<u>CURRICULUM VITAE</u>

Eunkyeng Baek, Ph. D.

Department of Educational Psychology
Texas A&M University
baek@tamu.edu

EDUCATION

2015   Ph.D.   Curriculum and Instruction
Concentration: Educational Measurement & Research
University of South Florida

2006   M.A.   Industrial and Organizational Psychology
Concentration: Psychometrics
Korea University [Seoul, Korea]

2003   B.A.   Psychology
Sungshin Women's University [Seoul, Korea]

ACADEMIC POSTIONS

2017-present   **Assistant Professor**
Texas A&M University
Department of Educational Psychology

2016-2017   **Visiting Assistant Professor**
Texas A&M University
Department of Educational Psychology

2011-2015   **Methodological Consultant**
University of South Florida
Consulting Office for Research in Education (CORE)

2010-2015   **Graduate Research Assistant**
University of South Florida
Department of Educational Measurement & Research

PROFESSOINAL EXPERIENCES

2015-2016	**Senior Coordinator for Student Learning Evaluation:**
	Developing predicted models for evaluation policy
	School Board of Polk County
2006-2007	**Senior Researcher:**
	Working as psychometrician to develop an aptitude test for army official
	Korea Institute for Defense Analyses (KIDA)
2006-2005	**Graduate Research Assistant:**
	Working as a psychometrician to develop a pre-employment test
	Dusan Group
2005-2004	**Graduate Research Assistant:**
	Working as a psychometrician to develop achievement tests
	Korean Psychological Testing Institute
2004	**Graduate Research Assistant:**
	Working as a psychometrician to develop a pre-employment test
	Korean Airlines

RESEARCH INTEREST

Single-Case data analysis
- Statistical methods to synthesizing single-case data
- Methodological issues of single-case data analysis

Multilevel modeling/Longitudinal modeling
- Consequences of misspecification of the model
- Consequences of using different estimation methods

Contemporary quantitative research methodologies
- Structural equation modeling
- Bayesian estimation method

Large-scale longitudinal data analysis
- Long term effect of educational policy
- Analyzing student academic achievement

GRANT ACTI VITIES

1. Understanding Online Learners: The Development of the Online-Learning Readiness Scale (ORES). Triads for Transformation (T3) Multidisciplinary Seed-Grant. Awarded by the Office of the Provost and Executive Vice President, Texas A&M University, $30,000. 2018-2019. <u>Investigators</u>: Oi-Man Kwok (PI), **Eunkyeng Baek (Co-PI)**, Noelle Wall Sweany (Co-PI), &

Alex McIntosh (Co-PI).

Roles and Responsibilities: Co-PI, Co-author of proposal, and co-author on associated peer-reviewed presentations, and publications.

2. Innovative K-12 School Design For Active And Healthy Students. Triads for Transformation (T3) Multidisciplinary Seed-Grant. Awarded by the Office of the Provost and Executive Vice President, Texas A&M University, $30,000. 2019-Present. <u>Investigators</u>: Xuemei Zhu (PI), **Eunkyeng Baek (Co-PI)**, & Chanam Lee (Co-PI).

Roles and Responsibilities: Co-PI, Co-author of proposal, and co-author on associated peer-reviewed presentations, and publications.

PUBLICATIONS

*Former/current students are identified with *, impact factors (IF) were retrieved from Web of Science (WS), and citation counts were taken from Google Scholar (GS).*

Refereed Publications

*Yeh, Y., Kwok, O.,*Chien, H., Sweany, N. W., **Baek, E.**, & McIntosh, W. (In press*). How college students' achievement goal orientations predict their expected online learning outcome: The mediation roles of self-regulated learning strategies and supportive online learning behaviors. *Online Learning Journal.*

Baek, E., W., Beretvas, T., Van den Noortgate, & Ferron, J. (2019). Brief research report: REML versus Bayesian estimation with noninformative priors in multilevel models of multiple-baseline data. *Journal of Experimental Education. DOI: 10.1080/00220973.2018.1527280* [WS 2018 IF: 2.919; times cited (GS): 3]

