

Heeryung Choi, Ph.D., Postdoctoral Associate

Curriculum Vitae

CONTACT INFORMATION	University of Minnesota Department of Educational Psychology 250 Educational Science 56 East River Road Minneapolis, MN 55455	heeryung@umn.edu www.linkedin.com/in/heeryung
EDUCATION	Ph.D. in Information with Data Science Certificate University of Michigan Dissertation: SRLA: Self-Regulated Learning Analytics Advisor: Prof. Christopher Brooks Committee: Profs. Philip H. Winne, Stephanie Teasley, and Andrew Krumm	2016–2022 Ann Arbor, MI, USA
	M.S. in Cognitive Science Seoul National University Advisor: Prof. Joonhwan Lee	2014–2016 Seoul, South Korea
	B.A. in English Education Seoul National University Summa Cum Laude	2009–2014 Seoul, South Korea
PROFESSIONAL APPOINTMENTS	Postdoctoral Research Associate University of Minnesota, Department of Educational Psychology Conducted data mining on institution-wide student data from learning management system interactions (Unizin, Canvas) to identify longitudinal behavior patterns and their impacts. Developed a codebook through open coding of K-12 student-tutor video recordings, guided by self-regulated learning theory. Supervisors: Profs. Panayiota (Pani) Kendeou and Caitlin Mills	August 2024–Present Minneapolis, MN, USA
	Research Fellow University of Michigan, School of Information Investigated the impact of reflection on students mindful use of AI-generated hints and their performance using mixed methods. Supervisor: Prof. Christopher Brooks	May 2024–August 2024 Ann Arbor, MI, USA
	Digital Learning Postdoctoral Associate Massachusetts Institute of Technology, Center for Transportation and Logistics Developed a learning analytics dashboard to support self-regulated learning for over 10k learners in the MITx MicroMasters Program. Supervisors: Drs. Eva Ponce-Cueto and Inma Borrella	2022–2024 Cambridge, MA, USA
GRANTS	Spencer Foundation Small Research Grant (Principal Investigator; Pending Decision) MIT Integrated Learning Initiative Learning Effectiveness Grant (USD 50,000)	April 2025 2022–2023
HONORS AND AWARDS	Outstanding Graduate Student Instructor of the Year Samsung PhD Scholarship (5 years) Korean National Research Scholarship Graduated Summa Cum Laude Seoul National University Merit Scholarship	2020–2021 2016–2020 2015 2014 2011–2013
PUBLICATIONS	Peer-reviewed Journal Papers Choi, H., Phung, T., Wu, M., Singla, A., & Brooks, C. (under review). Reflection-Satisfaction Tradeoff: Investigating Impact of Reflection on Student Engagement with AI-Generated Programming Hints. <i>Computers and Education: Artificial Intelligence</i> .	

Choi, H., Jovanovic, J., Poquet, S., Brooks, C., Joksimovic, S., & Williams, J. J. (2023). The Benefit of Reflection Prompts Encouraging Learning with Hints in Programming Education. *The Internet and Higher Education*.

Brooks, C., Quintana, R. M., **Choi, H.**, Quintana, C., NeCamp, T., & Gardner, J. (2021). Towards Culturally Relevant Personalization at Scale: Experiments with Data Science Learners. *International Journal of Artificial Intelligence in Education*, pp. 1-22.

Peer-reviewed Archival Conference Proceedings

Phung, T., **Choi, H.**, Wu, M., Singla, A., & Brooks, C. (2025). Plan More, Debug Less: Applying Metacognitive Theory to AI-Assisted Programming Education. In *Proceedings of the 26th International Conference on Artificial Intelligence in Education*. Springer Nature Switzerland.

Singh, A., Fariha, A., Brooks, C., Soares, G., Henley, A., Tiwari, A., M, Chethan., **Choi, H.**, & Gulwani, S. (2024). Investigating Student Mistakes in Introductory Data Science Programming. In *Proceedings of the 55th ACM Technical Symposium on Computer Science Education*.

