

# YongSeok Lee

School of Human Development and Organizational Studies, Research and Evaluation Methodology

College of Education, University of Florida

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## EDUCATION

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- 2017 - 2022      Ph.D., Education (Research & Evaluation Methodology), University of Florida  
*Dissertation Title: "A Comparison of Random Forest Methods for Dealing with Missing Data in Covariates in Propensity Score Analysis"*  
*Advisor: Dr. Walter Lana Leite*
- 2013 - 2016      M.A., Education (Educational Measurement & Evaluation), Seoul National University  
*Thesis Title: "The effect of the types of involvement in early childhood education on infant's cognitive, mental, behavioral development"*  
<https://s-space.snu.ac.kr/handle/10371/127918>
- 2007 - 2013      (Dual Degree)  
B.E., Statistics, Sungkyunkwan University  
B.A., Education, Sungkyunkwan University

## RESEARCH INTERESTS

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### [Quantitative Methodology]

Causal Inference in Machine Learning Framework, Causal Framework in Measurement, Missing Data Analysis, Multilevel Modeling (HLM), Structural Equation Modeling (SEM), Longitudinal Data Analysis, Dynamic (Optimal) Treatment Regime

### [Substantive Areas]

Equity Issue in Measurement, Online Teaching & Learning (MOOC), Early Childhood Education (Parenting Issue/Shadow Education in Early Childhood)

## RECOGNITIONS & OUTSTANDING ACHIEVEMENT

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- 2017-2021      Graduate Student Funding Award (GSFA), University of Florida
- 2019      Distinguished Paper Award, Florida Educational Research Association (FERA)

## PEER-REVIEWED PUBLICATIONS

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- Lee, Y., Leite, W. L., & Leroux, A. (2023). Propensity Score Matching with Cross-Classified Data Structures: A Comparison of Methods, *The Journal of Experimental Education*, <https://doi.org/10.1080/00220973.2023.2164843>
- Kim, D., Lee, Y., Leite, W. L., & Higgins-Manley, A. C. (2020). Exploring student and teacher usage patterns associated with student attrition in an open educational resource-supported online learning platform. *Computers & Education*, 156. <https://doi.org/10.1016/j.compedu.2020.103961>

### [Published in South Korea]

- Lee, Y. (2017). Analysis on the Effects of English Mediated Instruction at Universities: Focusing on students' academic self-efficacy and self-concept of English communication. *Journal of Research in Curriculum & Instruction*, 21(2), 84-99. <https://doi.org/10.24231/rici.2017.21.2.84>
- Kang, M., Lee, A., Shin, M., Lee, Y., Jo, H. (2017). Latent Growth Model Analysis of Career Indecision and Career Self-Efficacy Among College Students in Individual Career Counseling, *The Korean Journal of Counseling and Psychotherapy*, 29(2), 383-408. <https://doi.org/10.23844/kjcp.2017.05.29.2.383>
- Park, H., Lee, J., & Lee, Y. (2015). The analysis on the effects of volunteer activity participation on student's sense of community. *Korean Journal of Educational Administration*, 33(2), 235-257.

## SELECTED MANUSCRIPT UNDER REVIEW

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- Lee, Y., Leite, W. L. (Preprint). A Comparison of Missing Imputation Methods for Covariates in Propensity Score Analysis Using Random Forests.

## SELECTED CONFERENCE PRESENTATION

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- Lee, Y., Li, Z., Faiello, M., Huggins-Manley, A. C., & Bratsch-Hines, M. E. (2023). Assessing The Performance of Smoothed-Bootstrapping in DIF Detection with Small Sample Size. National Council on Measurement in Education (NCME), Chicago, IL.
- Lee, Y., Leite, W. L. (2021). The Effect of Lack of Measurement Invariance in Propensity Score Analysis with Latent Variables. Roundtable discussion at the 2021 Annual meeting of the American Educational Research Association (AERA), Orlando, FL.
- Lee, Y., Leite, W. L. (2020). A Comparison of Missing Imputation Methods for Covariates in Propensity Score Analysis Using Random Forests. Roundtable discussion at the 2020 Annual meeting of the American Educational Research Association (AERA), San Francisco, CA
- Lee, Y., Leite, W. L., & Leroux, A. J. (2019). A Comparison of Propensity Score Matching

with Cross-Classified Data in Quasi-Experimental Research. UF Statistics Winter Workshop, Gainesville, FL.

