

# Exploring Outputs from a CCSES Instructor Report – Learning and Possibilities

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## ABOUT

**The Canadian Consortium of Science Equity Scholars (CCSES)** comprises educators and researchers devoted to advancing equity in science education by exploring the impact of student social identities on affective experience in academia.

## AIM

Generate course-specific reports for instructors to examine student survey results, visualize systematic barriers hindering student success, and influence inclusive practices.

## APPROACH

**Survey 1** (start of course)      **Survey 2** (mid-course)      **Survey 3** (end of course)

Disciplinary belonging      Classroom climate      Disciplinary belonging

Self-efficacy      Social belonging      Self-efficacy

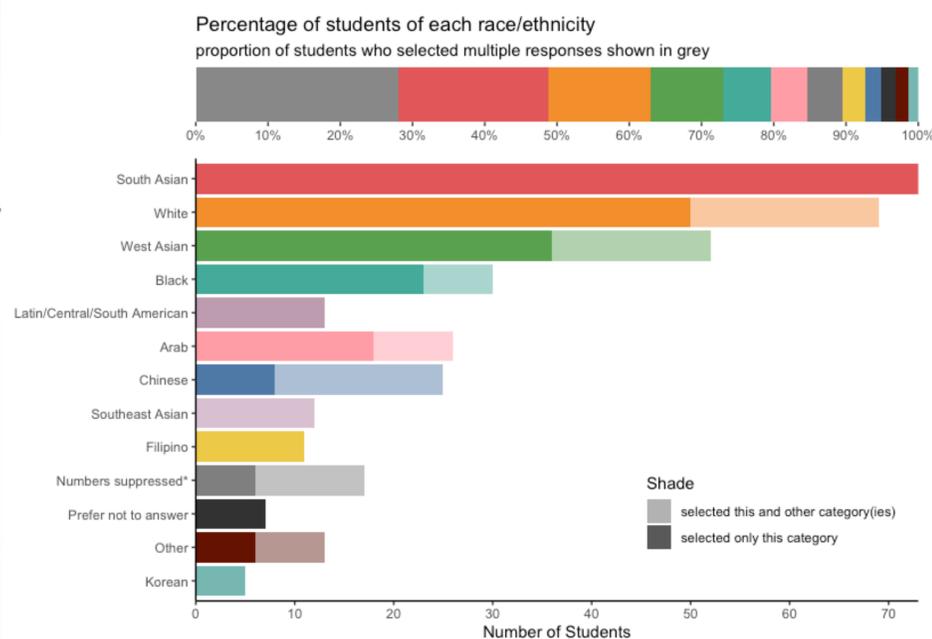
Demographics      Demographics      Demographics

- Demographics:** race/ethnicity, gender identity, family experience with post-secondary education, and disability status.
- Classroom climate:** perception of classroom care, connections, and learning orientation.
- Self-efficacy:** belief in one's capabilities to learn and succeed in the course.
- Sense of belonging (social and disciplinary):** a sense of fitting in, being engaged, and feeling accepted in social (social belonging) and disciplinary (disciplinary belonging) communities.
- Barriers to learning:** group-based exercise impacts on individual internal factors (e.g., fear of being judged, language barriers), external factors (e.g., participation style), and online factors (e.g., online learning).

