

Zhanxia Yang

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CURRENT POSITION

2021-Present Postdoctoral Research Fellow: Computer Science Education, Early Childhood
DevTech Research Group, Boston College (lab moved to Boston College from Tufts University in 2022)
Postdoctoral Mentor: Dr. Marina Bers

EDUCATION

2017-2020 Ph.D. in Educational Psychology, Texas Tech University, Lubbock, TX
-Dissertation: Examining Profiles of College Students' Mindset of Intelligence and Epistemological Beliefs and Their Association with Learning Motivations.

2014 – 2017 M.Ed. in Educational Psychology, Texas Tech University, Lubbock, TX

2010-2013 M.S. in Plant and Soil Science, Texas Tech University, Lubbock, TX

2006-2010 B.S. in Practacultural Science, Lanzhou University, Gansu, China

CERTIFICATIONS

- **Business Analytics Graduate Certificate** (Texas Tech University data science program)
- **Texas Standard Classroom Teaching Certifications**
 - Life Science (8-12)
 - Mathematics (8-12)

RESEARCH EXPERIENCE

2021-present Post-doc Researcher Data Analyst, DevTech Research Group
-Applied cluster randomized control research design for conducting research.
-Managed data collection from two sites, involving 2000 students from over 40 schools.
-Analyzed data to assess curriculum impact and explore contributing factors, utilizing complex modeling techniques like longitudinal analysis and multi-level mediational analysis.
-Prepared reports and manuscripts based on research findings.

- 2017-2018** Research Assistant, the Center for Adolescent Resilience, TTU
-Project: United Future Leadership (UFL)
-Managed 7 years (14 waves) longitudinal data
-Visited middle school students for programming and data collection
-Analyzed data and presented at conference
- 2014-2017** Research Assistant, College of Education, TTU
-Collaborated research studies with Dr. Shirley Matteson, Dr. Hansel Burley, and Dr. Raymond Flores
-Conducted literature review
-Compiled documents for IRB approval
-Submitted conference papers
-Research topics involved: productive failure in STEM, higher-order thinking skills, the role of pre-service teachers' beliefs.

TEACHING EXPERIENCE

Adjunct Instructor at Texas Tech University

- Spring 2021** EPSY 5381 Intermediate Statistics (Hybrid)
-Taught graduate-level intermediate statistics in education
-Zoom meeting once a week
- EPSY 5380 Intro- Statistics (Online)
-Taught graduate-level introductory statistics in education
- EDEL 4370 Mathematics Methods I (EC-3) (Face-to Face)
-Taught undergraduate pre-service teachers elementary mathematics methods from EC-3rd grade

Graduate Part-Time Instructor at Texas Tech University

- Fall 2020** EDEL 4373 Mathematics Methods II (Hybrid)
-Taught undergraduate pre-service teachers elementary mathematics methods from 4th -6th grade
-Supervised by Dr. Raymond Flores
- Spring 2020** EDEL 4370 Mathematics Methods I (Face-To-Face)
-Supervised by Dr. Raymond Flores
- Spring 2020** EDEL 4373 Mathematics Methods II (Online)
-Supervised by Dr. Raymond Flores
- Fall 2019** Instructor, EDEL 4370 Mathematics Methods I (Online)
-Supervised by Dr. Raymond Flores
- Spring 2019** Instructor, EDEL 4373 Mathematics Methods II (Online)
-Supervised by Dr. Raymond Flores

Other Teaching Experience at Texas Tech University

Sept. 2019	Invited Guest Speaker, EPSY 5330 Motivation in Educational Setting - <i>Topic: Mindset of Intelligence</i> - <i>Invited by Dr. William Lan</i>
Fall 2018	Teaching Assistant - <i>Searched resources for inquiry, argumentation, and reasoning</i> - <i>Designed science teaching methods for an upcoming course</i>
Fall 2017	Teaching Practicum, EPSY 5383 Data Analysis with Statistical Software - <i>Taught three topics: χ^2 analysis, EFA, and repeated measure analysis</i> - <i>Supervised by Dr. Lucy Barnard-Brak</i>
Fall 2015	Teaching Assistant, EDCI 5373 Designing Project-Enhanced Environments for Science and Mathematics - <i>Assisted in developing a graduate-level hybrid course</i> - <i>Supervised by Dr. Shirley Matteson</i>

High School Teaching

2013-2014	Teacher, Floydada High School, Floydada, TX - <i>Taught math models, algebra I, and pre-calculus</i>
Fall 2012	Teacher (internship), Lubbock High School, Lubbock, TX - <i>Taught 9th grade biology</i>

GRANT ACTIVITY

National Science Foundation Discovery Research PreK-12, "Exploring Learning and STEM Interest at SystemsGo: Productive Failure at Work in an Innovative Pre-Engineering Program." Submitted in December 2017 (\$2,487,265, not funded)

- Role: Data Analyst
- PI: Dr. Hansel Burley

AWARDS & SCHOLARSHIPS

Texas Tech University

March 2020	Summer Thesis/Dissertation Research Award (\$2,300)
2016 – 2018	Graduate Student Travel Grant (\$500/yr)
2014 – 2018	The <u>CH</u> Foundation Graduate Endowed Assistantship (\$4,000/yr)
Fall 2012	Helen DeVitt Jones Post-Bac Scholarship (\$5,000)
2010 – 2011	Provost Fellowship (\$20,000)

PUBLICATIONS

- Yang, Z.**, Blake-West, J., Yang, D., & Bers, M. (under review). The Impact of a Block-based Visual Programming Curriculum: Untangling Coding Skills and Computational Thinking. *Learning and Instruction*.
- Yang, D., **Yang, Z.**, & Bers, M. (under review). The Efficacy of a Computer Science Curriculum for Early Childhood: Evidence from a Randomized Controlled Trial in K-2 Classrooms. *Computer Science Education*.
- Yang, Z.** & Bers, M. (in press). Examining gender difference in the use of ScratchJr in a programming curriculum for first graders. *Computer Science Education*.
- Kapoor, M. G., **Yang, Z.**, & Bers, M. (2023). Supporting early elementary teachers' coding knowledge and self-efficacy through virtual professional development. *Journal of Technology and Teacher Education*. 30(4), 461-491.
- Bers, M., Blake-West, J., Govid, M., Levinson, T., Relkin, E., Unahalekhaka, A. & **Yang, Z.** (2023). Coding as another language: Research-based curriculum for early childhood computer science. *Early Childhood Research Quarterly*.
- Barnard-Brak, L., Stevens, T., & **Yang, Z.** (2020). Predictors of parental premature exiting from early intervention services. *Infants & Young Children*, 33(2), 132-141.
- Yang, Z.**, Barnard-Brak, L., & Lan, W. (2019). Examining the association of over-claiming with mathematics achievement. *Learning and Individual Differences*, 70, 30-38.
- Yang, Z.**, Barnard-Brak, L., Siwatu, K. O., (2019). How does the availability of ICT resources mediate the relationship between socioeconomic status and achievement? *Journal of Technology in Behavioral Science*, 4, 262-266.
- Barnard-Brak, L., Richman, D. M., **Yang, Z.** (2019). Age at death and comorbidity of Dementia-related disorders among individuals with Autism Spectrum Disorder. *Advances in Autism*, 5, 293-302.
- Barnard-Brak, L., Lan, W., & **Yang, Z.** (2018). Differences in mathematics achievement according to opportunity to learn: 4pL Item Response Theory Examination. *Studies in Educational Evaluation* 56, 1-7.
- Barnard-Brak, L., Richman, D. M., Little, T. D., & **Yang, Z.** (2018). Development of an in-vivo metric to aid visual inspection of single-case design data: Do we need to run more sessions? *Behaviour Research and Therapy*, 102, 8-15.
- Yang, Z.**, Nguyen, B., & Wright, R. (2015). Physical Mapping B_{12} Resistance in the Cotton. *Plant Cell Biotechnology and Molecular Biology*, 16, 1-11.

