

# Xuejun Ryan Ji



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## PROFILE

- ✦ Extensive expertise in advanced measurement and statistical modeling methods, including DIF, SEM, finite mixture models, mixed effects models, and Bayesian nets.
- ✦ Experienced in machine learning, natural language processing (NLP), and AI-powered item generation to develop innovative assessment solutions.
- ✦ Over nine years of multidisciplinary research experience in medical education, language assessment, public health, nursing workforce studies, and outcome measurement.
- ✦ Skilled in statistical programming and advanced modeling using *R*, *Python*, *SAS*, *STATA*, *Mplus*, and *flexMIRT*.
- ✦ Proven track record in research, technical writing, scholarly publication, and effective professional communication.
- ✦ Proficient in *Agile methodologies*, using project management tools for backlog grooming, task prioritization, and milestone tracking to ensure timely delivery and meet stakeholder objectives.

## EDUCATION

2024	<i>The University of British Columbia, Vancouver</i> <b>Ph.D. in Measurement, Evaluation &amp; Research Methodology</b> Advisor: Dr. Amery D. Wu
2017	<i>Texas A&amp;M University, College Station</i> <b>Ph.D. (Distinguished Honor) in Curriculum &amp; Instruction</b> Advisor: Dr. R. Malatesha Joshi
2012	<i>Texas A&amp;M University, College Station</i> <b>M.Ed. in Curriculum &amp; Instruction</b>
2009	<i>Tianjin Foreign Studies University</i> <b>B.A. in English Studies</b> (Translation & Interpretation)

## HONORS AND AWARDS

Year	Title	Amount
	<i>The University of British Columbia</i>	
2020-2023	President's Academic Excellence Initiative PhD Awards <i>8 awards, \$326 - \$1080 each</i>	\$4,974 CAD
2020	Donald and Ellen Poulter Scholarship	\$2,800 CAD
2019-2021	Faculty of Education Graduate Awards <i>3 awards, \$1,000 - \$8,000 each</i>	\$10,500 CAD
2018	Dean of Education Scholarship	\$1,500 CAD
2017-2023	International Tuition Awards <i>13 awards, \$800 - \$2,133 each</i>	\$20,000 CAD

**Note.** As per UBC policy, I was not eligible for Affiliated Awards during my doctoral studies at UBC, as I had previously completed a PhD at Texas A&M University.

*Texas A&M University*

2016	CEHD Strategic Research Fellowship Award	\$34,000 USD
	CEHD Research Scholars Award	\$500 USD
	SERA Deans' Paper Award (co-author)	\$150 USD
2015	Drs. Fred D. and Nancy Thornberry Endowed Fellowship	\$1,000 USD
2014-2015	CEHD Graduate Strategic Scholarship	\$2,833 USD
2013	Lechner Graduate Program Scholarship	\$ 1,500 USD

