

TARID WONGVORACHAN

Data Analysis Portfolio: <https://sites.google.com/view/tarid2/analysis-portfolio-1-0>

Live Application Demo: <https://taridwong.shinyapps.io/plumber-api/>

Authored R Package: <https://github.com/TaridWong/CTTvis>

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EDUCATION

- 2021–2024 **Doctor of Philosophy (Ph.D)**, Measurement, Evaluation, and Data Science,
Faculty of Education, University of Alberta, Edmonton, AB, Canada
Supervisor: Okan Bulut, PhD
Thesis: Item Revision with Network Psychometrics and Natural Language Processing
- 2018–2020 **Master of Education (M.Ed)**, Educational Psychology
Faculty of Education, Washington State University, WA USA
Supervisor: Chad Gotch, PhD
- 2012–2016 **Bachelor of Arts (B.A)**, Psychology
Faculty of Liberal Arts, Thammasat University, Pathumthani, Thailand

SUPERVISION AND ADVISORY

- 2026 Co-Supervisor, Master of Architecture in Tropical Architecture
Student: Rattanawalee Jitsamran
Title: "Impact of a Building Designed to WELL Building Standards on Employees' Psychological Well-being"
King Mongkut's Institute of Technology Ladkrabang (KMUTL)

RESEARCH EXPERIENCE

- 2024 **Graduate Research Assistant**, University of Alberta, Edmonton, AB, Canada
Informing EDI Mixed Methods Research Editorial Praxis: An Exploration of the Lived Experiences of Handbook Authors
- 2023 Identifying the Predictors of Mathematics Anxiety, Confidence, and Performance in Canada: An Educational Data Mining Approach
- 2022 Teacher and School Leader Hope Scale Development
Student Perception of Teaching (SPOT) Survey Development
- 2021 Data Mining of Public Health Briefings: A Mixed Methods Study of wave 2 to wave 6 of COVID-19
- 2024 **Graduate Research Intern**, Alberta Education, Edmonton, AB, Canada
Jurisdictional Scan for Curriculum Development, STEM, Careers, and Indigenous Curriculum sector
- 2023 Scoping Review for Digital Learning and Teaching Resources Identification, Learning and Teaching Resource Sector
- Undergraduate Research Assistant**, Psychology Department, Thammasat University, Pathumthani Thailand.

2016–2017	MMPI-2-RF Thai Translation Development: Phase2- Normative Data Collection and Standardization of MMPI-2-RF Thai Version
2016–2017	The impact of plot relations and violent cues on brand placement in games: Measure of brand recognition, attitude, and selection
2016	MMPI-2-RF Thai Translation Development: Phase1- Translation, and Validity and Reliability of MMPI-2-RF Thai Version
2016	Rorschach Ink-Blot test: Thai Translation Project
2016	Cross-Cultural Research Project on Consumer Culture Values identity Processes, Mindfulness, and Well-being
2016	Worldviews and Well-being Cross-Cultural Research Project

TEACHING EXPERIENCE

2026	Assistant Professor , Department of Educational Psychology and Special Education College of Education, University of Saskatchewan, Saskatoon, SK, Canada <i>EPSE 348: Essentials of Assessing Student Learning (Spring, Fall 2026, Winter 2027)</i> <i>EPSE 843: Theory of Educational and Psychological Measurement (Fall 2026)</i> <i>EPSE 202: Introduction to Educational Psychology (Winter 2027)</i>
2026	Instructor , Teacher Professional Competencies in AI-Driven Learning Engineering Professional Development Program, Department of Educational Research and Psychology Faculty of Education, Chulalongkorn University, Bangkok, Thailand <i>Session 1: Concepts and Frameworks for Responding to Learner Differences</i> <i>Session 2: Types of Learning Data, Analytical Units, and Learning Indicators in a Classroom Context</i> <i>Session 3: Uncovering Learning Landscape, Differences, and Trends of Learners Through Descriptive Data Analytics</i> <i>Session 4: Supporting Descriptive Analysis with Artificial Intelligence</i>
2024–Present	Principal Instructor / Adjunct Professor , Department of Educational Research and Psychology, Faculty of Education, Chulalongkorn University, Bangkok, Thailand <i>2758626: Principals and Applications of Text Analytics (2026)</i> <i>2758706: Data Analytics for Educational Decision Making (2025)</i> <i>2758701: Learning Analytics in Education (2024)</i>
2023–2025	Principal Instructor , Department of Educational Psychology, University of Alberta, Edmonton, AB, Canada <i>EDPY 303: Educational Assessment (Fall 2024, 2025; Winter 2023, 2024)</i>
2019–2020	Teaching Assistant and Tutor , Intensive American Language Center (IALC), Washington State University, WA, USA. <i>ED_PSYCH 502: Learning & Instructions</i> <i>ED_PSYCH 505: Research Methods I</i> <i>ED_PSYCH 507: Introduction to Qualitative Research</i> <i>ED_PSYCH 508: Educational Statistics</i> <i>ED_PSYCH 509: Educational Measurement, Test Development and Assessment</i> <i>ED_PSYCH 521: Indigenous Epistemology and Methodology</i> <i>ED_PSYCH 570: Introduction to Program Evaluation</i> <i>ED_PSYCH 572: Introduction to Systematic Literature Reviews and Meta Analyses</i> <i>ED_PSYCH 573: Motivation Theories</i> <i>ED_RES 565: Quantitative Methods</i>
2016	

Teaching Assistant, Department of Psychology, Thammasat University, Pathumthani, Thailand

