

# Dr. Yizhen (Eejain) Huang

POST-DOCTORAL RESEARCHER IN EDUCATIONAL PSYCHOLOGY

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## Current Research Interests

- Application of virtual reality simulations for promoting instructional quality and educational success
- Experimental investigations of teachers' cognition and emotion in physical and virtual reality through multi-modal data
- Antecedents and outcomes of teachers' professional vision

## Scientific Career

### Aggarwal-Blackburn Visiting Scholar

EXTENDED REALITY INITIATIVE (XRI), SCHOOL OF TEACHING, LEARNING AND CURRICULUM STUDIES

- Lead Professor: Prof. Dr. Karl W. Kosco

Kent State University, United States

2022/09

### Research Associate

DEPARTMENT OF RESEARCH ON TEACHING AND TEACHER EDUCATION

- Lead Professor: Prof. Dr. Thilo Kleickmann

Kiel University, Germany

2019–Present

### Research Associate

EDUCATIONAL RESEARCH IN EDUCATIONAL SCIENCES, DEPARTMENT OF EDUCATION

- Lead Professor: Prof. Dr. Dirk Richter

University of Potsdam, Germany

2018–Present

## Education

### Ph.D. in Education and Psychology

COMBINED PROGRAM IN EDUCATION AND PSYCHOLOGY

- Graduate Date: August 17, 2018
- Dissertation Title: "Learning from Teacher's Eye Movement: Expertise, Subject Matter and Video Modeling"
- Doctoral Committee: Kevin F. Miller (chair), Kai S. Cortina, Richard D. Gonzalez, Priti R. Shah

University of Michigan, Ann Arbor,

United States

2016–2018

### M.A. in Statistics

DUAL DEGREE PROGRAM

- Graduate Date: August 17, 2018

University of Michigan, Ann Arbor,

United States

2016–2018

### M.S. in Psychology

COMBINED PROGRAM IN EDUCATION AND PSYCHOLOGY

- Graduate Date: December 22, 2016

University of Michigan, Ann Arbor,

United States

2013–2016

### B.S. in Psychology

SCHOOL OF PSYCHOLOGY

- Graduate Date: July 01, 2013

Beijing Normal University, China

2009–2013

## Funded Research Projects

## Compare interactive simulation and 360 video in virtual reality for teacher professional learning (€3,850) Kent, United States and Potsdam, Germany

UNIVERSITY OF POTSDAM

- KoUP [Cooperation Funding at the University of Potsdam]
- Co-Principal Investigator. Co-PIs: Karl W. Kosco

2022

### Virtual Reality in Teacher Education

Potsdam, Germany

EDUCATIONAL RESEARCH IN THE EDUCATIONAL SCIENCES, UNIVERSITY OF POTSDAM

2019–Present

- Internal Funding
- Co-Principal Investigator. Co-PIs: Dirk Richter, Thilo Kleickmann, Eric Richter

### Understand Teacher's Professional Development Choices in Brandenburg

Potsdam, Germany

EDUCATIONAL RESEARCH IN THE EDUCATIONAL SCIENCES, UNIVERSITY OF POTSDAM

2018–2019

- Internal Funding
- Co-Principal Investigator. Co-PIs: Eric Richter, Dirk Richter

### Look through You: How First-person Perspective Video Promotes Perceptual Problem Solving? (\$3,000)

Ann Arbor, United States

RACKHAM GRADUATE SCHOOL, UNIVERSITY OF MICHIGAN

2017–2018

- Rackham Graduate Student Research Grant
- Principal Investigator. Co-PIs: Kevin F. Miller, Kai S. Cortina

### Effects of Modeling that Convey Moral Standards on Delay of Gratification among Chinese and US Preschoolers (\$5,000)

Ann Arbor, United States

THE INTERNATIONAL INSTITUTE, UNIVERSITY OF MICHIGAN

2016

- International Institute Individual Fellowships
- Principal Investigator. Co-PIs: Kevin F. Miller, Kai S. Cortina