**Note.** CEHD = College of Education and Human Development; SERA = Southwest Educational Research Association

## PROFESSIONAL EXPERIENCE

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2021-Present	<p>Inspire Global Assessments   British Columbia College of Nurses and Midwives</p> <p><b>Psychometrician</b> (2021.4-2023.11: part-time, 2023.12 to present: full time)</p> <p><b>Operational Psychometric Work</b></p> <ul style="list-style-type: none"> <li>✦ Conduct reliability and validity studies using <b>classical test theory (CTT)</b>, <b>item response theory (IRT)</b>, and <b>differential item functioning (DIF)</b> methods to establish the credibility and defensibility of assessment programs.</li> <li>✦ Perform statistical analyses for score reporting, including impact assessments and classification consistency evaluations, and analyze subgroup performance and demographic trends to evaluate equity and inclusivity.</li> <li>✦ Plan and implement <b>standard-setting exercises</b> and feedback instruments for defining defensible cut scores and support item refinement across multiple assessments.</li> </ul> <p><b>Quality Assurance, Policy, and Technical Communication</b></p> <ul style="list-style-type: none"> <li>✦ Investigate test irregularities (e.g., breaches, mode comparability issues, item drift) to safeguard the validity and reliability of reported scores.</li> <li>✦ Author and maintain <b>Standard Operating Procedures (SOPs)</b> for content assembly, form delivery, and administration troubleshooting, to ensure secure and fair assessment processes.</li> <li>✦ Produce detailed technical reports, providing stakeholders with clear guidance on test development, score interpretation, and test security practices.</li> </ul> <p><b>Research and Innovation</b></p> <p><i>GenAI-powered Content Development</i></p> <ul style="list-style-type: none"> <li>✦ Develop automated competency-mapping pipelines using <b>natural language processing (NLP)</b> techniques to improve efficiency and accuracy in competency-based content validation</li> <li>✦ Design and implement GenAI- powered pipelines for <b>automated item generation</b> in simulation-based assessments, streamlining scenario development and expanding case pools</li> </ul> <p><i>Virtual Reality (VR) OSCE</i></p> <ul style="list-style-type: none"> <li>✦ Design and implement <b>program evaluation</b> frameworks for VR-based OSCE solutions, using a logic model to guide mixed-method evaluation. Develop tools (e.g., SME forms, focus group protocols, rating matrices) and deliver reports addressing needs assessment, scenario content validation, implementation feasibility, and evaluation of outputs and outcomes to support data-driven improvement</li> <li>✦ Lead <b>project management</b> activities by defining scope, technical requirements, and system</li> </ul>
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integration plans, and deliver key outputs including the assessment data playbook (indicator mapping, scoring logic), development path mapping (API and platform dependencies), and pilot program planning

2019.8 -10 Medical Council of Canada

**Psychometrics Intern**

**Project:** Validation of automated marking of constructed response

- ✦ Developed an item assignment decision scheme for automated marking and human marking using natural language processing (NLP) techniques

*Statistical Consulting*

2024.03- Methods and Evaluation Consulting Service

present ✦ Client: Dr. Farinaz Havaei | UBC School of Nursing

- ✦ **Project:** Evaluating the impact of team-based care implementation on team effectiveness and provider-reported outcomes

2020.10- Lead Quantitative Analyst (analytics consulting and SAS programming)

12 ✦ Client: Morris J. Wosk Centre for Dialogue | Simon Fraser University

- ✦ **Project:** Pivot 2020 National Youth Employment Program

**RESEARCH EXPERIENCE**

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**Roles:** *research methodology, formal analysis, statistical programming, manuscript writing, literature review, measurement validation, database management*

*The University of British Columbia*

2017- **Project:** After-school activities and positive well-being among adolescents in British Columbia,  
Present Canada

Supervisor: Dr. Eva Oberle, School of Population and Public Health

2021-2022 **Project:** Behind the model minority mask: Identifying early factors in Cantonese- and Mandarin-  
speaking children's divergent literacy and academic trajectories in Canadian schools  
Supervisors: Dr. Guofang Li, Dr. Lee Gunderson, Department of Language and Literacy  
Education

2020-2021 **Project:** Health human resources optimization

Supervisor: Dr. Farinaz Havaei, School of Nursing

2019-2020 **Project:** Automated text evaluation

Supervisors: Drs. Sterett Mercer, Joanna Cannon, Department of Educational, Counseling  
Psychology and Special Education

*Texas A&M University*

2016 **Project:** Efficacy and replication trial of the individualized adaptive ITSS with 4th and 5th grade  
students in high- poverty schools (funded by US IES)

Supervisors: Dr. Kausalai Wijekumar, Dr. R. Malatesha Joshi

2015-2016 **Project:** Examination of the simple view of reading (SVR) among bilinguals in two different  
writing systems.

