Electrical and Computer Engineering 2022 Class Profile

Table of Contents

Demographics

Academics

Co-op

Future Plans

Reflections on Undergrad

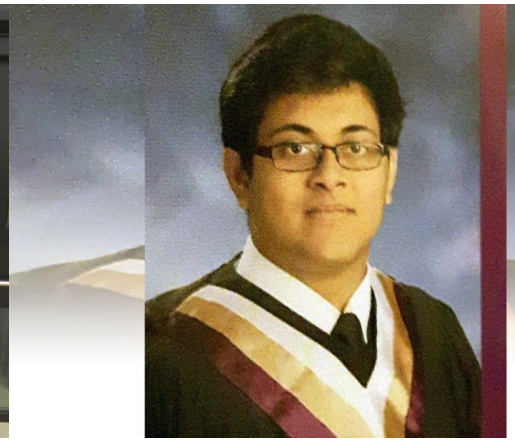
Mental Health

Lifestyle

Concluding Remarks

Preamble

Before we begin this report, we'd like to take a moment to send our condolences and farewells to those who didn't make it all the way through. The death of our peers and our mentors is crushing and painful. We'd like to take this introduction to send our wishes and prayers to the families of Firas Mansour, Jason Arbour and Mishkat Islam. They may be gone, but they are still with us in our thoughts.



Introduction

Class profiles take a minute, huh?

Earlier phases of the profiles weren't so tedious, but between an epidemic of senioritis and busy plans with grad travelling, making the profile took eons. Embarrassingly, we're currently ahead of many other classes, though we're still polishing and reviewing the remarks to make on every slide. Big thanks to Aditya A., Aditya S., Kate, Michael, and Rachel for helping with this absolute slugfest of a last stage of questions

If you see inaccuracies, or have any feedback, *please* fill out this form, we intend to iterate, improve and produce a cleaner, more professional public version for everyone to consume.

Special thanks to Aditya Arora, Aditya Sharma, Azin Taqizadeh, Clement Liaw, Illya Myshakov, Kate Zhao, Michael Leung, Rachel Wong, Stephen Lin, Waleed Ahmed, Yeshu Jain, and everyone who generously helped with the class profile. This wouldn't be possible without you.

Thanks for your patience, and with a light heart, we present to you our private class release of the ECE profile.

Daniel McCormick

Disclaimer

This is the public version of our class profile, which has been read through to ensure the content is appropriate for general consumption, while minimizing the amount of jokes that would require additional context to avoid any misunderstandings.

With this in mind, we hope this survey can be read with both a light heart and a sense of maturity, though we'd like to take the time to apologize for any offence or harm our survey may have caused. These remarks are made with the best of intentions and consideration to your well being.

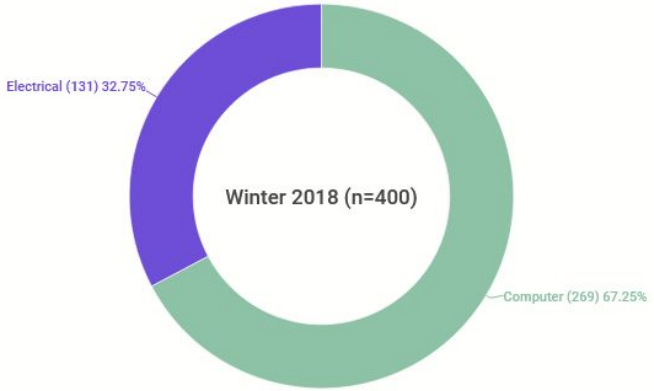
Given this context in mind, we'd also like to declare that the cleaned data has been refactored, obliviating any possibility for further correlations. This has been done such that it will no longer be retrievable to identify people who answered these questions, as we promised them privacy and will uphold it as such.

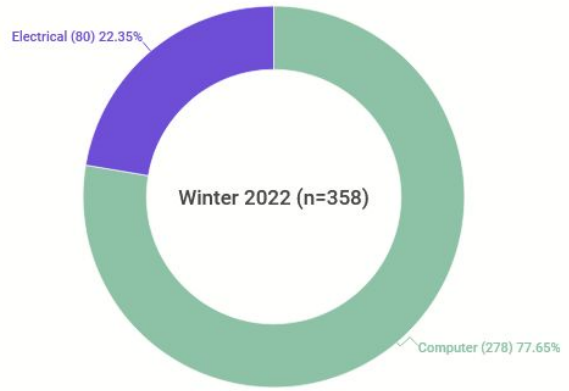
We've attempted to mark where some data is redacted (e.g. one person making <$1M/yr said they're making $7M over four years, and another person making >$100k/yr said they're making $85k over four years), but we've overall let the data mostly intact. The class were great sports who almost entirely provided serious answers, and we're thus happy to present these results.

And without further ado, let's begin the class profile!

Demographics

Computer vs Electrical



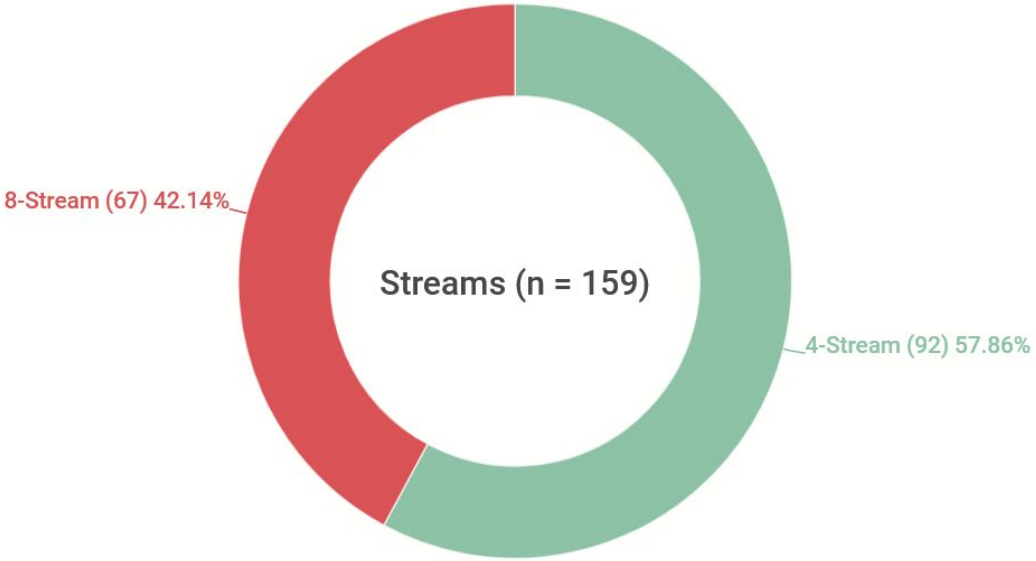


Within the ECE Department, there are two programs of study: Computer Engineering and Electrical Engineering. The two programs share the same courses up to and including the 2A academic term, meaning that transferring between the two programs is possible without penalty until then.

The proportion of Computer Engineering students increased between the second term of the program (Winter 2018) and the last term (Winter 2022), mostly because the number of Electrical Engineering students decreased heavily. Where'd you guys go?

Note: Data is taken from Institutional Planning [1]

Streams



In ECE, there's two types of streams. 8-streams, who start looking for a coop in their 1B term, and 4-streams, who start looking for a coop about 3 weeks into their undergrad (poor saps).

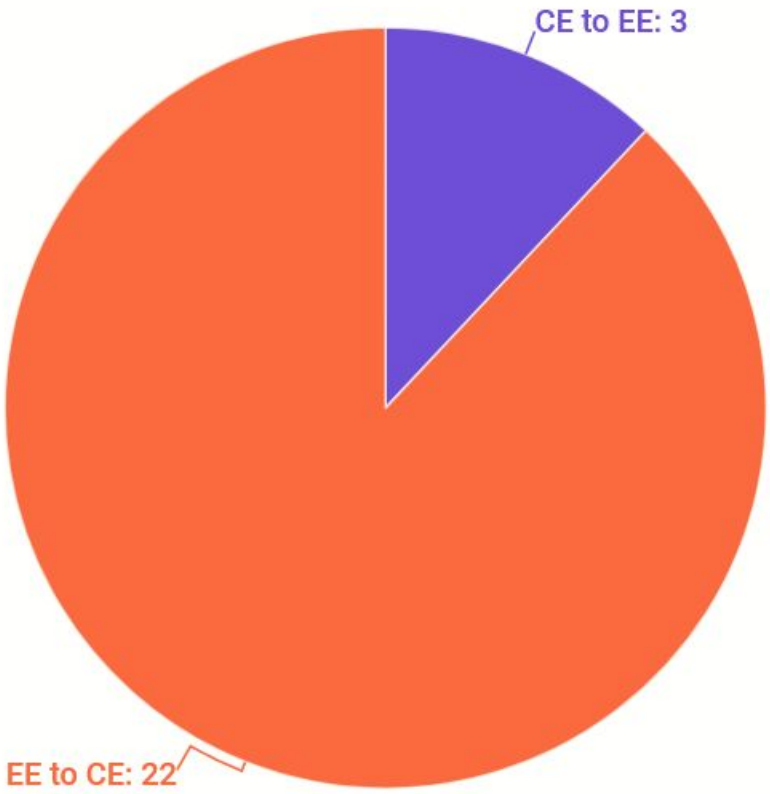
Interestingly, stream 8 students seem overrepresented, given that there's two stream 4 classes, and one stream 8. Maybe looking for a job in 1A hurts the odds of passing?

Jumping Ship

Not everyone stays in their part of ECE that they begin in.

Notably, a few students switched from CE to EE, and quite a few from EE to CE.

This is probably because Electrical Engineering is a lot of work.



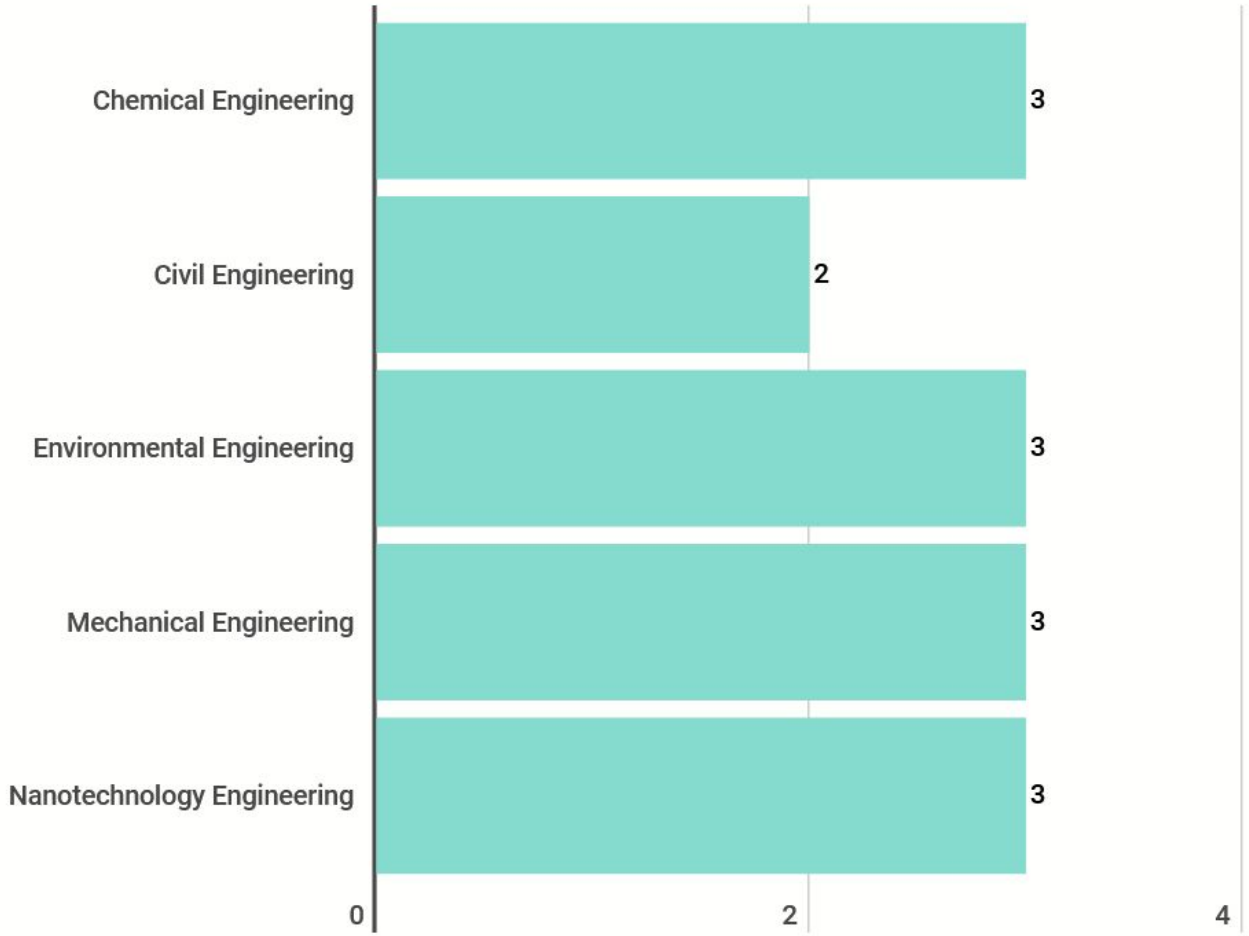
Welcome In!

Students transferred in from a variety of other engineering programs!

(n = 102), it seems 2-3 students transferred per other program - perhaps with friends?

It's a big tent, welcome aboard!

(Editor's note: At least one person switched from non-engineering, but they didn't fill out the survey)



Why Transfer?

Why switch to ECE?

Primarily the reasons are stuff like:

- It pays well
- Other eng sucks
- I like CE

Shoutout to the person who managed to transfer into their preferred program too, congrats!

“I wanted to be employed with less hassle.”

“I realized that [redacted] Engineering wasn’t for me”

“Transferred for better career opportunities and to better align with my interests.”

“[redacted] eng was boring and not very creative at all. Also tech is where most of the money is at.”

“(I) always wanted to enter CE but didn't have the marks for it”

“I enjoy the career opportunities and agency software engineers have, and I realized [redacted] engineering was very different than just studying [redacted].”

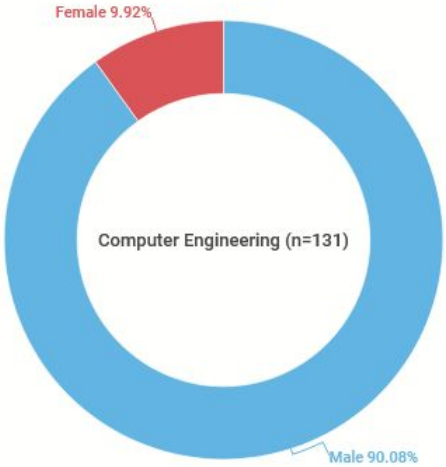
“(I had a) lack of interest in [redacted] Engineering

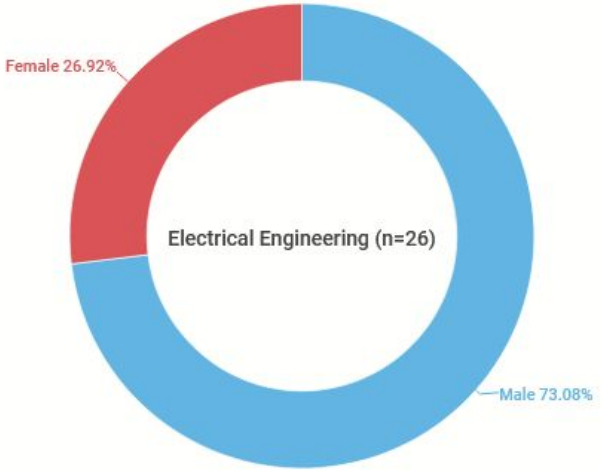
“I eventually transferred to Computer Engineering because of the better career prospects.”

“Transferred from UW's [redacted]Engineering because I enjoyed CE topics more.”

“I tried programming at a co-op and liked it”

Gender





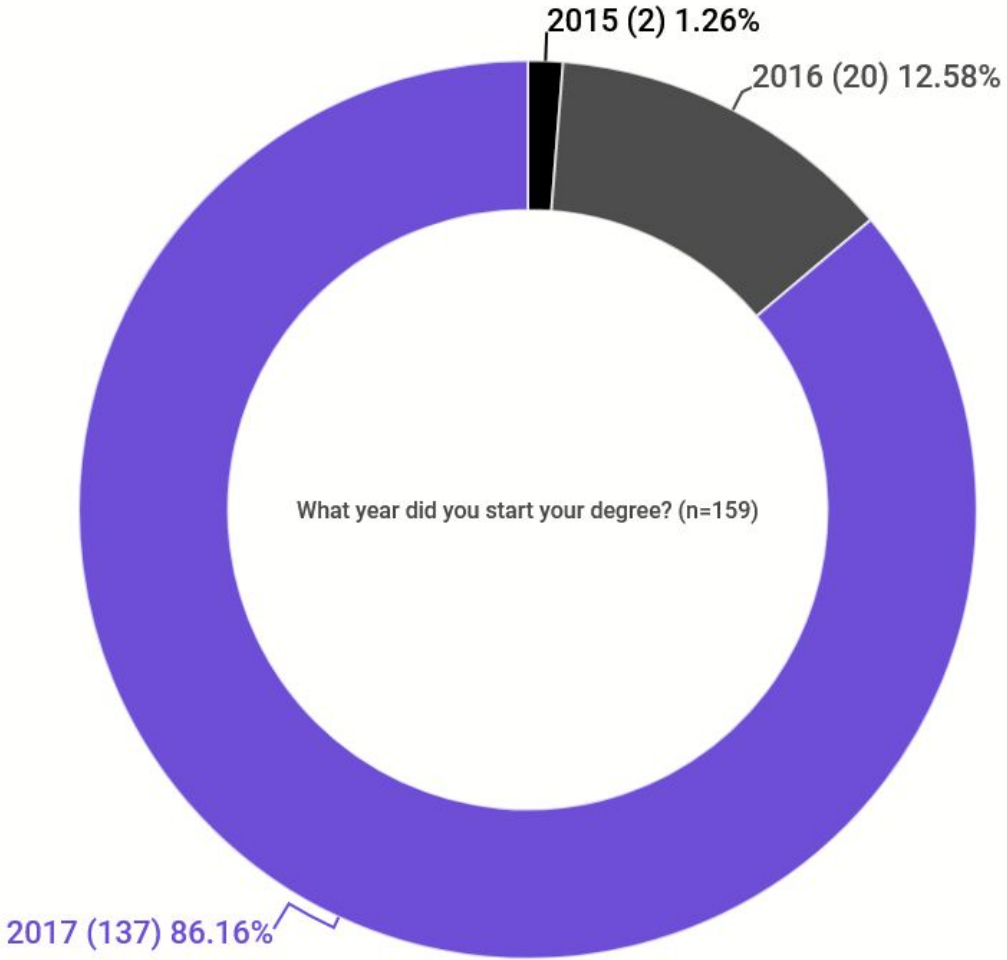
Students were provided the option to decline to answer, or provide their own input. 0 identified by other terms, 1 in Computer Engineering declined to identify by gender.

We believe these graphs may illustrate why accessing gender-based headcounts now is locked behind student authentication (alongside a VPN). Females seem substantially more represented in Electrical Engineering than historically present, though that's just 7 students.

Timeline

About 14% of the class took longer than anticipated to graduate.

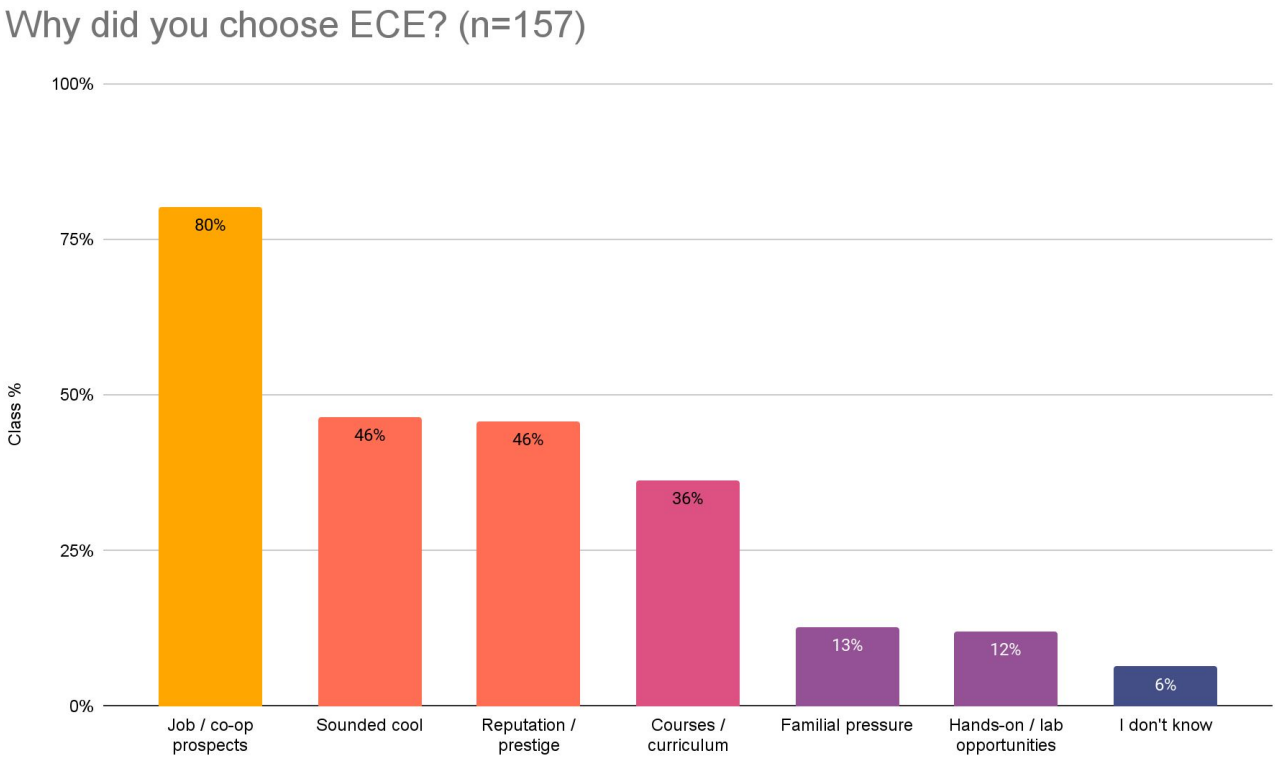
It's not a rush, we're glad to have you with us!



Choosing ECE

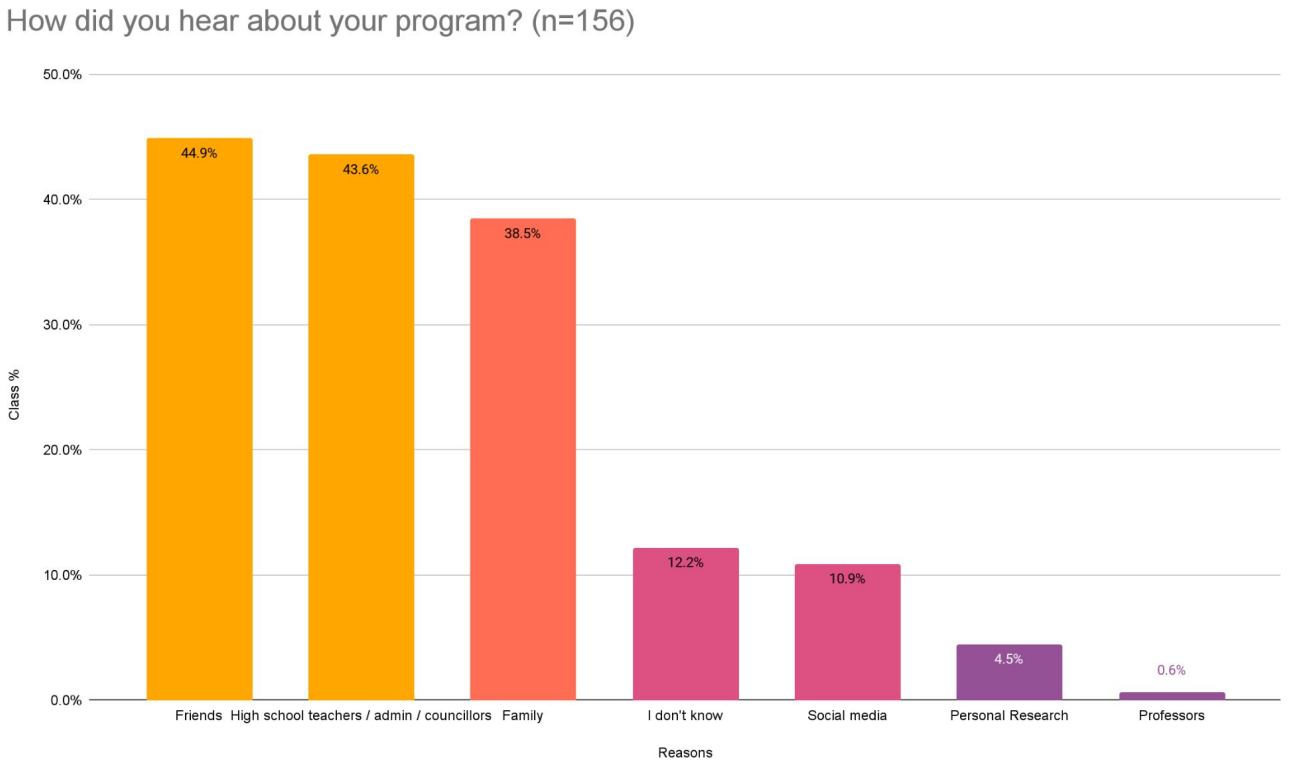
It's pretty clear that people chose ECE for the fantastic working prospects, with it sounding great as a follow-up.

It's reassuring to see family pressure isn't the driving force.



Discovering ECE

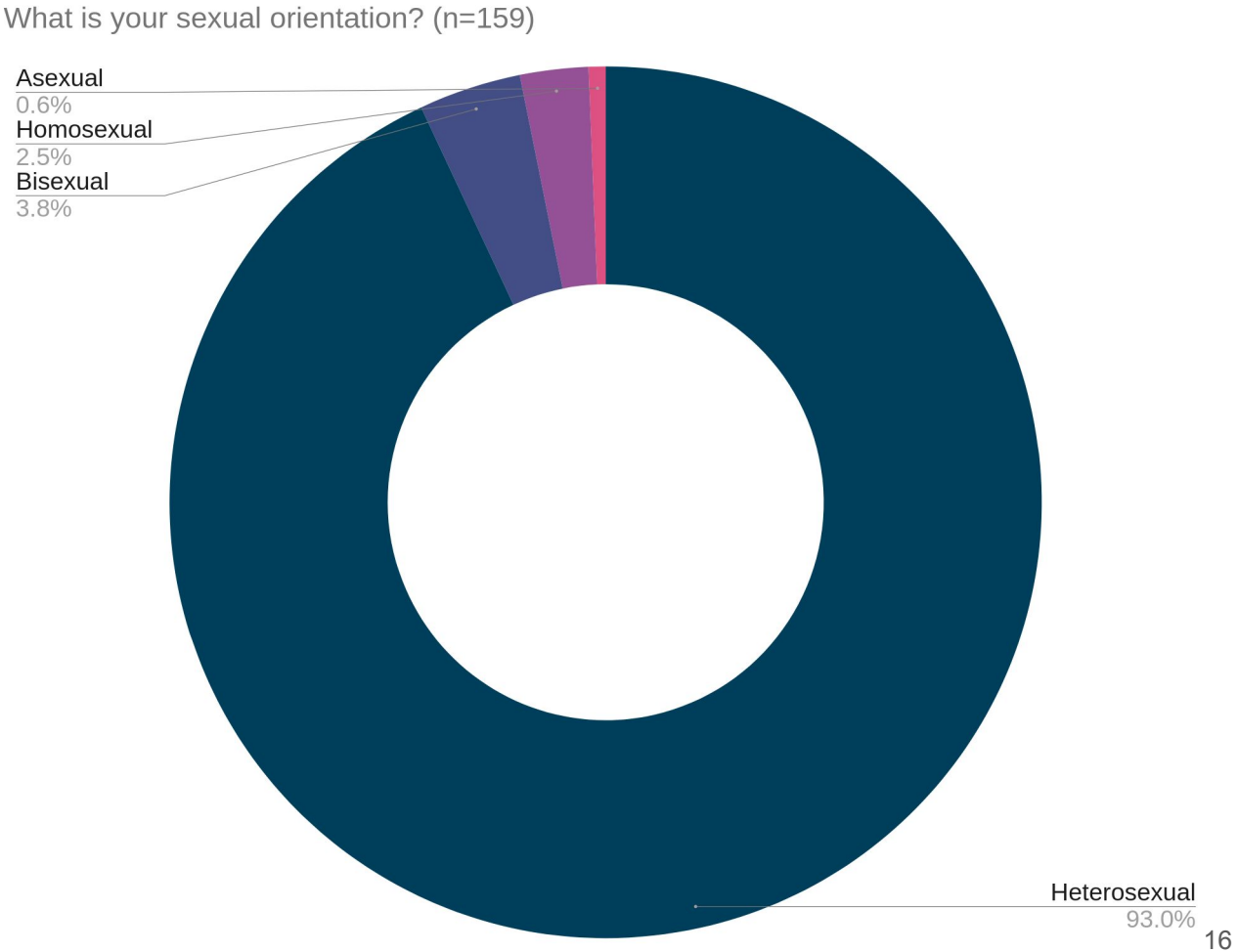
There isn't a primary source for the class, but it makes sense that it's friends, family and teachers influencing your university choices.



Sexual Orientation

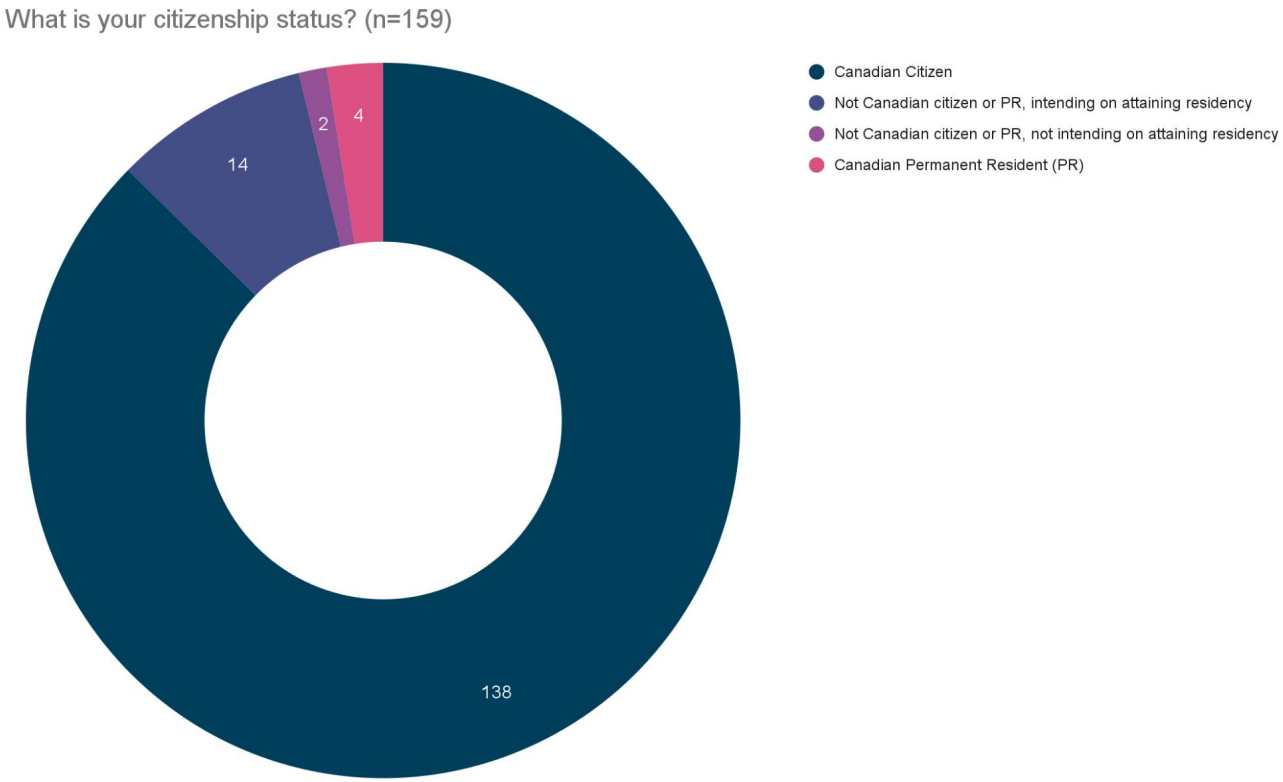
Stats Canada estimates about 4% of the population is *not* heterosexual[2], so this is roughly in line estimates of general population.

Every question, including this one is optional, so the number still may be skewed.



Citizenship

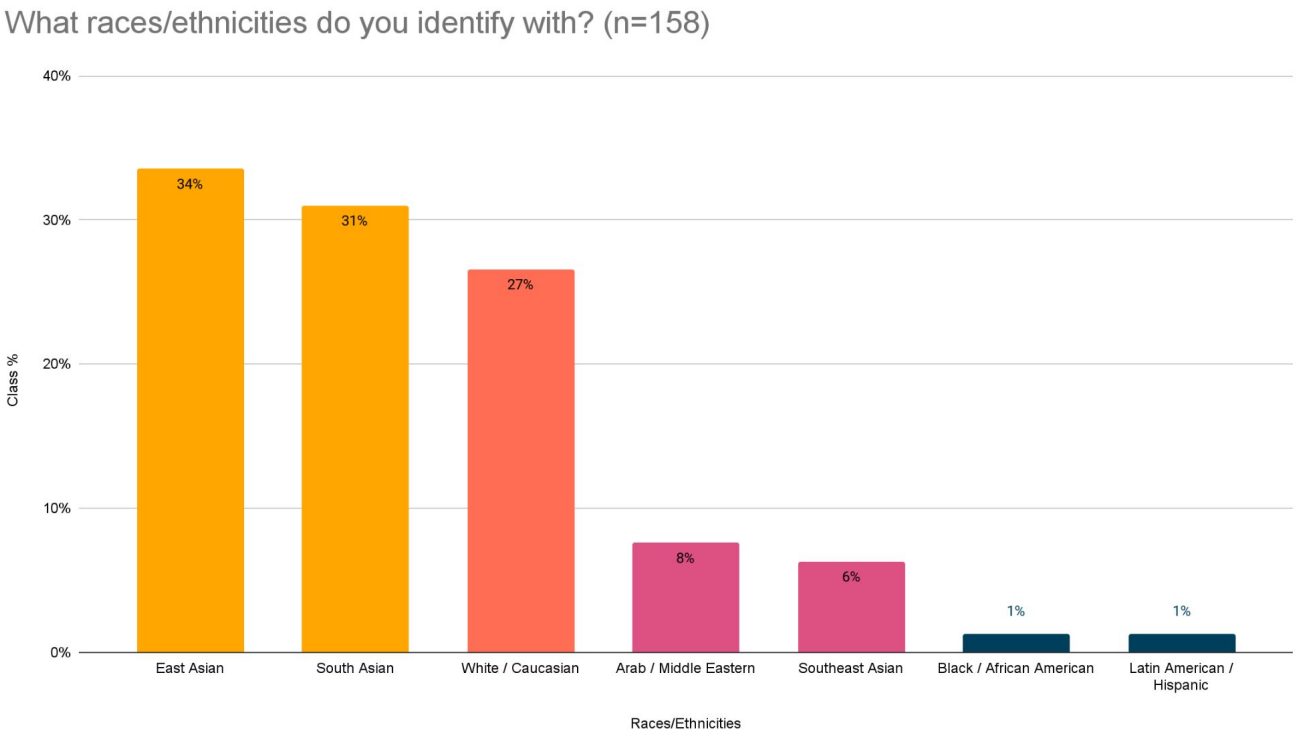
It warms our heart to see all international students intend on sticking around, you're right at home.



Races & Ethnicities

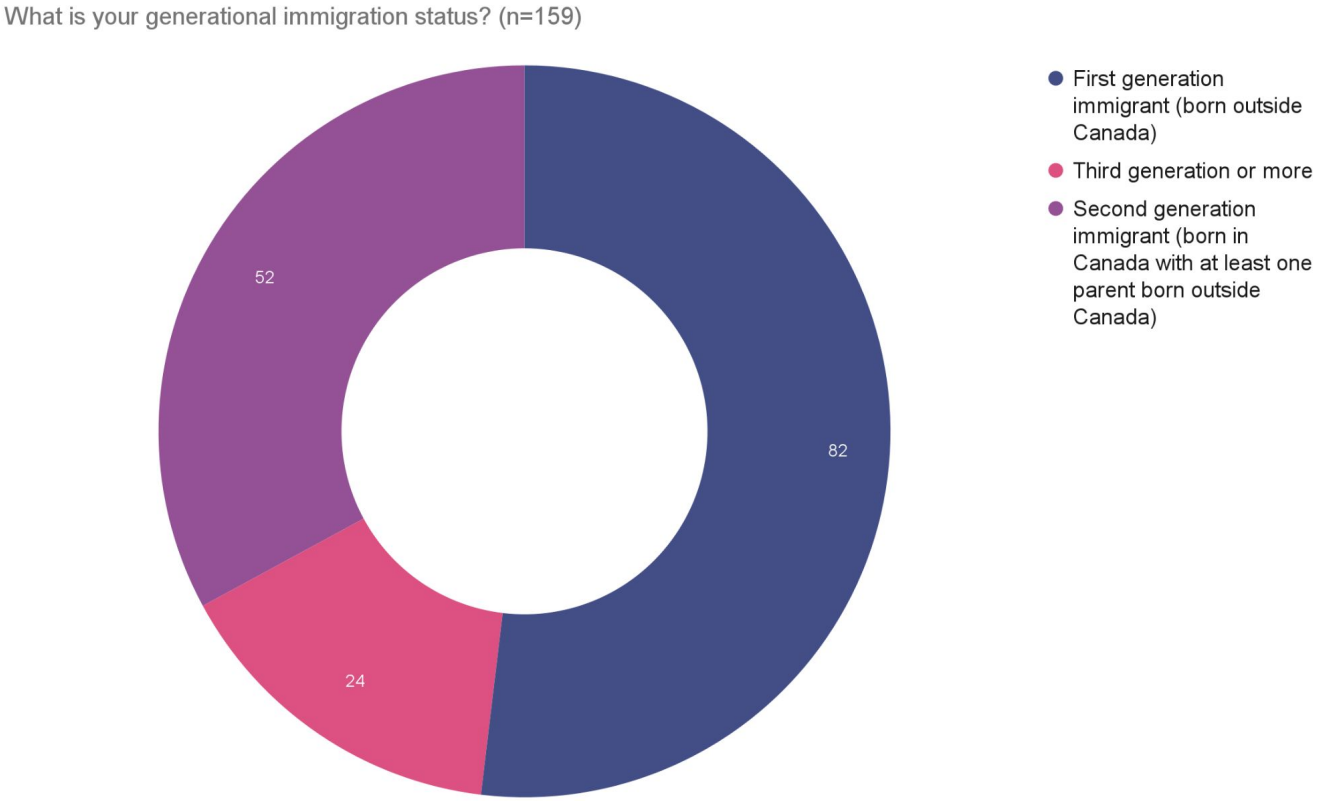
To little surprise, ECE is predominantly asian and then white.

Whatever claims of diversity have been made are likely not reflected in these demographics.



Generational Immigration

Interestingly, there's a remarkably uniform split between first, second and third + generations

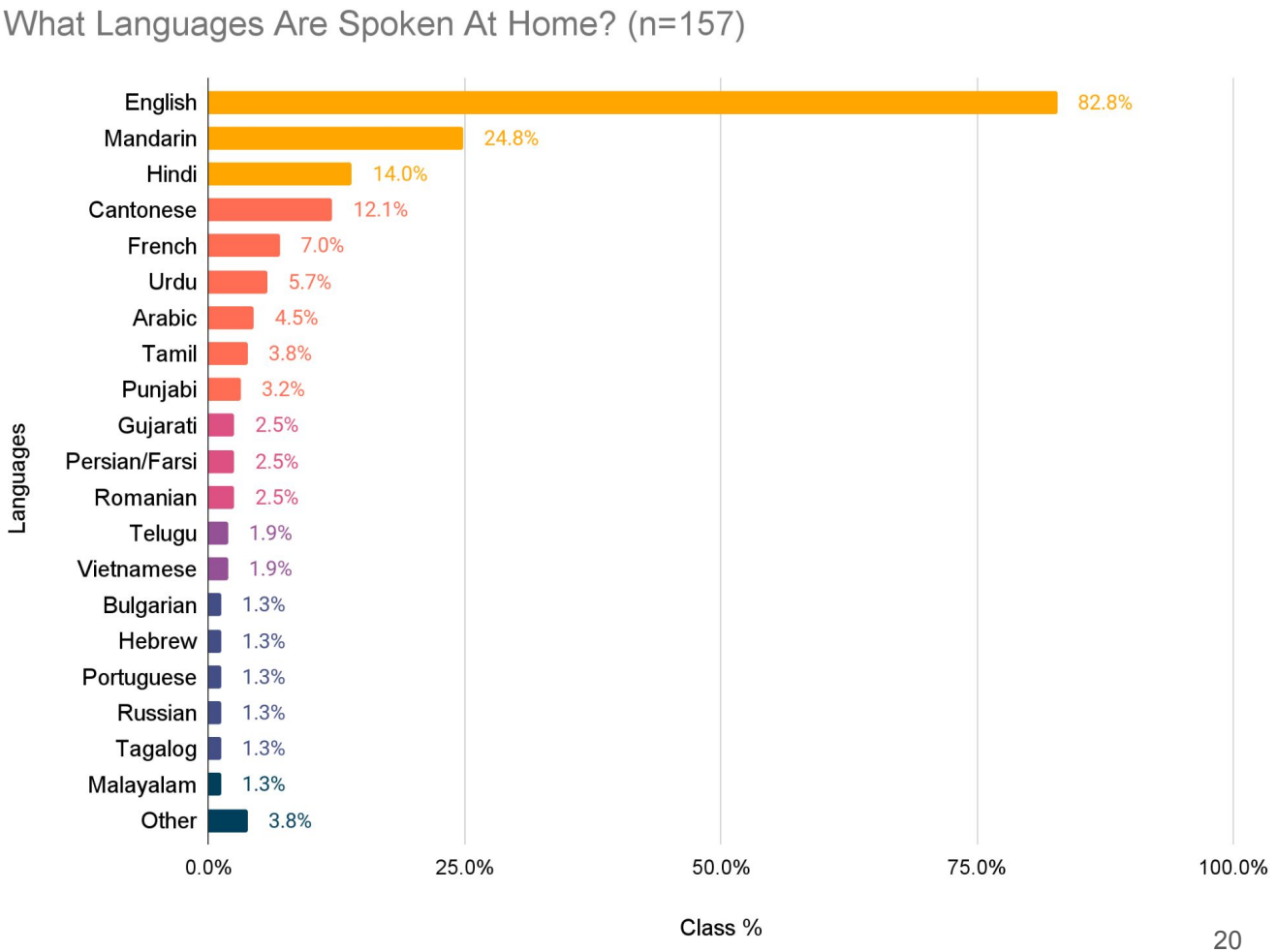


Spoken Languages

To the surprise of nobody, the most common languages at home are the most common languages in the world: English, Mandarin and Hindi.

Our class speaks a total of 27 languages!

Under “Other” we have one response each for Bosnian, Nepali, Polish, Shanghainese / Hakka, Spanish and Ukrainian

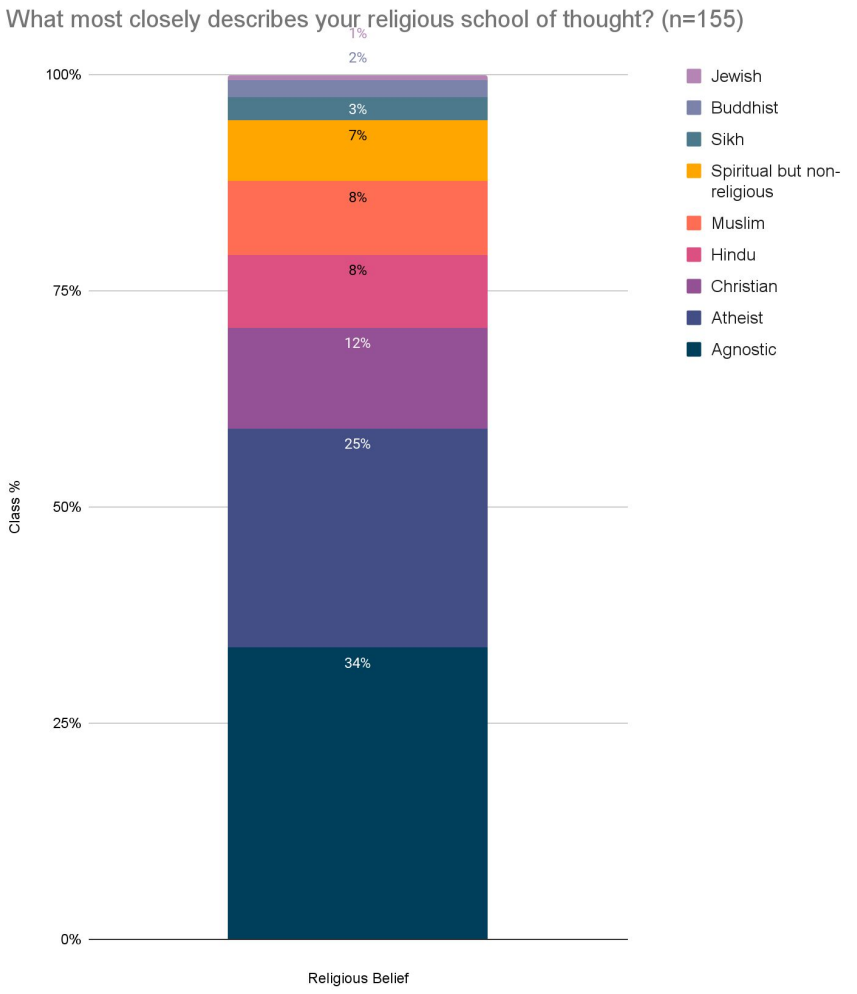


Religion - Students

59% of students reported themselves as either Agnostic or Atheist.

41% of students are Religious or Spiritual but non-religious.

A roughly equal split.

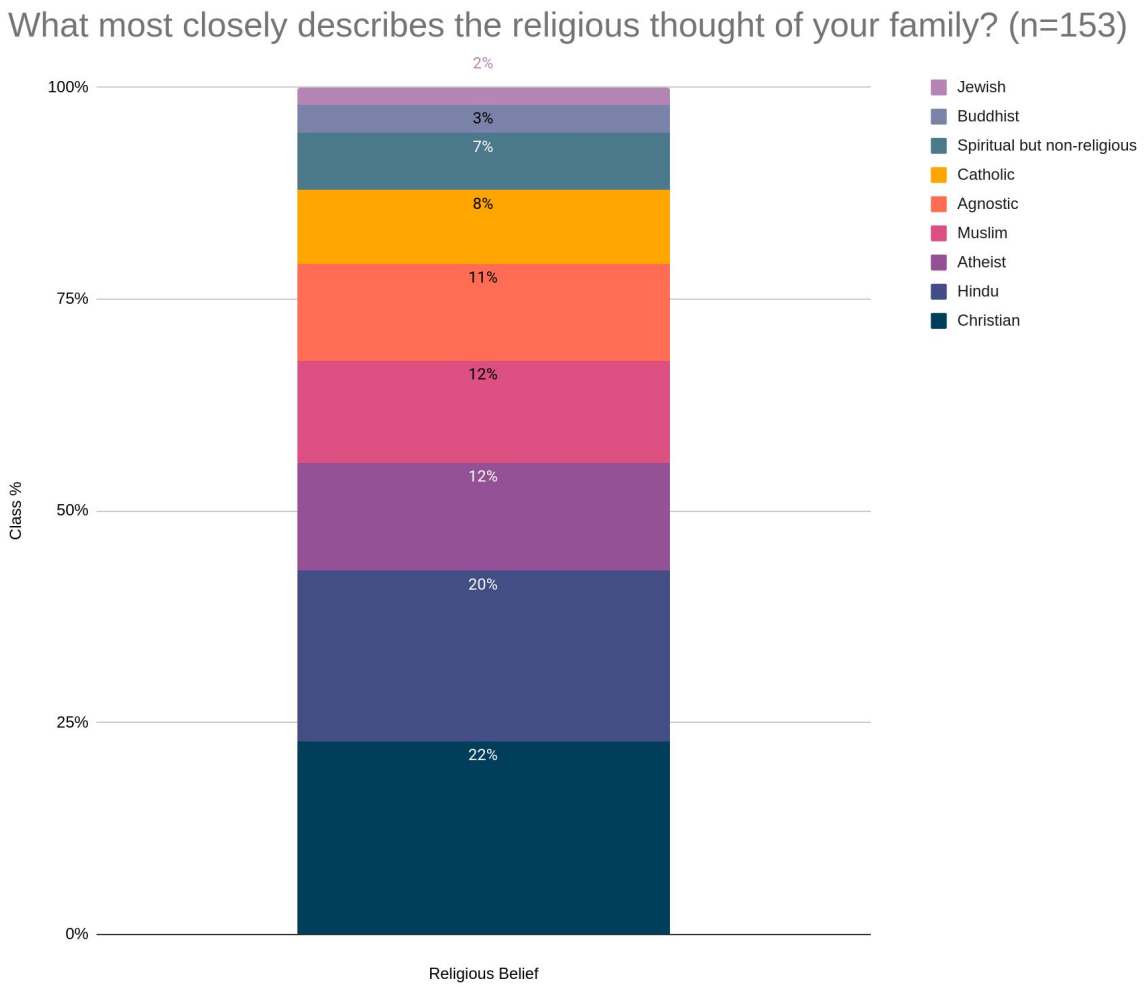


Religion - Families

23% of students reported their family as either Agnostic or Atheist.

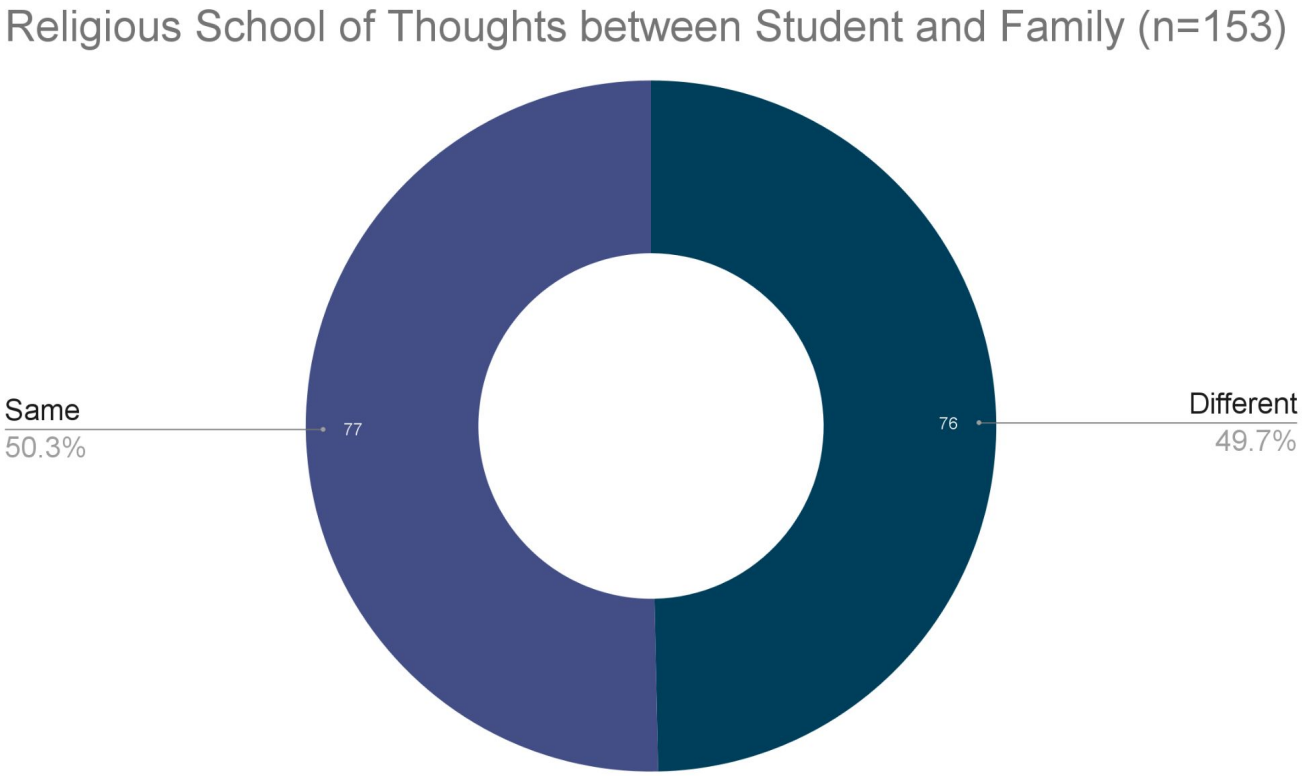
77% of students' families are Religious or Spiritual but non-religious.

Quite a deviation between students and their families.



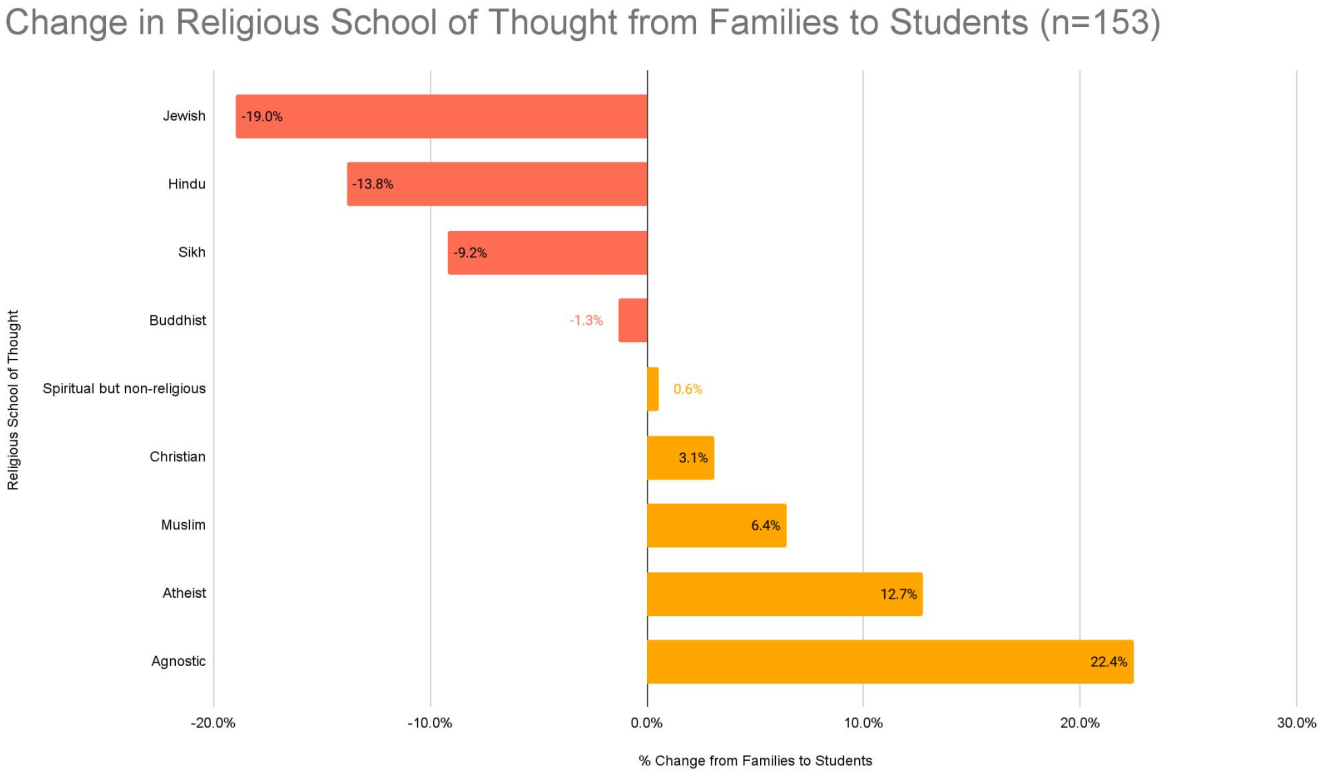
Religion - Comparison

Only about half of students follow the same religious schools of thought as their family.