PY 211: General Psychology

PY 212: Virtual Psychology, Ethics, and Societal Responsibility

PROFESSIONAL EXPERIENCE

- 2026-Present **Assistant Professor**, Department of Educational Psychology and Special Education, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
- 2026-Present **Visiting Scholar**, MARCS-CILS NokHook BabyLab, Faculty of Liberal Arts, Thammasat University, Bangkok, Thailand.
- 2025-Present **Corresponding Professor and Founder**, PAGES Lab – Psychological Advocacy for Gender and Equality Studies, Faculty of Liberal Arts, Thammasat University, Bangkok, Thailand.
- 2025 **Academic teaching staff**, Faculty of Education, University of Alberta, Edmonton, Alberta, Canada.
- 2024-Present **Adjunct professor**, Department of Educational Research and Psychology, Faculty of Education, Chulalongkorn University, Bangkok, Thailand.
- 2024–2025 **Psychometrician**, Education Quality and Accountability Office, Government of Ontario, Ontario, Canada.
- 2024 **Data consultant**, The United Nations International Children's Emergency Fund (UNICEF) Thailand, 19 Phra Atit Road, Bangkok, Thailand, 10200.
- 2022 **Student Evaluator**, The Evaluation group, Audit and Evaluation Branch, Canadian Food Inspection Agency (CFIA), Ottawa, ON, Canada.
- 2021 **Test Taker Assistance**, Universal Exam Solution, Edmonton, AB, Canada
- 2019 **Workshop Facilitator**, Cougar Health Services, Washington State University, WA, USA.
- 2015 **Clinical Psychologist Intern**, Sritanya Psychiatric Hospital, Nonthaburi, Thailand.

AWARD AND SCHOLARSHIPS

- 2026 **Faculty Recruitment and Retention Program Grant** (PROJ 363154), University of Saskatchewan, Saskatchewan, Canada (14,000 CAD)
KMITL Research Development Fund (KREF046924), King Mongkut's Institute of Technology Ladkrabang, Thailand (450,000 THB - 19,064.29 CAD)
- 2025 **Academic Melting Pot Grant** (KREF206802), King Mongkut's Institute of Technology Ladkrabang, Thailand (400,000 THB - 16,946.04 CAD)
MDPI Best paper award, Information, MDPI (800 CHF)
- 2023 **Boon-oom/Banyong Scholarship**, Alberta Thai Association (1000 CAD)
- 2021 **FGSR Doctoral Recruitment Scholarship**, University of Alberta, (5000 CAD)
- 2018 **INTO Washington State University Scholarship**, Washington State University, (3000 USD)
- 2016 **Award for second-class honored**, Thammasat University

PEER-REVIEWED PUBLICATIONS (36)

1. Khaengkhan P., Onsuwan, C., & Wongvorachan, T. (2026). Topic, Gender, and Conversational Roles as Factors Influencing the Use of Minimal Responses in Thai. *Journal of Liberal Arts, Thammasat University*, 26(2), 1-30. <https://doi.org/10.64731/jla.v26i2.296120>
2. Sirisakdi, L., Thampanichwat, C., **Wongvorachan, T.**, Wutisun, D., Petsirasan, S., Payakarintarangkura, N., & Suppa-Aim, P. (2026). Architectural atmospheres for spiritual constructs: A systematic literature review and practice-based interviews in the post-COVID era. *Buildings*, 16(16), 3312. <https://doi.org/10.3390/buildings16163312>
3. Promkesa, S., Onsuwan, C., Wongvorachan, T. Acoustic study of French liaison consonants produced by native French speakers. *The Bulletin de l'ATPF*, 151(1), 140-167. <https://so01.tci-thaijo.org/index.php/bulletinatpf/article/view/285388>
4. **Wongvorachan, T.**, & Naknarin, S. (2026). Power, prestige, and access: Tracking 25 years of discourse in academic reform with bibliometric analysis. *Journal of Scholarly Communication*, 1. <https://doi.org/10.62160/JSC64>
5. Phatthanaphan, N., **Wongvorachan, T.**, Wutisun, D., Singkham, S., Petsirasan, S., Thampanichwat, C., Bunyarittikit, S., & Sirirat, S. (2026). Structural imbalance and life-cycle cost coverage in vertical greenery systems: A systematic literature review. *Buildings*, 16(7), 1353. <https://doi.org/10.3390/buildings16071353>
6. Thampanichwat, C., Wongvorachan, T., Petlai, T., Somngam, P., Sirisakdi, L., Anuntavachakorn, P., & Bunyarittikit, S. (2026). Exterior architectural characteristics of biophilic design in diverse regional contexts: Case studies from Asia, Europe, and Australia. *Buildings*, 16(6), 1123. <https://doi.org/10.3390/buildings16061123>.
7. Bunyarittikit, S., **Wongvorachan, T.**, Petlai, T., Somngam, P., Ratanapong, N., Thampanichwat, C., & Sinnugool, S. (2026). Exterior biophilic design attributes supporting urban mental well-being: A case study of Singapore's architecture. *Sustainability*, 18(3), 1469. <https://doi.org/10.3390/su18031469>
8. **Wongvorachan, T.**, Bulut, O. (2026). The advanced applications of psychological networks with exploratory graph analysis. In: Saqr, M., López-Pernas, S. (eds) Advanced learning analytics methods. Springer, Cham. https://doi.org/10.1007/978-3-031-95365-1_13
9. **Wongvorachan, T.**, Bulut, O. (2026). The use of natural language processing in learning analytics. In: Saqr, M., López-Pernas, S. (eds) Advanced learning analytics methods. Springer, Cham. https://doi.org/10.1007/978-3-031-95365-1_9
10. **Wongvorachan, T.**, Bulut, O., Gorgun, G., & Daniels, L. (2025). Evaluating the validity of the student perspectives of teaching survey: A network psychometrics approach. *Trends in Higher Education*, 4(4), 74. <https://doi.org/10.3390/higheredu4040074>
11. Thampanichwat, C., **Wongvorachan, T.**, Somngam, P., Petlai, T., Sirisakdi, L., Anuntavachakorn, P., Bunyarittikit, S., & Prasarnklieo, W. (2025). Biophilic architecture in the livable city of Melbourne CBD. *Sustainability*, 17(23), 10485. <https://doi.org/10.3390/su172310485>

