*Curriculum Vitae*

Icy (Yunyi) Zhang

Phone: (424)285-9693 Email: icy.zhang@wisc.edu

Assistant Professor

Learning Sciences, Department of Educational Psychology

University of Wisconsin - Madison

**EDUCATION**

*Developmental Psychology, PhD* May 2024

Minor in Quantitative Psychology

* University of California, Los Angeles
* GPA: 3.98
* Dissertation: [From the Lab to the Classroom: Effects of Embodied Pedagogies on Students’ Learning of Statistical Concepts](https://escholarship.org/uc/item/6rn0j58n)

*Psychology, B.A., and Economics, B.A.*  Sep. 2019

* University of California, Los Angeles
* GPA: 3.90
* Honors Thesis: Hand Placement Affects Students’ Learning of an Abstract Concept from Video

PUBLICATIONS

* **Zhang, I.**, Xu, A., Son, J. Y., Stigler, J. W. (2024). Watching Hands Move Enhances Learning from Concrete and Dynamic Visualizations. *Journal of Experimental Psychology: General* [IF: 4.91, Citation: 0]
* **Zhang, I.***,* Izad, T., & Cartmill, E. (2024). Embodying Similarity and Difference: the Effect of Listing and Contrasting Gestures during U.S. Political Speech. *Cognitive Science* [IF: 2.92, Citation: 0]
* **Zhang, I.**, Son, J. Y., Blank, I. A., Stigler, J. W. (2024). [Watching videos of a drawing hand improves students' understanding of the normal probability distribution](https://link.springer.com/article/10.3758/s13421-024-01526-7). *Memory & Cognition* [IF: 2.5, Citation: 2]
* **Zhang, I.**, Gray, M., Cheng, X., Son, J., Stigler, J. W. (2024). [Representational-mapping strategies improve learning from an online statistics textbook.](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=PcmD8NwAAAAJ&citation_for_view=PcmD8NwAAAAJ:zYLM7Y9cAGgC) *Journal of Experimental Psychology, Applied.* [IF: 2.81, Citation: 2]
* **Zhang, I.**, Tucker, M. C., & Stigler, J. W. (2022). Watching a hands-on activity improves students’ understanding of randomness. *Computers & Education*, 104545. [IF: 15.58, Citation: 12]
* **Zhang, I**., Givvin, K. B., Sipple, J. M., Son, J. Y., & Stigler, J. W. (2021). Hand placement affects students’ learning of an abstract concept from video. *Cognitive Science*, *45*(2), e12940. [IF: 2.92, Citation: 31]
* Xiong, C., Lee-Robbins, E., **Zhang, I.,** Gaba, A., & Franconeri, S. (2022). Reasoning Affordances with Tables and Bar Charts. *IEEE Transactions on Visualization and Computer Graphics*. [IF: 5.23, Citation: 9]
* Eghterafi, W., Tucker, M. C., **Zhang, I**., & Son, J. Y. (2022). Effect of Feedback with Video-Based Peer Modeling on Learning and Self-Efficacy. *Online Learning*, *26*(2), 1-21. [IF: 1.50, Citation: 3]
* **Zhang, I.**, Cheng, X., Jia, Y., Son, J. Y., & Stigler, J. W. (under review). Empowering Novice Programmers: Redesigning Documentation for Effective Informal Learning. *Journal of Educational Computing Research.*
* **Zhang, I.**, Xu, A., Son, J. Y., & Stigler, J. W. (under review). The Role of Prior Knowledge in Effects of Embodied Pedagogies on Learning. *Journal of Educational Psychology.*