## FALL 2022 PRELIMINARY RESULTS

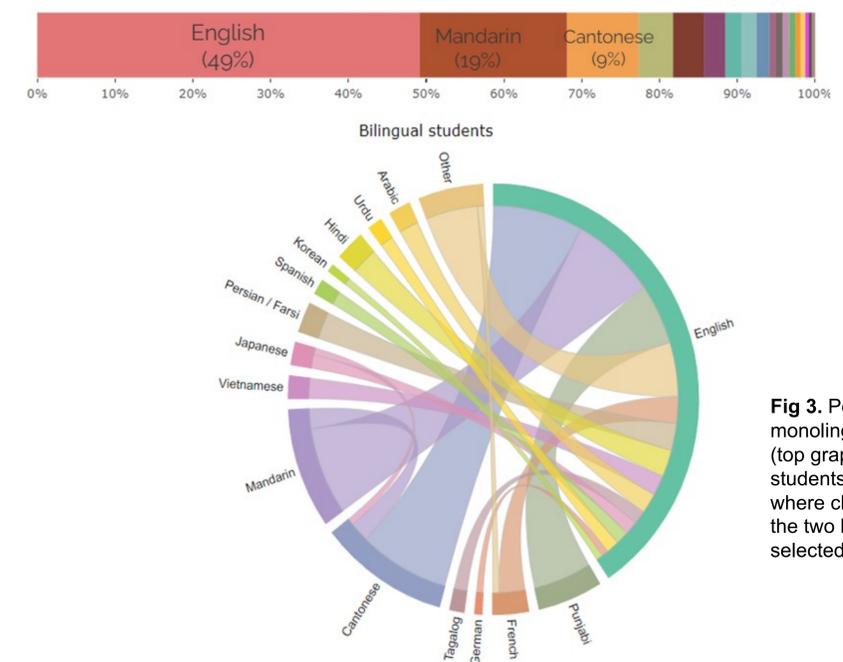
During the 2022 fall term, 7,421 students enrolled in chemistry, biology, physics, and ecology courses at the University of British Columbia (n = 2,666), University of Calgary (n = 107), University of Toronto (n = 3,121), and the University of York (n = 1,527) participated in a survey. The data presented below is specific to the University of York Biology2040 course – out of 485 students who completed the course, 320 participated in the survey (66% response rate).

**Survey question: Select how you self-identify (you can select more than one)?**



**Fig 1.** Demographic data results (n = 278) grouped according to color. The top bar plot accounts for total percentage of race/ethnicity responses; bottom bar plot accounts for number of student responses in each respective category where the dark shade indicates individual selected only this category and the light shade indicates individual selected this and other categories. \*numbers suppressed corresponds to categories that received less than 5 responses.

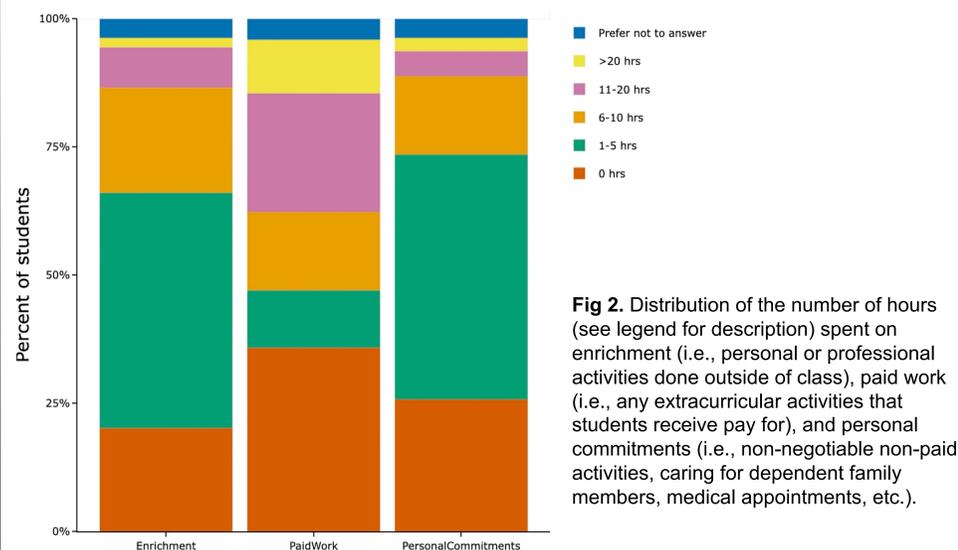
**Survey question: What is the language that you first learned at home in childhood and still understand? (select all that apply)**



**Fig 3.** Percent of monolingual students (top graph) and bilingual students (bottom graph), where chords designate the two languages selected.

Ask to see the full report!

**Survey question: Approximately how many hours per week do you typically spend on [Activity] in this term?**



**Fig 2.** Distribution of the number of hours (see legend for description) spent on enrichment (i.e., personal or professional activities done outside of class), paid work (i.e., any extracurricular activities that students receive pay for), and personal commitments (i.e., non-negotiable non-paid activities, caring for dependent family members, medical appointments, etc.).

## POSSIBILITIES

Instructor reports are currently being finalized for all participating instructors. Once ready, we will investigate instructors' perceptions of the report, facilitate adoption of additional inclusive teaching practices, and monitor the impact of changes.

## ACKNOWLEDGEMENTS

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