



The Devtech research group at the Eliot Pearson Department of Child Study and Human Development, directed by Prof. Marina Umaschi Bers, has an opening for a postdoctoral position with expertise in statistical data analysis with large data sets to work in the “Coding as Another Language” (CAL) project funded by the US Department of Education.

CAL implements and evaluates the use of ScratchJr in K-2 classrooms through partnerships with Rhode Island and Boston public schools over the course of two years. The CAL curriculum engages young children in developing computational thinking, problem solving, and collaboration skills while learning how to create their own interactive projects by programming with ScratchJr. The project accomplishes the following goals:

- Create a comprehensive, field-tested, high-quality, integrated K-2 computer science (CS) curriculum and suite of teaching materials and implementation supports that will be free and publicly available.
- Achieve high fidelity of implementation in grades K-2 resulting in improvements in student learning outcomes as well as improvements in teachers’ pedagogy and content knowledge to implement the curriculum.
- Build capacity of Tech Leaders, technology coordinators, and specialized coaches to replicate and sustain work following the grant period.
- Broaden participation in CS education from students currently underrepresented in CS education including females, racial/ethnic minorities, and students with disabilities.

The curriculum will be evaluated for impact. The impact study will use a randomized control trial design with delayed treatment. Impact will be assessed through differences in learning outcomes in the treatment and control group, looking at computational thinking and coding skills, math, and language development. A transfer and sustainability study will compare fidelity

of implementation across groups/cohorts and measure perceived sustainability through interviews with teachers and Tech Leaders via the development of a strategic plan.

The ideal candidate has PhD in psychology, statistics, child development or education, or another quantitative social science discipline, with a strong background in quantitative methods. Practical experience in an education or evaluation project is a plus. The work involves integrating and analyzing multiple, large data sets from disparate sources (primary and secondary data).

Required qualifications:

- demonstrated experience with exploratory, correlational and inference data analysis, especially hierarchical modeling
- knowledge of research design principles and educational measurement principles, including familiarity with psychometric concepts such as validity and reliability
- expertise in a research-oriented programming language (preferably R) for manipulating data and conducting statistical analyses
- experience with data management and collaborative work tools
- experience (or willingness to quickly learn) Qualtrics to design and conduct surveys
- good project management, attention to detail, and problem-solving skills
- excellent communication and writing skills for both technical and non-technical audiences

The postdoctoral scholar will be a key member of the DevTech team with significant research responsibilities focused on methodology and data analysis, the production of publications as well as the development of proposals to extend the research. This is a two year appointment.

If you are interested, please check the DevTech website and the CAL project at <http://ase.tufts.edu/devtech/> and send your CV and cover letter describing your interest in the project and your skills to marina.bers@tufts.edu