

Natalie Robison

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Education

Portland State University

Fall 2021 – Current

Major: Biology

Minor: Interdisciplinary Neuroscience

- Cumulative GPA: 3.87
- Expected Graduation with Honors: Spring 2024

Clackamas Community College

Fall 2019 – Spring 2022

Major: Transfer Degree

Focus: Biology

- Transfer GPA: 3.86

Research Experience

Portland State University

June 2022 – Current

- Undergraduate Research Assistant, Stipend-Supported
- Advisor: Dr. Carolyn Quam

*8 Full-Time Months
at 10-30 hrs./wk.*

Explore the causes and mechanisms of bilingual language attrition, and of tonal learning and processing, using a combination of eye-tracking, survey, and verbal test data.

Quantitative Data Collection

- Use eye tracking equipment (brand: SR Research) to calibrate human subjects to collect eye-tracked data as they progress through an automated program
- Troubleshoot software errors and thoroughly document solutions
- Verbally administer a Multilingual Naming Test (MiNT) to measure language dominance
- Administer a modified Bilingual Dominance Scale to measure language dominance

Qualitative Data Collection

- Facilitate completion of a survey asking respondents about their experiences with racism, the COVID-19 pandemic, and their possible impacts on language use
- Answer questions subjects may have about the survey as they complete it

SPSS Statistics Data Analysis

- Use Principal Component Analysis to combine measures of language dominance into a single, continuous measurement
- Conduct ANOVA, ANCOVA, and T-Tests to determine relationship(s) between variables: Vowel assimilability, trial type, language dominance, accuracy, reaction time
- Effectively communicated the findings to peers in the scientific community via poster session and slideshow presentation

IRB & Participant Recruitment

- Designed IRB-approved participant recruitment flyers for two divisions of the project
- Utilize community connections to gather participants with uncommon qualifying traits
- Advertise study recruitment via email lists, classroom/department announcements, and flyers posted in academic and non-academic locations around the Portland Metro Area
- Devised a digital tracking system to plan, manage, revise ongoing recruitment efforts

Project Team Leadership

- Hosted weekly meetings to monitor progress, delegate tasks, and maximize efficiency
- Trained new team members on experimental procedures
- Drafted training protocols for future self-sufficiency
- Served as interim lab manager by hosting weekly lab-wide meetings, coordinating inter-team communication, and maintaining structural organization of laboratory protocols

Laboratory committees

- Disability Advocacy Committee (Leading Member)
 - Studied rules and regulations on accessibility features of public-facing materials
 - Evaluated the laboratory's public-facing platforms to ensure accessibility standards were met
- Social Committee (Leading Member)
 - Plan lab-wise social events such as end-of-year celebrations and casual coffee check-ins
 - Gathered & distributed academic resources on burnout as a social-biological syndrome within various, intersectional contexts
 - Facilitated group discussions on intersectional academic boundaries
- Journal Club (Leading Member)
 - Facilitated group discussions analyzing academic literature

Teaching and Mentoring Experience

Teaching Assistant, Portland State University

Spring 2023 – Current

PSY-347: Perception, an introduction to sensory systems. Core requirement for the PSU Interdisciplinary Neuroscience minor. Volunteer position under Bill Griesar and Jeff Leake, co-founders of NW Noggin, a neuroscience outreach nonprofit.

- 3-7 hours per week for one academic year

Classroom Management

- Grade student assignments and exams
- Answer questions on class assignments, course structure, grading concerns
- Recorded live and virtual classes and provided students with timely access to recordings

Academic Support

- Led weekly review sessions for students
- Developed review materials to prepare students for exams and assignments
- Provided direct academic support to students who demonstrated a high level of need

Administrative Responsibility

- Provide accommodations to students with disabilities
- Moderate gradebook entries and publish grades to students and administration
- Identified students needing academic support or intervention to fulfill PSU's Initiation of Attendance and Early-Alert requirements

Mentor, Math & Science Tutor, Portland Tutor Doctor

May 2023 – Current

- 2-4 hours per week for 9 months
- Work one-on-one with high school students to develop their understanding of course content, study skills, and their self-perception as academics
- Transitioned to a mentorship position, helping define & develop long-term academic goals based on passions and skills

Math & Science Tutor, Clackamas Community College

October 2021 – August 2022

- 6-20 hours per week for 10 months
- Worked one-on-one with students to build study habits and deepen course knowledge
- Led a weekly study group for students taking Algebra (Math 111)
- Performance evaluated per term, including review of recorded tutoring sessions
- Identified as particularly supportive to students with disabilities

Presentations

Robison, N. & Quam, C., (March 2024). *Second Language Impacts on First Language Processing*. Poster presented at the Society for Neuroscience Oregon/SW Washington Chapter Meeting (Troutdale, OR).

Robison, N. & Quam, C., (September 2023). *Second Language Impacts on First Language Processing*. Poster presented at the Portland State University Student Research Symposium (Portland, OR).