Petit-Bois, M., **Baek, E.**, Van den Noortgate, W., Beretvas, T., & Ferron, J. (2016). The consequences of modeling autocorrelation when synthesizing single-case studies using a three level model. *Behavior Research Methods, 48, 803-812.* [WS 2018 IF: 4.063; times cited (GS): 13]

Baek, E., Petit-Bois, M., Van den Noortgate, W., Beretvas, T., & Ferron, J. (2016). Using visual analysis to evaluate and refine multilevel models of single-case studies. *Journal of Special Education, 50,* 18-26. [WS 2018 IF: 1.537; times cited (GS): 12]

Baek, E., Moeyaert, M., Petit-Bois, M., Beretvas, T., Van den Noortgate, W., & Ferron, J.

(2014). The use of multilevel analysis for integrating single-case experimental design results within a study and across studies. *Neuropsychological Rehabilitation, 24,* 590-606. *[WS 2018 IF: 2.667; times cited (GS): 28]*

Baek, E., & Ferron, J. M. (2013). Multilevel Models for Multiple-Baseline Data: Modeling Across Participant Variation in Autocorrelation and Residual Variance. *Behavior Research Methods. 45,* 65-74. *[WS 2018 IF: 4.063; times cited (ISI): 31]*

Chatters, S., **Baek, E.**, & Rodríguez-Campos, L. (2010). Program management in secondary schools: A collaborative metaevaluation. *The International Journal of Knowledge, Culture, and Change Management, 10*, 22-35. **[WS IF not available, SJR: 0.105]**

Book chapters and conference proceedings

Kwok, O., *Yeh, Y., *Chien, H., Sweany, N. W., **Baek, E.**, & McIntosh, W. (March, 2019*). Finding the At-Risk Online Learners: Development of the Online REadiness Screener (ORES).* The Companion Proceedings of the 9th International Conference on Learning Analytics and Knowledge (LAK19) (pp.159-160). New York, NY: ACM. *https://www.solaresearch.org/wp-content/uploads/2019/08/LAK19_Companion_Proceedings.pdf* *[Google H5-index for Interanational Conference on Learning Analytics and Knowledge: 36; Ranked 6th in "Educational Technology" based on Google Scholar Metrics]*

Baek, E., & Chatter, S. (2015). Using a Collaborative Approach in the Evaluation of a graduate Program. In Rodríguez-Campos, L. (Eds.), *Collaborative Evaluation in Practice: Insights from Business, Education and Nonprofit.* Scottsdale, AZ: Information Age Publishing.

Evaluative and Technical Reports

Rodríguez-Campos, L., **Baek, E.**, Owens, C., & Walker, C. (2011). *Recognizing Extraordinary Accomplishments of Children (REACH): Quarterly Performance Report_ May 2011.* Florida, USA: University of South Florida, Grant's Principal Investigator.

Rodríguez-Campos, L., **Baek, E.**, Owens, C., & Walker, C. (2010). *Recognizing Extraordinary Accomplishments of Children (REACH): Quarterly Performance Report_ November 2010.* Florida, USA: University of South Florida, Grant's Principal Investigator.

Rodríguez-Campos, L., **Baek, E.**, Owens, C., & Walker, C. (2010). *Recognizing Extraordinary Accomplishments of Children (REACH): Quarterly Performance Report_ May 2010.* Florida, USA:University of South Florida, Grant's Principal

Investigator.

Rodríguez-Campos, L., **Baek, E.**, Bradshaw, W., Chatters, S. Lake, J., Lewis, J. Mahowski, J., Pham, T., & Sibley, C. (2010). *Metaevaluation of Commissioned Reports*. Florida, USA: Metaevaluation client (client requested confidentiality).

Non-Refereed Publications

Baek, E., & Chatters, S. (June, 2011). AEA365: Improving the dynamics of metaevaluation teams. *American Evaluation Association Website, 6,* 20. Retrieved from http://aea365.org/blog/?p=3769.