Supervisor: Dr. R. Malatesha Joshi

2015-2016 **Project:** Spelling error analyses of native monolingual Spanish speaking children in grades 2 to 4  
 Supervisor: Dr. R. Malatesha Joshi

## JOURNAL PUBLICATIONS (24)

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- Oberle, E., Fan, S., Molyneux, T. M., Ji, X. R., Brussoni, M. (2025). Adherence to 24-hour movement guidelines and associations with mental well-being: A population-based study with adolescents in Canada. *BMC Public Health*.
- Oberle, E., Ji, X. R., Alkawaja, M., Molyneux, T. M., Kerai, S., Thomson, K. C., Guhn, M., Schonert-Reichl, K. A., & Gadermann, A. M. (2024). Connections matter: Adolescent social connectedness profiles and mental well-being over time. *Journal of Adolescence*, 96(1), 31-48.  
<https://doi.org/10.1002/jad.12250>
- Lai, J., Ji, X. R., Joshi, R. M., & Zhao, J. (2024). Investigating parental beliefs and home literacy environment on Chinese kindergarteners' English literacy and language skills. *Early Childhood Education Journal*, 52(1), 113-126. <https://doi.org/10.1007/s10643-022-01413-3>
- Ji, X. R., & Wu, A. D. (2023). Validation as evaluating desired and undesired effects: Insights from cross-classified mixed effects model. *Educational Measurement: Issues and Practice*, 42(2), 12-20.  
<https://doi.org/10.1111/emip.12553>
- Oberle, E., Ji, X. R., & Molyneux, T. M. (2023). Pathways from prosocial behaviour to emotional health and academic achievement in early adolescence. *The Journal of Early Adolescence*, 43(5), 632-653.  
<https://doi.org/10.1177/02724316221113349>
- Li, G., Lin, Z., Zhen, F., Gunderson, L., & Ji, X. R. (2023). Home literacy environment and early biliteracy engagement and attainment: A gendered perspective. *Bilingual Research Journal*, 46(3-4), 258-274.  
<https://doi.org/10.1080/15235882.2023.2258823>
- Ji, X. R., Li, G., & Gunderson, L. (2022). Validation of the PPVT-5 for Chinese-English bilingual learners: Application of cross-classified mixed effects model. *Research Methods in Applied Linguistics*, 1(2), Article 100013. <https://doi.org/10.1016/j.rmal.2022.100013>
- Li, G., Sun, Z., Zhen, F., Ji, X. R., & Gunderson, L. (2022). Home literacy environment and Chinese-Canadian first graders' bilingual vocabulary profiles: A mixed methods analysis. *Sustainability*, 14(23), Article 15788. <https://doi.org/10.3390/su142315788>
- Li, G., Yin, X., & Ji, X. R. (2022). Early bilingual vocabulary development among low-SES ethnic minority learners in China. The case of Uyghur and Kazak children. *Chinese Journal of Applied Linguistics*, 45(3), 323-339. <https://doi.org/10.1515/CJAL-2022-0301>
- Havaei, F., Ji, X. R., & Boamah, S. A. (2022). Workplace predictors of quality and safe patient care delivery among nurses using machine learning techniques. *Journal of Nursing Care Quality*, 37(2), 103-109.  
<https://doi.org/10.1097/NCQ.0000000000000600>
- Havaei, F., Ji, X. R., MacPhee, M., McLeod, C., & Straight, H. (2021). Identifying the most important workplace factors in predicting mental health among British Columbia nurses using machine learning techniques. *BMC Nursing*, 20, Article 216. <https://doi.org/10.1186/s12912-021-00742-9>
- Zhang, S., Hudson, A., Ji, X. R., Joshi, R. M., Zamora, J., Gómez-Velázquez, F. R., & González-Garrido, A. A.