12. **Wongvorachan, T.**, & Bulut, O. (2025). Detecting construct-irrelevant variance: A comparison of network psychometrics and traditional psychometric methods using the HEXACO-PI dataset. *Psychology International*, 7(4), 88. <https://doi.org/10.3390/psychoint7040088>
13. Preechapanich, S., Onsuwan, C., & **Wongvorachan, T.** (2025). Influence of language on Thai preschoolers on gender classification. *Journal of Liberal Arts: Thammasat University*, 25, 233-255. <https://doi.org/10.64731/jla.v25i2.285836>
14. Anunatavachakorn, P., Pawarana, P., **Wongvorachan, T.**, Thampanichwat, C., & Bunyarittikit, S. (2025). Exploring sidewalk built environment design strategies to promote walkability in tropical humid climates. *Buildings*, 15(15), 2659. <https://doi.org/10.3390/buildings15152659>
15. Thampanichwat, C., Sirisakdi, L., Petsirasan, S., Wutisun, D., Singkham, S., **Wongvorachan, T.**, Phaibulputhipong, P., Bunyarittikit, S., & Wongmahasiri, R. (2025). A Systematic review of architectural atmosphere that fosters mindfulness constructs. *Buildings*, 15(14), 2443. <https://doi.org/10.3390/buildings15142443>
16. Thampanichwat, C., **Wongvorachan, T.**, Sirisakdi, L., Chunhajinda, P., Bunyarittikit, S., & Wongmahasiri, R. (2025). Mindful architecture from text-to-image AI perspectives: A case study of DALL-E, Midjourney, and Stable Diffusion. *Buildings*, 15(6), 972. <https://doi.org/10.3390/buildings15060972>
17. He, S., Bulut, O., Cui, Y., & **Wongvorachan, T.** (2025). Uncovering dimensions of learning management system event logs: Insights from exploratory factor analysis, psychometric network analysis, and consensus hierarchical clustering. *Chinese/English Journal of Educational Measurement and Evaluation* | 教育测量与评估双语期刊, 6(1), 7. <https://doi.org/10.59863/FZRN7818>
18. Thampanichwat, C., **Wongvorachan, T.**, Sirisakdi, L., Somngam, P., Petlai, T., Singkham, S., Bhutdhakomut, B., & Jinjantarawong, N. (2025). The architectural language of biophilic design after architects use text-to-image AI. *Buildings*, 15(5), 662. <https://doi.org/10.3390/buildings15050662>
19. Wongmahasiri, R., **Wongvorachan, T.**, Thampanichwat, C., & Bunyarittikit, S. (2024). Impact of wall paint solar absorptance on CO2 emissions in residential buildings: A case study from Bangkok. *Buildings*, 14(12), 3958. <https://doi.org/10.3390/buildings14123958>
20. Chobthamkit, P., Sutton, R. M., English, A. S., **Wongvorachan, T.**, Datu, J. A. D., Chung, K. L., Tan, C., Imada, H., Ozkan, Z., Ashraf, F., Cayubit, R. F. O., Chaleeraktragoon, T., Cheng, C., Chien, C., Ching, B. H., Fatima, I., Jiang, D., Kamble, S. V., Khan, A., ... Yusoff, A. M. (2024). Belief in a just world for the self and others, karma, system justification and well-being during COVID-19 pandemic: Evidence from 15 Asian nations. *Asian Journal of Social Psychology*, 0(0). <https://doi.org/10.1111/ajsp.12667>
21. Bulut, O., Beiting-Parrish, M., Casabianca, J. M., Slater, S. C., Jiao, H., Song, D., Ormerod, C., Fabiyi, D. G., Ivan, R., Walsh, C., Rios, O., Wilson, J., Yildirim-Erbasli, S. N., **Wongvorachan, T.**, Liu, J. X., Tan, B., & Morilova, P. (2024). The rise of artificial intelligence in educational measurement: Opportunities and ethical challenges. *Chinese/English Journal of Educational Measurement and Evaluation*, 5(3). <https://doi.org/10.59863/MIQL7785>