Baek, E., & Chatters, S. (May, 2011). AEA365: Risks in Internal Evaluation. *American Evaluation Association Website, 5,* 24. Retrieved from http://aea365.org/blog/?p=3518.

Manuscripts Uunder Peer-Review

Baek, E., Luo, W. & *Henri, M. (**resubmit**). Issues and solutions in meta-analysis of single-case design with multiple dependent variables using multilevel modeling. *Journal of Experimental Education.*

Baek, E., & Ferron, J. M. (**resubmit**). Modeling heterogeneity of the level-1 Error covariance matrix in multilevel models for single-case data using Bayesian estimation. *Methodology.*

*Campbell, A., Burk, M., Thompson, J., *Semma, B., & **Baek, E.** (under review). Integrating social-emotional and behavior support for disadvantaged African American learners at-risk for emotional and behavioral problems. *Exceptional Children.*

Baek, E., & Ferron, J. M. (under review). Bayesian analysis for multiple-baseline studies where the variance differs across cases in OpenBUGS. *Developmental Neurorehabilitation*

Manuscripts in Progress

Baek, E., Luo, W., & *Henri, M. (In progress). Modeling between-outcomes variation in level-1 error covariance matrix in meta-analysis of single-case design using mutilevel modeling. *Behavior Research Methods.*

Baek, E., *Semma, B., *Altinsoy, F., *Ji, Y., *Lam, K., Luo, W., & Thompson, C. (In progress). A systematic review of meta-analyzing single-case data using multilevel modeling.

*Li, H, Luo, W., **Baek, E.**, *Lam, K., & Thompson, C. (In progress). Adjusted

autocorrelation using bootstrapping method in multilevel modeling of SCED. *Behavior Research Methods.*

Thompson, C., *Semma, B., & **Baek, E.** (In progress). A data-driven prior distribution for between-studies heterogeneity in meta-analysis.

Wang, Y., **Baek, E.**, & Ferron, J. M. (In progress). Evaluation of a latent growth modeling approach to estimating intervention effects in interrupted time series data with small samples.

CONFERENCE PRESENTATIONS *(Former/current students are marked with *)*

*Li, H, *Lam, K., Luo, W., **Baek, E.,** & Thompson, C, & *Majzun, A.(April, 2020). *Adjusted autocorrelation using bootstrapping method in multilevel modeling of SCED.* Poster presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

*Yeh, Y., Kwok, O., *Chien, H., Sweany, N. W., **Baek, E.,** & McIntosh, A. (April, 2020). *Achievement Goals Predict Online Academic Expectations Through Self-Regulated Learning Strategies and Supportive Online Learning Behaviors.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Ganz, J., Machalicek, W., Maggin, D., Vannest, K., & **Baek, E.** (Feb, 2020). *Establishing evidence-based practices in single-case research via the use of meta-analysis.* Panel at the Council for Exceptional Children (CEC), Portland, OR.

Baek, E., *Henri, M., & Luo, W. (April, 2019). *Meta-analysis of Single-Case Design using Multilevel modeling: Modeling Between-outcomes Variation in Autocorrelation.* Poster presented at the Annual Meeting of the American Educational Research Association, Toronto, Canada.

Baek, E., *Semma, B., *Altinsoy, F., *Ji, Y., *Lam, K., Luo, W., & Thompson, C. (April, 2019). *A systematic review of meta-analyzing single-case data using multilevel modeling.* Poster presented at the Annual Meeting of the American Educational Research Association, Toronto, Canada.

Kwok, O., *Yeh, Y., *Chien, H., Sweany, N. W., **Baek, E.,** & McIntosh, A. (April, 2019). *Understanding online learners: The development of the Online-Learning REadiness Scale (ORES).* Paper presented at the 1st President's Excellence Fund Symposium, College Station, TX.

