. (2022, May 21). *The Effectiveness of Question Types and Strategies to Enhance Learner Engagement in Online Education*. Conference of Association for Educational Information and Media. Virtual Convention.
10. Park, J., **Hong, S.**, & Lim, C. (2022, May 21). *Exploratory Study on the Attributes of*

Instructional Media for Educational Use in the Metaverse. Conference of Association for Educational Information and Media. Virtual Convention.

11. **Hong, S.**, Kwon, H., & Han, H. (2022, Jun 18). *Exploration of Scaffolding Strategies in University Online Education through Systematic Literature Review*. Conference of Korean Society of Educational Technology. Daejeon, South Korea.

12. Han, Y., **Hong, S.**, & Lim, C. (2022, Oct 24-28). *Exploring a Conceptual Model for an Intelligent Learning Companion System*. 2022 AECT Convention, Las Vegas, NV.

13. Ko, B., **Hong, S.**, lhm, J., & Lim, C. (2022, Oct 24-28). *A Study on the Effectiveness of Open Book Evaluation in Dentistry Education*. 2022 AECT Convention, Las Vegas, NV.

14. Lim, C., **Hong, S.**, Kim, H., Lim, E., Yoo, J., Lee, H., Lee, d., Park, J., & Lee, J. (2022, Oct 24-28). *A Study of the Optimization Method for Distance Education and Evaluation of Effectiveness: The case of S University in South Korea*. 2022 AECT Convention, Las Vegas, NV.

15. **Hong, S.**, Lim, C., & Han, H. (2022, Oct 24-28). *The role of the teacher and scaffolding strategies for facilitating interaction with artificial intelligence speaker in education*. 2022 AECT Convention, Las Vegas, NV.

16. Lim, C., **Hong, S.**, Park, J., Kim, H., Park, S., Eom, T., & Jeong, Y. (2023, May 13). *Development of a Framework and Assessment Tools for Effective Teaching and Learning Methods in the Post-COVID Era*. Conference of Association for Educational Information and Media. Seoul, South Korea.

17. Lim, E., **Hong, S.**, Park, S., & Lim, C. (2023, Jun 17). *Exploring the Improvement of Rapid Prototyping to Instructional Systems Design(RPISD) Model*. Conference of Korean Society of Educational Technology. Jeju, South Korea.

18. Lim, C., Han, S., **Hong, S.**, Lee, D., Park, J., Eom, T., Jeon, M, Choi, J., Kye, Kim, E., & Kwon, M. (2023, Jun 17). *Research on Typification and Strategy Development for Instructional Design for Educational Use of the Metaverse in K-12 Education*. Conference of Korean Society of Educational Technology. Jeju, South Korea.

19. Han, Y., **Hong, S.**, Lee, J., & Lim, C. (2023, Jun 17). *Exploration of Artificial Intelligence Learning Companion Systems. Conference of Korean Society of Educational Technology*. Jeju, South Korea.

20. Lim, C., **Hong, S.**, Lim, E., Park, S., Kim, H., & Han, H. (2023, Oct 12-13). *A Development of Framework for Hybrid Learning in Higher Education in the context of South Korea*. International Conference on Education Research. Seoul, South Korea. Jeju, South Korea.

21. Lim, C., Park, J., Park, S., Eom, S., **Hong, S.**, Jeong, Y., & Kim, H. (2023, Oct 15-19). *An Exploration of Design Principles for Blended Learning considering the Four Quadrants of Blended Learning Types*. 2023 AECT Convention, Orlando, FL, United States.

22. Yoo, J., **Hong, S.**, Kim, H., Lim, C., & Lim, Y. (2023, Oct 15-19). *Promoting Active Learning in Engineering College Classes through Social Learning Platforms: An Investigation of Learner Question Generation and Engagement*. 2023 AECT Convention, Orlando, FL, United States.

23. Lim, C., **Hong, S.**, Lim, E., Park, S., Kim, H., & Han, H. (2023, Oct 15-19). *A Development of Instructional Strategies for Hybrid Learning in South Korea Higher Education*. 2023 AECT Convention, Orlando, FL, United States.

24. Lim, C., **Hong, S.**, Lim, E., Park, S., Kim, H., & Han, H. (2023, Nov 11). *A Development of Conceptual model and Instructional Strategies for Hybrid Learning in Higher Education*. Joint Conference of Korean Society of Educational Technology, Association for Educational Information and Media. Seoul, South Korea.