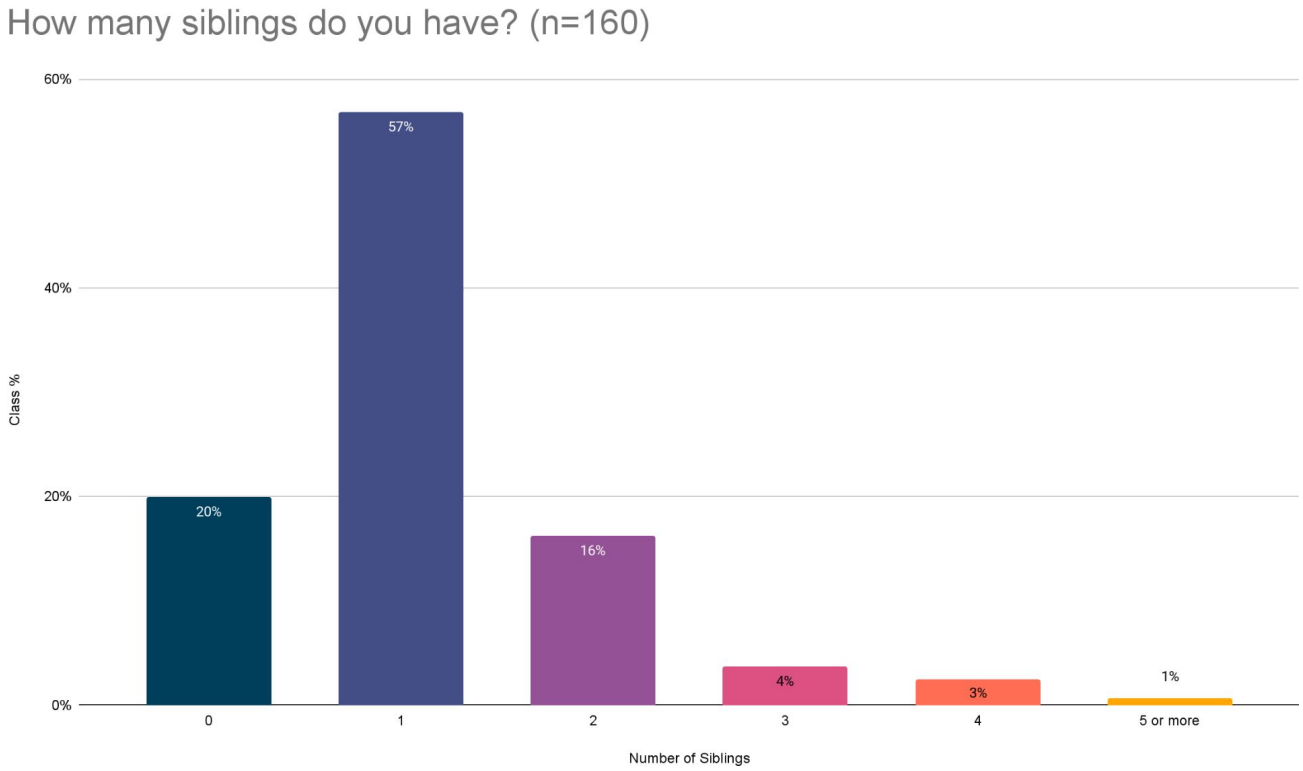
Religion - Comparison

Students are more likely to be Agnostic, Athiest, Muslim, or Christian compared to their families.



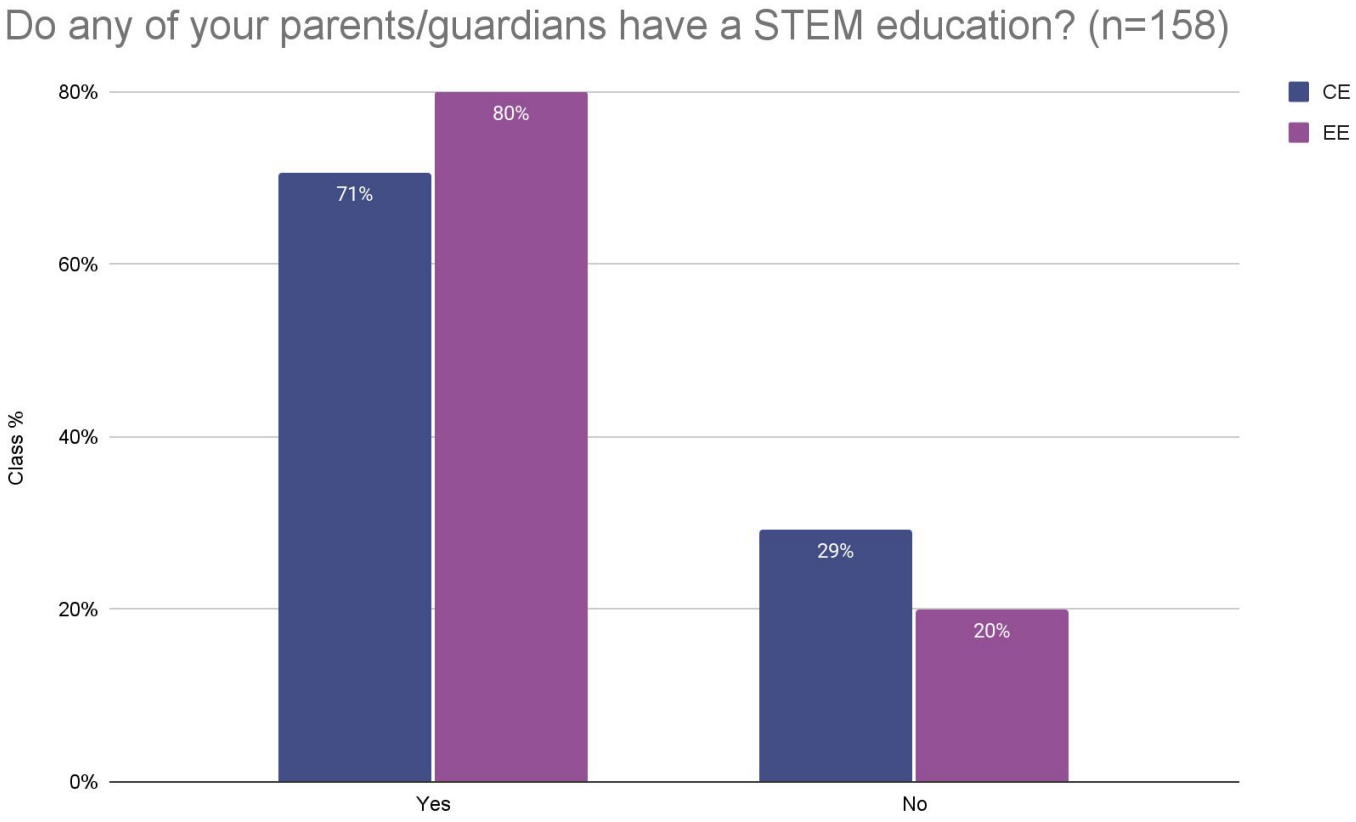
Siblings

Only 20% of respondents reported being an only child, with almost 60% of respondents having one sibling, and the remainder having more than 1 sibling



Parents & Guardians STEM Education

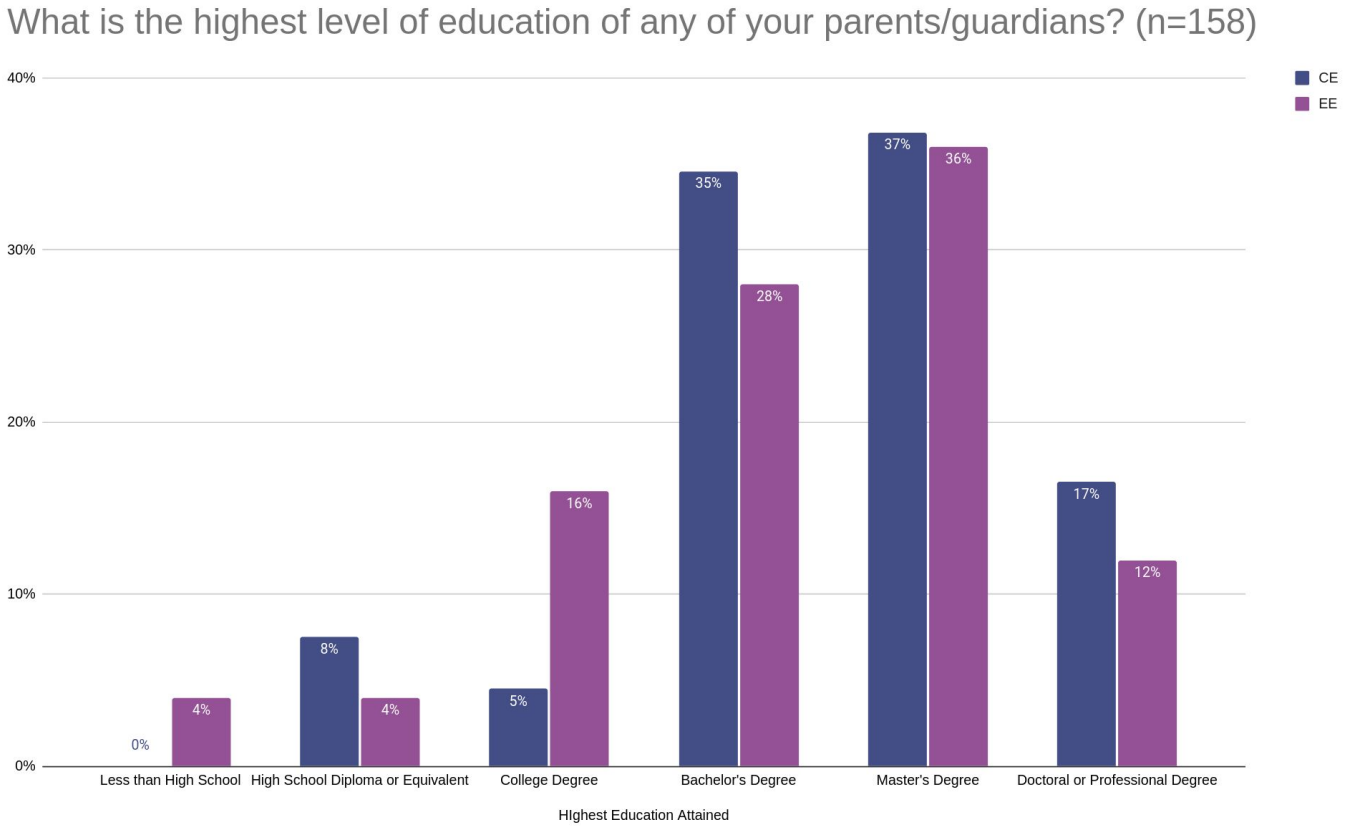
The majority of the class's parents or guardians have received a STEM education, which is unsurprising.



Parents Highest Education

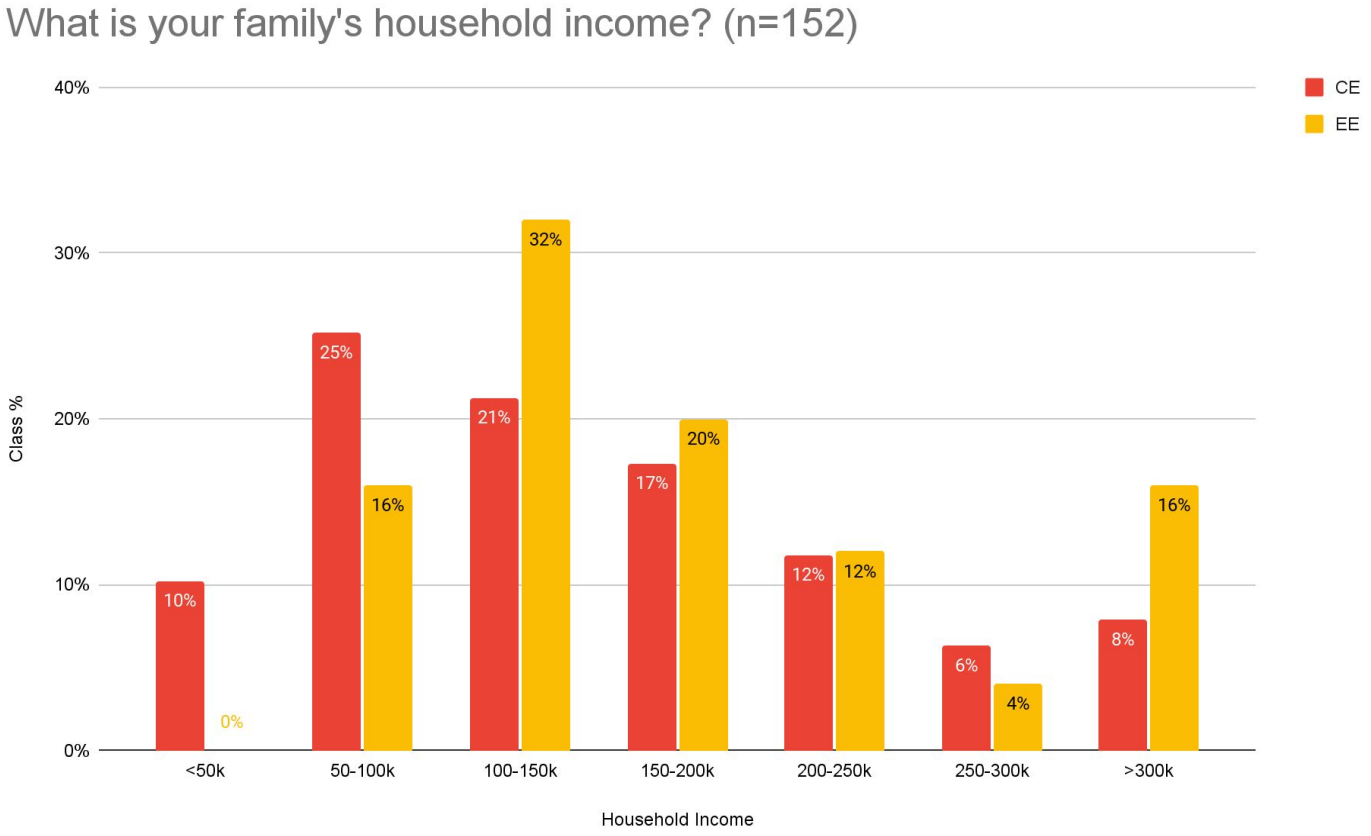
For some reason, CEs' parents generally attain higher level of education than parents of EEs'.

The exceptions being college degrees and education less than high school.



Household Income

EEs' parents tend to have higher household income than CEs' parents.

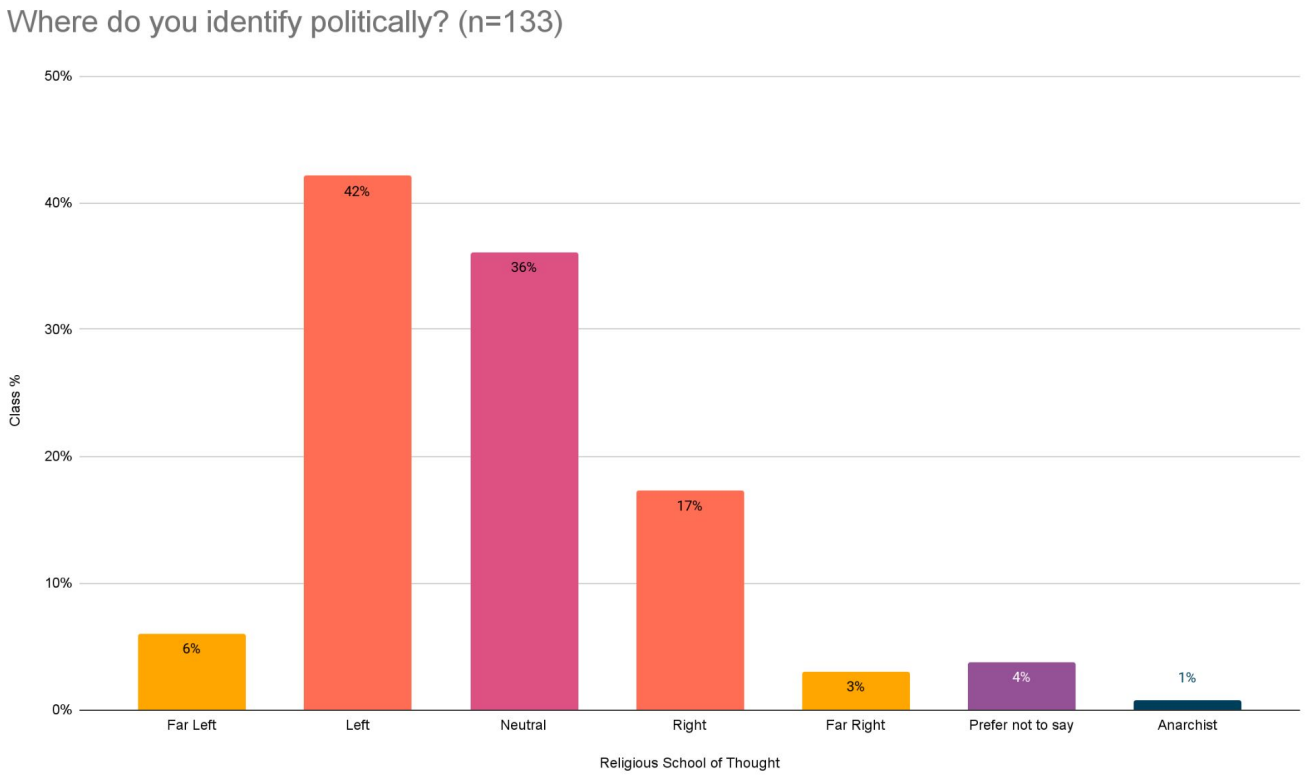


Political Identity

48% of students identify as Left or Far Left.

36% of students identify as Neutral.

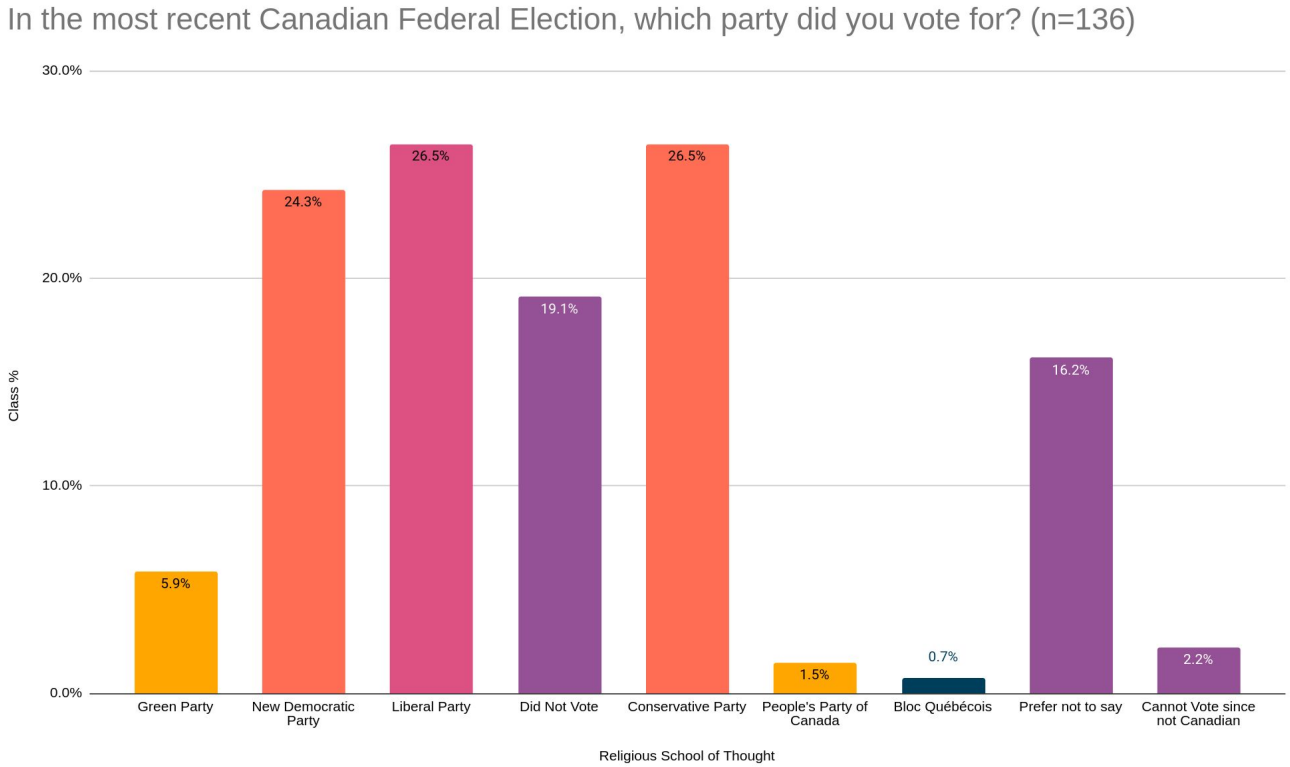
20% of students identify as Right or Far Right.



Canadian Federal Election

56.6% of students voted for left-wing parties while 27.9% of students voted for right-wing parties.

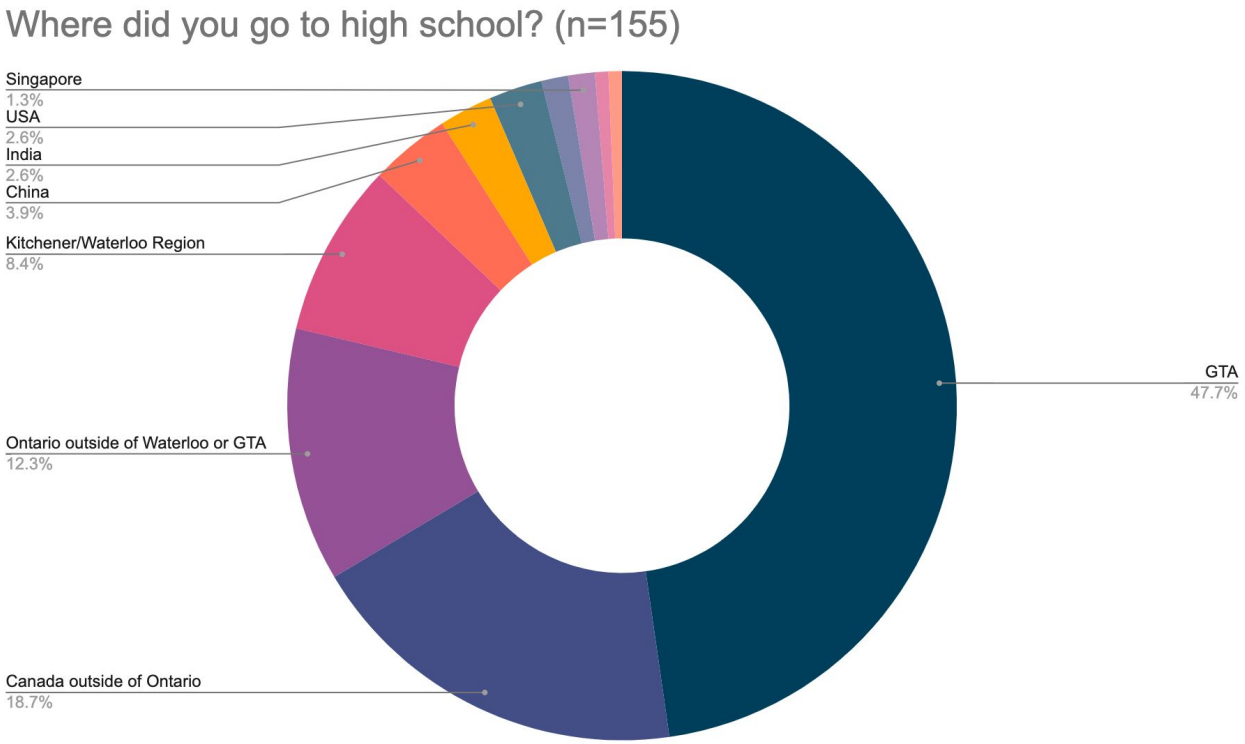
Interestingly, the student votes reported are not representative of each party's seats in the House of Commons, possibly due to the large "Prefer not to say" crowd 👀.



Where did you go to high school?

88% of the class did their high school in Canada, with the majority in Ontario.

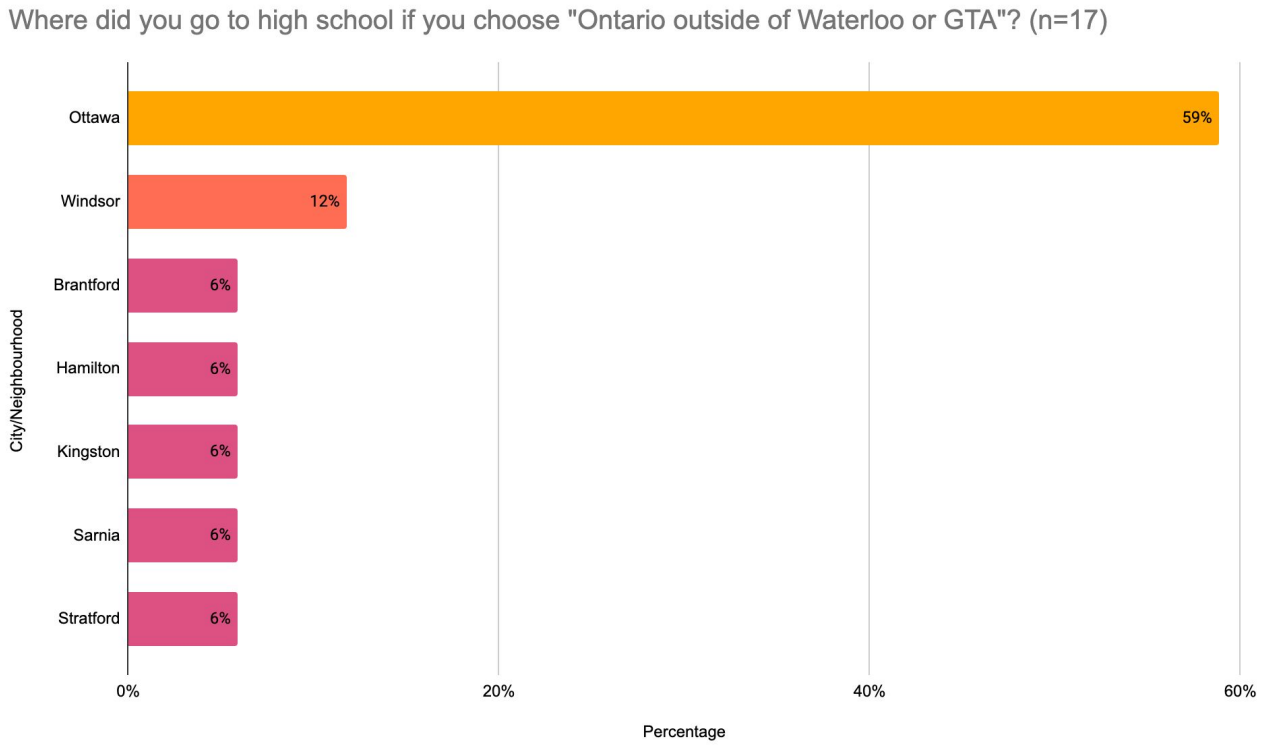
To the 10% students that did not finish their high school in Canada, welcome :))



Where did you go to high school? Cont.

Surprisingly, for classmates that went to highschool outside of GTA or Waterloo, more than half of them came from Ottawa, followed by Windsor.

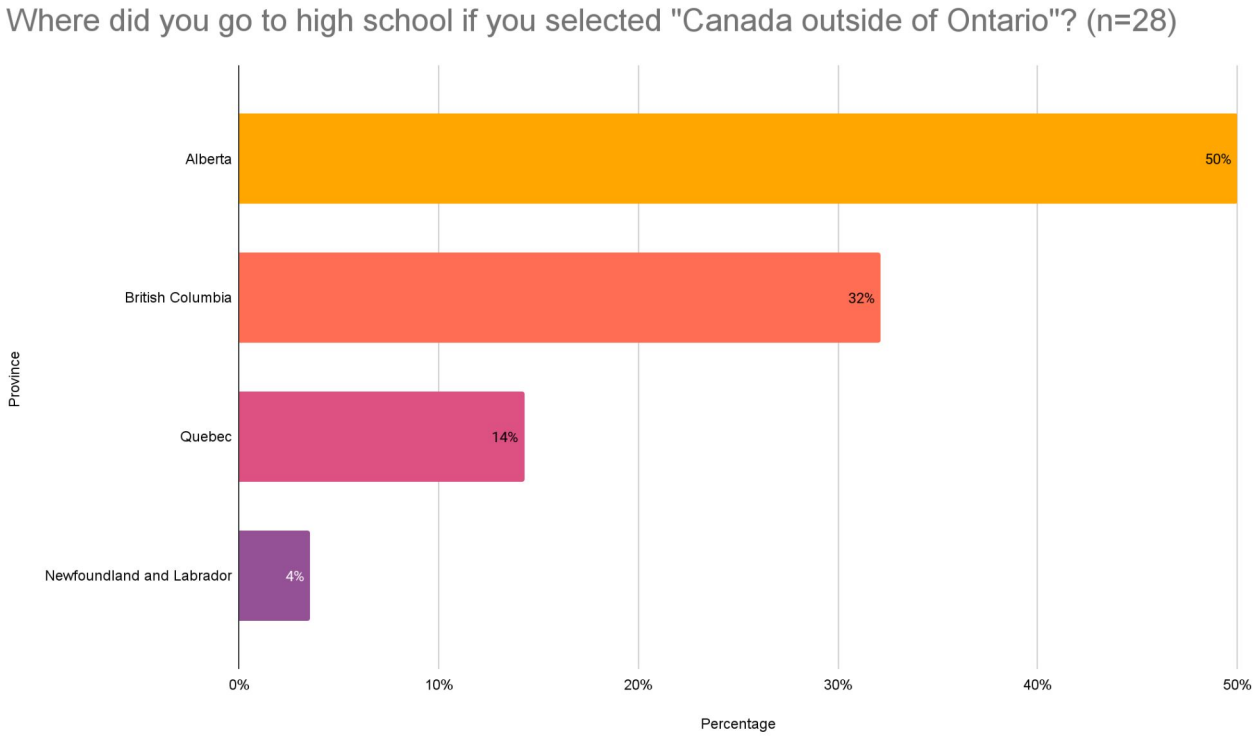
The rest is scattered in Ontario except Northern Ontario.



Where did you go to high school? Cont.

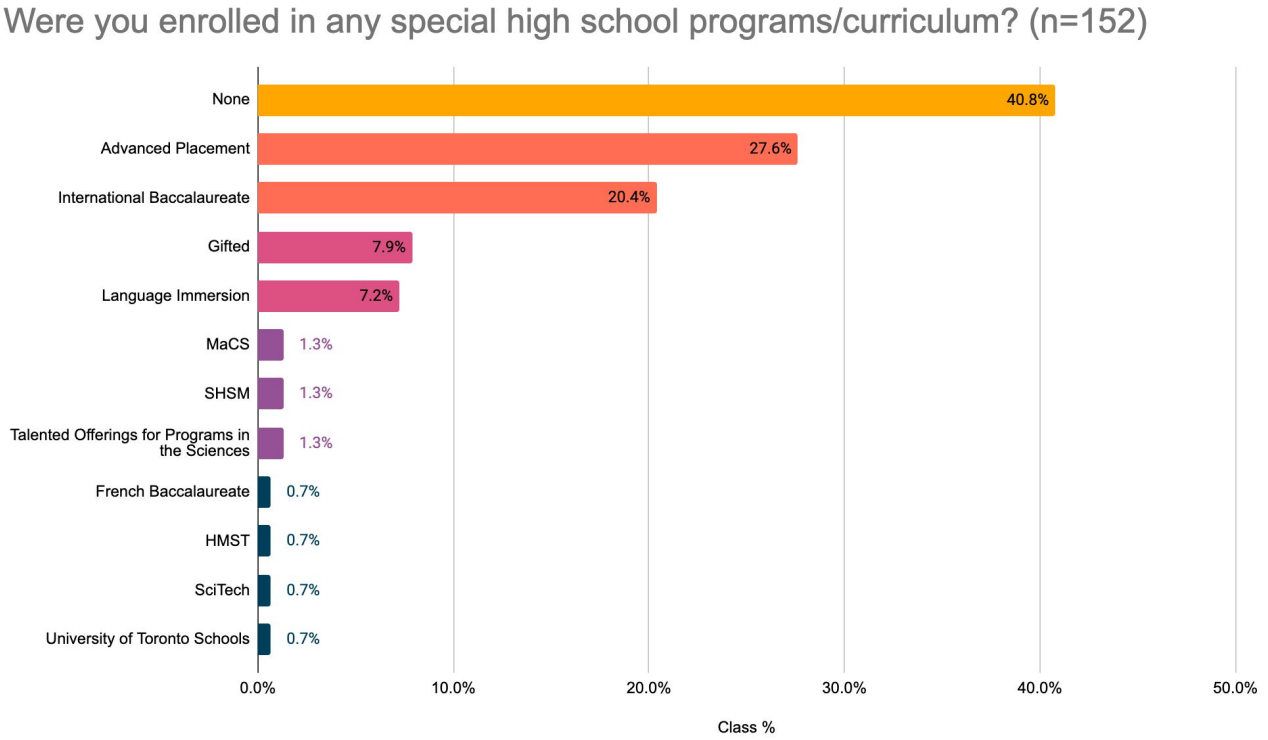
Most of the out of province classmates come from Alberta and British Columbia!

Seems like folks from provinces other than the 4 shown here did not want to come all the way to Ontario ://



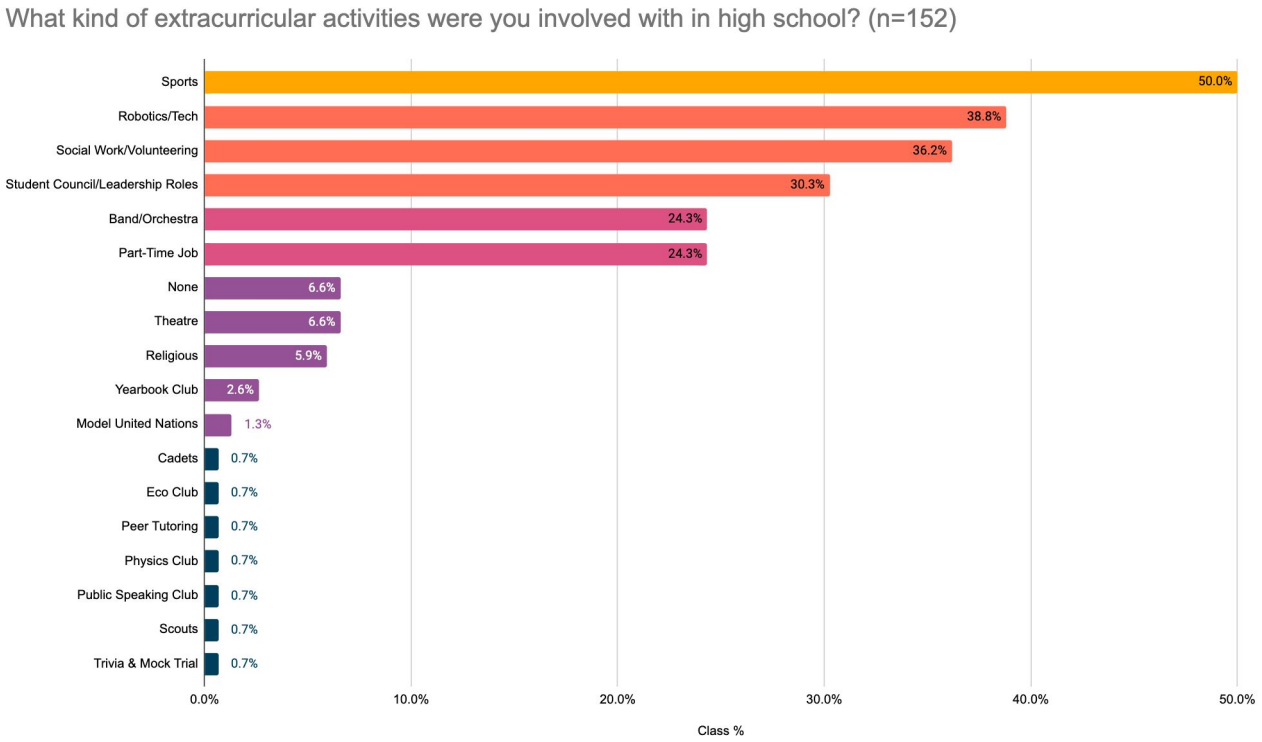
Special high school programs/curriculum

The majority of classmates did not enroll in any special high school programs, but AP and IB are the most popular special curriculum offerings.



Extracurriculars!

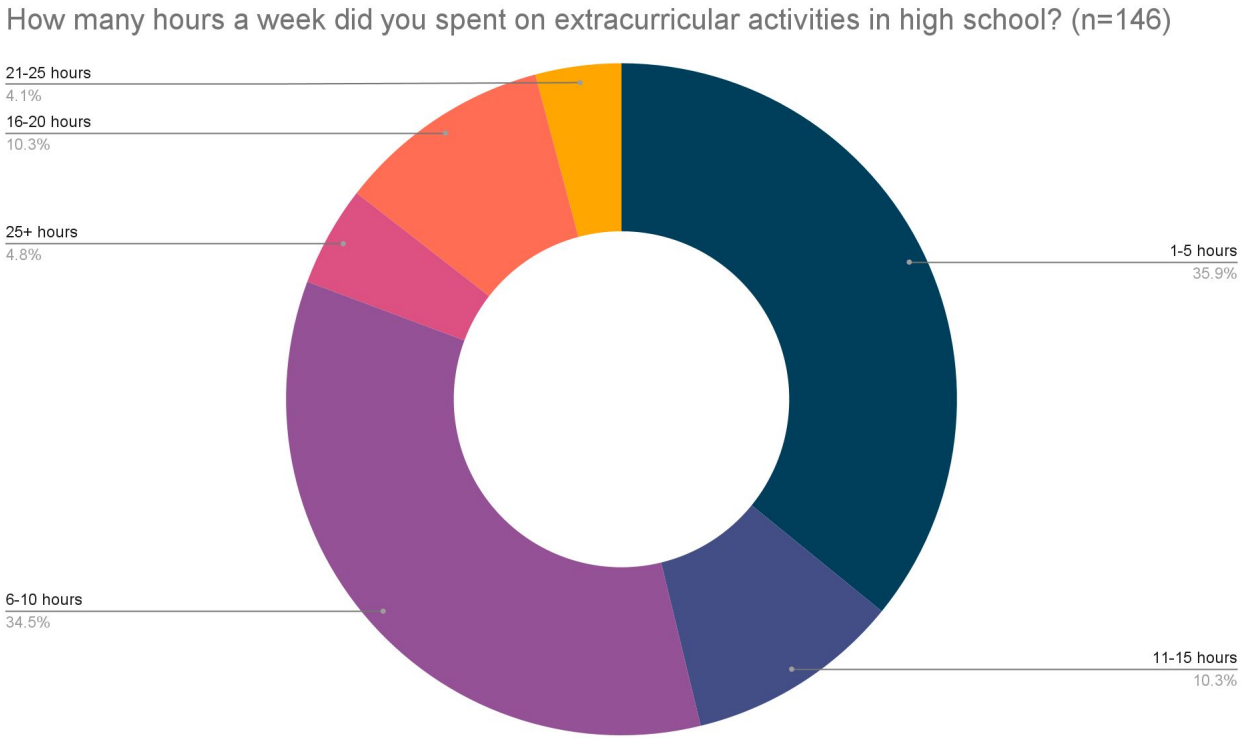
Half of the class did sports during high school, followed by Robotics/Tech and Volunteering.



How many hours a week did you spent on extracurricular activities in high school?

What a bunch of industrious, young, go-getters.

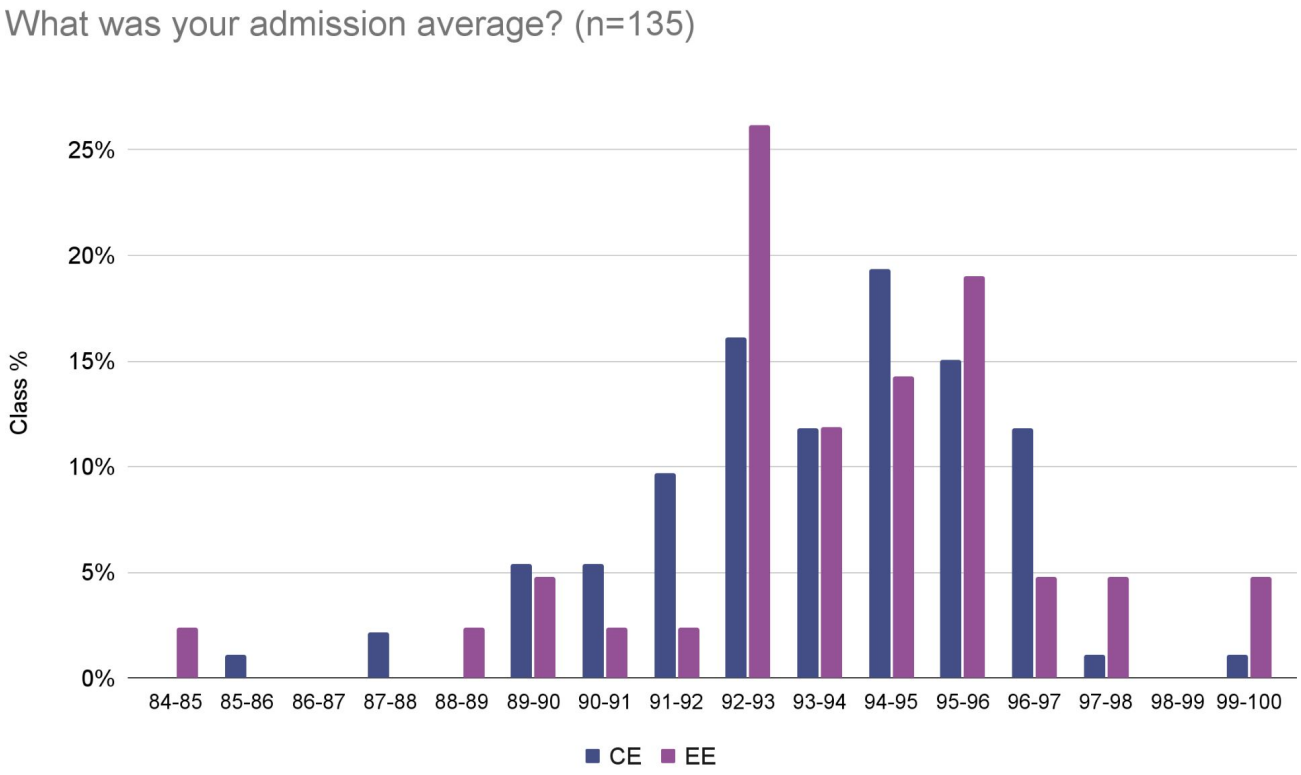
Also, in Ontario you only need a total of 40 volunteer hours. Perhaps the requirement is different elsewhere which could explain the spread.



Admission Averages

For both CEs and EEs, the distributions are right-leaning (heavy left tails) and have medians of 94.

EEs have more extreme outliers (compared to a normal distribution) than CEs, as seen in the ranges 97-100 and 84-89.

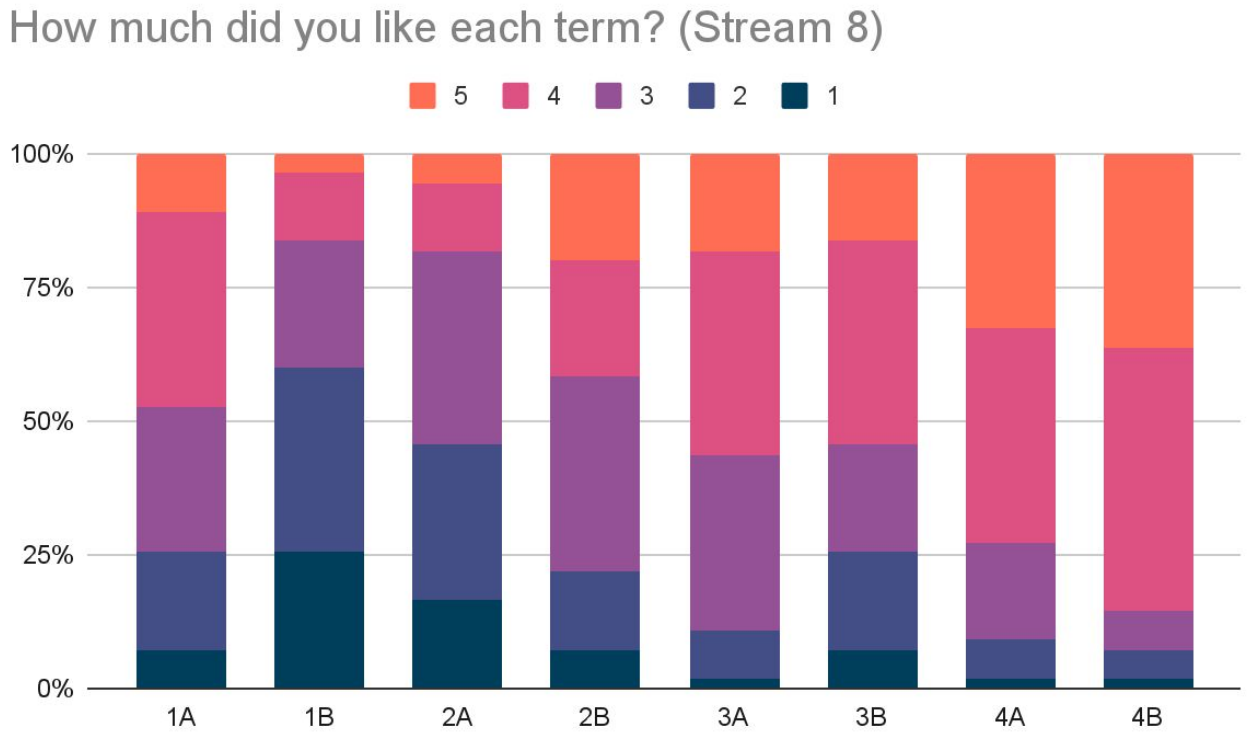


Academics

How much did you like each term? (S8)

On this scale, 5 is most liked, and 1 is least liked.

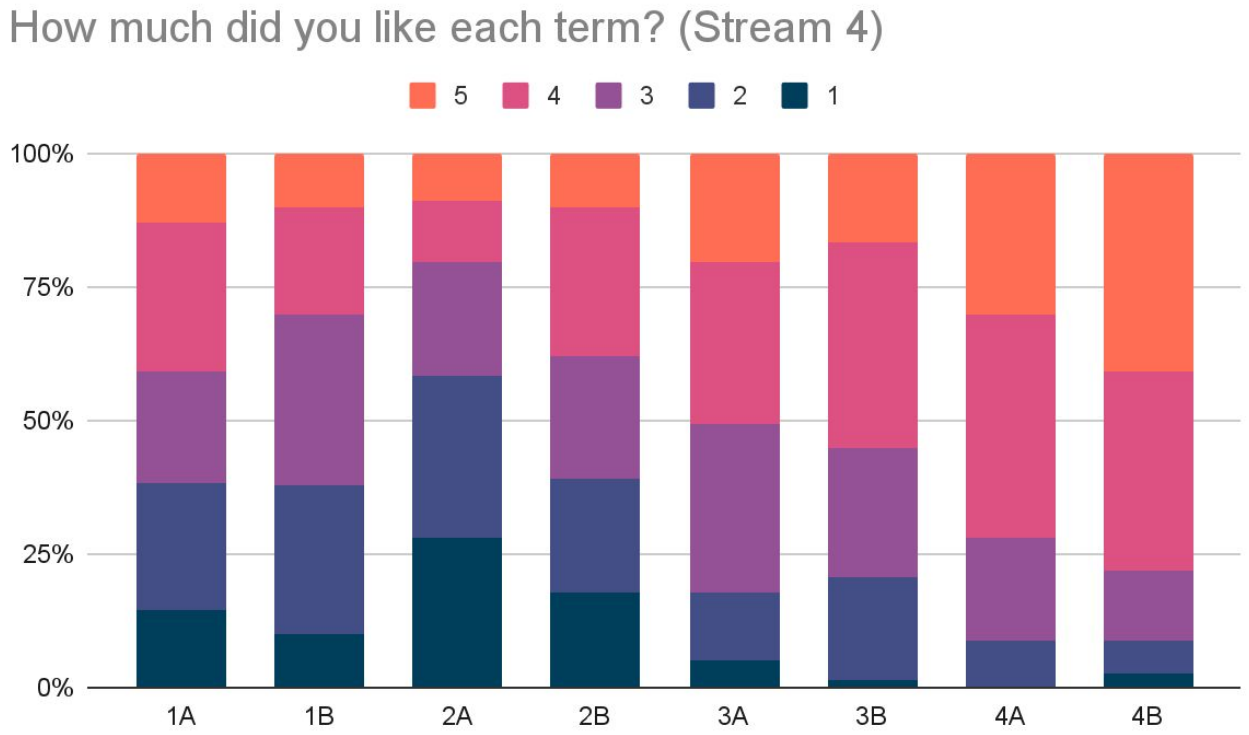
As anticipated, it gets worse up to 2A, and then more or less downsides into better terms as time goes on for 8 streams.



How much did you like each term? (S4)

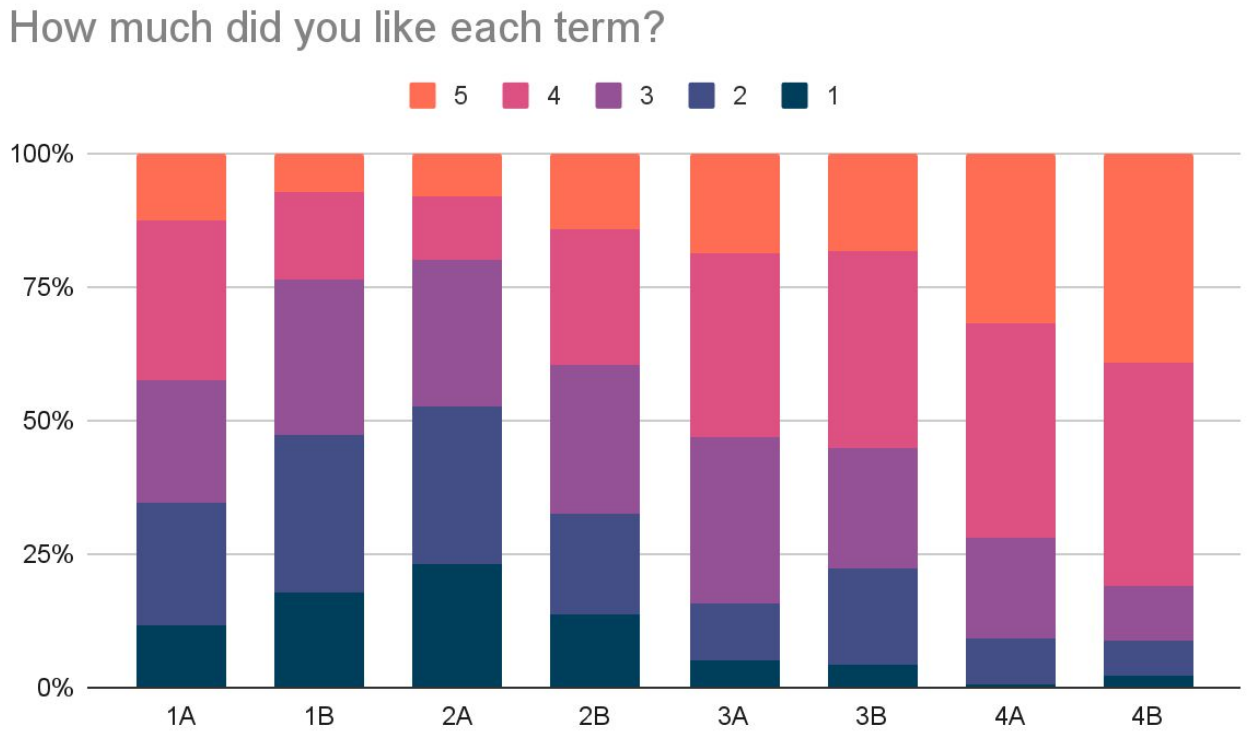
Notably, Stream 4 liked 1A less because they had to find jobs.

What else do you think caused the differences?



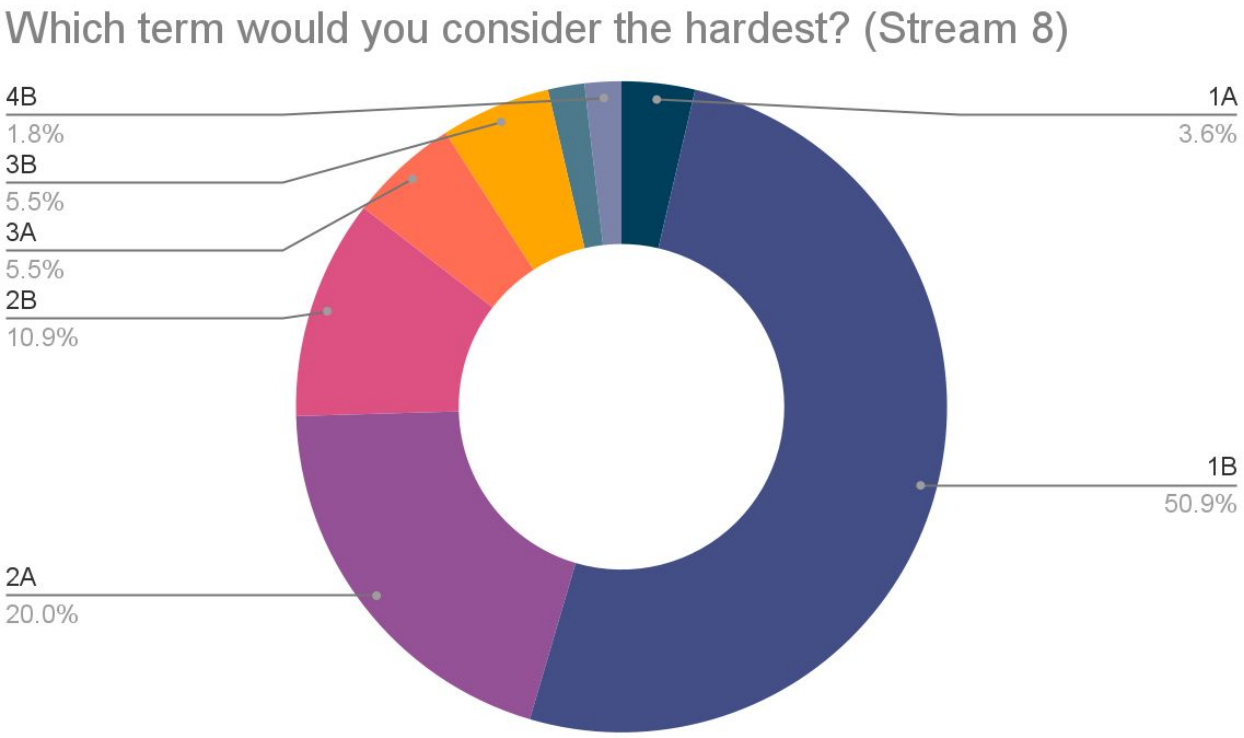
Combined Term ratings

Some students did not specify their stream, so this includes them while the previous 2 plots do not



Hardest term - Stream 8

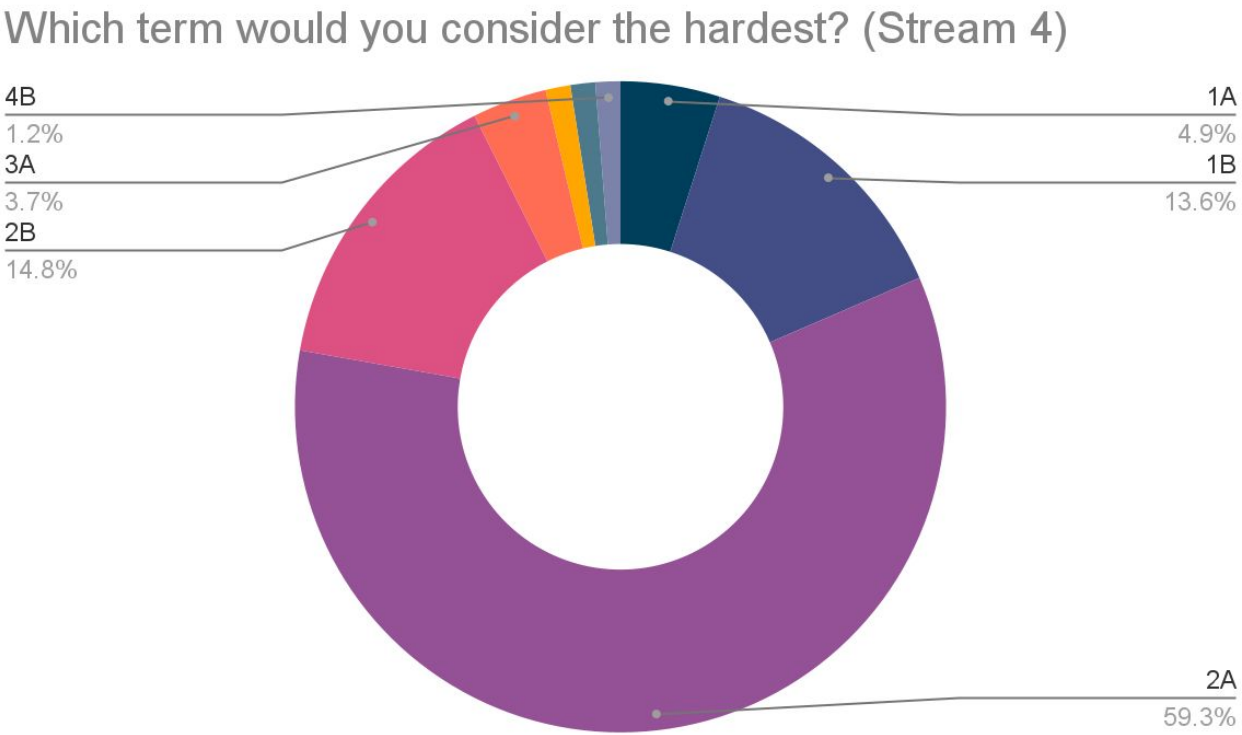
1B was a hard term for 8 stream students - this is possibly because it was the first time they had to find a coop while taking on one of the toughest terms overall along with the new course offerings being taught for the first time.



