

Developing and Implementing a Comprehensive Survey Tool to Understand Persistence in Engineering Education



Supported by a Contemporary Issues in Student Mobility project grant.

GOALS

- Create a survey instrument intended to broadly capture the engineering student experience from entry into first-year through to graduation.
- Seek details such as physical and mental health, home life, sexual orientation and gender identify, and belonging to better contextualize the student experience.
- Enable evaluation of initiatives aimed to address barriers experienced by students.

Scan for 1st year survey



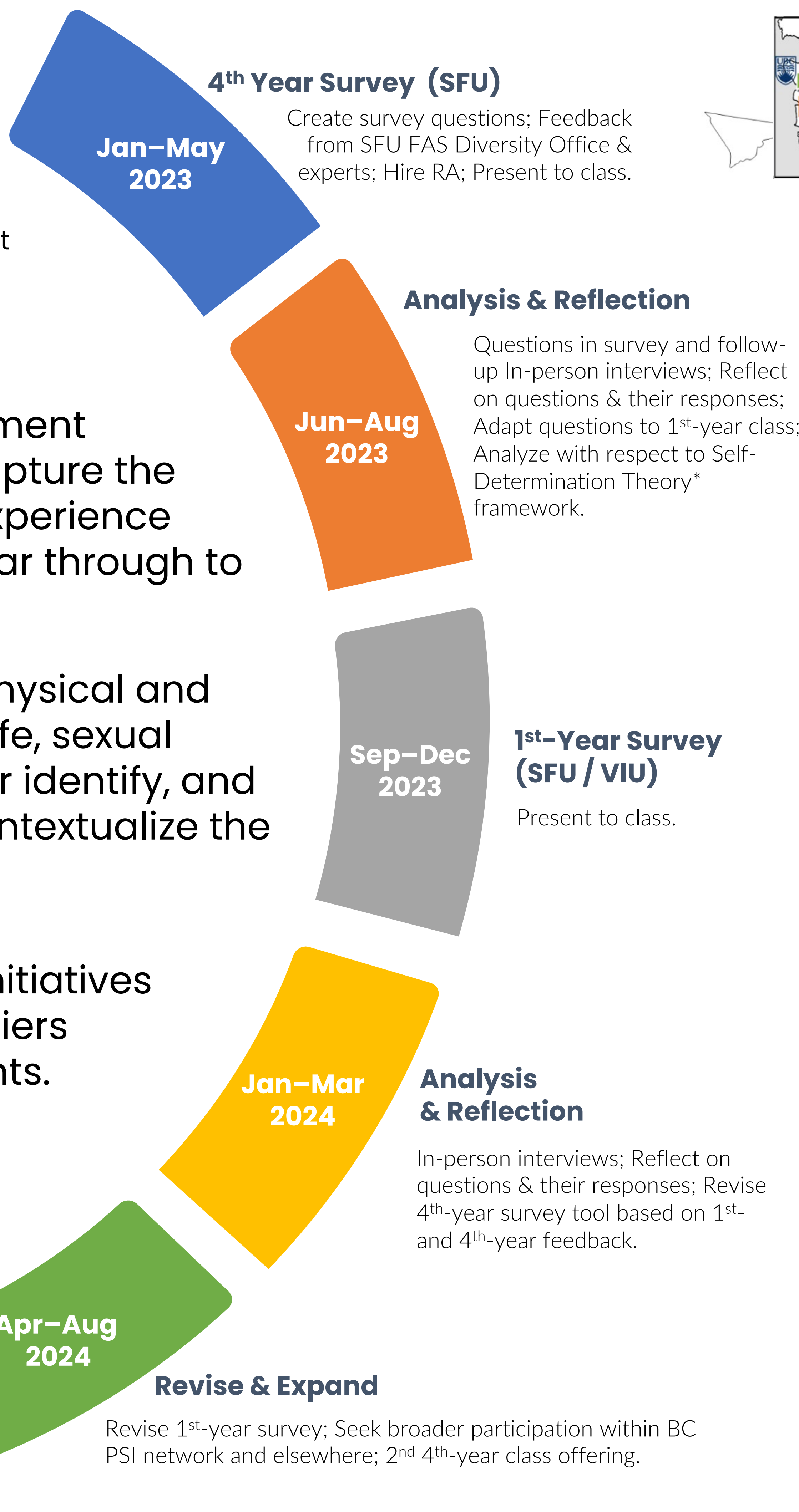
Sept - Dec 2024

Launch - 1st Year Survey (SFU/VIU/Other)

Present to participating classes and participating institutions.