Kim, J., Kim, N., & Lee, Y. (2014). The relation between adolescents' free-time activities and their creativity and self-concept. Poster was presented at ICER 15th international conference on education, Seoul National University [**Presented in South Korea**]

## WORKS IN PROGRESS

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### [Propensity Score & Missing Data]

Lee, Y., Leite, W. L. (in preparation [proposal draft is completed]). *A comparison of non-ignorable missing data methods for covariates in the propensity score analysis using random forests.*

### [Testing & Measurement]

Lee, Y., Huggins-Manley, A. C. (in preparation [dataset are ready for analysis]). *Analysis of Differential Item Functioning (DIF) in Teacher Literacy Assessment in the Early Learning Florida (ELFL)*

Lee, Y., Huggins-Manley, A. C. (in preparation [simulation code is ready]). *A comparison of Causal Differential Item Functioning (DIF) Adjusted by Propensity Score Approach: Focusing on Matching and Weighting Strategies*

### [Social Network & NLP]

Lee, Y., Smith, T. B., & Vacca, R. (in preparation [dataset is ready for analysis]). *Leveraging team science? Evaluating the impact of translational research funding and services on scientific collaboration*

Smith, T. B., & Vacca, R. & Lee, Y. (in preparation [dataset is ready for analysis]). *Emphasizing creativity? Evaluating the impact of translational research funding and services on scientific innovation in medical and public health research*

## OTHER PUBLICATIONS

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Lee, Y., Leite, W., Leroux, A. (2023). Resources for Propensity Score Matching with Cross-Classified Data Structures. <https://doi.org/10.17605/OSF.IO/7EQMC>

## R SOFTWARE

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### [Contributor]

Fish, G. & Lee, Y. (2021). A sensitivity analysis of predicting continued use of online teacher professional development and the influence of social presence and sociability by Jo

A. Smith and Stephen A.

Sivo. <https://cran.rproject.org/web/packages/SEMsens/vignettes/Smith12vignette.pdf>

## Research Appointments

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**(08/2022 – present)**

Postdoctoral Associate

Supervisor: Dr. Christopher McCarty ([ufchris@ufl.edu](mailto:ufchris@ufl.edu))

Clinical and Translational Science Institute (CTSI) Network Science Program and Bureau of  
Economic and Business Research (BEBR)  
University of Florida

**(08/2021 – 05/2022)**

Research Assistant on Item analysis in Early Learning Florida (ELFL)

PI: Dr. Bratsch-Hines, Mary ([bratsch@coe.ufl.edu](mailto:bratsch@coe.ufl.edu))

Role: Data Analyst, Writing Technical Report/Research Paper, Constructing dashboard  
Lastinger Center for Learning  
University of Florida

**(01/2019 – 08/2021)**

Research Assistant on Algebra Nation Project (Funded by Institute of Education Sciences)

PI: Dr. Walter Lana Leite ([walter.leite@coe.ufl.edu](mailto:walter.leite@coe.ufl.edu))

Role: Data Analyst, Writing Research Paper  
Virtual Learning Lab (VLL)  
University of Florida

## TEACHING & COUNSELING EXPERIENCE

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### [Undergraduate Course]

Fall 2021 Educational Research Design (Course instructor), University of Florida

### [Faculty & Graduate Student Counseling]

(Acknowledgement)

Youmi Suk & Hyunseung Kang (2022). <https://doi.org/10.1080/00273171.2021.1994364>

(Cohort Counseling)

Lisette Tolentino ([litolen@ufl.edu](mailto:litolen@ufl.edu), Simulation Process of Dissertation)

Jiehan Li ([jiehanli@ufl.edu](mailto:jiehanli@ufl.edu), Analysis code in IRT-missing data Project)  
Taewon Kim ([taewonkim@Knights.ucf.edu](mailto:taewonkim@Knights.ucf.edu), Analysis plan for journal paper)

## PROFESSIONAL AFFILIATIONS & SERVICES

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### [Journal Article Reviewer]

Career and Technical Education Research (2021, Ad-hoc reviewer)  
Computers and Education (2020, Volunteer reviewer)

### [Conference Reviewer & Membership]

American Educational Research Association (AERA - Division D)  
National Council on Measurements in Education (NCME)  
Florida Educational Research Association (FERA)  
Psychometric Society (IMPS)  
Society of Research on Educational Effectiveness (SREE)

## COMPUTER SOFTWARE SKILLS

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Professional Statistical Analysis: **R**  
Machine Learning & Deep Learning: **R, Python, TensorFlow, Scikit-Learn**  
Econometrics & Causal inference: **STATA, R**  
Structural Equation Model (SEM): **MPLUS, AMOS, R**  
Multilevel modeling: **HLM, STATA, MPLUS, R**  
Bayesian analysis: **R (JAGS)**  
Interactive Dashboard: **flexdashboard, R-shiny**

## REFERENCES

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### **Dr. Walter Lana Leite**

Professor in the College of Education (Research & Evaluation Methodology)  
2-265I Norman Hall  
PO Box 117049  
Gainesville, FL 32611  
University of Florida  
[walter.leite@coe.ufl.edu](mailto:walter.leite@coe.ufl.edu)

### **Dr. Anne Corinne Huggins-Manley**

Associate Professor in the College of Education (Research & Evaluation Methodology)  
Associate Director of Human Development and Organizational Studies  
2-265K Norman Hall

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**Dr. George Michailidis**

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Director of the UF Informatics Institute  
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