CONFERENCE PRESENTATIONS

* **Zhang, I.**, Xu, A., Son, J., & Stigler, J. W. (2024, October). The Role of Prior Knowledge in Effects of Embodied Pedagogies on Learning. Paper to be presented at the North American Chapter of the International Group for the Psychology of Mathematics Education.
* **Zhang, I.**, Xu, A., Son, J., & Stigler, J. W. (2024, June). Exploring the Role of Prior Knowledge during Embodied Learning. Paper presented at International Society for the Learning Sciences.
* **Zhang, I.,** Xu, A., & Stigler, J. W. (2023, Jul). The power of Embodied Learning in an Online Course with Chinese High Schoolers. Poster presented at Cogsci 2023
* **Zhang, I.,** Izad, T., Huber, J., Saini, S., Gates, M., Cartmill, E (2023 Jul). Gesture during political speech reflects and affects judgements of topic similarity. Poster presented at Cogsci 2023
* **Zhang, I.,** Xu, A., & Stigler, J. W. (2023, April). Effects of Embodied Learning on Students’ Understanding of Randomness in Data Science. Paper presented at 2023 American Educational Research Association Annual Meeting.
* **Zhang, I.**, Cheng, X., Jia, Y., & Stigler, J. W. (2023, April). Designing R Documentation to Support Mapping and Subsequent Learning. Paper presented at 2023 American Educational Research Association Annual Meeting.
* Xu, A., **Zhang, I.**, & Stigler, J. W. (2023, April). Early Identification of Underperforming Students via Reading Patterns. Paper presented at 2023 American Educational Research Association Annual Meeting.
* Jia, Y., **Zhang, I.**, Cheng, X., & Son, J. (2023, April). Redesigning R Documentation to Support Novice Learning: A Qualitative Interview. Paper presented at 2023 American Educational Research Association Annual Meeting.
* **Zhang, I.**, Fu, S., Xu, A., & Lu, H. (2022, June). Causal and Associative Relations Are Differently Perceived and Represented in Space. Presented at CogSci 2022
* **Zhang, I.**, Gray, M., Cheng, X., & Stigler, J. W. (2022, April). Use Analogical Learning Strategies to Improve Learning from an Online Statistics Textbook. Paper presented at 2022 American Educational Research Association Annual Meeting.
* McGinty, J., Planey, J., Yun, Y., & **Zhang, I.** (2021, November). Opportunities and Challenges with Technology-Enhanced Embodied Cognition for STEM. Roundtable presentation at Learning Science Graduate Student Conference (LSGSC).
* **Zhang, I.**, Tucker, M., & Stigler, J. W. (2021, September). Using hands-on demonstrations to complement computer-based simulation in online learning environments. Paper presented at the International Association for Statistical Education (IASE) 2021 Satellite Conference.
* **Zhang, I.**, Son, J. Y., Blank, I. A., Stigler, J. W. (2021, July). Utilizing Dynamic and Embodied Visualization to Facilitate Understanding of Normal Probability Distributions. Presented at CogSci 2021.
* **Zhang, I.**, Gray, M., & Stigler, J. W. (2021, May). Using an Analogical Approach in an Online Statistics Textbook to Promote Learning. Paper presented at 2021 APS Virtual Convention and Poster Showcase.
* Fries, L., Davis, C., **Zhang, I.**, Son, J. (2021, September). Teaching Modeling in Introductory Statistics Using the Better Book Approach. Paper presented at the International Association for Statistical Education (IASE) 2021 Satellite Conference.
* **Zhang, I.**, Givvin, K. B., Son, J. Y., & Stigler, J. W. (2021, April). Using questions to promote thinking, teaching, and continuous improvement of an interactive online textbook. Paper presented at 2021 Virtual American Educational Research Association Annual Meeting.
* Eghterafi, W., Tucker, M., **Zhang, I.**, Son, J., Stigler, J. W. (2020, November). Using video-based peer modeling to teach programming in an introductory statistics course. Paper presented at Psychonomics, Virtual Conference.
* **Zhang, I.**, Sipple, J., Peng, Z., & Smith, J., (2019, May). Hand placement impacts students’ learning from video. Poster presented at UCLA Undergraduate Research Conference, Los Angeles, California.

**FELLOWSHIPS, AWARDS AND ACHIEVEMENTS**

* Nellie McKay Fellowship 2027-2028
* 2024 Millard Madsen Distinguished Dissertation Award 2024
* UCLA Dissertation Year Fellowship 2023-2024
* UCLA Life Science Excellence in Educational Innovation 2024
* UCLA Charles F. Scott Fellowship 2023-2024
* UCLA Charles E. & Sue K. Young Graduate Student Fellowship 2023
	+ 1 out of 4 graduate students from UCLA to receive this fellowship
* Liu Yunghuo Bei Qui Memorial Fellowship 2023
* UCLA Charles F. Scott Fellowship 2022-2023
	+ 1 out of 2 graduate students from Psychology who demonstrate leadership in national, state or local governmental administration to receive this fellowship
* AERA Registration Fellowship 2022
* Center for Scholars and Storytellers Graduate Student Fellowship  2021
* UCLA Graduate Summer Research Mentorship 2021 & 2022
* UCLA Conference Travel Grant 2020-2023
* APS 2021 Student Diversity Registration Award 2021
* Magna Cum Laude Honors –UCLA College of Letters & Science 2019
* UCLA Psychology Departmental Highest Honors 2019
* UCLA Student Achievement Award (Invited to student achievement reception) 2019
* Phi Beta Kappa 2019
* UCLA Library Research Poster Grant 2019
* UCLA Dean’s Honors List 2016 – 2019