Hardest Term - Stream 4

2A was a hard term for 4 stream students

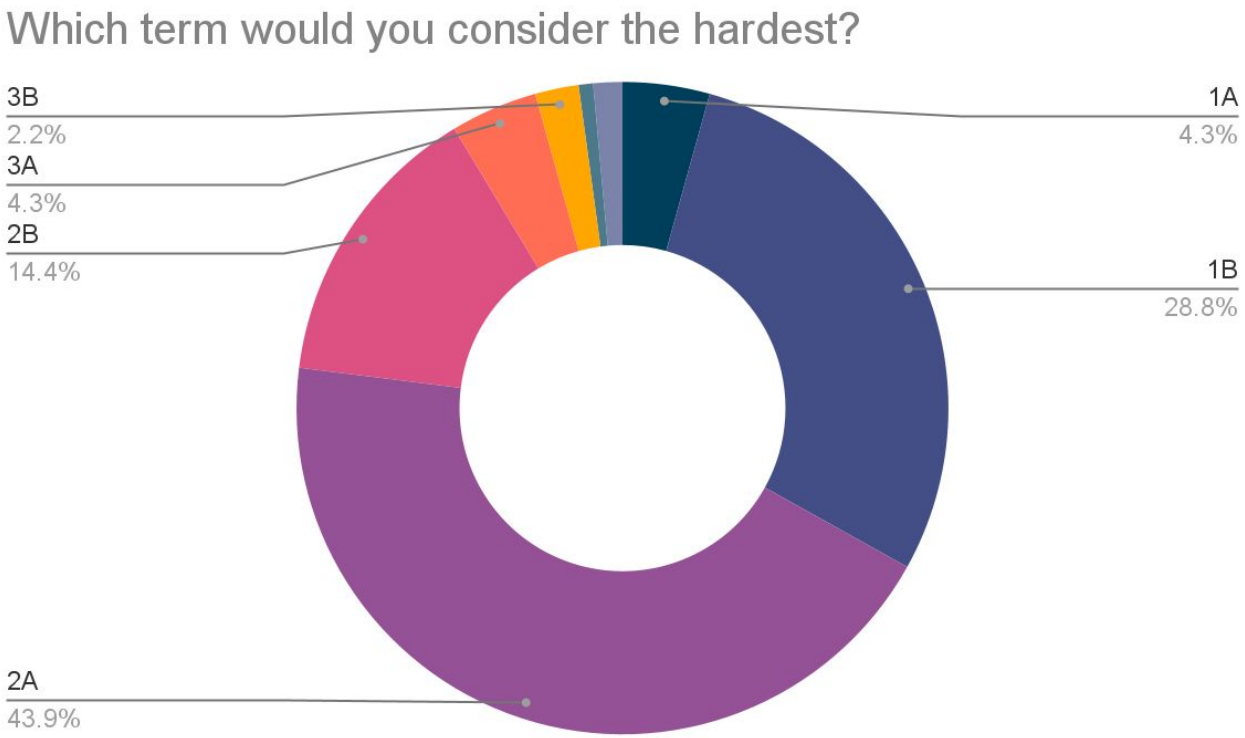
This is probably because 2A is hard



Which term would you consider the hardest?

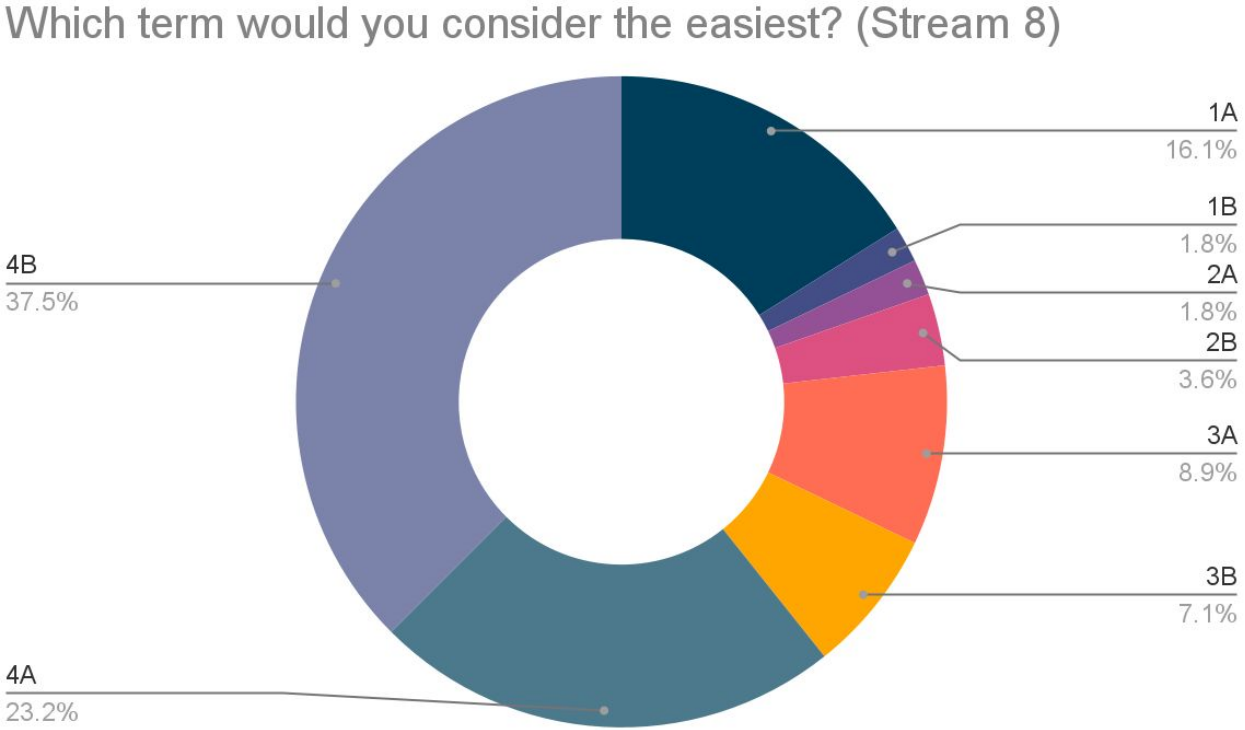
Unsurprisingly, 1B and 2A are famously the hardest terms, and this survey reflects that.

Good grief.



Easiest Term - 8 Stream

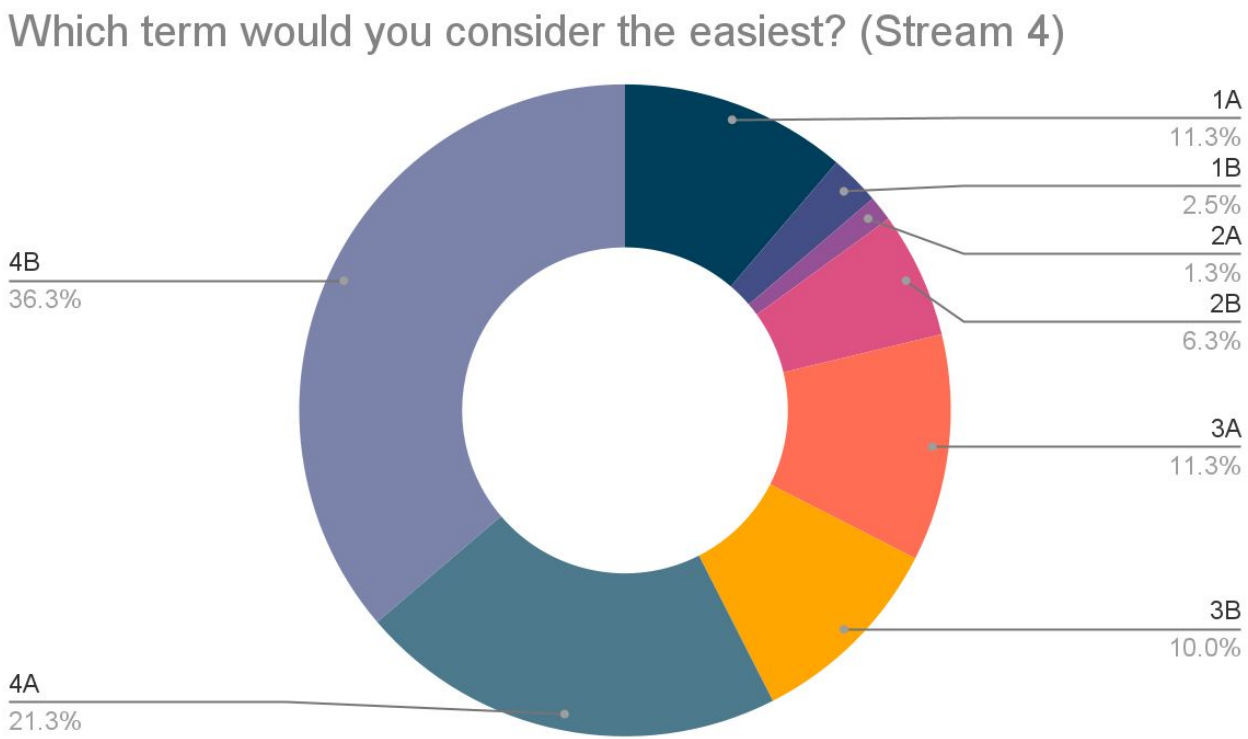
The 8-stream students found 1A as the easiest substantially more often - this is possibly because they didn't have to find a job that term.



Easiest Term - 4 Stream

There's a smaller difference in 4 streams back-to-back terms (3B-4A), but it is still found somewhat easier for them as they didn't have to job search.

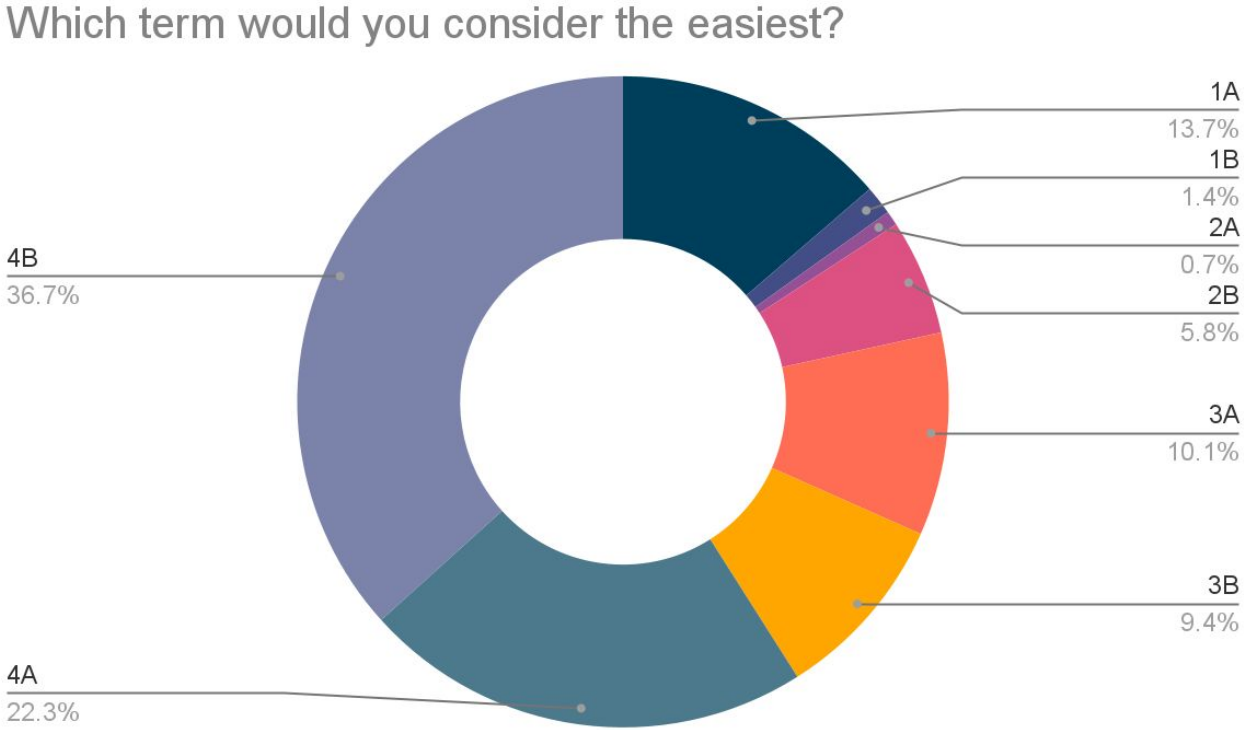
Additionally, 4-stream 3A was the first fully-online school term, so there may have been some adjustments



Easiest Term - Combined

Given the prior slides, this should be no surprise. Fourth year, and then first semester are often the easiest terms for those who can pull through.

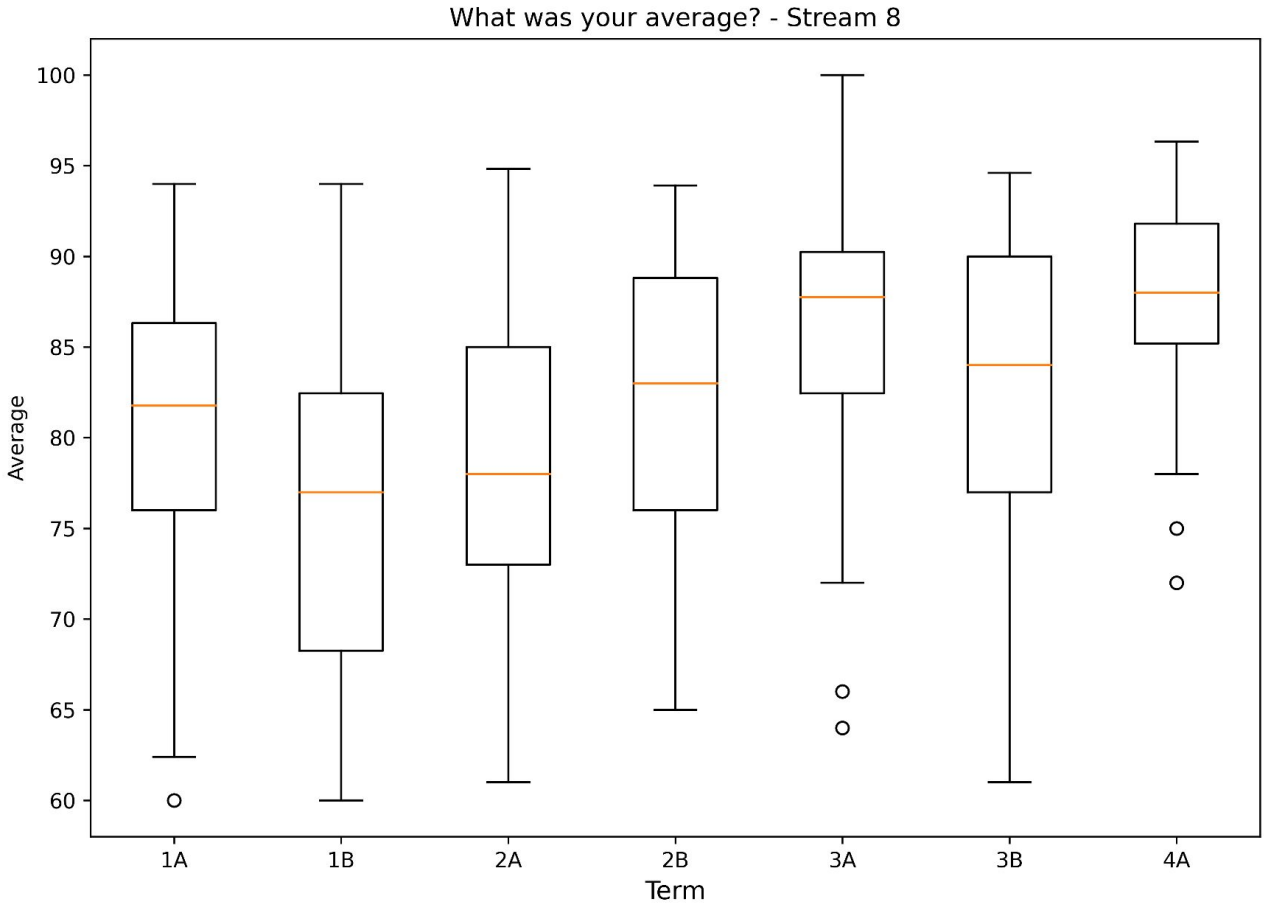
This is partially because of all the complementary study electives (CSEs) one can take in fourth year, such as ECON 101 and CLAS 104



Term Averages - Stream 8

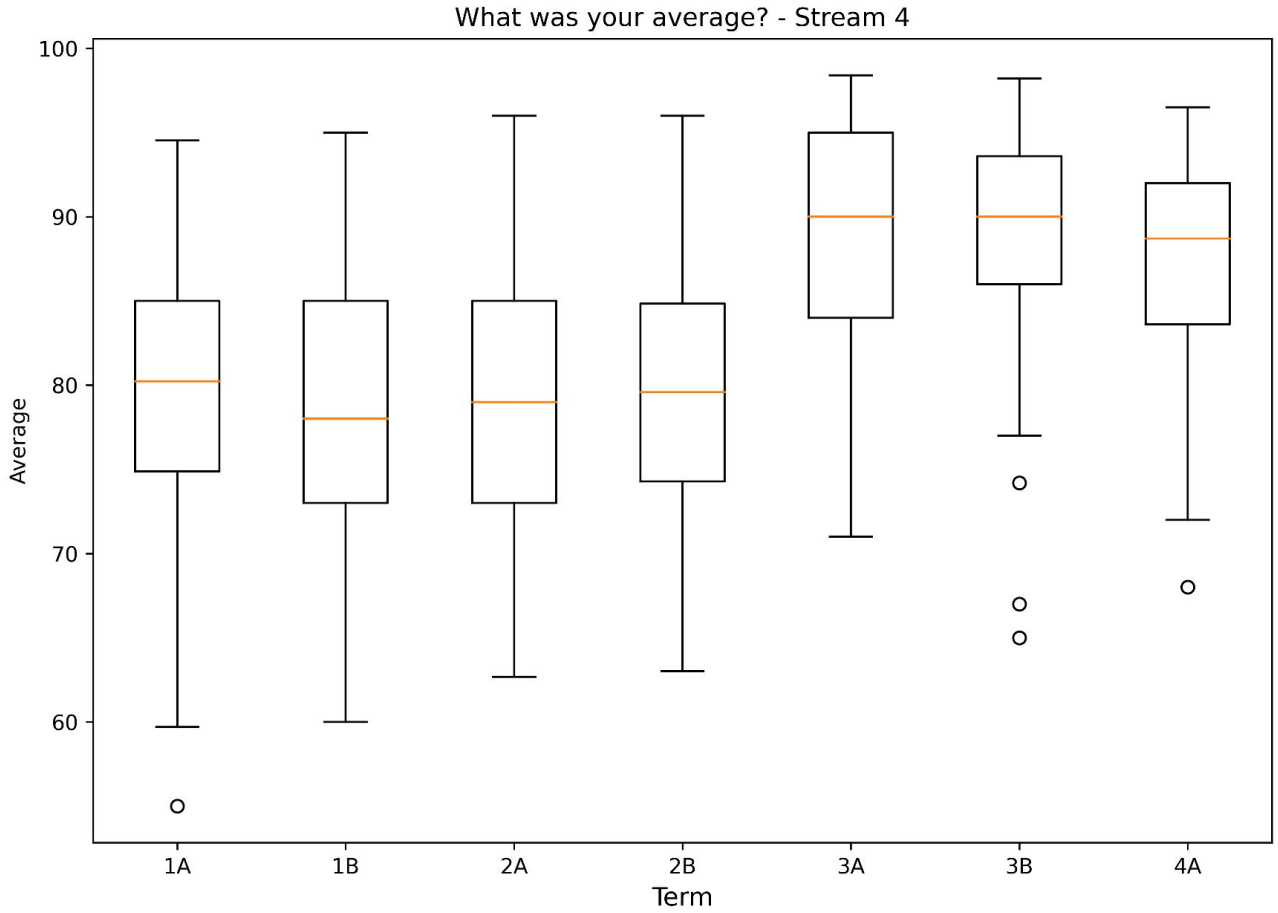
3A having fully online finals early-pandemic clearly allowed the class to .. achieve new heights.

Otherwise, 1B had the lowest average to no surprise - after all, it was a very difficult term where we had to find our first coops.



Term Averages - Stream 4

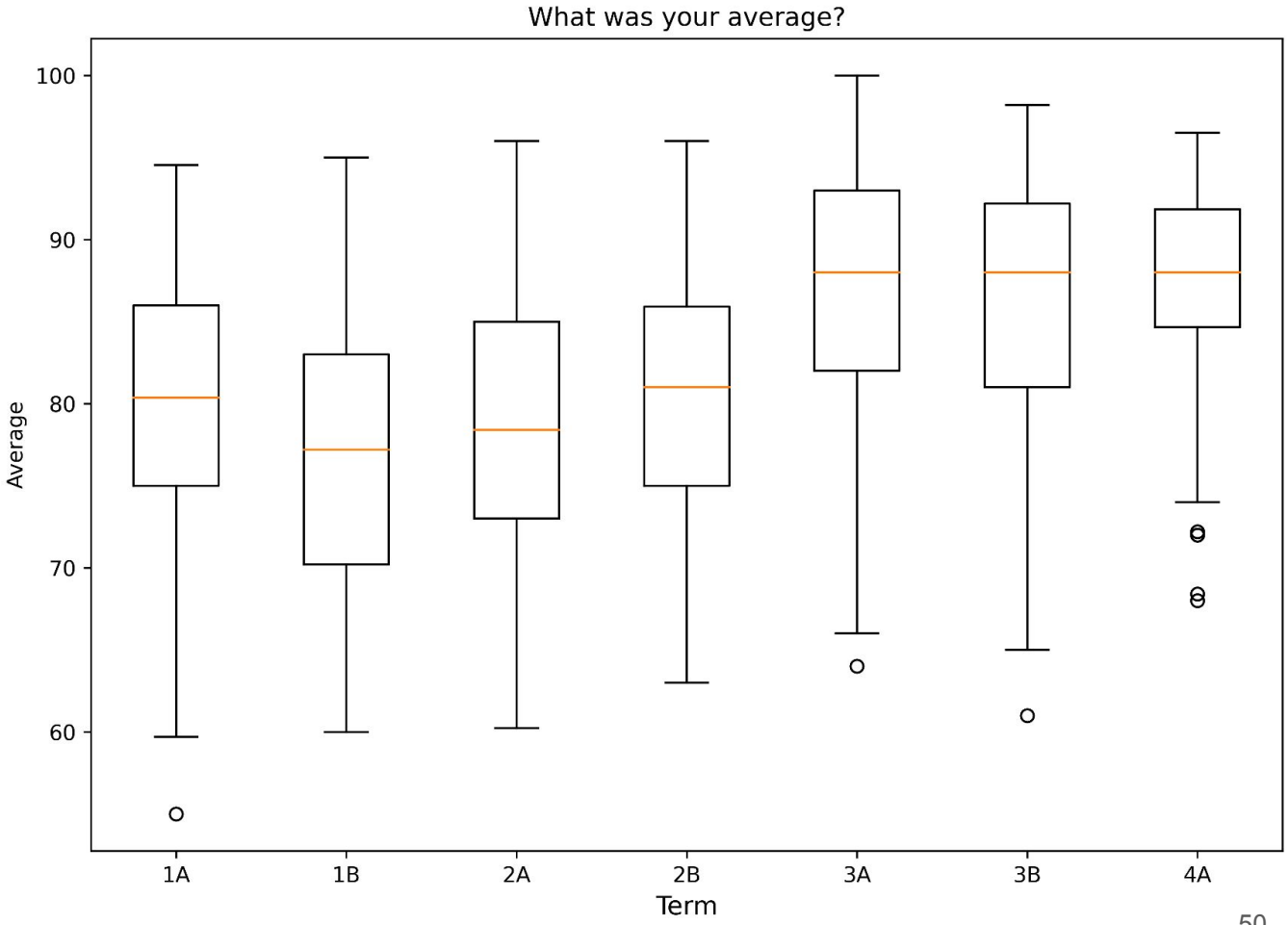
The term averages were super consistent right until the pandemic. Seems like online learning has had its benefits.



Term Averages - Overall

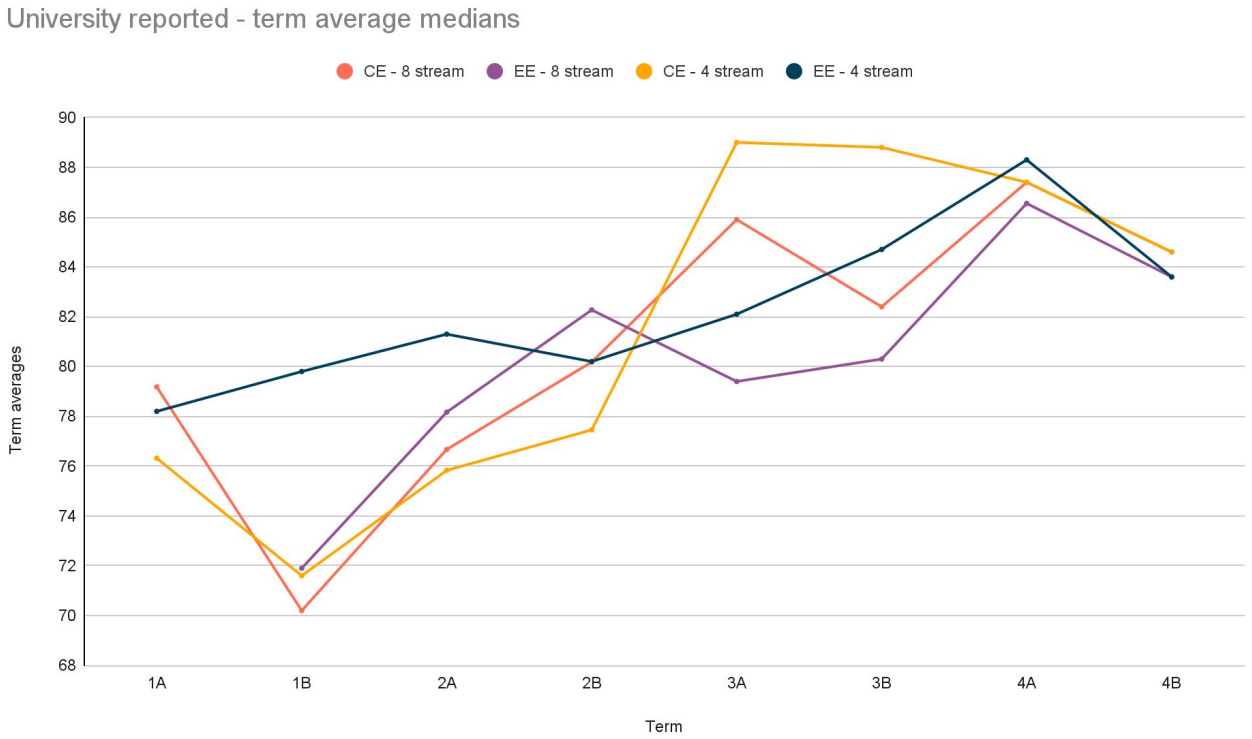
As a whole, the primary indicators are a downshift until after 2A, at which point things get better.

Also, after 2A, people stop cutting it so close with their averages - if you can get through the early terms, you can get through the rest!



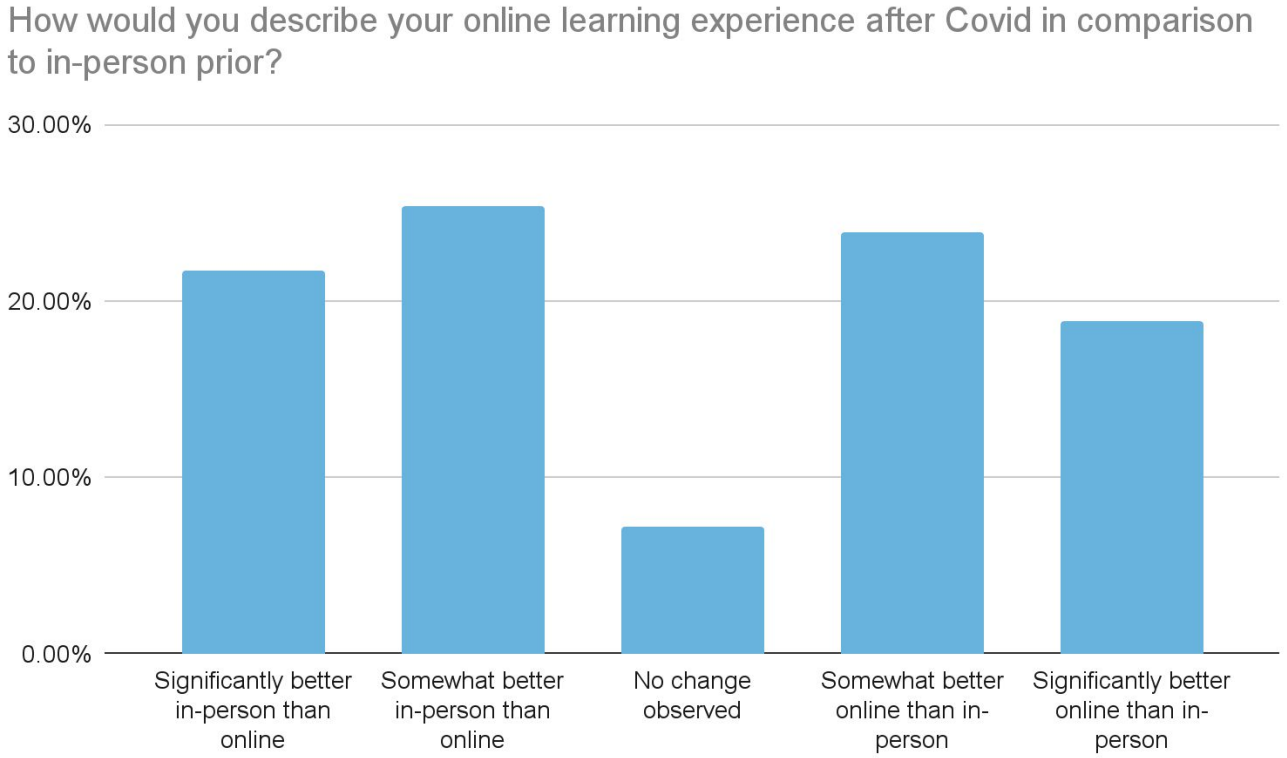
Term Averages - University reported

This is data sourced from engug.uwaterloo.ca, split by program and stream



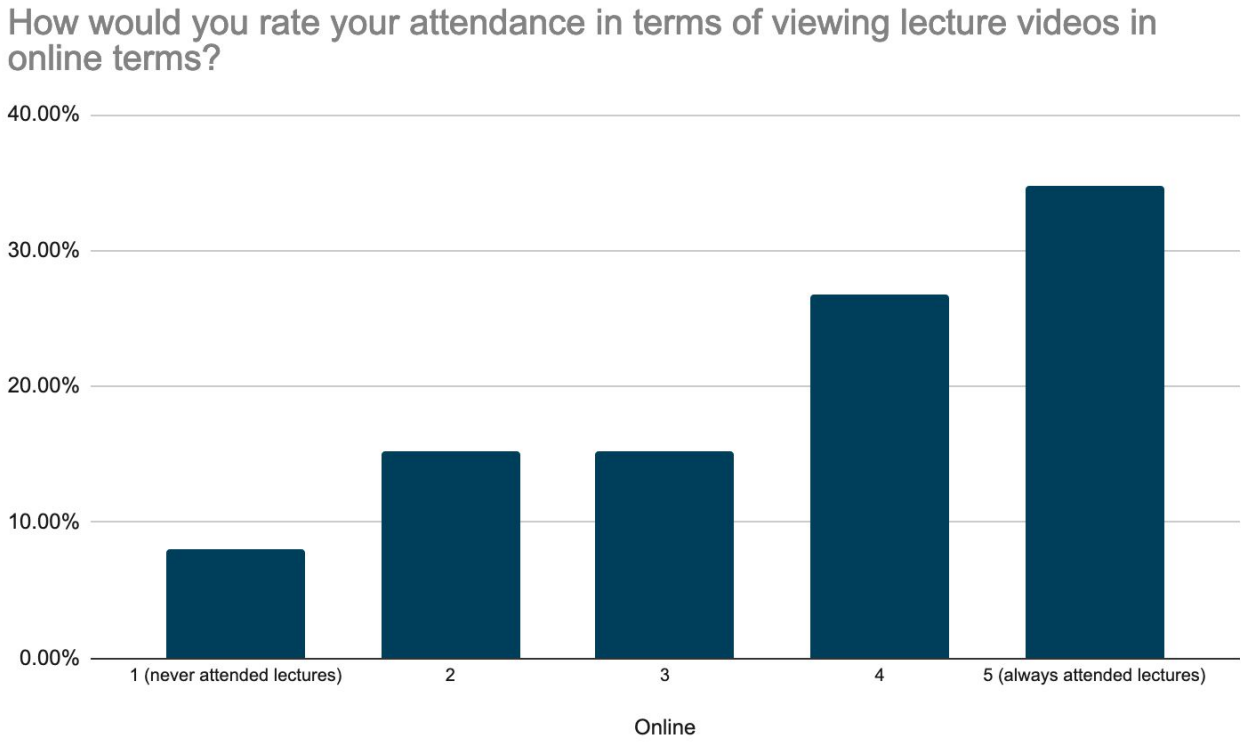
Online vs Offline School

Of the respondents, the class seems to be an even split between students thinking that learning was better vs worse online.



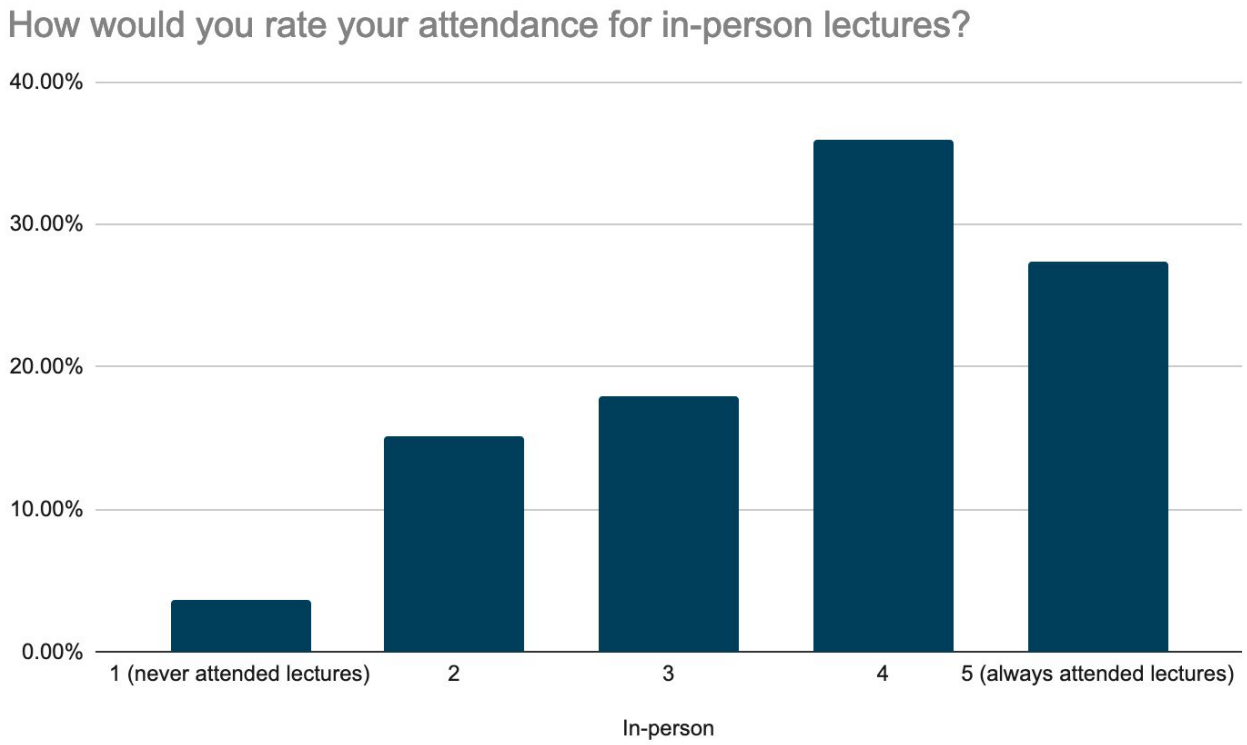
Online Attendance

It’s worth noting a lot of these include post-hoc viewings, such that you watch it after it’s delivered.



Offline Attendance

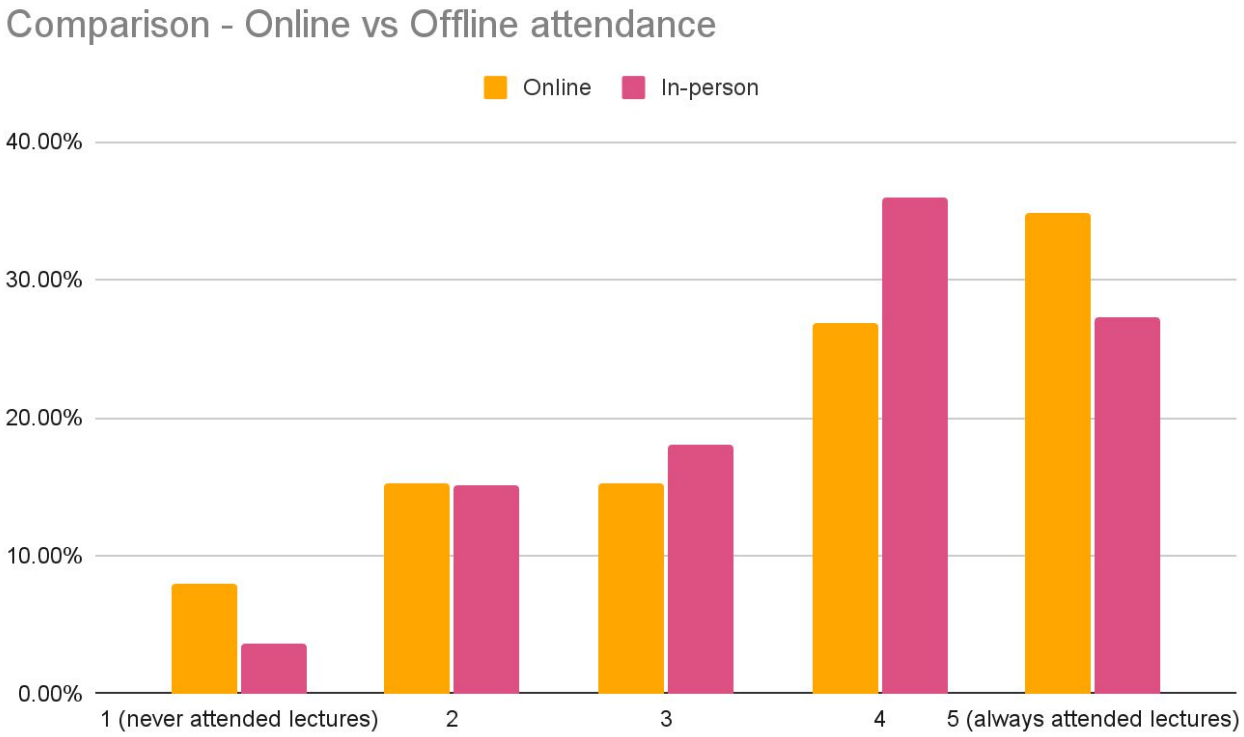
Clearly, with the fluctuations of normal life, attending all lectures requires more sacrifices in-person than online, so it makes sense that a lot of the “always attends online” crowd can’t always make it in person.



Online vs Offline - Attendance

Head-by-head, the main takeaways are that more people completely skip online lectures but also more people are likely to always attend all of them because of the availability.

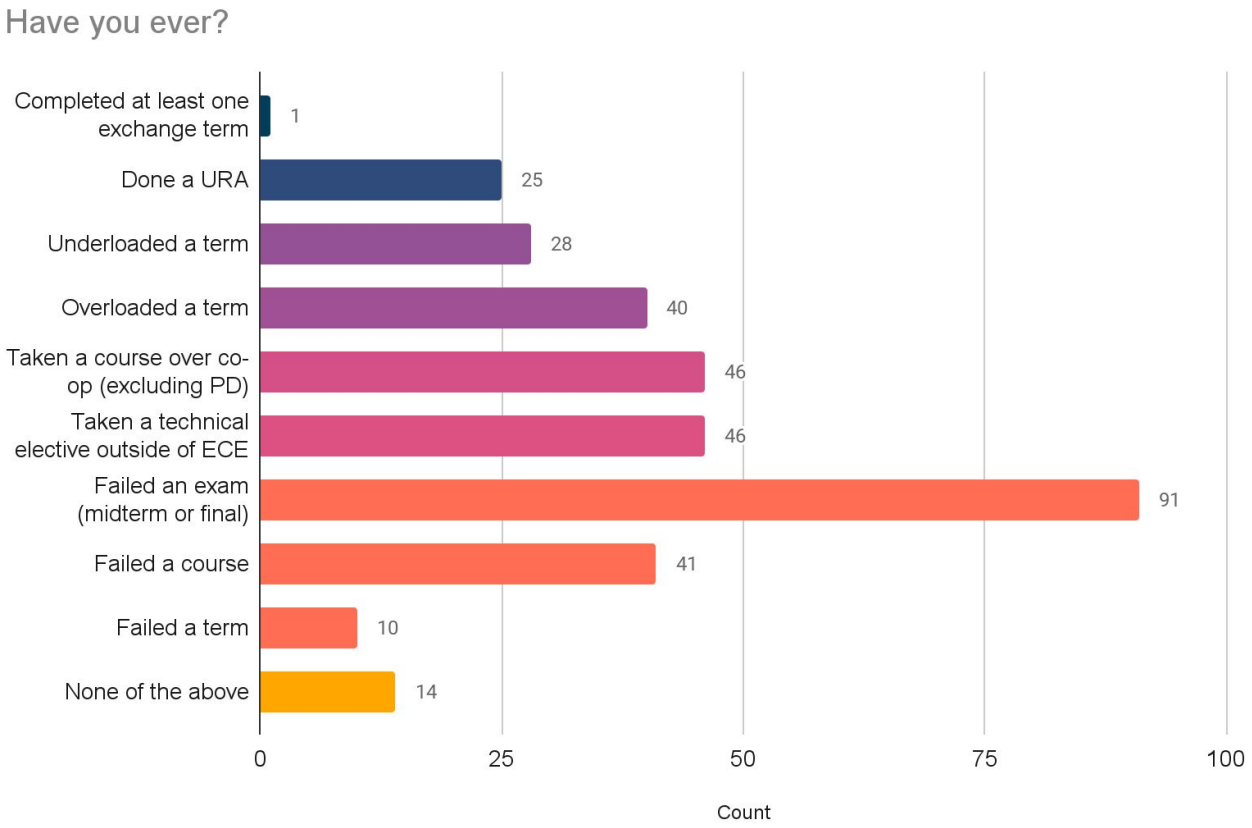
This may also reflect a higher variance in online course quality.



Have you ever?

Failure is normal, especially when midterm weights get shifted to finals. What's important is that you keep going.

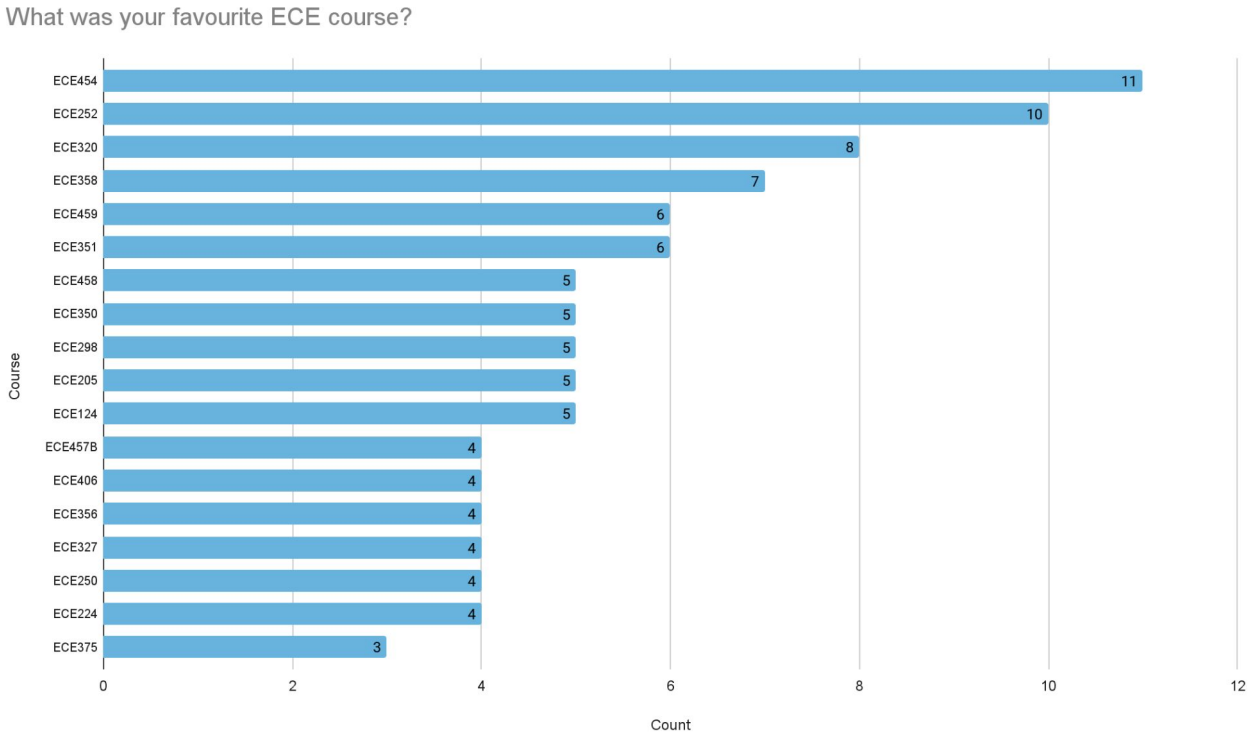
¼ did a URA, and like ⅖ overloaded. Good stuff gang.



Favorite ECE course

27 courses with less than 3 people having them as a favourite were truncated.

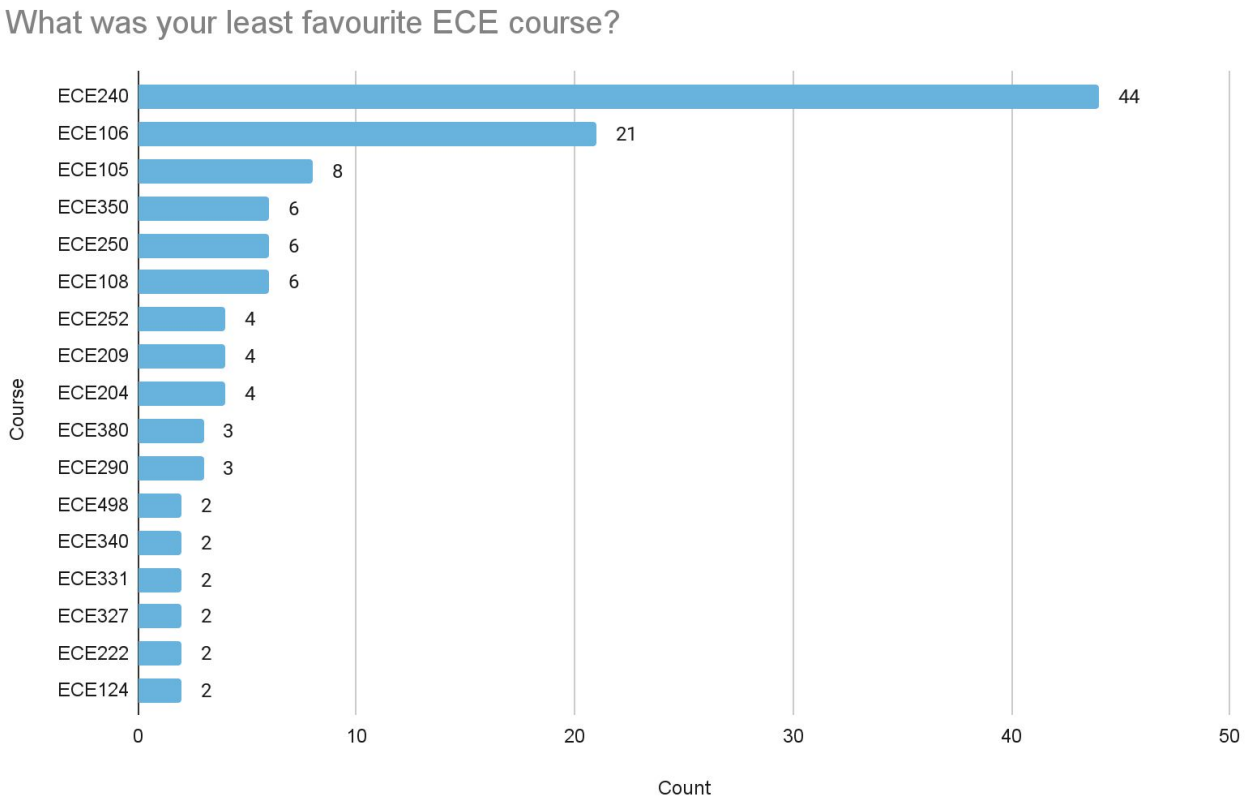
To no surprise were the technical electives (e.g. courses people voluntarily took) quite often more popular than mandatory courses, with ECE 252 as a notable outlier. Shoutout to Jeff Zarnett!



Least Favorite ECE course

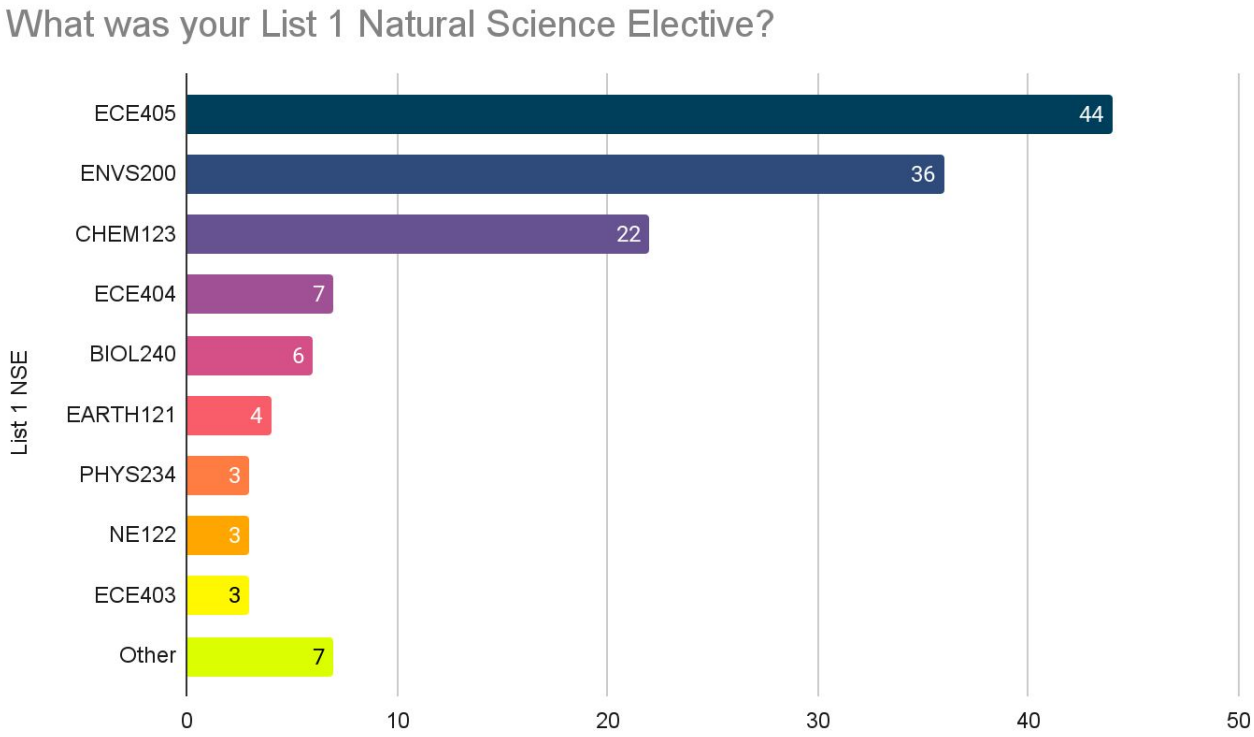
16 courses with counts < 2 have been truncated from this list

ECE 240 and ECE 106 are famously the two hardest courses in the program, with an emphasis more towards EE, possibly explaining the extreme dislike.



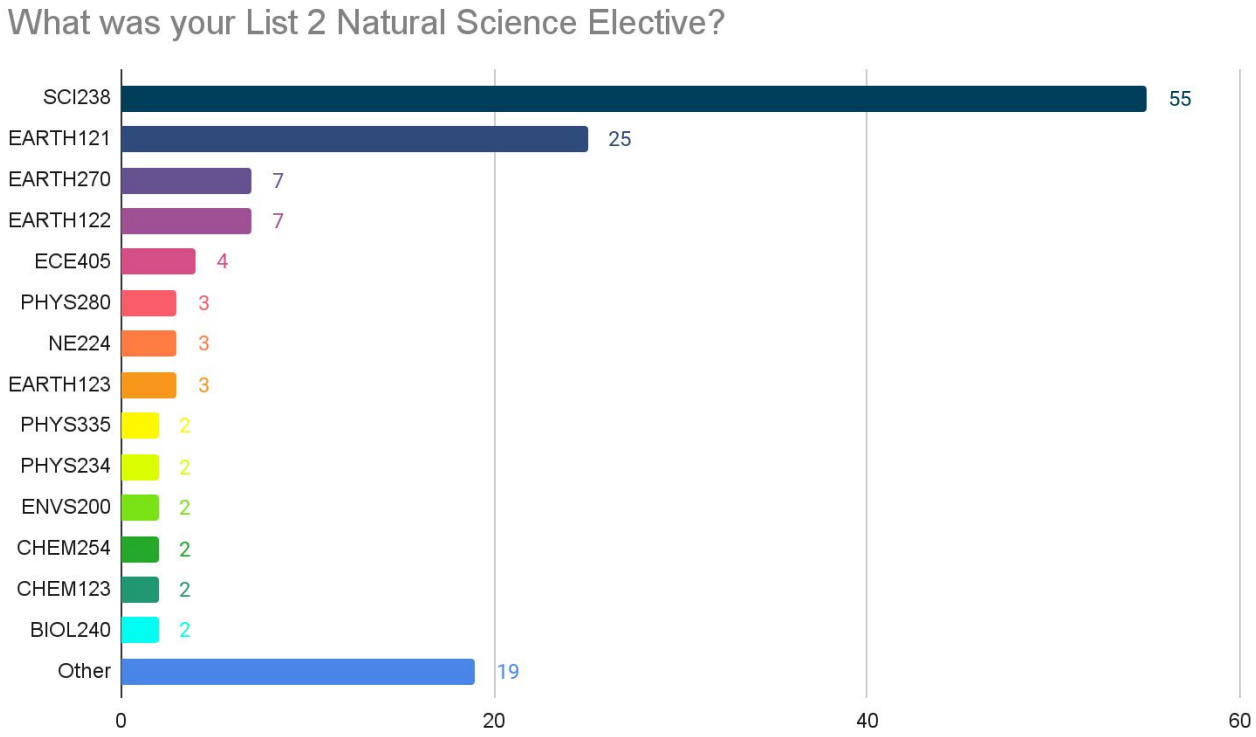
List 1 NSE

Other includes, Earth, Chemistry, and Biology



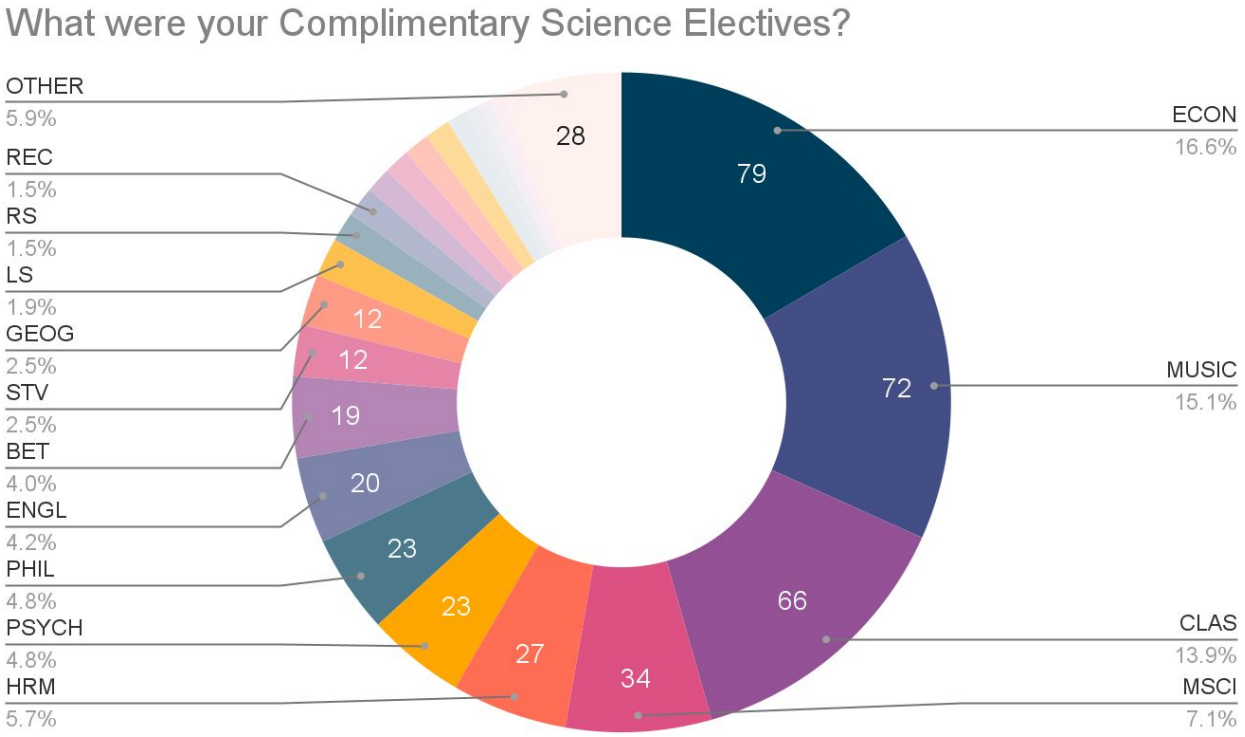
List 2 NSE

Note some of these are List 1 NSEs since students could take 2 List 1 NSEs or one from each of List 1 and List 2 - see more here [4].