Baek, E., Cao, & Chunhua (May, 2016). *Using multi-membership multilevel VAM.* Paper presented at the Annual Meeting of the Modern Modeling Methods, Storrs, CT.

Baek, E., Cao, Chunhua, & Wright, Heather. (November, 2015). *Using PROC GLIMMIX to improve a school district's Early Warning System by identifying students at risk of*

dropping out. Paper presented at the Annual Meeting of the Florida Educational Research Association, Cocoa Beach, FL.

Baek, E., & Ferron, J. M. (April, 2015). *The impact of modeling and not modeling between-case variation in the level-1 error structure on the multilevel modeling in single-case studies: A Monte Carlo study.* Poster presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Baek, E., Petit-Bois, M., & Ferron, J. M. (November, 2014). *The Interplay Between Visual Analysis and Multilevel Models in the Synthesis of Single-Case Data.* Paper presented at the Annual Meeting of the Florida Educational Research Association, Cocoa Beach, FL.

Baek, E., Petit-Bois, M., & Ferron, J. M. (April, 2014). *A comparison of Bayesian restricted maximum likelihood approach in multilevel models for single-case data.* Poster presented at the Annual Meeting of the American Educational Research Association. Philadelphia, PA.

Petit-Bois, M., **Baek, E.,** Nguyen, D., & Ferron, J. M. (April, 2014). *The robustness of multilevel models in single-case studies: Non-normal errors and misspecification of the error covariance structure.* Poster presented at the Annual Meeting of the American Educational Research Association. Philadelphia, PA.

Baek, E., Petit-Bois, M., & Ferron, J. M. (April, 2013). *A feasible way to vary level-1 error structure across participants in multilevel models for single-case data.* Poster presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.

Petit-Bois, M., **Baek, E.,** & Ferron, J. M. (April, 2013). *The effect of error structure specification on the meta-analysis of single-case studies: A Monte Carlo study.* Poster presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.

Pham, T., Petit-Bois, M., **Baek, E.,** & Kromrey, J. D. (April, 2013). *A simulation study of accuracy and precision in estimation of effect size for mediation analysis.* Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.

Shaunessy, E., Evans, L., Homan, S., Ferron, J., Lindo, M., Cao, C., & **Baek, E.** (April, 2013). *Gains in reading comprehension and attitudes toward reading among gifted and general education students in title I schools.* Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA.

Ferron, J., Van den Noortgate, W., Beretvas, T., Moeyaert, M., Ugille, M., Petit-Bois, M.,& **Baek, E.** (March, 2013). *Synthesis of single-case experimental data: A comparison of alternative multilevel approaches.* Society for Research on Educational Effectiveness, Washington, D.C.

Baek, E., Petit-Bois, M., & Ferron, J. M. (April, 2012). *Effects of error structure specification on the meta-analysis of single-case studies of reading fluency interventions.* Paper presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.

Petit-Bois, M., **Baek, E.,** & Ferron, J. M. (April, 2012). *Consequences of misspecification of growth trajectories when meta-analyzing single-case data using a three-level model.* Paper presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.

Baek, E., Petit-Bois, M., Pham, T., & Kromrey, J. D. (February, 2012). *Estimates of Effect Size Confidence Intervals for Mediation Analysis: An Empirical Investigation of Accuracy and Precision.* Paper presented at the annual meeting of the Eastern Educational Research Association, Hilton Head, SC.

Petit-Bois, M., & Pham, T., **Baek, E.,** & Kromrey, J. D. (April, 2012). *A SAS® macro for computing point estimates and confidence Intervals of effect sizes associated with mediation Analysis.* Paper presented at the SAS global forum 2012, Orlando, FL.

Pham, T., & **Baek, E.** (November, 2011). *The effect of LID on measurement implications, an empirical examination.* Paper presented at the annual meeting of the Florida Educational Research Association, Orlando, FL.

