

CLARE BAEK, PH.D.

Postdoctoral Scholar

School of Education, University of California, Irvine

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EDUCATION

Ph.D., Urban Education Policy , University of Southern California Educational Psychology Concentration Expected in May, 2022 Advisor: Dr. Stephen Aguilar Dissertation: Educational Technologies as Tools for Self-Regulated Learning for Students with Autism in Post-Secondary Settings	2022
M.Ed., Special Education , University of San Diego Teaching credential with Added Authorization in Autism	2014
M.A., Pure Mathematics , San Diego State University Thesis: Analytic and Numerical Investigation of N Points on a 3-sphere	2013
B.A., Pure Mathematics , University of California, San Diego	2009

ACADEMIC POSITIONS

Postdoctoral Scholar , University of California, Irvine School of Education Advised by Dr. Mark Warschauer	2022-Present
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RESEARCH INTERESTS

Learning analytics, Educational technology, Computer science education, Equity, Special education

PUBLICATIONS

Peer-reviewed Journals

Baek, C., Aguilar, S.J. (2022). Past, Present, and Future Directions of Learning Analytics Research for Students with Disabilities. *Journal of Research on Technology in Education*.

Baek, C., Doleck, T. (2022). Educational Data Mining: A Bibliometric Analysis of an Emerging Field. *IEEE Access*.

Copur-Gencturk, Y., **Baek, C.**, Doleck, T. (2022). A Closer Look at Teachers' Proportional Reasoning. *International Journal of Science and Mathematics Education*.

Aguilar, S.J., Galperin, H., **Baek, C.**, Gonzalez, E. (2021). Live Instruction Predicts Engagement in K-12 Remote Learning. *Educational Researcher*.

Baek, C., Doleck, T. (2021). Educational Data Mining versus Learning Analytics: A Review of Publications from 2015-2019. *Interactive Learning Environments*.

Lemay, D., **Baek, C.**, Doleck, T. (2021). Comparison of Learning Analytics and Educational Data Mining: A Topic Modeling Approach. *Computers & Education: Artificial Intelligence*.

Aguilar, S.J., Karabenick, S., Teasley, S.D., **Baek, C.**, (2021). Associations Between Learning Analytics Dashboard Exposure and Motivation in Self-Regulated Learning. *Computers & Education*.

Baek, C., Doleck, T. (2020). A Bibliometric Analysis of the Papers Published in the Journal of Artificial Intelligence in Education from 2015-2019. *International Journal of Learning Analytics and Artificial Intelligence for Education (iJAI)*. 2(1), 67–84.

Aguilar, S.J., **Baek, C.** (2020). Sexual Harassment in Academe is Underreported, Especially by Students in the Physical Sciences. *PLOS ONE*. [Cited in U.S. Supreme Court No. 20-216]

Conference Proceeding

Aguilar, S.J., **Baek, C.** (2019). Motivation Information Seeking and Graph Comprehension in Relation to Help-Seeking and Comparison Among College Students. *Proceedings of the Ninth International Conference (LAK'19)*. ACM, New York, NY.

Policy Report

Aguilar, S.J., Galperin, H., **Baek, C.**, Gonzalez, E. (2020). When school comes home: How low-income families are adapting to distance learning. <https://doi.org/10.35542/osf.io/su8wk>

MANUSCRIPTS UNDER REVIEW

Baek, C., Aguilar, S.J. Experimental Evidence Showing Effectiveness of a Text over Video Online Intervention on Improving Teachers' Attitude Towards Children with Autism.

Baek, C., Aguilar, S.J., Gray, A. The Use and Evaluation of Educational Technologies in Special Education from 2009-2019.

Baek, C., Doleck, T. Learning Analytics: A Comparison of Western, Educated, Industrialized, Rich, and Democratic (WEIRD) and Non-WEIRD Research.

MANUSCRIPTS IN PREPARATION

Baek, C. Special Education Community's Discussions on Twitter during COVID-19: Sentiment Analysis and Topic Modeling Approach.

Aguilar, S. J., **Baek, C.**, Galperin, H. Gonzalez, E. Examining the Relationship Between Help-seeking and Reported Engagement During Remote Instruction for Low-income Students.

Baek, C., Aguilar, S. J. Educational Technologies as Tools for Self-Regulated Learning for Post-Secondary Students with Autism Spectrum Disorder.

Baek, C., Aguilar, S. J. Autism Traits' Role on Self-Regulated Learning in Digital Learning Environments.

Baek, C., Ojeda-Ramirez, S., Saito-Stehberger, D., Garcia, L., Jacob, S. R., & Warschauer, M. Elementary School Students' Self-Regulated Learning while Learning Computational Thinking and Literacy through Programming.

