

Yuting Sun

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EDUCATION

PhD	Human Development and Quantitative Methodology University of Maryland, College Park, MD <i>Specialization: Educational Psychology</i> <i>Advisor: Dr. Patricia A. Alexander</i> Dissertation: <i>Higher-Order Thinking Across Stages of an Argumentative Multiple Source Use Task</i>	Anticipated Fall 2023
Graduate Certificate	Measurement, Statistics and Evaluation University of Maryland, College Park, MD <i>Advisor: Dr. Jeffrey R. Harring</i>	Spring 2020
MA	Linguistics Department of Foreign Languages and Literatures Tsinghua University, Beijing, China <i>Advisor: Dr. Li Yin</i> Thesis: <i>Chinese kindergarteners use orthographic knowledge in learning to write</i>	July 2015
BA	English Language Department of Foreign Languages and Literatures Tsinghua University, Beijing, China <i>With first-class distinction (equivalent to magna cum laude)</i> Overseas exchange: Heidelberg University, Heidelberg, Germany	July 2012 September 2010 – August 2011

HONORS AND AWARDS

Ann G. Wylie Dissertation Fellowship Department Nominee, University of Maryland, College Park	2023
Graduate Student Poster Award Finalist, American Psychological Association Division 15, Minneapolis, MN	2022
Dean's Fellowship, University of Maryland, College Park	2015, 2018
Graduate Research Appreciation Day Second Prize Winner, University of Maryland.	2017
Department of Human Development and Quantitative Methodology Travel Award,	2017-2019,

University of Maryland, College Park	2023
Jacob K. Goldhaber Travel Award, the Graduate School, University of Maryland, College Park	2017, 2023
Merit Fellowship, University of Maryland, College Park	2015
Zhang Mingwei Scholarship, Tsinghua University, Beijing, China	2013
Outstanding Graduate Student of Higher Education Institutions in Beijing, Beijing, China	2012
Baden-Württemberg Scholarship for Students, Heidelberg, Germany	2011
National Scholarship for Undergraduate Students of China, Beijing, China	2009, 2010

RESEARCH EXPERIENCES

Assistant Director	<i>Disciplined Reading and Learning Research Laboratory</i> University of Maryland, College Park, MD <ul style="list-style-type: none"> • Overseeing academic activities and resources • Coordinating 10 graduate researchers, visiting scholars, and affiliated faculty • Supervising undergraduate research assistants 	2018-present
Laboratory Member	<i>Disciplined Reading and Learning Research Laboratory</i> University of Maryland, College Park, MD <ul style="list-style-type: none"> • Conducting quantitative research and literature reviews on topics such as college students' higher-order and critical-analytic thinking in multiple text learning, relational reasoning in middle-school science classroom discourse, development of relational reasoning in Chinese children and adolescents 	2015-2018
Research Assistant	<i>National Foreign Languages Center</i> University of Maryland, Riverdale, MD <ul style="list-style-type: none"> • Designed and administered national surveys for participants in nation-wide world language immersion programs (STARTALK) funded by National Security Agency • Analyzed longitudinal survey data and wrote program evaluation reports on the long-term impact of the STARTALK program and the state of critical language education and teacher training in the U.S. • Developed a report to institution leadership and submitted an academic conference paper on questions of demographics and equity for students in language immersion programs, using multilevel modeling 	2020-2021

Research Assistant	<p>Strategies: The Bessie Coleman Project - Using Computer Modeling and Flight Simulation to Create STEM Pathways, National Science Foundation (NSF 1757976), 2018-2021, Principal Investigator: Jacqueline Leonard (Co-PIs: Ruben Gamboa, Geeta Verma, Roni Ellington, Brandon Gellis, Richard Kitchen, Andrea Burrows).</p> <p>University of Maryland, College Park, MD</p> <ul style="list-style-type: none"> • Conducted research on assessing the reliability and validity of a survey on elementary to secondary school students’ self-efficacy for computational thinking • Communicated findings and challenges with an interdisciplinary team of investigators 	2019-2021
Research Assistant	<p>Quantitative Research Methods for STEM Education Scholars Program, National Science Foundation (NSF 1937745), 2019-2022, Principal Investigator: Laura Stapleton (Co-PI: Gregory Hancock)</p> <p>University of Maryland, College Park, MD</p> <ul style="list-style-type: none"> • Assisted with recruitment of early-career STEM education scholars to the program for methodological mentorship, • Coordinated the capstone Quantitative Research Methods Summer Institute for 30 selected scholars • Supported the subsequent year-long mentorship between quantitative experts and participating scholars 	2019-2020
Research Assistant	<p>Center for the Study of Language and Psychology</p> <p>Tsinghua University, Beijing, China</p> <ul style="list-style-type: none"> • Worked as coordinator and experimenter on three research projects funded by National Natural Science Foundation of China on identifying early precursors of reading and writing difficulties in Chinese • Conducted an independent study on Chinese kindergarteners’ orthographic knowledge development 	2011-2015