Pham, T., **Baek, E.,** Petit-Bois, M., & Kromrey, J. D. (October, 2011). *CI_MEDIATE: A SAS® macro for computing point and interval estimates of effect Sizes associated with mediation analysis.* Paper presented at the annual meeting of the Southeast SAS Users Group, Alexandria, VA.

Baek, E., & Chatters, S. (November, 2011). *Developing and sharpening the tools in your toolbox: Strategies for creating tools to be used in a collaborative evaluation.* Paper presented at the annual conference of the American Evaluation Association, Anaheim, CA.

Chatters, S. & **Baek, E.** (November, 2011). *There is no 'I' in team: Understanding roles and dynamics in metaevaluation team.* Paper presented at the annual conference of the American Evaluation Association, Anaheim, CA.

Ferron, J. M., & **Baek, E.** (April, 2011). *Multilevel models for multiple-baseline data: Modeling between-case variation in autocorrelation.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Dennis, D.V., Kroeger, D.C., Welsh, J., Brummer, R.C., & **Baek, E.** (April, 2011). *Retaining failed policies: A longitudinal study of Florida's mandatory third-grade retention.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Shaunessy, E., Dedrick, R., Bellara, A., Walker, C., **Baek, E.,** & Stewart, S. (April, 2011).

Review of instruments for student evaluations of distance education instruction. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Dennis, D.V., Kroeger, D.C., Welsh, J., Brummer, R.C., & **Baek, E.** (November, 2010). *Pre and Post: A view of florida's third grade retention policy.* Paper in symposium presented at the annual meeting of the Florida Educational Research Association, Orlando, FL.

Shaunessy, E., Dedrick, R., Bellara, A., Walker, C., **Baek, E.,** & Stewart, S. (November, 2010). *A psychometric review of instruments for student evaluations of distance education instruction.* Paper presented at the annual meeting of the Florida Educational Research Association, Orlando, FL.

Chatters, S., **Baek, E.,** Pham, T., & Hunter, Y. (November, 2010). *Evaluation goes to college: The collaborative evaluation of a graduate program.* Paper presented at the annual conference of the American Evaluation Association, San Antonio, TX.

Baek, E., Rodríguez-Campos, L. & Chatters, S. (July, 2010). *Program management in secondary schools: A collaborative metaevaluation.* Paper presented at the International Conference on Knowledge, Culture and Change in Organizations. Toronto, Canada.

TEACHING EXPERIENCE

Texas A&M University

Fall 2019	**Statistical Analysis in Educational Research I** (EPSY640: Graduate level)
	• Covered descriptive and inferential statistics, including T-test, ANOVA
Spring 2019	**Experimental Design in Education II** (EPSY641: Graduate level)
	• Covered inferential statistics, including Chi-squared test, ANOVA, Regression, ANCOVA
Fall 2018	**Experimental Design in Education I** (EPSY640: Graduate level)
	• Covered descriptive and inferential statistics, including T-test, ANOVA
Spring 2018	**Experimental Design in Education II** (EPSY641: Graduate level)
	• Covered inferential statistics, including Chi-squared test, ANOVA, Regression, ANCOVA
Fall 2017	**Survey Instrument Development** (EPSY656: *Online* Graduate level)
	• Covered development and validate process of survey instrument

Fall 2017 **Experimental Design in Education I** (EPSY640: Graduate level)
- Covered descriptive and inferential statistics, including T-test, ANOVA

Spring 2017 **Experimental Design in Education II** (EPSY641: Graduate level)
- Covered inferential statistics, including Chi-squared test, ANOVA, Regression, ANCOVA

Spring 2017 **Measurement & Evaluation in Education** (EPSY622: *Online* Graduate level)
- Covered introduction of educational measurement and evaluation

Spring 2017 **Survey Instrument Development** (EPSY656: *Online* Graduate level)
- Covered development and validate process of survey instrument

Fall 2016 **Experimental Design in Education I** (EPSY640: Graduate level)
- Covered descriptive and inferential statistics, including T-test, ANOVA