### The Influence of First-person Perspective Video on Early Childhood Sex-typed Toy Choices (\$4,000)

Ann Arbor, United States

SCHOOL OF EDUCATION, UNIVERSITY OF MICHIGAN

2014

- Professor & Mrs. Cho-Yee To Fund
- Principal Investigator. Co-PIs: Kevin F. Miller, Kai S. Cortina

## Awards, Scholarships, Further Competitive Grants

### Kongressreisenprogramm [Congress Travel Program] (€2,259)

Bonn, Germany

DAAD [GERMAN ACADEMIC EXCHANGE SERVICE]

2022

- Federal-level support for active participation of German scientists in international scientific congresses.

### AERA SIG-IT Best Paper Award (\$350)

Virtual

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION (AERA) INSTRUCTIONAL TECHNOLOGY SPECIAL INTEREST GROUP (SIG-IT)

2021

- Selected as the best research paper submitted to SIG-IT and accepted for presentation at the AERA 2021 Conference.

### Study Innovation Prize (€100)

Potsdam, Germany

FACULTY OF HUMAN SCIENCES, UNIVERSITY OF POTSDAM

2020

- Selected as the top three innovative teaching projects that promote good practice in E-Learning.

### Potsdam Travel Grant (€1,480)

Potsdam, Germany

POTSDAM GRADUATE SCHOOL, UNIVERSITY OF POTSDAM

2019

- Institute-level support for presentations in scientific events.

### Rackham Conference Travel Grant (\$800)

Ann Arbor, United States

RACKHAM GRADUATE SCHOOL, UNIVERSITY OF MICHIGAN

2015

- Institute-level support for graduate students in good academic standings for academic conferences.

## Publications

### REFEREED JOURNAL ARTICLES

Richter, E., Hußner, I., **Huang, Y.**, Richter, D., & Lazarides, R. (2022). Video-based reflection in teacher education: Comparing virtual reality and real classroom videos. *Computers & Education*, 104601. <https://doi.org/10.1016/j.compedu.2022.104601>

**Huang, Y.**, Richter, E., Kleickmann, T., & Richter, D. (2022). Class size affects preservice teachers' physiological and

psychological stress reactions: An experiment in a virtual reality classroom. *Computers & Education*, 184, 104503. <https://doi.org/10.1016/j.compedu.2022.104503>

**Huang, Y.**, Richter, E., Kleickmann, T., & Richter, D. (2022). Comparing video and virtual reality as tools for fostering interest and self-efficacy in classroom management: Results of a pre-registered experiment. *British Journal of Educational Technology*. <https://doi.org/10.1111/bjet.13254>

**Huang, Y.**, Richter, E., Kleickmann, T., Wiepke, A., & Richter, D. (2021). Classroom complexity affects student teachers' behavior in a VR classroom. *Computers & Education*, 163, 104100. <https://doi.org/10.1016/j.compedu.2020.104100>

**Huang, Y.**, Miller, K. F., Cortina, K. S., & Richter, D. (2021). Teachers' professional vision in action: Comparing expert and novice teacher's real-life eye movements in the classroom. *Zeitschrift Für Pädagogische Psychologie*, 1–18. <https://doi.org/10.1024/1010-0652/a000313>

Richter, E., Marx, A., **Huang, Y.**, & Richter, D. (2020). Zeiten zum beruflichen Lernen: Eine empirische Untersuchung zum Zeitpunkt und der Dauer von Fortbildungsangeboten für Lehrkräfte [Time for professional learning: an empirical study about timing and duration of teacher training]. *Zeitschrift für Erziehungswissenschaft [Journal of Educational Science]*, 23(1), 145–173. <https://doi.org/10.1007/s11618-019-00924-x>

## BOOK CHAPTERS AND REPORTS

Cortina, K. S., Miller, K. F., Hua, S., Peist, E., **Huang, Y.**, & Wei, Y. (2013). Behavioral regulation of preschoolers in China and the US: the role of attention. In N. McElvany & H. G. Holtappels (Eds.), *Empirische Bildungsforschung: Theorien, Methoden, Befunde und Perspektiven [Empirical educational research: theories, methods, findings, and perspectives]* (pp. 125–133). Waxmann Verlag. <https://books.google.com?id=rUAdAAAAQBAJ>

## OTHER PUBLICATIONS

**Huang, Y.** (2018). *Learning from teacher's eye movement: Expertise, subject matter and video modeling* [Doctoral dissertation, University of Michigan]. <https://doi.org/2027.42/145853>

**Huang, Y.** (2017). *A discussion on data visualization in 21st century education*. Blog of Center for Academic Innovation at University of Michigan. <https://ai.umich.edu/blog/a-discussion-on-data-visualization-in-21st-century-education/>

**Huang, Y.**, Foley, K., & Jankovic, F. (2017). *A picture is worth a thousand words: Understanding learners through visualization*. Blog of Center for Academic Innovation at University of Michigan. <https://ai.umich.edu/blog/a-picture-is-worth-a-thousand-words-understanding-learners-through-visualization/>

## SUBMITTED MANUSCRIPTS

**Huang, Y.**, Lazarides, R., & Richter, D. (2022). *Teachers' adaptations to COVID-19: Perceived preparedness for distance education, frequency of teacher–student contact, and resources in ICT* [Under review].

**Huang, Y.**, Richter, E., Kleickmann, T., & Richter, D. (2021). Virtual reality in teacher education from 2010 to 2020: A review of program implementation, intended outcomes, and effectiveness measures [Accepted for publication]. In K. Scheiter & I. Gogolin (Eds.), *Bildung für eine digitale Zukunft [Education for a Digital Future]*. Springer. <https://edaxiv.org/ye6uw/>

## Presentations

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### REFEREED CONFERENCE PRESENTATIONS

**Huang, Y.**, Richter, E., Kleickmann, T., Wiepke, A., & Richter, D. (2021, April). *Classroom complexity affects student teachers' behavior in a VR classroom* [Paper presentation]. American Educational Research Association (AERA) 2021 Annual Meeting, Virtual.

**Huang, Y.**, Richter, E., Kleickmann, T., & Richter, D. (2020, December 11). *Virtual reality and teacher education: A literature review for the last decade* [Paper presentation]. ZfE-Forum 2020: Bildung für eine digitale Zukunft [Journal of Educational Science Forum 2020: Education for a Digital Future], Virtual.

**Huang, Y.**, Richter, E., & Richter, D. (2020, April). *Presence and efficacy: Training preservice teachers' classroom management skills in virtual reality* [Paper presentation]. American Educational Research Association (AERA) 2020 Annual Meeting, San Francisco, CA, United States (Conference Canceled). <http://tinyurl.com/vqq6f1p>