PUBLICATIONS

Refereed Journal Articles

- Alexander, P. A., Fusenig, J., Schoute, E. C., Singh, A., **Sun, Y.**, & van Meerten, J. E. (2023). Confronting the challenges of undergraduates’ argumentation writing in a “Learning How to Learn” course. *Written Communication, 40*(2), 482-517. <https://doi.org/10.1177/07410883221148468>
- List, A., & **Sun, Y.** (2023). To clarity and beyond: Situating higher-order, critical, and critical-analytic thinking in the literature on learning from multiple texts. *Educational Psychology Review, 35*(2), Article 40. <https://doi.org/10.1007/s10648-023-09756-y>
- Trakhman, L. M. S., Alexander, P. A., & **Sun, Y.** (2022). The effects of processing multimodal texts

in print and digitally on students' comprehension and calibration. *The Journal of Experimental Education*, 91(4), 599-620. <https://doi.org/10.1080/00220973.2022.2092831>

Zhao, H., Alexander, P. A., & **Sun, Y.** (2021). Relational reasoning's contributions to mathematical thinking and performance in Chinese elementary and middle-school students. *Journal of Educational Psychology*, 113(2), 279-303. <https://doi.org/10.1037/edu0000595>

Alexander, P. A., Zhao, H., & **Sun, Y.** (2020). Spontaneous focusing on what and why? What children's imprecise responses reveal about their mathematical thinking and relational reasoning. *Mathematical Thinking and Learning: Special Issue on Spontaneous Focusing*, 22(4), 332-350. <https://doi.org/10.1080/10986065.2020.1818471>

Chapters in Edited Volumes

Alexander, P. A., & **the Disciplined Reading and Learning Research Laboratory*** (2020). Relational reasoning: The bedrock of integration within multi-representational texts, contexts, and perspectives. In P. van Meter, A. List, D. Lombardi, & P. Kendeou (Eds.), *Handbook of learning from multiple representations and perspectives* (pp. 396-420). Routledge. <https://doi.org/10.4324/9780429443961>

[*Contributors include (in alphabetic order) Jannah Fusenig, Sophie Jablansky, Eric Schoute, Anisha Singh, **Yuting Sun**, Lauren Singer Trakhman, Julianne van Meerten, and Hongyang Zhao]

Alexander, P. A., Murphy, P. K., & **Sun, Y.** (2018). Knowledge and beliefs change in academic development. In H. Fives & D. L. Dinsmore (Eds.), *The Model of Domain Learning: Understanding the development of expertise* (pp.157-174). Routledge. <https://doi.org/10.4324/9781315458014>

Yin, L., & **Sun, Y.** (2017). Chinese-speaking societies. In N. Kucirkova, C. Snow, V. Grover, & C. McBride (Eds.), *The Routledge international handbook of early literacy education: A contemporary guide to literacy teaching and interventions in a global context* (pp. 223-232). Routledge. <https://doi.org/10.4324/9781315766027-20>

Test Development

Alexander, P. A., & **the Disciplined Reading and Learning Research Laboratory** (2018). *Test of Relational Reasoning-Junior* (copyright pending) College Park, MD: University of Maryland.

Zhao, H., **Sun, Y.**, & Alexander, P. A. (2019). *Quantitative Relations Test for Chinese Children* (copyright pending). College Park, MD: Disciplined Reading and Learning Research Laboratory, University of Maryland

Manuscripts Under Review or In Preparation

Sun, Y. & Alexander, P. A. (under review). Higher-order thinking in multiple source use tasks among college students: A systematic review.

Singh, A., **Sun, Y.**, Alexander, P. A., & Zhao, H. (in preparation). Componential modeling of the argumentative essay writing: A Bayesian network approach.