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- (2021). Spelling acquisition in Spanish: Using error analyses to examine individual differences in phonological and orthographic processing. *Scientific Studies of Reading*, 25(1), 64-83.  
<https://doi.org/10.1080/10888438.2020.1754834>
- Oberle, E., Ji, X. R., Kerai, S., Guhn, M., Schonert-Reichl, K. A., & Gadermann, A. M. (2020). Screen time and extracurricular activities as risk and protective factors for mental health in adolescence: A population-level study. *Preventive Medicine*, 141, Article 106291.  
<https://doi.org/10.1016/j.ypmed.2020.106291>
- Oberle, E., Ji, X. R., Guhn, M., Schonert-Reichl, K. A., & Gadermann, A. M. (2019). Benefits of extracurricular participation in early adolescence: Associations with peer belonging and mental health. *Journal of Youth and Adolescence*, 48(11), 2255-2270. <https://doi.org/10.1007/s10964-019-01110-2>
- Oberle, E., Ji, X. R., Magee, C., Guhn, M., Schonert-Reichl, K. A., & Gadermann, A. M. (2019). Extracurricular activity profiles and wellbeing in middle childhood: A population-level study. *PLoS One*, 14(7). Article e0218488 <https://doi.org/10.1371/journal.pone.0218488>
- Abba, K. A., Joshi, R. M., & Ji, X. R. (2019). Analyzing writing performance of L1, L2, and generation 1.5 community college students through Coh-Metrix. *Writing Language & Literacy*, 22(1), 67-95.  
<https://doi.org/10.1075/wll.00020.abb>
- Ji, X. R., Beerwinkle, A., Wijekumar, K., Lei, P., Joshi, R. M., & Zhang, S. (2018). Using latent transition analysis to identify effects of an intelligent tutoring system on reading comprehension of seventh-grade students. *Reading and Writing: An Interdisciplinary Journal*, 31, 2095-2113.  
<https://doi.org/10.1007/s11145-018-9888-8>
- Yang, X., L.-J., Kuo, Ji, X. R., & McTigue, E. (2018). A critical examination of the relationship among research, theory, and practice: Technology and reading instruction. *Computers & Education*, 125, 62-73.  
<https://doi.org/10.1016/j.compedu.2018.03.009>
- Nakamura, P. R., Joshi, R. M., & Ji, X. R. (2018). Investigating the asymmetrical roles of syllabic and phonemic awareness in Akshara processing. *Journal of Learning Disabilities*, 51(5), 499-506.  
<https://doi.org/10.1177/0022219417718201>
- Feng, L., Linder, A., Ji, X. R., & Joshi, R. M. (2017). The role of handwriting in writing development: A meta-analytic review. *Reading and Writing: An Interdisciplinary Journal*, 32, 33-63.  
<https://doi.org/10.1007/s11145-017-9749-x>
- Wijekumar, K., Meyer, B. J., Lei, P.-W., Ji, X. R., & Joshi, R. M. (2017). Evidence of an intelligent tutoring system as a mindtool to promote strategic memory of expository texts and comprehension with children in grade 4 and 5. *Journal of Educational Computing Research*, 55(7), 1022-1048.  
<https://doi.org/10.1177/0735633117696909>
- Ji, X. R. (2016). A primer on Johnson – Neyman technique: An alternative procedure to ANCOVA. *General Linear Model Journal*, 42, 25-31.
- Joshi, R. M., Ji, X. R., Breznitz, Z., Amiel, M., & Yulia, A. (2015). Validation of the simple view of reading in Hebrew-A Semitic language. *Scientific Studies of Reading*, 19(3), 243-252.  
<https://doi.org/10.1080/10888438.2015.1010117>
- Yeh, Y. F., Joshi, R. M., & Ji, X. R. (2015). The development of morphological awareness in Chinese ESL students. *Contemporary Educational Psychology*, 43, 51-60.  
<https://doi.org/10.1016/j.cedpsych.2015.10.002>

## REFEREED CONFERENCE PRESENTATIONS (32)

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- Ji, X. R., & Joshi, R. M. (2025, July 16–19). *Detecting differential item functioning using Bayesian network model: A case study of ePIRLS 2016 reading assessment* [Spoken Paper]. 2025 Society for the Scientific Study of Reading, Calgary, AB, Canada.
- Ji, X. R., & Joshi, R. M. (2025, April 23–26). *Identifying at-risk readers using finite mixture models and decision trees* [eBoard]. 2025 Annual Meeting of the National Council on Measurement in Education, Denver, CO, United States.
- Chen-Kaptur, D., Huang, Y., Ji, X. R., Guo, Y., & Kaptur, B. (2025, April 23–26). *Enhancing systematic reviews with large language models: Using GPT-4 and Kimi* [eBoard]. 2025 Annual Meeting of the National Council on Measurement in Education, Denver, CO, United States.
- Ji, X.R. & Wu, A. D. (2023, April 12-15). *Validation as Evaluating (Un-)desired Effects: Insights from Cross-Classified Mixed Effects Model* [Graduate electronic board session]. 2023 Annual Meeting of the National Council on Measurement in Education, Chicago, IL, United States.
- Ji, X. R. & Wu, A. D. (2022, April 22-25). *Evaluating the Quality of Competence-Based Assessment Instrument Using Generalized Linear Mixed Model* [Graduate electronic board session]. 2022 Annual Meeting of the National Council on Measurement in Education, San Diego, CA, United States.
- Ji, X. R., Li, G., & Gunderson, L. (2022, April 21-22). *Assessing the psychometric properties of the Peabody Picture Vocabulary Test–5 for Chinese-English bilingual learners* [Paper session]. 2022 Annual Meeting of the American Educational Research Association, San Diego, CA, United States.
- Li, G., Lin, Z., Ji, X. R., Sun, Z., & Gunderson, L. (2022, April 21-22). *Exploring home factors that shape gender differences in Chinese Canadian children's early bilingual vocabulary development* [Poster session]. 2022 Annual Meeting of the American Educational Research Association, San Diego, CA, United States.
- Li, G., Sun, Z., & Ji, X. R. (2022, April 21-22). *Unpacking Chinese-English bilingual vocabulary knowledge gaps among Chinese Canadian first graders: A mixed-methods approach* [Paper session]. 2022 Annual Meeting of the American Educational Research Association, San Diego, CA, United States.
- Sinclair, J., Ji, X.R., Rhemtulla, K., & Parikh, R. (2021, October 6). *Validating NCAS's Health Care Assistant assessment: Key learnings about assessing a supervised role* [Poster session]. 2021 CHES Celebration of Scholarship, Vancouver, BC, Canada.
- Havaei F, MacPhee M, Phinney A, Keselman D, Staempfli S, Ma A, Ji, X.R., Desabrais E. (2021, May 19-21). *The evaluation of rapid redesign and resource deployment on LTC staff: A case study* [Paper session]. Canadian Association for Health Services and Policy Research, Vancouver, BC, Canada.
- Havaei F, MacPhee M, Keselman D, Staempfli S, Ma A, Ji, X. R., Desabrais E. (2021, May 19-21) *The evaluation of rapid redesign and resource deployment on LTC residents and families: A case study* [Paper session]. Canadian Association for Health Services and Policy Research, Vancouver, BC, Canada.
- Ji, X.R., Wu, A.D., & Wijekumar, K. (2020, September 9-11). *Investigating the skill hierarchies in reading comprehension* [Poster session]. 2020 Annual Meeting of the National Council on Measurement in Education, San Francisco, CA, United States.
- Oberle, E., & Ji, X.R. (2020, April 17-21). *Transitioning from non-participation to extracurricular engagement is associated with mental health in early adolescence* [Paper session]. 2020 Annual Meeting of the American Educational Research Association, San Francisco, CA, United States.