- Huang, Y.**, Miller, K. F., Cortina, K. S., & Richter, D. (2019, February). *Learning from teacher's eyes: Expertise and eye movements* [Paper presentation]. Gesellschaft für Empirische Bildungsforschung [Society for Empirical Educational Research] (GEBF) 2019 Annual Meeting, Köln, NW, Germany.
- Richter, D., Wiepke, A., Richter, E., **Huang, Y.**, & Zender, R. (2019, February). *Nutzung von Virtual Reality-Technologie zur Erfassung von Klassenführungskompetenzen in der Lehrerausbildung* [Using virtual reality technology to assess classroom management skills in teacher education] [Paper presentation]. Gesellschaft für Empirische Bildungsforschung [Society for Empirical Educational Research] (GEBF) 2019 Annual Meeting, Köln, NW, Germany.
- Richter, E., Marx, A., **Huang, Y.**, & Richter, D. (2019, February). *Zeiten zum Lernen: Eine empirische Analyse zum Zeitpunkt und der Dauer von Fortbildungsveranstaltungen für Lehrkräfte* [Times to learn: An empirical analysis of the timing and duration of professional development events for teachers] [Paper presentation]. Gesellschaft für Empirische Bildungsforschung [Society for Empirical Educational Research] (GEBF) 2019 Annual Meeting, Köln, NW, Germany.
- Park, I., **Huang, Y.**, & Sun, X. (2018, April). *Effects of first impressions and instructional quality on student engagement: A continuous evaluation* [Symposium]. American Educational Research Association (AERA) 2018 Annual Meeting, New York, NY, United States.
- Huang, Y.**, Miller, K. F., Cortina, K. S., & Su, L. (2017, April). *Effects of modeling on delay of gratification among Chinese preschoolers: Testing a new method for assessing self-control* [Poster presentation]. Society for Research in Child Development (SRCD) 2017 Biennial Meeting, Austin, TX, United States.
- Huang, Y.**, Su, L., & Miller, K. F. (2015, March). *Looking through you: First-person perspective video affects Chinese preschoolers' sex-typed toy choices* [Poster presentation]. Society for Research in Child Development (SRCD) 2015 Biennial Meeting, Philadelphia, PA, United States.
- Wang, Z., & **Huang, Y.** (2013, April). *Attention, self-regulation, and looking at distractions in preschool Chinese children* [Poster presentation]. Society for Research in Child Development (SRCD) 2013 Biennial Meeting, Seattle, WA, United States.

#### INVITED TALKS

- Huang, Y.** (2022, September). *Teach in virtual reality (VR): Understand preservice teachers' behaviors through VR experiments* [Talk]. Combined Program in Education and Psychology Colloquium Series, University of Michigan, Ann Arbor, MI, United States.
- Huang, Y.** (2022, September). *Uncoil preservice teachers' experiences through virtual reality experiments* [Talk]. The Gerald H. Read Center for International and Intercultural Education Guest Talk, Kent State University, Kent, OH, United States.
- Huang, Y.** (2022, June). *Professional vision in virtual reality: Experimental investigations of preservice teachers' noticing* [Talk]. Research Colloquium of Eye Tracking Working Group in Methods of Empirical Classroom Research, University of Augsburg, Germany. <https://www.uni-augsburg.de/de/fakultaet/philsoz/fakultat/empirische-unterrichtsforschung/forschung/arbeitsgruppe-eye-tracking/>
- Huang, Y.** (2022, March). *Features and applications of the Potsdam virtual reality classroom* [Talk]. Module of Immersive Learning Environments from the Swiss Competence Centre for Innovations in Learning, St.Gallen, Switzerland.
- Huang, Y.** (2021, December). *Classroom features and preservice teachers' behaviors: Experimental investigations in a virtual reality (VR) classroom* [Talk]. Research Colloquium of the Professorships at the Department of Educational Science, University of Potsdam, Potsdam, Germany.
- Huang, Y.** (2018, October). *Learning from teacher's eye movement: Expertise, subject matter and video modeling* [Talk]. Research Colloquium of the Professorships at the Department of Educational Science, University of Potsdam, Potsdam, Germany.
- Huang, Y.** (2017, March). *Effects of modeling on delay of gratification among Chinese preschoolers: Testing a new method for assessing self-control* [Talk]. Combined Program in Education and Psychology Colloquium Series, University of Michigan, Ann Arbor, MI, United States.

**Huang, Y.** (2015, October). *Looking through you: First-person perspective video affects Chinese preschoolers' sex-typed toy choices* [Talk]. Combined Program in Education and Psychology Colloquium Series, University of Michigan, Ann Arbor, MI, United States.