CSE

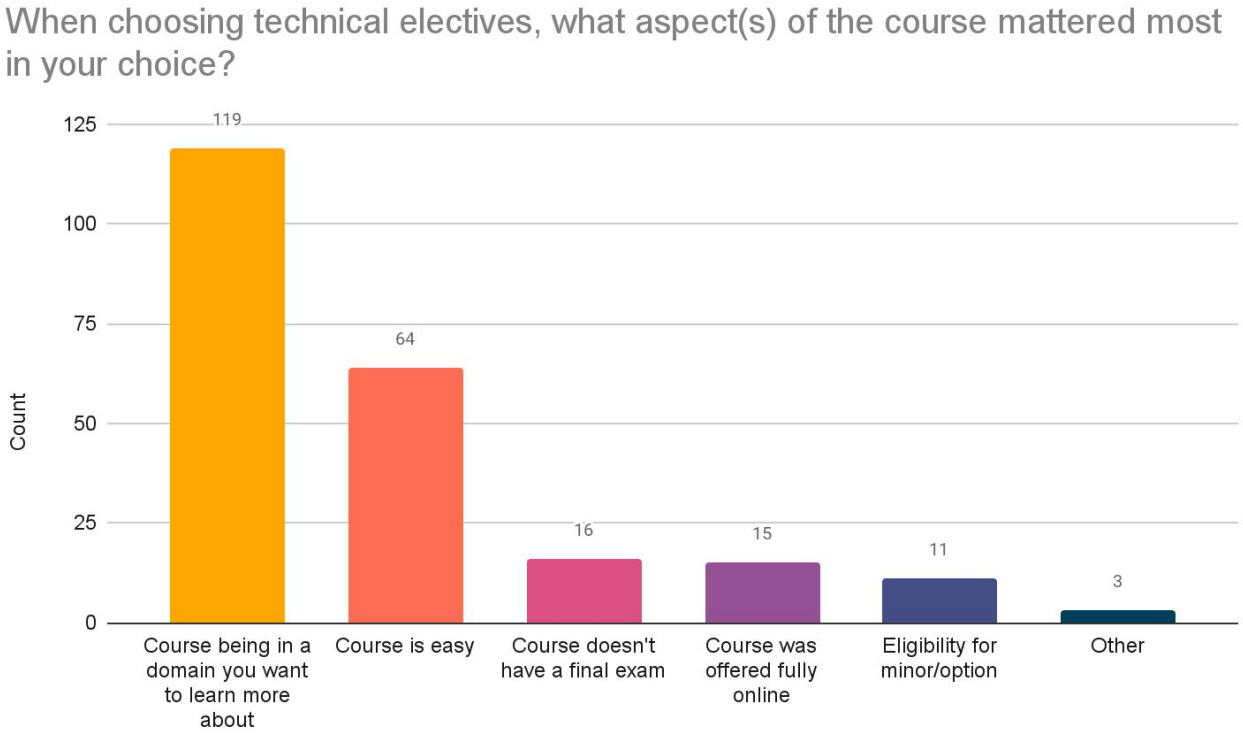
Who knew ECE students loved music history, micro-economics and classical mythology so much?



Factors affecting TE

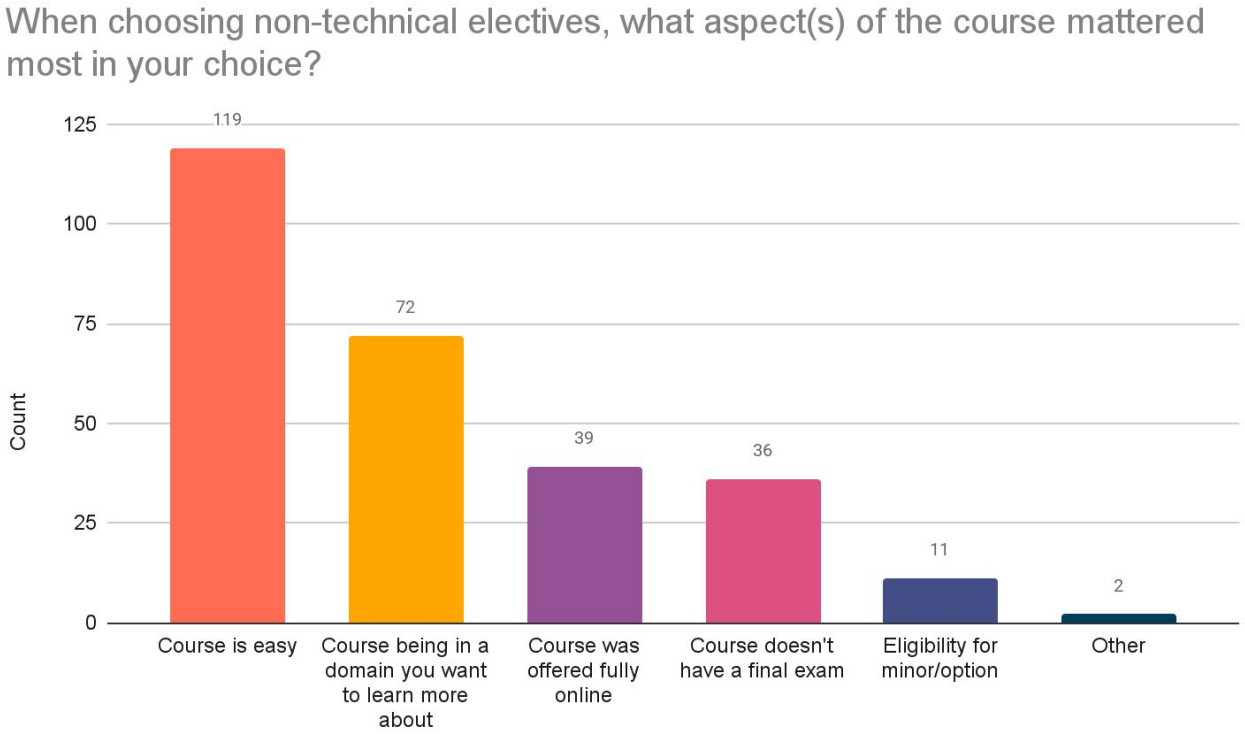
Other includes

- Friends taking it
- Professor teaching it
- Workload complimented other TEs



Factors affecting non-TEs

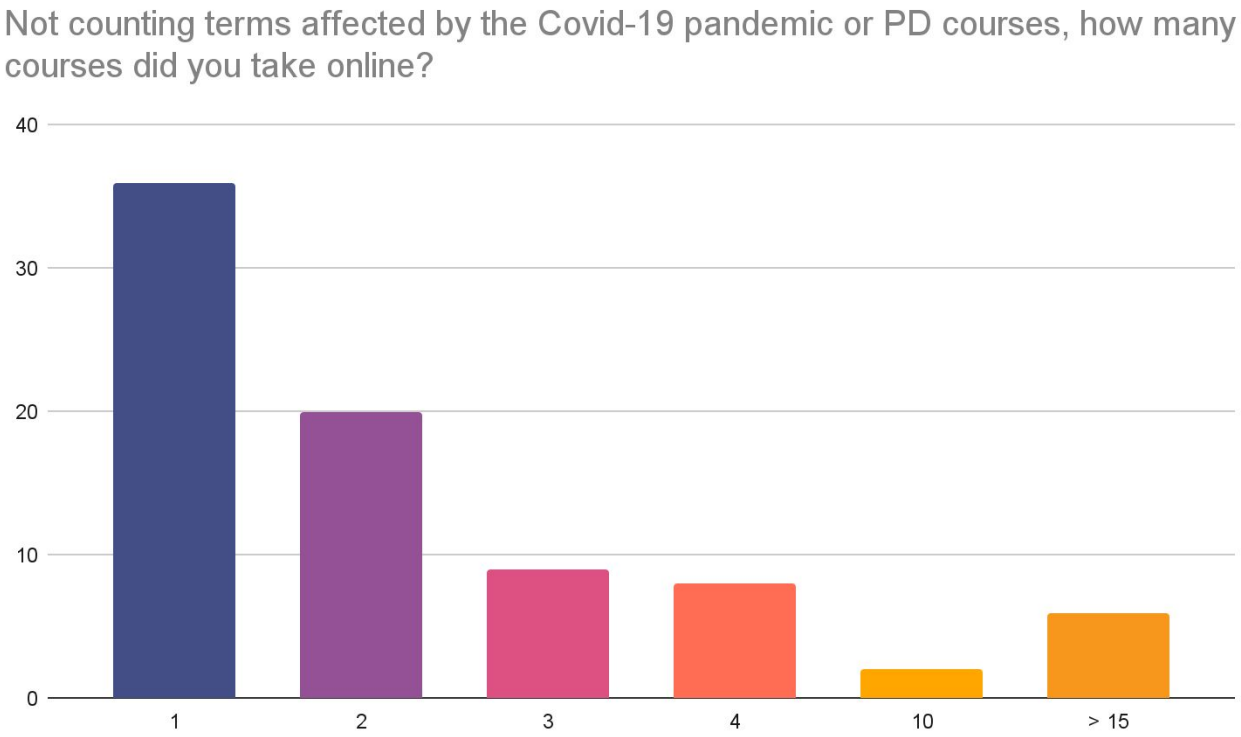
Other includes
- Fun and enjoyable material
- Fun professor teaching it
- Workload complimented other TEs



Online courses excluding PD and COVID affected terms

36% of respondents took 0 courses online apart from PD, and those in terms affected by the pandemic

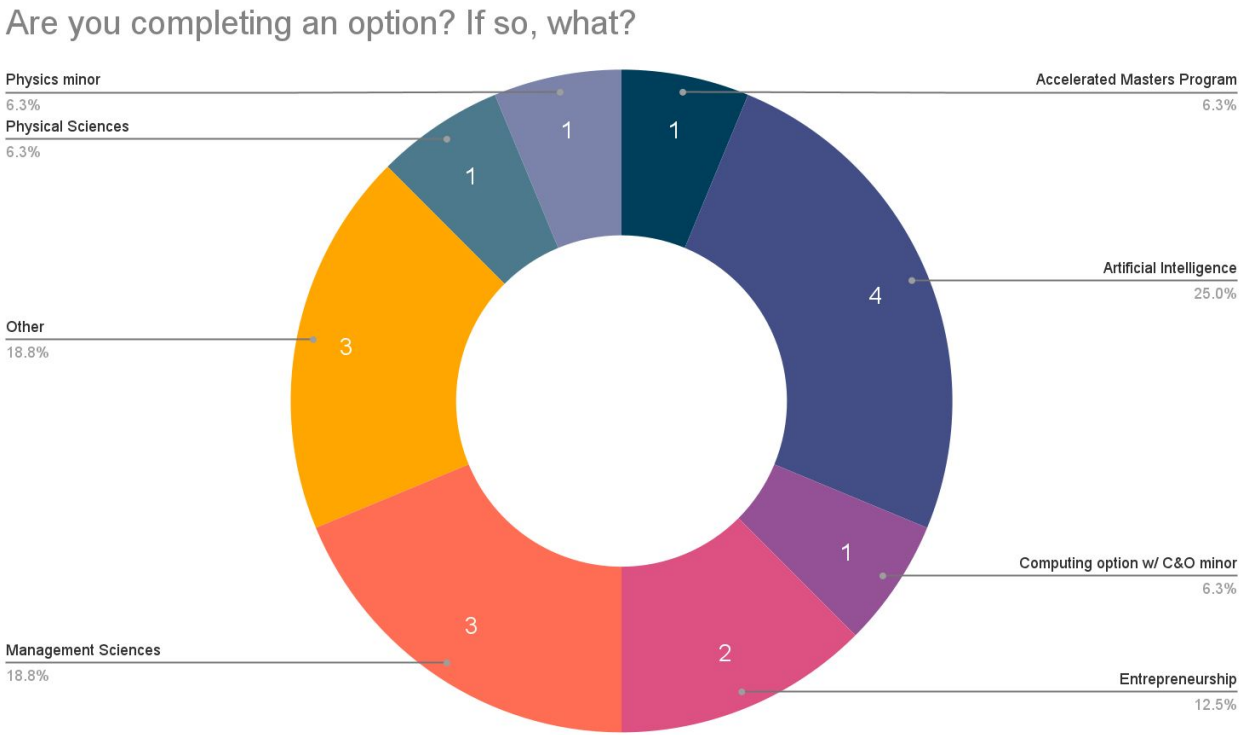
One respondent reporting apparently took 30 courses online - remote learning ahead of time!



Option?

88% of respondents reported not pursuing an option

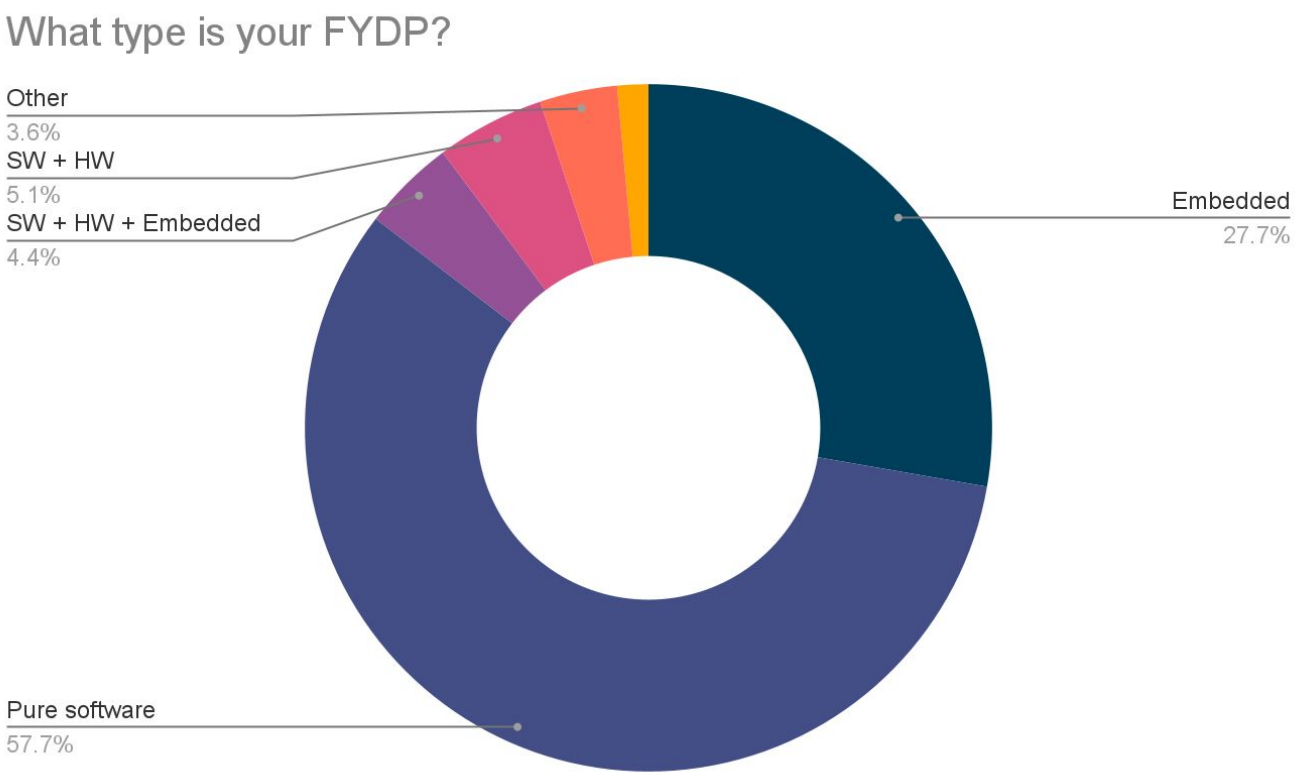
2 respondents also provided the information of their minors, one being in Combinatorics and Optimization, while the other being a Physics minor which have both been included here



FYDP

Other includes
- GENE with Mechanical
- Robot + App
- Embedded + Mechanical
- Interdisciplinary

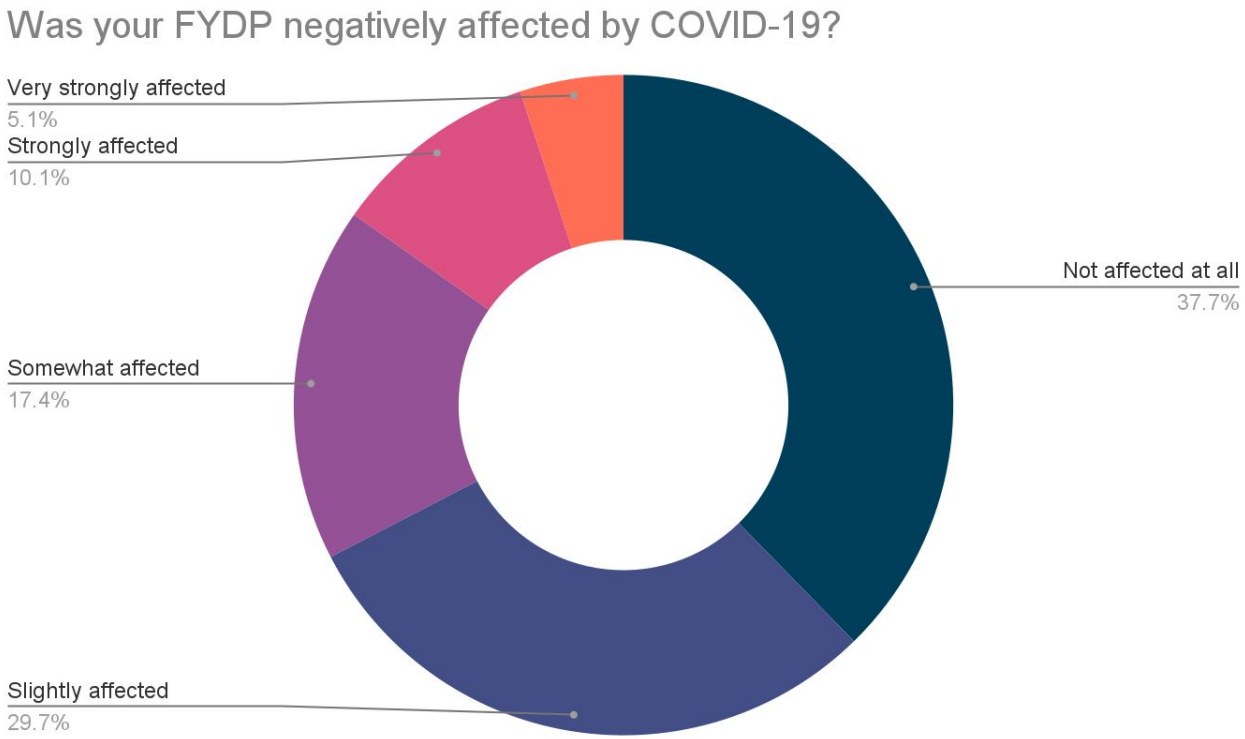
Only 2 respondents claimed to have their project be “Purely Hardware”, shown in yellow



FYDP affected by COVID-19 pandemic?

Out of 138 respondents, 52 responded having their FYDP being unaffected by their pandemic, with 45 of those being “Purely Software” projects

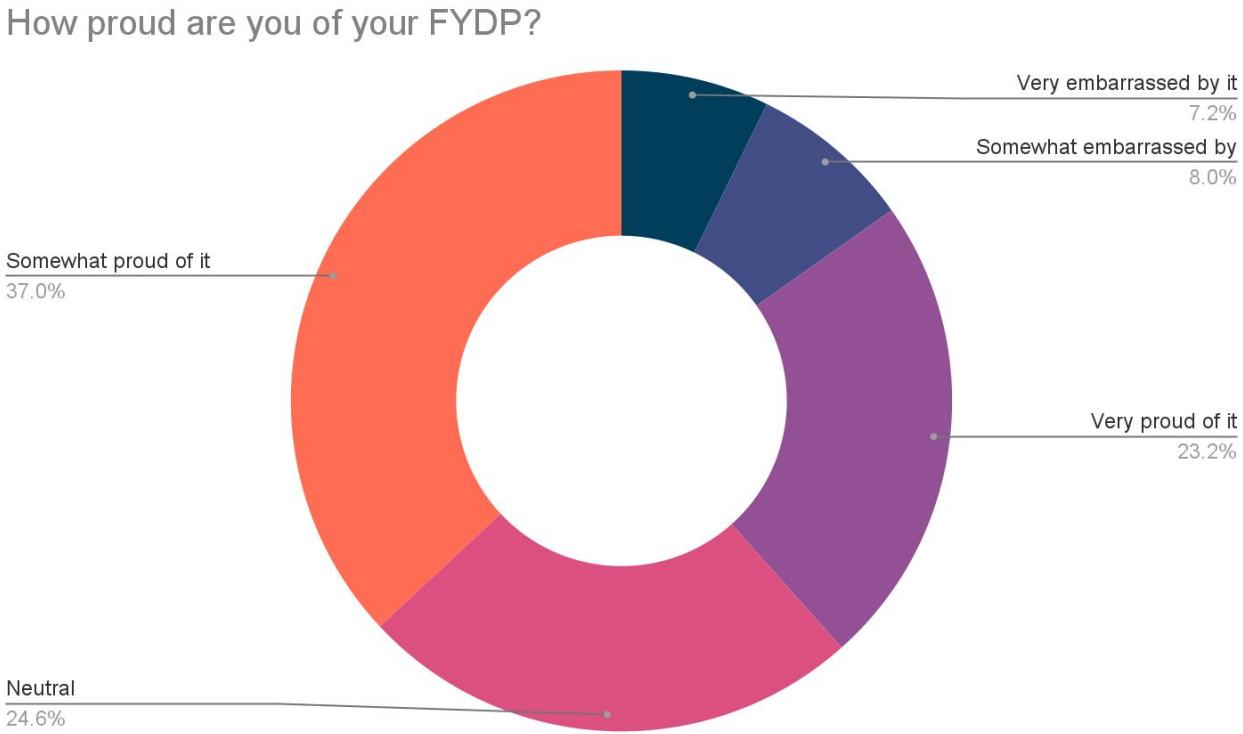
All of the projects that claimed to be “Very strongly affected” were “Embedded” projects, that more than likely required integration between students from different expertise having to collaborate remotely with additional debugging difficulty



Proud of FYDP?

Out of 138 respondents, 83 responded being “Somewhat proud” or “Very proud” of their FYDP

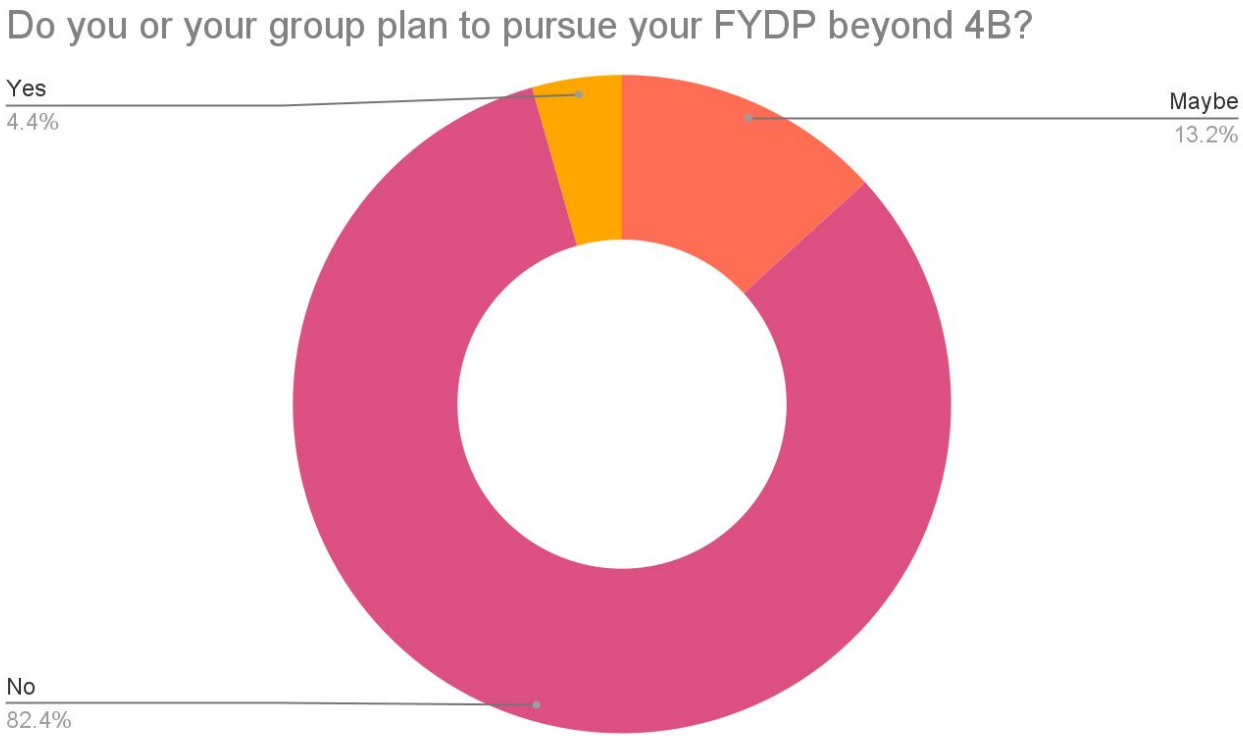
Only 10 respondents reported being “Very embarrassed” of their FYDP



FYDP after graduation?

6 respondents affirmed that they would continue to pursue their FYDP, with 5 of them being “Pure software” projects, and 1 being a combination of SW/HW and Embedded

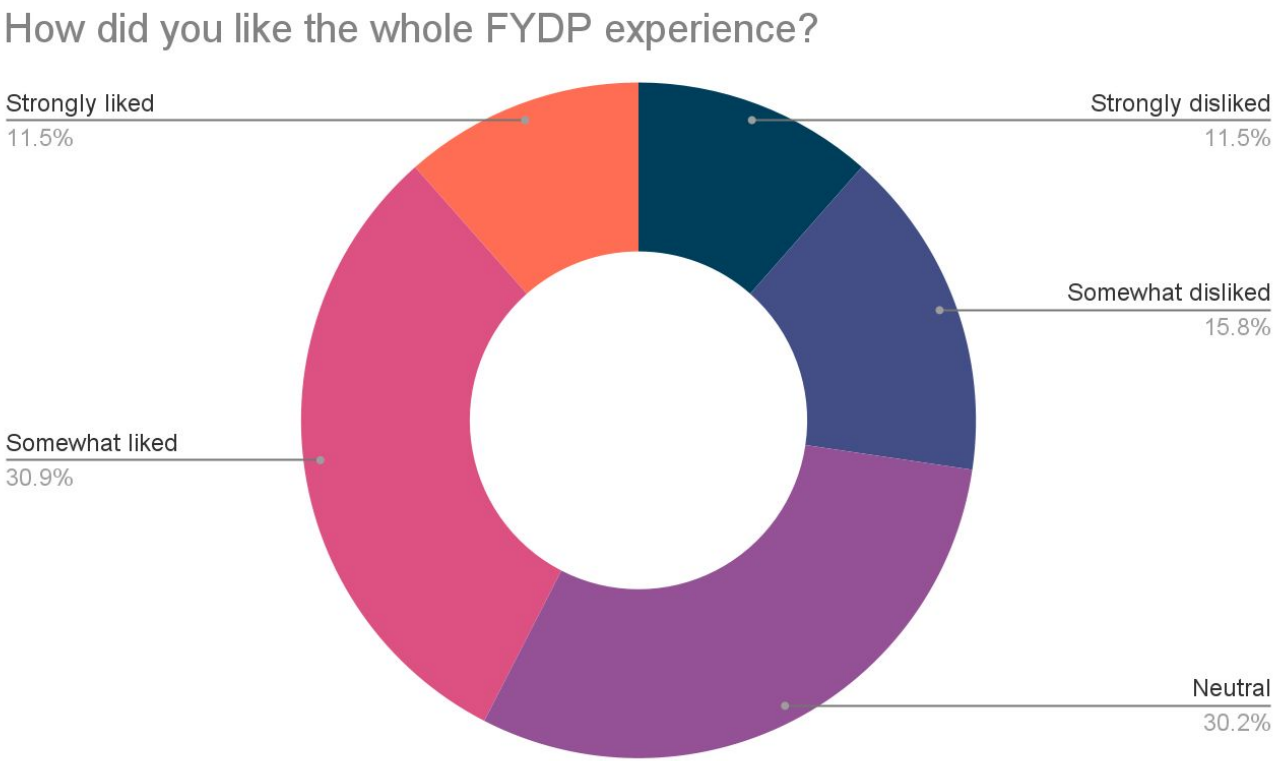
18 respondents responded “Maybe” with the more than half with “Pure Software” projects



Overall rating of the FYDP experience

16 respondents reported strongly disliking their FYDP experience, with the same number reporting strongly liking their experience

Almost one in every 4 ECE student reported not liking their FYDP experience, which is a lot considering somewhere between 8 to 12 months are spent by them on it



Favorite Professors

We honour the memory of Firas Kamal Mansour. He was a professor of utmost devotion to his students and brought a unique vigour to his lectures that kept students enthralled to physics.

When he came to lecture, he radiated a passion that made physics exciting to learn; aided with the use of lively demonstrations and colourful stories. He was welcoming of any question, no matter how trivial it may have been. This, along with his fantastic wit made him very approachable, which helped build our academic confidence. Him distributing baklava to the class at the end of term is a cherished memory.

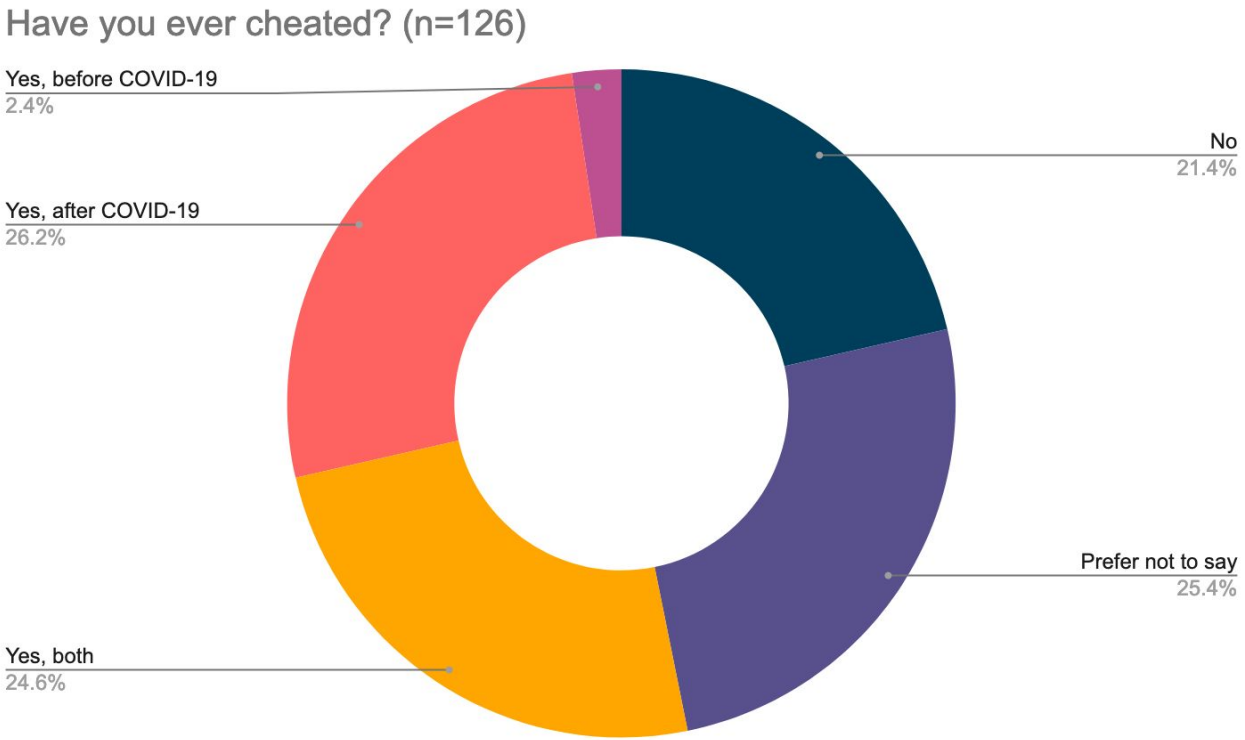
He was a great teacher and will be remembered long after we finish university. We will miss you, Firas.
- ECE, 2022

Policy 71

More than half the class has admitted to cheating

Yikes.

To be fair, this is likely much more cheating on 1% assignments than exams.

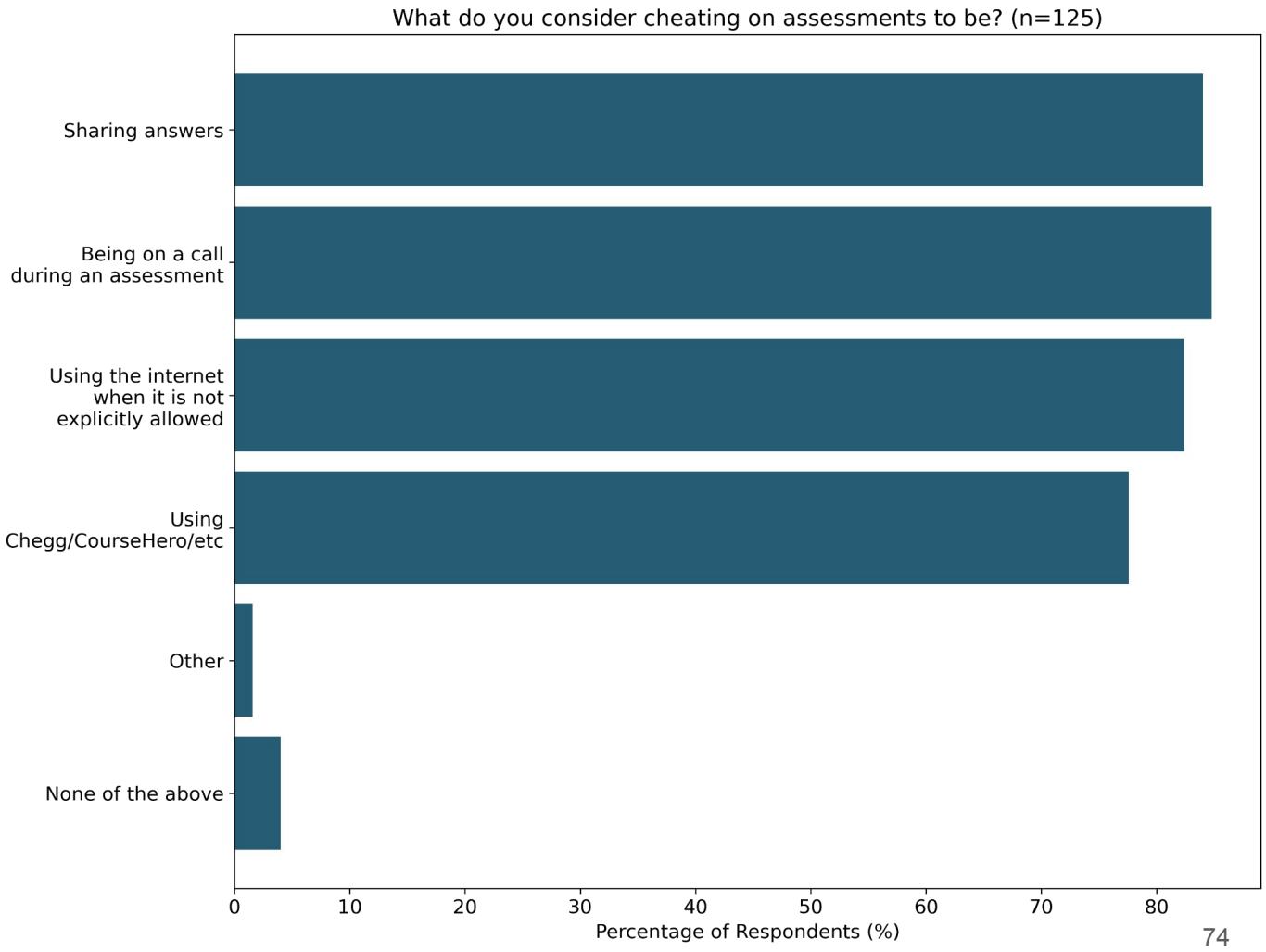


What is cheating?

Sharing answers, being on call, using the internet, and Chegg/CourseHero, are all generally considered to be cheating on assessments

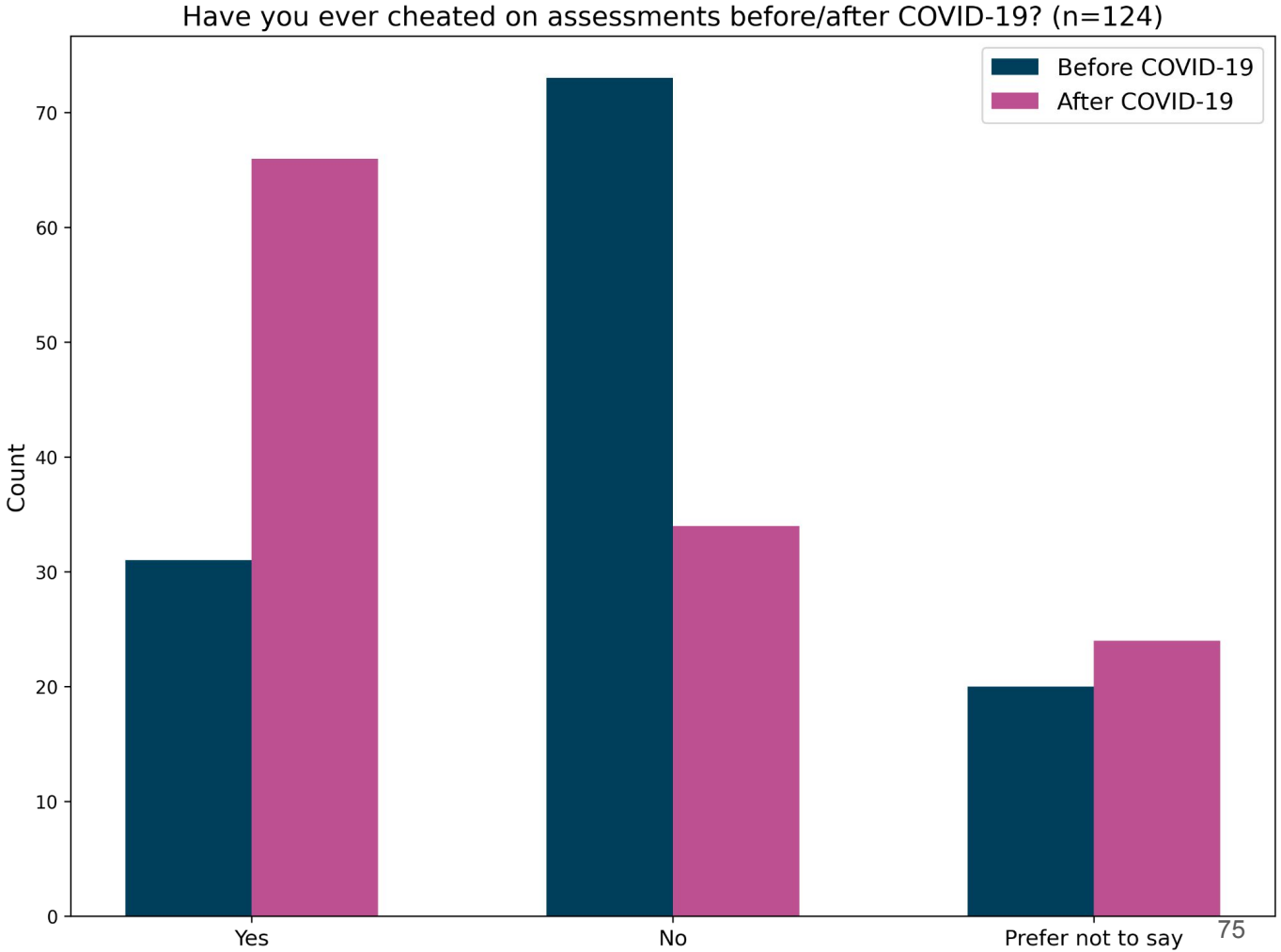
Respondents were allowed to select more than one answer.

Assessments includes exams, labs, quizzes and assignments, where levels of scrutiny vary based on the assessment.



COVID-19 & P71

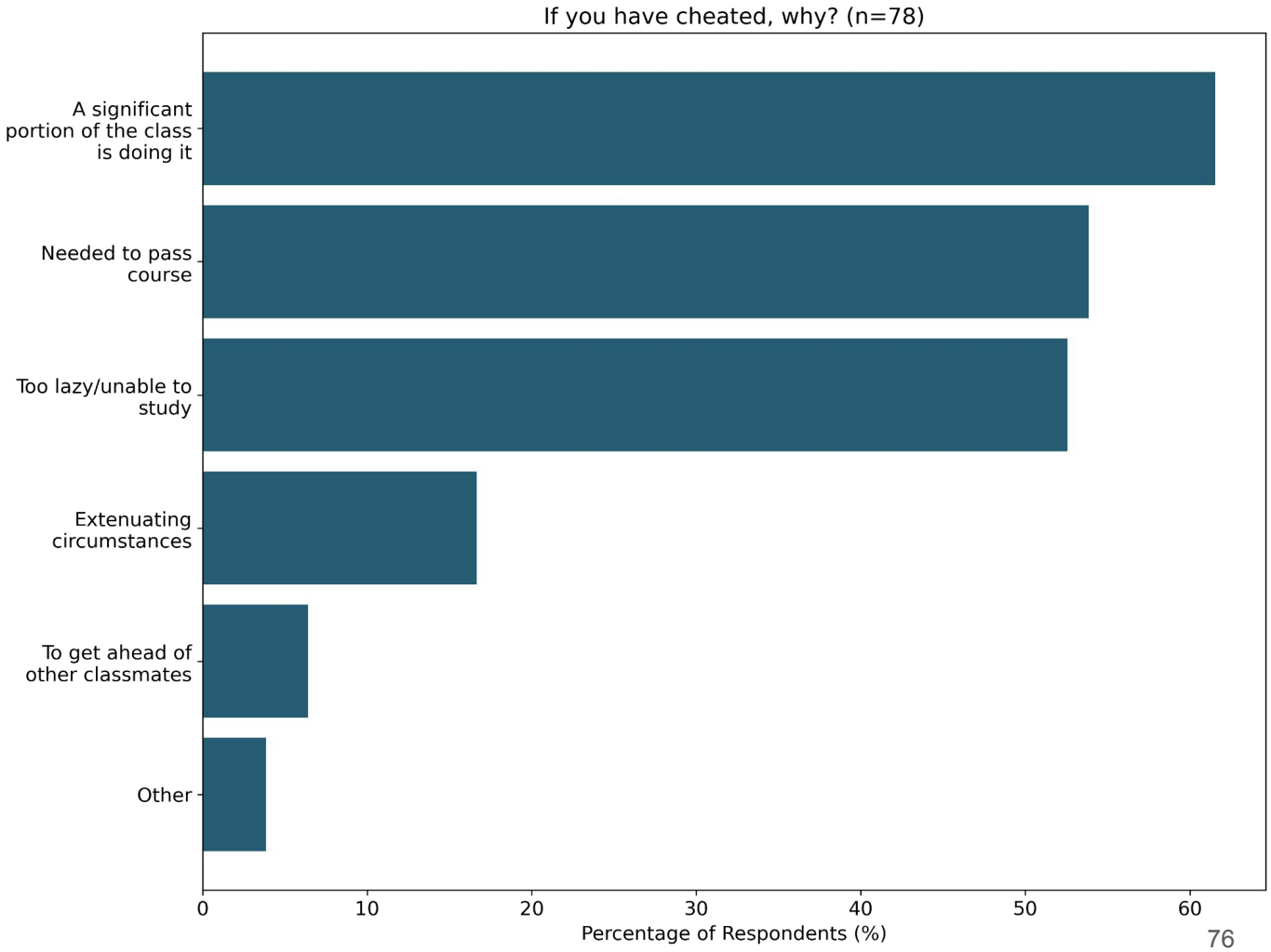
Cheating rates skyrocketed after COVID-19



Why Cheat?

Most cheaters justify their reasoning by saying most of the class is doing it.

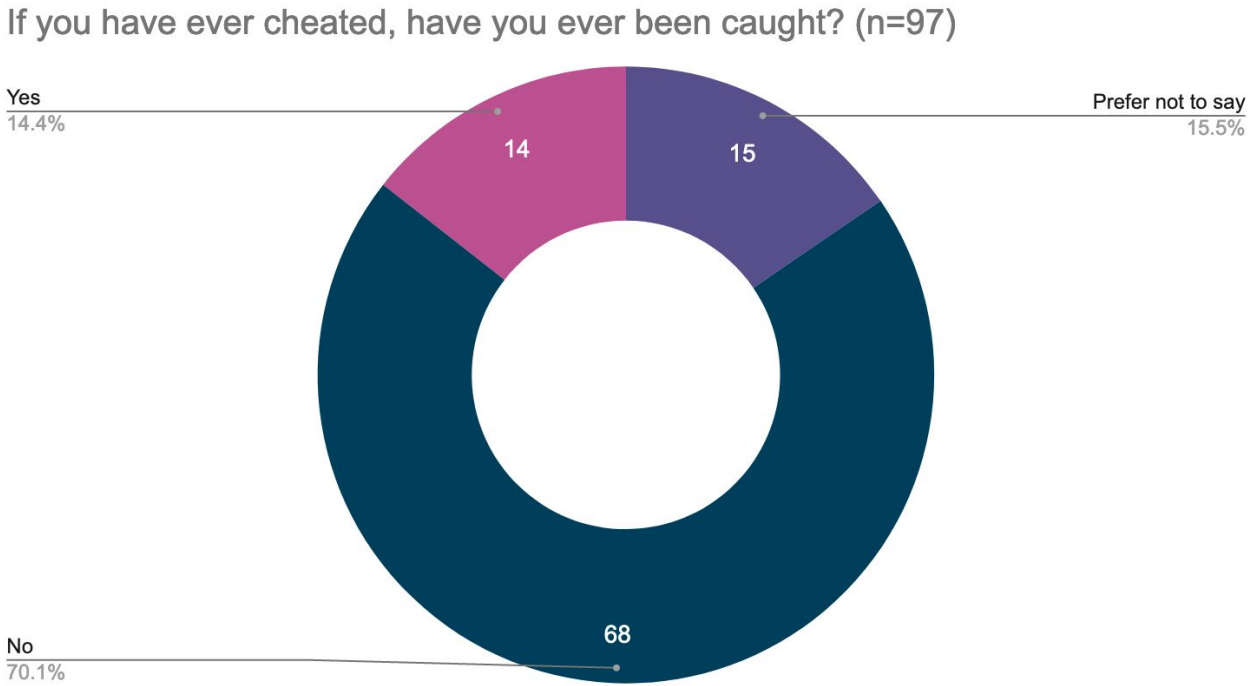
Based on previous slides, this may be true.



Caught red-handed?

Actually, a lot of people probably were caught and profs decided it's not worth the effort.

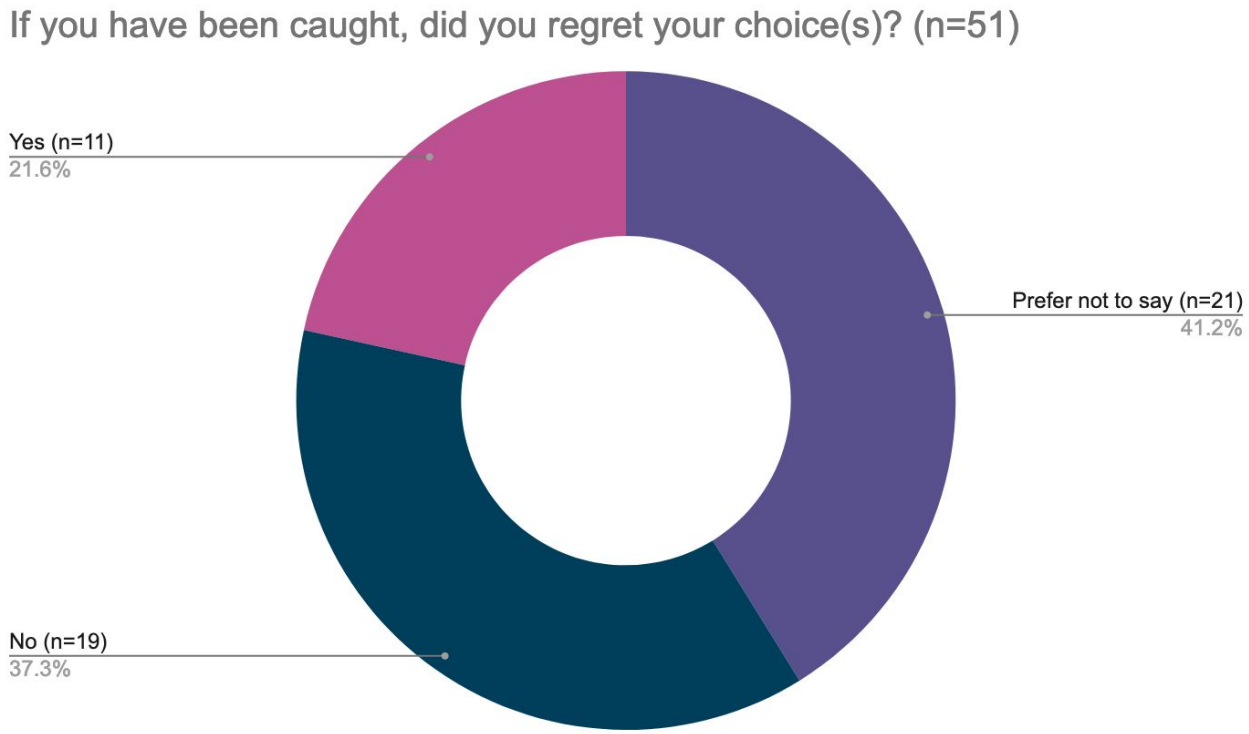
This is also because some types of cheating, if done correctly are indistinguishable from learning.



Cheater's Remorse

A good chunk of cheaters that were caught didn't regret their decision.

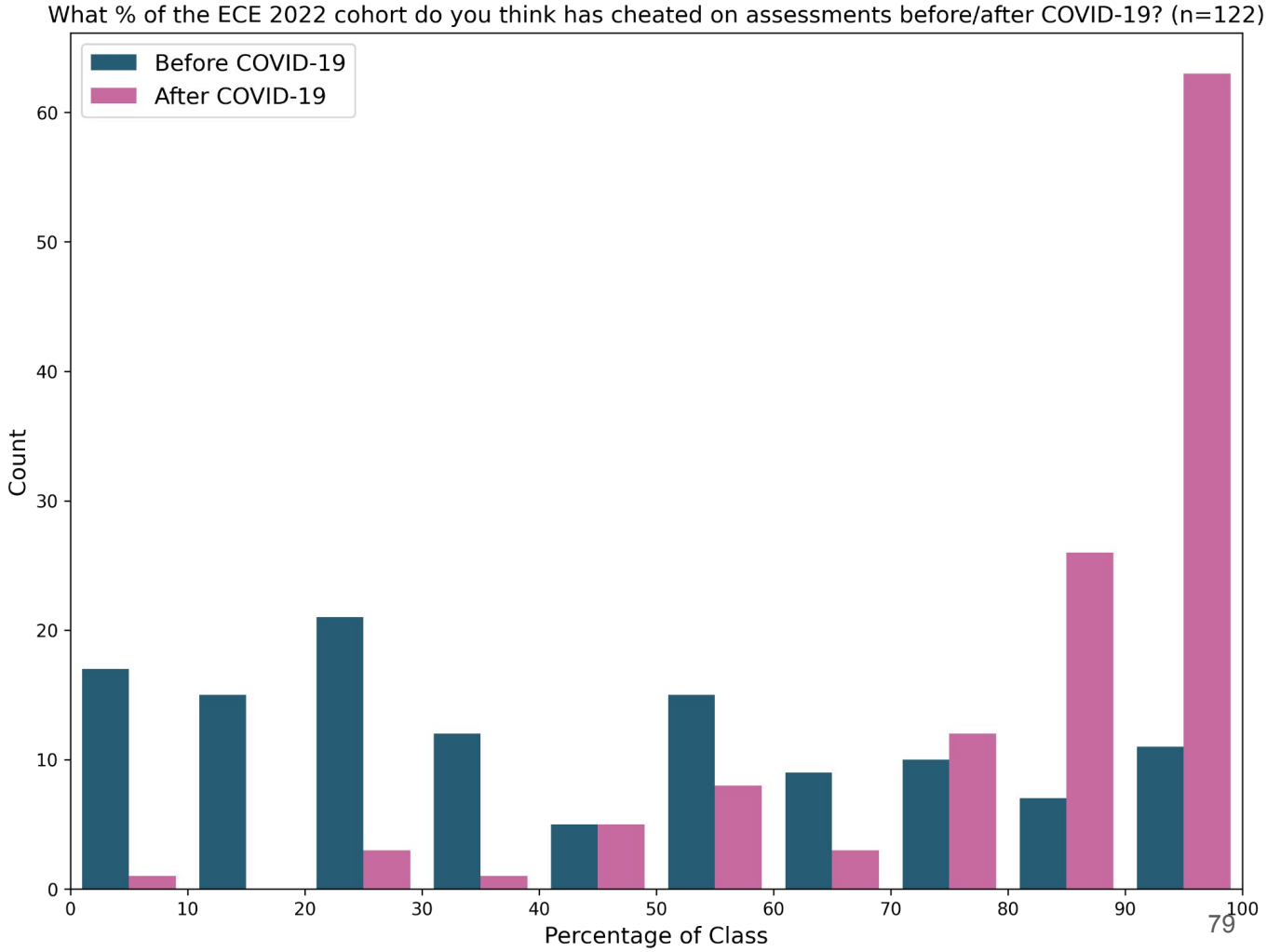
Perhaps this reflects a society where people care more about passing than they do about really learning the content.



Cohort Perceptions

Most of the class thinks cheating has skyrocketed after COVID-19.

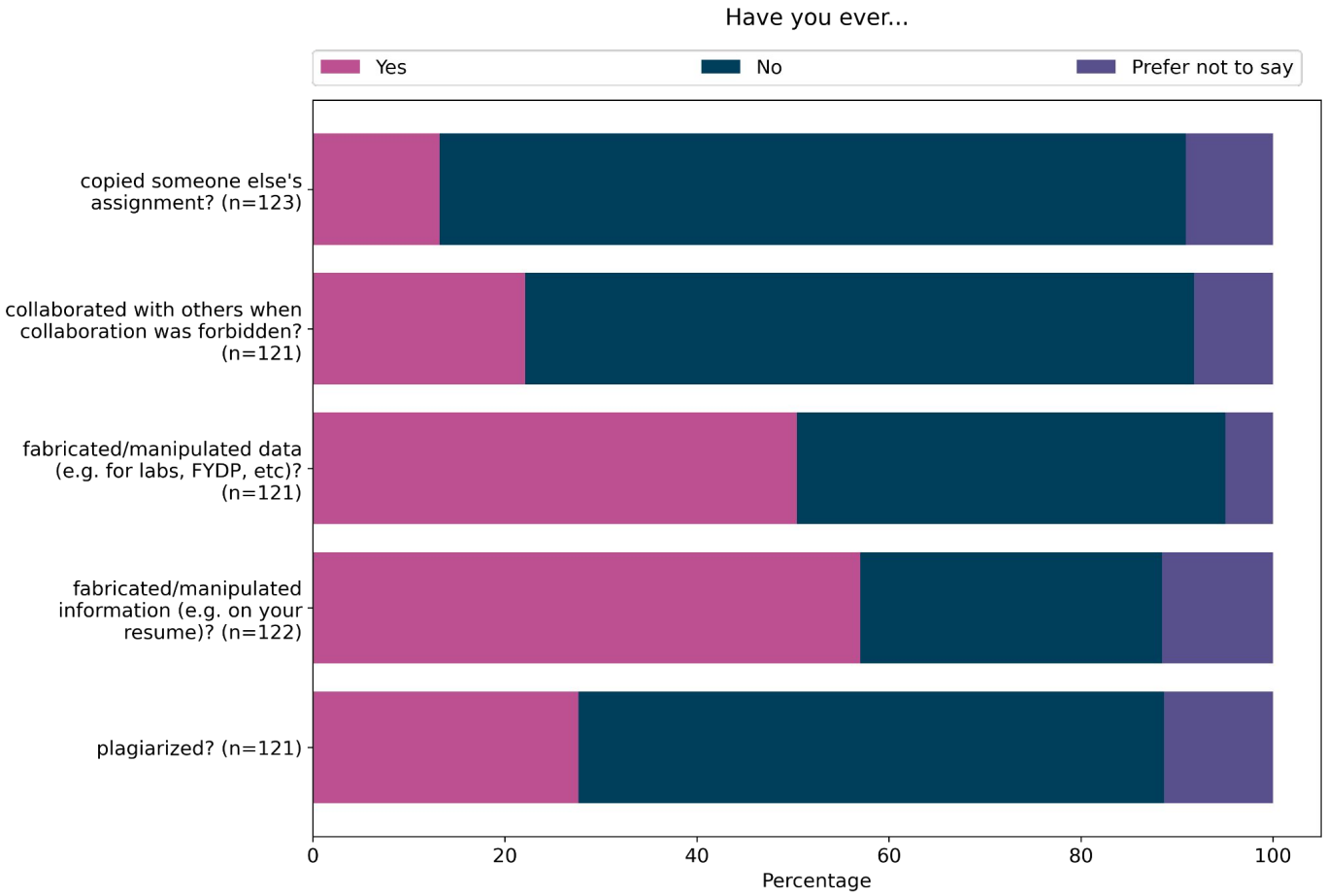
We're a reasonably self aware bunch, based on the cheating admissions in previous slides.