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- Ji, X.R., & Joshi, R.M. (2019, April 5-9). *The role of home literacy environment in early reading achievement: A latent variable analysis study*. [Poster session]. 2019 Annual meeting of American Educational Research Association, Toronto, ON, Canada
- Ji, X.R., Wijekumar, K. Meyer, B. J., Lei, P.-W. & Joshi, R.M (2017, April 27 – May 1). *Using latent transition model to identify effects of an Intelligent Tutoring System on reading comprehension* [Poster session]. 2017 Annual meeting of American Educational Research Association, San Antonio, TX, United States.
- Wright, K. L., Ji, X. R., & Etchells, M. J. (2017, April 27 – May1). Writing-to-learn in secondary science classes: For whom is it effective? In Hodges, T.S., *Modelling scientific writing: Current problems and potential solutions for teaching writing to struggling students* [Symposium]. 2017 Annual meeting of American Educational Research Association, San Antonio, TX, United States.
- Wright, K. L., & Ji, X. R. (2016, February 14-16). *Cluster and latent class analysis: A comparison of methods for educational research* [Paper session]. 2016 Southwest Educational Research Association, New Orleans, LA, United States. [SERA Deans' Awards Paper]
- Nakamura, P.R., Joshi, R.M., & Ji, X.R. (2016, July 13- July16). *Role of decoding in developing vocabulary in Akshara reading in multilingual children* [Paper session]. 2016 Society for the Scientific Study of Reading, Porto, Portugal.
- Gómez –Velázquez, F.R., González-Garrido, A. A., Ji, X.R., Zamora, J., Feng, L., Linder, A., & Joshi, R.M. (2016, July). *Spelling error analyses of native Spanish-speaking children in early grades* [Paper session]. 2016 Society for the Scientific Study of Reading, Porto, Portugal.
- Abba, K., Joshi, R.M., & Ji, X. R. (2016, July 1-6). *Community college students' writing: Lexical, syntactic, and cohesion differences in L1, L2, and generation 1.5 students and examining knowledge of the writing process* [Paper session]. 2016 International Conference on Writing Research, Liverpool, UK.
- Ji, X. R., Joshi, R.M, & Feng, L. (2015, July 15-18). *Gender gap in reading development within ethnicity from person-centered and variable-centered analyses* [Poster session]. 2015 Society for the Scientific Study of Reading, The Big Island, HI, United States.
- Feng, L., Joshi, R.M., & Ji, X. R., (2015, July 15-18). *The role of morphological awareness in bilingual reading: A systematic review*. [Poster session]. 2015 Society for the Scientific Study of Reading, The Big Island, HI, United States.
- Abba, K., Joshi, R.M., & Ji, X. R. (2015, July 15-18). *Lexical, syntactical, and cohesion differences in writing of community college students* [Poster session]. 2015 Society for the Scientific Study of Reading, The Big Island, HI, United States.
- Ji, X., Kim, T.-J., Kuo, L.-J., & Wu, S. (2015, April 16-20). *The impact of second language experience on the development of morpho-syntactic skills in a native language: A cross-sectional study* [Poster session]. 2015 Annual Meeting of American Educational Research Association, Chicago, IL, United States.
- Yang, X., Ji, X., Park, J, & Kaani, B. (2015, April 16-20). Theoretical support for digital literacy: The application of technology in reading instruction. In L.-J. Kuo & E. McTigue, *Connection between theory and practice: Systematic reviews of articles in literacy journals published for teachers* [Symposium]. 2015 Annual Meeting of American Educational Research Association, Chicago, IL, United States.
- Yeh, Y-F., Joshi, R. M., & Ji. X. (2015, March 7-9). *Do Chinese speaking students develop their Chinese and*

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*English morphological awareness in similar ways?*[Paper session]. 2015 East Asia Joint Symposium on Reading and Spelling. Taipei, Taiwan.

Ji, X., Yeh, Y.-F., & Joshi, R.M. (2014, July 17-19). The role of Chinese morphological awareness in learning English. In M. Wang, *Literacy development of adolescent Chinese-English bilinguals and Chinese-speaking learners of English: Linguistics, social and instructional factors* [Symposium]. 2014 Society for the Scientific Study of Reading, Santa Fe, NM, United States.

Sandoval, S., Joshi, R. M., Lara-arroyo, R., Irby, B., Ji, X., Bi, Y & Unal, M (2014, July 17-19). *Spelling error analyses of Spanish speaking children in grades 2 and 3*[Poster session]. 2014 Society for the Scientific Study of Reading, Santa Fe, NM, United States.

Feng, L., & Ji, X. & Joshi, R.M. (2014, July 17-19). Role of handwriting in writing development: A meta-analysis study [Poster session]. 2014 Society of the Scientific Study of Reading, Santa Fe, NM, United States.

Lin, S., Ji, X., & Luo, W. (2014, March 13-15). *The effect of test score reliability on student learning objectives assessment*. [Poster session]. 2014 Association for Educational Finance and Policy, San Antonio, TX, United States.

Kaani, B., Joshi, R.M., Ji, X. & Mulenga, V. (2013, July 10-13). *Comparing factors predicting reading comprehension in contrasting orthographies: A case of English and Nyanja languages* [Poster session]. 2013 Society for the Scientific Study of Reading, Hong Kong, China.

