YOUNGWON KIM

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EDUCATION

Jun 2023 Ph.D., Measurement & Statistics

> College of Education, University of Washington, Seattle, WA Dissertation: *Modern prediction algorithms for factor analyses*:

Comparing accuracy-efficiency trade-offs (Advisor: Dr. Elizabeth Sanders)

M.A., Educational Psychology *May 2017*

Human Development, Culture, & Learning Sciences

University of Texas at Austin, Austin, TX

Thesis: A clash of constructs? Re-examining grit in light of academic

buoyancy and future time perspective

Feb 2011 B.A., International & Area Studies, Counseling Psychology, & Social Welfare

Handong Global University, Pohang-si, Gyeongbuk, South Korea

AREAS OF INTRESTS

Psychometrics and Statistics

- Machine Learning and Natural Language Processing
- Causal Inference
- Social, Behavioral, Educational Research

AWARDS/HONORS

2019 Young Researcher Award, Korean-American Educational Research

Association (KAERA)

OTEFE Foundation Scholarship, OTEFE Foundation, Inc. 2015 - 2021

RESEARCH EXPERIENCE

Aug 2023 – Present Postdoctoral Fellow Harvard Graduate School of Education, Harvard University, Cambridge, MA **Project:** Practical tools for large-scale evaluation of text data in randomized trials in education (Drs. Luke Miratrix, Reagan Mozer, and Shireen Al-Adeimi)

- Lead research on the performance and accuracy of large language models versus machine learning algorithms for automated essay scoring
- Conduct in-depth text analysis of large language model outputs across various prompts to identify optimal evaluation rubrics
- Develop the R package (rcttext) to effectively leverage text in the context of randomized controlled trials (RCTs)
- Create academic papers, tutorial materials, and blog posts to assist applied researchers in utilizing text in RCT contexts

Jun 2019 – Jun 2023

Center for Social Science Computation and Research, University of Statistical Consultant Washington, Seattle, WA (Dr. Jerald Herting)

- Provided statistical and programming consulting services to students and faculty from across UW Seattle campus
- Offered guidance on research designs, data cleaning, data analysis, and use of data analysis and visualization software (Mplus, Python, R, SPSS, SQL)
- Conducted remote synchronous and asynchronous workshops on R and SPSS

Jun 2022– Aug 2022 Research Intern

Human Services Division - Education Systems Program Area, American **Institutes for Research (AIR)**, Arlington, VA (Dr. Cong Ye)

- Developed a school-level social vulnerability index for the CEE (COVID-19 and Equity in Education) projects
- Participated in AIR Hackthon using the CEE longitudinal database and 2022 Summer Intern Expo

RESEARCH EXPERIENCE (Cont'd)

Research Assistant

May 2018 – Jun 2022 School of Education & Human Development, Texas A&M University, College Station, TX

> **Project:** Asian International Graduate Students' Professional Development and Psychological Well-Being (Dr. Katie Koo)

- Interviewed international graduate students and transcribe the interviews
- Coded and analyzed transcripts on the usage of social media, language proficiency, academic achievement, career development, social support, mental and physical health issues of international students
- Contributed to writing proposals for conference presentations and manuscripts for publication

Research Assistant

Mar 2020 – Dec 2020 Center for the Study of Teaching and Policy, University of Washington, Seattle, WA

Project: Teacher Workforce (Drs. Ana Elfers and Marge Plecki)

- Co-designed and implemented statistical models to examine the teacher workforce in Washington State with respect to teacher retention and mobility
- Co-authored results for presentation, white paper, and publication

Jul 2018 – Sep 2018 Data Wrangler

Health Sciences Library, University of Washington, Seattle, WA (Dr. Lorrie Dong)

- Performed data cleaning and created dashboards for National Network of Libraries of Medicine (NNLM)
- Created R functions to automate data-cleaning processes

Research Assistant

Feb 2015 – Aug 2017 Higher Education Learning and Persistence Lab, College of Education, University of Texas at Austin, Austin, TX (Dr. Carlton Fong)

- Collected documents and coded data for meta-analyses on psychosocial factors and critical thinking of community college students
- Conducted meta-analyses to examine growth- and fixed-mindset profiles and associations with stress, need satisfaction, coping strategies, and fear of failure

TEACHING EXPERIENCE

University of Washington

Sep 2021 – Dec 2021 EDPSY 576: Multilevel Modeling, College of Education

Apr 2019 – Jun 2019 PSYCH 315: Understanding Statistics in Psychology, Department of Psychology

Sep 2018 – Mar 2019 PSYCH 209: Fundamentals of Psychological Research, Department of Psychology

Sep 2017 – Dec 2017 EDPSY 302: Child Development and Learning, College of Education