Fall 2016 **Measurement & Evaluation in Education** (EPSY622: *Online* Graduate level)
- Covered introduction of educational measurement and evaluation

Fall 2016 **Survey Research Methods** (EPSY690: *Online* Graduate level)
- Covered survey research theories and methods

Fall 2016 **Survey Instrument Development** (EPSY656: *Online* Graduate level)
- Covered development and validate process of survey instrument

Course Development

Fall 2016 **Survey Instrument Development** (EPSY656: *Online* Graduate level)
- Developed as a graduate online-course

Major Revision

Fall 2016 **Experimental Design in Education I** (EPSY640: Graduate level)
- Revise contents of the course and utilize a software STATA

Spring 2017 **Experimental Design in Education II** (EPSY641: Graduate level)
- Revise contents of the course and utilize a software STATA

University of South Florida

Fall 2013 **Statistical Analysis for Educational Research III (Graduate level)**
- Covered multivariate analysis, including MANOVA, discriminant function analysis, and repeated measures (co-teaching).

Fall 2012 **Statistical Analysis for Educational Research I (Graduate level)**
- Covered descriptive and inferential statistics, including ANOVA, ANCOVA and multiple regression (co-teaching).

Summer 2012   **Single-Case Design (Graduate level)**
- Teaches methods used to analyze data from single-case designs including visual analysis, randomization tests and multilevel modeling (co-teaching).

Spring 2012   **Applied Multilevel Model in Education (Graduate level)**
- Covered the fundamental concepts of multilevel modeling, underlying assumptions, estimation methods, and model evaluation techniques (co-teaching).

Doctoral Advisor and Dissertation Chair [* signifies my role as Co-Chair]
- Lam Hap Kwok, *in progress*
- Fatma Altinsoy*, *in progress*

Doctoral Committee Member
- Mary E. Lockhart, *in progress*
- Eun Hye Ko, *in progress*
- Valeria Yllades, *in progress*
- Cynthia Lang, *in progress*
- Sanikan Wattanawongwan, *in progress*
- Aaron Campbell, *in progress*
- Yi-Fan Li, *in progress*

Master Committee Member
- Rana Hussein, *in progress*
- Jian-Siang Wang, *in progress*

HONORS AND AWARDS

2010-11   • **University Graduate Student Enhancement (Top-up fund) Award**
University of South Florida, Graduate School

2009-10   • **University Graduate Fellowship (UGF) Award**
University of South Florida, Graduate School

2005   • **Scholarship for Outstanding Graduate Student**
Graduate School of Korea University, Seoul, Korea

2002   • **Scholarship for Outstanding Undergraduate Student**
Sungshin Women's University, Seoul, Korea

SERVICES

Texas A&M University

2019	Co-Director for Educational Research and Evaluation Laboratory (EREL)
2016-2017	Incoming advisor for MERIT students

University of South Florida

2011-2015	Consultant	Consulting Office for Research in Education (CORE)
2011	Member	Department Search Committee, Assistant Professor, Measurement and Research
2009-2015	Member	Center for Research, Evaluation, Assessment and Measurement (CREAM)

Journal Editor

2020	*Action Editor*, Behavior Research Methods
2020	*Guest Editor*, Behavior Modification

Manuscript Reviewer

2019	Journal of Experimental Education
2018-2019	Behavior Research Methods
2018-2019	Behavior Modification
2010	Evaluation and Program Planning
2010	American Evaluation Association (AEA)

PROFESSIONAL AFFILIATIONS

Council for Exceptional Children (CEC) 2019-present

American Educational Research Association (AERA) 2010-present

Florida Educational Research Association (FERA) 2010-2014

American Evaluation Association (AEA) 2010-2012

Eastern Educational Research Association (EERA) 2011-2012

STATISTICAL PROGRAM SKILLS

SAS / SPSS / STATA / R / S-PLUS / M-PLUS/ WINBUGS/ BILOG-MG / MULTILOG /
DFIT / SIBTEST / CSIBTEST / ITERLINK

(Updated by 12/18/19)