Yingbin Zhang

Email: yingbin2@illinois.edu
Website: https://yingbinzhang.netlify.app/

Research interest

Educational Data Mining, Learning Analytics, Student Modeling, Sequential Analysis, Self-regulated Learning, Computer Science Education

Education

Ph.D.	Curriculum and Instruction	*University of Illinois at Urbana-Champaign*	2018 – present
	Advisor: Dr. Luc Paquette		
	Minor in Statistics		
M.A.	Educational Measurement	*Beijing Normal University*	2015 – 2018
	Advisor: Dr. Yehui Wang		
B.S.	Applied Psychology	*Zhengzhou University*	2011 – 2015

Professional Experience

Research

08/2020–present	**Research Assistant** Combining human judgment and data-driven approaches for the development of interpretable models of student behaviors: Applications to computer science education. NSF project. University of Illinois at Urbana-Champaign
08/2018–05/2021	**Research Assistant** Using Data Mining and Observation to Derive an Enhanced Theory of SRL in Science Learning Environments. NSF project. University of Illinois at Urbana-Champaign
10/2016–06/2018	**Research Assistant** Assessment of Children's Learning and Development in Child-Friendly Schools Project, Collaborative Innovation Center of Assessment for Basic Education Quality (CICA-BEQ), Beijing Normal University
03/2016–03/2017	**Research Assistant** Item Position Effects in Educational Assessment Project, CICA-BEQ, Beijing Normal University
02/2016–08/2016	**Research Assistant** Evaluation of Education Quality of Primary and Secondary Schools in Mengtougou District Project, Faculty of Education, Beijing Normal University

Teaching

09/2016–01/2017	**Teaching Assistant** Regression Analysis, CICA-BEQ, Beijing Normal University

Reviewing

Journal

Education and Information Technologies 2022

Conference

The International Conference on Educational Data Mining (EDM): 2022

The Annual Meeting of the Cognitive Science Society (CogSci): 2022

The ACM Technical Symposium on Computer Science Education (SIGCSE): 2022

The American Educational Research Association (AERA) Annual Meeting: 2021, 2022

The Learning Sciences Graduate Student Conference (LSGSC): 2021

The National Council on Measurement in Education (NCME) Annual Meeting: 2020

Conference Committee

Learning Sciences Graduate Student Conference 2021, Speakers and Events Committee Member

Learning Sciences Graduate Student Conference 2020, Branding and Communication Committee Member

The 13th International Conference on Educational Data Mining (EDM'20), Session Chair

Others

07/2016–09/2016 **Data Analyst** National Assessment of Education Quality Project, CICA-BEQ, Beijing Normal University

Publications

Journal Articles

1. **Zhang, Y.**, Yang, Z., & Wang, Y.* (2022). The impact of extreme response style on the mean comparison of two independent samples. *Sage Open*. https://doi.org/10.1177/21582440221108168 **SSCI**

2. **Zhang, Y.**, Paquette, L., Baker, R. S., Bosch, N., Ocumpaugh, J., & Biswas, G. (2022). How are feelings of difficulty and familiarity linked to learning behaviors and gains in a complex science learning task? *European Journal of Psychology of Education*. https://doi.org/10.1007/s10212-022-00616-x **SSCI**

3. **Zhang, Y.**, Paquette, L., Bosch, N., Ocumpaugh, J., Biswas, G., Hutt, Stephen., & Baker, R. S. (2022). The evolution of metacognitive strategy use in an open-ended learning environment: Do prior domain knowledge and motivation play a role? *Contemprary Educational Psychology, 69*, 102064. https://doi.org/10.1016/j.cedpsych.2022.102064 **SSCI**

4. **Zhang, Y.**, Paquette, L., Baker, R. S., Ocumpaugh, J., Bosch, N., Biswas, G., & Munshi, A. (2021). Can strategic behavior facilitate confusion resolution? The interplay between confusion and metacognitive strategies in Betty's Brain. *Journal of Learning Analytics, 8*(3), 28-44. https://doi.org/10.18608/jla.2021.7161 **ESCI**

5. **Zhang, Y.**, & Wang, Y. (2020). Validity of three IRT models for measuring and controlling extreme and midpoint response styles. *Frontiers in Psychology, 11*, 271. https://doi.org/10.3389/fpsyg.2020.00271 **SSCI**

6. Liu, T., Chen, X., Liu, M., **Zhang, Y.**, Xin, T., & Wang, Y. (2020). The effects of children's self-educational aspiration and self-efficacy on mathematics achievement: A moderated chained mediation model. *Annals of Psychology, 36*(2), 262-270. https://doi.org/10.6018/analesps.366621 **SSCI**

7. **Zhang, Y.**, & Wang, Y. (2019). The methods for measuring and controlling response styles. *Journal of Psychological Science, 42*(3), 747 – 758. https://doi.org/10.16719/j.cnki.1671-6981.20190334 **CSSCI**

