

2018-2019 Outstanding Thesis Award Winner Alana Muller



*Alana Muller, M.A. in
Psychological Science*

Muller is the author of author of *Neurological Correlates of the Dunning-Kruger Effect*, written for her Master of Arts in Psychological Science. Her thesis explores the neurological basis for the Dunning-Kruger effect - the tendency for low performers to overestimate their performance on a cognitive task and for high performers to underestimate their performance – by measuring human brain waves. Her study involved asking her research participants to take a set of memory tests and estimate their own performance while connected to an EEG machine that measured two memory processes called familiarity and recollection. Familiarity generates memories that are general and lack details, while recollection produces clear memories that include specific details. She was then tasked with interpreting the results.

In his letter of support, committee chair Dr. Rick Addante described Muller’s thesis as “a bold endeavor better suited to a Ph.D.-level student.” The study required her to undertake extensive research on electrophysiology of the Dunning-Kruger Effect, a subject area new to her. As Dr. Addante describes it, “I asked her to synthesize a highly disparate and interdisciplinary literature ranging from neurophysiology to metacognition and social psychology - using physiological methods to directly address a core question that has riddled the likes of Socrates, Confucius, Shakespeare, and Darwin.” Muller proved herself up to the task, and produced a work that shows that the over- and under-estimations of low and high performing individuals correspond to distinct patterns of neurological activity, familiarity and recognition. It is the first published work to do so.

After earning more than 20 awards for scholarship during her time at CSUSB, Muller is now pursuing a Ph.D. in psychology at the University of Arizona. She hopes to join the faculty of a university where she can teach and conduct her own research – possibly at CSUSB. “I found a passion for teaching during my time at CSUSB,” she notes. “I would love to come back to teach there to try to give other students the opportunities that CSUSB gave me.”

Muller made original contributions that were first in her field – a remarkable achievement for any master’s thesis. Her thesis is available on CSUSB ScholarWorks. Graduate Studies extends its hearty congratulations to Ms. Muller!