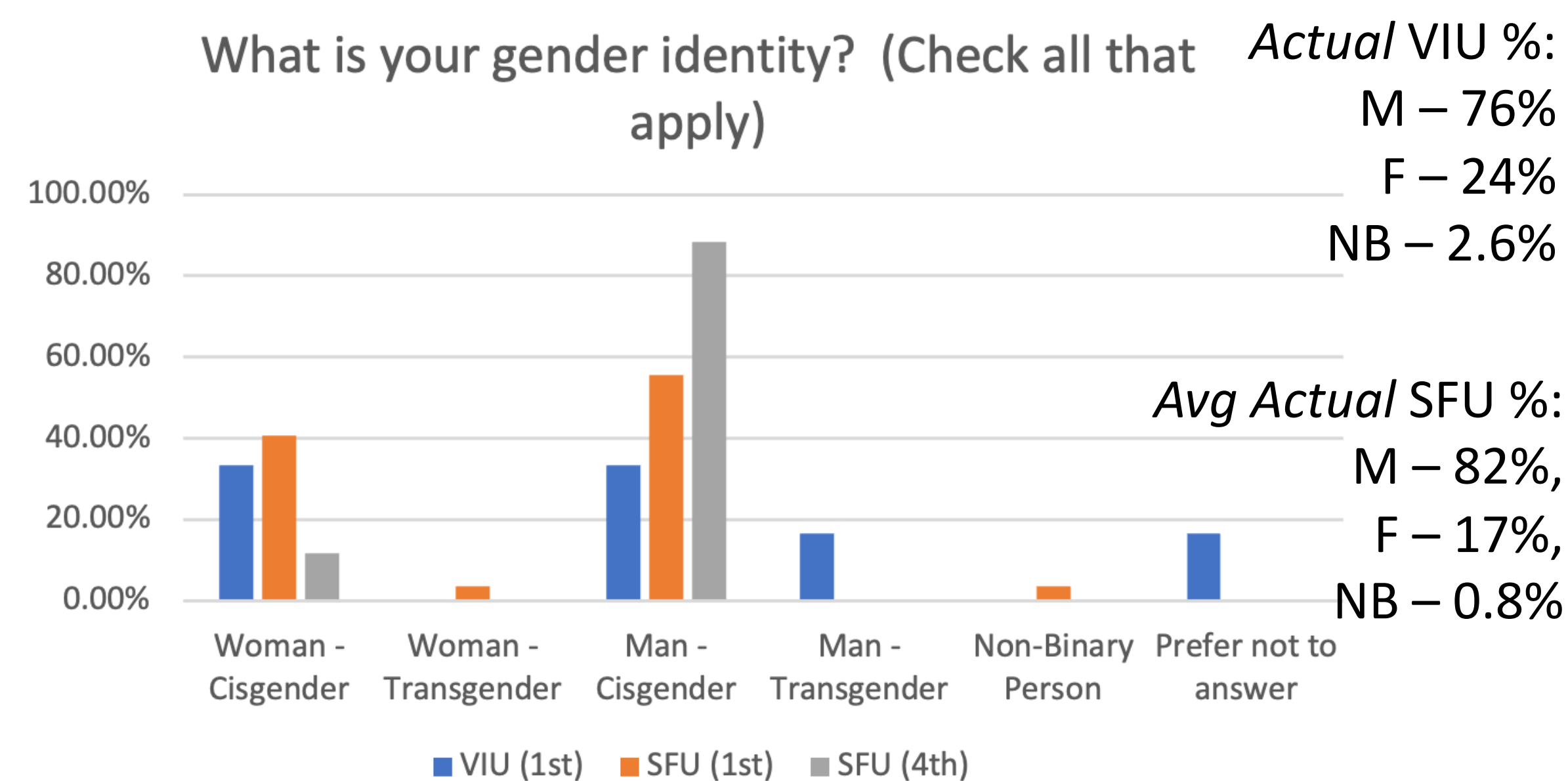


Scan if your PSI is interested in participating



SURVEY VALIDATION

Portions of the data set can be evaluated against known values to help interpretation.