Choi, H., Borrella, I., & Ponce-Cueto, E. (2023). Meta-LAD: Developing a Learning Analytics Dashboard with Theoretically Grounded and Context-Specific Approaches. In *Proceedings of the 9th IEEE Learning with MOOCs (LWMOOCs)*. **Nominated for Best Paper.**

Choi, H., Winne, P. H., Brooks, C., Li, W., & Shedden, K. (2023). Logs or Self-Reports? Misalignment Between Behavioral Trace Data and Surveys When Modeling Learner Achievement Goal Orientation. In *Proceedings of the 13th International Conference on Learning Analytics & Knowledge (LAK)*.

Choi, H., Mills, C., Brooks, C., Doherty, S., & Singh, A. (2022). Design Recommendations for Using Textual Aids in Data-Science Programming Courses. In *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education*.

Choi, H., Dowell, N., Brooks, C., & Teasley, S. (2019). Social Comparison in MOOCs: Perceived SES, Opinion, and Message Formality. In *Proceedings of the 9th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 160-169).

Yan, W., Dowell, N., Holman, C., Welsh, S. S., **Choi, H.**, & Brooks, C. (2019). Exploring Learner Engagement Patterns in Teach-Outs Using Topic, Sentiment and On-Topicity to Reflect on Pedagogy. In *Proceedings of the 9th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 180-184).

Lin, Y., Dowell, N., Godfrey, A., **Choi, H.**, & Brooks, C. (2019). Modeling Gender Dynamics in Intra and Interpersonal Interactions During Online Collaborative Learning. In *Proceedings of the 9th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 431-435).

Book Chapter

Choi, H., Winne, P. H., & Brooks, C. (2023). Reconfiguring Measures of Motivational Constructs Using State-Revealing Trace Data. In V. Kovanovic, R. Azevedo, D. C. Gibson, & D. Ifenthaler (Eds.), *Unobtrusive Observations of Learning in Digital Environments* (pp. 7389). Springer, Cham.

TEACHING
EXPERIENCE

Instructor/Course Lead

SC0x: Supply Chain Analytics (online credential, 3,000+ students)	2022–2024
SIADS 505: Data Manipulation (online degree, 20+ students)	2021

Teaching Assistant

SIADS 521: Visual Exploration of Data (online degree, 240+ graduate students)	2018–2021
SIADS 505: Data Manipulation (online degree, 270+ graduate students)	
SI 630: Natural Language Processing: Algorithms and People (residential, 70+ graduate students)	
SI 671: Data Mining (residential, 50+ graduate students)	

PRESENTATIONS

Peer-reviewed Presentations

Choi, H., Steadman, C., Mills, C., & Kendeou, P. (under review). Clicks to Insights: Exploring Self-Regulated Learning Behaviors Longitudinally Using Institutional Data. In *2026 American Educational Research Association (AERA) Annual Meeting*.

Choi, H., Steadman, C., Mills, C., & Kendeou, P. (2025). Designing Theory-Guided Log Indicators of Self-Regulated Learning During Academic Challenges. In *National Consortium for Instruction and Cognition Annual Meeting 2025 (NCIC)*.

Peer-reviewed Workshops and Poster

Choi, H., Brooks, C., Hayward, C., Kitto, K., Gasevic, D., Pardo, A., Winne, P., & Heffernan, N. (2021). Engineering Learning Analytics Technology Environments (ELATE): Understanding Iteration Between Data and Theory, and Design and Deployment. In *The 11th international conference on learning analytics & knowledge (LAK)*.

Choi, H., Dowell, N., Brooks, C., & Teasley, S. (2019). Social Comparison in MOOCs: Perceived SES, Opinion, and Message Formality. In *The 9th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 160-169).

Choi, H., Wang, Z., Brooks, C., Collins-Thompson, K., Reed, B. G., & Fitch, D. (2017). Social Work in The Classroom? A Tool to Evaluate Topical Relevance in Student Writing. In *The 10th International Conference on Educational Data Mining (EDM)* (p. 386).

Choi, H., Brooks, C., & Collins-Thompson, K. (2017). What Does Student Writing Tell Us about Their Thinking on Social Justice?. In *The 7th International Conference on Learning Analytics & Knowledge (LAK)* (pp. 594-595).

