

Joshua Buffington
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Georgetown University Medical Center
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EDUCATION

Georgetown University, Washington, D.C.
Postdoctoral Research Fellow, 2023 – Present
Aging and Alzheimer’s Research Training
Ruth L. Kirschstein National Research Service Award, NIH 1T32 AG071745
Advisors: Professors Michael T. Ullman, Jana Reifegerste, and G. William Rebeck

University of Illinois Chicago, IL
Doctor of Philosophy, psychology, December, 2023
Thesis: Listening fast and slow: The role of declarative and procedural memory in learning through L2 aural input
Advisor: Professor Kara Morgan-Short

Master of Arts, psychology, December, 2018
Thesis: The reliability and validity of procedural memory assessments used in second language learning.
Advisor: Professor Kara Morgan-Short

Cornell University, Ithaca, NY
Master of Arts, linguistics, May, 2015

Texas A&M University, College Station, TX
Bachelor of Arts, English, minors in psychology and Spanish, May, 2013
Thesis: The role of lexical stress in word recognition
Advisor: Professor Jyotsna Vaid

RESEARCH INTERESTS

Cognitive neuroscience; psycholinguistics; second language acquisition; neurobiology of language

AWARDS AND HONORS

Psychonomic Society Graduate Conference Award August 2023
Title: Listening fast and slow: Investigating neurocognitive mechanisms of verbal statistical learning
Amount: \$750

Michael J. Piorkowski Award April 2021
Description of award: Dr. Geraldine and Mr. Frank Piorkowski endowed this award to "honor the memory of our son, Michael J. Piorkowski, and to encourage the pursuit of psychology to a graduate student who displays intellectual curiosity, creativity, strength of character, and love of people-- characteristics that Michael had in abundance."

UIC Provost’s Award for Graduate Research December 2017-December 2018

Title of project: *The role of long-term memory in second language acquisition: An investigation of language aptitude and neurocognitive memory systems.*

Amount: \$1,100

Phi Beta Kappa, Member

2013-Present

PUBLICATIONS

Buffington, J., Demos, A.P., & Morgan-Short, K. (2021). The reliability and validity of procedural memory assessments used in second language acquisition research. *Studies in Second Language Acquisition*. 43(3), 635-662. doi:10.1017/S0272263121000127

Buffington, J., & Morgan-Short, K. (2019). Declarative and procedural memory as individual differences in second language aptitude. In Wen, Z., Skehan, P., & Biedron, A. (Eds.), *Advances in Foreign Language Aptitude: Multiple Perspectives and Emerging Trends*. NY: Routledge.

Buffington, J., & Morgan-Short, K. (2018). Construct validity of procedural memory tasks used in adult-learned language. In T.T. Rogers, M. Rau, X. Zhu, & C.W. Kalish (Eds.), *Proceedings of the 40th Annual Conference of the Cognitive Science Society* (pp. 1422-1427). Austin, TX: Cognitive Science Society.

Registered Reports

Buffington, J., Leshikar, E.D., Leach, R.C., & Morgan-Short, K. (in-principle acceptance). Examining the role of Broca's Area in artificial grammar learning: A noninvasive brain stimulation study. *Cortex*.

WORK IN PROGRESS

Reifegerste, J., Veríssimo, J., Lipscomb, D.W., Russell, L.E., **Buffington, J.,** DeMarco, A.T., Flowers, S.A., & Ullman, M.T. (in preparation). Behavioral, neuroanatomical, and genetic evidence that hippocampal declines underlie word-finding difficulties in healthy aging.

Buffington, J., Ullman, M.T., & Reifegerste, J. (in preparation). The effect of aging and hippocampal volume on production and comprehension of novel words.

Buffington, J., & Morgan-Short, K. (in preparation). The effect of speech rate on learning outcomes and neurocognitive processing in statistical learning.

Conway, C., Janacek, K., **Buffington, J.,** & Ullman, M. T. (in preparation). The what, how, and where of statistical learning. Invited for submission by *Nature Reviews Neuroscience*.