RESEARCH EXPERIENCE

**Graduate Researcher,** Teaching and Learning Lab & Reasoning Lab⏐UCLA Sep. 2020 – Present

* Examine the use of the analogical approach, comparing and contrasting, to help students gain a better understanding of statistics by connecting different text, R code, and data visualizations in an online interactive statistics textbook
* Developed four instructional videos and launched an in-class experiment in the online statistics textbook to test the effectiveness of the analogical instructional approach on students’ learning
* Explore the effect of hand simulation before learning coding on students’ understanding of abstract concepts in statistics

**Researcher,** Teaching and Learning Lab⏐UCLA Oct. 2019 – Sep. 2020

* Conducted independent project to explore students’ understanding of normal probability distributions in an introductory statistics class; examining whether students really understand fundamental ideas of normal probability distributions that are assumed in the visualization of normal probability distributions
* Compared the effect of embodied and dynamic visualizations with static visualizations in facilitating students’ conceptual learning of statistics

**Lab Manager (Full-time),** Teaching and Learning Lab ⏐UCLA Oct. 2019 – Sep. 2020

* Assisted the development of the Better Book project to develop a new approach for education research and design
* Leveraged the ability of technology to provide interactive and personalized online learning materials and create a community of researchers, designers and instructors work together to improve the online textbook continuously and collaboratively
* Conducted studies to explore the effect of hand placement on learning and to examine the effectiveness of an online statistical course
* Prepared for and assisted the teaching of Psych 100A (a Psychological Statistics course) for Winter 2019, participating in TA meetings and developing materials

**Undergraduate Researcher,** Teaching and Learning Lab ⏐UCLA Mar. 2017 – Sep. 2019

* Conducted individual research projects on the effect and implication of gesture in teaching and learning
* Designed an experiment investigating whether seeing vs. performing gesture helps students understand statistical problems; conducted observational video-coding and data analysis on 60 participants
* Completed Psychology Departmental Honors Thesis and research conference poster presentation examining the effect of hand placement on students’ learning of abstract statistical models
* Participated in weekly meetings with professors; worked with multiple teams to construct the online course material ranging from image creation to troubleshooting

**Research Assistant,** LCAP**|** UCLA Feb. 2018 – Sep. 2019

* Conducted 20+ EEG data collection sessions to measure P50 suppression (sensory gating) from first-episode psychosis patients as part of the UCLA Cognitive Training & Exercise intervention study at UCLA Laboratory for Clinical and Affective Psychophysiology
* Assisted with EEG data quality control using MATLAB tools (EEGLAB)

**TEACHING AND MENTOR EXPERIENCE**

**Teaching Assistant**,UCLA | Los Angeles, US Jan. 2020 – Present

* Psychological Statistics (4 times, led labs with 200+ students)
* Quantitative Data Analysis (graduate-level class in the social science department)
	+ Guest lecturer
* Developmental Psychology
* Early Adversity and Trauma
* Introductory Psychology

**Graduate Mentor**, Undergraduate Research Journal of Psychology **|** Los Angeles Oct. 2021 – Present

* Introducing undergraduates to the peer review process and providing help on mentorship for undergraduates in reviewing papers
* Held undergraduate workshops to share experiences in graduate school

**Mentor & Judge**, China Thinks Big (CTB) **|** Cambridge, USA Sep. 2020 – Present

* Serve as Mentor and Judge for a competition that promotes social innovation through academic research and implementation for high school students in China
* Meet with the student teams for the CTB Global Finals in one-on-one sessions to provide guidance and raise questions on project topics ranging from music therapy to developmental and cognitive analysis on the loss of loved ones

**Educational Consultant & Manager**, Panopath Company⏐ Shanghai, China Jul. 2017 – Oct. 2020

* Provided individual guidance to international students applying to colleges in the US and helped those students explore their academic interest and potential
* Designed and promoted consulting services according to a limited budget; earned the largest monthly profit per product for the company since the start-up began
* Recruited and led a diverse team; communicated and collaborated with other departments to promote services

