

YIRAN (VICKY) ZHAO

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EDUCATION

DPhil in Psychology and Education, University of Cambridge

Oct 2018 - Jan 2023

Centre for Research on Play in Education, Development Learning

Lego Foundation Cambridge Trust Scholar

Doctoral project: Play more and play better: why play in early years is important for children's future language, mathematical and mental health development?

MicroMaster in Data, Economics and Development Policy, Massachusetts Institute of Technology

May

2018 - May 2023 expected

Microeconomics (90%); Data Analysis for Social Scientist (94%); Foundations of Development Policy: Advanced Development Economics (79%); Good Economics for Hard Times (92%); Designing and Running Randomized Evaluations (in progress)

MPhil in Educational Research (Economics of Education), University of Cambridge

Oct 2017-July 2018

Distinction and Best Dissertation Award

BA and MA (Hons) in Education with Physics, University of Cambridge

Oct 2014-July 2017

First Class, Top of my cohort, Horobin Prize, CUQM/Sage Prize and Top 7 Undergraduate Part II Dissertation

The High School Affiliated to Renmin University

Sep 2011-July

2014

Mizuho Bank Scholarship

INDUSTRY RESEARCH AND EMPLOYMENT EXPERIENCE

ALSOLIFE World-Leading AI-Powered Digital Therapeutics Platform

March 2023-present

Academic Head of ALSOLIFE International Research Institute

ALSOLIFE is a world-leading AI-powered digital therapeutics platform with headquarter located in Beijing China. Funded by three fathers to five autistic children, it has grown to be the largest autistic community in China (N=370,000+). An interdisciplinary team with backgrounds in medicine, business, technology, data science, engineering, psychology and education, we have developed evidence-based *AI-powered digital auxiliary diagnostic system, AI-powered digital evaluation and training platform, AI-powered teaching system and AI-powered intervention system* to support neurodivergent children and their families around the world. By early 2023, we have collected more than 600 million datapoints, obtained 318 copyrights and patents, established research collaborations with 8 world-leading universities and institutions, with our innovations currently in use in 40 tertiary hospitals. I lead the academic research in the ALSOLIFE International Research Institute and represent ALSOLIFE in establishing both international academic and industry collaborations.

POSTDOCTORAL RESEARCH AND ACADEMIC EMPLOYMENT EXPERIENCE

Mass Media Intervention to Promote Children's Social and Emotional Learning in Jordan Dec 2022-May 2023
expected

Research consultant and lead psychometrician for *New York University Global TIES for Children Center*, managed by Prof Hirokazu Yoshikawa, Courtney Sale Ross University Professor of Globalization and Education at Steinhardt, Co-Director of the *Global TIES for Children Center* at NYU

Ahlan Simsim is a humanitarian program targeted at improving children's early learning. It has been watched by over 23 million children in the Middle East/North Africa region, with a particular focus on reaching families affected by conflict and crisis in Iraq, Jordan, Lebanon, and Syria. The current project is led by NYU Global Ties, Sesame Workshop and the International Rescue Committee (IRC), as part of a 100-million-dollar initiative funded by the MacArthur Foundation. The team evaluated the effectiveness of the Ahlan Simsim television program on preschool children's emotion knowledge and regulation. More than 4000 children from 206 treatment and control schools in Jordan were recruited. The treatment involved showing 26 episodes of the Ahlan Simsim television show (two times each) over the period of 13 weeks during school hours. I led the psychometrics and impact analyses. I also assisted the presentation to a wide range of stakeholders, including the Sesame Workshop, the International Rescue Committee (IRC) and the Ministry of Education in Jordan. Research outputs include reports for main stakeholders and peer-reviewed journal articles.

LEGO Playful Learning Across the Years (PLAY) measurement tool July 2022-June 2023 expected

Research consultant and lead psychometrician for *Research Triangle Institute (RTI)*, managed by Dr Matthew Jukes, Fellow and Senior Education Evaluation Specialist at RTI International

The LEGO Playful Learning Across the Years (PLAY) measurement tool is a 4-million-dollar initiative funded by the LEGO Foundation and led by Research Triangle Institute International and New York University Global TIES for Children Center. This project aims to assess the quality of inclusive learning practices in the primary school contexts across approximately 150 schools, 150 teachers and 750 students in Colombia, Ghana and Kenya respectively. I led the psychometric analyses on evaluating the PLAY 1.0 observational tool, teacher-report survey and student-report survey in Colombia, Ghana and Kenya. Research outputs include reports for main stakeholders, peer-reviewed journal articles, analytical dashboard and guide analyses for future users.

