

# Kunlei He

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## Research Interests and Methods

Topics	Child-computer interaction, early childhood learning, conversational AI
Methods	Design-based implementation research, participatory design, mixed effects models, structural equation modeling, text analysis, interview

## Education

2022-2027 (Expected)	<b>University of California, Irvine</b> – Irvine, CA Ph.D. in Education Advisors: Professors Mark Warschauer, & Penelope Collins.
2019-2020	<b>Harvard Graduate School of Education</b> – Cambridge, MA M.Ed. in Language and Literacy Advisor: Professor Catherine Snow.
2015-2019	<b>Wuhan University</b> – Wuhan, China B.A. in German

## Honors and Scholarships

2024	Scholarship for Education Research, ICPSR, University of Michigan, Ann Arbor
2023	Best Paper Award, Interaction Design and Children Conference
2022	Teaching in Research Fellowship, University of California, Irvine
2020	Harvard Operation Impact First Prize, Harvard University
2020	Harvard President Innovation Challenge Semifinalist, Harvard University

## Publications

### Peer-reviewed Conference Proceedings

- C2 **He, K.**, Levine, J., Cervera, K., Ojeda-Ramirez, S., Xu, Y., & Warschauer, M. (2024, May). A Home Study of Parent-Child Co-Reading with a Bilingual Conversational Agent *In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI'24)*. Association for Computing Machinery, Honolulu, HI, USA
- C1 Xu, Y., **He, K.**, Vigil, V., Ojeda-Ramirez, S., Liu, X., Levine, J., Cervera, K., & Warschauer, M. (2023, June). “Rosita Reads With My Family”: Developing A Bilingual Conversational Agent to Support Parent-Child Shared Reading. *In Proceedings of the 22nd ACM International Conference on Interaction Design and Children (IDC'23)*. Association for Computing Machinery, Chicago, IL, USA (**Best Paper Award**)

### Journal Articles

- J2 Xu Y., **He, K.**, Levine, J., Ritchie, D., Pan, Z., Bustamante, A. S. & Warschauer, M.. (2024). Artificial Intelligence Enhances Children’s Science Learning from Television Shows. *Journal of Educational Psychology*
- J1 **He, K.**, & Bowman, Y. Z. (2021). Association between teachers’ shared book reading strategies and children’s vocabulary development in rural China preschools. *Journal of Chinese Writing Systems*, 5(3), 185-193.

### Manuscripts under Review

- M1 Promoting Parent-Child Shared Reading with a Bilingual Conversational Agent. *International Journal of Human-Computer Studies*

### Conference Presentations

- P5 **He, K.**, Levine, J., Cervera, K., Ojeda-Ramirez, S., Xu, Y., & Warschauer, M. (2024, May). *Home Deployment of a Bilingual Conversational Agent for Parent-Child Joint Engagement in Reading*. CHI 2024 Workshop on Child-centred AI Design, Honolulu, HI, USA.
- P4 **He, K.**, Xu, Y., Levine, J., Ritchie, D., Bustamante., & Warschauer, M. (2024, March). *Artificial Intelligence Enhances Children’s Science Learning from Television Shows by Boosting their Response to Questions of High Cognitive Demand* [Poster session]. Cognitive Development Society Conference, Pasadena, CA.
- P3 **He, K.**, Xu, Y., Vigil, V., Ojeda-Ramirez, S., Cervera, K., & Warschauer, M. (2023, April). *Developing a Bilingual Dialogic Ebook with a Conversational Agent for Hispanic Families* [Paper session]. American Educational Research Association Annual Meeting, Chicago, IL.

- P2 **He, K.**, Xu, Y., & Warschauer, M. (2023, February). *Leveraging Large Language Models to Improve the Design of Conversational Agents for Young Children's Learning*. CHI 2023 Workshop on Child-centred AI Design: Definition, Operation and Considerations, Hamburg, Germany.
- P1 **He, K.**, & Bowman, Y. Z. (2021, April). *Association between Shared Book Reading Strategies and Children's Vocabulary Development in Rural China Preschools*. [Poster session]. American Educational Research Association Annual Meeting, Virtual.

## Teaching Experience

- 2024 **Teaching Assistant**, UNISTU 3 AI in Education Seminar  
**Guest Lecturer**, UNISTU 3 AI in Education Seminar
- 2022 **Guest lecturer**, EDUC 134 Teaching English Internationally  
**Guest lecturer**, UNISTU 3 AI in Education Seminar

## Research Experience

- 2022–Present **Digital Learning Lab**, University of California, Irvine  
Mentors: Dr. Mark Warschauer & Dr. Ying Xu.  
Design and evaluate AI-powered conversational agents to promote children's language and STEM learning.
- 2021–2022 **The Snow Lab**, Harvard Graduate School of Education  
Mentors: Dr. Catherine Snow & Dr. Si Chen.  
Examined the associations between teachers' shared book reading teaching strategies and children's language learning outcomes.

## Service

### Professional Service

- 2023-Present I serve as a reviewer for the following journals and conferences:  
Journal of Literacy and Technology,  
ACM Conference on Human Factors in Computing (CHI),  
ACM Designing Interactive Systems (DIS),  
ACM Conference on Interaction Design and Children (IDC),  
International Society of the Learning Sciences Conference (ISLS).

2024 I served as a student volunteer for the Conference on Human Factors in Computing Systems (CHI'24).

### **University Service**

- 2022–Present My undergraduate mentees at UCI include:  
Yerin Ko (M.Ed Program, Harvard Graduate School of Education),  
Dieyu Ouyang (METALS Program, CMU),  
Ayerim Estrada (MAT Program, UCI),  
Yiqun Zhang (MAPSS Program, University of Chicago),  
Nikki Nasserri (Social Ecology Honors Thesis)
- 2022–2024 Coordinator, Digital Learning Lab
- 2024 Student Representative, UCI School of Education Admission Committee  
Peer Mentor, UCI Diverse Educational Community and Doctoral Experience
- 2023 Student Buddy, UCI School of Education Recruitment Weekend