Ridchenko, M., Berles, A., **Buffington, J.,** & Morgan-Short, K. (in preparation). Learning context and the role of long-term memory in adult language learning.

Berles, A., Ridchenko, M., **Buffington, J.,** & Morgan-Short, K. (in preparation). Individual differences in cognitive control and adult language learning.

Buffington, J. & Morgan-Short, K. (in preparation). The role of long-term memory in second language acquisition: An investigation of language aptitude and neurocognitive memory systems.

INVITED TALKS

Buffington, J., Reifegerste, J., & Ullman, M.T. (2025, February). *Hippocampal Atrophy Contributes to Lexical Declines in Healthy Aging: Behavioral, Neuroanatomical, and Genetic Evidence*. Invited talk in the Department of Psychology, University at Albany, SUNY, Albany, NY.

CONFERENCE PRESENTATIONS

Buffington, J., Ullman, M.T., & Reifegerste, J. (2024, November). *Word Learning Declines in Aging: Roles for the Hippocampus?*. Spoken session at the Annual Meeting of the Psychonomic Society, New York, NY.

Buffington, J., & Morgan-Short, K. (2024, November). *Speech Rate May Affect Neurocognitive Processing in Statistical Learning*. Spoken session at the Annual Meeting of the Psychonomic Society, New York, NY.

Buffington, J., Ullman, M., Reifegerste, J. (July, 2024). *Recall, But Not Comprehension, of Newly-Learned Vocabulary Shows Strong Declines in Aging: A Role for Hippocampal Atrophy?* Poster presented at the 3rd annual meeting of the Georgetown University Healthy Aging Symposium, Washington, D.C.

Buffington, J., & Morgan-Short, K. (April, 2024). *Speech Rate May Affect Neurocognitive Processing in Statistical Learning*. Talk given at the annual meeting of the Midwestern Psychological Association, Chicago, IL.

Berles, A., Ridchenko, M., **Buffington, J.,** & Morgan-Short, K. (2023, October). *Individual differences in adult Romance-like language learning and working memory in implicit and explicit contexts*. Paper presented at the meeting of the Hispanic Linguistics Symposium, Provo, UT.

Buffington, J., & Morgan-Short, K. (2023, April). *Cognitive Mechanisms Supporting Adult Language Learning*. Talk given at the annual meeting of the Midwestern Psychological Association, Chicago, IL.

Berles, A., Ridchenko, M., **Buffington, J.,** & Morgan-Short, K. (2023, March). *Individual Differences in Cognitive Control and Adult Language Learning*. Paper presented at the meeting of the American Association for Applied Linguistics, Portland, OR.

Ridchenko, M., Berles, A., **Buffington, J.,** & Morgan-Short, K. (2022, November). *Does Learning Context Modulate the Roles of Long-term Memory in Adult Second Language Learning?* Poster presented at the Annual Meeting of the Psychonomic Society, Boston, MA.

Buffington, J., Morgan-Short, K., & Demos, A.P. (2021, November). *Validating Measures of Procedural Memory Used in Second Language Acquisition Research*. Spoken session at the Virtual Annual Meeting of the Psychonomic Society.

Morgan-Short, K., **Buffington, J.,** & Demos, A.P. (2021, March). *The Reliability and Validity of Procedural Memory Assessments in Second Language Learning Research*. Paper presented at the Virtual Conference of the American Association for Applied Linguistics.

Buffington, J. & Morgan-Short, K. (2020, November). *Accounting for Second Language Aptitude: The Role of Domain-General Cognitive Abilities*. Poster presented at the Virtual Annual Meeting of the Psychonomic Society.

Buffington, J., & Morgan-Short, K. (2020, May). *The Role of Declarative and Procedural Memory in Second Language Acquisition: An Examination with Multiple Measures of Memory*. Poster presented at the Association for Psychological Science Virtual Convention.