22. Thampanichwat, C.; **Wongvorachan, T.**; Bunyarittikit, S.; Chunhajinda, P.; Phaibulphuttipong, P.; Wongmahasiri, R. (2024). The architectural design strategies that promote attention to foster mindfulness: A systematic review, content analysis and meta-analysis. *Buildings*, 14(28), 14, 2508. <https://doi.org/10.3390/buildings14082508>
23. Bulut, O., **Wongvorachan, T.**, He, S., Lee, S. (2024). Enhancing high-school dropout identification: A collaborative approach integrating human and machine insights. *Discover Education*, 3(109). <https://doi.org/10.1007/s44217-024-00209-4>
24. **Wongvorachan, T.**, Srisuttiyakorn, S., & Sriklaub, K. (2024). Optimizing learning: Predicting research competency via statistical proficiency. *Trends in Higher Education*, 3(3), 540-559. <https://doi.org/10.3390/higheredu3030032>
25. **Wongvorachan, T.**, Bulut, O., Liu, J.X., Mazzullo, E. (2024). A comparison of bias mitigation techniques for educational classification tasks using supervised machine learning. *Information*, 15(6), 326. <https://doi.org/10.3390/info15060326>
26. Poth, C. N., **Wongvorachan, T.**, Bulut, O., & Otto, S. J. G. (2024). Adaptive case study-mixed methods design practices for researchers studying complex phenomena. *Journal of Mixed Methods Research*, 18(3). <https://doi.org/10.1177/15586898241250217>
27. Mazzullo, E., Bulut, O., **Wongvorachan, T.**, & Tan, B. (2023). Learning analytics in the era of large language models. *Analytics*, 2(4), 877-898. <https://doi.org/10.3390/analytics2040046>
28. Bulut, O., Gorgun, G., **Wongvorachan, T.**, & Tan, B. (2023). Rapid guessing in low-stakes assessments: Finding the optimal response time threshold with random search and genetic algorithm. *Algorithms*, 16(2), 89. <https://doi.org/10.3390/a16020089>
29. **Wongvorachan, T.**, He, S., Bulut, O. (2023). A comparison of undersampling, oversampling, and SMOTE methods for dealing with imbalanced classification in educational data mining. *Information*, 14(1), 54. <https://doi.org/10.3390/info14010054>.
30. **Wongvorachan, T.**, Bulut, O. (2022). Feedback generation through artificial intelligence. *The Open/Technology in Education, Society, and Scholarship Association Conference Proceedings*, 2(1), 1-9. <https://doi.org/10.18357/otessac.2022.2.1.125>
31. **Wongvorachan, T.**, Bulut, O., Tsai, Y.-S., Lindner, M.A. (2022). Improving student feedback literacy in e-assessments: A framework for the higher education context. *Trends in Higher Education*, 1(1), 16–29. <https://doi.org/10.3390/higheredu1010002>
32. **Wongvorachan, T.**, Lai, K.W., Bulut, O., Tsai, Y. S., Chen, G. (2022). Artificial Intelligence: Transforming the Future of Feedback in Education. *Journal of Applied Testing Technology*, 23(1). 95-116. <http://jattjournal.net/index.php/atp/article/view/170387>
33. Bulut, O., Gorgun, G., Yildirim-Erbasli, S. N., **Wongvorachan, T.**, Daniels, L. M., Gao, Y., ... & Shin, J. (2022). Standing on the shoulders of giants: Online formative assessments as the foundation for predictive learning analytics models. *British Journal of Educational Technology*. <https://doi.org/10.1111/bjet.13276>
34. **Wongvorachan, T.**, Clelland A., Gorgun G., Bulut, O. (2022). Identifying the Predictors of Mathematics Anxiety AND Performance in Canada: An Educational Data Mining Approach. *Alberta Academic Review*, 5(1), 2-2. <https://doi.org/10.29173/aar134>

35. Swangwiboonpong, N., **Wongvorachan, T.**, Kiattiporn-Opas, C., Mayurasakorn, W., Thanasakulprasert, N., Taesilapasathit, C. (2016). The influence of communication methods on the perception of sadness. *Journal of Behavioral Science*, 23(1), 55-70.

ACKNOWLEDGED CONTRIBUTIONS

1. Chobthamkit, P., Sutton, R. M., Uskul, A. K., & Chaleeraktragoon, T. (2022). Personal Versus General Belief in a Just World, Karma, and Well-Being: Evidence from Thailand and the UK. *Social Justice Research*, 1-22. <https://doi.org/10.1007/s11211-022-00393-4>
2. Poth, C. N., Molina-Azorin, J. F., & Fetters, M. D. (2022). Virtual Special Issue on “Design of Mixed Methods Research: Past Advancements, Present Conversations, and Future Possibilities.” *Journal of Mixed Methods Research*. <https://doi.org/10.1177/15586898221110375>

PREPRINT ARTICLES AND PROJECTS (5)

1. **Wongvorachan, T.**, & Yen, J. (2026). Part three: Survey analysis and report. In S. A. Edwards, *Small press publishing in Canada, 2025/6* (pp. 19–20). Canada Council for the Arts SEED Program. <https://doi.org/10.5281/zenodo.20183963>
2. **Wongvorachan, T.** (2023). *The impact of classroom competition and cooperation to student academic performance*. PsyArXiv. <https://doi.org/10.31234/osf.io/7vugd>
3. **Wongvorachan, T.** (2021). *Review of Rorschach Ink-Blot Test: Performance Assessment System (R-PAS®)*. PsyArXiv. <https://doi.org/10.31234/osf.io/jts4z>
4. Wongvorachan, T. (2020). Cheating behavior in high-stakes test: A synthesis statement. [Unpublished Master’s final project]. Washington State University.
5. **Wongvorachan, T.** (2019). *Cheating detection in tests: A systematic review*. PsyArXiv. <https://doi.org/10.31234/osf.io/uc5hj>

WEB-BASED PUBLICATIONS (27)

1. **Wongvorachan, T.** (2025, Jan. 12). Visualizing Item Analysis: Creating Interactive Plots for Educational Assessments. Retrieved from <https://taridwong.github.io/posts/2025-01-12-cttplotly/>
2. **Wongvorachan, T.** (2024, Dec. 20). Equating Quiz Scores Across Semesters. Retrieved from <https://sites.google.com/view/tarid2/analysis-portfolio-2-0/test-equating-with-r>
3. **Wongvorachan, T.** (2024, Nov. 17). Evaluating Synthetic Data with A Psychometric Approach. Retrieved from <https://taridwong.github.io/posts/2024-11-15-synth/>
4. **Wongvorachan, T.** (2023, Dec. 15). Exploring Nature's 2023 postdoc survey with predictive modeling and NLP. Retrieved from <https://taridwong.github.io/posts/2023-12-10-naturepostdoc/>
5. **Wongvorachan, T.** (2023, Dec. 8). Examining Differences among Psychological Networks with Network Tree. Retrieved from <https://taridwong.github.io/posts/2023-12-08-networktree/>
6. **Wongvorachan, T.** (2023, April 30). Examining Big 5 Personality Inventory Data with Network Psychometrics. Retrieved from <https://taridwong.github.io/posts/2023-04-30-networkpsych/>
7. **Wongvorachan, T.** (2023, March 22). Examining State of the Field with Bibliometric Analysis. Retrieved from <https://taridwong.github.io/posts/2023-03-20-bibanalysis/>

8. **Wongvorachan, T.** (2022, Dec. 31). Data Exploration with ggstatsplot. Retrieved from <https://taridwong.github.io/posts/2022-12-31-ggstat/>
9. **Wongvorachan, T.** (2022, Aug. 14). Test Shortening with Genetic Algorithm and Ant Colony Optimization. Retrieved from <https://taridwong.github.io/posts/2022-08-14-ga-aco/>
10. **Wongvorachan, T.** (2022, Aug. 6). Leveraging a Large-Scale Educational Data Set with Educational Data Mining. Retrieved from <https://taridwong.github.io/posts/2022-08-06-edm/>
11. **Wongvorachan, T.** (2022, May 15). Item Response Theory. Retrieved from <https://taridwong.github.io/posts/2022-05-15-irt/>
12. **Wongvorachan, T.** (2022, May 5). Making Sense of Machine Learning with Explanable Artificial Intelligence. Retrieved from <https://taridwong.github.io/posts/2022-04-28-xai/>
13. **Wongvorachan, T.** (2022, April 28). Addressing Data Imbalance with Semi-Supervised Learning. Retrieved from <https://taridwong.github.io/posts/2022-04-28-semisupervised/>
14. **Wongvorachan, T.** (2022, April 18). Examining Customer Cluster with Unsupervised Machine Learning. Retrieved from <https://taridwong.github.io/posts/2022-04-18-unsupervisedml/>
15. **Wongvorachan, T.** (2022, April 9). Combining Multiple Machine Learning Models with the Ensemble Methods. Retrieved from <https://taridwong.github.io/posts/2022-04-09-ensemble/>
16. **Wongvorachan, T.** (2022, Feb. 27). Examining PISA 2018 Data Set with Statistical Learning Approach. Retrieved from <https://taridwong.github.io/posts/2022-02-27-statlearning/>
17. **Wongvorachan, T.** (2022, Jan. 15). Classical Test Theory in R. Retrieved from <https://taridwong.github.io/posts/2022-01-15-ctt/>
18. **Wongvorachan, T.** (2022, Jan. 1). Examining the Big 5 personality Dataset with factor analysis. Retrieved from <https://taridwong.github.io/posts/2022-01-01-efacfa/>
19. **Wongvorachan, T.** (2021, Dec. 29). Measuring Text Similarity with Movie plot data. Retrieved from <https://taridwong.github.io/posts/2021-12-29-movie-similarity/>
20. **Wongvorachan, T.** (2021, Dec. 27). Missing Data Analysis. Retrieved from <https://taridwong.github.io/posts/2021-12-27-missingdata/>
21. **Wongvorachan, T.** (2021, Dec. 11). Applying Machine Learning to Audio Data: Visualization, Classification, and Recommendation. Retrieved from <https://taridwong.github.io/posts/2021-12-11-applying-machine-learning-to-audio-data/>
22. **Wongvorachan, T.** (2021, Dec. 9). Interactive plots for Suicide Data. Retrieved from <https://taridwong.github.io/posts/2021-12-08-interactive-dashboard-for-suicide-data/>
23. **Wongvorachan, T.** (2021, Dec. 7). Image Recognition with Artificial Neural Networks. Retrieved from <https://taridwong.github.io/posts/2021-12-07-image-recognition-with-artificial-neural-networks/>
24. **Wongvorachan, T.** (2021, Dec. 4). Anomaly Detection with New York City taxi data. Retrieved from <https://taridwong.github.io/posts/2021-12-04-anomaly-detection-with-new-york-city-taxi-data/>

25. **Wongvorachan, T.** (2021, Nov. 30). Crime mapping in San Francisco with police data. Retrieved from <https://taridwong.github.io/posts/2021-11-30-crime-mapping-in-san-francisco-with-police-data/>
26. **Wongvorachan, T.** (2021, Nov. 23). Exploring COVID-19 data from twitter with topic modeling. Retrieved from <https://taridwong.github.io/posts/2021-11-18-exploring-covid-19-data-from-twitter-with-word-clouds/>
27. **Wongvorachan, T.** (2021, Nov. 9). Finding a home among the paradigm push-back with Dialectical Pluralism. Retrieved from <https://taridwong.github.io/posts/2021-11-07-introducing-dialectical-pluralism/>

CONFERENCE PRESENTATIONS (31)

1. **Wongvorachan, T.** (2026, October 28th – 31st). *Friendly Neighborhood Methodologist: Bridging the Gap Between Classroom Practice and Technical Innovation* [SoTL Studio]. iSSOTL26 Building Bridges: Strengthening Relationships and Networks in SoTL, Saskatoon, Saskatchewan, Canada.
2. Kwon, A., Ng, I. Y. E., Noels, K. A., and **Wongvorachan, T.** (2026, July 14-18). *Does who I am depend on where I am? Examining situated ethnic identity through ESM* [Poster presentation]. 28th International Congress of the International Association for Cross-Cultural Psychology – IACCP 2026, Leuven, Belgium.
3. Chonmahatrakul, N., Onsuwan, C., Chonchaiya, W., **Wongvorachan, T.**, Duangmal, J., and Mazuka, R. (2026, June 22). *Preliminary Thai adaptation of the CDI:WG: Early vocabulary and parental comprehensibility of child communication* [Poster Presentation]. The 28th Biennial Meeting of the International Society for the Study of Behavioural Development (ISSBD), Incheon, South Korea. <https://2026biennial.issbd.org/>
4. Larsen, D., Hudson Breen, R., Hunter, D., Bulut, O., **Wongvorachan, T.**, Hobbs, C., Everitt, L., & McCrae, P. (2025, October). *Developing a teacher hope Scale: The scale and it's five dimensions* [Poster presentation]. The College of Social Sciences and Humanities Celebration of Research, University of Alberta, Edmonton, Canada.
5. **Wongvorachan, T.** (2025 May 3rd), *Rethinking Academic Publishing: A Call for Inclusive, Transparent, and Sustainable Reforms* [Roundtable Discussion]. Alberta Graduate Conference in Education 2025, Edmonton, Alberta.
6. **Wongvorachan, T.**, Sakulku, J., & Charuchutharat, Y. (2025 April 4th), *Risk factors and predictors of incarceration and recidivism in juvenile offenders: Insights from a maximum-risk juvenile detention center* [Paper presentation]. 39th Royce Research Conference, Edmonton, Alberta. Best Talk Award.
7. Poth, C., **Wongvorachan, T.**, Shariff, F., & Dufresne, D. (2025 April 15th – 16th), *Fostering inclusion and equity in mixed methods research publishing* [Paper presentation]. 5th Mixed Methods Caribbean Regional Conference, Kingston, Jamaica.
8. Bulut, O., Clelland, A., & **Wongvorachan, T.** (2024, June). *Identifying the predictors of mathematics performance and math anxiety in Canada: An educational data mining approach*. Paper submitted to the annual conference of the Canadian Center of Science and Education (CCSE), Montréal, QC.

9. Armoush, N., Gorgun, G., **Wongvorachan, T.**, Gierl, M., & Bulut O. (2024 April) *Generating and Evaluating AIG Items* [Poster presentation]. the UAlberta Graduate Student Research in Education Conference 2024, Edmonton, Alberta, Canada.
10. **Wongvorachan, T.** (2024 April). *Accessible digital learning resources: A jurisdictional scan*. Paper presented at the UAlberta Graduate Student Research in Education Conference 2024, Edmonton, Alberta, Canada.
11. Mazzullo, E., Bulut, O., **Wongvorachan, T.**, & Tan, B. (2024, April). *How can large language models revolutionize learning analytics?* Paper presented at the annual meeting of the National Council on Measurement in Education, Philadelphia, Pennsylvania, USA.
12. **Wongvorachan, T.**, Bulut, O., & Gorgun, G. (2024, April). *Evaluating dimensionality in non-cognitive measures: Exploratory vs. hierarchical exploratory graph analysis*. Paper presented at the annual meeting of the National Council on Measurement in Education, Philadelphia, Pennsylvania, USA.
13. Bulut, O., **Wongvorachan, T.** (2024, March). *A network psychometrics approach to evaluate the validity of the SPOT survey* [Poster presentation]. the Celebration of Socially Transformative Research and Teaching, University of Alberta, Edmonton, Canada.
14. **Wongvorachan, T.**, Bulut, O., Gorgun, G., Tan, B. (2023 April 12-15). *Random search algorithm to identify response time thresholds for rapid guessing* [Conference Session]. 2023 National Council on Measurement in Education (NCME) Annual Meeting. Presented at Chicago, Illinois, USA.
15. Gorgun, G., Tan, B., **Wongvorachan, T.**, Bulut, O. (2023 April 12-15). Predicting item difficulty from students' response behaviors. In T. Shuqin (chair), *Predicting item difficulty and response latencies*. [Symposium] 2023 National Council on Measurement in Education (NCME) Annual Meeting, Chicago, Illinois, USA.
16. Tan, B., Bulut, O., Gorgun, G., **Wongvorachan, T.** (2023 April 12-15). *Mining textual features of questions to predict item parameters* [Conference Session]. 2023 National Council on Measurement in Education (NCME) Annual Meeting. Presented at Chicago, Illinois, USA.
17. He, S., **Wongvorachan, T.**, Bulut, O., Lai, K.W. (2023 April 12-15). Identifying early warning indicators for high school dropouts. In Z. Xiuyuan (chair), *Using eye movement and natural language processing to inform various decisions*. [Symposium] 2023 National Council on Measurement in Education (NCME) Annual Meeting, Chicago, Illinois, USA.
18. Gorgun, G., Bulut, O., **Wongvorachan, T.** (2023 April 12-15). Detecting rapid guessing: In search of the optimal response time threshold. In U. Esther., R. Joseph (chair), *Methodological advances in detecting and accounting for noneffortful responding*. [Symposium] 2023 National Council on Measurement in Education (NCME) Annual Meeting, Chicago, Illinois, USA.
19. **Wongvorachan, T.**, He, S., Lai, K.W., Bulut, O. (2023 April 12-15). *A comparison of sampling methods for imbalanced classifications in educational datasets* [Conference Session]. 2023 National Council on Measurement in Education (NCME) Annual Meeting. Presented at Chicago, Illinois, USA.