CONTEXT

Engineering schools and professional bodies recognize that not all segments of society have equitable opportunity to pursue and succeed in engineering.

Initiatives such as Engineers Canada's 30 by 30 program aim to address this challenge, but there is limited data available to measure impact on students who may experience other barriers.

~20% of first-year engineering seats in BC are at colleges and teaching intensive universities.

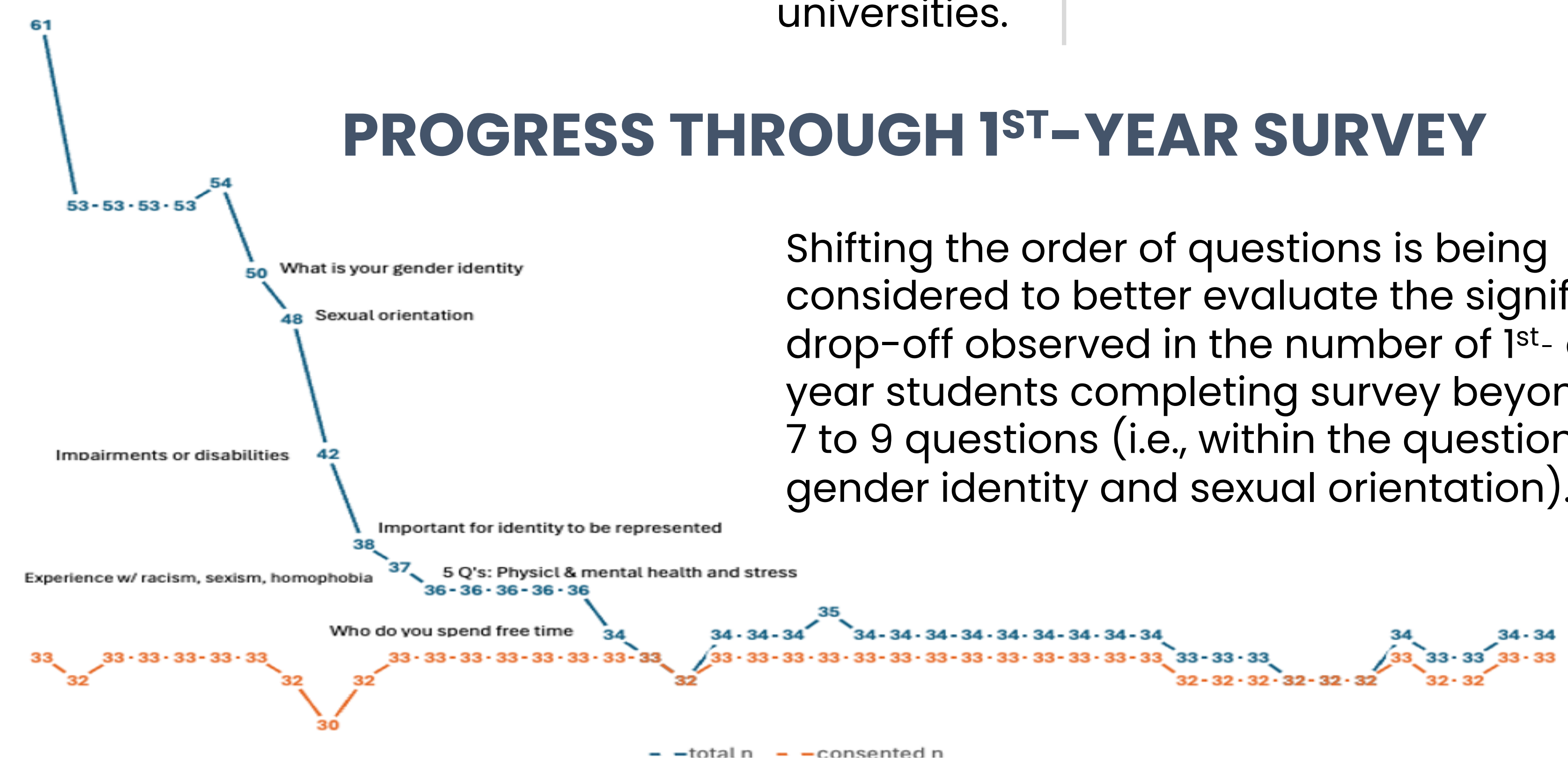
4TH-YR SURVEY FEEDBACK

Length of survey was reported as reasonable. Some students not expecting such level of detail.

Examples of changes:

- Expanded question set on belonging**, and identity (e.g., significance or insignificance to self).