## Teaching Experience

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### Education on the Horizon: Teaching and Learning with Technology

[UNDERGRADUATE SEMINAR] INSTRUCTOR

University of Potsdam

2019–Present

### Enhance Teaching and Learning through the Perspective of Cognitive Psychology

[UNDERGRADUATE SEMINAR] INSTRUCTOR

University of Potsdam

2018–Present

### Understand Schooling through the Lens of Cross-cultural Comparisons

[UNDERGRADUATE SEMINAR] INSTRUCTOR

University of Potsdam/Kiel

University

2018–Present

### Educational Psychology and Human Development

[UNDERGRADUATE SEMINAR] GRADUATE STUDENT INSTRUCTOR

University of Michigan

2016

### Research Methods in Educational and Cross-cultural Contexts

[UNDERGRADUATE SEMINAR] GRADUATE STUDENT INSTRUCTOR

University of Michigan

2015

### Introduction to Psychology

[UNDERGRADUATE SEMINAR] GRADUATE STUDENT INSTRUCTOR

University of Michigan

2014–2017

### Psychology Subject

HIGH SCHOOL TEACHER

Gucheng High School, Beijing, China

2012

## Supervision of Theses

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- Are Comic Books Suitable for Teaching Second Language? — Example of English in German Secondary Education [Bachelor, 2020/10, University of Potsdam]
- Aufmerksamkeitsverteilung bei Praxissemesterstudierenden [Distribution of visual attention among teacher trainees] [Master, 2020/06, University of Potsdam]

## Working Experience

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### Data Visualization Specialist

DIGITAL EDUCATION & INNOVATION LAB, THE OFFICE OF ACADEMIC INNOVATION, UNIVERSITY OF MICHIGAN

Ann Arbor, United States

2016–2017

- Responsible for managing, mining, analyzing and visualizing big data set for the Massive Open Online Courses provided by University of Michigan.

### Program Leader

GLOBAL COURSE CONNECTION IN CHINA, CENTER FOR GLOBAL AND INTERCULTURAL STUDY, UNIVERSITY OF MICHIGAN

Ann Arbor, United States

2013–2017

- Responsible for leading international comparison studies both in US and China, as well as facilitating the cultural and academic exchange between American and Chinese college students.

### Graphic Designer

FREELANCE

Virtual

2011–Present

- Graphic designer specialized in scientific illustration and data visualization

## Professional Service

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### AD-HOC PEER REVIEW

- Asia Pacific Education Review (2022–Present)
- Computers & Education (2021–Present)
- Frontiers in Psychology (2022–Present)
- European Journal of Teacher Education (2021–Present)
- International Conference on Information Systems (ICIS) (2022)

## Institutional Service

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## Admissions Committee

COMBINED PROGRAM IN EDUCATION AND PSYCHOLOGY

University of Michigan

2017–2018

## Colloquium Planning Committee

COMBINED PROGRAM IN EDUCATION AND PSYCHOLOGY

University of Michigan

2016–2017

## Communications Committee

COMBINED PROGRAM IN EDUCATION AND PSYCHOLOGY

University of Michigan

2014

## Executive Committee Cohort Representative

COMBINED PROGRAM IN EDUCATION AND PSYCHOLOGY

University of Michigan

2013

## Graduate Student Mentor

THE MICHIGAN ASSOCIATION OF PSYCHOLOGY SCHOLARS

University of Michigan

2013

## Current Memberships

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- American Educational Research Association: Division C (Learning and Instruction), SIG 119 (Technology, Instruction, Cognition, and Learning), SIG 052 (Instructional Technology)
- American Psychological Association: Division 7 (Developmental Psychology), Division 15 (Educational Psychology)

## Skills

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<b>Data Science</b>	R, Mplus, SPSS, Tableau, Python
<b>Reproducible Report</b>	Markdown, org-babel, LaTeX, Pandoc
<b>Programming Languages</b>	C/C++/C#
<b>Apparatus</b>	SMI Mobile Eye-tracking system, Tobii Eye-tracking system, Pupil Labs Eye-tracking system, HTC VIVE
<b>Quantitative Methods</b>	Hierarchical Linear Modeling, Structural Equation Modeling, Survey Design, Unsupervised/Supervised Machine Learning
<b>Languages</b>	English, Mandarin



**Place:** Berlin, Germany

**Date:** 2022-09-10