Morgan-Short, K., Villegas, B., & **Buffington, J.** (2019, March). *A Cognitive Approach to Classroom Data: Understanding the Factors that Lead to the Development of L2 Spanish “se.”* Paper presented at the meeting of the American Association for Applied Linguistics, Atlanta, GA.

Buffington, J., & Morgan-Short, K. (2018, November). *Multivariate Analysis on the Construct Validity of Procedural Memory Assessments Used in Second Language Learning*. Poster presented at the Annual Meeting of the Psychonomic Society, New Orleans, LA.

Buffington, J., & Morgan-Short, K. (2017, November). *The Reliability and Validity of Procedural Memory Assessments Used in Second Language Learning*. Poster presented at the Annual Meeting of the Psychonomic Society, Vancouver, British Columbia, Canada.

Buffington, J., Vaid, J., Lopez, B.G., & Tosun, S. (2016, November). *Lexical Stress Assignment for Visually Presented Words Across Languages: Evidence from Bilinguals and Monolinguals*. Poster presented at the Annual Meeting of the Psychonomic Society, Boston, MA.

Vaid, J., **Buffington, J., Lopez, B.G., & Tosun, S.** (2014, August). *Reliance on Orthographic Cues for Lexical Stress Assignment: Does Language Experience Matter?* Poster presented at AILA (International Applied Linguistics Association), Brisbane, Australia.

OTHER SCHOLARLY PRESENTATIONS

(* = undergraduate research assistant)

Buffington, J. & Morgan-Short, K. (2021, April). *Are Domain-General Cognitive Abilities ‘Apt’ for Language Aptitude? The roles of declarative and procedural memory*. Paper presented at Cognitive Psychology Brown Bag, University of Illinois Chicago.

Morgan-Short, K. & **Buffington, J.** (2020, October). *Registered Reports in Open Science: Definitions, Rationale, and Personal Experiences*. Paper presented at Cognitive Psychology Brown Bag, University of Illinois Chicago.

*Farooqi, U., **Buffington, J., & Morgan-Short, K.** (2019, April). *The Role of Procedural Memory in L2 Acquisition: Do Different Measurement Methods Produce the Same Results?* Poster presented at Impact and Research Day, University of Illinois at Chicago, Chicago, IL.

*Reddy, S., **Buffington, J., & Morgan-Short, K.** (2019, April). *The Relationship Between Second Language Acquisition and Intelligence*. Poster presented at Impact and Research Day, University of Illinois at Chicago, Chicago, IL.

Buffington, J. (2018, October). *Measuring Procedural Memory Learning Abilities: One Teaspoon of Weather Prediction and One Cup of Serial Reaction Time?* Paper presented at Cognitive Psychology Brown Bag, University of Illinois at Chicago.

*Ghazawi, T., & **Buffington, J.** (2018, April). *The Reliability and Validity of Procedural Memory Assessments Used in Second Language Learning*. Poster presented at Student Research Forum, University of Illinois at Chicago, Chicago, IL.

Buffington, J., & Morgan-Short, K. (2017, April). *The Reliability and Validity of Procedural Memory Assessments Used in Second Language Learning*. Paper presented at Cognitive Psychology Brown Bag, University of Illinois at Chicago.