Invited Talks

Choi, H. (2025, Jan). Do You Know What You Want to Know From Data? Insights From Log and Survey Data to Capture Different Aspects of Goals, *Technical University of Munich, Munich Data Science Institute and School of Social Sciences and Technology*.

Choi, H. (2024, Dec). Interpreting Student Interaction with AI-Generated Hints and Reflection Prompts, *University of Minnesota, Department of Educational Psychology*.

Choi, H. (2023, Oct). Advancing Learning Analytics: Insights From Trace and Survey Data on Self-Regulated Learning, *Cornell University, Ann S. Bowers College of Computing and Information Science*.

Choi, H. (2023, Aug). Upskilling SCM Professionals Through Online Learning, *Massachusetts Institute of Technology, Center for Transportation and Logistics Monthly Research Briefing*.

Choi, H. (2023, Mar). Survey or Trace Data?: Steps to Understand Self-Regulated Learning Better, *Syracuse University, School of Education*.

Choi, H. (2023, Jan). Meta-LAD: A Dashboard Supporting Self-Regulated Learning, *Massachusetts Institute of Technology, Open Learning, MITx Digital Learning Lab*.

Choi, H. (2022, Oct). Interviewed for INFO 4100 Learning Analytics, *Cornell University, Department of Information Science*.

Choi, H. (2021, Oct). Using Data to Understand Self-Regulated Learning, *Massachusetts Institute of Technology, Center for Transportation and Logistics*.

Choi, H. (2021, May). Engineering Learning Analytics Technology Environments (ELATE), *University of Michigan, Center of Academic Innovation*.

SERVICE

Conference Organizing Committee

Poster & Demo Track Chair

International Conference on Educational Data Mining 2025 (EDM' 25)

2024 - 2025

	Poster & Demo Track Chair International Conference on Educational Data Mining 2024 (EDM' 24)	2023 - 2024
	Peer Review (Journals)	
	Metacognition and Learning	2024 - Present
	British Journal of Educational Technology (BJET)	2022 - Present
	International Journal of Artificial Intelligence in Education (IJAIED)	2020 - Present
	Journal of Learning Analytics (JLA)	2019 - Present
	Peer Review (Conference Program Committees)	
	ACM Learning @ Scale Conference (L@S)	2025 - Present
	Technical Symposium on Computer Science Education (SIGCSE)	2024 - Present
	International Educational Data Mining Conference (EDM)	2024 - Present
	American Educational Research Association (AERA) Annual Meeting	2023 - Present
	Learning with MOOCs (LwMOOCs)	2023 - Present
	Artificial Intelligence in Education Conference (AIED)	2020 - Present
	ACM Learning Analytics and Knowledge Conference (LAK)	2016 - Present
	Peer Review (Grants)	
	Society for Learning Analytics Research Early Career Grant	2023 - Present
	Leadership	
	Organized a graduate research competition in collaboration with Big Picture Learning, a non-profit organization	2025–Present University of Minnesota
	Organized a job panel featuring international scholars on academic careers beyond the USA	Spring 2025 University of Minnesota
	Member, Working Group of Society for Learning Analytics Research (SoLAR)	2019–Present
	Doctoral Executive Committee Member of School of Information	2017–2018 University of Michigan
MEDIA COVERAGE	New dashboard supports online learners' self-regulated learning and performance	Oct 2023 MIT Open Learning
REFERENCES	<div> Panayiota (Pani) Kendeou, Ph.D. Distinguished McKnight University Professor & Guy Bond Chair in Reading Department of Educational Psychology University of Minnesota Minneapolis, MN, USA kend0040@umn.edu </div> <div> Christopher Brooks, Ph.D. Associate Professor School of Information University of Michigan Ann Arbor, MI, USA brookschr@umich.edu </div> <div> Oleksandra Poquet, Ph.D. Professor in Learning Analytics School of Social Sciences and Technology Technical University of Munich Munich, Germany sasha.poquet@tum.de </div> <div> Caitlin Mills, Ph.D. Associate Professor Department of Educational Psychology University of Minnesota Minneapolis, MN, USA cmills@umn.edu </div> <div> Philip H. Winne, Ph.D. Professor Emeritus Faculty of Education Simon Fraser University Burnaby, BC, Canada winne@sfu.ca </div>	