Never have I ever…

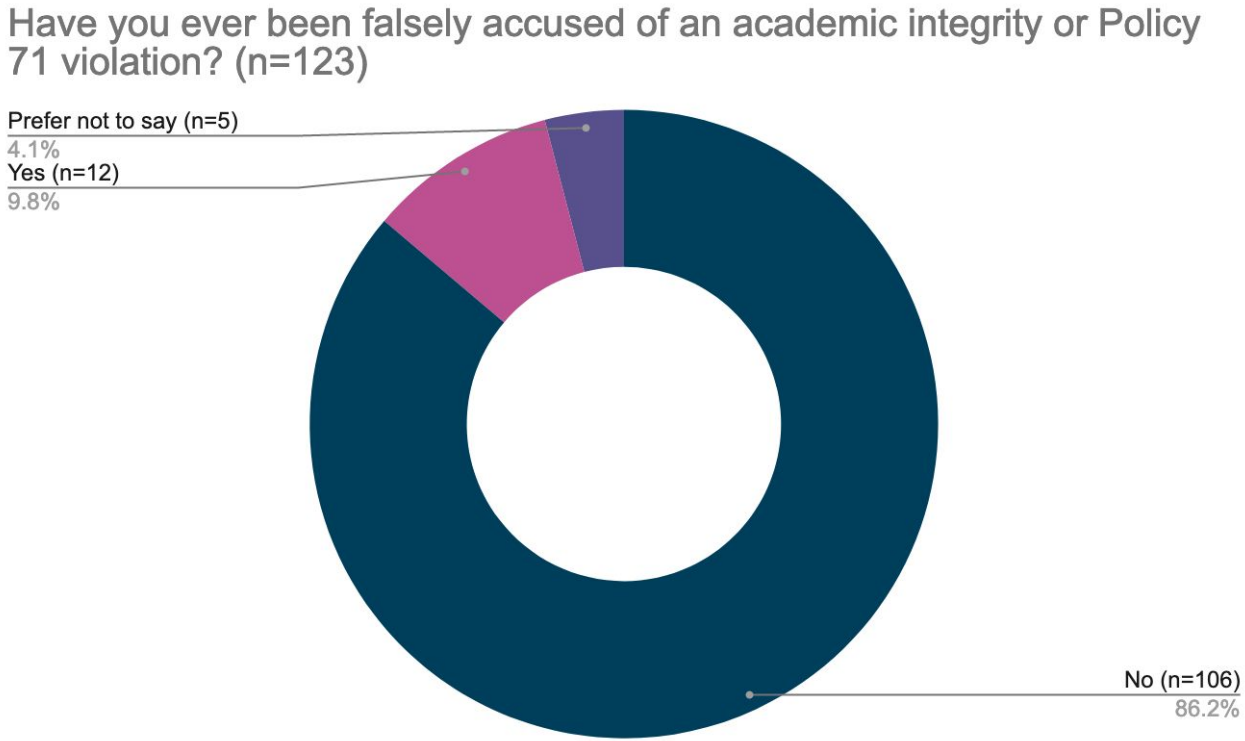
A good 60% of respondents fabricated or manipulated information on resumes

Printing “hello world” doesn’t make you “experienced” in a language though



Cheating Crackdowns?

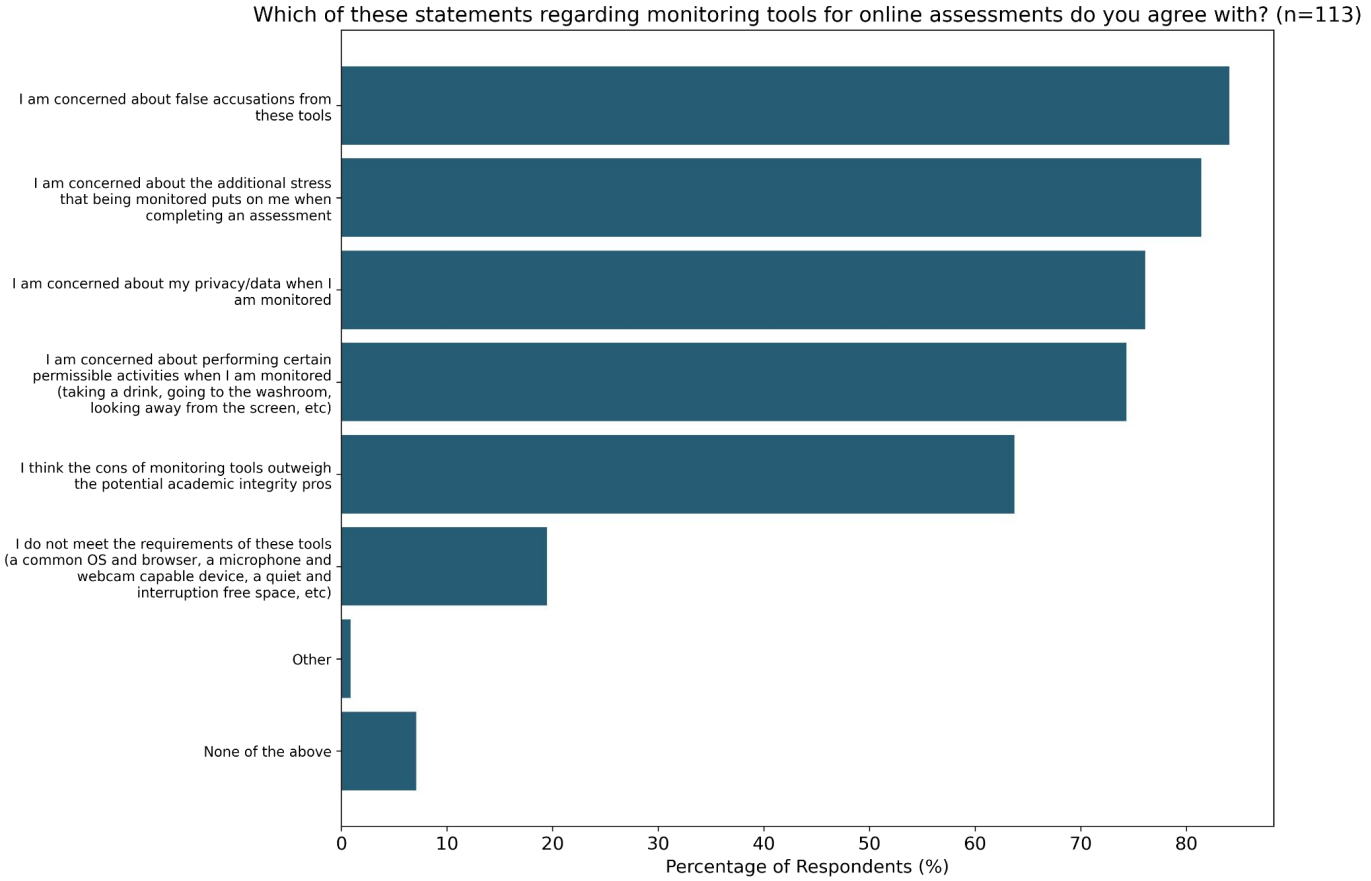
Most have not been falsely accused of P71, but around 10% did.



Big Brother is watching

Monitoring tools for assessments have exploded in popularity during COVID-19. However, the use of those aren't without concern…

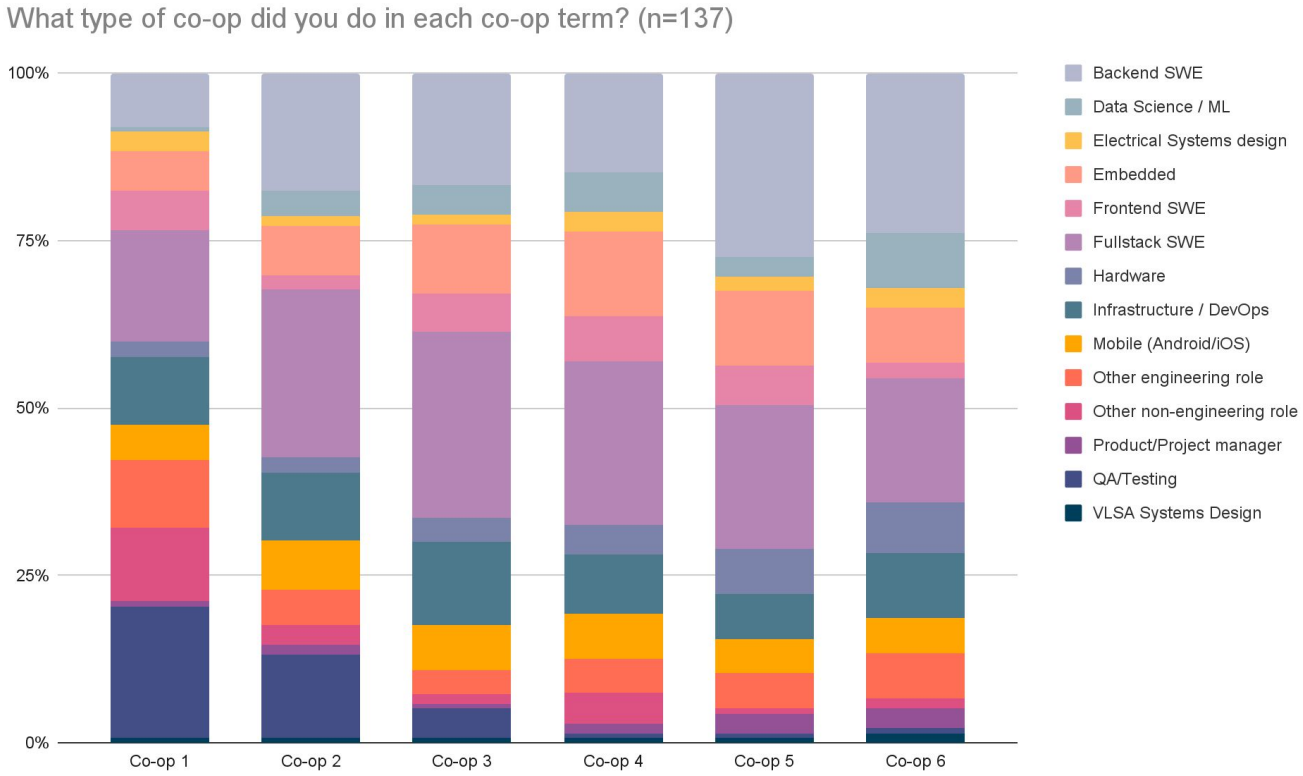
Other concerns that have been raised include the ethical relationships between companies and universities.



Co-op

Co-op Type

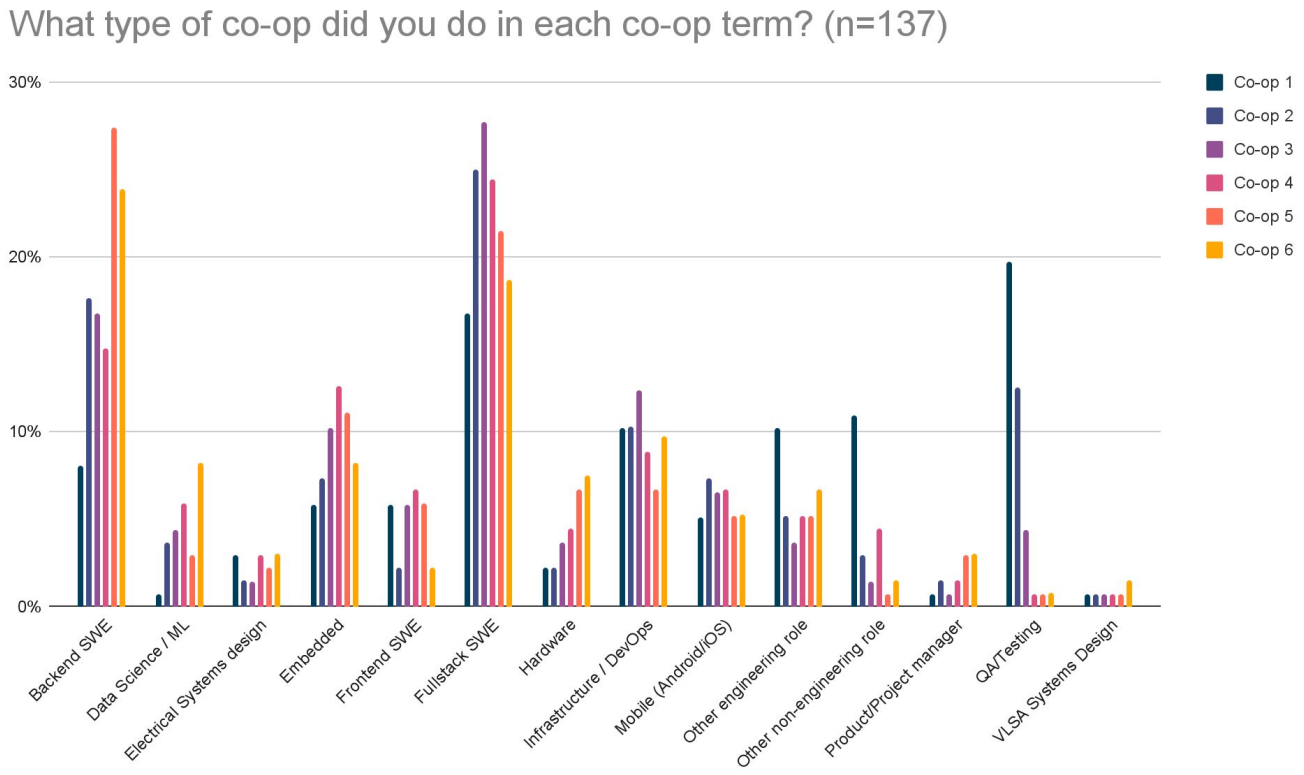
Students who did QA/Testing or Non-Engineering Roles in their early coops usually transitioned to other types of coops eventually.



Co-op Type

Backend SWE, Data Science/ML, and Hardware co-ops grew more common throughout co-op terms.

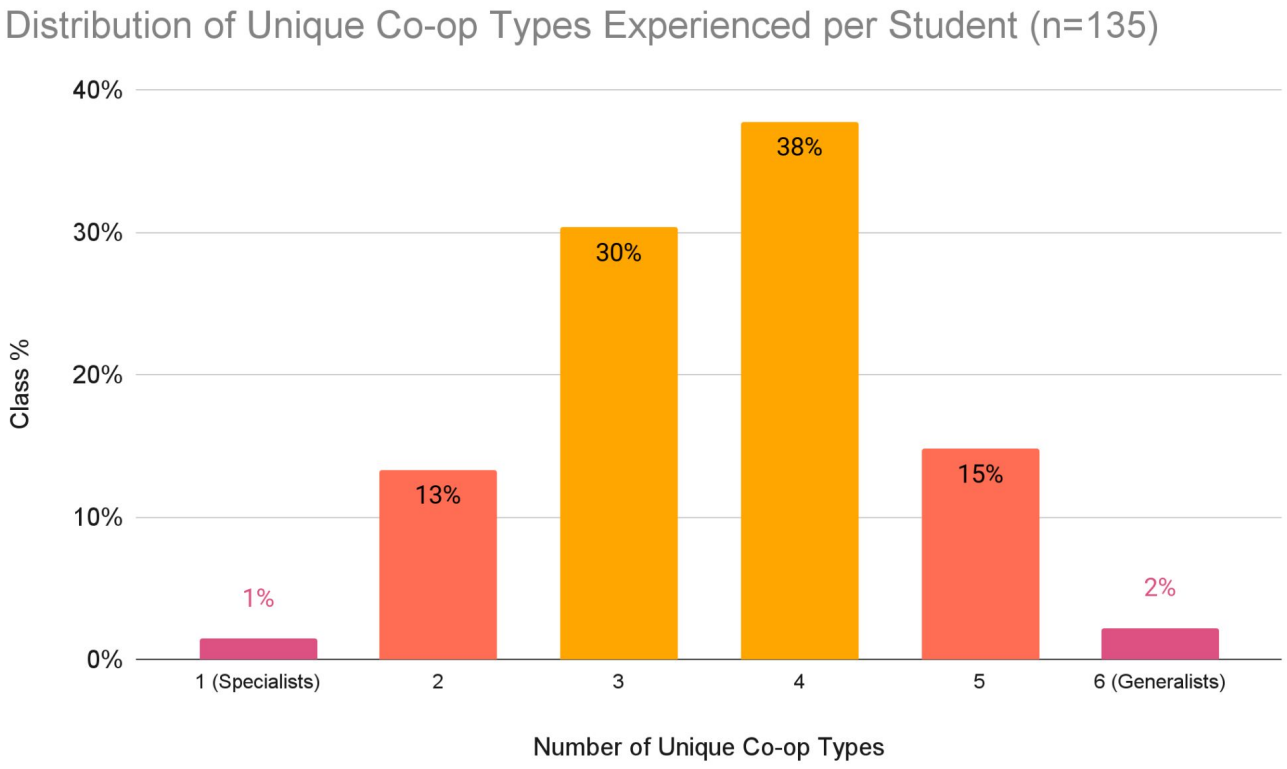
Embedded, Fullstack SWE coops, and Mobile briefly grew more common in the “middle” co-op terms.



Specialists or Generalists?

Turns out we're mostly neither, only 3% of the class reported trying only 1 co-op type in total (Specialists) or or trying 6 co-op types in total (Generalists).

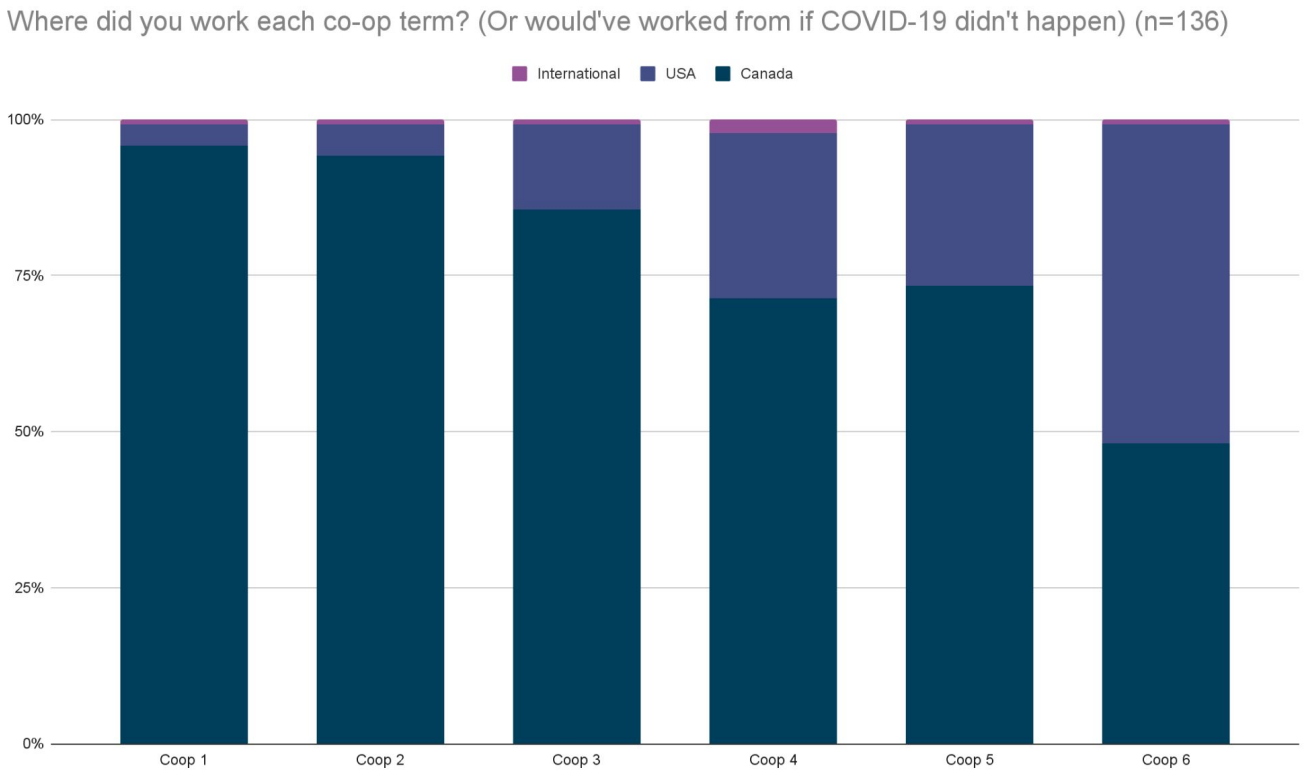
68% of the class reported trying 3-4 co-op types. Maybe this indicates a sense of progression.



Co-op Location (by Country)

Students typically work more in the US and less in Canada with each successive co-op term.

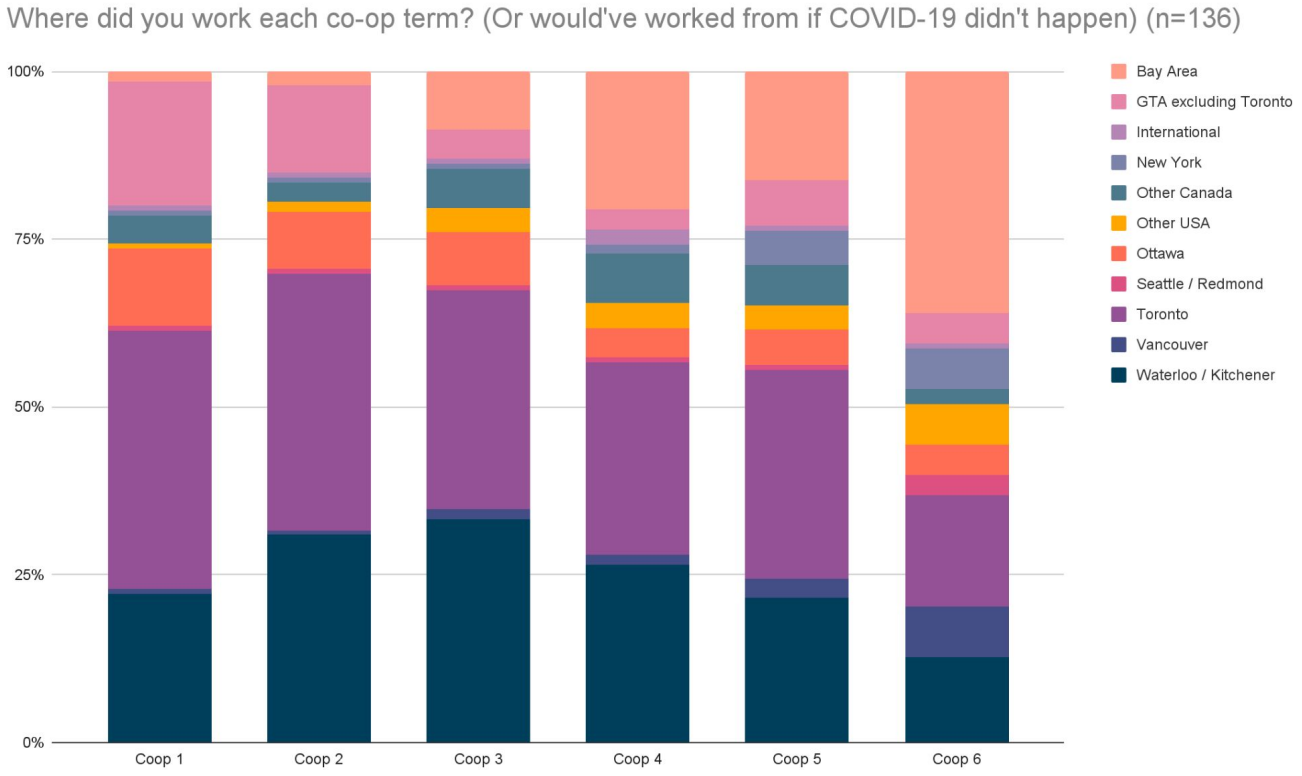
Students were most likely to work Internationally on their 4th co-op (2.2%).



Co-op Location (by City/Region)

Bay Area was one of the rarest 1st co-op locations (1%), but became the most common 6th co-op location (36%).

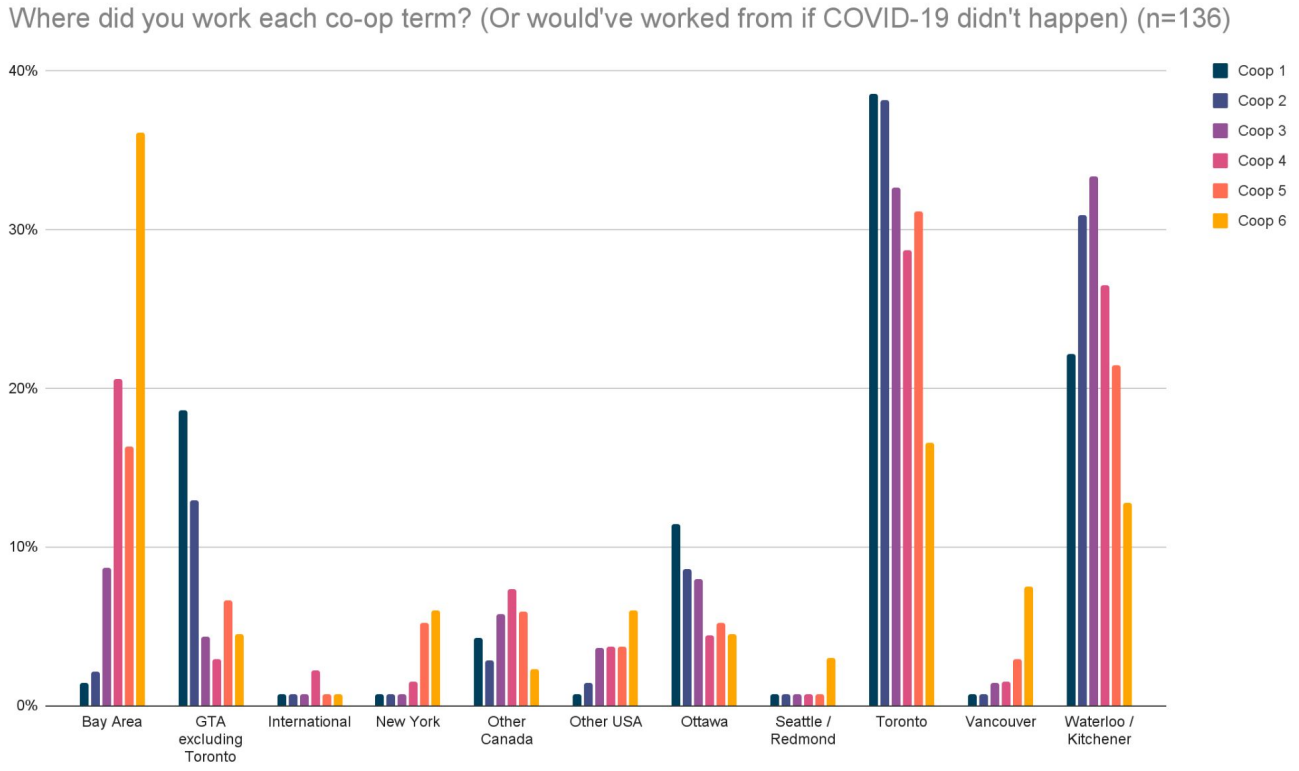
Bay Area is the most common location among US co-ops.



Co-op Location (by City/Region)

In the later co-op terms; Bay Area, New York, Other USA, Seattle/Redmond, and Vancouver grew to be more common co-op locations.

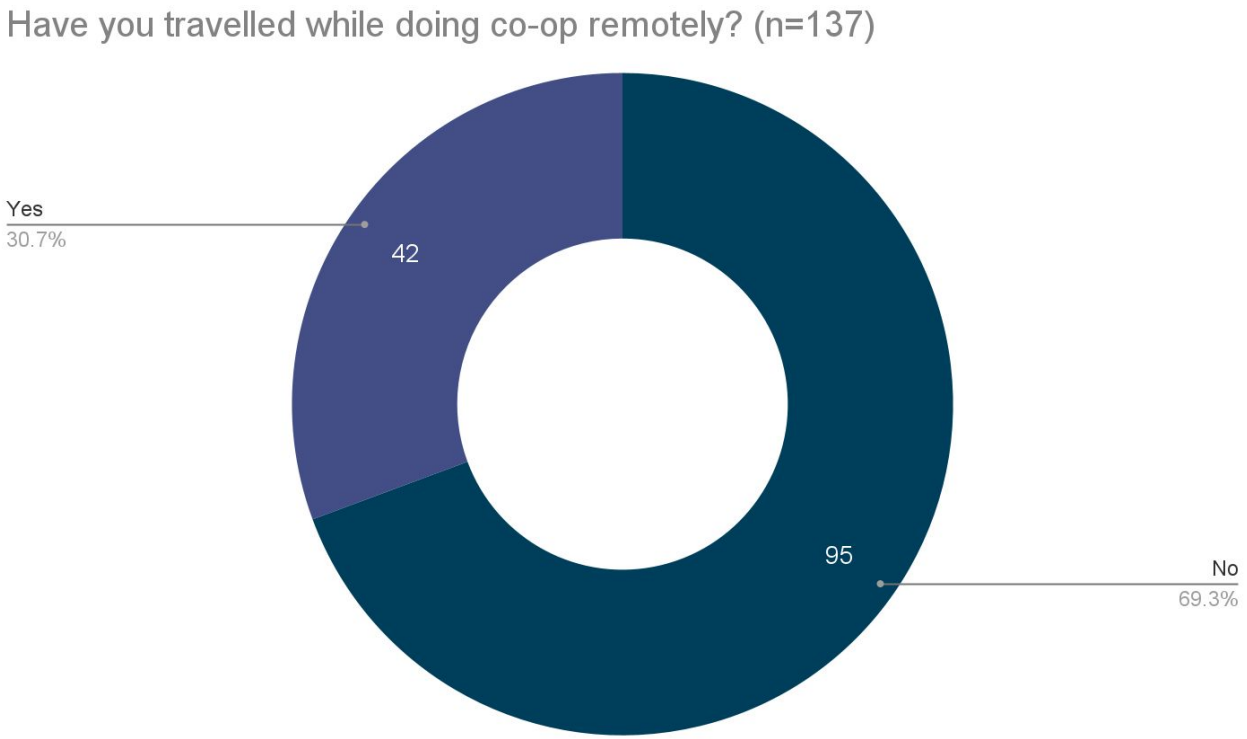
In contrast, GTA excluding Toronto, Ottawa, Toronto, and Waterloo/Kitchener became more uncommon.



Travelled during Remote Co-op?

Most students did not travel during remote co-op terms, but 30% is still a great number!

With everything locked down, it was harder to take advantage of everything being remote.

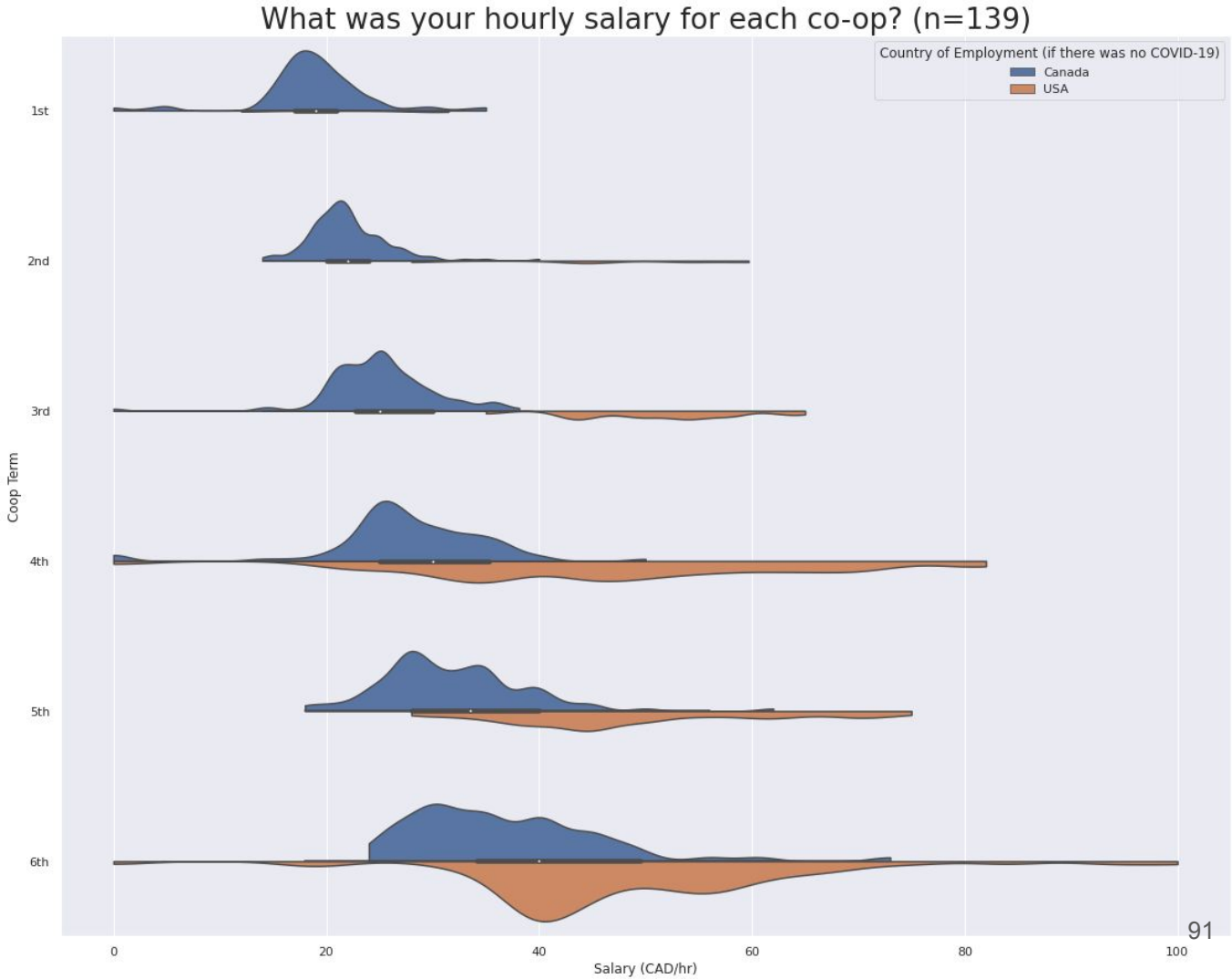


Co-op Hourly Salary

In both Canada and the US, the median wage for students increase with each coop term.

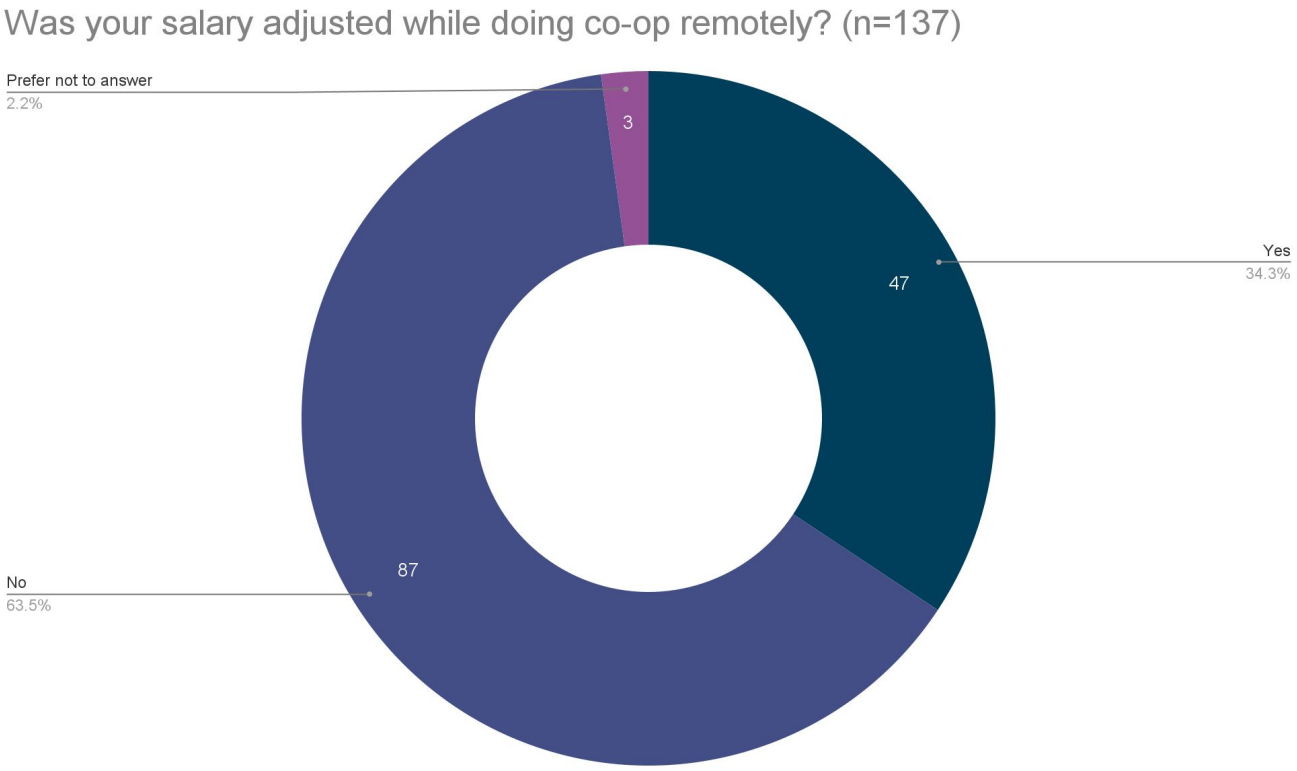
In every co-op term, the median hourly salary in the US was higher than in Canada.

Students work increasingly more in the US in later terms, as shown by the growing area of the orange distribution.



Salary Adjusted during Remote Co-op?

More than half of students fortunately did not have their salary adjusted.



Co-op Employers

Students worked at 346+ unique companies in total. Looks like we did OK.

20% of students chose not to respond to this question, possibly to avoid being identified from their LinkedIn profiles. As a result, some employers are not represented.

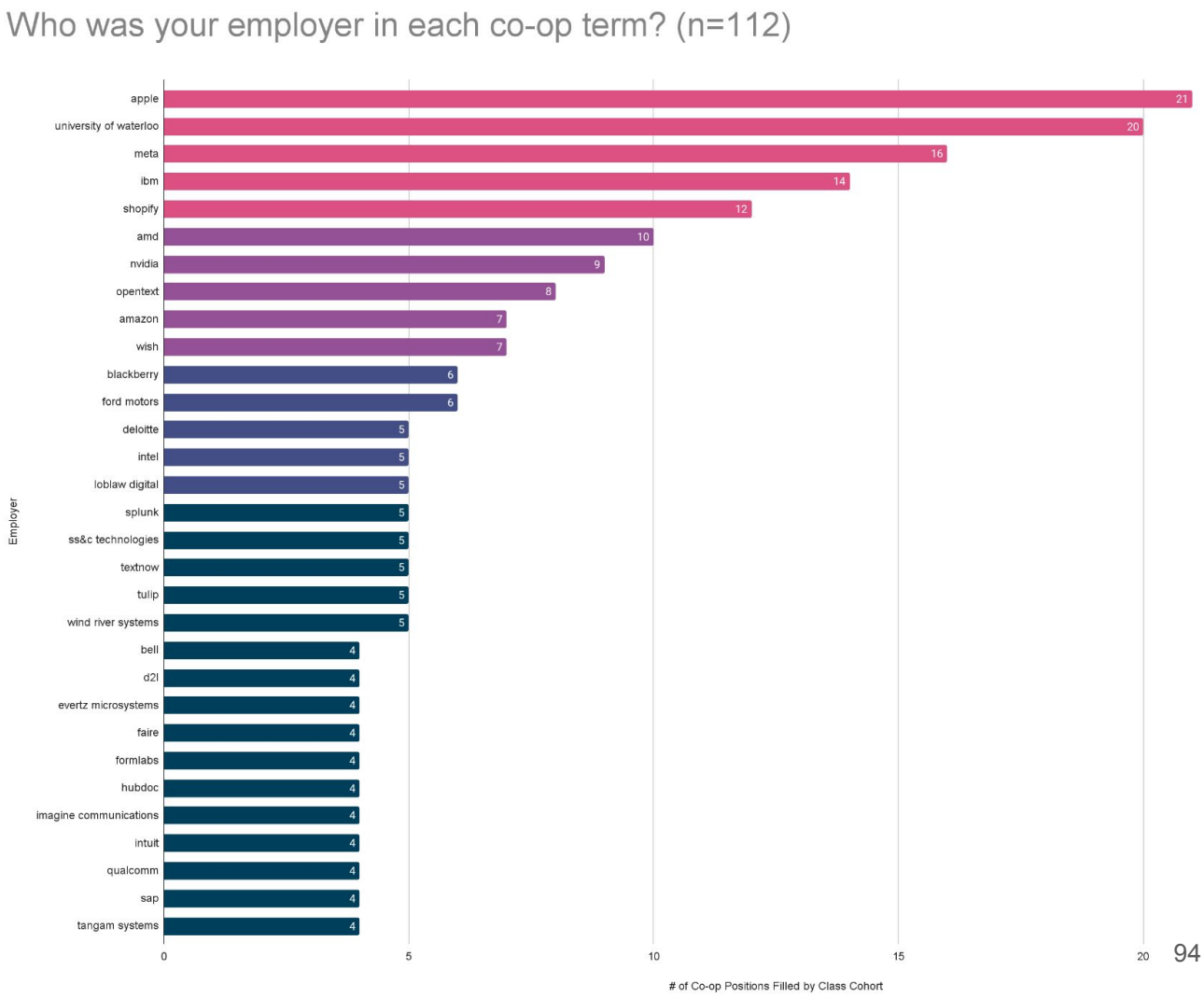
Who was your employer in each co-op term? (n=112)

apple
meta
shopify
amd
ibm
amazon
nvidia
opentext
wish
splunk
deloitte
intel
hubdoc
tangam systems
evertz microsystems
textnow
tulip
wind river systems
formlabs
ford motors
loblaw digital
ss&c technologies
blackberry
snowflake
qualcomm
fairventures
tophatter
arctic wolf
sap.
ciena
rbc
mcap
d2l
christie digital
uber atg
geo semiconductor
wonolo
agilicus incorporated
intuit
zemind games
lifion by adp
marvell
extreme networks
ford motor company
scotiabank
thescore
miovision
titanium agency
environment and climate change
connected
tesla
faire
interac
sidefx
autodesk
ubisoft
sibros
veeva systems
alertdriving
finastra
escrypt
bmo
lcbo
enlighted
oracle
trexo robotics
matician
north
ultimate software
airtime
wayfair
coursera
ontario power generation
government
google
rich media
infinera
boss insights
covid killed my coop
defense research and developme
defence research and developme
independent electricity system
information builders
interaptix
motorola solutions
monogram
human capital
conrad bets program
cloudleaf
kpmg
entrpy
forcen inc
crosstx
maple leaf foods
2by2 strategies
coursera incorporated
martello technologies
darkvision technologies inc
ka imaging
acs athletics
forethought ai
globality
dye and durham
canadian tire
bonfire
blackberry
mitel
bloomberg
datadog
majik systems
swift medical
cerebras
fibos inc
meggitt
irris power
adhawk
canarie
bungalow
jsi telecom
home depot
jabil
allianz
oanda
mappedin
intermedia labs
auvik network
sourced group
autonomic
flipp
ellisdon construction
mckinsey consulting
manulife
klipfolio
aeryon labs inc. (now teledyne
applyboard
behaviour interactive
marsh & mclennan companies inc
clearpath
untether ai
lending loop
thomson reuters
imagine communications
climax media
medly labs
citadel
meter
kaleidescape
bluerover
cisco
coinbase
inflight
cgi
huawei
bell
darwinai
cepton
hitplay
wattpad
square
health canada
stars technologies
squarepoint capital
minted
brex
home trust company
clearbridge mobile
lime
doordash
mcgill university
harled inc
finovertech
eclipse automation
ing robotic aviation
marlena books
shaw communications
royal canadian air force
freshbooks
conrad school of business
square enix montreal
dejero
capital one
equitable bank
itg
bdo
#paid
economical insurance
securekey technologies
blue rover
nuvation
microsoft
intersect
meter parts
draperai
lumentum
kitchenmate
morningstar
jannatech technologies
genesys
ci technologies
derivative inc.
morneau shepell
national bank of canada
ghatteries
dragon agile
hyalto
ceridian
carta
gts
jewlr
ifds
allstream
sidefx
bets
agf
carrot
aws
dell
mlh
adp
alstom
citco
firbit
td
eventmobi
fibos inc
drvn intelligence
kaleidescape.
axsium group
method:crm
ka imaging
darkvision technologies inc
martello technologies
coursera incorporated
maple leaf foods
defence research and developme
independent electricity system
mosaic sales solutions
kinaxis
forcen inc
fibos
crosstx
2by2 strategies
platform9
titanium agency
infinera
rich media
lifion by adp by adp
geotab
dealer fx
acerta
government
google
miovision
thescore
scotiabank
coursera
ontario power generation
environment and climate change
connected
tesla
faire
interac
sidefx
autodesk
ubisoft
sibros
veeva systems
alertdriving
finastra
escrypt
bmo
lcbo
enlighted
oracle
trexo robotics
matician
north
ultimate software
airtime
wayfair
splunk
deloitte
hubdoc
intel
tangam systems
evertz microsystems
textnow
tulip
wind river systems
formlabs
ford motors
loblaw digital
ss&c technologies
blackberry
snowflake
qualcomm
fairventures
tophatter
arctic wolf
sap.
ciena
rbc
mcap
d2l
christie digital
uber atg
geo semiconductor
wonolo
agilicus incorporated
intuit
zemind games
lifion by adp
marvell
extreme networks
ford motor company
scotiabank
thescore
miovision
titanium agency

Co-op Employers

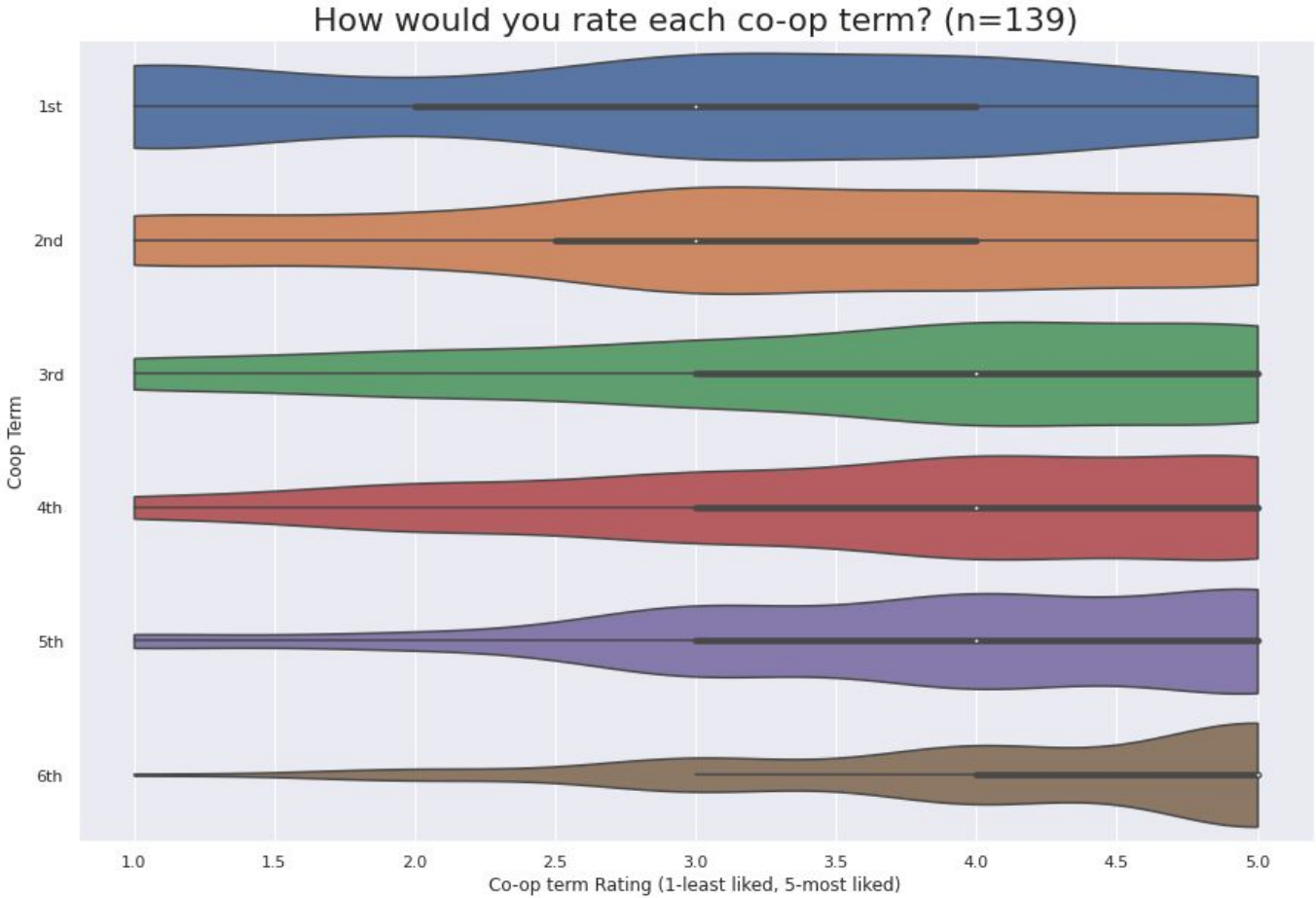
The top 5 employers who hired the most co-ops from this cohort are:
1. Apple
2. University of Waterloo
3. Meta
4. IBM
5. Shopify

Employers who filled less than 4 co-op positions were removed for legibility.



Co-op Ratings by Students

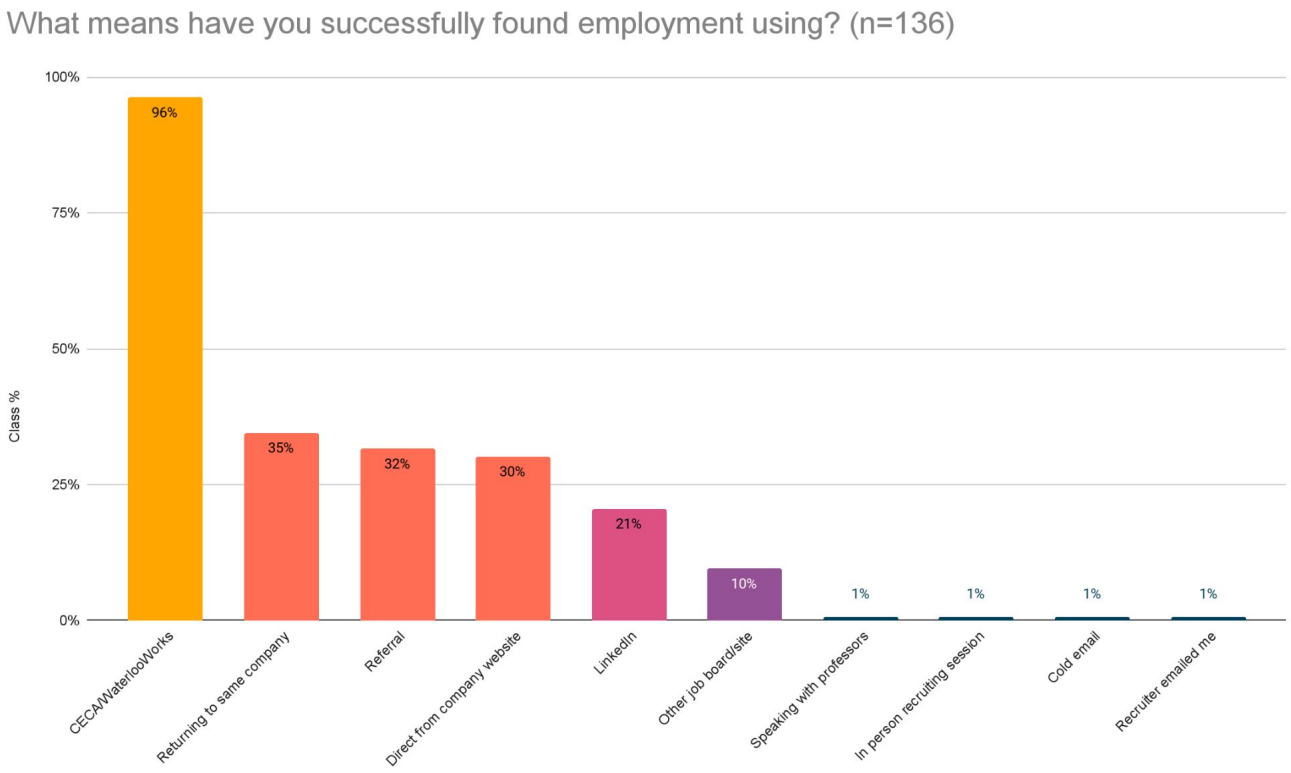
Students generally liked their coops more over time, as shown by the median increasing there being very few “1” ratings by the 5th and 6th coop terms.



Successful Means to Find Employment

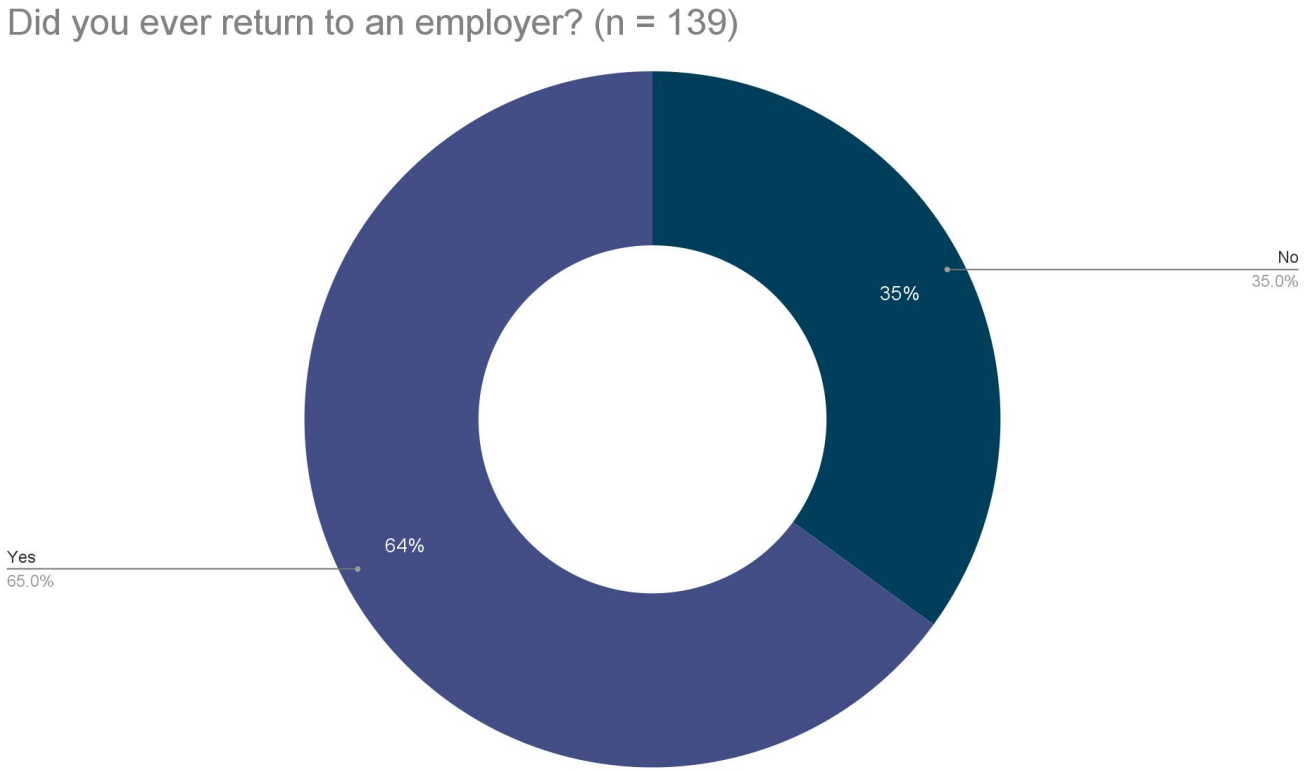
Students found most success securing their co-ops using CECA/WaterlooWorks.

The least successful methods were: Speaking with professors, In person recruiting session, cold email, and recruiter emails.



Returned to an Employer?

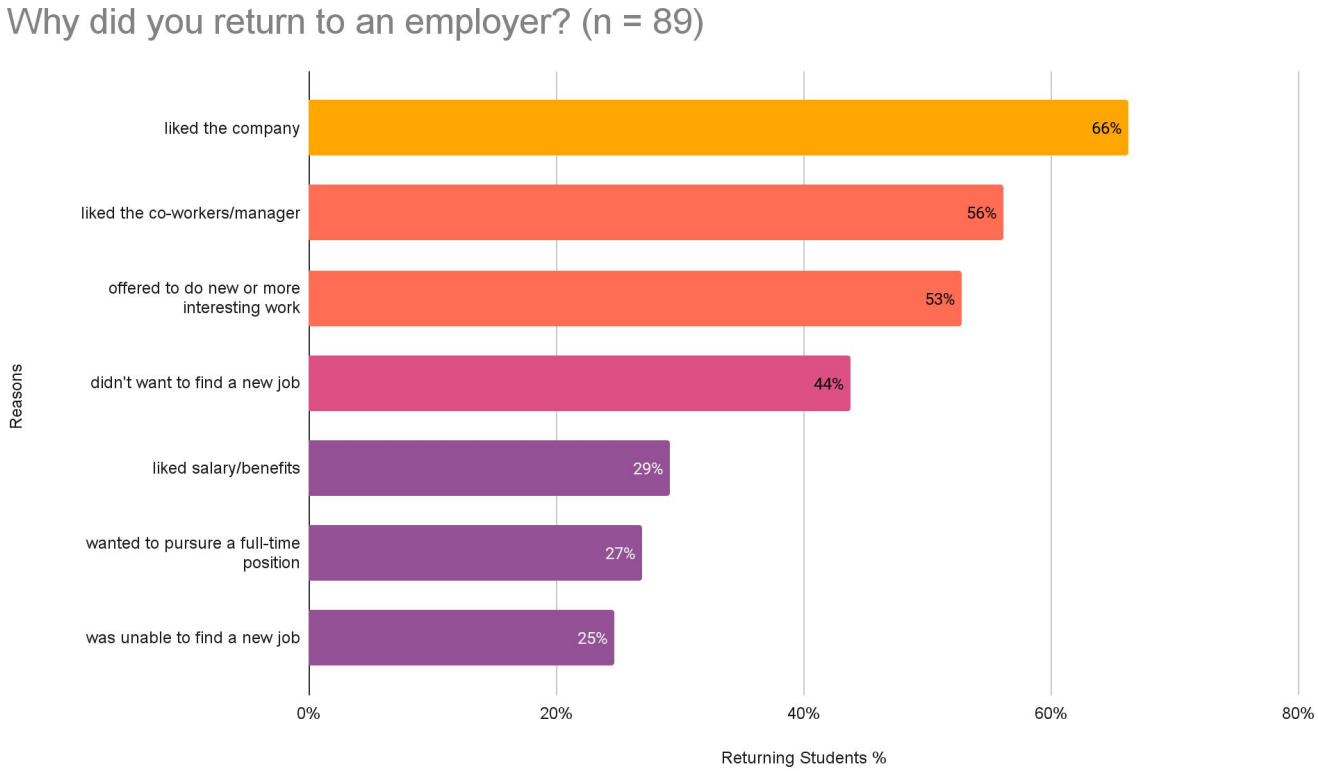
Most students returned to a previous employer at some point, likely due to COVID-19 which reduced the number of employers hiring co-op students.



