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Education

- 2017 – 2023 **Ph.D., Stanford University** Graduate School of Education
Dissertation title: *Computational Validity*.
- 2019 – 2021 **M.S., Stanford University** Computer Science
- 2010 – 2012 **M.S., Drexel University** Education
- 2001 – 2005 **B.S., Drexel University** Physics

Academic Appointments

- 2023 – **Assistant Professor of Applied Statistics**, New York University,
Steinhardt School of Culture, Education, and Human Development,
Department of Applied Statistics, Social Science, and the Humanities

Publications

Journal Articles

1. Domingue, B. W., Rahal, C., Faul, J., Freese, J., **Kanopka, K.**, Rigos, A., Stenhaug, B., & Tripathi, A. S. (2025). The intermodel vigorish (imv) as a flexible and portable approach for quantifying predictive accuracy with binary outcomes. *PloS one*, 20(3), eo316491.
2. Ma, W. A., Richie-Halford, A., Burkhardt, A. K., **Kanopka, K.**, Chou, C., Domingue, B. W., & Yeatman, J. D. (2025). Roar-cat: Rapid online assessment of reading ability with computerized adaptive testing. *Behavior Research Methods*, 57(1), 1–17.
3. Caffarra, S., **Kanopka, K.**, Kruper, J., Richie-Halford, A., Roy, E., Rokem, A., & Yeatman, J. D. (2024). Development of the alpha rhythm is linked to visual white matter pathways and visual detection performance. *Journal of Neuroscience*, 44(6).
4. Domingue, B. W., **Kanopka, K.**, Kapoor, R., Pohl, S., Chalmers, R. P., Rahal, C., & Rhemtulla, M. (2024). The intermodel vigorish as a lens for understanding (and quantifying) the value of item response models for dichotomously coded items. *Psychometrika*, 1–21.
5. **Kanopka, K.**, Claro, S., Loeb, S., West, M., & Fricke, H. (2024). Are changes in reported social-emotional skills just noise? the predictive power of longitudinal differences in self-reports. *AERA Open*, 10.
6. **Kanopka, K.**, & Domingue, B. W. (2024). A position-sensitive mixture item response model. *Journal of Educational and Behavioral Statistics*, 10769986241289399.
7. Kapoor, R., Fahle, E., **Kanopka, K.**, Klinowski, D., Ribeiro, A. C. T., & Domingue, B. W. (2024). Differences in time usage as a competing hypothesis for observed group differences in accuracy with an application to observed gender differences in pisa data. *Journal of Educational Measurement*.
8. Moeller, K. J., **Kanopka, K.**, French, J., Hook, T., & Sedighi, M. (2024). Educational capitalisation: A co-formational feminist framework for conceptualising investment in for-profit education within the racialised and gendered political economy. *Globalisation, Societies and Education*, 1–15.
9. Trejo, S., & **Kanopka, K.** (2024). Using the phenotype differences model to identify genetic effects in samples of partially genotyped sibling pairs. *Proceedings of the National Academy of Sciences*, 121(49), e2405725121.

10. Biernacki, P. J., Altavilla, J., **Kanopka, K.**, Hsieh, H., & Solano-Flores, G. (2023). Long-term english learners' mathematics course trajectories: Downstream consequences of early remediation on college preparation. *International Multilingual Research Journal*, 17(2), 122–138.
11. Ramamurthy, M., Richie-Halford, A., **Kanopka, K.**, Hartsough, A., Osuna, K., Gorno-Tempini, M. L., & Yeatman, J. D. (2023). Can a gamified, rapid, online assessment of letter encoding ability in kindergarten and first grade children predict future reading development? *Journal of Vision*, 23(9), 5858–5858.
12. Ulitzsch, E., Domingue, B. W., Kapoor, R., **Kanopka, K.**, & Rios, J. A. (2023). A probabilistic filtering approach to non-effortful responding. *Educational Measurement: Issues and Practice*.
13. Domingue, B. W., **Kanopka, K.**, Mallard, T. T., Trejo, S., & Tucker-Drob, E. M. (2022). Modeling interaction and dispersion effects in the analysis of gene-by-environment interaction. *Behavior genetics*, 52(1), 56–64.
14. Domingue, B. W., **Kanopka, K.**, Stenhaug, B., Sulik, M. J., Beverly, T., Brinkhuis, M., Circi, R., Faul, J., Liao, D., McCandliss, B., et al. (2022). Speed–accuracy trade-off? not so fast: Marginal changes in speed have inconsistent relationships with accuracy in real-world settings. *Journal of Educational and Behavioral Statistics*, 47(5), 576–602.
15. Domingue, B. W., **Kanopka, K.**, Trejo, S., Rhemtulla, M., & Tucker-Drob, E. M. (2022). Ubiquitous bias and false discovery due to model misspecification in analysis of statistical interactions: The role of the outcome's distribution and metric properties. *Psychological Methods*.
16. Domingue, B. W., **Kanopka, K.**, Stenhaug, B., Soland, J., Kuhfeld, M., Wise, S., & Piech, C. (2021). Variation in respondent speed and its implications: Evidence from an adaptive testing scenario. *Journal of Educational Measurement*, 58(3), 335–363.
17. Yeatman, J. D., Tang, K. A., Donnelly, P. M., Yablonski, M., Ramamurthy, M., Karipidis, I. I., Caffarra, S., Takada, M. E., **Kanopka, K.**, Ben-Shachar, M., et al. (2021). Rapid online assessment of reading ability. *Scientific reports*, 11(1), 6396.

