

Research Assistant Opportunity

Group exams: Does Gender Influence Student Choices and Success?

The Simon Fraser University Institute for the Study of Teaching and Learning in the Disciplines and the Faculty of Science invites applications for a short-term research assistant position.

In some introductory courses, students write tests in the group format (also called two-stage, or two-phase): they complete the test individually, then join a group to complete same test again, deciding on shared answers (e.g. Gilley & Clarkston, JCST 2014). Several studies have been published on this teaching approach as a way to boost learning, retention, and inclusivity/equity. We are interested to see any evidence of gender dynamics at work in the groups, and have data from at least one semester in a high-enrollment course. This project may relate to biology courses, or possibly a comparison of data between biology and physics courses.

Timeline and expectations of applicant experience:

We are intending this to be a short-term contract, with reasonably intense data analysis/writing work focussed towards submitting your first-author manuscripts by end-of-December 2020 (ideally). All data has been collected, and we are excited to build a team this semester to analyze, interpret, and publish the findings. Thus, we are looking for self-directed applicants experienced with data science / statistical analysis and academic writing in the Discipline-Based Education Research (DBER) or Learning Analytics (LA) fields. This may be through a formal program (e.g., graduate training, postdoctoral fellowship, etc.) or it may be through other equivalent experiences.

Required qualifications and skills:

- **Data science:** Ability to select and implement meaningful analyses, including appropriate statistical treatment, and effectively communicate the work to a DBER or LA audience (who are not necessarily data scientists themselves).
- **Writing & publishing:** Academic research and manuscript-writing skills, as demonstrated by prior publication(s). (In other words, have published at least one science education paper in DBER, learning analytics, or similar field.)
- **Communication:** Excellent interpersonal skills, including reliable and effective communication with the team and project lead.
- **Initiative and experience:** Self-directed, independent project completion skills, in consultation with the project lead and research team. Note that the project lead has reasonable DBER, education, and academic writing experience, but is not a data scientist.
- An **interest** in evidence-based teaching and learning, and science education. Personal experience with undergraduate science courses is an asset, but not required.

Research assistant responsibilities:

- Analysis of large- or moderate-scale datasets (selecting & implementing analysis approach; documenting workflow, drawing conclusions, data visualization);
- Writing a full draft of a (first-author) paper for publication in the DBER or LA field. including short literature review for the introduction and context.
- Meeting remotely each week with project team, during PDT daytime hours, from contract start until papers are submitted (ideally end of December 2020).
- Available intermittently in 2021 to discuss and handle journal revision requests.
- Optional: Presentation at a conference. (e.g. at SABER or LAK or similar); conference registration costs may be eligible to be covered, depending on cost.

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Rate of pay: \$25-30/hr (Canadian dollar; incl. vacation and statutory holiday pay, no medical or dental benefits) - based on experience & qualifications. Minimum 120 hours with the possibility of additional hours.

To Apply: Applicants must be eligible to work in Canada (with a valid Canadian SIN and bank account). Applicants should submit: (1) a 1-page cover letter structured to address the interest, skills, and role responsibilities as listed above; and (2) a 1-2 page resumé that highlights relevant qualifications, experience, and dissemination of prior projects. These two items should be organized as one PDF attachment addressed to Megan Barker, and emailed to megan.barker@sfu.ca, with the subject line: "*RA position: Group Exams*". Short-listed applicants will be provided with a mock, small-scale dataset, and then invited to interview (via Zoom).

Application deadline: Friday, October 23, 2020. We appreciate all replies to this posting, however, we will only contact short-listed applicants.