GRADUATE RESEARCH AND ACADEMIC EMPLOYMENT EXPERIENCE

The India Early Childhood Education Impact study Jan 2020-March 2022

Graduate Research assistant for Dr Ben Alcott, Senior Policy Officer (Monitoring Lead) for *Global Education Monitoring Report* at UNESCO

The India Early Childhood Education Impact study is a multi-million-dollar longitudinal study. It was carried out across three major Indian states between 2011 and 2016 by the Centre for Early Childhood Education and Development at Ambedkar University Delhi, ASER Centre and UNICEF India. It was listed as the top 10 finalists for Best of UNICEF Research 2019. I led the analyses that examined children's learning trajectories and attainment gaps with respect to gender, socioeconomic status and government/private early childhood centre attended in India. Research article has been published in *Oxford Review of Education*.

The Road Not Taken: the Drivers of Course Selection Aug 2019-Nov 2020

Graduate Research Assistant for Prof Anna Vignoles, Professor of Education at the University of Cambridge, Director of the *Leverhulme Trust*, Fellow of the *British Academy*, and Commander of the *Most Excellent Order of the British Empire*

This report was led by Social Mobility Commission and Faculty of Education, University of Cambridge. It examined current socioeconomic inequalities in vocational education and training (VET). I assisted the literature review of existing evidence and led data analyses of government statistics and population cohort studies in England.

External social benefits of education in Ethiopia

May 2019- July 2020

Graduate Research Assistant for Prof Ricardo Sabates, Professor of Education and International Development and Director of Research in the Faculty of Education at University of Cambridge

This study was undertaken amid insufficient evidence of the non-monetary social returns to education, particularly in the context of developing countries. I assisted literature review and data analysis of the Young Lives data. We examined the effects of education levels on external social benefits such as engaging with community actions and voluntary work in Ethiopia. Research article has been published in Journal of Education Finance.

The Scholar's Programme by the Brilliant Club

Oct 2018- Dec 2019

Graduate Research Assistant for Dr Sonia Ilie, Associate Professor in Higher Education at University of Cambridge

The Scholar's Programme is a widening participation programme initiated by the Brilliant Club, a charity based in the UK that has successfully increased the number of under-represented students to progress into highly-selective universities. I assisted the design and evaluation of a randomised control trial, which is largest of its kinds in East Anglia, England.

The Learning and Employability Gain Assessment Community

Oct 2016- March 2017

Undergraduate Research Assistant for Prof Jan Vermunt, Professor of Learning Sciences and Educational Innovation, and Scientific Director of Eindhoven School of Education at Eindhoven University of Technology

The Learning and Employability Gain Assessment Community (LEGACY) Project was the largest longitudinal study in England that examined university students' learning gain. I was involved in the design, piloting and first round of data collection. My undergraduate dissertation was based on the pilot data, which received TOP 7 Undergraduate Part II Dissertation Award across the the entire School of Humanities and Social Sciences.

PUBLICATIONS (11)

Zhao, Y.V., Gibson, J. (Accepted). Early home learning support and home mathematics environment as predictors of children's mathematical skills between age 4 and 6: a longitudinal analysis using video observations and survey data. *Child Development*.