Book Chapters

1. Ruiz-Primo, M. A., **Kanopka, K.**, & Hernandez, P. A. (2025). Measuring, assessing, or just testing student achievement? evidence from some states' testing programs in the united states. In L. Cohen-Vogel, P. Youngs, & J. Scott (Eds.), *Handbook of education policy research* (2nd, pp. 511–542). American Educational Research Association.

Conference Proceedings

1. Mongkhonvanit, K., **Kanopka, K.**, & Lang, D. (2019). Deep knowledge tracing and engagement with moocs. *Proceedings of the 9th international conference on learning analytics & knowledge*, 340–342.

Preprints

1. Zhang, L., Liu, Y., Molenaar, J., Dylan Gilbert, **Kanopka, K.**, & Domingue, B. W. (2025). Realistic simulation of item difficulties. *PsyArXiv*.
2. Deng, S., Siswandjo, J., & **Kanopka, K.** (2024). Mapping the participation of venture capital in education: An investment network perspective. *SocArXiv*.
3. Domingue, B., Braginsky, M., Caffrey-Maffei, L., Gilbert, J. B., **Kanopka, K.**, Kapoor, R., Liu, Y., Nadela, S., Pan, G., Zhang, L., et al. (2024). Solving the problem of data in psychometrics: An introduction to the item response warehouse (irw).
4. Ramamurthy, M., **Kanopka, K.**, Richie-Halford, A., Domingue, B. W., Pei, F., Bell, P., Yan, L., Hartsough, A., Luisa, G. T. M., & Yeatman, J. D. (2024). Design and validation of a rapid visual processing measure for screening reading difficulties in early childhood. *PsyArXiv*.

5. Ramamurthy, M., **Kanopka, K.**, Siebert, J. M., Yan, L., Townley-Flores, C., Zegers, M., Pei, F., Bell, P., Catts, H. W., Luisa, G. T. M., & Yeatman, J. D. (2024). Visual tasks as language-agnostic early identification measures of reading challenges. *PsyArXiv*.
6. Domingue, B. W., **Kanopka, K.**, Ulitzsch, E., & Zhang, L. (2023). Implied probabilities of polytomous response functions for model-based prediction and comparison. *PsyArXiv*.
7. Zhang, L., **Kanopka, K.**, Rahal, C., Ulitzsch, E., Zhang, Z., & Domingue, B. W. (2023). The intermodel vigorish for model comparison in confirmatory factor analysis with binary outcomes. *PsyArXiv*.

Policy Briefs

1. **Kanopka, K.**, Claro, S., Loeb, S., West, M. R., & Fricke, H. (2020). What do changes in social-emotional learning tell us about changes in academic and behavioral outcomes? *Policy Analysis for California Education*.

Presentations

Invited Talks

1. **Kanopka, K.** A position-sensitive mixture item response model. In: Fordham Psychometrics Seminar at Fordham University. 2024.
2. **Kanopka, K.**, & Moeller, K. Following the capital: Using investment networks to understand venture capital's influence on education. In: Society for Research into Higher Education Digital University Network Event on the Political Economy of EdTech. 2023.
3. **Kanopka, K.** Good luck with the blue book! an irt mixture model for position effects. In: Berkeley Evaluation & Assessment Research (BEAR) Seminar at UC Berkeley. 2021.