**Lecturer & Capstone Leader**, HSYLC X | Los Angeles, USA Jun. 2020 – Aug. 2020

* Taught a seminar in data exploration and data visualization in an online class of 50 students as part of the Harvard Summit for Young Leaders in China (HSYLC)
* Utilized my research findings, such as gestural representations, to help students understand statistics and R language
* Led interactive discussions with students to help students develop their own psychology research projects and write their own literature review in eight days

**Teacher (Part-time)**, Elite Education⏐Suzhou, China Jun. 2015 – Sep. 2017

* Taught classes of >40 people on listening and writing techniques
* Taught classes of >100 people on SAT math, analyzing problems, teaching its corresponding concepts and setting practice questions for students
* Awarded “Distinguished Teacher or Teaching Assistant” by the institution

SERVICE, ACTIVITIES AND WORK EXPERIENCE

**Chair of Undergraduate Outreach**, UGSP| Los Angeles, USA Aug. 2022 – Present

* Lead annual campus-wide research assistant recruitment events for undergraduate students in psychology
* Serving as a UGSP representative for the Psych Dept Diversity Issues Committee (DIC) to discuss issues around diversity, equity and inclusion
* Lead 5+ initiatives to make resources regarding research and graduate school more accessible to undergraduate students

**Intern**, Clinton Health Access Initiative | Hainan, China Apr. 2023 – Aug. 2023

* Collaborate with Tsinghua University on a white paper on the development of global health market to guide Chinese enterprises to join the global health care market
* Conduct analysis on the global health market and provide suggestions to Chinese enterprises

**Chair of Social Outreach**, UGSP| Los Angeles.  Jun. 2021 – Aug. 2022

* Organized social events as the chair of social committee of Underrepresented Graduate Student in Psychology (UGSP)
* Contributed to and advocating for issues critical to the equity of the department, such as the fellowship review process

**Editor,** Undergraduate Research Journal of Psychology **|** Los Angeles Oct. 2019 – Jun. 2020

* Reviewedd submitted articles
* Worked closely with authors to facilitate polished and publishable pieces

**Academic Coach & Director,** China Thinks Big (CTB) **|** Cambridge, USA Oct. 2018 – Jun 2021

* CTB is a high-school level research and innovation competition designed to help high school students in China gain access to research and other academic resources
* Served as an academic coach for CTB in 2018 and was then promoted to be the academic mentor who supervised all coaches
* Served as a director for CTB in 2019 and 2020, training coaches to offer detailed suggestions on each team’s research work including research proposal, outline, and final paper
* Provided background research information for each academic subject and preparing for the international final competition

**Student Assistant,** Geffen Academy **|** Los Angeles, USA Nov. 2018 – Jun. 2019

* Supervised and tutored students from 6th - 12th grade during lunch and after-school hours
* Communicated with students daily about their schoolwork and life in general, identifying possible problems or conflicts, and working in conjunction with students to solve their problems
* Collaborated with schoolteachers during school activities for event planning and organizing

**Admission Committee,** HSYLC| Hangzhou, China Jun. 2018 – Aug. 2019

* Collaborated with students coming from Harvard University to teach a seminar about psychology and identity to over 60 high school students selected from China in Harvard Summit for Young Leaders in China (HSYLC)
* Organized and led over 300 Chinese high school students in both social and academic events and helped students individually with their worries and issues
* Invited to join the admission committee at the end of the event because of outstanding performance and reviewed 300+ application materials for HSYLC 2019

**ACADEMIC SERVICE**

Reviewed for journals:

* Computer & Education
* Journal of Computer Assisted Learning
* Memory & Cognition
* Educational Psychology Review
* Contemporary Educational Psychology
* Journal of Nonverbal Behavior

Reviewed for conferences:

* Cognitive Science Annual Meeting
* AERA (American Educational Research Association)

**SKILLS**

**Quantitative and computer skills**

* Experienced in R programming, and SPSS
	+ Advanced modelling such as mediation and moderation using PROCESS in R
	+ Data visualization using ggplot2
* Basic C++, MATLAB, and other data analysis and presentation techniques

**Language**

* Chinese and English

**Visual arts skills**:

* Website design with Jekyll (Designed the UCLA Teaching and Learning Lab website: https://uclatall.com)