Reasons for Returning?

Of the students who did return to a previous employer, thankfully a majority of them liked the company, manager, and the new/interesting work.

Unfortunately, 25% of these students returned because they were unable to find a new job.

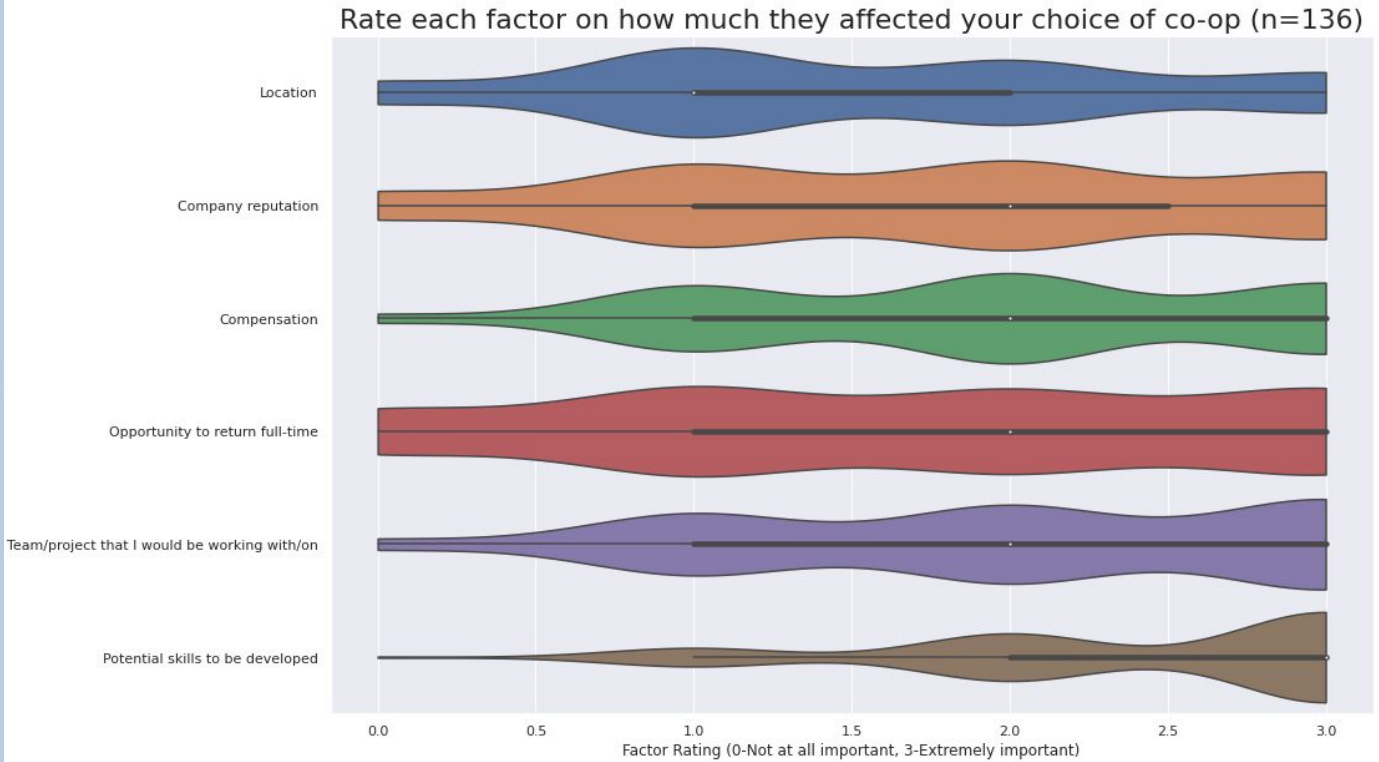


Factors Affecting Co-op Choice

Students usually prioritized Potential skills to be developed over all other factors.

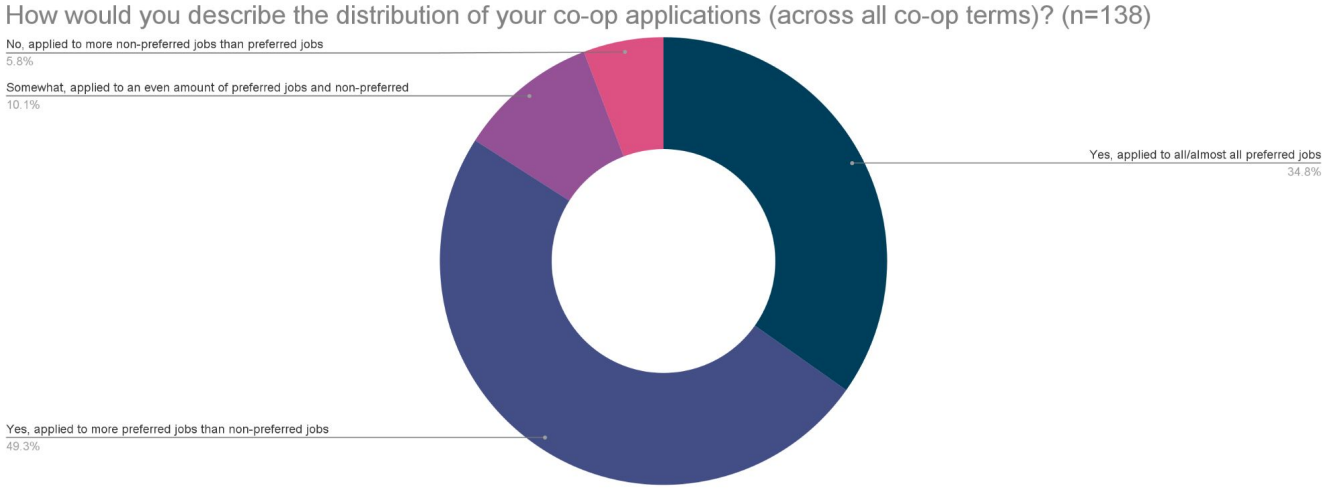
Students usually deprioritized Location over all other factors.

The 4 other factors were often equally “Very Important” (Rating of 4). Sounds like deciding between co-ops was hard 👀.



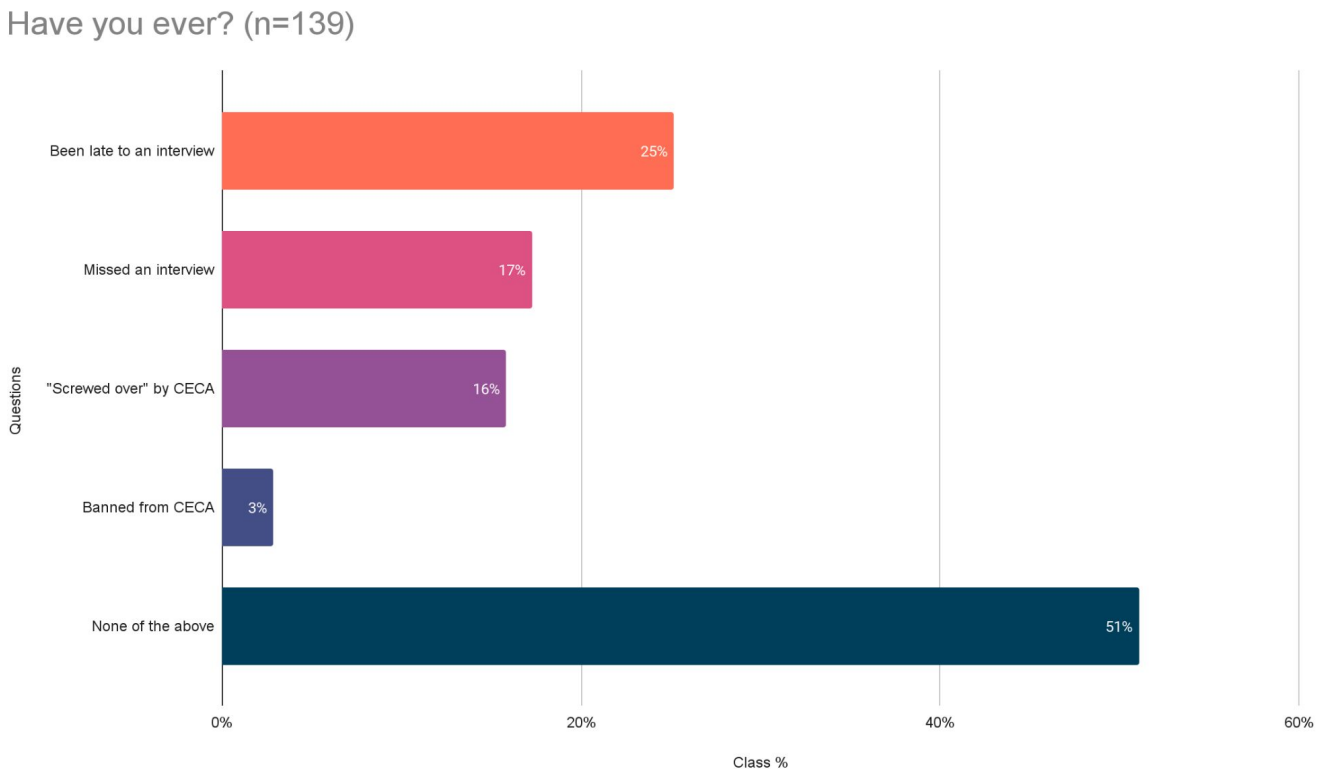
Distribution of Co-op Applications

The majority of students applied to more preferred jobs than non-preferred jobs or entirely preferred jobs.



Have you ever?

Thankfully, the majority of students survived CECA.



Future Plans

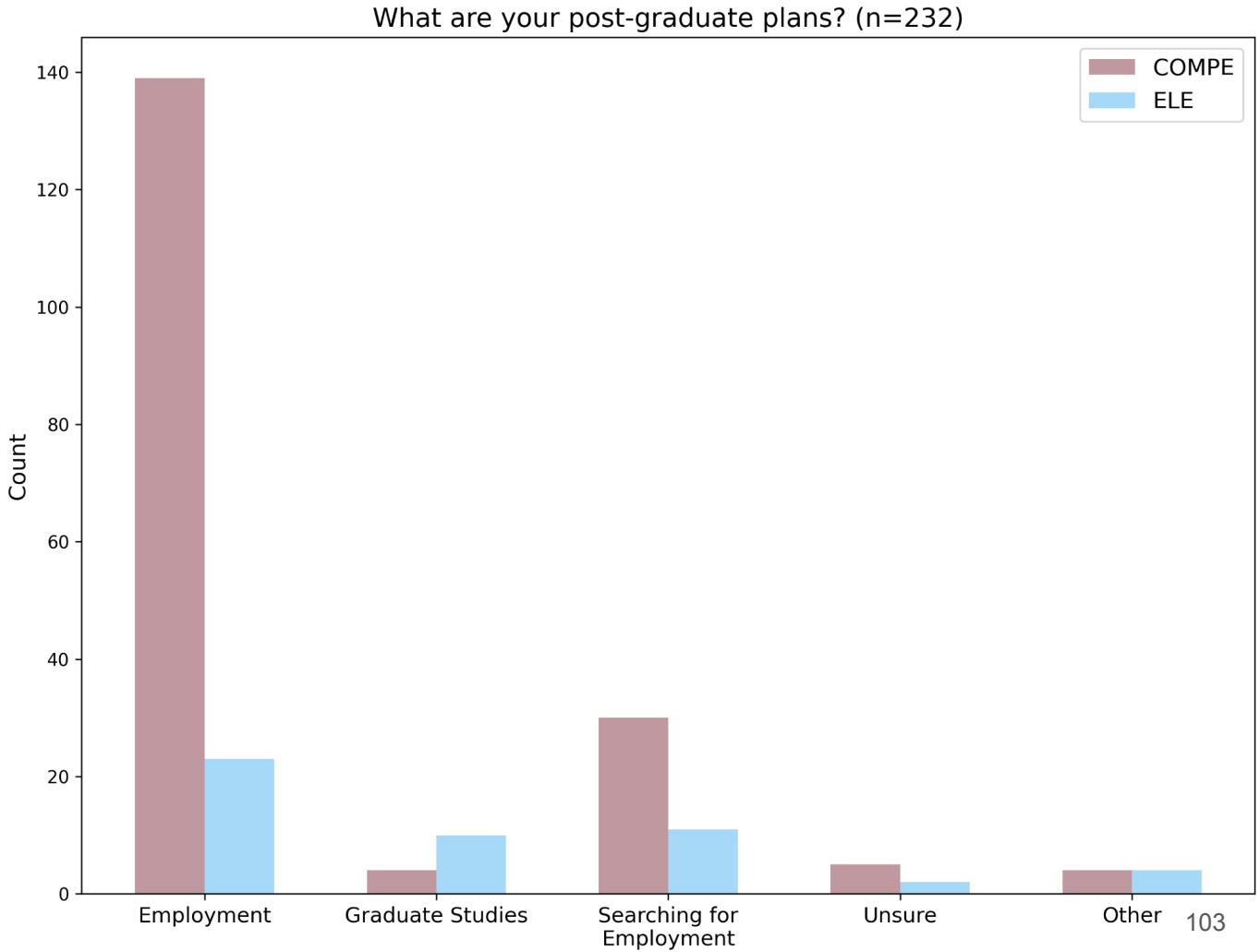
Next Steps

The vast majority of students are planning on pursuing employment.

A few are pursuing further studies.

This is probably because employment pays well.

Data courtesy of Derek Wright.

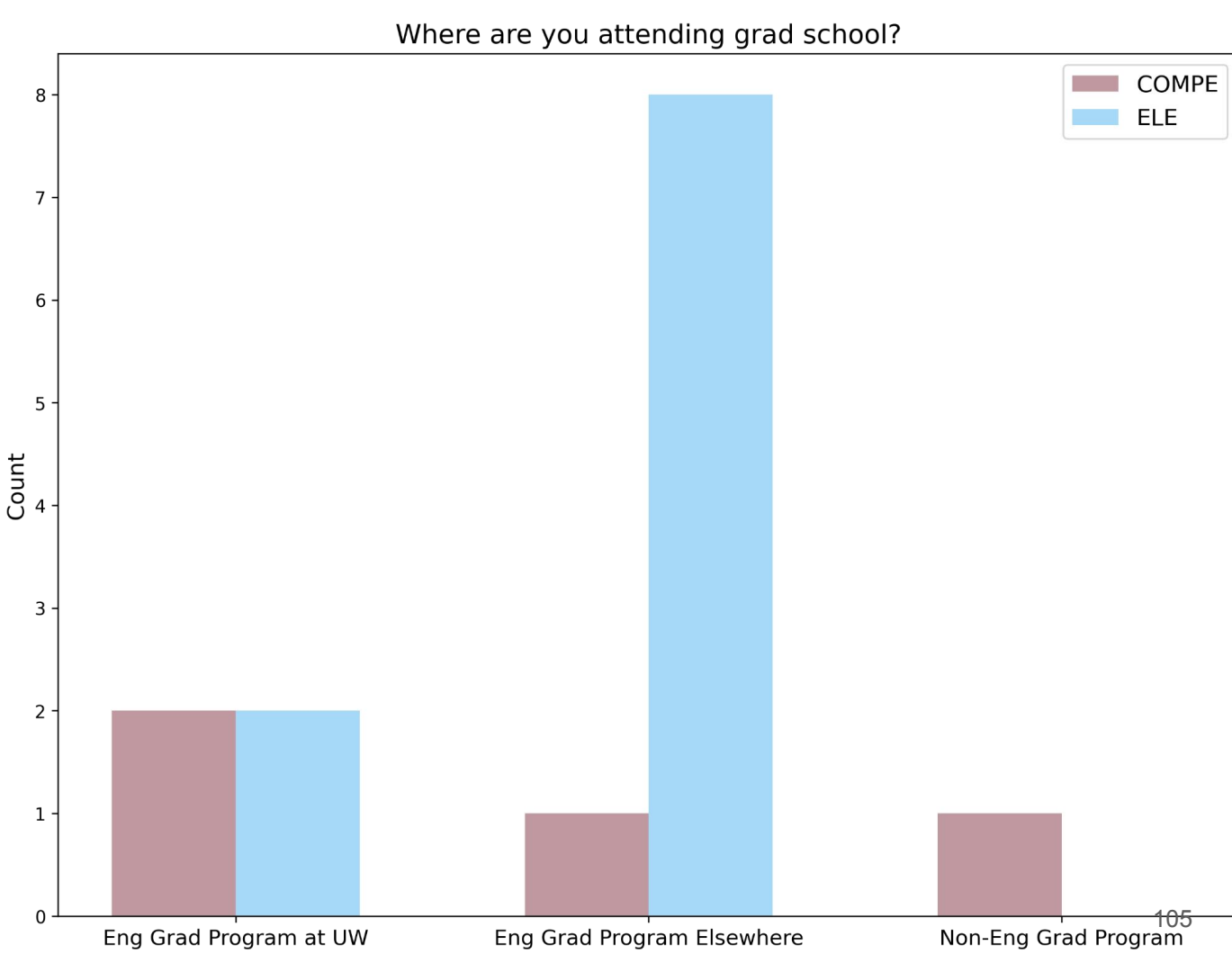


Full-Time Employers

Further Studies

Way more EEs are pursuing further studies than CEs.

Data courtesy of Derek Wright.

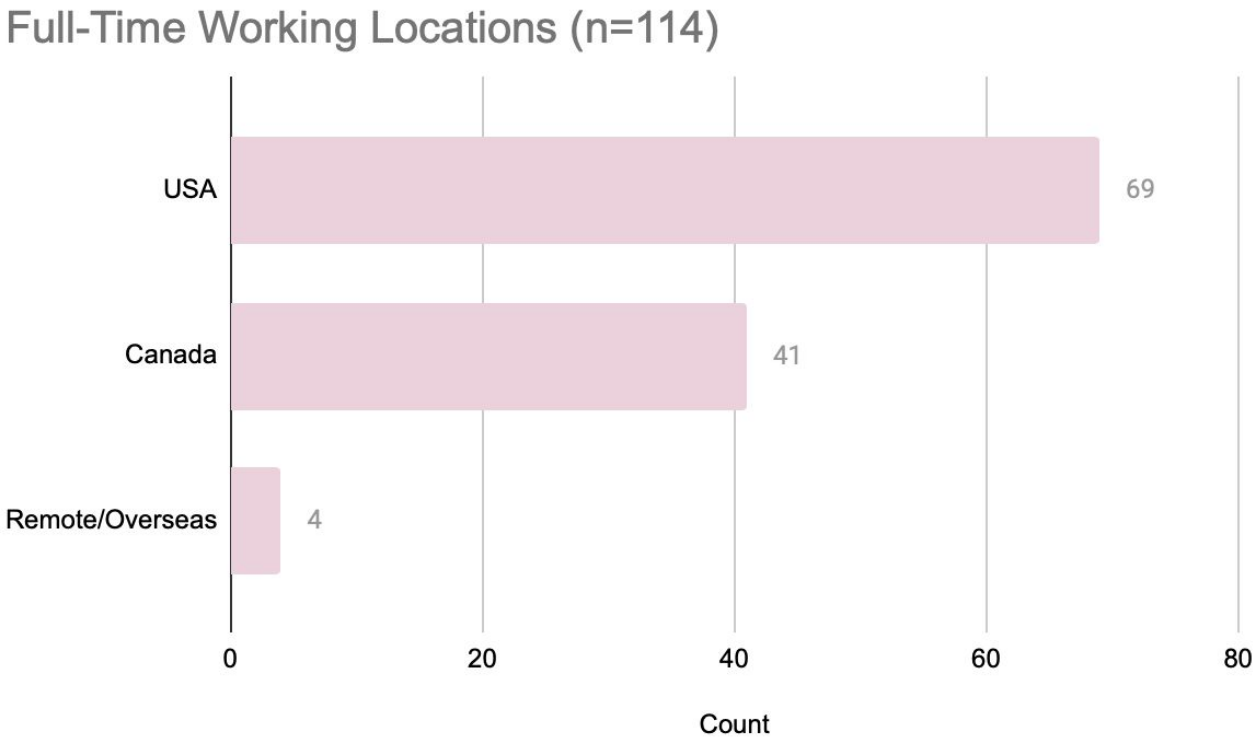


Institutions for Further Studies

Full Time Working Locations

The majority of graduates are moving to the States.

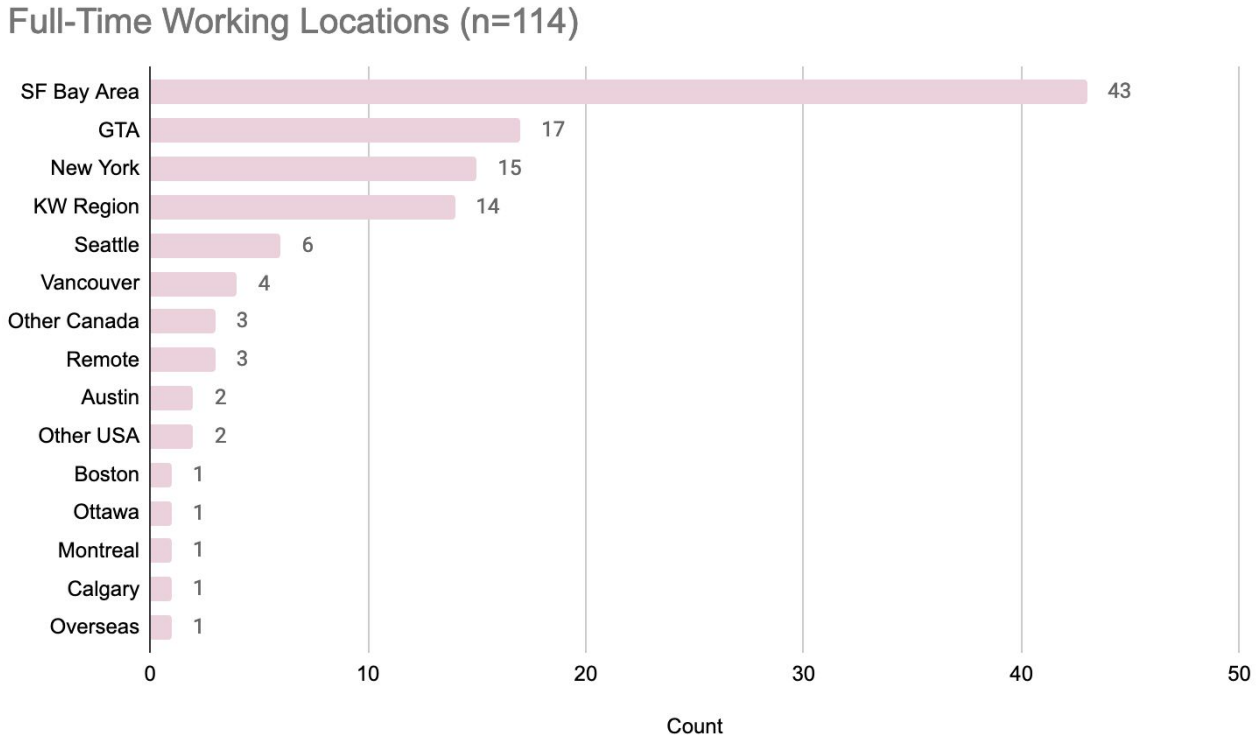
The brain drain is real, and possibly driven based off financial incentives.



Full Time Working Locations

Breaking down the previous slide in greater detail, most respondents moving to the US are Bay Area bound.

There's also a decent amount of people staying in the GTA and KW region.

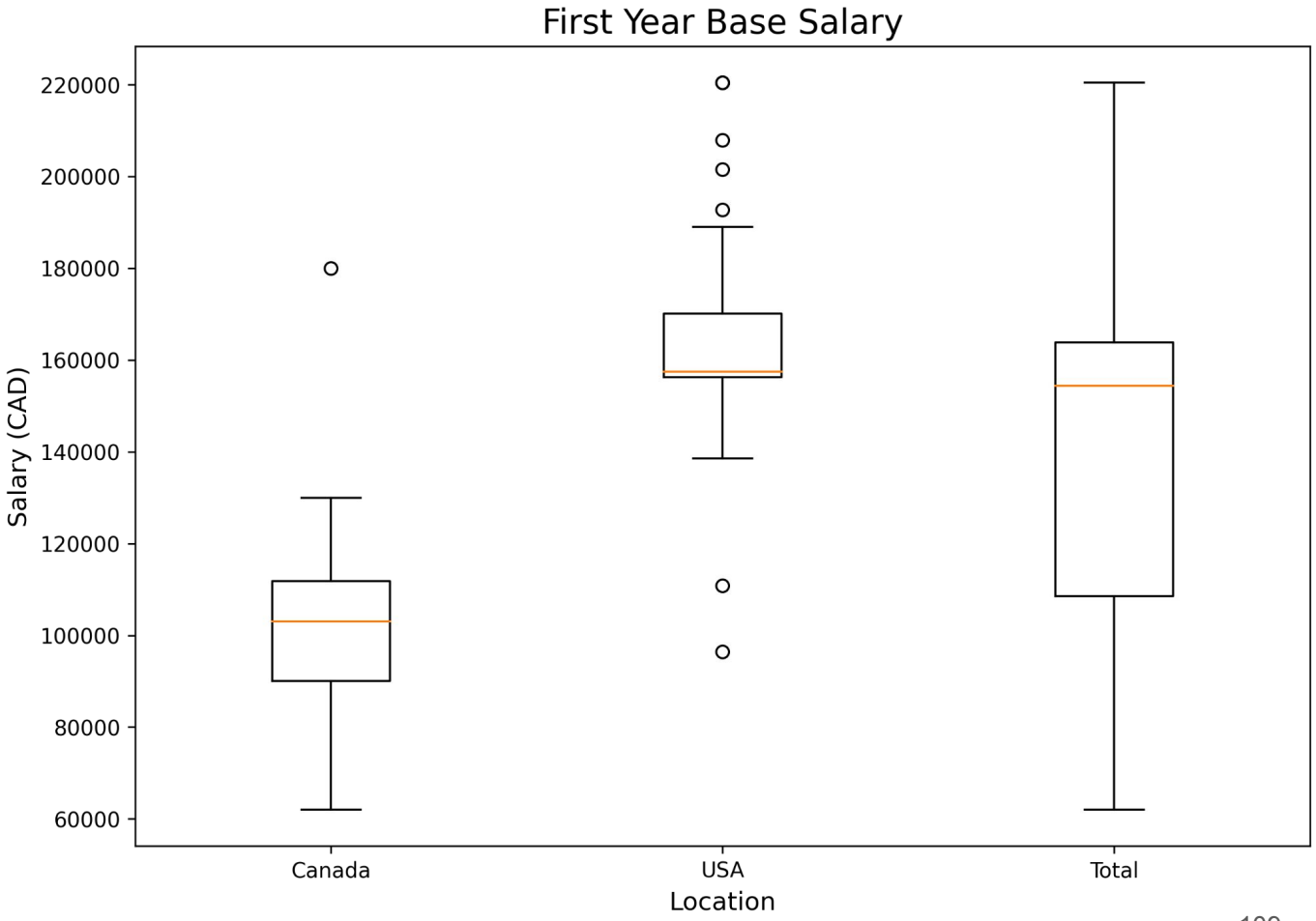


First Year Base Salary

Median first year base salaries (CAD) are:

- Canada: $103k
- USA: $157.5k ($125k USD)

Note: an exchange rate of $1 USD = $1.26 CAD was used. This is lower than prior years, so US salaries may seem lower than previous years

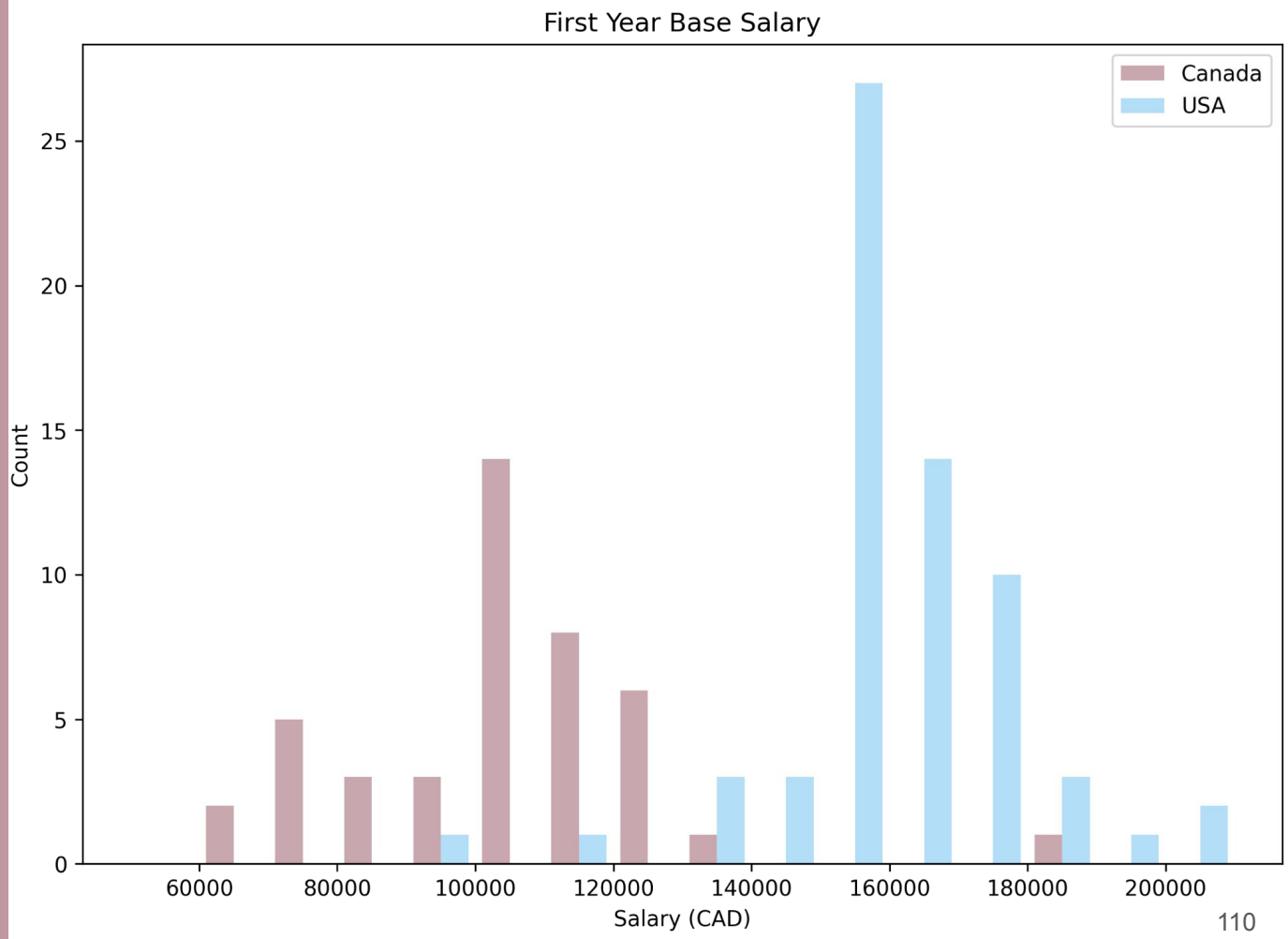


First Year Base Salary Distribution

Mean first year base salaries (CAD) are:

- Canada: $103k
- USA: $163k ($129k USD)

Note: an exchange rate of $1 USD = $1.26 CAD was used. This reflects a few massive outliers in the US salaries.



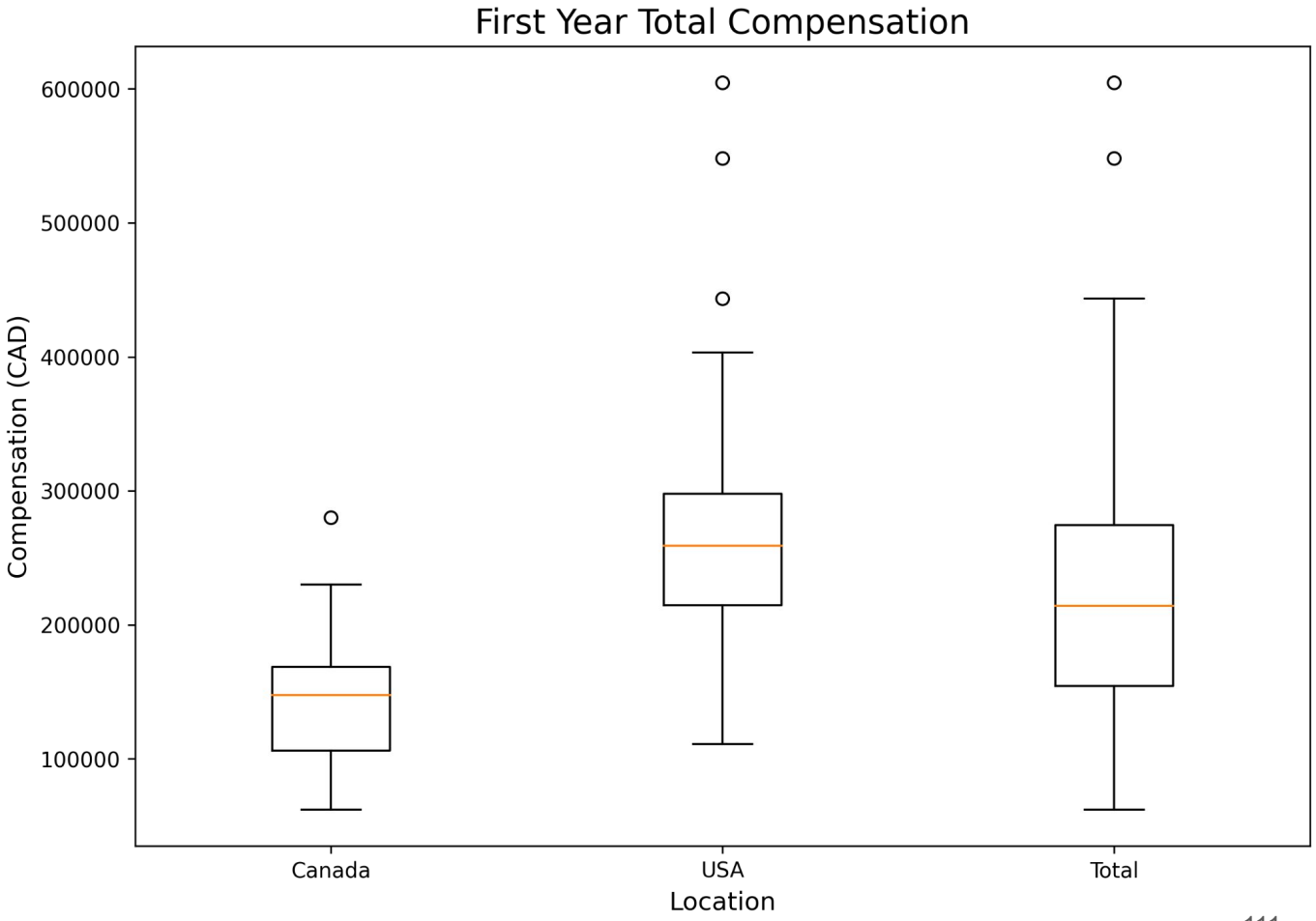
First Year Total Compensation

Median first year total compensations (CAD) are:

- Canada: $147.5k [+44.5k over base]
- USA: $258.9k ($205.5k USD) [95.9k ($75.11k USD) over base]

This is up $34.3k (30.3%) from last year's profile in Canada, and $30k in the US13%)

Note: an exchange rate of $1 USD = $1.26 CAD was used

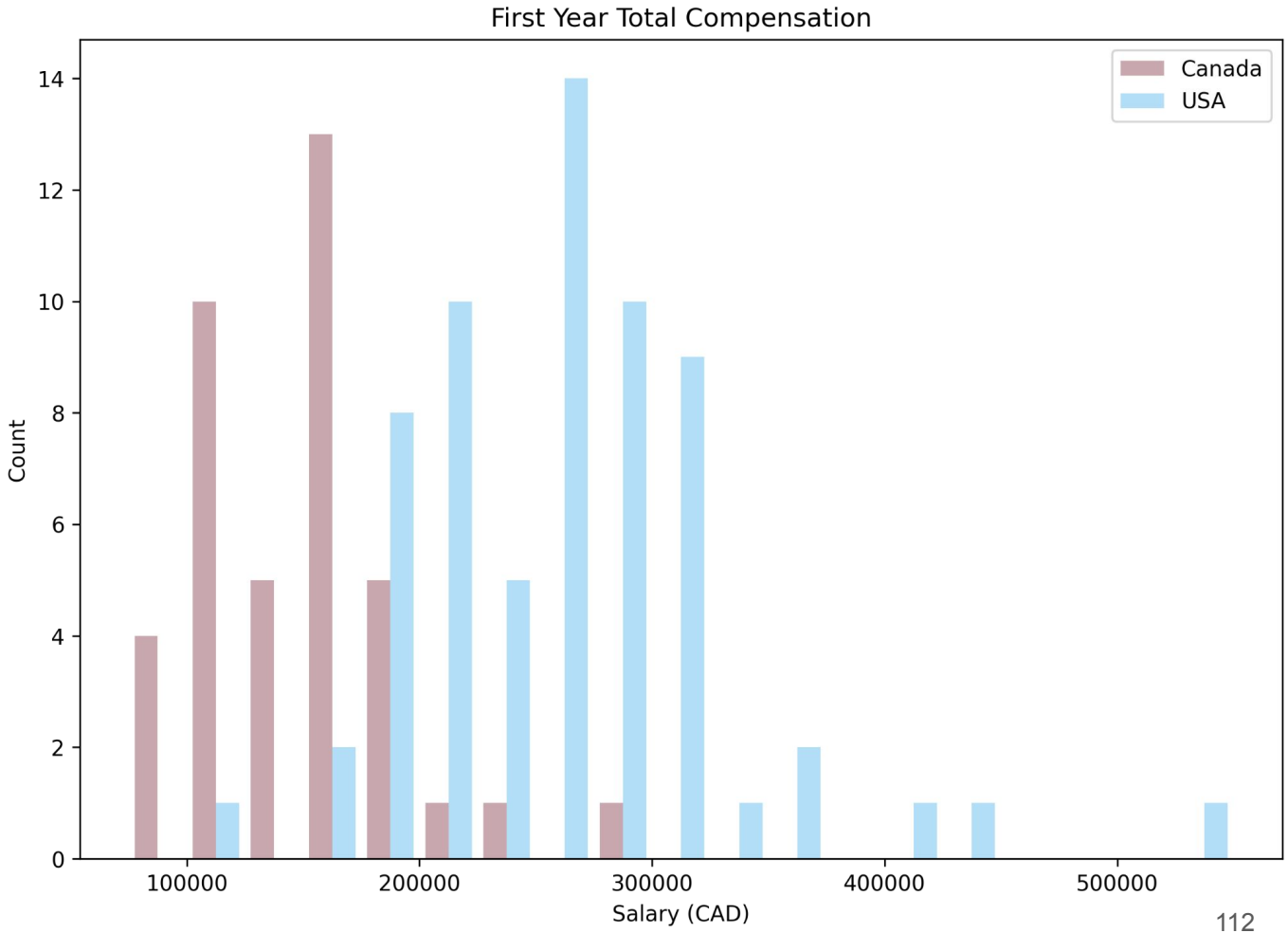


First Year Total Compensation Distribution

Mean first year total comp (CAD) are:

- Canada: $141.5k
- USA: $267.9k ($212.6k USD)

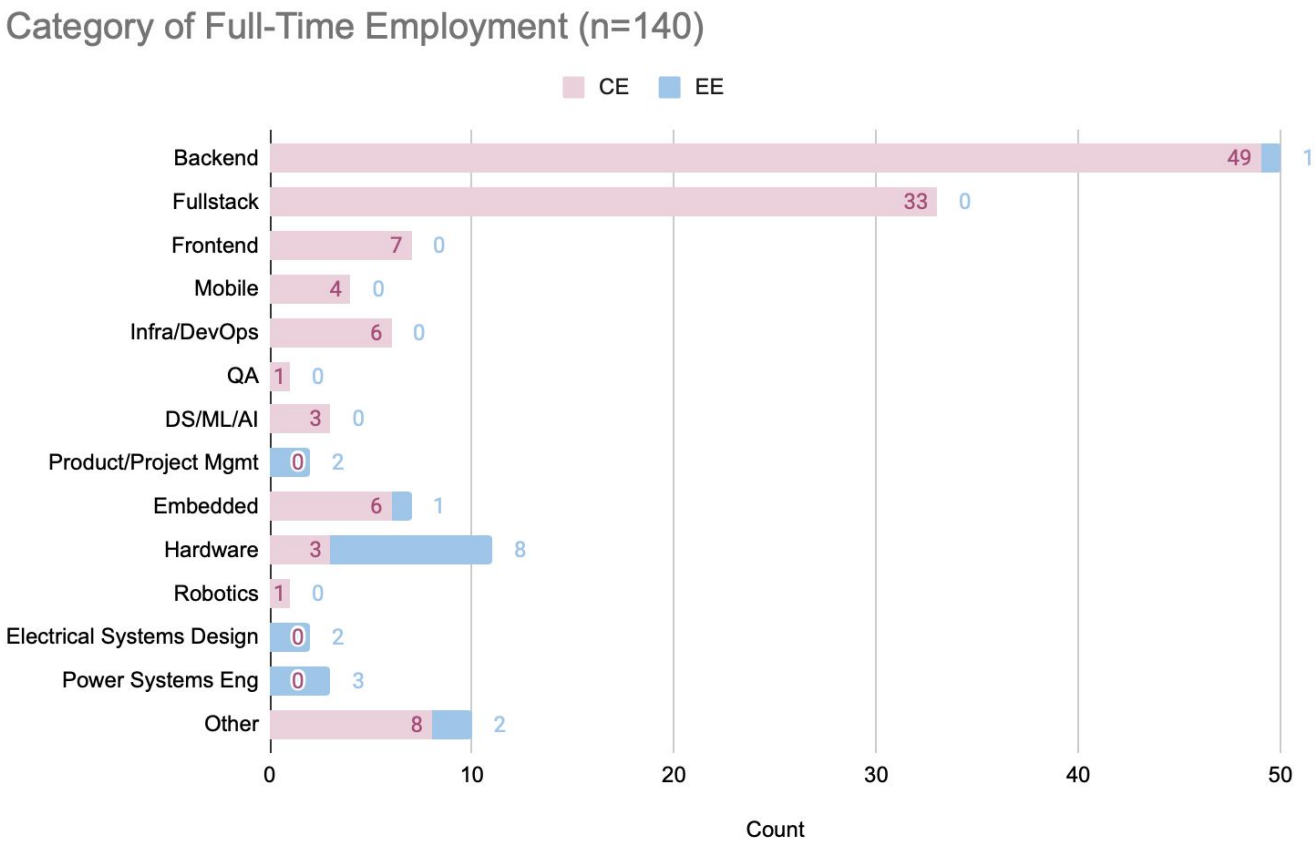
Note: an exchange rate of $1 USD = $1.26 CAD was used



Category of Full-Time Employment

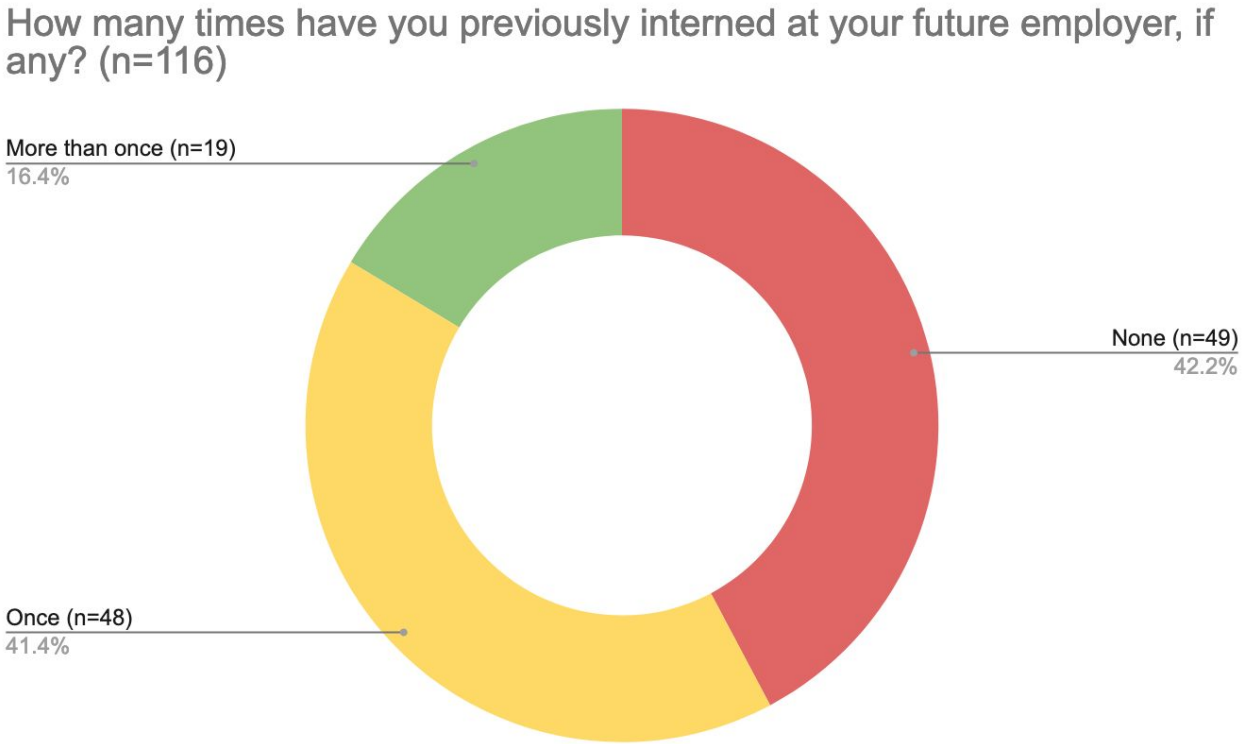
Lots of backend development, with a surprising amount of hardware.

Data courtesy of Derek Wright.



Co-op & Job Hunting

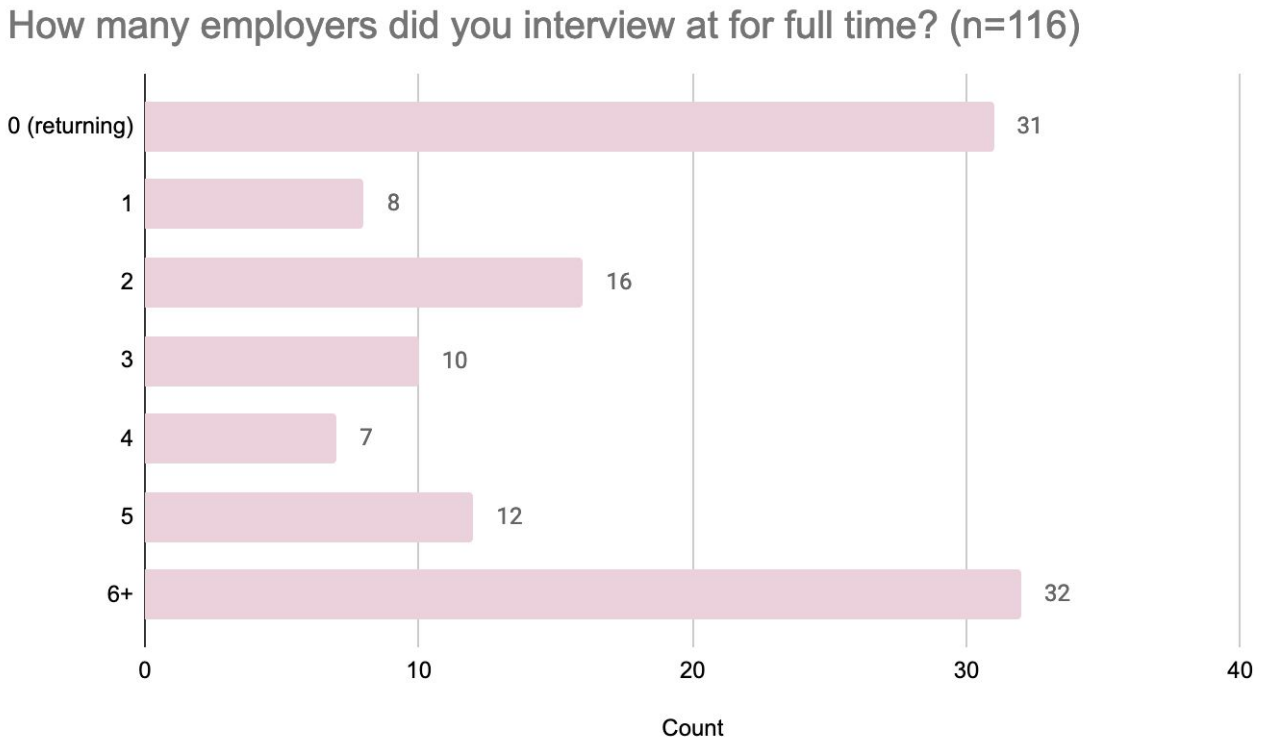
More than half of respondents are returning to a previous co-op employer for full-time work



The Job Hunt

Most respondents either returned to an old employer, or interviewed at 6+ companies!

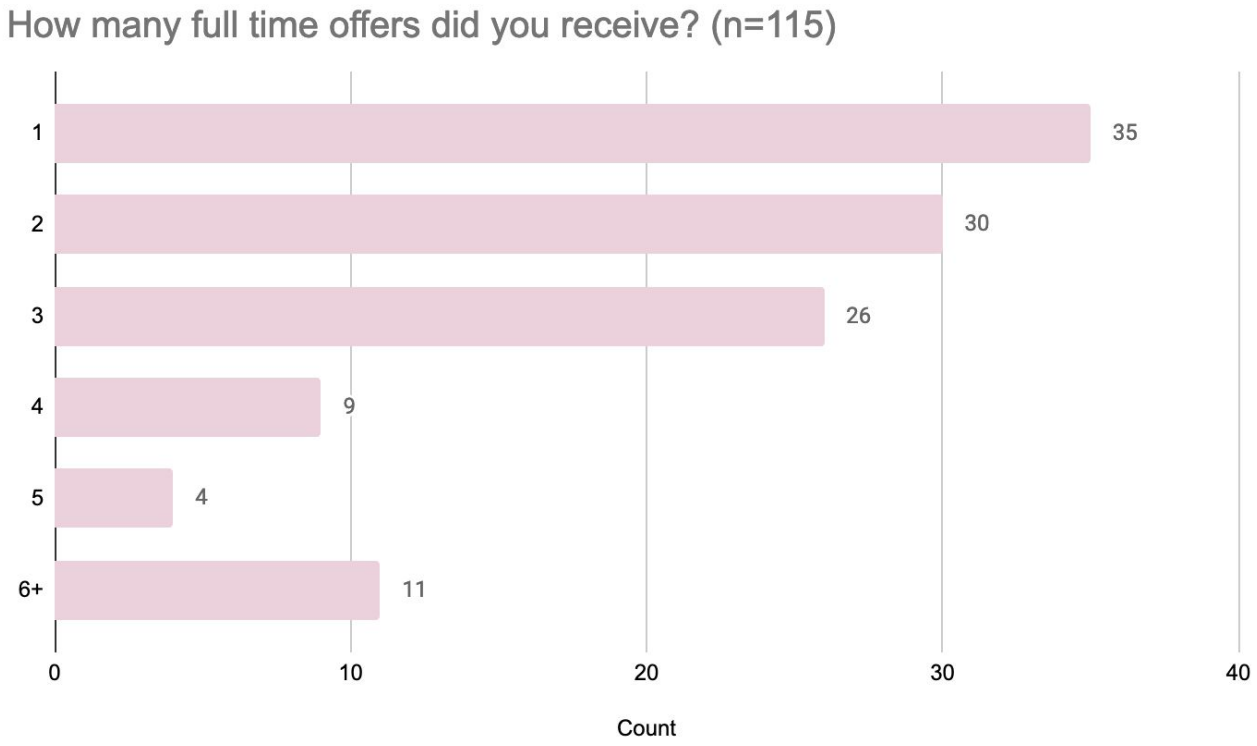
Guess the ol' Waterlooworks grind has built us a little different.



The Job Hunt

Who's the 11 people balling with >6 offers?

Since 31 people are returning to previous employers, most people with 1 offer likely didn't interview.

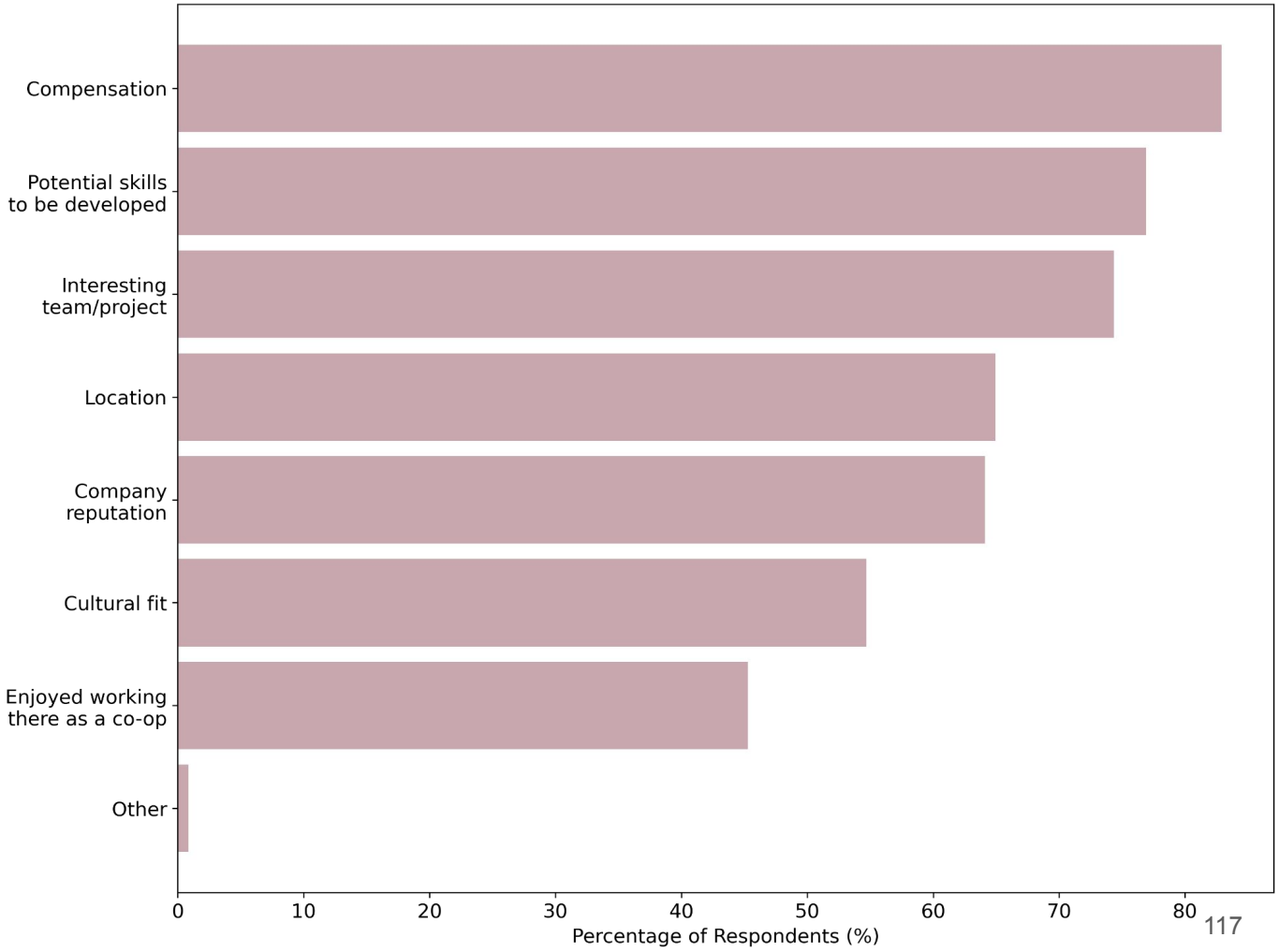


Employment Considerations

What factors influenced your choice for full-time employment? (n=117)

Unsurprisingly, over 80% stated compensation as a key factor.