Hogan, E. & **Sun, Y.** (under review). How classroom dialogic interaction patterns affect student reading performance: A mixed methods study.

Sun, Y., Ketelhut, D. J., Cabrera, L., Leonard, J., & Jordan, W. J. (in preparation). Measuring computational thinking self-efficacy: Reliability and validity of the Computational Thinking Self-Efficacy (CompTSE) Scale

Sun, Y., Singh, A., & Alexander, P. A. (in preparation). Characterizing college students' multiple source use in an argumentative essay task: A profile analysis.

PRESENTATIONS

National and International

Sun, Y., & List, A. (2023, April 13-16). To clarity and beyond: Situating higher-order, critical, and critical-analytic thinking in the literature on learning from multiple texts. In A.J. K. Maki (Chair), *Navigating the murky waters of higher order, critical, and critical analytic thinking* [Symposium]. Annual Meeting of the American Educational Research Association, Chicago, IL, United States

Schoute, E. C., van Meerten, J. E., **Sun, Y., & Singh, A.** (2023, April 13–16). Validating students' behavioral profiles in classroom-based multiple source use tasks: Lessons learned, remaining challenges. [Paper presentation]. Annual Meeting of the American Educational Research Association, Chicago, IL, United States

Sun, Y. & Alexander, P. A. (2022, August 4-6). *The elusive presence of higher-order thinking in multiple source use studies: A systematic review* [Poster presentation]. American Psychological Association conference, Minneapolis, MN, United States (**Graduate Student Poster Award Finalist**)

Sun, Y., Ketelhut, D. J., Leonard, J., & Jordan, W. J., (2021 April 9-12). Measuring computational thinking self-efficacy: Validation for the Computational Thinking Self-Efficacy (CompTSE) Scale. In W. E. W. Bortz (Chair), *Computers and learning: Programming and computational thinking* [Paper session]. Virtual annual meeting of the American Educational Research Association.

Schoute, E. C., van Meerten, J. E., **Sun, Y., & Singh, A.** (2021 April 9-12). Search logs, argumentative essays, and performance profiles: Positioning multiple source use in a classroom context. In J. Braasch (Chair), *Synergy of reading and writing within multiple source tasks: Novel approaches and innovative techniques* [Symposium]. Virtual annual meeting of the American Educational Research Association. <https://doi.org/10.23668/psycharchives.8170>

Zhao, H., Alexander, P. A., & **Sun, Y.** (2021 April 9-12). *A close examination of the Test of Relational Reasoning Junior Version under the multidimensional item response theory framework* [Poster presentation]. Virtual annual meeting of the American Educational Research Association.

Sun, Y., Alexander, P. A., Singh, A., & Zhao, H. (2020, August 6-9). *Characterizing college students' multiple source use in an argumentative essay task: A profile analysis* [Poster presentation]. American Psychological Association conference, Washington, D.C., United States.

Zhao, H., Alexander, P. A., & **Sun, Y.** (2020, April 17-21). Exploring the connection between children's error patterns on a novel mathematical task and their relational reasoning ability. In J. Fusenig (Chair), *Relational reasoning and mathematical knowledge: Exploring the connection* [Symposium]. Annual meeting of the American Educational Research Association, San Francisco, CA, United States. (Conference canceled due to COVID-19 outbreak)

Alexander, P. A., Zhao, H., & **Sun, Y.** (2019, August 12-16). Interrelations among relational

- reasoning, spontaneous focus on mathematical properties, and mathematics performance. In J. McMullen (Chair), *Beyond SFON: Expanding examinations of spontaneous mathematical focusing tendencies* [Symposium]. Biennial meeting of the European Association for Research in Learning and Instruction, Aachen, Germany.
- Singh, A., **Sun, Y.**, & Zhao, H. (2019, April 5-9). Defining and assessing integration in the context of argumentative essays based on multiple sources. In L. M. S. Trakhman (Chair), *Integration: A critical competency for the digital age* [Symposium]. Annual meeting of the American Educational Research Association, Toronto, Canada.
- Zhao, H., & **Sun, Y.** (2019, April 5-9). Development of relational reasoning ability among Chinese elementary and middle school students. In E. Grossnickle-Peterson (Chair), *Pushing the boundaries of relational reasoning in research and practice: Cross-national, cross-domain, and cross-age explorations* [Symposium]. Annual meeting of the American Educational Research Association, Toronto, Canada.
- Trakhman, L. M. S., **Sun, Y.**, & Silverman, A. (2019, April 5-9). *The effects of processing multimodal texts in print and digitally on students' comprehension and calibration* [Paper presentation]. Annual meeting of the American Educational Research Association, Toronto, Canada.
- Sun, Y.**, Alexander, P. A., & Zhao, H. (2018, April 13-17). *Influence of teacher discursive moves on students' relational reasoning in science classrooms* [Poster presentation]. Annual meeting of the American Educational Research Association, New York, NY, United States.
- Hogan, E., **Sun, Y.**, & Croninger, R. (2018, April 13-17). *How classroom dialogic interaction affects student reading performance: A mixed-methods study* [Poster presentation]. Annual meeting of the American Educational Research Association, New York, NY, United States.
- Alexander, P. A., Murphy, P. K., & **Sun, Y.** (2018, April 13-17). *Knowledge and belief change in academic development* [Poster presentation]. Annual meeting of the American Educational Research Association, New York, NY, United States.
- Zhao, H., Alexander, P., & **Sun, Y.** (2018, August 9-12). *Measuring relational reasoning in Chinese children and adolescents using TORRjr*. [Poster presentation]. American Psychological Association conference, San Francisco, CA, United States.
- Sun, Y.**, Zhao, H., & Alexander, P. A. (2017, August 3-6). *Relational reasoning in eighth-grade science classrooms in U.S. and Australia* [Poster presentation]. American Psychological Association conference, Washington, D.C., United States.
- Jablansky, S., Alexander, P. A., Eilam, B., Aharon, I. & **Sun, Y.** (2017, April 17-May 1). *TORRjr: Measuring relational reasoning in children and adolescents* [Poster presentation]. Annual meeting of the American Educational Research Association, San Antonio, TX, United States.
- Zhao, H., **Sun, Y.**, & Alexander, P. A. (2017, April 17-May 1). *Getting students to use relational reasoning: Sequential analysis of eighth-grade science classroom discourse* [Poster presentation]. Annual meeting of the American Educational Research Association, San Antonio, TX, United States.
- Zhao, H., **Sun, Y.**, & Alexander, P. A. (2017, August 3-6). *Applying latent semantic analysis to*

the study of relational reasoning in classroom [Poster presentation]. American Psychological Association conference, Washington, D.C., United States.

Sun, Y., Yin, L., & McBride, C. (2015, July). *Chinese kindergarteners use orthographic knowledge in learning to write* [Paper presentation]. 22nd Annual Conference of the Society for the Scientific Studies of Reading, Hawaii, United States.

University

Singh, A., **Sun, Y., & Zhao, H.** (2019, March). *Defining and assessing integration in the context of argumentative essays based on multiple sources* [Paper presentation]. Student Research Symposium, University of Maryland, College Park, MD, United States.

Zhao, H., & **Sun, Y.** (2019, April). *Development of relational reasoning ability among Chinese elementary and middle school students* [Paper presentation]. Student Research Symposium, University of Maryland, College Park, MD, United States.

Sun, Y., Alexander, P. A., & Zhao, H. (2018, April). *Influence of teacher discursive moves on students' relational reasoning in science classrooms.* [Poster presentation]. Graduate Research Appreciation Day, University of Maryland, College Park, MD, United States.

Sun, Y., Zhao, H., & Alexander, P. A. (2017, August). *Relational reasoning in eighth-grade science classrooms in U.S. and Australia.* [Poster presentation]. Graduate Research Appreciation Day, University of Maryland, College Park, MD, United States.

Zhao, H., **Sun, Y., & Alexander, P. A.** (2017, August). *Applying latent semantic analysis to the study of relational reasoning in classroom.* [Poster presentation]. Graduate Research Appreciation Day, University of Maryland, College Park, MD, United States.

TEACHING EXPERIENCES

Instructor of Record	Department of Human Development and Quantitative Methodology University of Maryland, College Park, MD <i>EDHD306 Research Methods in Human Development</i> Independently taught research methods to classes of 20-40 students each semester in online or in-person formats	Spring 2023 Summer 2020 Summer 2019
Instructor of Record	Department of Human Development and Quantitative Methodology University of Maryland, College Park, MD <i>EDHD460 Educational Psychology</i> Independently taught educational psychology to classes of 30-40 undergraduate students for 4 semesters	Fall 2017 - Spring 2019

**Teaching
Assistant**

**Department of Human Development and Quantitative
Methodology**

University of Maryland, College Park, MD

EDMS 645 Quantitative Research Methods I

Instructors: Dr. Alice Donlan, Dr. Megan Masters

Developed and taught *R* tutorials; assisted with online and in-person instruction of introductory descriptive and inferential statistics to classes of 20-30 graduate students each semester

Fall 2021 -
Fall 2022

EDMS 651 General Linear Models II

Instructor: Dr. Ji Seung Yang

Provided support on statistical software application (*R* and SPSS) for homework assignments to 30 graduate students

Spring 2022

***Off Campus Human Development Master of Education
program***

Instructor: Dr. Ann Battle

Supported and gave feedback on the writing of seminar papers of 12 students seeking Master of Education degrees

Spring 2018

EDHD 201 Learning How to Learn

Instructor: Dr. Patricia A. Alexander

Assisted with class material preparation; organized group discussions; taught key concepts of educational psychology; graded assignments and exams

Spring 2017

EDHD460 Educational Psychology

Instructors: Dr. Patricia A. Alexander, Dr. Geetha Ramani

Assisted with teaching educational psychology concepts to around 40 undergraduate students each semester; graded assignments and exams

Fall 2015-
Fall 2016

**Teaching
Assistant**

Department of Foreign Languages and Literatures

Tsinghua University, Beijing, China

Undergraduate Thesis Training

Instructor: Dr. Li Yin

Provided feedback on undergraduate students' theses; kept track of 141 students' performance and progress over the course of thesis writing; assisted with organization of the thesis defense

Spring 2014

Research Methods and Practice

Instructor: Dr. Li Yin

Held weekly Q&A sessions for students; helped students choose research topics and use databases; provided feedback on students' reading reports and research proposals

Fall 2013

Reading Classics (3) Fall 2012

Instructor: Dr. Xia Wu

Led group discussion sessions on classic western and Chinese literary works for 50 undergraduate students; graded and provided feedback on students' book reports

**Part-Time
Teacher**

**Affiliated Primary School of Tsinghua University
Beijing, China**

Fall 2011-
Spring 2012

Taught English to 2 classes of 30 Chinese third-graders; helped students build English vocabulary, grammar knowledge, and oral expression skills

PROFESSIONAL EXPERIENCES AND SERVICES

Ad Hoc Reviewer *Contemporary Educational Psychology* 2016-Present

Translational Issues in Psychological Science 2019-Present

Learning and Instruction 2022-Present

Course Assistant **How to Get Published Professional Development Course, American Educational Research Association** 2016-2020

- Organized and hosted annual professional development workshops featuring 8 renowned researchers around the world, offered to 50-100 participants each year
- Incorporated participant feedback to improve the course

Assistant Designer **Media Studio of the Department of Human Development and Quantitative Methodology, University of Maryland** 2018-2019

- Co-designed and co-created a media studio for professional video and audio production that became a major multimedia resource in the department
- Assisted with researching, purchasing, and setting up equipment for the studio space
- Provided an introductory presentation and created user manuals to guide faculty and students on how to use the studio to enhance teaching and researching

Graduate Student Representative **College of Education Graduate Student Organization, University of Maryland** Fall 2017-
Spring 2018

- Coordinated and co-organized academic, professional development, and social events for the College of Education graduate students and faculty (Graduate Student Research Symposium, Welcome Fair, Course Showcase)

Graduate Student Co-Coordinator **Educational Psychology Colloquium at the Department of Human Development and Quantitative Methodology, University of Maryland** 2017-2018

- Co-organized biweekly academic presentations and professional development events attended by graduate students and faculty speakers from within and outside of UMD

METHODOLOGICAL SKILLS

Quantitative Methods: general linear modeling, exploratory and confirmatory factor analysis, multilevel modeling, structural equation modeling, Item Response Theory, Bayesian network analysis, lag sequential analysis, complex survey analysis

Statistical software: SPSS, R, Mplus, HLM

Mixed Methods

PROFESSIONAL MEMBERSHIP

American Educational Research Association, Division C

American Psychological Association, Division 15