Robison, N., (September 2023). *Second Language Impacts on First Language Processing*. Slideshow presented at the Portland State University Student Research Symposium.

Robison, N., Lin, A., & Quam, C., (26 April 2023). Virtual poster session at the *Scholars Transforming through Research* Spring Online Showcase.

Robison, N., Lin, A., & Quam, C., (May 2023). Video abstract submitted for the *Scholars Transforming through Research* Spring Online Showcase.

Undergraduate Thesis

Robison, N., (Expected June 2023, advisor Carolyn Quam) "Attrition & Assimilation: Neural mechanisms of English-Mandarin Chinese bilingualism". *University Honors Theses*.

Non-Refereed Publications

Robison, N., (December 2023). "A Brain Without Glia: Navigating Neuroscience Without Structural Support" *NWNoggin*, <https://nwnoggin.org/2023/12/11/a-brain-without-glia/>

Skills & Certifications

Laboratory

- IRB Fluency & Participant Recruitment
 - Develop IRB amendments to revise active protocols
 - Design flyers to recruit participants from a particular demographic
 - Interpret IRB language to guide flyer placement in the Portland metro area
 - Utilize community connections to identify locations/events prime for recruitment
 - Screen potential participants for qualification to participate in the study
 - Develop digital recruitment materials for use in classroom announcements, academic programs, and other forms of outreach
- Grant writing

Software

- SR Research Eye-Tracking (advanced): EyeLink, ExperimentBuilder
 - Calibrate the eye tracker to human subjects
 - Deploy the experimental program and monitor the subject's progress
 - Troubleshoot errors in calibration and the experimental program
 - Export data for back-ups and analysis
- Praat: Acoustic analysis software
 - Find the formants, intensity (decibels), and pitch (hertz) of audio files
 - Create custom scripts to extract data from large numbers of files
- IBM SPSS Statistics
- Coding: C++, Praat Scripts
- Adobe (advanced): Photoshop, Illustrator
- Microsoft Office (advanced): Excel, Word, PowerPoint, Access
- Zotero (advanced)

Certifications

- FERPA Trained
- Human-Subjects Trained: CITI Certification

Academic Activity

BUILD EXITO

September 2021 – September 2023

- Selected through a competitive application and interview process while at Clackamas Community College
- Received training on how scientific research is conducted at the systemic level

- Underwent mentoring and personal development sessions to develop my personal identity and career plans
- These activities continued upon transfer to Portland State University with the addition of stipend-supported participation in undergraduate research

URISE at Portland State University

September 2023 – Current

- Highly selective program with a cohort of 8 students
- Identified as a particularly successful BUILD EXITO scholar in September 2023 and transferred to the URISE program, representing the first such scholar “promotion”
- Mentoring and personal development sessions now personalized to terminal degree aspirations, concurrent with continued stipend-supported laboratory research

Advocacy

Oregon Senate Testimonial

February 2024

Alongside neuroscience outreach group Northwest Noggin, provided testimony to the Oregon Senate twice in support of abolishing Daylight Savings Time, in favor of Permanent Standard Time.

- First testimony provided in-person, by invitation, on February 6th to the Oregon Senate Committee on Veterans, Emergency Management, Federal and World Affairs
- Second testimony provided virtually on February 22nd to the Oregon Senate’s public hearing regarding the bill (SB 1548)
- Testimonial detailed the personal impact of Daylight Savings Time on myself as an individual with a circadian rhythm disorder, as well as how Permanent Standard Time enables more effective treatment for hormone-based disorders

Disability Rights Advocacy

Spring 2023 – December 2023

Student representative on the selection committee for the Director of the Disability Resource Center at Portland State University.

- Recommended for the position based on my prior advocacy which resulted in a policy change in favor of increasing equity for students with disabilities
- Identify the needs and concerns of the community which the center serves
- Review best practices to reduce implicit bias during applicant review
- Conduct interviews and evaluate systematically to select applicant to recommend

Policy Advocacy Training

October 2022 – April 2023

Scholars Transforming through Research, a national program under the Council on Undergraduate Research to develop collaboration between science and policy-making.

- Selected via a competitive application process
- Traveled to Alexandria, VA for initial training and to network with the national cohort
- Monthly virtual training on providing evidence-based solutions to policy-making processes
 - Op-ed writing
 - Establishing working relationships with legislators, representatives
- Program supported by the National Institute of Health and the National Science Foundation; personal participation sponsored by the Portland State University Department of Research and Graduate Studies & the BUILD EXITO Program

Honors & Awards

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| • University Honors: Fall 2021 - Current | Portland State University |
| • Wessinger Foundation Honors Scholarship | Portland State University |
| • President’s List (Fall 2022, Spring 2023, Fall 2023) | Portland State University |
| • Dean’s List (Winter 2023) | Portland State University |
| • Phi Kappa Phi Honor Society (Invited) | Portland State University |
| • Phi Theta Kappa Honor Society (Initiated) | Clackamas Community College |