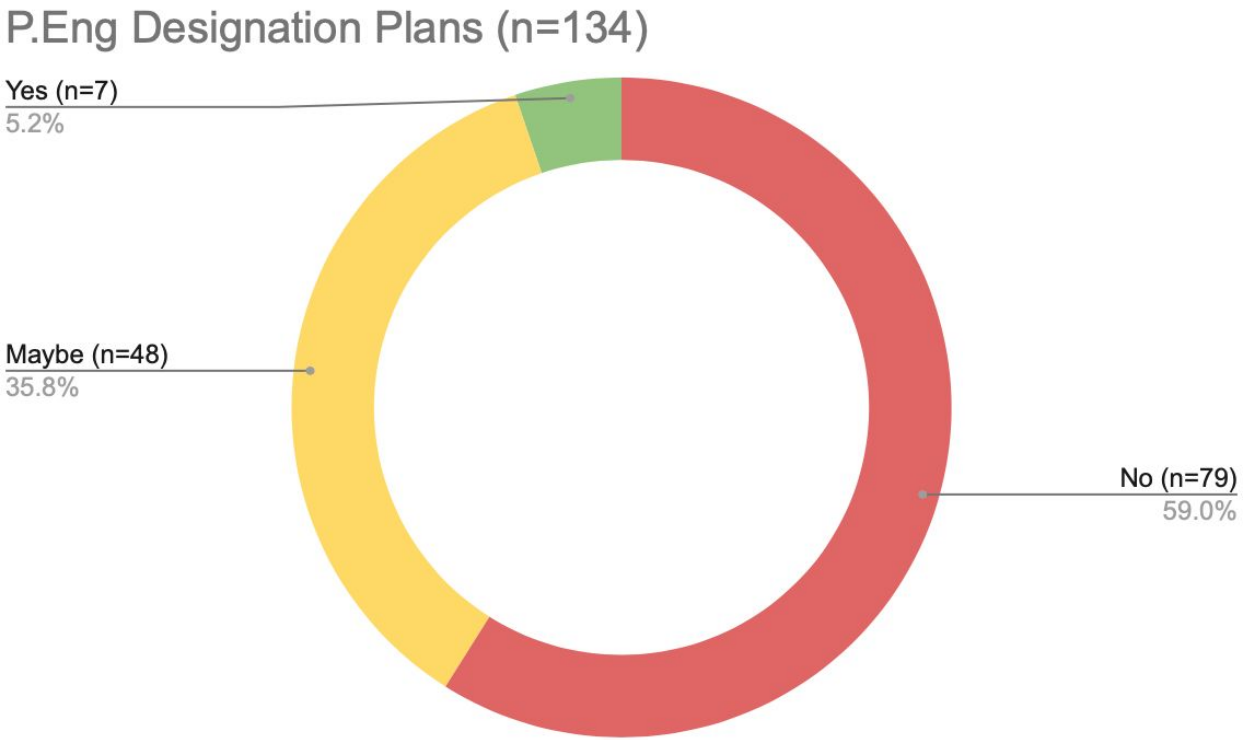
Multiple selections were permitted.



Professional Engineering Designation Plans

The majority (59%) do not plan on pursuing their Professional Engineering (P.Eng) designation in the future.

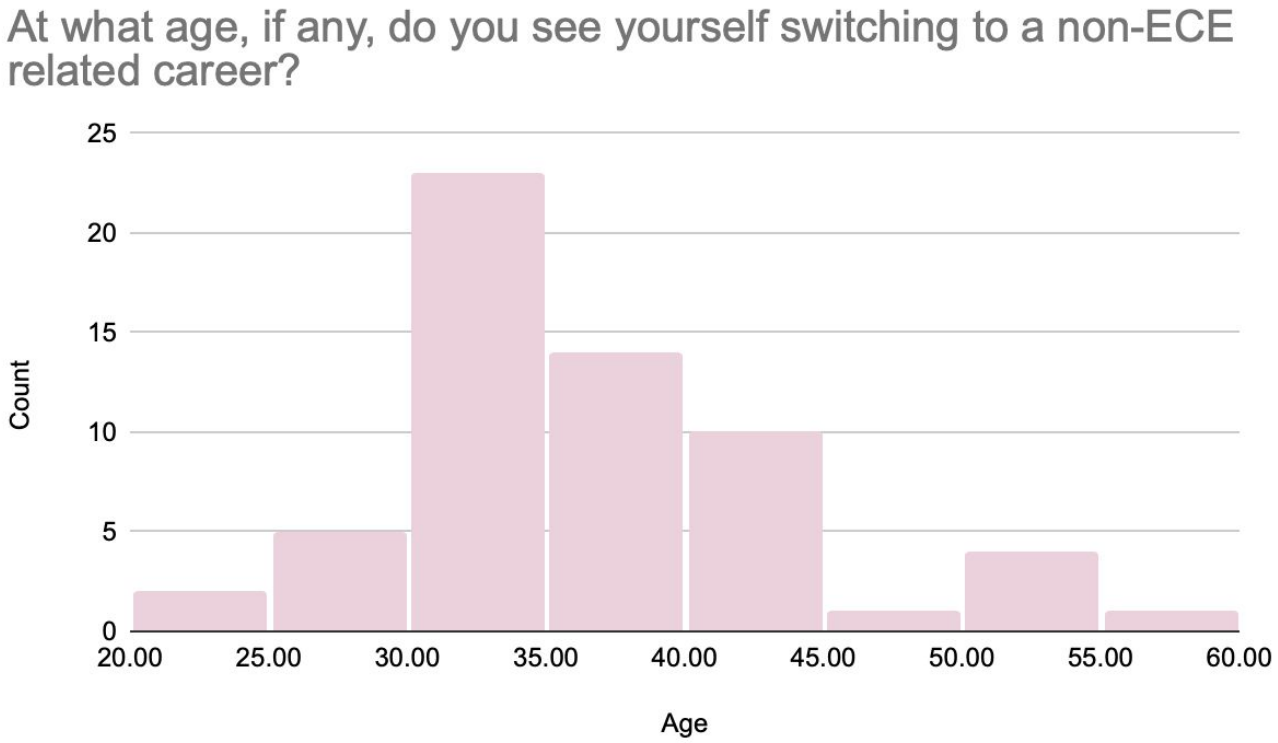
35.8% might pursue the P.Eng



Career Moves

A decent number of people plan to switch to a non-ECE career

Most plan on switching between the ages of 30 and 40.



If not ECE, then...?

Most plan on switching to management based careers.

Finance/Business is another popular alternative.

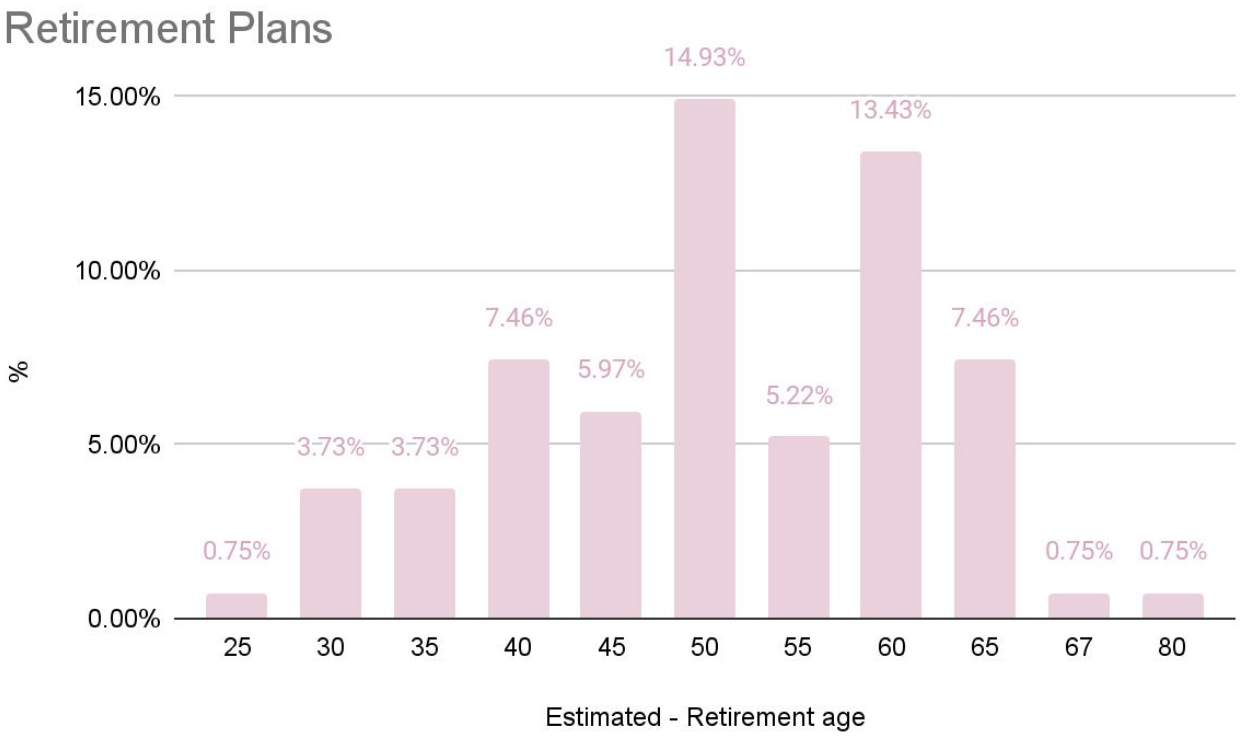
Retirement

The class was asked to answer with a retirement age, or leave empty if they didn't plan on retiring

The blank response was also the default if the question was skipped

35.82% of the class did not answer this question

Most plan on retiring in their 50s and 60s.

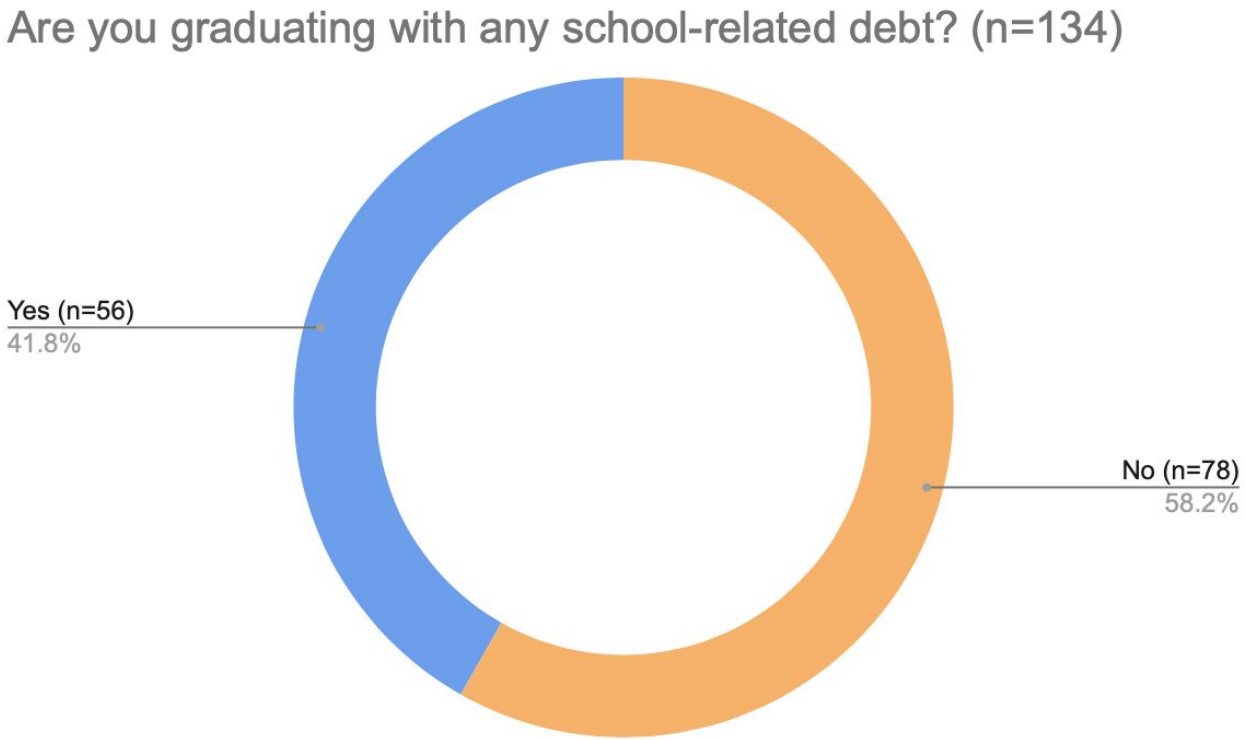


Reflections on Undergrad

Paying for School

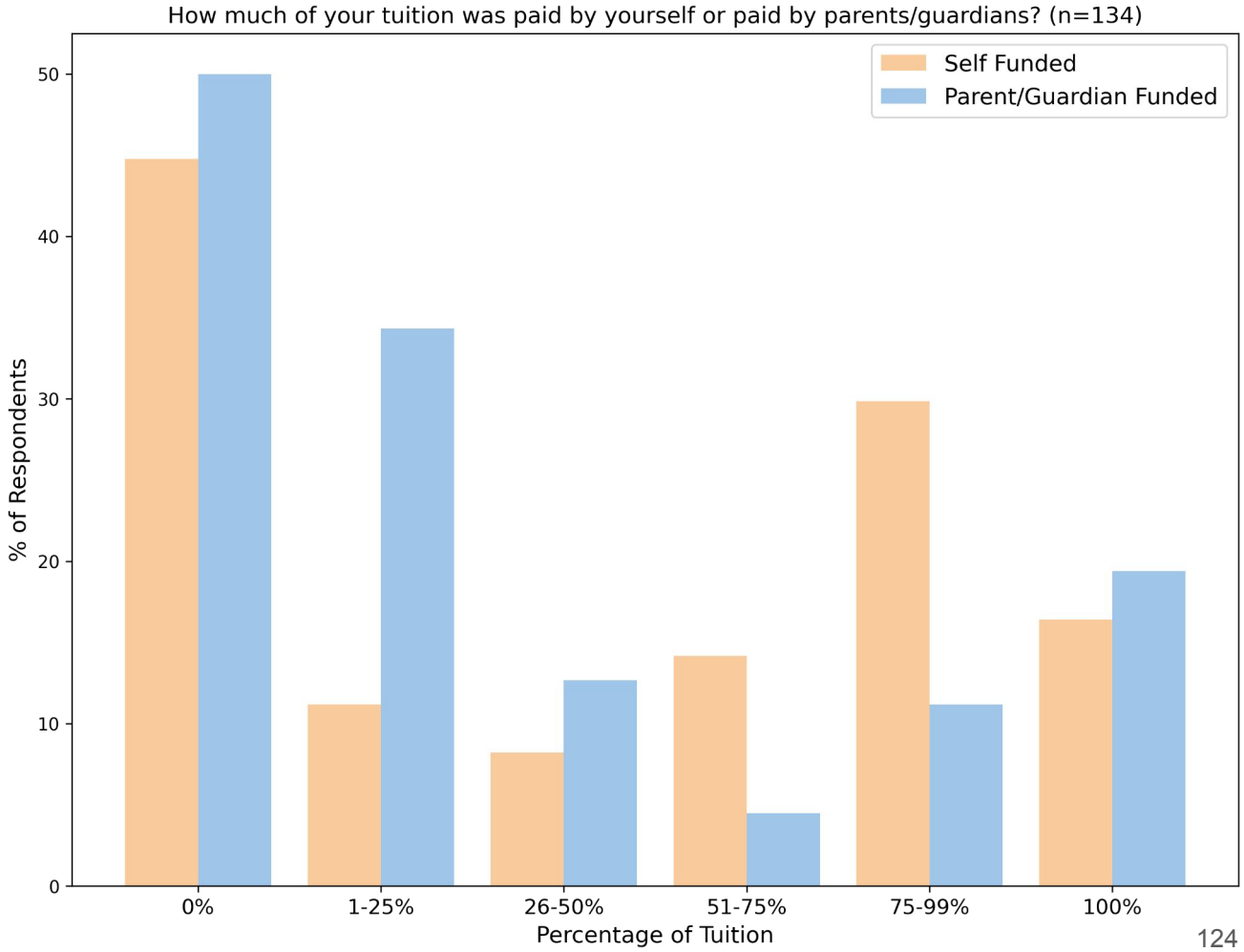
The majority are graduating debt-free!

This is probably thanks to co-op earnings that help pay for a significant portion of tuition.



Paying for School 2

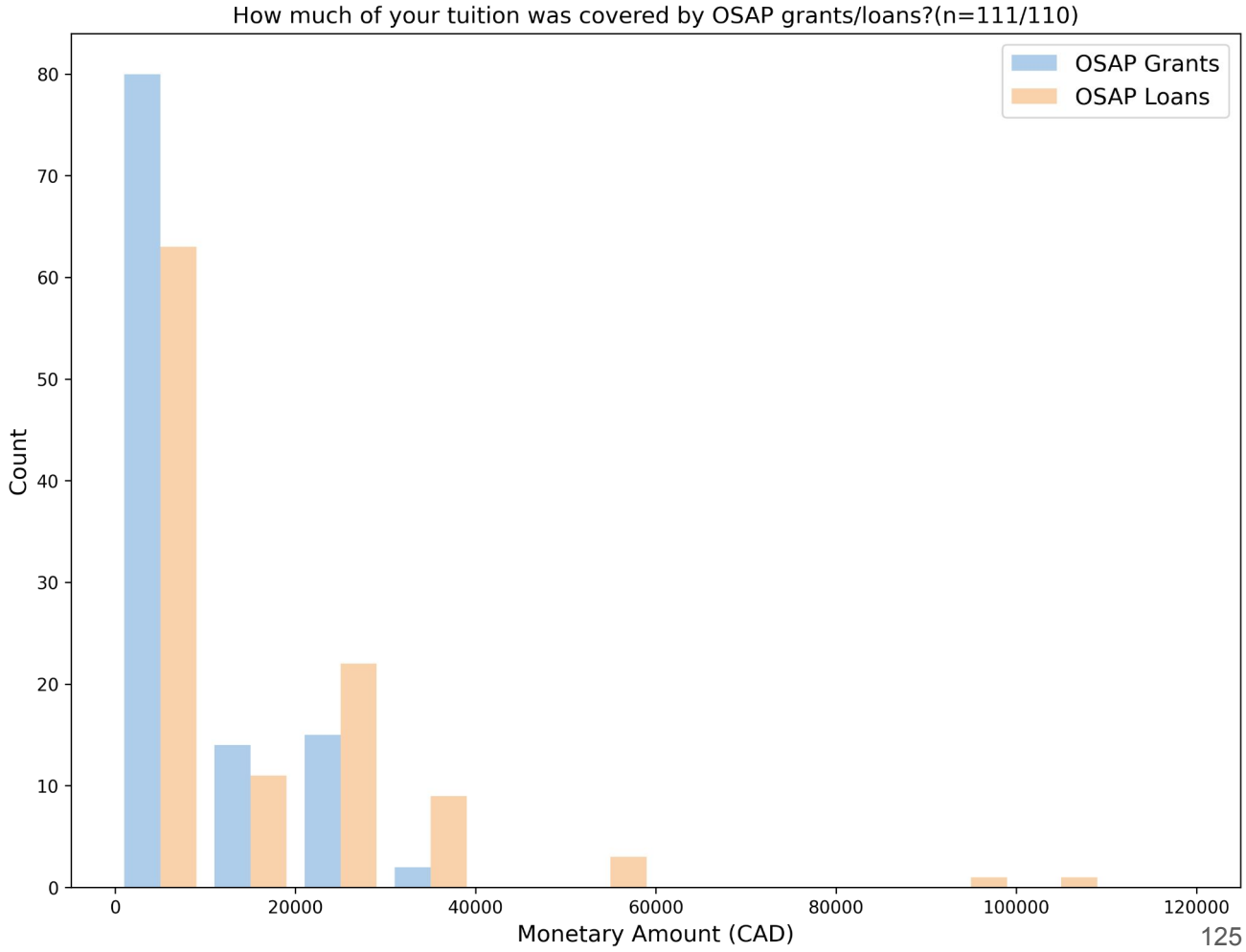
Parents/guardians mostly paid between 0% - 25% of our tuitions.



OSAP

Most people got very little OSAP.

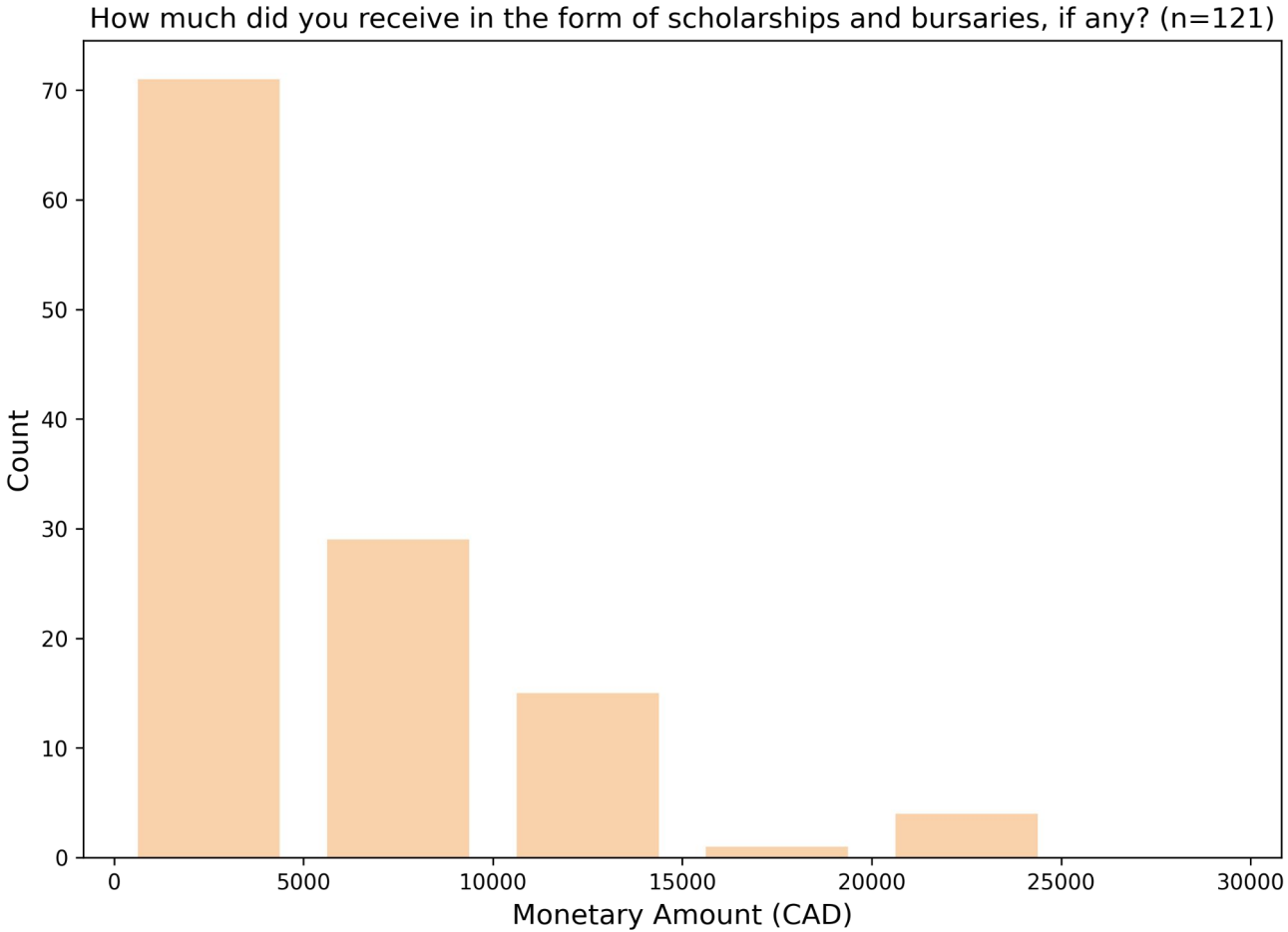
Strong independent class!



Scholarships

Most people got the entrance scholarship.

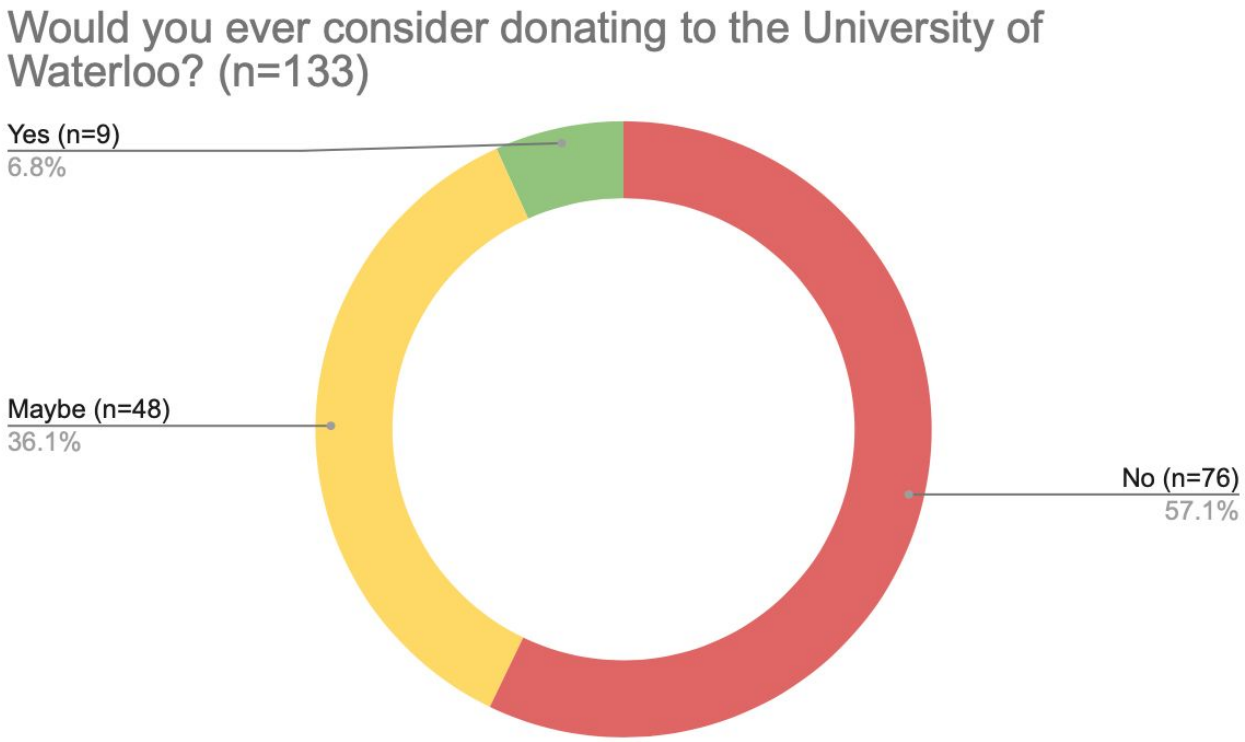
We have a Loran winner too, so not *everyone* did this profile



Didn’t we give UW enough money?

Clearly most of the class thought so - nearly 60% would **not** donate to UW in the future.

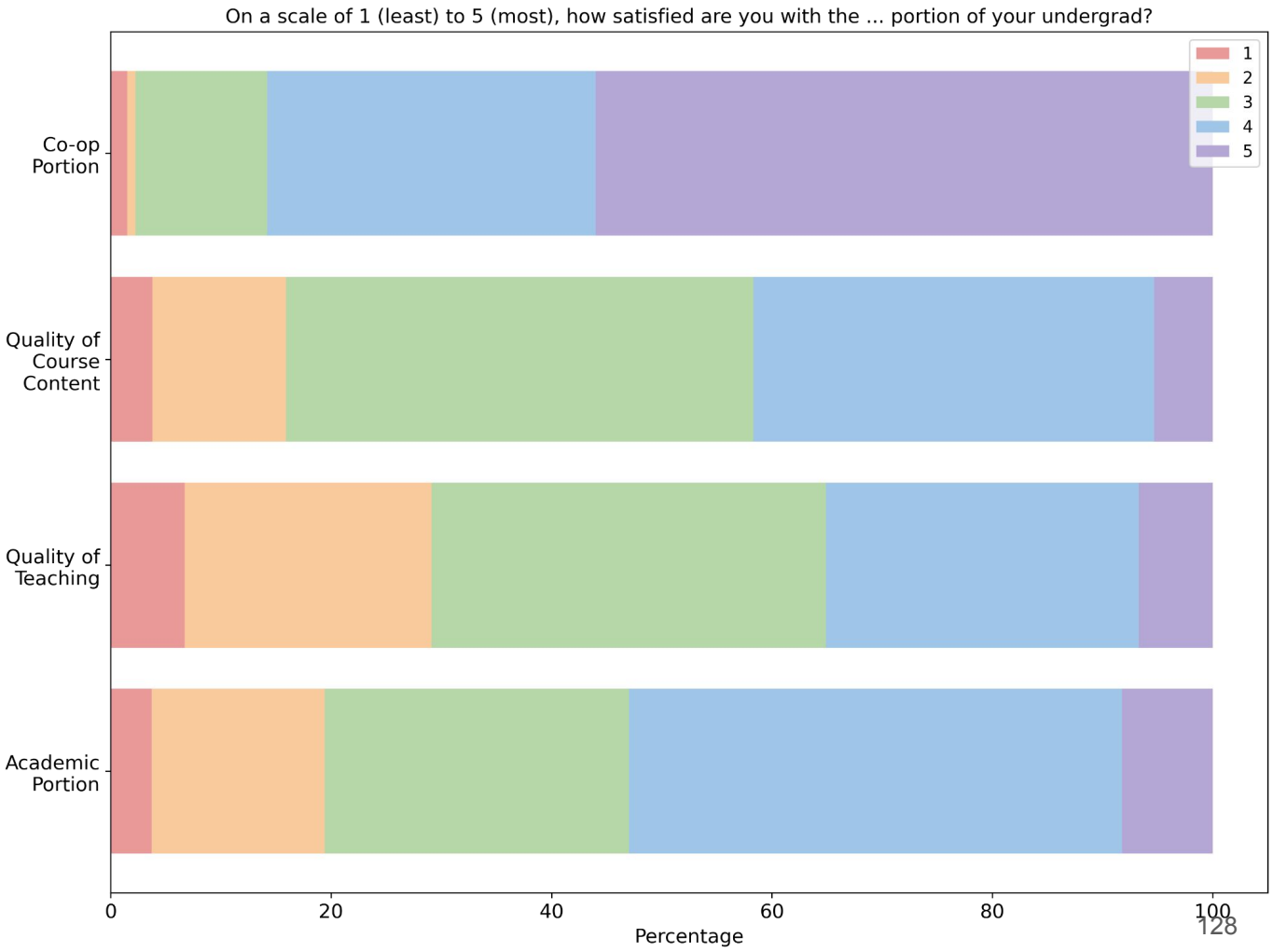
With fees of about $9000 a term for 8 school terms, this makes sense.



Student Satisfaction

Most students were largely satisfied with the co-op portion of their degrees.

The same can't be said for the quality of teaching or the quality of course content.

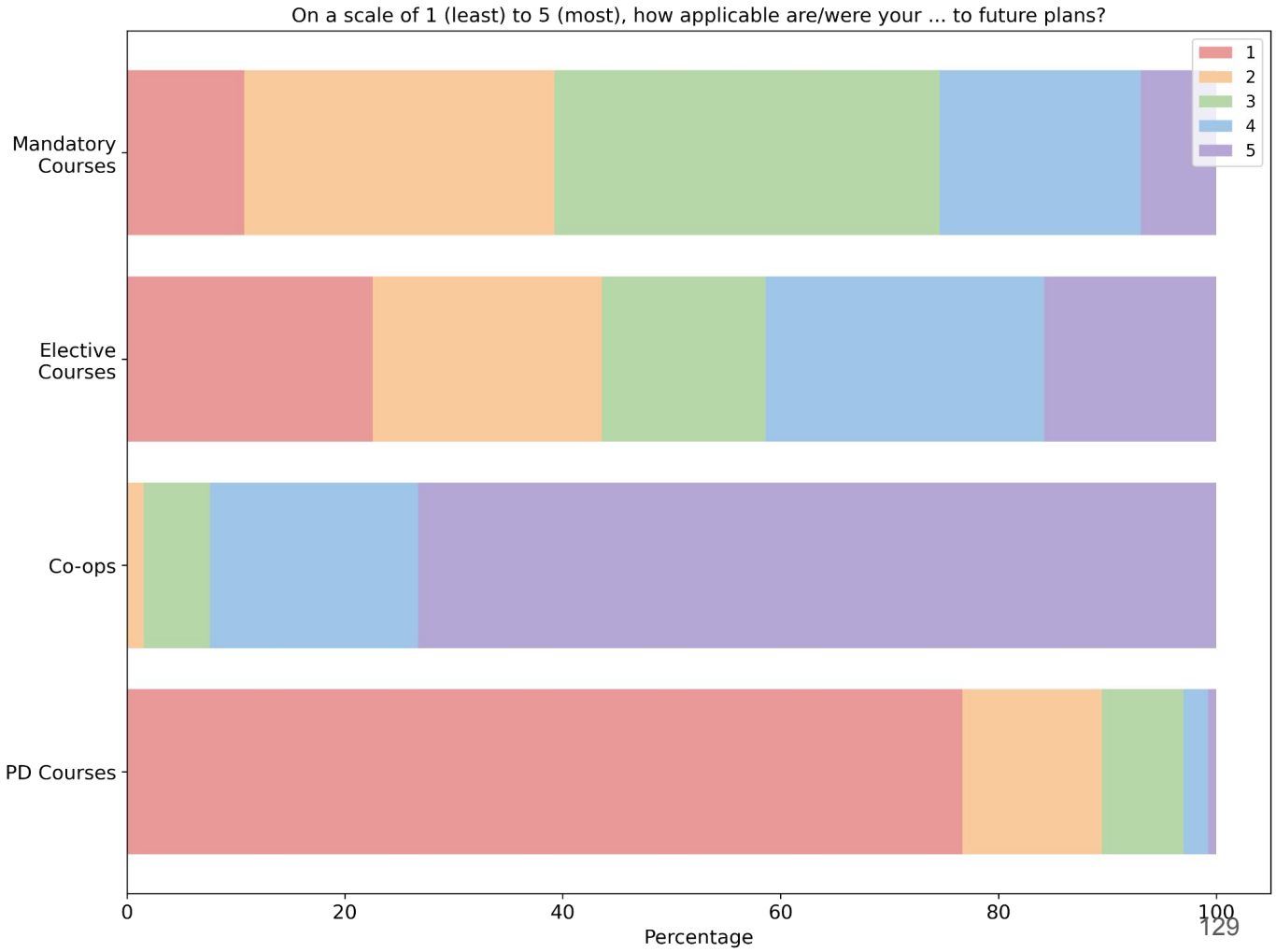


Applications

Electives seem generally more applicable than mandatory core courses.

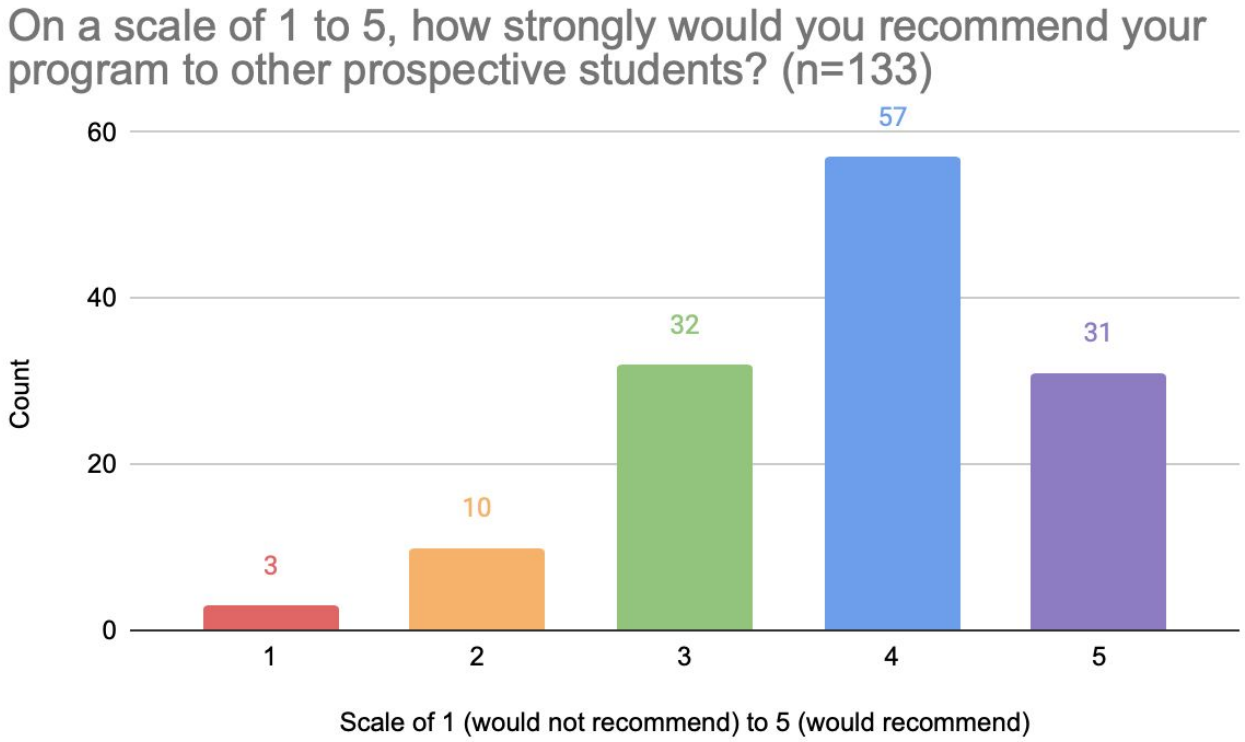
Co-ops come out on top again.

PD was largely useless, to nobody's surprise.



Recommendations

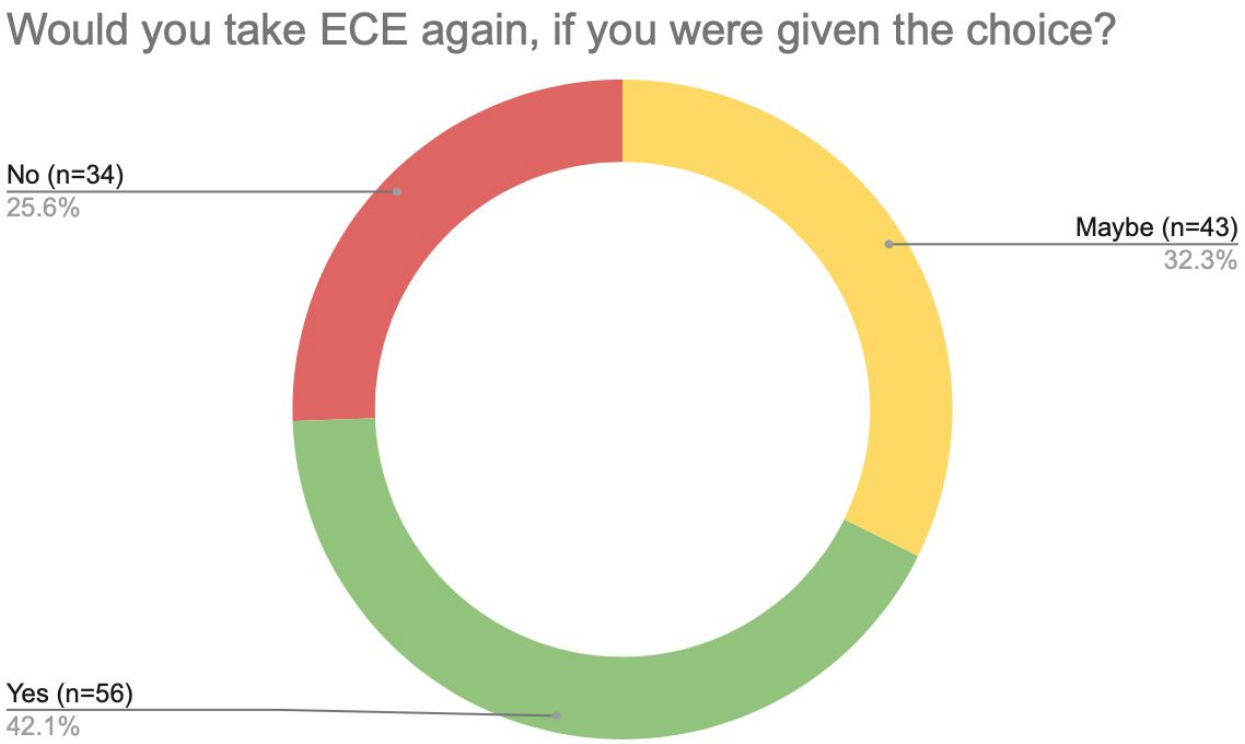
Most students would recommend ECE! The university and the department are doing something right.



ECE Round 2?

Despite the solid recommendations, a good quarter of the class would not take ECE again.

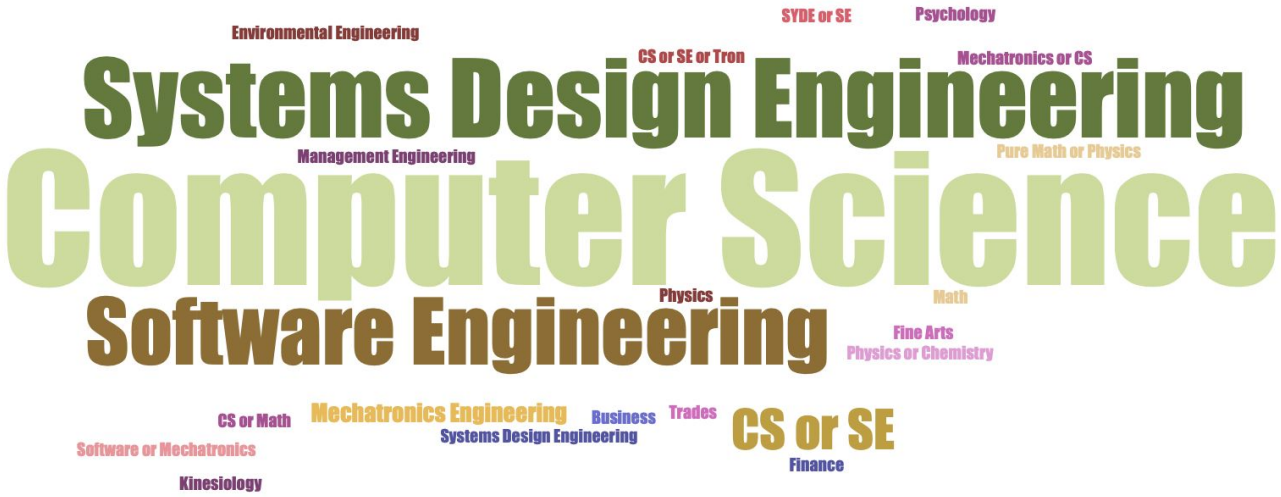
This wasn't an easy degree to obtain, by any measure.



Alternatives to ECE

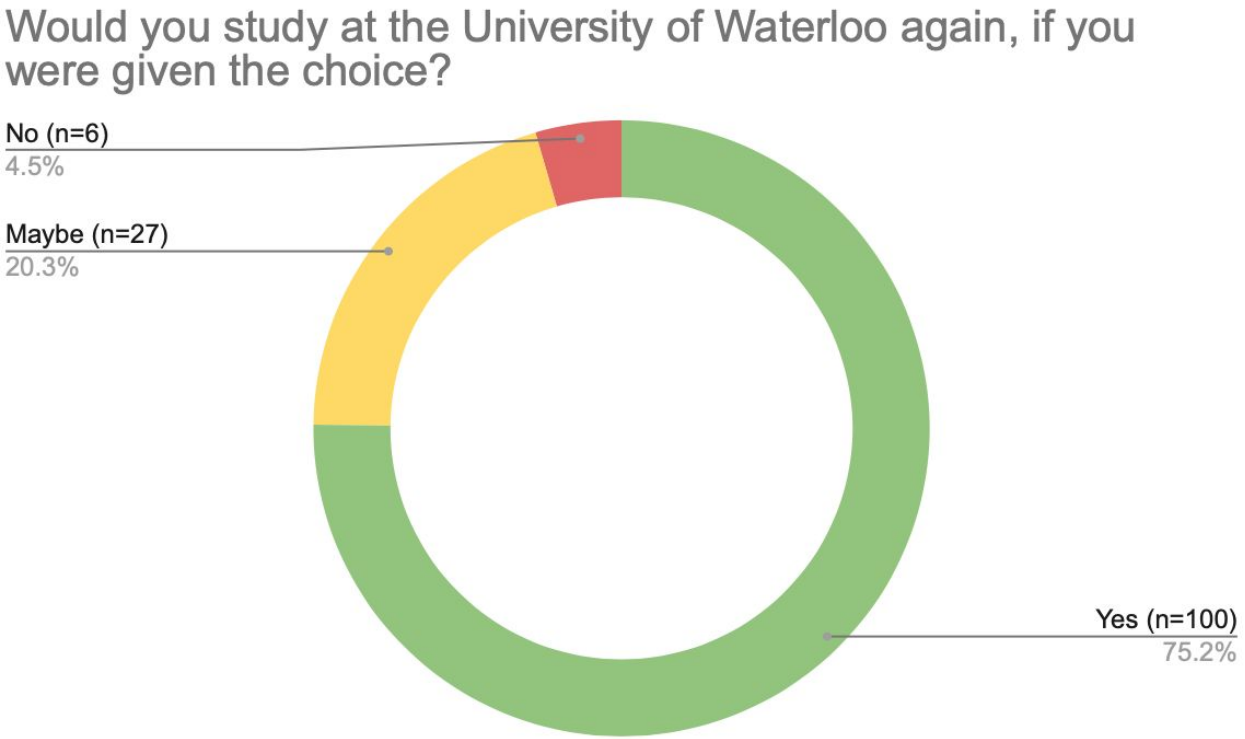
Which program would you choose, if not ECE?

Unsurprisingly, most would choose to go to CS or SE, though a decent number of students would also consider SYDE.



UW Round 2?

Most (**75%**) would attend UW again, which is more than the % of the class that would do ECE again.

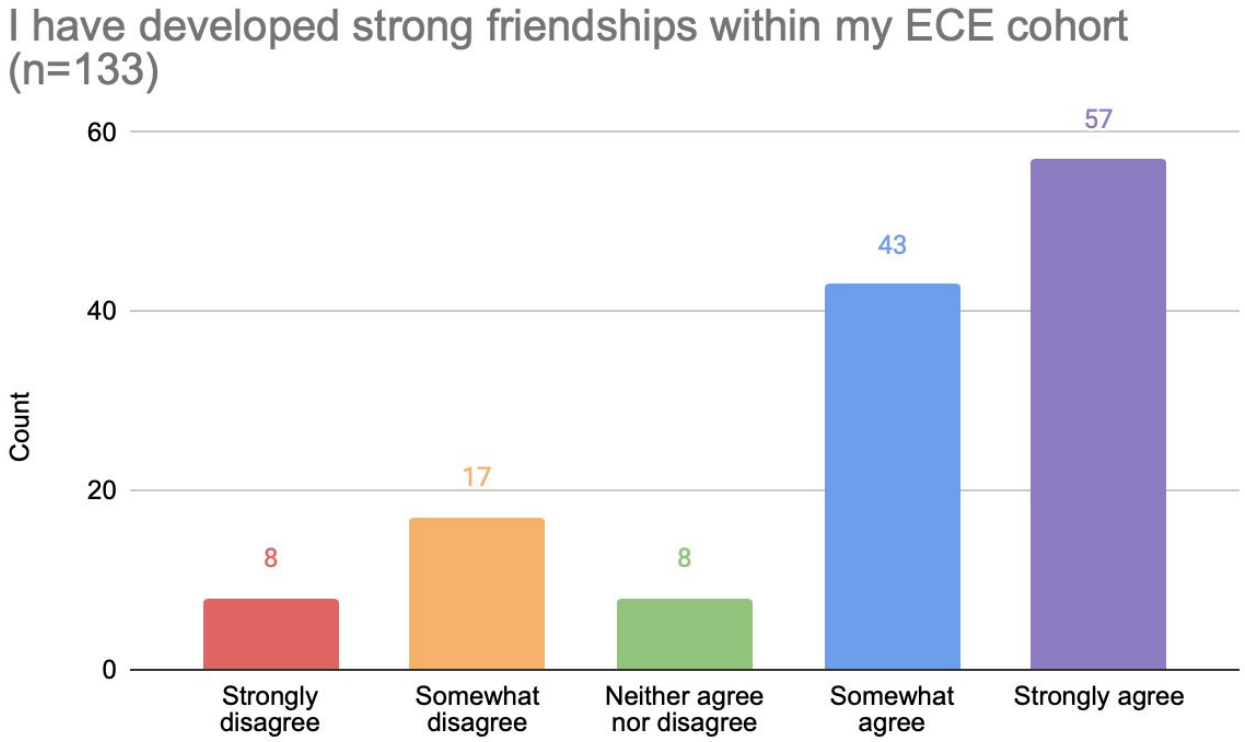


If not UW, then where?

Friends in ECE

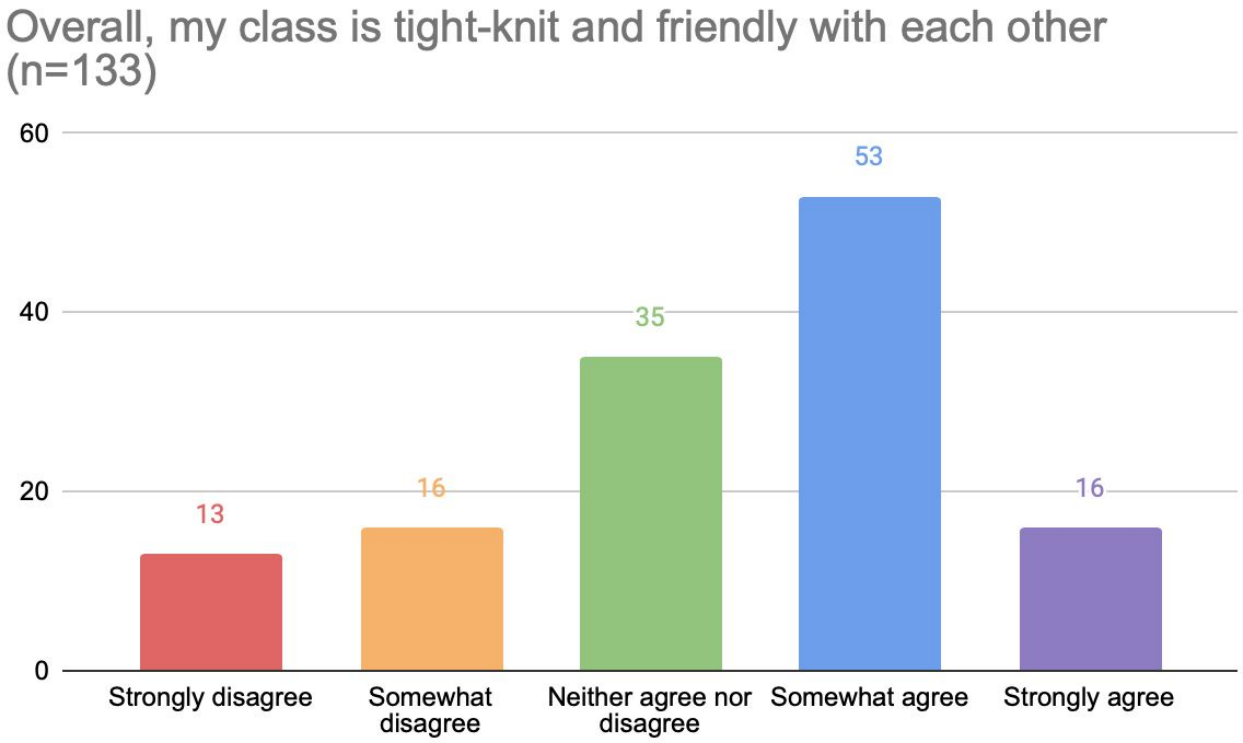
A lot of people have got great friendships.

Cheers guys, here's to us!



ECE Class Unite

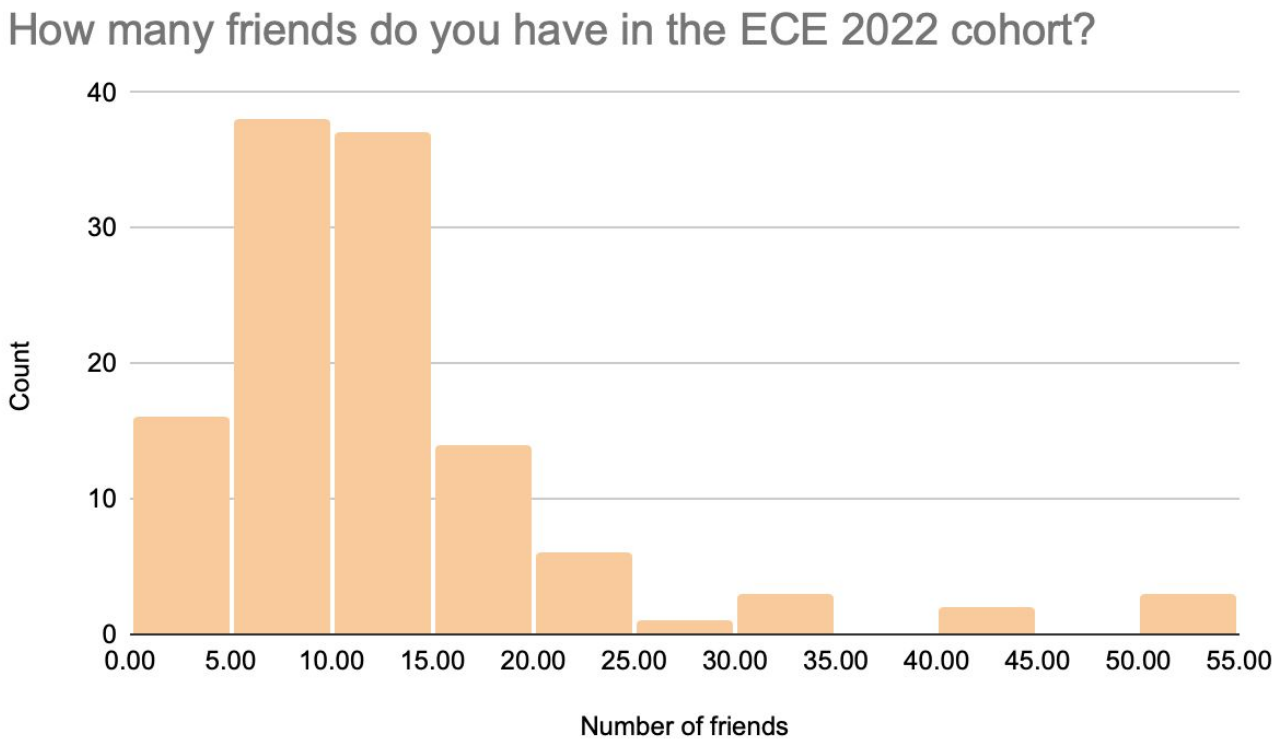
Let's not get too chummy, those ECE hoodies never did come through…



Friends in the Cohort

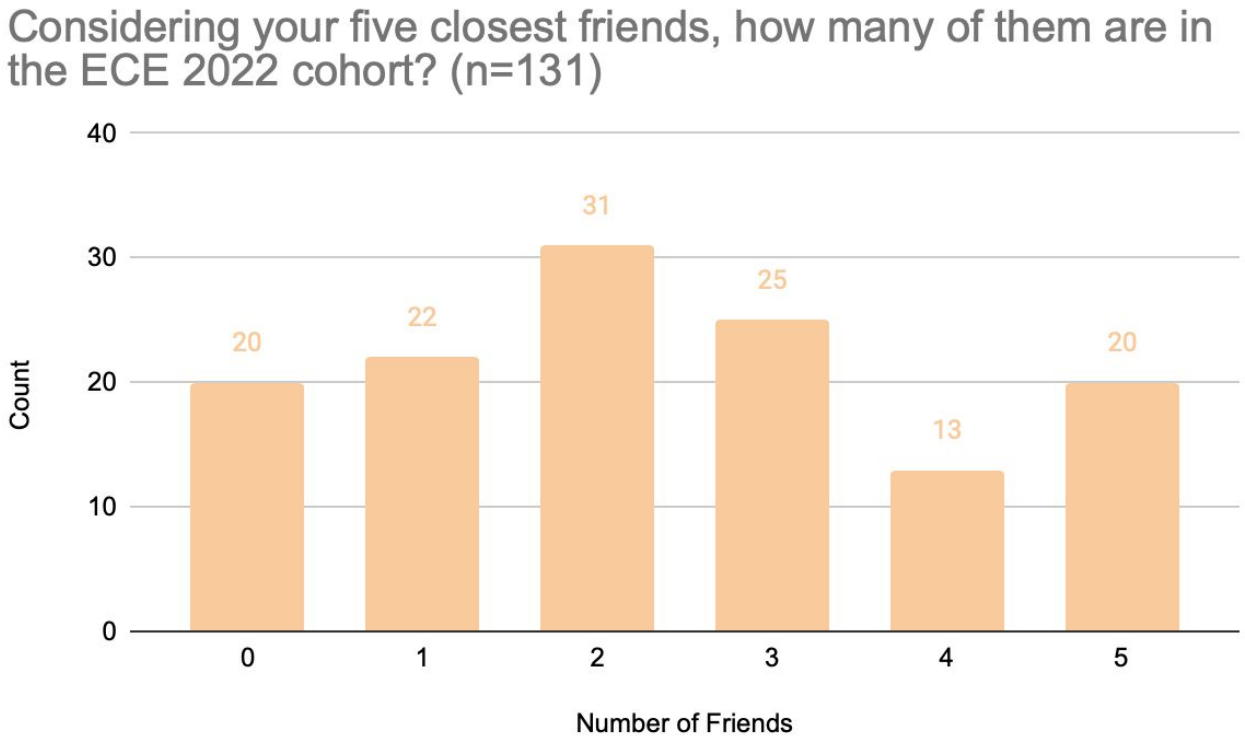
Most folk have 0-20 friends, with a couple of having a good amount more.

The average number of friends in the cohort is 11.8, but Johnny Friendhaver is an extreme outlier with 100 friends and is thus omitted from the sample set.



