Aaron Wenger

PhD

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PhD applicant with experience in study design, statistical analysis, data management, and STEM education teaching and research seeking the Post-Graduate Fellow position at Science and Mathematics Program Improvement (SAMPI).

Key Skills

Study Design, Data Management, and Statistical Analysis

- Created study assessment tool and applied it to 400+ experimental and quasi-experimental studies judging internal validity and threat of bias
- Constructed relational database to collect and organize hierarchically structured data and implemented appropriate data management practices (e.g., data dictionaries)
- Designed and implemented analysis pipelines to automatically clean, process, and analyse data in R
- Applied multilevel regression models with appropriate diagnostics

Project Management and Communication

- Planned large project requiring 1,500+ hours, identifying the critical path for progress and key deliverables (e.g., analytic results)
- Organized and maintained a working group of peers for related projects
- Presented project results to peers and non-experts in multiple venues

Diverse Quantative and Qualitative Evaluation Skills

- Created survey tools, interview protocols, various project documents (e.g., memos), and supporting documentation
- Conducted numerous interviews for SAMPI, analyzed those interviews and drafted reports
- Conducted surveys using Google Forms and Qualtics, analyzed the collected responses, and drafted reports
- Reviewed research literature to support work and developed new skills to address challenges

Experience

Western Michigan University
Kalamazoo, Michigan

Graduate Research Assistant in Science And Mathematics Program Improvement (SAMPI) — *2021-2023*

- Worked on MiSTEM project (among others) under direction of project leads
- Created protocols and tools in collaboration with internal staff
- Conducted quantitative and qualitative analysis of continuous, ordinal, and textual data
- Wrote internal and external reports summarizing findings and key action points
- Extensive experience collaborating in *Microsoft Office Suite* products

Western Michigan University
Kalamazoo, Michigan

Teaching Assistant — *2017-2021*

- Taught science courses, including chemistry and biology, as the instructor of record
- Independently moved in-person courses to virtual, partially synchronous format making all necessary modifications to course activities and materials

Education

Western Michigan University
Kalamazoo, Michigan

Ph.D. in Science Education — *2017-present*

- Named the **2023-2024 Department Graduate Research and Creative Scholar**, in recognition of excellence in research and creative scholarship
- Learned basic inferential statistics through multivariate analysis using SAS, SPSS, and R
- Independently learned data management principles, R programming, and software for computational reproducibility
- Leveraged tools for parametrized reporting (Rmarkdown, Quarto) including my dissertation manuscript and this resume

M.A. in Biological Sciences — *2017-2021*

- Master's Thesis Project: Engineered Flagellin Disulfide Variants in Salmonella typhimurium

Cornerstone University
Grand Rapids, Michigan

B.S. in Biology-Health Sciences - minors in Chemistry, Ancient (History) Studies — *2011-2015*

- Recipient of the Ronald Meyer Academic Scholar, Dean's list (6 of 7 semesters), and President's Scholarship