TEACHING EXPERIENCE

University of Illinois Chicago

<i>Guest Lecturer – Spanish 556</i> (“Declarative/Procedural Model of L2”, 23 October 2023)	Fall 2023
<i>Teaching Assistant- Neuroscience II</i> (Instructor: Professor Jamie Roitman)	Spring 2023
<i>Guest Lecturer – Neuroscience II</i> (“Language”, 11 April 2023)	Spring 2023
<i>Teaching Assistant- Introduction to Research Methods in Psychology</i> (Instructor: Professor Christopher Baker)	Fall 2022
<i>Teaching Assistant- Neuroscience II</i> (Instructor: Professor Jamie Roitman)	Spring 2022
<i>Guest Lecturer – Neuroscience II</i> (“Language”, 19 April 2022)	Spring 2022
<i>Teaching Assistant- Introduction to Research Methods in Psychology</i> (Instructor: Professor Christopher Baker)	Fall 2021
<i>Teaching Assistant- Neuroanatomy</i> (Instructor: Professor David Wirtshafter)	Spring 2021
<i>Teaching Assistant- Statistical Methods in Behavioral Sciences</i> (Instructor: Professor Candice Burkett)	Summer 2020
<i>Teaching Assistant- Introduction to Psychology</i> (Instructor: Candice Burkett)	Fall 2019-Spring 2020
<i>Head Teaching Assistant- Introduction to Psychology</i> (Instructor: Professor Daniel Cervone)	Summer 2019
<i>Teaching Assistant- Introduction to Research Methods in Psychology</i> (Instructor: Professor Christopher Baker)	Spring 2019
<i>Teaching Assistant- Introduction to Psychology</i> (Instructor: Professor Eric D. Leshikar)	Fall 2018

Teaching Assistant- Statistical Methods in Behavioral Sciences Summer 2018
(Instructor: Dr. Hillary Rowe)

Teaching Assistant- Laboratory in Cognition and Memory Spring 2018
(Instructor: Professor Gary E. Raney)

Teaching Assistant- Introduction to Psychology Summer 2017
(Instructor: Professor Daniel Cervone)

Teaching Assistant- Introduction to Research Methods in Psychology Fall 2016-Fall 2017 (3 terms)
(Instructor: Dr. Eric W. Gobel)

Cornell University

Teaching Associate - Elementary Spanish I Fall 2015

Teaching Assistant - From Cuneiform to Cryptography Spring 2015

Teaching Assistant- Elementary Spanish I Fall 2014

SERVICE

Lake Highlands Elementary, Richardson, TX
5th Grade Career Day Presentation: “Careers in Psychology” May 2024

UIC Bilingualism Forum
Abstract Reviewer Summer 2024

UIC Department of Psychology
Member, *Diversity Advancement Committee Task Force on Diversifying Curriculum* Spring 2022-Spring 2023

Manuscript Reviewing
Bilingualism: Language and Cognition (1)

Language Assessment Quarterly (1)

Language, Cognition, and Neuroscience (1)

Studies in Second Language Acquisition (1)

Uncommon Sense Teaching: Practical Insights in Brain Science to Help Students Learn (1)

Community Outreach
Cognition of Second Language Acquisition Lab outreach with Heartland Alliance Fall 2020-Spring 2021

MENTORING EXPERIENCE

Georgetown University
Elisa Yanni – master’s student in Integrative Neuroscience Fall 2024-Present

Marina Ridchenko – graduate assistant (Georgetown University & UIC) Summer 2024-Present

Mallory Montgomery – undergraduate research assistant	Spring 2024-Present
University of Illinois Chicago	
Yael Lenga- undergraduate research assistant	Fall 2022-Spring 2024
Elizabeth Sodimu- undergraduate research assistant	Fall 2020-Spring 2023
Sahana Reddy- UIC Honors College Capstone Project Undergraduate research assistant	Fall 2018-Fall 2019 Fall 2017-Fall 2019
Usamah Farooqi- UIC Honors College Capstone Project	Fall 2018-Spring 2019
Annalise Caviasco- Association for Psychological Science Student Caucus Mentorship Program	Fall 2017-Spring 2022
Justyna Mastalerz- undergraduate research assistant	Fall 2017-Spring 2019
Tariq Ghazawi- UIC Honors College Capstone Project	Fall 2017-Spring 2018
Jocelyn Fernandez- undergraduate research assistant	Fall 2016-Spring 2017

SOFTWARE PROFICIENCIES

R; Microsoft Excel; Python

PROFESSIONAL MEMBERSHIPS

Psychonomic Society; Association for Psychological Science; Cognitive Science Society; Society for the Neurobiology of Language; American Association for Applied Linguistics