25. Yoo, J., **Hong, S.**, Kim, H., Lim, C., & Lim, Y. (2023, Nov 11). *A Study on Teaching Strategy and Effectiveness Using an Online Communication Platform to Promote Learner Questions*. Joint Conference of Korean Society of Educational Technology, Association for Educational

Information and Media. Seoul, South Korea.

Poster Presentation

1. Park, E., Liu, K., **Hong, S.**, & Song, Y. (2019, Oct 17-18). *A Study on the Development of Creative Marketing Educational Training Program based on RPISD(Rapid Prototyping to ISD)*. International Conference on Education Research. Seoul, South Korea.
2. Lim, C., **Hong, S.**, Park, S., & Eom, T. (2023, Oct 12-13*). Collaborative instructional model among instructors-learners-artificial intelligence (AI) in English writing class using cloud-based learning tools*. International Conference on Education Research. Seoul, South Korea.
3. Lim, C., Hong, S., Lim E., Jeong, K., Eom, T., Koh, J., Kim, Y., & Hong, J. (2024, July 11). A Study on the Development of Online Education Content Manual for Korea Medicine Using RPISD Model. International Conference on Education Research. Seoul, South Korea.
4. Lim, C., **Hong, S.**, Eom, T., Park, S., & Lim, M. (2024, July 11). From traditional school library to Metaverse learning commons. International Conference on Education Research. Seoul, South Korea.
5. Lim, C., **Hong, S.**, Lim E., Jeong, K., Eom, T., Koh, J., Kim, Y., & Hong, J. (2024,). A Study on the Development of Online Education Content Manual for Korean Medicine Using RPISD Model.
6. Eom, T., & **Hong, S.** (2024, November). A systematic review of the role of AI agents in virtual world–based learning environments. Joint Fall Conference of the Korean Society for Educational Technology (KSET) & the Korean Association for Educational Information and Media (KAEIM).
7. **Hong, S.**, Eom, T., Lim, J., Lim, C., & Moon, J. (2025, April 25). Integrating a generative AI–enhanced virtual reality simulation into teacher education: A preliminary design study [Conference presentation]. 2025 AERA Annual Meeting.
8. Park, G., Kwak, H., Han, Y., Lee, E., Han, D., & **Hong, S.** (2025, May). A design model for AI–ethics integrated instruction in secondary education. Spring Conference of the Korean Society for Educational Technology (KSET).

Media Presentation

1. Hwang, J., **Hong, S.**, Eom, T., & Lim, C. (2023, Nov 11). *Development of a Generative AI-based virtual reality class simulation to improve the teaching competence of pre-service teachers*. Joint Conference of Korean Society of Educational Technology, Association for Educational Information and Media. Seoul, South Korea.
2. Hwang, J., **Hong, S.,** Eom, T., & Lim, C. (2024, Jun 11). Enhancing Pre-service Teachers' Competence with a Generative Artificial Intelligence-Enhanced Virtual Reality Simulation. International Society of the Learning Sciences. Buffalo, NY, United States.

Teaching Experience

1. Seoul National University, Center for Teaching and Learning Development (Mar, 2021 – Present)

   • Small Teaching and learning Method Clinic

   • Teaching Seoul National University Professors learning tools including Perusall

and Gradescope.

Awards

Best Media Award

Media Recognized: Hwang, J., **Hong, S.**, Eom, T., & Lim, C. (2023). Development of a Generative AI-based virtual reality class simulation to improve the teaching competence of pre-service teachers.

Korean Society of Educational Technology (KSET),

Korean Association for Educational Information and Media(KAEIM), 2023

Fellowship & Scholarships

1. Seoul National University BK21 Phase 4, 6th Outstanding Graduate Student (27, Jun, 2023)

2. BK21 Institute for Innovation and Coexistence Education Research, Junior Scholar Fellowship (14, Feb, 2023)

3. BK21 Institute for Innovation and Coexistence Education Research, Jr. Priming Award (28, 2022.6.28)

4. Epson Global Leader Scholarship (Set, 2015 – Aug, 2016)

Certification

1. Google Certified Trainer / Google for Education (Aug, 2022)

2. Certified AI Expert / Korean Standards Association (Dec, 2021)

3. Secondary School Teacher's Certificate (Chinese) / Ministry of Education and Human Resources Development (Aug, 2017)