Zhao, Y.V., Bhattacharjea, S., Alcott, B. (2023). Slippery slope: early learning and equity in rural India. *Oxford Review of Education*. <https://doi.org/10.1080/03054985.2022.2101442>

Zhao, Y.V. (2022). Play more and play better: why play in early years is important for children's future language, mathematical and mental health development? (Doctoral thesis). <https://www.repository.cam.ac.uk/handle/1810/345066>

Jukes, M., Betts, K., Dubeck, M.P., Edwards, L., Nduku, T., Staskowicz, E., Stern, J., Yoshikawa, H., Gjicali, K., Kim, S., Mahbub, T., Montagut, M., Moran, C., Patanka, K.U., Rosenbach, S., Saleh, H.M., Strouf, K., **Zhao, Y.V.** (2022). Playful Learning Across the Years (PLAY) Measurement Toolkit: Full Report. <https://cms.learningthroughplay.com/media/3qcajhg1/play-1-0-full-report-december-2022.pdf>

RTI International and NYU-Global Ties. (2022). PLAY Toolkit Guide to Analysis. <https://cms.learningthroughplay.com/media/n2afia0j/play-section-8-guide-to-analysis.pdf>

Tai, K.W.H **Zhao, Y.V.** (2022). Success Factors for English as a Second Language University Students' Attainment in Academic English Language Proficiency: Exploring the Roles of Medium-of-Instruction and Learners' Variable. *Applied Linguistics Review*. <https://doi.org/10.1515/applirev-2022-0049>

Zhao, Y.V., Gibson, J. (2022). Evidence for protective effects of peer play in the early years: better peer play ability at age 3 predicts lower risks of externalising and internalising problems at age 7 in a longitudinal cohort analysis. *Child Psychiatry and Human Development*. <https://doi.org/10.1007/s10578-022-01368-x>

Zhao, Y.V., Gibson, J. (2022). Solitary symbolic play, object substitution and peer role play skills at age 3 predict different aspects of age 7 structural language abilities in a matched sample of autistic and non-autistic children. *Autism Developmental Language Impairments*, 7, <https://doi.org/10.1177/23969415211063822>

Sabates, R., **Zhao, Y.V.**, Mitchell, R., Ilie, S. (2021). Understanding the Non-market Social Benefits of Higher Education in Ethiopia: An Empirical and Contextual Analysis using Young Lives. *Journal of Education Finance*, 47(1), 45–70. <https://muse.jhu.edu/article/806386>

Archer, R., Higton, J., Sibieta, L., Tahir, I., Trammell, L. T., Ilie, S., Vignoles, A., **Zhao, Y.V.** (2021). The road not taken: the drivers of course selection: The determinants and consequences of post-16 education choices. [https://dera.ioe.ac.uk/38405/2/The road not taken- review of literature.pdf](https://dera.ioe.ac.uk/38405/2/The%20road%20not%20taken-%20review%20of%20literature.pdf) - -

Zhao, Y.V., Kulkarni, K., Gibson, J., Baker, S., Ramchandani, P. G. (2019). Introducing the Play in Education, Development and Learning (PEDAL) Research Centre. *International Journal of Play*, 8(3), 308–319.

SELECTED MEDIA COVERAGE OF MY RESEARCH

Andrianaly, G. (2022, June 16). Santé mentale: Il est bon de jouer avec des copains avant l'école. **Pourquoi Docteur**. <https://www.pourquoidocteur.fr/Articles/Question-d-actu/39671-Sante-mentale-bon-jouer-copains-l-ecole>

Hola Doctor. (2022, June 15). Por qué es tan importante llevarse bien con los demás en el preescolar. **Hola Doctor** <https://holadoctor.com/es/noticias/por-que-es-tan-importante-llevarse-bien-con-los-demas-en-el-preescolar>

Kirby, J. (2022, June 14). Young children who play with others their age 'have better mental health'. **The Independent**. <https://www.independent.co.uk/news/uk/children-university-of-cambridge-growing-up-australia-covid-b2100292.html>

Knapton, S. (2022, June 14). Young children may be at greater risk of mental health problems after pandemic isolation. **The Telegraph**. <https://www.telegraph.co.uk/news/2022/06/14/young-children-may-greater-risk-mental-health-problems-pandemic/>

Mann, D. (2022, June 14). Why Getting Along in Preschool Is So Important. **US News World Report**. <https://www.usnews.com/news/health-news/articles/2022-06-14/why-getting-along-in-preschool-is-so-important>

the Times. (2022, June 14). Play aids mental health. **The Times and The Sunday Times E-Paper**, p6. <https://epaper.thetimes.co.uk/the-times/20220614>

Weale, S., correspondent, S. W. E. (2022, June 14). Improved mental health for children who play well with peers by age three. **The Guardian**. <https://www.theguardian.com/society/2022/jun/14/improved-mental-health-children-play-with-peers-by-age-three>

TEACHING

1. **Undergraduate supervisor in Education, Neuroscience and Society, University of Cambridge, UK, 2021-present**
This is a third-year paper targeting at undergraduate students from Education Tripos, Psychological and Behavioural Sciences Tripos and Natural Science Tripos. This paper covers a range of topics in neuroscience (e.g. EEG and fMRI methods), developmental psychology (e.g. autism and developmental language disorder) and inclusive education (e.g. SEND policy).