Ji, X. (2013, February 14-16). *A primer on Johnson- Neyman technique: An alternative technique to ANCOVA* [Paper session]. 2013 Southwest Educational Research Association, San Antonio, TX, United States.

#### BOOK CHAPTERS

Nakamura, P.R., Joshi, R.M., & Ji, X.R. (2019). Biliteracy spelling acquisition in Akshara and English. In R. M. Joshi & McBride, C. (Eds.). *Handbook of literacy in Akshara orthography* (pp. 103-118). Springer, Cham. [https://doi.org/10.1007/978-3-030-05977-4\\_6](https://doi.org/10.1007/978-3-030-05977-4_6)

#### COURSES TAUGHT

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##### *The University of British Columbia*

2023W1W2 Adjunct Professor, *SOWK553 Quantitative Methods in Social Work Research*

2022.W1 Teaching Assistant, *SOWK420 Introduction to Social Work Research*

2018.W2 Teaching Assistant, *EPSE310B Assessment and Learning in the Classroom*

2018.2 Guest Instructor, *EDUC500 Research Methodology in Education (Quantitative Methods Session)*

Principal Instructors: Drs. Joy Butler and Hartley Banack

##### *Texas A&M University*

2015 -2016 Sessional Instructor, *RDNG372 Reading and Writing across the Middle Grades Curriculum*

2012 -2013 Teaching Assistant, *RDNG620 Literacy and Language, RDNG467 Reading and the Language Arts*

*RDNG470 Reading/Language Arts Methods*

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## CURRICULUM DEVELOPMENT

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	School of Social Work, UBC
2023W1W2	Comprehensively redesigned and delivered the curriculum for <i>SOWK553 (Quantitative Methods in Social Work Research)</i>
	Department of Curriculum and Pedagogy, UBC
2018.2	Created and implemented new quantitative methods content for <i>EDUC500 (Research Methodology in Education)</i>

## STUDENT SUPPORT AND MENTORING

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2024.1-present	Suiqiong Fan, PhD student, School of Population and Public Health Provide mentorship and support in data analysis and results interpretation for large-scale population-level studies (Middle Years Development Instrument Survey)
2024.7-present	Tonje Molyneux, PhD candidate, Department of ECPS Provide technical support in quantitative analysis for mixed-methods dissertation research, with a focus on advanced statistical modeling procedures and results interpretation

## OPEN SCIENCE ADVOCACY ACTIVITIES

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	Chinese Open Science Network – Open Minds Talks
2024.09.27	Deconstruct “Construct” Validity
2020.08.22	An Introduction to SEM for Experimental Designs
2019.11.23	Measurement Error is NOT White Noise!

## PROFESSIONAL SERVICE

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	<i>American Educational Research Association</i>
2018-2019	Early Career Award Committee   Division D- Measurement & Research Methodologies Committee member specializing in statistical methods
	<i>The University of British Columbia</i>
2020	Peer Advisor  Department of Education, Counseling and Special Education ✦ Organized social events in person or via zoom ✦ Served as an informal ombudsperson for students' concern
2018-2022	Steering Committee Member  Language Sciences ✦ Developed professional development training program (e.g., <i>publication strategies, data visualization</i> ) ✦ Organized Language Sciences Graduate Students and Postdoctoral Fellows Conference
2017-2020	Quantitative Methods Support  Department of Education, Counseling and Special Education ✦ Provided technical supports to graduate students and faculty members ✦ Organized quantitative methods workshops: topics including <i>decision tree, secondary data analysis, SQL database, text analytics, statistical power analysis, R programming</i>
2018-2019	Faculty Search Committee   Department of Education, Counseling and Special Education

- ✦ Graduate student representative

*Texas A&M University*, Department of Teaching, Learning and Culture

2015-2016 Departmental Climate and Diversity Committee Member

- ✦ Grant writing team member

2014-2015 Departmental Graduate Student Association Professional Development Coordinator