8. Wang, Y.,Yang, Z., **Zhang, Y.**, Wang, F., Liu, T., & Xin, T. (2019). The effect of social-emotional competency on child development in western China. *Frontiers in Psychology, 10*, 1282. https://doi.org/10.3389/fpsyg.2019.01 **SSCI**

9. Wang, Y., Ma, X., **Zhang, Y.**, Wu, L., Yang, Z., Yang, T., & Li, Y. (2019). The relationship of physical education curriculum implementation and mathematics achievement in Chinese youth. *Research Quarterly for Exercise and Sport, 90*(2), 133-140. https://doi.org/10.1080/02701367.2019.1603775 **SSCI**

10. Nie, X., Chen, P., **Zhang, Y.**, & He Y. (2018). Item position effects: conceptualization, detection and developments. *Advances in Psychological Science, 26*(2), 368–380. https://doi.org/10.3724/SP.J.1042.2018.00368 **CSSCI**

11. Wang, Y., **Zhang, Y.**, & Xin T. (2018). The effect of parents' educational aspirations on children's mathematics achievement: Analysis of the multiple mediation effects. *Studies of Psychology and Behavior, 16*(1), 96–102. http://www.xml-data.org/XYYXWYJ/html/2018/1/2018-1-96.html **CSSCI**

12. Wang, Y., **Zhang, Y.**, Yang, T., & Xin, T. (2017). Applications and implications of test equating in large-scale international educational assessments. *China Examinations*, (8), 43–49. https://doi.org/10.19360/j.cnki.11-3303/g4.2017.08.008 **CSSCI**

Peer-reviewed Conference Paper

1. Pinto, J. D., **Zhang, Y.**, Paquette, L., Fan, A. X. (2021). Investigating Elements of Student Persistence in an Introductory Computer Science Course. In *Joint Proceedings of the CSEDM Workshops at the International Conference on Educational Data Mining 2021CEUR Workshop Proceedings*. Virtual, Online. **EI**

2. Bosch, N., **Zhang, Y.**, Paquette, L., Baker, R., Ocumpaugh, J., & Biswas, G. (2021). Students' verbalized metacognition during computerized learning. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21)* (pp. 680:1-680:12). ACM, Yokohama, Japan. https://doi.org/10.1145/3411764.3445809 **EI**

3. Paquette, L., Grant, T., **Zhang, Y.**, Biswas, G., & Baker, R. (2021). Using epistemic networks to analyze self-regulated learning in an open-ended problem-solving environment. In Ruis A.R., Lee S.B. (eds), *Advances in Quantitative Ethnography. ICQE 2021. Communications in Computer and Information Science, vol 1312.* (pp. 185-201). Springer, Cham. https://doi.org/10.1007/978-3-030-67788-6_13. **EI**

4. **Zhang, Y.**, Paquette, L., Baker, R., Ocumpaugh, J., Bosch, N., Munshi, A., & Biswas, G. (2020). The relationship between confusion and metacognitive strategies in Betty's Brain. In *Proceedings of the 10th International Conference on Learning Analytics & Knowledge (LAK'20)* (pp. 276-284). ACM, Frankfurt, Germany. https://doi.org/10.1145/1234567890 **EI**

Peer-reviewed Presentation

1. **Zhang, Y.**, & Paquette, L. (2022). Investigating the reliability of learning analytics measures aggregated over short and long periods. Presented at *The 2nd Workshop on Learning Analytics and Assessment (LAK22 Assess)*. (Fully virtual conference)

2. **Zhang, Y.**, & Paquette, L. (2021). Mining sequential patterns with high usage variation. Poster presented at *The 14th International Conference on Educational Data Mining (EDM '21)*. (Fully virtual conference)

3. **Zhang, Y.**, & Paquette, L. (2020). An effect-size-based temporal interestingness metric for sequential pattern mining. Poster presented at *The 13th International Conference on Educational Data Mining (EDM '20).* (Fully virtual conference)

4. **Zhang, Y.**, & Liu, T. (2019). Using person-fit statistics to detect response styles. Poster presented at *The National Council on Measurement in Education Annual Meeting*, Toronto, Canada.

Honors and Awards

UIUC Graduate College Conference Travel Award	2021, 2022
Erik Duval Travel Scholarship for Learning Analytics Summer Institute	2021
UIUC College of Education 11th Annual Graduate Student Conference Award	2020
UIUC College of Education Hong Kong Graduate Student Exchange Award	2019
Chinese Government Scholarship	2018 - 2022

Professional Skills

Data analysis: Statistical analysis, machine learning, data mining, psychometrics

Software: Python, R, SPSS, Mplus

Last updated: July 8, 2022