2. Undergraduate supervisor and examiner in Statistics and Methods, University of Cambridge, UK, 2019-present
This is a second-year paper targeting at undergraduate students from Education Tripos and Human, Social, and Political Sciences Tripos. This paper covers a range of topics and debates around both qualitative (e.g. paradigm shift and ethnography) and quantitative social science methods (e.g. positivism and regression analyses).

3. Lecturer and Demonstrator, Social Science Research Method Programme, University of Cambridge, UK, 2018-present

I lecture on a one-day course on propensity score matching to postgraduate students, postdoctoral researchers and academics across the School of the Humanities and Social Sciences at University of Cambridge. I also assist practical sessions on ANOVA, linear regression analyses, logistic regression analyses, regression discontinuity, propensity score matching, difference-in-difference, instrumental variable using Stata.

SELECTED CONFERENCE

Early home learning support, Global Parenting Initiative Research Series, University of Oxford, 26th of October, 2022

Peer play and mental health, Play Symposium led by Aarhus University, University of Cambridge and Harvard University, 20th of April 2021

The role of education in equality of opportunity and individual experience of social mobility in the Chinese context, British Association for International and Comparative Education Conference, 14th of September, 2018

Higher education students' self-regulated learning: the role of critical processing and epistemological beliefs, Society for Research into Higher Education Newer Early Career Researchers Conference, 5th of December, 2017

SKILLS

1. Statistical softwares

Fluent in R, Mplus, MATLAB, Stata, SPSS and Excel

2. Interdisciplinary research methods

ANOVA, linear and logistic regression analyses, regression discontinuity, propensity score matching, difference-in-difference, instrumental variable, randomised controlled trials, structural equation models, latent growth curve models and meta-analysis

3. Online courses

<i>Econometrics: Methods and Applications</i> offered by Erasmus Universiteit Rotterdam. Grade: 92%	<i>May 2018</i>
<i>Miracles of Human Language: An Introduction to Linguistics</i> offered by Universiteit Leiden: 91%	<i>Feb 2020</i>
<i>Autism Spectrum Disorder</i> offered by University of California, Davis: 97%	<i>Aug 2020</i>

4. Language

Mandarin Chinese (Native)
English (Bilingual proficiency)
French (Intermediate 1 CEFR B1)

RESEARCH NETWORKS IN THE CHINESE CONTEXT

Graduate School of Education, Peking University, China

August 2021-present

I joined Peking University as a consultant on the Early Childhood Development in Urban China study, which is a collaborative project between the Center for Economics of Human Development at the University of Chicago and the Graduate School of Education/Institute of Economics of Education at Peking University. I assist the design of research framework, the selection of cognitive instruments and the design of a randomised controlled trial to improve early childhood parenting.

Institute of Education, Xiamen University, China

September 2017-present

I was invited by Prof Qiuheg Shi as a visiting scholar at the Institute of Education, Xiamen University in September 2017. I presented my work in several national and international conferences invited by Prof Qiuheg Shi, including the most recent one on "Education Evaluation Division, China Association of Higher Education" held between 9th and 12th of July 2021. I also participated in the design of National College Student Survey (NCSS) led by Prof Qiuheg Shi.

Lifelong Learning Lab at Tsinghua University, China

July 2017-present

I interned at the Lifelong Learning Lab at Tsinghua University (TULLL) between July and September 2017. I assisted the design of textbooks and teaching manuals for the newly renovated science curriculum in China. I also assisted the facilitation of the two-week project-based lessons by using Scratch Jr, LEGO WeDo 2.0 and EV3 robots.