Conference Presentations

1. **Kanopka, K.** Prediction quality of a range of polytomous models applied to a large data corpus. In: Annual Meeting of the National Council on Measurement in Education. 2025.
2. **Kanopka, K.**, Zhang, X., & Harel, D. A markov chain monte carlo procedure with simulated annealing for short form creation. In: International Objective Measurement Workshop. 2025.
3. Lu, Y., Huang, Y., & **Kanopka, K.** Assessing the representativeness of llm-generated item responses using latent class analysis. In: Annual Meeting of the National Council on Measurement in Education. 2025.
4. Domingue, B. W., **Kanopka, K.**, Braginsky, M., Zhang, L., Caffrey-Maffei, L., Kapoor, R., Liu, Y., Zhang, S., & Frank, M. The item response warehouse (irw): A large open repository of response data. In: Annual Meeting of the National Council on Measurement in Education. 2024.
5. Domingue, B. W., **Kanopka, K.**, Caffrey-Maffei, L., Kapoor, R., Zhang, S., & Liu, Y. The item response warehouse (irw): A large open repository of response data. In: Annual Meeting of the National Council on Measurement in Education. 2024.
6. Domingue, B. W., **Kanopka, K.**, Ulitzsch, E., & Zhang, L. Implied probabilities of polytomous response functions for model-based prediction and comparison. In: Annual Meeting of the National Council on Measurement in Education. 2024.
7. **Kanopka, K.**, & Harel, D. A lasso approach for short form item selection. In: International Meeting of the Psychometric Society. 2024.
8. Domingue, B. W., **Kanopka, K.**, Kapoor, R., Pohl, S., Chalmers, R. P., Rahal, C., & Rhemtulla, M. Applying the intermodel vigorish to quantify the value of item response modeling. In: Annual Meeting of the National Council on Measurement in Education. 2023.

9. **Kanopka, K.**, & Domingue, B. W. Projecting the performance of polytomous item response models onto a common scale with the intermodel vigorish. In: International Conference on Computational and Methodological Statistics. 2023.
10. **Kanopka, K.**, Domingue, B. W., Ulitzsch, E., Kapoor, R., Pohl, S., Chalmer, R. P., Rahal, C., & Rhemtulla, M. Bookmaking for item responses: Prediction, profits, and the imv. In: International Objective Measurement Workshop. 2023.
11. **Kanopka, K.**, & Hook, T. J. Following the capital: Using investment networks to understand venture capital's influence on education. In: Annual Meeting of the Comparative and International Education Society. 2023.
12. **Kanopka, K.**, Lang, D., & Alvero, A. Weighing algorithmic tradeoffs: Observations from 60,000 admission essays. In: Annual Meeting of the National Council on Measurement in Education. 2023.
13. **Kanopka, K.**, Yeatman, J., & Burkhardt, A. Incorporating response time using drift diffusion models in an online reading assessment. In: Annual Meeting of the National Council on Measurement in Education. 2023.
14. Kapoor, R., **Kanopka, K.**, & Domingue, B. W. Revisiting angrist et al. (2021): Merging international assessment data is not easy. In: Annual Meeting of the National Council on Measurement in Education. 2023.
15. Kapoor, R., Ruiz-Primo, M. A., Hernandez, P., & **Kanopka, K.** Online response process procedures: Affordances and constraints to collect, analyze, and interpret validity information. In: Annual Meeting of the American Educational Research Association. 2023.
16. Ulitzsch, E., Rios, J. A., Kapoor, R., **Kanopka, K.**, & Domingue, B. W. A probabilistic filtering approach to accounting for noneffortful responding. In: Annual Meeting of the National Council on Measurement in Education. 2023.
17. Wang, N., Li, M., **Kanopka, K.**, Dong, D., Hernandez, P., & Ruiz-Primo, M. A. Modeling context characteristics for contextualized assessment: A bayesian contextualized item response model. In: Annual Meeting of the National Council on Measurement in Education. 2023.
18. **Kanopka, K.** Profiling changes in student writing: From failure to success. In: Annual Meeting of the National Council on Measurement in Education. 2022.
19. **Kanopka, K.**, & Domingue, B. W. Good luck with the blue book: Computational approaches to fairness and validity in admissions testing. In: Annual Meeting of the American Educational Research Association. 2022.
20. Moeller, K., & **Kanopka, K.** Who profits from edtech? an intersectional feminist analysis of venture capital investment in education. In: Annual Meeting of the American Educational Research Association. 2022.
21. **Kanopka, K.**, & Domingue, B. Addressing the blue book problem: Application of a position-sensitive irt mixture model to enem 2014. In: International Meeting of the Psychometric Society. 2021.
22. **Kanopka, K.**, & Domingue, B. W. An irt mixture model for item position effects. In: Annual Meeting of the National Council on Measurement in Education. 2021.
23. **Kanopka, K.**, Hernandez, P., Wang, N., Ruiz-Primo, M. A., Li, M., & Minstrell, J. An application of multiple correspondence analysis to the experimental study of item context. In: Annual Meeting of the American Educational Research Association. 2021.
24. Moeller, K., **Kanopka, K.**, & French, J. Venture capitalists as educational actors: Understanding the racialized political economy of silicon valley investments in education technology. In: Annual Meeting of the American Educational Research Association. 2021.

25. Moeller, K., **Kanopka, K.**, & French, J. Venture capitalists as educational actors: Understanding the racialized political economy of silicon valley investments in education technology. In: Annual Meeting of the Comparative and International Education Society. 2021.
26. Ruiz-Primo, M. A., Li, M., **Kanopka, K.**, Hernandez, P., Dong, D., Wang, N., & Minstrell, J. Analysis and review of context in science: Effects in student performance. In: Annual Meeting of the American Educational Research Association. 2021.
27. Alvero, A., Sedlacek, Q., & **Kanopka, K.** A call for critical and constructive data science in teacher education. In: AERA Conference on Educational Data Science. 2020.
28. Claro, S., **Kanopka, K.**, West, M., Loeb, S., & Fricke, H. Exploring the relationship between changes in social-emotional skills and achievement. In: Annual Meeting of the American Educational Research Association (Conference Cancelled). 2020.
29. Ruiz-Primo, M. A., Li, M., Minstrell, J., Dong, D., **Kanopka, K.**, & Hernandez, P. Mapping the characteristics of contexts in science items: The case of forces and motion items. In: Annual Meeting of the American Educational Research Association (Conference Cancelled). 2020.
30. Hernandez, P., Ruiz-Primo, M. A., Zhai, X., & **Kanopka, K.** Validity study of linked items to determine student fundamental ideas. In: Annual Meeting of the American Educational Research Association. 2019.
31. **Kanopka, K.** Addressing defensive objections: Adversarial examples in automatic essay scoring. In: Annual Meeting of the American Educational Research Association. 2019.
32. **Kanopka, K.** Diagnosing non-parallelism in hierarchically contextualized physics assessments. In: Annual Meeting of the National Association for Research in Science Teaching. 2019.
33. Munoz-Najar Galvez, S., **Kanopka, K.**, & Alvero, A. Identifying (dis)continuities in edtech's discourse of invention. In: Text Analysis Across Domains. 2019.
34. Ruiz-Primo, M. A., Li, M., Minstrell, J., Zhai, X., Dong, D., **Kanopka, K.**, & Hernandez, P. Testing the generalization to the domain inference: The use of contextualized clusters of items. In: Annual Meeting of the National Council on Measurement in Education. 2019.
35. Ruiz-Primo, M. A., Li, M., Minstrell, J., Zhai, X., **Kanopka, K.**, Hernandez, P., & Dong, D. Contextualized science assessments: Addressing the use of information and generalization of inferences of students' performance. In: Annual Meeting of the American Educational Research Association. 2019.
36. Zhai, X., Ruiz-Primo, M. A., Li, M., Dong, D., **Kanopka, K.**, Hernandez, P., & Minstrell, J. Using many-facet rasch model to examine student performance on contextualized science assessment. In: Annual Meeting of the American Educational Research Association. 2019.

Awards and Fellowships

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| 2024 | W. Gabriel Carras Research Award , New York University Steinhardt School of Culture, Education, and Human Development
Brenda H. Loyd Outstanding Dissertation Award , National Council on Measurement in Education |
| 2021 | Gerald J Lieberman Fellowship , Stanford University
Summer Internship , Educational Testing Service |
| 2017 | Stanford Graduate Fellowship in Science & Engineering , Stanford University |

Courses Taught

New York University

- 2024 – APSTA-GE 2094 (APSY-GE 2524): Modern Approaches in Measurement
APSTA-GE 2044: Generalized Linear Models and Extensions
- 2023 – APSTA-GE 2352: Practicum in Applied Statistics: Statistical Computing

Stanford University

- 2023 EDUC 423B (SOC 302B): Introduction to Education Data Science: Data Analysis
- 2019 EDUC 200A: Introduction to Data Analysis and Interpretation

Professional Activities

Professional Memberships

- 2017 – American Educational Research Association
- 2018 – National Council on Measurement in Education
- 2019 – Psychometric Society
- 2023 – Comparative and International Education Society

Service to Field

- Editorial New Directions for Evaluation (Editorial Board)
- Reviewer Educational Measurement: Issues and Practice
Educational Assessment
AERA Open
New Directions for Evaluation
Journal of Leisure Research

Organized Sessions

- 2023 CMStatistics: Applied statistical and psychometrics issues in measurement (with Daphna Harel)