Handong Global University

July 2020 & 2021

Online Summer Workshop on Applied Statistics, School of Counseling Psychology and Social Welfare

University of Texas at Austin

Jan 2017 – May 2017 SDS 332: Statistical Models for the Health and Behavioral Sciences,

Department of Statistics and Data Sciences

Sep 2015– Dec 2016 MKT282: Marketing Analytics & Applications, McComb School of Business

PUBLICATIONS

Peer-reviewed articles

- Koo, K., **Kim, Y. W.**, Lee, Y., & Rodriquez, S. (under review). What does it mean to be an Asian in a pandemic? Exploring experiences of racism and discrimination among Asian international students in the United States during COVID-19. *Journal of Counseling Psychology*.
- Fong, C. J., Schallert, D. L., Williamson, Z. H., Lin, S., Williams, K. M., & Kim, Y. W. (2023). Are self-compassionate writers more feedback literate? Exploring undergraduates' perceptions of feedback constructiveness. *Assessing Writing*, 57. https://doi.org/10.1016/j.asw.2023.100761
- Elfers, A., Plecki, M., **Kim, Y. W.**, & Bei, N. (2022). How retention and mobility rates differ for teachers of color? *Teachers and Teaching*, 28, 724-741. https://doi.org/10.1080/13540602.2022.2098271
- Fong, C. J., Schallert, D. L., Williams, K. M., Williamson, Z. H., Lin, S., **Kim, Y. W., &** Chen, L. (2021). Making feedback constructive: The interplay of undergraduates' mastery goal orientation with feedback specificity and friendliness. *Educational Psychology*, 1-19. https://doi.org/10.1080/01443410.2021.1951671
- Fong, C. J. & **Kim**, Y. W. (2021). A clash of constructs? Re-examining grit in light of academic buoyancy and future time perspective. *Current Psychology*, 40(4), 1824-1837. https://doi.org/10.1007/s12144-018-0120-4
- Koo, K., **Kim, Y. W.**, Lee, Y., & Nyunt, G. (2021). "It's my fault": Exploring experiences and mental wellness among Korean international graduate students. *Journal of International Students*, 11(4), 790-811. https://doi.org/10.32674/jis.v11i4.2801
- Fong, C. J., Schallert, D. S., Williams, K. M., Williamson, Z. H., Warner, J. R., Lin, S., & **Kim, Y. W.** (2018). When feedback signals failure but offers hope for improvement: A process model of constructive criticism. *Thinking Skills and Creativity, 30,* 42-53. https://doi.org/10.1016/j.tsc.2018.02.014
- Fong, C. J., Williams, K. M., Williamson, Z. H., Lin, S., **Kim, Y. W.**, & Schallert, D. L. (2018). "Inside out": Student appraisals for achievement emotions regarding constructive criticism, positive feedback, and negative feedback on writing. *Motivation and Emotion*, *42*, 236-257. https://doi.org/10.1007/s11031-017-9658-y
- Fong, C. J., Davis, C. W., Kim, Y., **Kim, Y. W**., Marriott, L. A., & Kim, S. (2017). Psychosocial factors and community college student success: A meta-analytic investigation. *Review of Educational Research*, 87(2), 388-424. http://doi.org/10.3102/0034654316653479
- Fong, C. J., Kim, Y., Davis, C. W., Hoang, T., & **Kim, Y. W.** (2017). A meta-analysis on critical thinking and community college success. *Thinking Skills and Creativity, 26,* 71-83. http://doi.org/10.1016/j.tsc.2017.06.002

CONFERENCE PRESENTATIONS

Joint Statistical Meetings (JSM)

Mozer, R., Miratrix, L., **Kim, Y.,** & Al-Ademi, S. (2024, August). *Statistical innovation with text as data: Emerging trends and future directions.* Paper presented at the JSM Annual Meeting. Portland, OR.

Association for Education Finance & Policy (AEFP)

Kim, Y., Mozer, R., Miratrix, L., & Al-Ademi, S. (2024, March). Assessing essay grading with machine learning and large language models: A comparative study on efficacy and accuracy. Paper presented at the AEFP Annual Meeting. Baltimore, MD.

CONFERENCE PRESENTATIONS (Cont'd)

National Council on Measurement in Education (NCME)

- **Kim**, Y. & Sanders, E. A. (2023, April). *Exploratory measurement modeling with Lasso*. Paper presented at the NCME Annual Meeting. Chicago, IL.
- Bei, N., Sanders, E. A., Abe, N., & **Kim, Y**. (2021, June). *Measuring item process data with network analysis methods*. Paper presented at the NCME Annual Meeting (Virtual).

International Meeting of the Psychometric Society (IMPS)

Kim, Y. & Sanders, E. A. (2023, July). *Exploratory measurement modeling with Lasso*. Paper presented at the IMPS Annual Meeting. College Park, MD.

American Educational Research Association (AERA)

- **Kim, Y**. & Sanders, E. A. (2024, April). *Enhancing factor analysis: Evaluating factor retention accuracy with measurement error*. Paper presented at the AERA Annual Meeting. Philadelphia, PA.
- Koo, K., Kwon, J., & **Kim, Y**. (2022, April). *Strive to survive in a pandemic in a foreign country: Korean international students' well-being during covid-19*. Paper presented at the AERA Annual Meeting. San Diego, CA.
- **Kim, Y.** (2021, April). *Understanding the role of academic achievement and psychosocial factors on adolescent depression: A latent growth model.* Paper presented at the AERA Annual Meeting (Virtual).
- Koo, K, **Kim, Y.**, Lee, Y., & Rodriquez, S. (2021, April). What does it mean to be an Asian in a pandemic? Exploring experiences of racism and discrimination among Asian international students in the United States during covid-19. Paper presented at the AERA Annual Meeting (Virtual).
- Elfers, A., Plecki, M., **Kim, Y.**, & Bei, N. (2021, April). *Examining differences in the retention and mobility of teachers of color by racial/ethnic group*. Paper presented at the AERA Annual Meeting (Virtual).
- **Kim, Y.** (2020, April). Executive function difficulty, self-esteem, happiness, gender, and parent's income as the predictors of digital addiction. Paper accepted for presentation at the AERA Annual Meeting, San Francisco, CA. (Conference canceled)
- Koo, K., **Kim, Y.**, Lee, Y., & Nyunt, G. (2020, April). What makes them happy? A qualitative study on Korean international graduate students' experiences and psychological well-being. Paper accepted for presentation at the AERA Annual Meeting, San Francisco, CA. (Conference canceled)
- **Kim, Y.** (2019, April). *Trajectories of parents' socioeconomic status, child-parent interaction, children's self-control, school readiness, and academic performance.* Paper presented at the AERA Annual Meeting, Toronto, ON.
- Fong, C. J., Davis, C., Li, D., & **Kim, Y.** (2017, April). *A meta-analysis of noncognitive factors and community college student success at 4-year institutions*. Paper presented at the AERA Annual Meeting, San Antonio, TX.
- Fong, C. J., **Kim, Y.**, Lin, S., & Hoang, T. (2017, April). *Do Noncognitive Interventions Enhance Community College Student Success? A Systematic Review and Meta-Analysis*. Paper presented at the AERA Annual Meeting, San Antonio, TX.
- Williamson, Z. H., Fong, C. J., Lin, S., Williams, K. M., **Kim, Y.**, & Schallert, D. L., (2017, April). *Self-Kindness in the Face of Criticism: Self-Compassion Influences Undergraduates' Perceptions of Constructive Feedback.* Paper presented at the AERA Annual Meeting, San Antonio, TX.
- Fong, C. J., Kim, Y., Davis, C. W., **Kim, Y.**, Marriott, L. A., & Kim, S. (2016, April). *Psychosocial and self-regulatory correlates of community college student success: A systematic review and meta-analysis*. Paper presented at the AERA Annual Meeting, Washington, D.C.

CONFERENCE PRESENTATIONS (Cont'd)

American Educational Research Association (AERA, Cont'd)

- Fong, C. J., Kim, Y., Davis, C. W., **Kim, Y.**, Marriott, L. A., & Kim, S. (2016, April). *Psychosocial and self-regulatory correlates of community college student success: A systematic review and meta-analysis*. Paper presented at the AERA Annual Meeting, Washington, D.C.
- Fong, C. J., Kim, Y., Davis, C. W., **Kim, Y.**, Marriott, L. A., & Kim, S. (2016, April). *Psychosocial and self-regulatory correlates of community college student success: A systematic review and meta-analysis*. Paper presented at the AERA Annual Meeting, Washington, D.C.
- Fong, C. J., Schallert, D. L., Williams, K. M., Williamson, Z. H., Lin, S., Chen, L., **Kim, Y.** (2016, April). *Making feedback constructive: The interplay of undergraduates' mastery goal orientation with feedback specificity and friendliness*. Paper presented at the AERA Annual Meeting, Washington, D.C.

Korean-American Educational Researchers Association (KAERA)

- **Kim, Y.** (2020, April). Understanding the role of academic achievement and psychosocial factors on adolescent depression: A latent growth model. Paper accepted at the KAERA Annual Meeting, San Francisco, CA. (Conference canceled)
- Koo, K., & Kim, Y. (2020, April). The effectiveness of focusing art therapy on PTSD and cultural adjustment among North Korean refugee girls. Paper accepted for presentation at the KAERA Annual Meeting, San Francisco, CA. (Conference canceled)
- Koo, K., **Kim, Y.**, & Lee, Y. (2019, April). What makes them happy? Korean international graduate students' personal and professional experiences and emotional health. Paper presented at the KAERA Annual Meeting, Toronto, ON.

American College Personnel Association (ACPA)

Koo, K., **Kim, Y.**, & Lee, Y. (2019, March). What makes them happy? Asian international graduate students' personal and professional experiences and emotional health. Paper presented at the ACPA Annual Meeting, Boston, MA.

Other Referred Conferences

- Fong, C. J., Davis, C., Li, D., **Kim, Y.**, & Hartman, C. E. (2016, August). *A meta-analysis of noncognitive factors and community college transfer student success at four-year institutions*. Paper presented at the Texas Higher Education Symposium, Austin, TX.
- Lin, S., Fong, C. J., & **Kim, Y.** (2016, April). *Make up your mind: A person-centered approach to growth and fixed mindsets among Chinese undergraduates*. Paper presented at the Chinese American Education Research & Development Association, Washington, D.C.
- Kim, Y., Fong, C. J., Davis, C. W., Hoang, T., & **Kim, Y.** (2016, March). *A meta-analysis on critical thinking and community college student achievement*. Paper presented at the Council for the Study of Community Colleges Annual Meeting, Plano, TX.

INVITED TALKS AND PRESENTATIONS

- **Kim, Y**. (2024, June). *ChatGPT vs. machine learning: Assessing the efficacy and accuracy of large language models for automated essay scoring.* Talk presented at the Trustworthy AI Lab for Education Summer Online Symposium, University of Norte Dame (<u>Detail</u>).
- **Kim**, Y. (2024, May). *Empowering children and guiding their future career in the AI era*. Invited panel by 2024 Changbal Road to Tech, Seattle, WA (<u>Detail</u>).

INVITED TALKS AND PRESENTATIONS (Cont'd)

- **Kim, Y**. (2023, October). *Modern prediction algorithms for factor analyses: Comparing accuracy-efficiency trade-offs*. Talk presented at the Mathematical Sciences Research Seminar, Bentley University (<u>Detail</u>).
- **Kim, Y**. (2023, October). Enhancing factor analysis: Evaluating factor retention accuracy with measurement error. Talk presented at the lab meeting of Causality, Applications, and Research in Education and Statistics, Harvard Graduate School of Education / Harvard Department of Statistics, Harvard University, Cambridge, MA.
- **Kim, Y.** (2021, April). Racism and the racialized experience among Asian international students in the U.S. Invited panel by ACPA 2021 International Colloquium Support for international students during and after Covid-19: Best practices from a global perspective (<u>Detail</u>).
- **Kim, Y.** (2020, July). *Racism and racialized identities: The experience among Asian international students in the United States*. Invited panel by ACPA Commission for Global Dimensions of Student Development.

WORKS IN PROGRESS

Manuscripts

- **Kim, Y. W.**, Mozer, R., Miratrix, L., & Al-Ademi, S. (in preparation). Chatgpt vs. machine learning: Assessing the efficacy and accuracy of large language models for automated essay scoring.
- **Kim, Y. W.** & Sanders, E. (in preparation). Enhancing factor analysis: Evaluating factor retention accuracy with measurement error.

Software Development

Mozer, R., Miratrix, L., & Al-Ademi, S. & **Kim. Y. W.** (in preparation). R package "*rcttext*": Tools for impact analysis in randomized trials with text outcomes

SERVICE

Jul 2019 – Jan 2020

Student Representative

SERVICE		
July 2023 – Current Ad-hoc Reviewer	•	Current Psychology
Oct 2020 – Current Ad-hoc Reviewer	•	Journal of International Students
Oct 2022 Program planning committee member	•	Section 2 (Statistical theory and quantitative methodologies), Division D program planning committee meeting, AERA, Washington, D.C.
Aug 2021 – Aug 2022 Student Support Chair	•	Associated Students of the College of Education (ASCE), University of Washington, Seattle
Aug 2021 – Aug 2022 GSC Liaison	•	AERA Division D Graduate Student Committee (GSC) Liaison, American Educational Research Association, Washington, D.C.
Apr 2021 – Jun 2021 Mentor	•	Next Generation Mentorship Program (NGMP), Office of Student Diversity and Inclusion, College of Education, University of Washington, Seattle

Education, University of Washington, Seattle

New Hire Search Committee, Measurement & Statistics, College of