20. Bulut, O., Gorgun, G., Tan, B., **Wongvorachan, T.**, Yildirim-Erbasli, S., & Clelland, A. (2023, June). *Self-regulated learning through online formative assessments: The effects of assessment frequency and participation on student performance* [Paper presentation]. the annual meeting of the International Society of the Learning Sciences, Montréal, QC, Canada.
21. **Wongvorachan, T.**, Poth, C., Bulut, O., Otto, S. (2022 August 4th), *Leveraging Open Data Sources in Mixed Methods Research* [Paper presentation]. 2022 Mixed methods international research association (MMIRA) Global Virtual Conference. Virtual.
22. **Wongvorachan T.**, Bulut, O. (2022, May 17th). *Feedback Generation through Artificial Intelligence* [Conference Session]. Open Technology in Education, Society, and Scholarship Association (OTESSA) 2022 Conference. Presented at University of Victoria, Greater Victoria, BC, Canada.
23. **Wongvorachan T.**, Clelland A., Gorgun G., Bulut, O. (2022, Apr 30th). *Identifying the Predictors of Mathematics Anxiety AND Performance in Canada: An Educational Data Mining Approach* [Conference Session]. the 14th Annual Graduate Student Research Showcase: Exploring horizons. Presented at University of Alberta, Edmonton, AB, Canada.
24. Bulut , O., Nur Yildirim Erbasli, S., Gorgun, G., Gao, Y., **Wongvorachan, T.**, Lai, K.W., Shin, J. (2022 March 21st). *Leveraging Online Formative Assessments to Enhance Predictive Learning Analytics Models* [Conference Session]. The 12th International Learning Analytics and Knowledge Conference (LAK22). Presented at University of California, Irvine, CA, USA.
25. **Wongvorachan, T.**, Lai, K.W., Bulut, O., Tsai, Y.S., Chen, G. (2022, February 18th). *The Application of Artificial Intelligence in Educational Feedback* [Poster presentation]. Reverse Expo 2022. Presented at University of Alberta, Edmonton, AB, Canada.
26. **Wongvorachan, T.**, Lai, K.W., Bukut, O., & Tsai, Y. (2022, January 28th). *Feedback Literacy Framework in the E-Assessment Context* [Poster presentation]. Advancing Assessment and Evaluation Virtual Conference: Queen's University Assessment and Evaluation Group (AEG) and Educational Testing Services (ETS), Kingston, Ontario, Canada.
27. Bulut , O., Gorgun, G., Nur Yildirim Erbasli, S., **Wongvorachan, T.** (2021, July 5th). *Generating Effective Feedback from Online Assessments* [Conference session]. Festival of Teaching and Learning 2021: Teaching through transition. Presented at University of Alberta, Edmonton, AB, Canada.
28. **Wongvorachan, T.** (2020, March 26th). *Cheating detection in tests: A systematic review* [Poster presentation]. Washington State University academic showcase. Washington State University, Pullman, WA, USA. (Showcase canceled).
29. **Wongvorachan, T.** (2020, March 7th). *An integrative exploration of inequity-driven cheating behavior in marginalized people* [Conference session]. Washington State University interdisciplinary graduate social justice conference (WSU SJCON). Presented at Washington State University, Pullman, WA, USA.
30. **Wongvorachan, T.** (2019, October 14th). *Cheating behavior in large-scale assessment* [Conference session]. Presented at the Research on Psychometrics & Applied Statistics (RPAS) Conference. Presented at University of Washington, Seattle, WA, USA.
31. Swangwiboonpong, N., **Wongvorachan, T.**, Kiattiporn-Opas, C., Mayurasakorn, W., Thanasakulprasert, N., Taesilapasathit, C. (2016, July. 8th-9th). *The influence of communication*

methods on the perception of sadness [Conference session]. Thailand National Conference on Psychology: Empowering people in the world of change (TNCP 2016). Presented at Chulalongkorn University, Bangkok, Thailand.

INVITED PRESENTATIONS AND TALKS (17)

1. **Wongvorachan, T.** (2026, July 11th). *LLM: From Rented Intelligence to Intellectual Autonomy*. Seminar. Department of Educational Research and Psychology. Faculty of Education, Chulalongkorn University, Thailand.
2. **Wongvorachan, T.** (2026, April 25th). *Statistics: Helping Us Make Better Decisions Every Day*. Open Lecture. MARCS-CILS NokHook BabyLab, Faculty of Liberal Arts, Thammasat University, Bangkok, Thailand
3. **Wongvorachan, T.** (2026, January 26th). *Systematic Reviews: From Information Noise to Evidence Synthesis*. Workshop. Department of Psychology, Faculty of Liberal Arts, Thammasat University, Thailand
4. **Wongvorachan T.** (2025, October 22nd). *Seeing spaces through data: Unlocking architectural insights with visual analytics*. Seminar. School of Architecture, Art, and Design, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand
5. **Wongvorachan T.** (2025, September 24th). *Introduction to Operational Psychometrics*. Seminar. Faculty of Psychology, Chulalongkorn University, Thailand
6. **Wongvorachan T.** (2025, September 19th). *Feedback literacy in the digital age: Learning-oriented sustainable assessment (LOSA) in action*. National Institute of Education, Nanyang Technological University, Singapore
7. **Wongvorachan T.** (2025, September 17th). *Numbers tell stories, but reflection makes them last: Toward sustainable assessment*. National Institute of Education, Nanyang Technological University, Singapore.
8. **Wongvorachan, T.** (2025, July 5th). *From Concept to Completion: Using AI to Support Every Stage of the Dissertation Process*. Seminar. Faculty of Psychology, Chulalongkorn University, Thailand
9. **Wongvorachan, T.** (2025, May 17th). *The Art and Science of Giving Effective Feedback: Insights from Education and Artificial Intelligence*. Open lecture. Faculty of Psychology, Chulalongkorn University, Thailand
10. **Wongvorachan, T.** (2025, February 20th). *Introduction to Free and Open-Source Research Tools*. Seminar. Centre for Mathematics, Science, and Technology Education, University of Alberta, Edmonton, AB, Canada.
11. **Wongvorachan, T.** (2025, January 22nd and 24th). *Analyzing Large-Scale Survey Data with Data Science Techniques*. Open lecture. Faculty of Psychology, Chulalongkorn University, Thailand