- Restructured and/or reworded questions to avoid misinterpretation (e.g., experience/witnessing unfairness instead of discrimination).
- Expanded question set on motivation (e.g., mirrored questions on enrolment decisions).

PROGRESS THROUGH 1ST-YEAR SURVEY

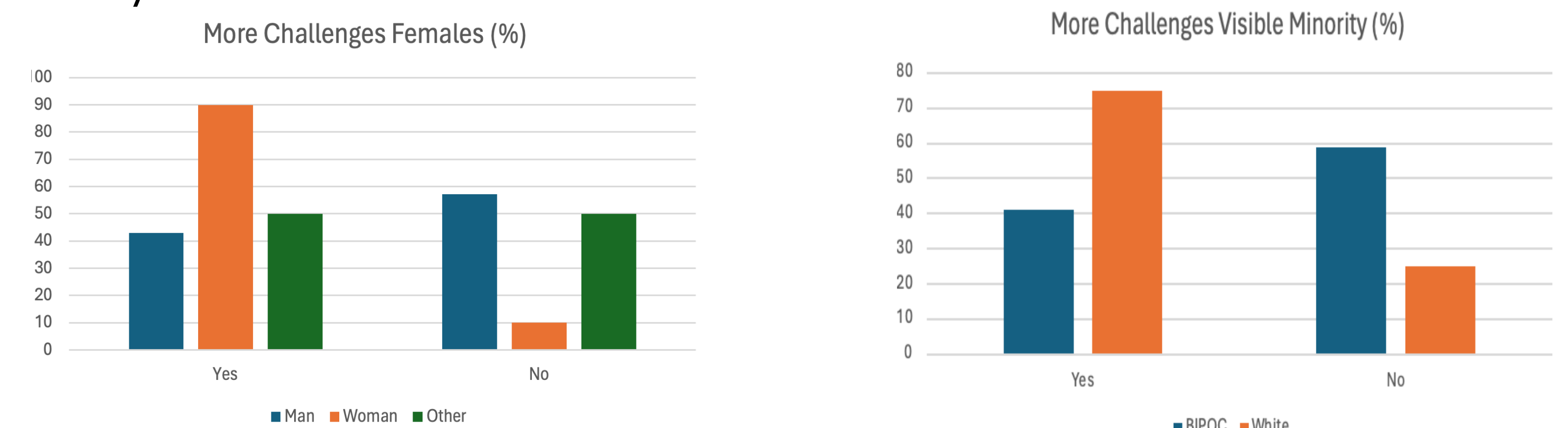


Shifting the order of questions is being considered to better evaluate the significant drop-off observed in the number of 1st- and 4th-year students completing survey beyond the first 7 to 9 questions (i.e., within the question set on gender identity and sexual orientation).

First-Year Student Respondent Drop-off During Survey

SELECT OUTCOMES

Consistent with other studies**, the data suggested a different experience based on their identity:



And may suggest a nuanced story in how mental health and stress is presented:

