

TIFFANY WU
DOCTORAL CANDIDATE, UNIVERSITY OF MICHIGAN
EMAIL: WUTIFFA@UMICH.EDU
WEBSITE: TIFFANY-WU.GITHUB.IO

EDUCATION

University of Michigan	2021–2026 (expected)
<i>Ph.D. in Education and Psychology</i>	
Thesis: “Showing up is half the battle: How machine learning, psychometrics, and causal inference methods offer distinct yet complementary insights into reducing student absenteeism”	
Dissertation Committee: Christina Weiland (chair), Allison Ryan, Ben Hansen, Kevin Stange	
University of Michigan	2022–2026 (expected)
<i>Master of Arts in Statistics (Dual Degree Program)</i>	
University of Chicago	2018–2019
<i>Master of Arts in the Social Sciences</i>	
Concentration in Psychology	
Thesis: “Multiplication is vexation and practice drives me mad: The relationship between math anxiety, retrieval practice, and test performance”	
Advisor: Susan Levine	
Northwestern University	2011–2015
<i>Bachelor of Science in Secondary Education and History</i>	
Summa cum Laude	
Illinois Middle School and High School Teaching License:	
Professional Educator License (PEL) 2315234	

PROFESSIONAL EXPERIENCE

2021-	University of Michigan, Early Learning Lab, Ann Arbor, MI <i>Graduate Research Assistant, Dr. Christina Weiland</i> <ul style="list-style-type: none">• Use causal inference, psychometric, and machine learning/AI methods to inform the development of early childhood interventions and policies
2019-2021	LEAP Innovations, Personalized Learning Education Technology Non-profit, Chicago, IL <i>Research Analyst</i> <ul style="list-style-type: none">• Conducted program efficacy research and analyzed academic achievement of students using LEAP’s edtech and professional development programming in Chicago Public Schools
2018-2019	University of Chicago, Cognitive Development Lab, Chicago, IL <i>Graduate Research Assistant, Dr. Susan Levine</i> <ul style="list-style-type: none">• Designed a survey study, using a causal mediation analysis to examine the relationship between math anxiety, retrieval practice, and test performance

2015-2017	Chicago Public Schools, Lindblom Math & Science Academy, Englewood, Chicago, IL <i>High School Social Sciences Teacher</i>
	<ul style="list-style-type: none"> • Taught Psychology, Sociology, and Human Geography in a Title 1 school on the South Side of Chicago

2011-2015	Northwestern University, Institute for Policy Research, Evanston, IL <i>Research Assistant, Dr. Lindsay Chase-Lansdale</i>
	<ul style="list-style-type: none"> • Collaborated on the Two-Generation Education Intervention project, which combines education and workforce programs for young, low-income parents with high-quality, early childhood education programs for children

FELLOWSHIPS AND AWARDS

2025	William C. Morse Fellowship, University of Michigan (\$995)
2024	Sarri Family Fellowship for Research on Educational Attainment of Children in Low Income Families, Institute for Social Research (ISR), University of Michigan (\$6,000)
2024	Dr. Stuart A. Karabenick Fellowship, University of Michigan (\$1,000)
2023, 2024	Rackham Conference Travel Grant, University of Michigan (\$900)
2022-2026	IES Causal Inference in Education Policy Research Predoctoral Fellowship (4 years of support for doctoral studies; \approx \$146,000)
2022	Association for Public Policy Analysis and Management (APPAM) Equity and Inclusion Student Fellowship (\$600)
2022	Institute for Social Research (ISR)-Rackham Summer Training Award, University of Michigan (\$3,800)
2021	Rackham Regents Fellowship, University of Michigan (1 year of support for doctoral studies; \$32,691)
2019	Dean's Scholarship, University of Chicago (\$5,250)
2019	Master of Arts in the Social Sciences Scholarship, University of Chicago (\$28,998)
2015	Highest Undergraduate GPA Award, School of Education and Social Policy, Northwestern University
2013-2015	Ralph Robinson Scholarship (\$5,000), Northwestern University
2012	New Cosmic Frontiers Astronomy & Physics International Essay Competition Third Place, University of Chicago (\$10,000)

GRANTS

Awarded	
2022, 2023	<p><i>Collaborative Partnership with Local Michigan Schools to Promote Interest in STEM</i> DEI Faculty Grant, Industrial and Operations Engineering, University of Michigan PIs: Salar Fattahi (PI), Tiffany Wu (co-PI) Total award amount: \$10,000 Media coverage link here</p>

PUBLICATIONS

Peer-Reviewed Journal Articles (published or in press)

Wu, T. & Weiland, C. (in press). Leveraging Modern Machine Learning to Improve Early Warning Systems and Reduce Chronic Absenteeism in Early Childhood. *Educational Evaluation and Policy Analysis*. (also an EdWorkingPaper, No. 24-1081. Annenberg Institute for School Reform at Brown University). [[link here](#)]

McCormick, M., Hanno, E., Weiland, C., **Wu, T.**, Pralica, M., Hsueh, J., Giles, A., Snow, C., & Sachs, J. (2025). Moving beyond point in time estimates: Using growth models to understand when PreK convergence happens, how, and for which skills. *Child Development*, 96(4), 1354-1372. [[link here](#)]

Wu, T., Weiland, C., McCormick, M., C., Hsueh, J., Snow, C., & Sachs, J. (2024). One score to rule them all: Comparing the predictive and concurrent validity of 30 ways to score the Hearts and Flowers task. *Assessment*, 1-19. [[link here](#)]

Papers Under Review

Yerington, E., Weiland, C., **Wu, T.**, McCormick, M., Hsueh, J., Sachs, J., Snow, C., Guerrero-Rosada, P., & Xia, Y. (2025). *Teacher-Student Racial-Ethnic Match and Kindergarteners' Academic and Cognitive Gains: Evidence from Boston*. Revise and resubmit, *Early Childhood Research Quarterly*.

Weiland, C., **Wu, T.**, Unterman, R., Shapiro, A., Lightner, S., Staines, T., & Taylor, A. (2025). *Impacts of Oversubscribed Boston Pre-K Programs through Middle School*. Revise and resubmit, *Child Development*. (also an EdWorkingPaper No. 25-1194. Annenberg Institute for School Reform at Brown University). [[link here](#)]

Wu, T., Weiland, C., Diemer, M., Unterman, R., Shapiro, A., & Staines, T. (2025). *Measuring "Noncognitive" Skills at Scale: Building Longitudinal Student Behavior Composites Using Administrative Data*. Under review (also an EdWorkingPaper No. 25-1250. Annenberg Institute for School Reform at Brown University). [[link here](#)]

Lein, L., Borah, A., Burzo, Z., Egash, R., Khoshlessan, M., Jin, Z., Mahalingam, R., Nwatu, J., Patel, M., Vega Hidalgo, A., **Wu, T.**, & Mihalcea, R. (2025). *How AI can be used to contribute to poverty alleviation without deepening inequality*. Under review.

Policy Briefs

Wu, T., McCormick, M., Weiland, C., Hsueh, J., Sachs, J., & Snow, C. (2023). *What Sustains the Pre-K Boost? New Evidence from Boston Public Schools*. Boston Early Childhood Research Practice Partnership. [[link here](#)]

Weiland, C., McCormick, M., **Wu, T.**, MacDowell, C., Guerrero-Rosada, P., Taylor, A., Snow, C., & Sachs, J. (2023). *Professional Development in the Time of COVID-19: Evidence and Insights from Early Educators in the Boston Public Schools*. Boston Early Childhood Research Practice Partnership. [[link here](#)]

Wu, T., Weiland, C., McCormick, M., Sachs, J., Taylor, A., Hsueh, J., & Snow, C. (2023). *What if You Miss the First Year of an Aligned Curriculum? Boston Public Schools' Pre-K Non-Attendees Made Equivalent Learning Gains Whether or Not their Kindergarten Program was Aligned with Pre-K*. Boston Early Childhood Research Practice Partnership. [[link here](#)]

Works in Progress

Wu, T., Weiland, C., & Staines, T. *The Chronic(les) of Absenteeism Measurement: Unpacking the Many Measures of Attendance and Evidence for a Lower Chronic Absenteeism Threshold*

Wu, T. *Fair Warning? Improving Early Warning Systems for Ninth Grade Chronic Absenteeism through Longitudinal Trajectories, Assessment of Computational Cost, and Fairness Evaluation.*

Wu, T., Unterman, R., & Weiland, C. *Quantifying and Predicting Variation in the Long-Term Effects of Oversubscribed Prekindergarten Programs.*

CONFERENCE ACTIVITY

Presentations

Weiland, C., **Wu, T.**, Unterman, R., Shapiro, A., Lightner, S., Staines, T., & Taylor, A. (2025, May). *Impacts of Oversubscribed Boston Pre-K Programs through Middle School*. Causal Inference in Education Research Seminar, Ann Arbor, MI.

Wu, T. & Weiland, C. (2025, May). *Leveraging Modern Machine Learning to Improve Early Warning Systems and Reduce Chronic Absenteeism in Early Childhood*. Supporting Students in their Earliest Years: Innovations at the State and Local Levels. Harvard University Strategic Data Project Convening, Boston, MA.

Yerington, E., Weiland, C., **Wu, T.**, McCormick, M., Hsueh, J., Sachs, J., Snow, C., Guerrero-Rosada, P., & Xia, Y. (2025, May). *Teacher-Student Racial-Ethnic Match and Kindergarteners' Academic and Cognitive Gains: Evidence from Boston*. Society for Research in Child Development (SRCD), Minneapolis, MN.

Wu, T. (2025, February). *Leveraging Modern Machine Learning to Improve Early Warning Systems and Reduce Chronic Absenteeism in Early Childhood*. Combined Program in Education and Psychology Brown Bag, Ann Arbor, MI.

Wu, T. & Weiland, C. (2024, September). *Leveraging Modern Machine Learning to Reduce Chronic Absenteeism in Early Childhood*. Society for Research on Educational Effectiveness (SREE), Baltimore, MD.

Wu, T., Weiland, C., Unterman, R., Shapiro, A. (2023, November). *Prekindergarten Absenteeism in Boston Public Schools: Predictors, Patterns, and Relationships to Learning Outcomes*. Association for Public Policy Analysis & Management (APPAM), Atlanta, GA.

Wu, T. & Weiland, C. (2023, August). *SMOTE, XGBoost, Action! Leveraging Machine Learning for Improving Chronic Absenteeism Prediction in Early Childhood*. Causal Inference in Education Research Seminar, Ann Arbor, MI.

Wu, T. (2019, June). *Multiplication is Vexation and Practice Drives Me Mad: Retrieval Practice Accuracy Mediates the Effect of Math Anxiety on Test Performance*. The University of Chicago MAPSS Conference, Chicago, IL.

Posters

Wu, T. & Weiland, C. (2025, November). *Leveraging Modern Machine Learning to Improve Early Warning Systems and Reduce Chronic Absenteeism in Early Childhood*. MIDAS Annual Data Science & AI Summit, University of Michigan, Ann Arbor, MI.
- [MIDAS Award for High-Impact Application](#)

Wu, T., Weiland, C., McCormick, M., Hsueh, J., Snow, C., & Sachs, J. (2023, May). *One Score to Rule Them All? Comparing the Predictive and Concurrent Validity of 30 Ways to Score the Hearts and Flowers Task*. HighScope International Conference, Ypsilanti, MI.

Wu, T., Weiland, C., McCormick, M., Hsueh, J., Snow, C., & Sachs, J. (2023, May). *One Score to Rule Them All? Comparing the Predictive and Concurrent Validity of 30 Ways to Score the Hearts and Flowers Task*. American Educational Research Association (AERA), Chicago, IL.

Wu, T., Weiland, C., McCormick, M., Hsueh, J., Snow, C., & Sachs, J. (2023, March). *One Score to Rule Them All? Comparing the Predictive and Concurrent Validity of 30 Ways to Score the Hearts and Flowers Task*. The Susan B. Meister Lecture in Child Health Policy, University of Michigan Child Health Evaluation and Research Center, Ann Arbor, MI.

Jenifer, J. & **Wu, T.** (2019, May). *Math Anxiety & Retrieval Practice: A Potential Strategy for Reducing Performance Gaps*. Association for Psychological Science (APS) 31st Annual Convention. Washington, D.C.

Sommer, T.E., Chase-Lansdale, L., Sabol, T.J., Yoshikawa, H., Brooks-Gunn, J., **Wu, T.** (2014, June). *Barrier or Opportunity to Promote Parental Employment?: Early Childhood Education Programs for Low-Income Children*. Work and Family Researchers Network Conference. New York City, NY.

TEACHING EXPERIENCE

Graduate Student Instructor

Fall 2024 **University of Michigan, Ann Arbor, MI**
Psychometric Theory: Classical and Latent Trait Models (EDUC 707/PSYCH 803)
Teaching Assistant with Dr. Matthew Diemer

Summer 2024 **University of Michigan, Ann Arbor, MI**
Latent Variable Modeling to Advance Diversity, Equity, and Inclusion
International Consortium for Political and Social Research (ICPSR) Summer Program
Teaching Assistant with Dr. Matthew Diemer

K-12 Teaching Experience

2015-2017 **Chicago Public Schools, Lindblom Math & Science Academy (Title 1 School), Englewood, Chicago, IL**
High School Social Sciences Teacher

2012-2015 **Northwestern University Center for Talent Development, Evanston, IL**
Teaching Assistant & Residential Teaching Assistant

Guest Lectures

Wu, T. (2025, February). *Leveraging Machine Learning to Improve Chronic Absenteeism Prediction in Early Childhood*. Guest Lecture in IOE 473: Advanced Data Analytics. University of Michigan, Ann Arbor, MI.

Wu, T. (2024, October). *Regression Discontinuity and the Effectiveness of Early Warning Systems*. Guest Lecture in PUBPOL 712: Causal Inference in Education Policy Research. University of Michigan, Ann Arbor, MI.

PAID CONSULTANCIES

2023 **Johnson County Cabinet for Children and Youth, Vienna, IL**
Education Research Consultant

REFEREE SERVICE

2024-Present **Ad Hoc Reviewer**
AERA Open, Assessment

ACADEMIC SERVICE

Service to the University of Michigan

2024-2025 Coordinator, Causal Inference in Education Research Seminar (CIERS), Education Policy Initiative
2024-2025 Admissions Committee Member, Combined Program in Education and Psychology
2023-2024 Curriculum Committee Member, Combined Program in Education and Psychology
2022-2023 Social Committee Member, Combined Program in Education and Psychology
2022-2023 Executive Committee Member, Combined Program in Education and Psychology
2021-2022 Recruitment Committee Member, Combined Program in Education and Psychology

AFFILIATIONS

2025- Association for Education Finance & Policy (AEFP)
2024- Society for Research on Educational Effectiveness (SREE)

2022- Association for Public Policy Analysis & Management (APPAM)

2021- American Educational Research Association (AERA)

PROGRAMMING & STATISTICAL SOFTWARE

Extensive experience with R, Python, Stata, and SQL.

Additional experience with SPSS, MPlus, and web development tools (HTML, CSS, Javascript).