RESEARCH CONFERENCE

- Yi, M., Flores, R., **Yang, Z.**, Wang, G., & Brito, M. (2021, April). *Successes and Challenges MTEs and TCs experienced through the implementation of edTPA Mathematics Task 4*. Paper presented at 2021 American Educational Research Association Annual Meeting.
- Yang, Z.**, Flores, R., Wang, G., & Guo, L. (2020, April). Do preservice elementary mathematics teachers' beliefs matter? An empirical study from a large-scale dataset. [Roundtable Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/wpt4rmb> (Conference Canceled)
- Guo, L., Wang, J., & **Yang, Z.** (2020, April). An analysis of PIRLS data: Efficacy of balanced literacy instruction on elementary students' reading performances. [Poster Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/von958z> (Conference Canceled)
- Yang, Z.**, Follmer-Reece, H., Velez, P., & Dodd, S. (2018, October). Family practices and character development of adolescents: An exploratory study. Poster presented at 2018 Society for Research in Child Development Special Topic Meeting: *Promoting Character Development Among Diverse Children and Adolescents: The Roles of Families, Schools, and Out-Of-School-Time Youth Development Programs*, Philadelphia, PA.
- Yang, Z.**, Barnard-Brak, L., & Lan, W., (2018, April). Examining the effect of high school students' over-claiming and their mathematics achievement. Proposal presented at 2018 American Educational Research Association Annual Meeting, New York, NY.
- Yang, Z.**, Barnard-Brak, L., & Siwatu, K. O., (2018, April). How does the use of ICT resources mediate the relationship between socioeconomic status and achievement? Proposal presented at 2018 American Educational Research Association Annual Meeting, New York, NY.
- Yang, Z.**, & Yaqobi, S. (2017, February). Teachers' technology self-efficacy and practices. Proposal presented at the 40th annual meeting of the Southwest Educational Research Association, San Antonio, TX.
- Yang, Z.**, Yaqobi, S., & Matteson, S. (2017, February). Developing a culture of thinking for culturally and linguistically diverse students. Proposal presented at the 40th annual meeting of the Southwest Educational Research Association, San Antonio, TX.
- Yaqobi, S., & **Yang, Z.** (2017, February). Strategies to engage English language learners in the classroom: The role of active teaching. Proposal presented at the 40th annual meeting of the Southwest Educational Research Association, San Antonio, TX.
- Matteson, S., Kackley Smith, L., **Yang, Z.**, & Yaqobi, S. (2016, October). Development of a culture of thinking in middle level classrooms: A case study. Proposal presented at the Middle Level Education Research Roundtable, annual meeting of the Association for Middle Level Education, Austin, TX.

Yang, Z. (2016, February). A review of strategies that improve higher order thinking in mathematics. Proposal presented at the 39th annual meeting of the Southwest Educational Research Association, New Orleans, LA.

Matteson, S., **Yang, Z.**, Yaqobi, S., & Kackley, L. (2016, February). Thinking strategies that work. Proposal presented at the 39th annual meeting of the Southwest Educational Research Association, New Orleans, LA.

Kackley, L., Yaqobi, S., **Yang, Z.**, & Matteson, S. (2016, February). The Starbursting thinking strategy: Perspectives from the field. Proposal presented at the 39th annual meeting of the Southwest Educational Research Association, New Orleans, LA.

DATA ANALYSIS SOFTWARE SKILLS

- Statistical Software or processing languages: R (skillful), M-plus (skillful), SPSS (skillful), SAS (Intermediate), Python (skillful with pandas)
- Other technical tools: Tableau, MySQL, LaTeX

RELEVANT COURSES IN QUANTITATIVE DATA ANALYSIS

EPSY 5381 GR	Intermediate Educational Statistics
EPSY 5383 GR	Data Analysis Stat Software
EPSY 6301 GR	Structural Equation Modeling
EPSY 6349 GR	Longitudinal Structural Equation Modeling
HDFS 6364 GR	Quantitative Methods III
ANSC 5403 GR	Biometry
ISQS 5347 GR	Adv. Statistical Methods
ISQS 6348 GR	Appl. Multivariate Anlys.
ISQS 5349 GR	Regression Analysis
ISQS6339 GR	Business Intelligence
ISQS 6349 GR	Predictive Analytics

PROFESSIONAL SERVICE

2022-present	<i>Reviewer</i> , Journal for Research in Mathematics Education
2019-present	<i>Reviewer</i> , International Journal of Higher Education
Sep. 2020	<i>Reviewer</i> , the 2021 American Educational Research Association Annual Meeting-SIG-Research in Mathematics Education
Apr. 2020	<i>Discussant</i> , the 2020 American Educational Research

Association Annual Meeting (cancelled due to COVID)

Apr. 2019

Reviewer, the 11th Annual Undergraduate Research Conference at TTU

Oct. 2018

Reviewer, the 42nd Southwest Educational Research Association in Division III and VI

COMMUNITY SERVICE

2014-2021

Coordinator, Student Fellowship in Lubbock Chinese Christian Church (LCCC)

2014-2021

Sunday School Teacher, 1st-3rd grade Sunday School in LCCC

Jan. 2020

Volunteer, Children's Home of Lubbock, Lubbock TX

Jan. 2019

Science Fair Judge, Roscoe Wilson Elementary School, Lubbock, TX

Fall 2019

Volunteer, Buckner Children & Family Services, Lubbock TX

Fall 2019

Volunteer, Paul's Project - Grace Campus, Lubbock TX

2017-2018

Volunteer Data Analyst, Institute for Measurement, Methodology, Analysis, & Policy, TTU

Spring 2013

Statistics Tutor, TTU Learning Center, Lubbock, TX

2011-2012

Volunteer, Back to School Fiesta, TTU, Lubbock, TX