12. **Wongvorachan, T.** (2024, September 14th). *Introduction to Qualitative-oriented Mixed Methods Research*. EDHS 597 Qualitative Research Methodologies in Health Science Education. Faculty of Rehabilitation Medicine, University of Alberta, Canada.
13. **Wongvorachan, T.** (2024, August 28th). *Mastering the art of literature review: Navigating research landscapes and uncovering your next big idea*. Open lecture. Faculty of Education, Chulalongkorn University, Thailand.
14. **Wongvorachan, T.** (2023, September 23rd). *Introduction to Qualitative-oriented Mixed Methods Research*. EDHS 597 Qualitative Research Methodologies in Health Science Education. Faculty of Rehabilitation Medicine, University of Alberta, Canada.
15. **Wongvorachan, T.** (2023 June 18th). *Stress management in everyday lives*. Sansarang Gallery, Nakhon Si Thammarat, Thailand.
16. **Wongvorachan, T.** (2023 March 28th). *Introduction to mixed methods research*. REHAB 601: Research design in rehabilitation science. Faculty of Rehabilitation Medicine, University of Alberta, Canada.
17. **Wongvorachan, T.** (2022 April 1st). *Utilizing open data with mixed methods research*. Mixed methods approach to educational research. Department of Educational Psychology, University of Alberta, Canada.

PROFESSIONAL CERTIFICATES AND WORKSHOPS

2026	Introduction to Leapspace for Research , Thammasat University
2025	Certificate of Professional Data Scientist , Datacamp
2024	PowerBI Fundamentals skill track certificate, Datacamp
2024	SQL Fundamentals skill track, Datacamp
2022	Explainable Artificial Intelligence (XAI) . Kaggle
2022	Data Analyst with Python and R career track, Datacamp
2021	Statistician with R career track, Datacamp
2021	Data Scientist with Python and R career track, Datacamp
2021	Machine learning scientist with Python and R career track, Datacamp
2021	Natural Language Processing in Python and R skill track, Datacamp
2021	Deep Learning in Python skill track, Datacamp
2019	Mixed methods research workshop, McCrudden, M., Learning and Performance Research Center (LPRC), Washington State University, Pullman, WA, USA.

PROFESSIONAL AFFILIATIONS

2026–Present	The International Society for the Scholarship of Teaching and Learning - iSSOTL
2024–Present	Statistics Without Borders
2022–Present	Mixed Methods International Research Association
2021–Present	National Council of Measurement in Education
2021–Present	The e-Assessment Association
2021–Present	American Educational Research Association
2018–Present	American Psychological Association: Division 15

EDITORIAL BOARD SERVICE

2025–Present	<i>Journal of Research Methodology</i> (วารสารวิธีวิทยาการวิจัย), Department of Educational Research and Psychology, Faculty of Education, Chulalongkorn University,
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Bangkok, Thailand

MANUSCRIPT PEER REVIEWER (14)

2026	University of Regina Open Education & Publishing Website ISSOTL26 - Building Bridges: Strengthening Relationships and Networks in SoTL Journal of Research Methodology (2025 - Present)
2025	Behavioral Sciences Statistics and Computing BMC Medical Education
2024	Canadian Society for the Study of Education 52 nd Annual Conference
2023	National Council of Measurement in Education 2024 Annual Meeting Conference Patterns The Open/Technology in Education, Society, and Scholarship Association Conference
2022	International Society of the Learning Sciences 2023 Annual Meeting National Council of Measurement in Education 2023 Annual Meeting Conference Journal of Mixed Methods Research The 14 th Annual Graduate Research Showcase of Elementary/Secondary Graduate Students' Association
2021	Alberta Journal of Educational Research

COMMUNITY SERVICE (8)

2026	Co-Facilitator , College of Education Narrative Research Group. University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
2026	Committee member , College of Education Equity, Diversity, Inclusion, and Anti-Racism (EDI/AR) Committee. University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
2026	Steering committee member , College of Education Celebration of Research, Scholarly, and Artistic Work. University of Saskatchewan, Saskatoon, Saskatchewan, Canada.
2024	Steering committee member , UAlberta Graduate Student Research in Education Conference 2024. University of Alberta, Edmonton, Alberta, Canada.
2023–2024	Research method and statistics consultant , Ubekka Juvenile Detention Center. Government of Thailand, Nakhon Pathom, Thailand.
2023–2024	Research method and statistics consultant . ASK CRAME sessions. Faculty of Education. University of Alberta, Edmonton, Alberta, Canada.
2023–2024	Social science judge . Festival of Undergraduate Research and Creative Activities. University of Alberta, Edmonton, Alberta, Canada.
2012–2016	48th President of Psychology Student Council . Thammasat University, Bangkok, Thailand.

LANGUAGES

English, Thai: Professional level in speaking, listening, reading, and writing

TECHNICAL SKILLS

Research and Statistics

Statistical Packages for Social Sciences (SPSS), R, Python, SQL, PowerBI, QDA Miner, WordStat

Bibliographic Management Systems

Zotero, Endnote, Covidence