#### **Journal Ad-hoc Reviewer**

- ✦ Applied Psycholinguistics
- ✦ Clinical Psychology & Psychotherapy
- ✦ Behavior Research Methods
- ✦ Journal of Adolescence
- ✦ The Journal of Early Adolescence
- ✦ Journal of Educational Measurement
- ✦ Journal of Cross-Cultural Psychology
- ✦ Journal of Psychoeducational Assessment
- ✦ Journal of Research on Educational Effectiveness
- ✦ Learning and Individual Differences
- ✦ Psychology in the Schools
- ✦ Reading and Writing: An Interdisciplinary Journal

#### **Professional Association Membership and Conference Proposal Reviewer**

- ✦ National Council on Measurement in Education (NCME)
- ✦ American Educational Research Association (AERA)
  - Division C- Learning and Instruction
  - Division D- Measurement and Research Methodology
  - SIG-Cognition and Assessment
  - SIG-Multiple Linear Regression: The General Linear Model
  - SIG- Survey Research in Education
- ✦ American Psychological Association (APA)
  - Division 5 - Methodology
  - Division 15- Educational Psychology

#### **CERTIFICATES**

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##### *Graduate Certificates from Texas A&M University*

- ✦ Education & Social Sciences Advanced Research Methods
- ✦ Applied Statistics - Data Mining Emphasis, Department of Statistics

##### *SAS Programming*

- ✦ Base Programming for SAS 9 (License Number: 270585847)
- ✦ Advanced Programming for SAS 9 (License Number: 281626185)

##### *Coursera/DeepLearning.ai Certificates*

- ✦ Data Sciences in Pharma: Patient Centered Outcomes Research – Genentech | Coursera (2024)
- ✦ ChatGPT Prompt Engineering for Developers – OpenAI | DeepLearning.AI (2024)
- ✦ Foundations of Project Management – Google | Coursera (2024)

## STAISTICAL & ANALYTICAL PROGRAMMING SKILLS

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- ✦ SAS (Reporting, Macro, SQL, Statistical Modeling)
- ✦ STATA, SPSS, R, HLM, Mplus, flexMIRT, PowerBI
- ✦ Python (text mining, machine learning, prompt engineering)

## STATISTICAL MODELING & ANALYTIC METHODS

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- ✦ Finite Mixture Modeling (e.g., latent class analysis, latent profile analysis, latent transition analysis, growth curve)
- ✦ Structural Equation Modeling (e.g., factor analysis, mediation analysis, moderation analysis)
- ✦ Hierarchical Linear Modeling (e.g., longitudinal data analysis)
- ✦ Item Response Theory
- ✦ Generalizability Theory
- ✦ Network Psychometric Modeling
- ✦ Social Sequence Analysis
- ✦ Categorical Data Analysis
- ✦ Bayesian Network Analysis

## PROFESSIONAL DEVELOPMENT

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| 2017.7 | Head Start Family and Child Experiences Survey, <i>ICPSR Summer Workshop, University of Michigan</i>  |
| 2017.4 | Advanced Meta-Analysis (Meta-Regression, Robust Variance Estimation), <i>AERA, San Antonio, TX</i>  |
| 2017.4 | Enhancing the Validity Argument of Assessments: Identifying, Understanding, and Mitigating Unintended Consequences of Test Use, <i>AERA, San Antonio, TX</i>              |
| 2017.4 | AEAR Division C Graduate Student Seminar (Early scholar mentorship program, highly selective), <i>San Antonio, TX</i>   |
| 2016.6 | Learning Analytics Summer Institute, <i>Society for Learning Analytics Research, Ann Arbor, MI</i>  |
| 2015.6 | National Assessment of Educational Progress Database Training, <i>U.S. Department of Education, Washington, D.C.</i> (fully funded by US Institute of Education Sciences) |
| 2015.6 | High School Transcript Study Database Training, <i>U.S. Department of Education, Washington, D.C.</i><br>(fully funded by US Institute of Education Sciences)             |
| 2015.4 | Analyzing NAEP Assessment Data with Plausible Values, <i>AERA, Chicago, IL.</i>   |
| 2015.4 | Hierarchical Linear Modeling with Large-Scale International Databases (PISA), <i>AERA, Chicago, IL</i>  |
| 2015.4 | New Weighting Methods for Causal Mediation Analysis, <i>AERA, Chicago, IL.</i>  |