CONFERENCE & OTHER PRESENTATIONS

Conference Presentations

Baek, C., Aguilar, S. J. (2022, Apr 21-26) Special Education Community's Discussions on Twitter during COVID-19: Sentiment Analysis and Topic Modeling Approach. [Paper Session]. AERA Annual Meeting. San Diego, CA

Baek, C., Aguilar, S. J. (2021, Apr 9-12) *Training and Supporting Teachers to Improve their Attitude Towards Students with Autism* [Roundtable Session]. AERA Annual Meeting. (Online)

Baek, C., Aguilar, S. J., Gray, A. (2021, Apr 9 - 12) *The Use and Evaluation of Educational Technology in Special Education from 2009-2019* [Paper Session]. AERA Annual Meeting. (Online)

Copur-Genturck, Y., **Baek, C.,** Doleck, T. (2021, Apr 9-12) *Empirical Study of Teachers' Proportional Reasoning and their Performance on Proportional Relationship Problems* [Paper Session]. AERA Annual Meeting. (Online)

Gonzalez, E. & **Baek, C.** (2020) *The Economic and Academic Experiences of Students during COVID-19*. COVID-19 Work in Progress Conference. Los Angeles, CA

Baek, C. & Aguilar, S. J. (2020, Apr 17 - 21) *Sexual Harassment in Academe Is Underreported, Especially by Students in the Physical Sciences* [Roundtable Session]. AERA Annual Meeting. San Francisco, CA <http://tinyurl.com/tn2jkvq> (Conference Canceled)

Aguilar, S.J., **Baek, C.** (2019). Motivated Information Seeking and Graph Comprehension. Paper presented at the *Learning Analytics and Knowledge Conference (LAK' 19)*. Phoenix, AZ.

Poster Presentation

Baek, C. (2020). Impact of Watching a First-Person Perspective Video on Teachers' Attitude Towards Children with Autism. *USC Rossier Research Office Poster Session*. Los Angeles, CA.

Invited Talks

Baek, C., (2022). Multiple Regression in Multivariate Statistics. Guest lecture at Simon Fraser University, Canada.

Baek, C., (2018). Successful Women in STEM field. Talk given at The Help Group Summit. Los Angeles, CA.

PROFESSIONAL AFFILIATIONS

Society for Learning Analytics Research (SoLAR)

American Educational Research Association (AERA)

SERVICES

Peer Review for Journals

Review of Educational Research

British Journal of Educational Technology

Education and Information Technologies

International Journal of Information Technology & Decision

International Journal of Informatics and Communication Technology

Frontiers in Education

Cybernetics and Systems

Peer Review for Conferences

(2019-present); **American Educational Research Association (AERA) Division C-Learning and Instruction**

(2021); **SIG-Special and Inclusive Education Research**

Institutional Service

Co-leader (2019-2021): **Asian American & Pacific Islander Doctoral Support Group at USC Rossier**

ACADEMIC EXPERIENCE

Academic Positions

2018 – 2022. Research Assistant

Learning Analytics and Psychology Lab (LAPeL)
Rossier School of Education
University of Southern California

Grant Research Experience

2022-Pres. Postdoctoral Scholar

Elementary Computing for All. University of California, Irvine
Directed by Dr. Mark Warschauer in Collaboration with Montebello Unified School District, El Sol Arts and Academy, Santa Ana Unified School District, and University of Chicago to design and Implement computer science curriculum to improve computational thinking and literacy for linguistically and culturally diverse students.

2020. Research Assistant

Distance Learning and Educational Equity in the Wake of COVID-19. University of Southern California, Directed by Dr. Hernan Galperin and Dr. Stephen Aguilar in Collaboration with Great

Public Schools Now. Collaborated with the Great Public Schools Now partnership to design and conduct surveys to LAUSD families.

2018-2019. Research Assistant

Advancing Middle School Teachers' Understanding of Proportional Reasoning for Teaching (Institution of Education Sciences). University of Southern California, Directed by Dr. Yasemin Copur-Gencturk. Worked as a collaborative team to design an online professional development modules to test train middle school math teachers to develop proportional reasoning.

TEACHING EXPERIENCE

Teaching Assistant

Foundations of Digital Learning 2022
University of California, Irvine, Irvine, CA

Introduction to Quantitative Methods 2020
University of Southern California, Los Angeles, CA

Educational Performance Problems: The Role of Learning 2019
University of Southern California, Los Angeles, CA

PROFESSIONAL EXPERIENCE

Teaching Leadership

Mathematics and Computer Science Department Chair, Mentor Teacher 2016-2018
STEM 3 Academy (The Help Group), Los Angeles, CA

Teaching

Mathematics and Computer Science High School & Elementary School Teacher 2015-2018
STEM 3 Academy (The Help Group), Los Angeles, CA

Mathematics and Computer Science Teacher 2014-2015
Village Glen High School (The Help Group), Los Angeles, CA

AP Reader, AP Computer Science Principles, Educational Testing Service 2017, 2018
Kansas City, MO

HONORS AND AWARDS

Rossier Dean's Assistantship, University of Southern California 2018-present

Erik Duval Scholarship, Society of Learning Analytics Research 2021

Internal Research Funds, University of Southern California 2021

Educational Technologies as Tools for Self-Regulated Learning for Students with Autism in Post-Secondary Settings

Research Grant (\$1500)

Principal Investigator.

Internal Research Funds , University of Southern California <i>Impact of Watching a First-Person Perspective Video on Teachers' Attitude Towards Children with Autism</i> Research Grant (\$1424) Principal Investigator . Co-PI: Stephen Aguilar	2019
Employee Excellence Award , The Help Group	2016
LA. Division III, Runaway Train 1st Place (Coach) , Odyssey of the Mind	2015
Walter Fitch Trust Endowed Scholarship , University of San Diego	2012, 2013

SKILLS & COMPETENCIES

Languages

English (fluent: reading, writing, and speaking)

Korean (native/fluent: reading, writing, and speaking)

Programming

R, Stata, Python, Java, LaTeX, Processing, C++