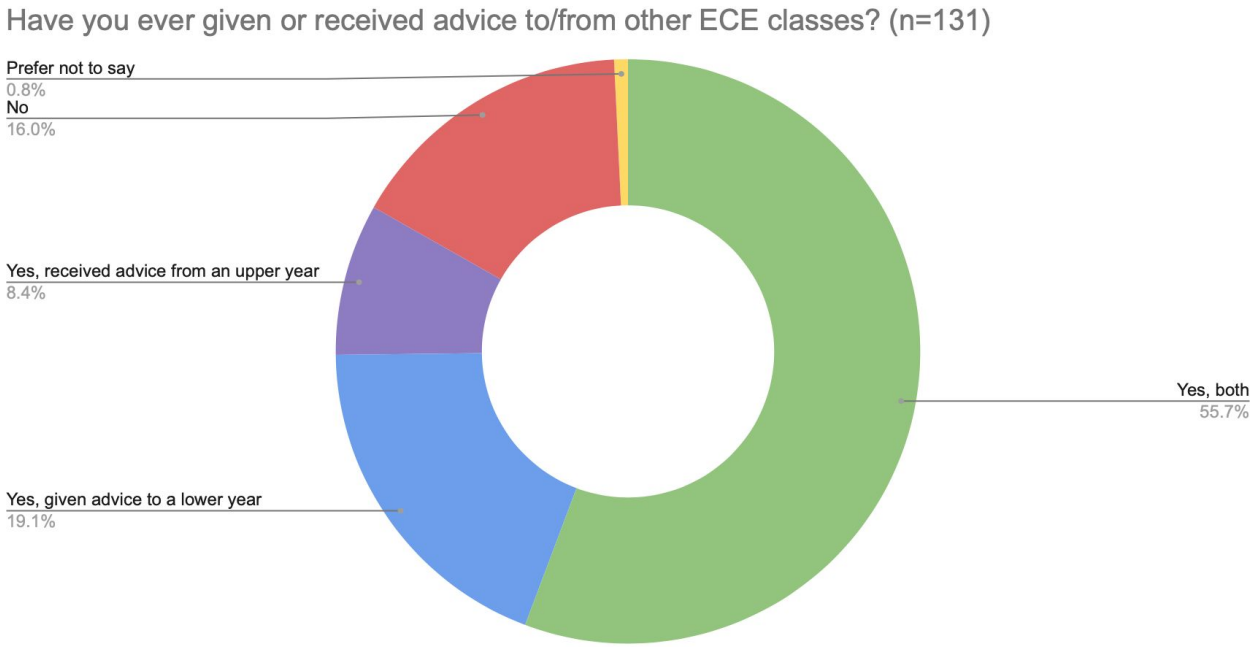
Close Friends in ECE

Most commonly two, but ~85% of people have at least one of their closest friends in ECE, with 44% having the majority of their closest friends in ECE



A Helping Hand

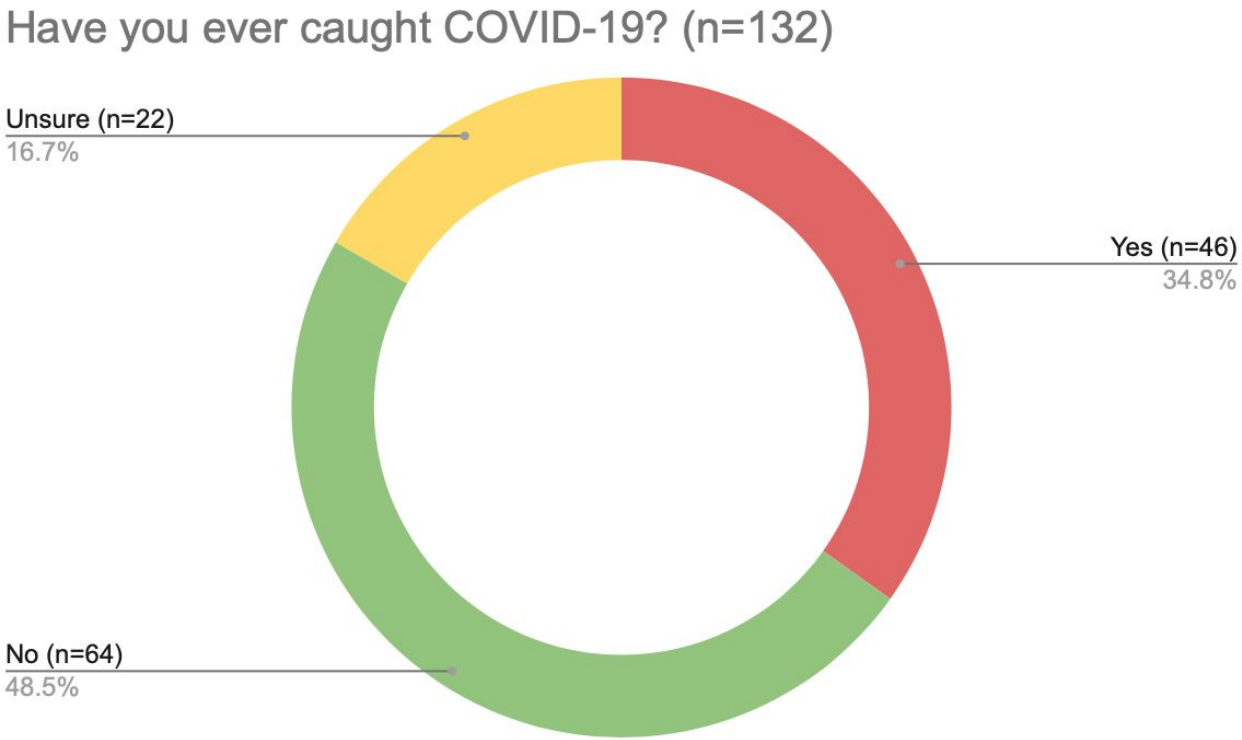
Most students have either received advice from upper years, given advice to lower years, or done both.



COVID-19

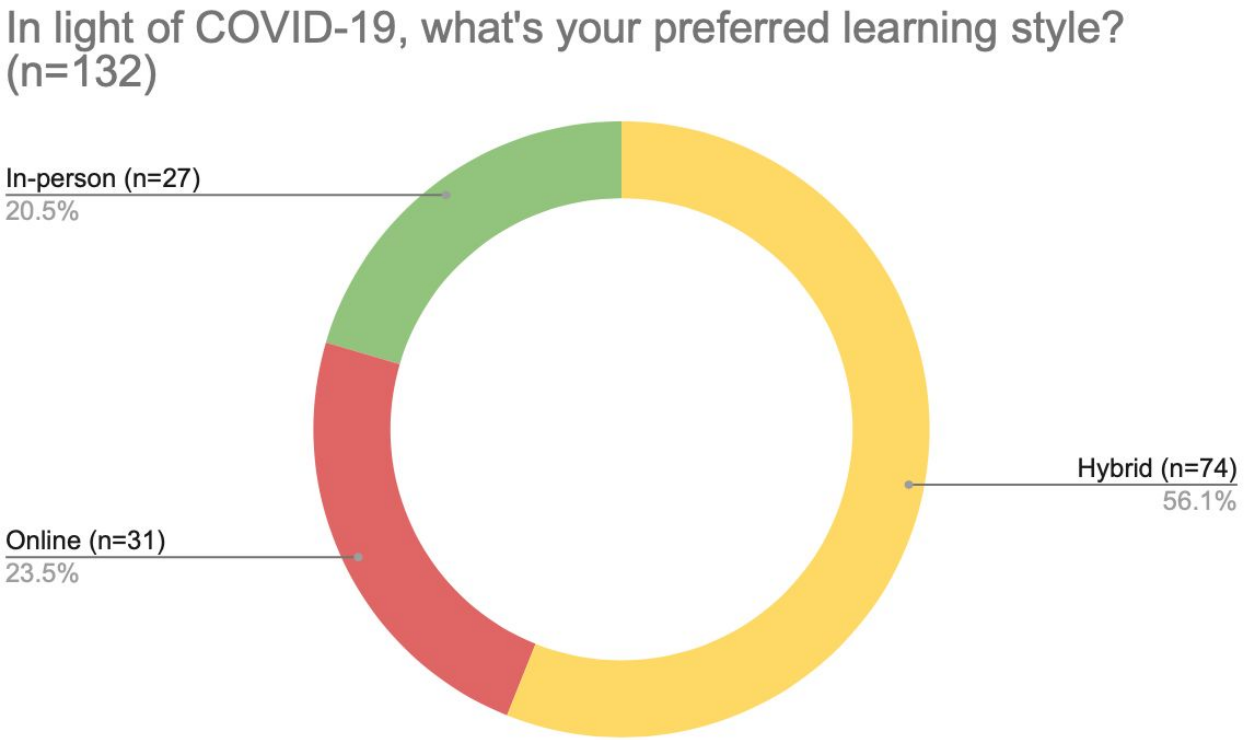
It was game over once people started going back to Phil's.

Not that packed classrooms in E7 were really any better.



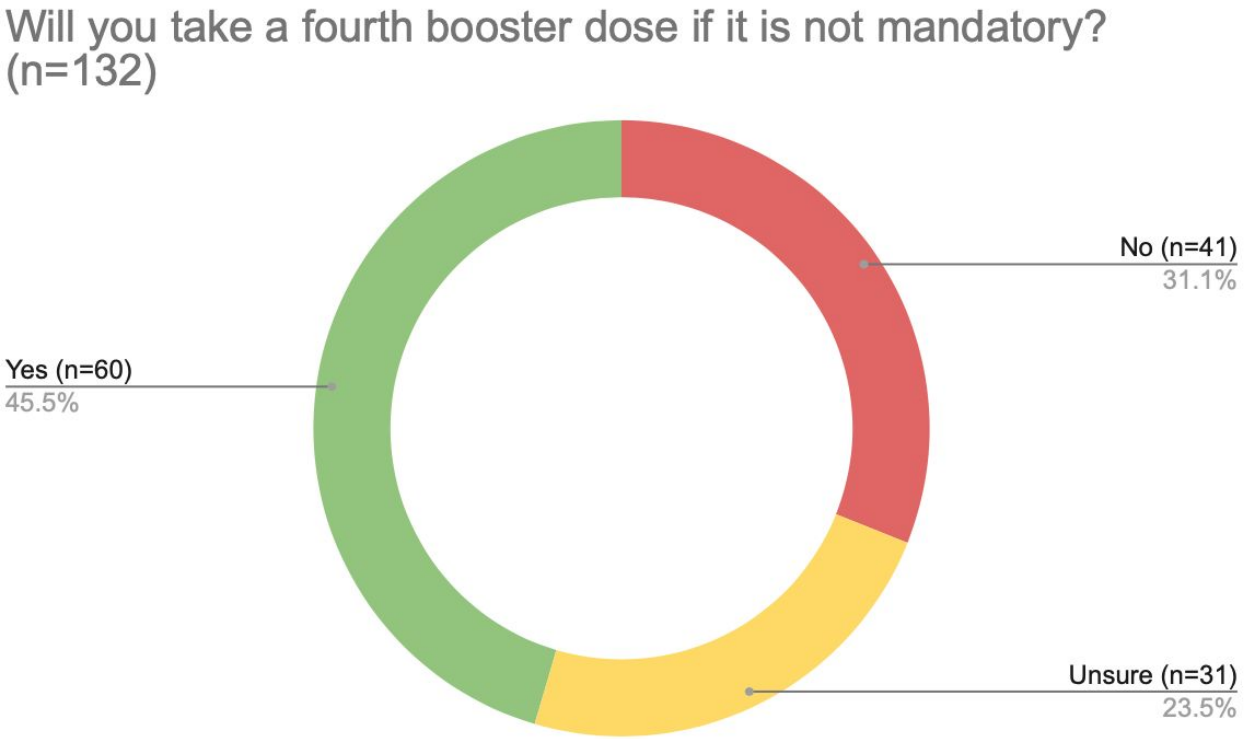
Online Learning Styles

It seems like hybrid is the best form of compromise - this might be because in person has a better connection, but an online recording allows replays (and negates the necessity of attending 8:30AM lectures).



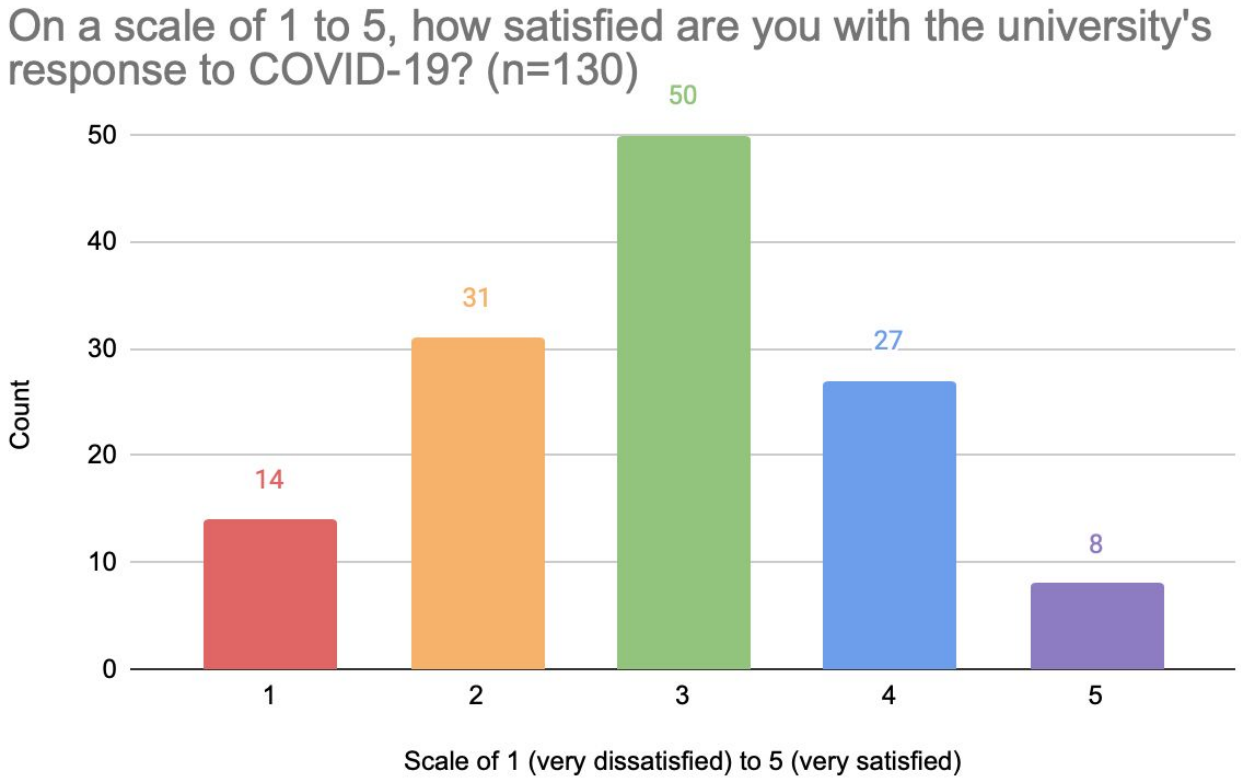
Shots Shots Shots

There's a mix of opinions when it comes to the fourth booster.



UW & COVID-19

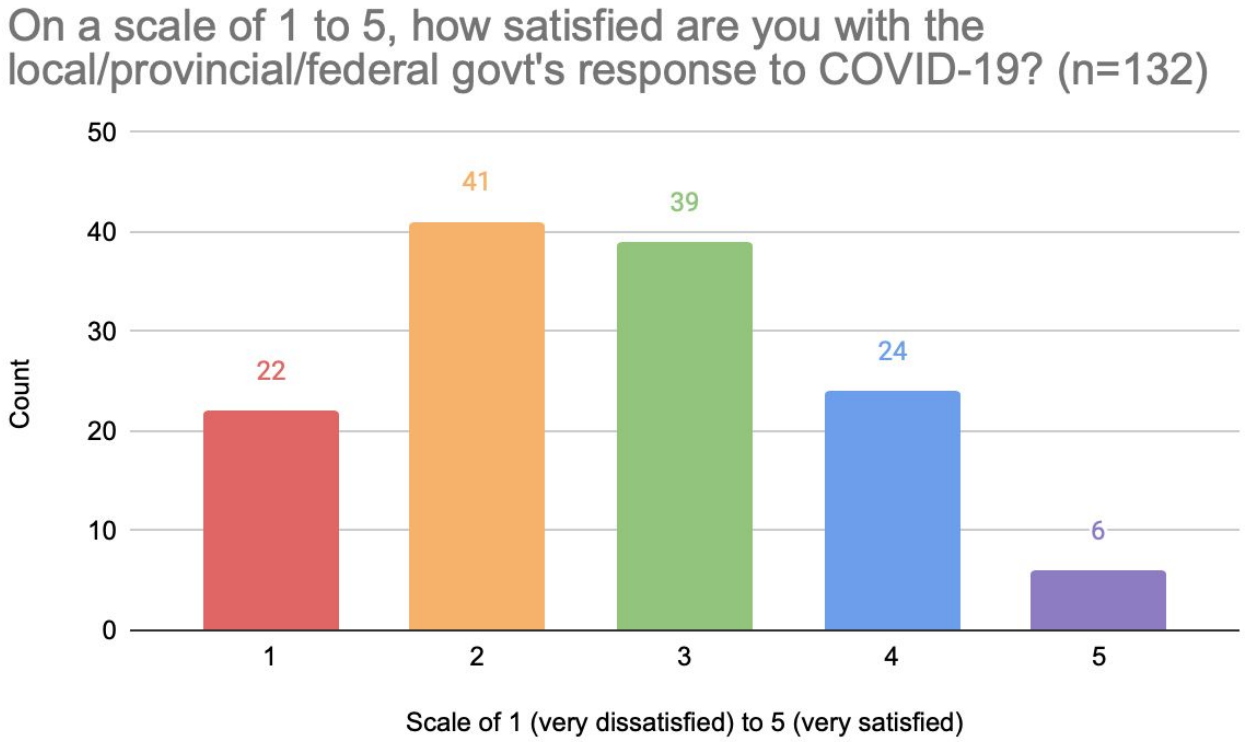
Don’t read too too much into this, beyond the flip-flopping (and a certain ceremony), it’s just kinda mediocre.



Governments & COVID-19

In general, people were less pleased with government responses to COVID-19.

To be fair, the government response varied considerably at each level and with location.

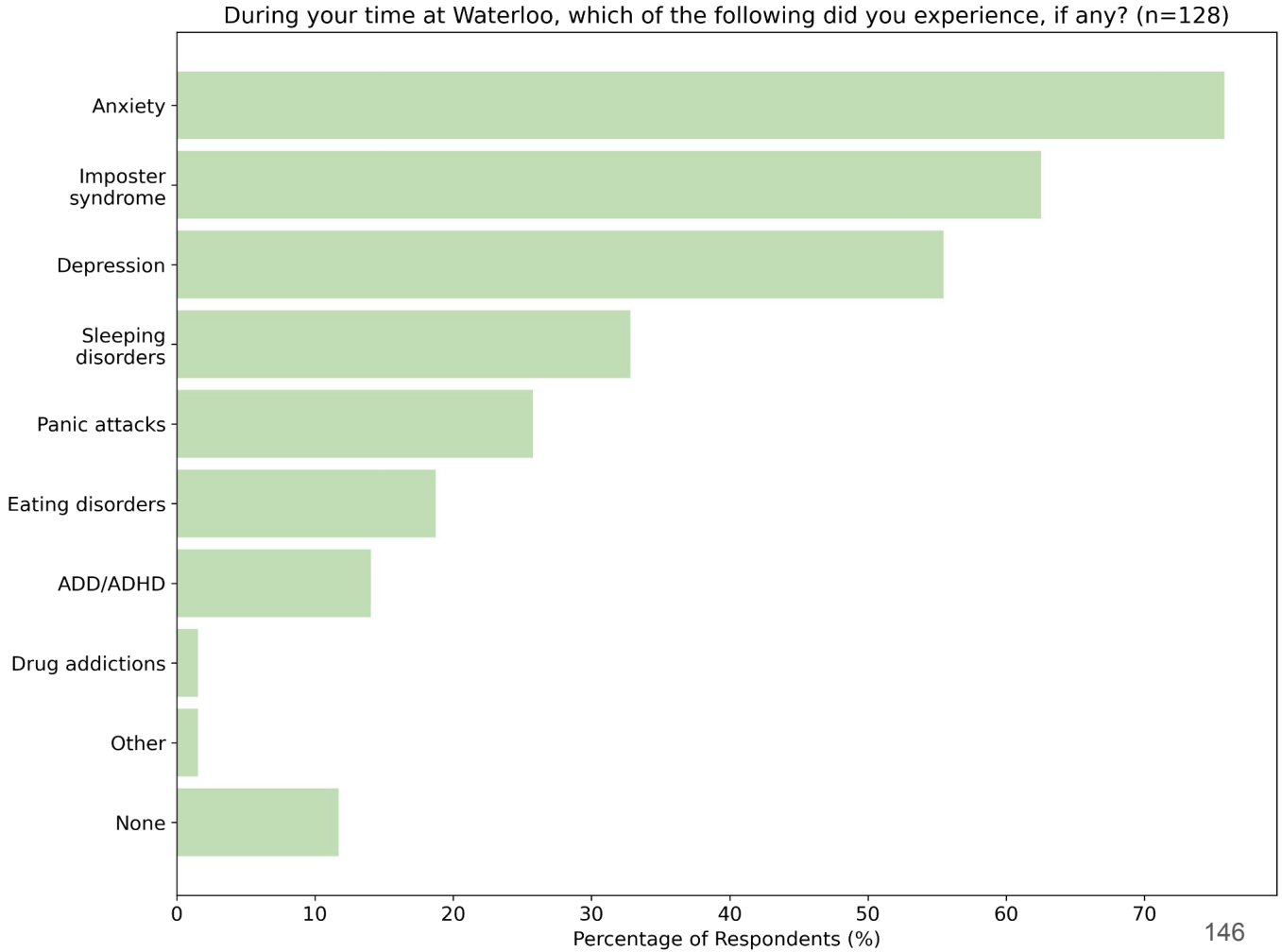


Mental Health

Mental Health

Over 70% of respondents experienced anxiety. Over 60% had imposter syndrome, and over 50% had depression.

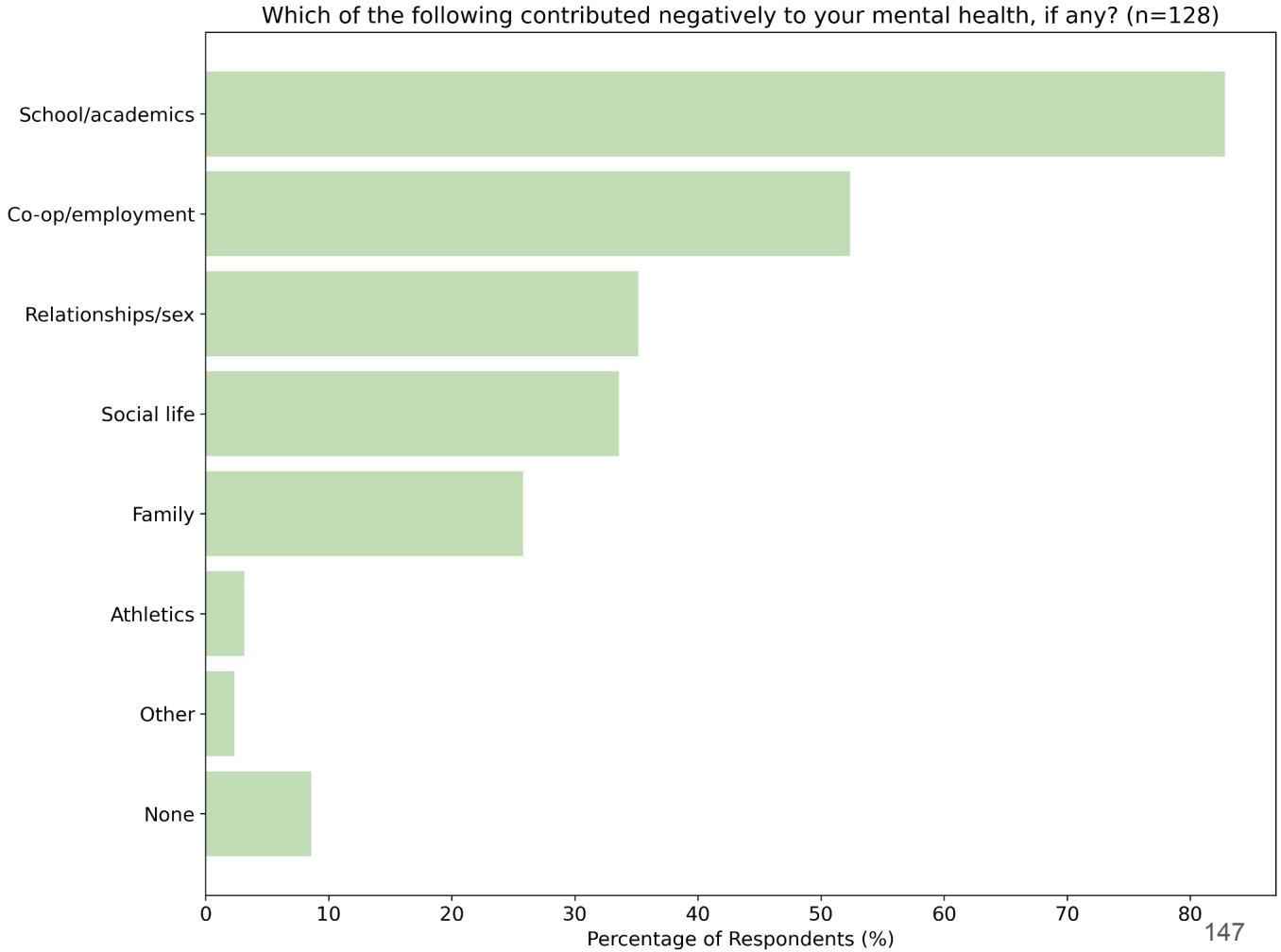
A lot of people struggle with these challenges at Waterloo, and you're not alone.



Mental Health Contributors

Perhaps unsurprisingly, the two greatest negative contributors to mental health are school and co-op.

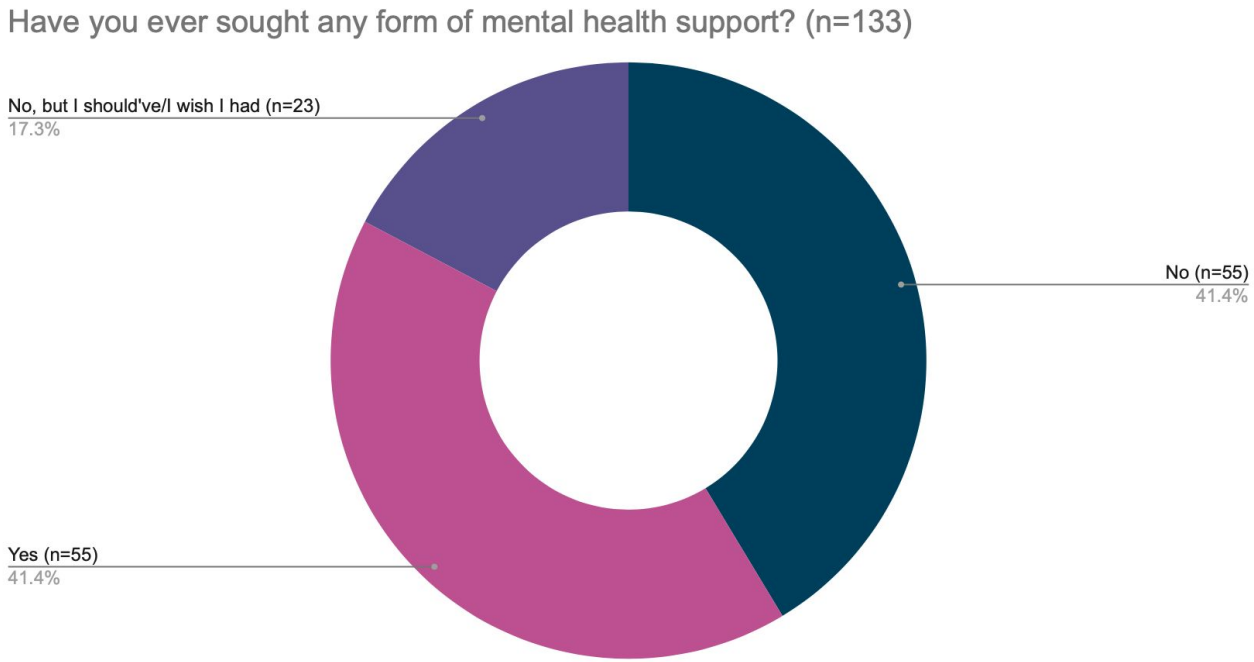
Other reasons include: the climate crisis, living conditions, and the COVID-19 pandemic



Mental Health Support

The majority of the class either sought mental health support, or wished they did.

There's no shame in getting help, and 1 in 6 people in the class wish they did.

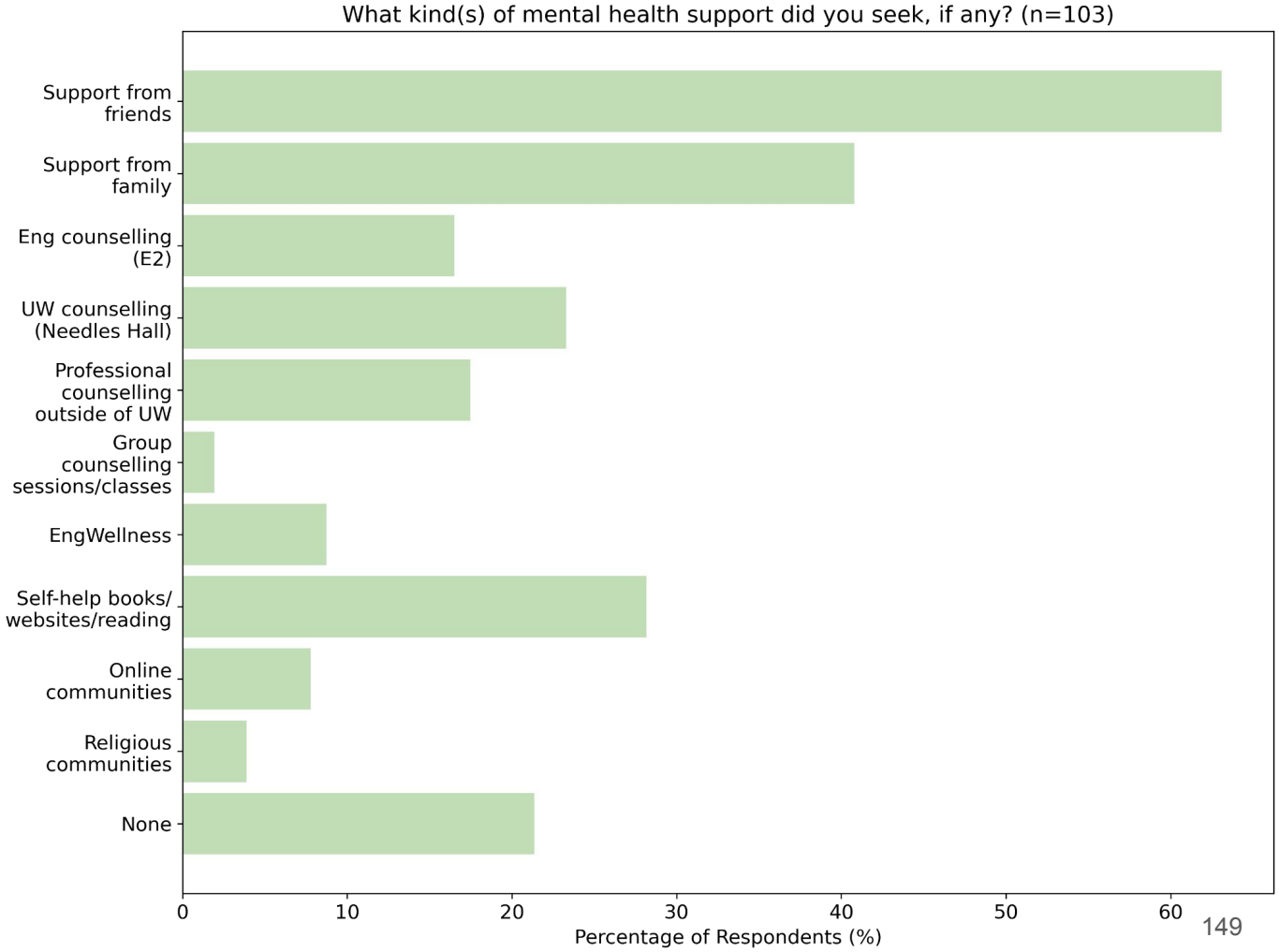


Types of Support

Friends and family go a long way.

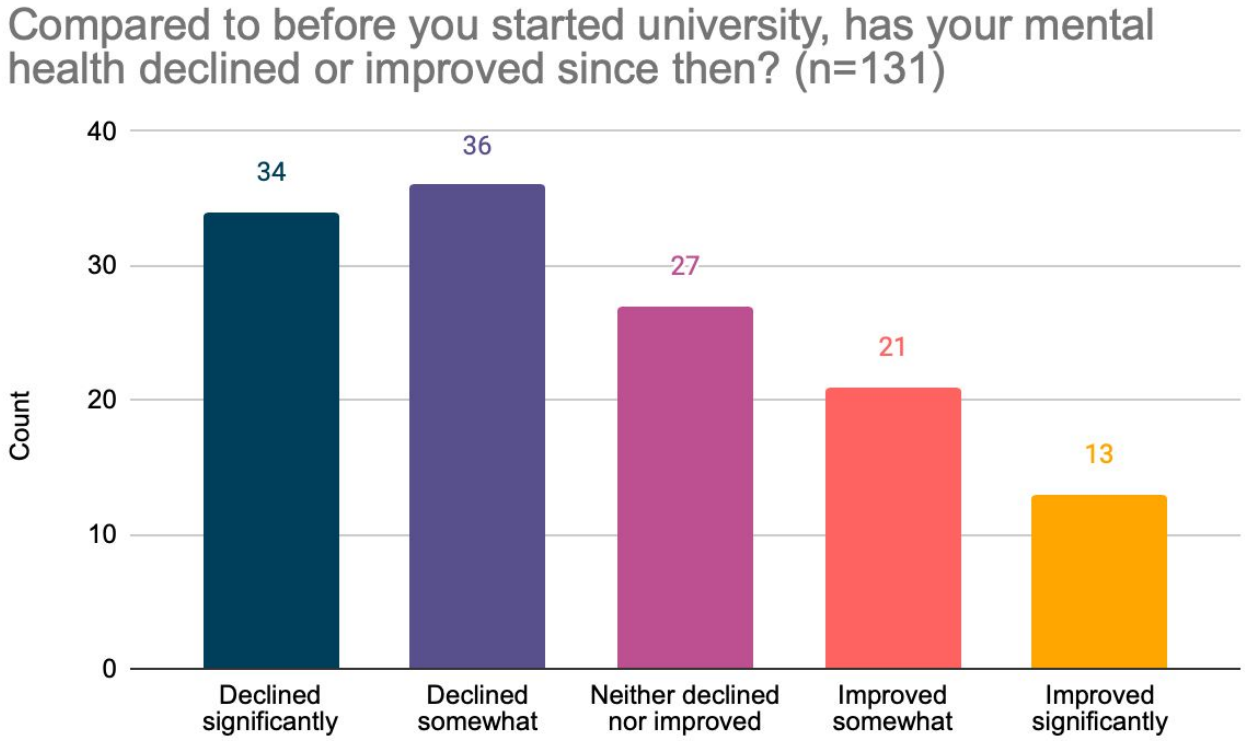
Perhaps surprisingly, self-help proved to be more popular than professional counselling, whether at E2, Needles, or outside the university.

Multiple selection was permitted.



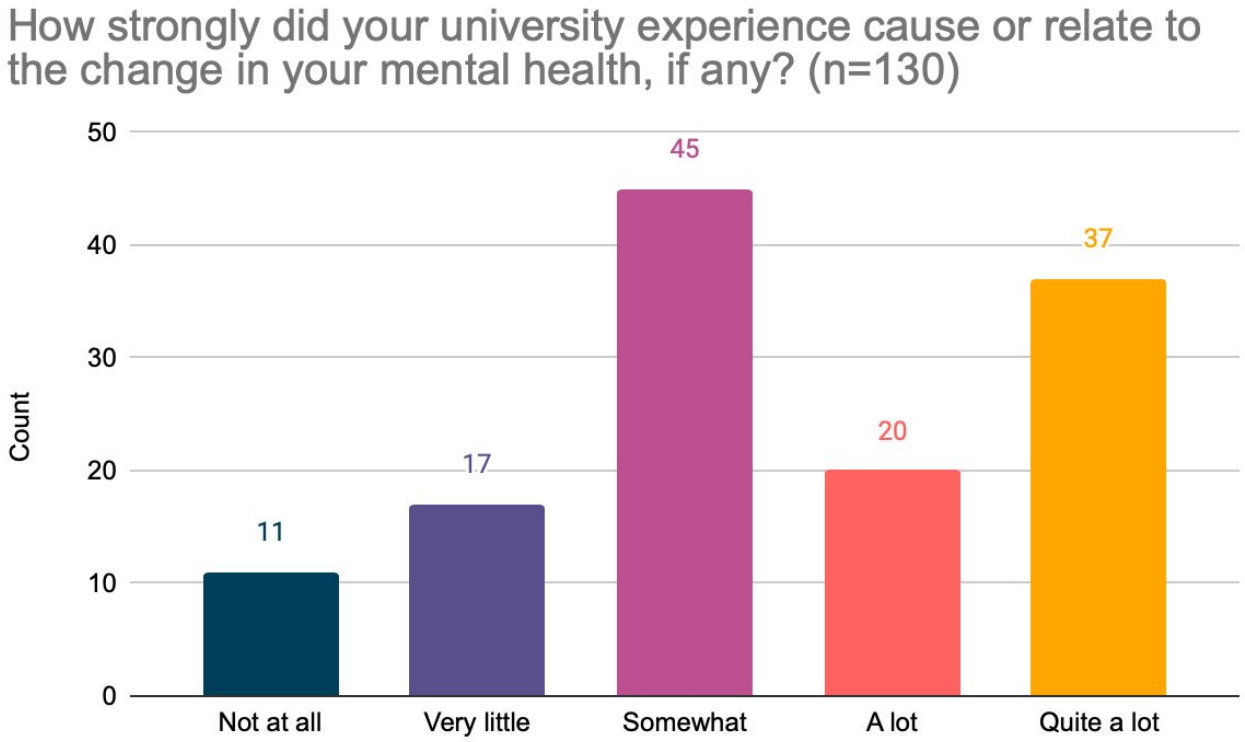
Mental Health & UW

UW doesn't have the best effect on mental health for the majority of respondents



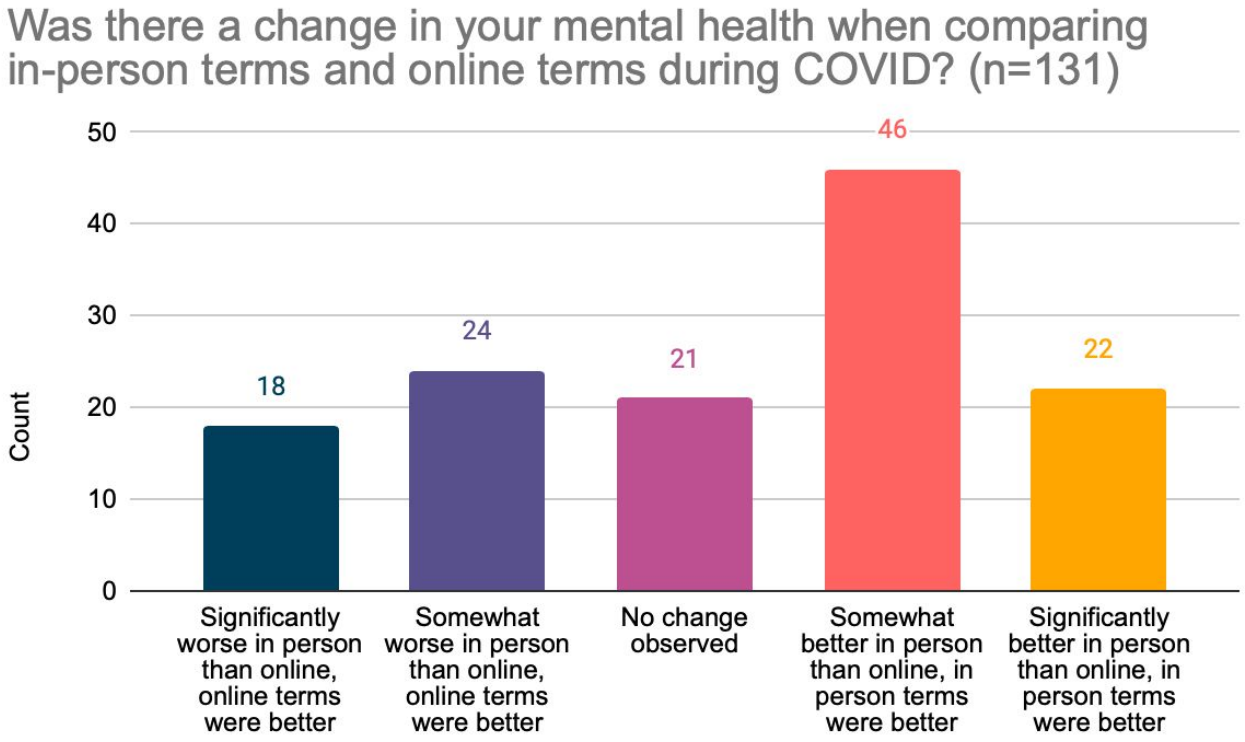
University & Mental Health

The university experience contributed/related to changes in mental health. This is hardly a surprise, between co-op, academics, and other things to juggle.



COVID & Mental Health

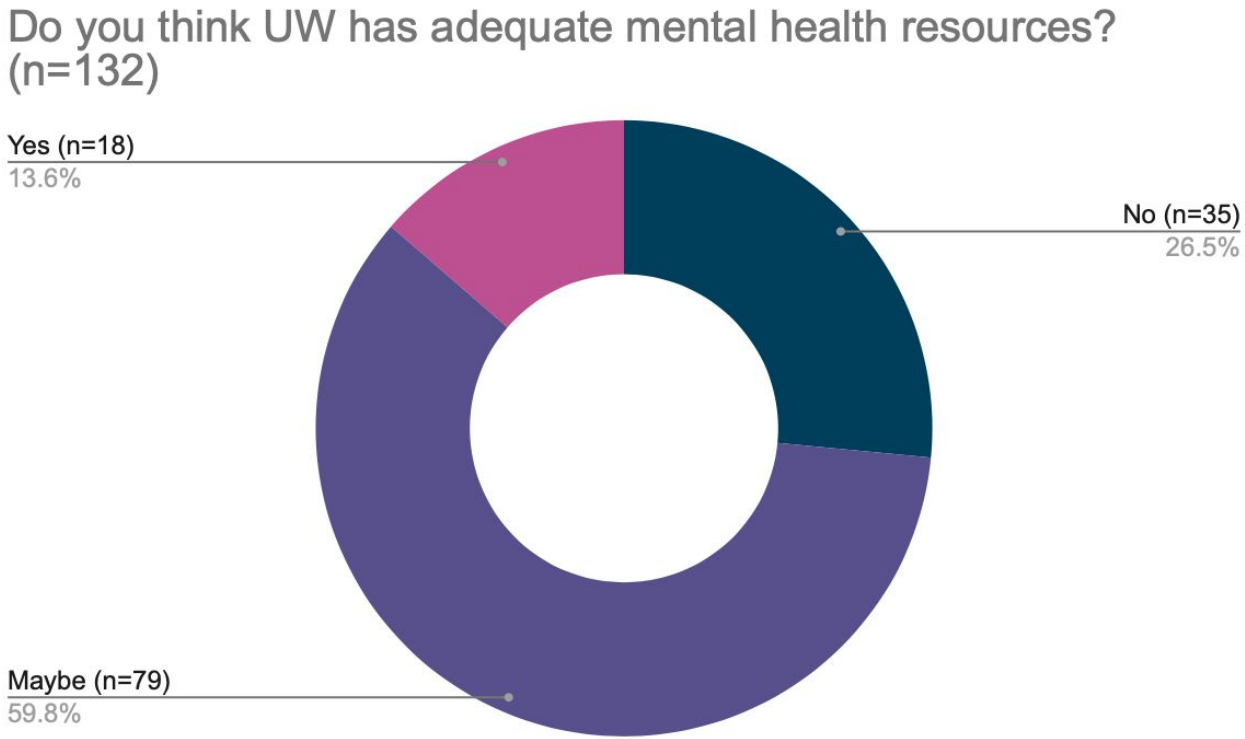
People generally had better mental health in person than online. Seeing friends goes a long way!



Mental Health Resources

It's worth nothing a lot of people are unsure about UW's resources because it wasn't presented well, and website links don't make it accessible.

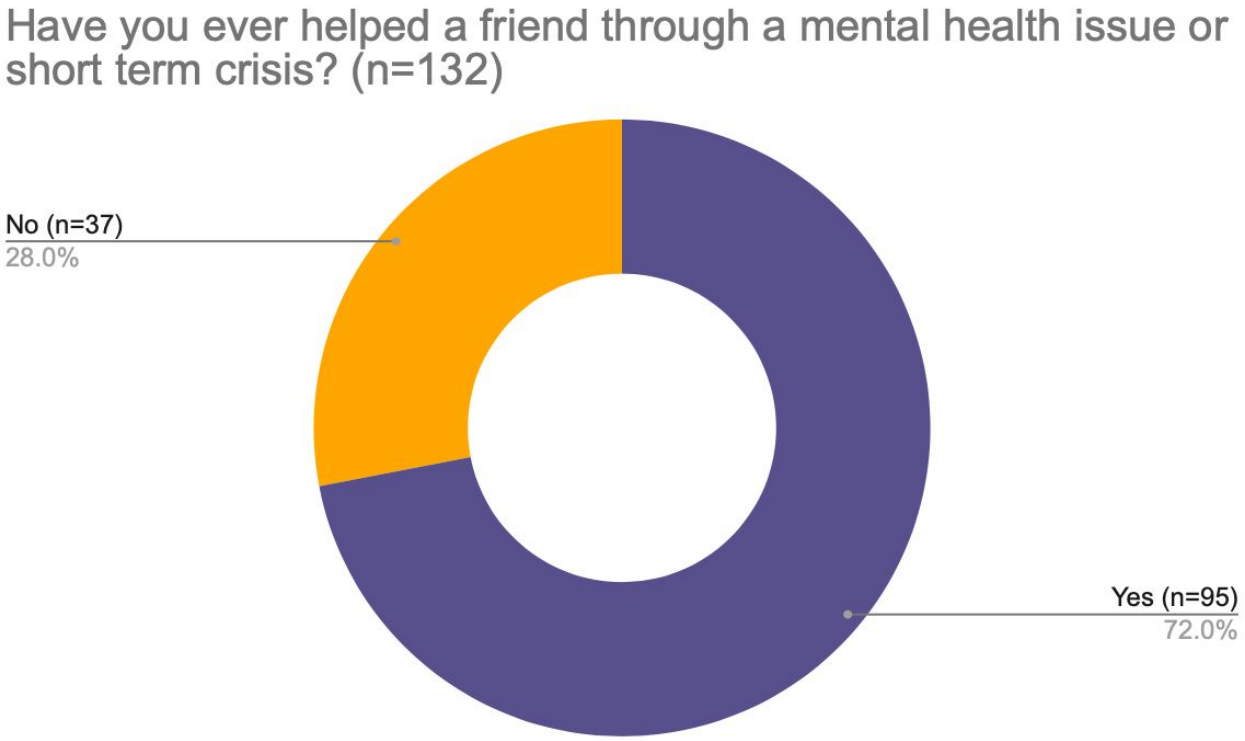
Frankly, it has felt like the best bet for support is places other than the university.



You've got a friend in me

Nearly 3/4s of respondents have helped a friend through mental health issues or crises.

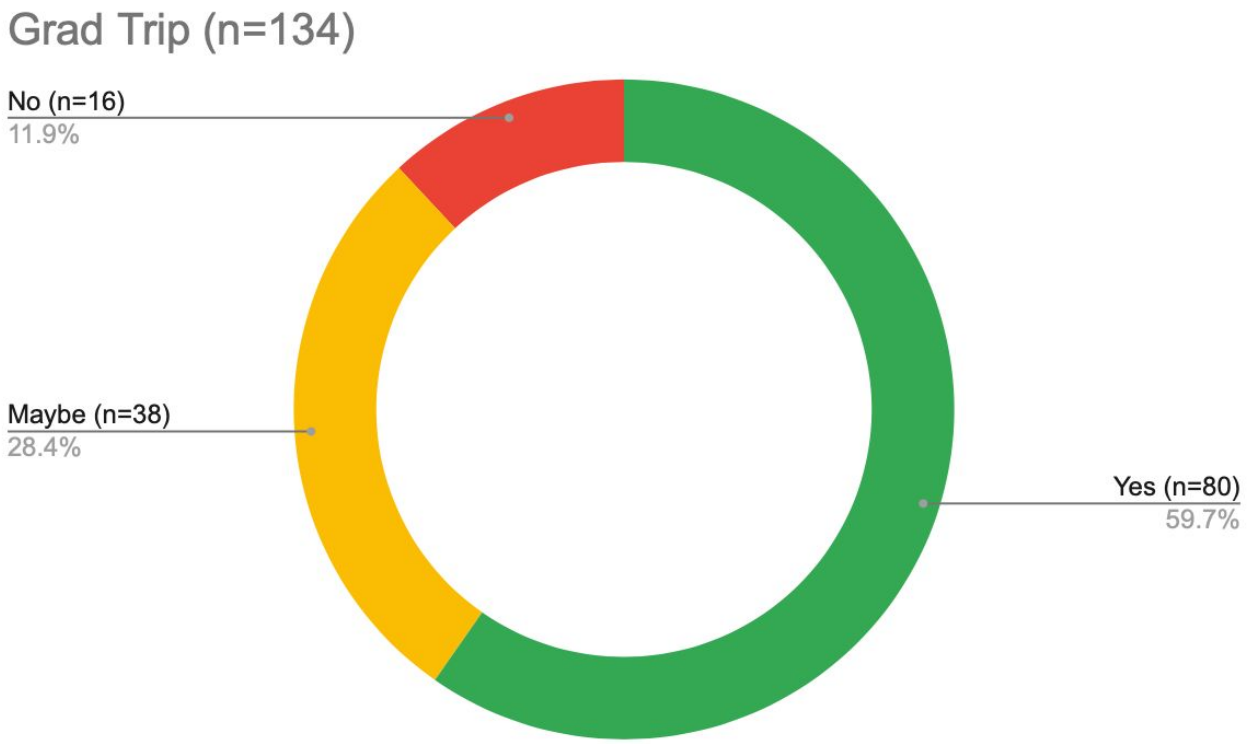
We're all in this together, there's room for plenty of winners.



Lifestyle

Grad Trip

After 2 years of a pandemic, ~60% of respondents plan on taking a grad trip



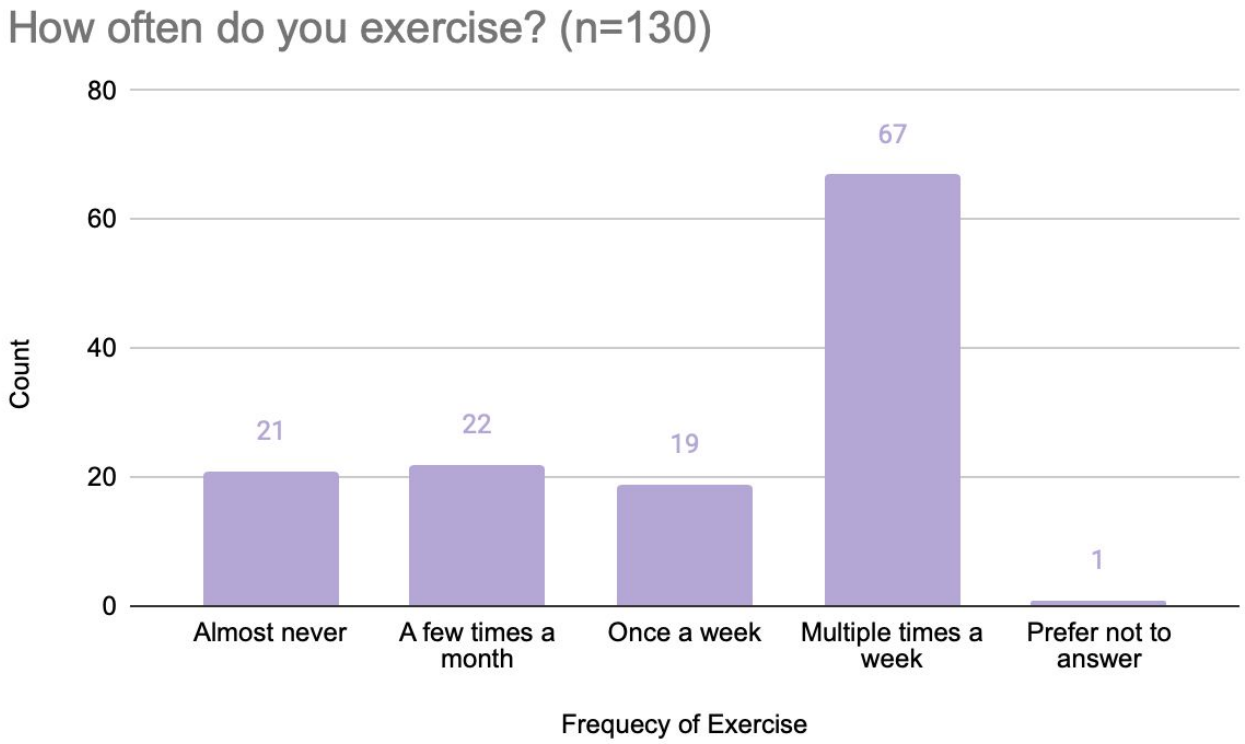
We are wanderers of the world!

Europe is overwhelmingly the most popular destination!

Note: Some people provided continents while others provided countries. For this visual, we lumped both data types into continents

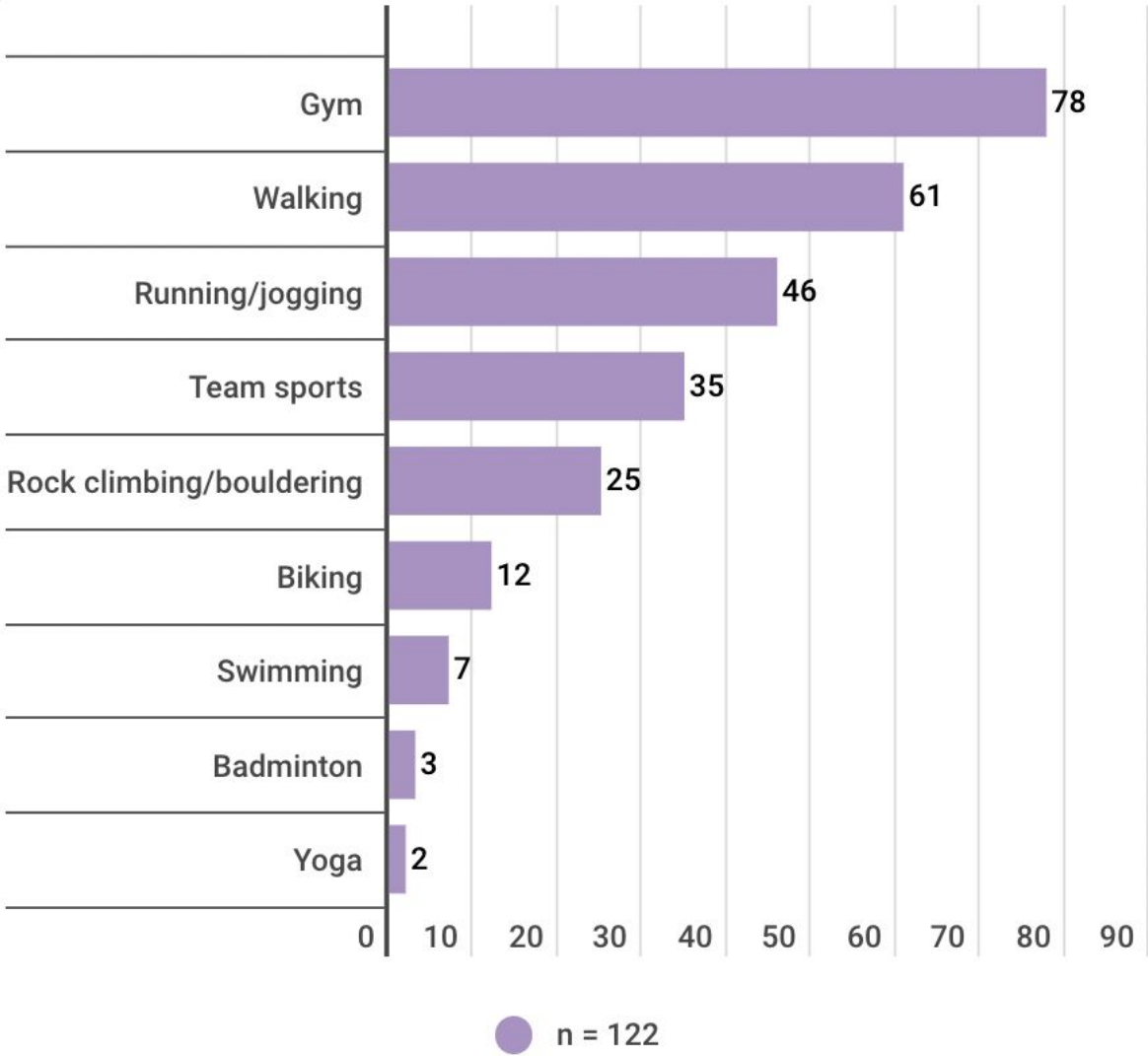
How often do we exercise?

We are a fit group with 52% of us working out multiple times a week!



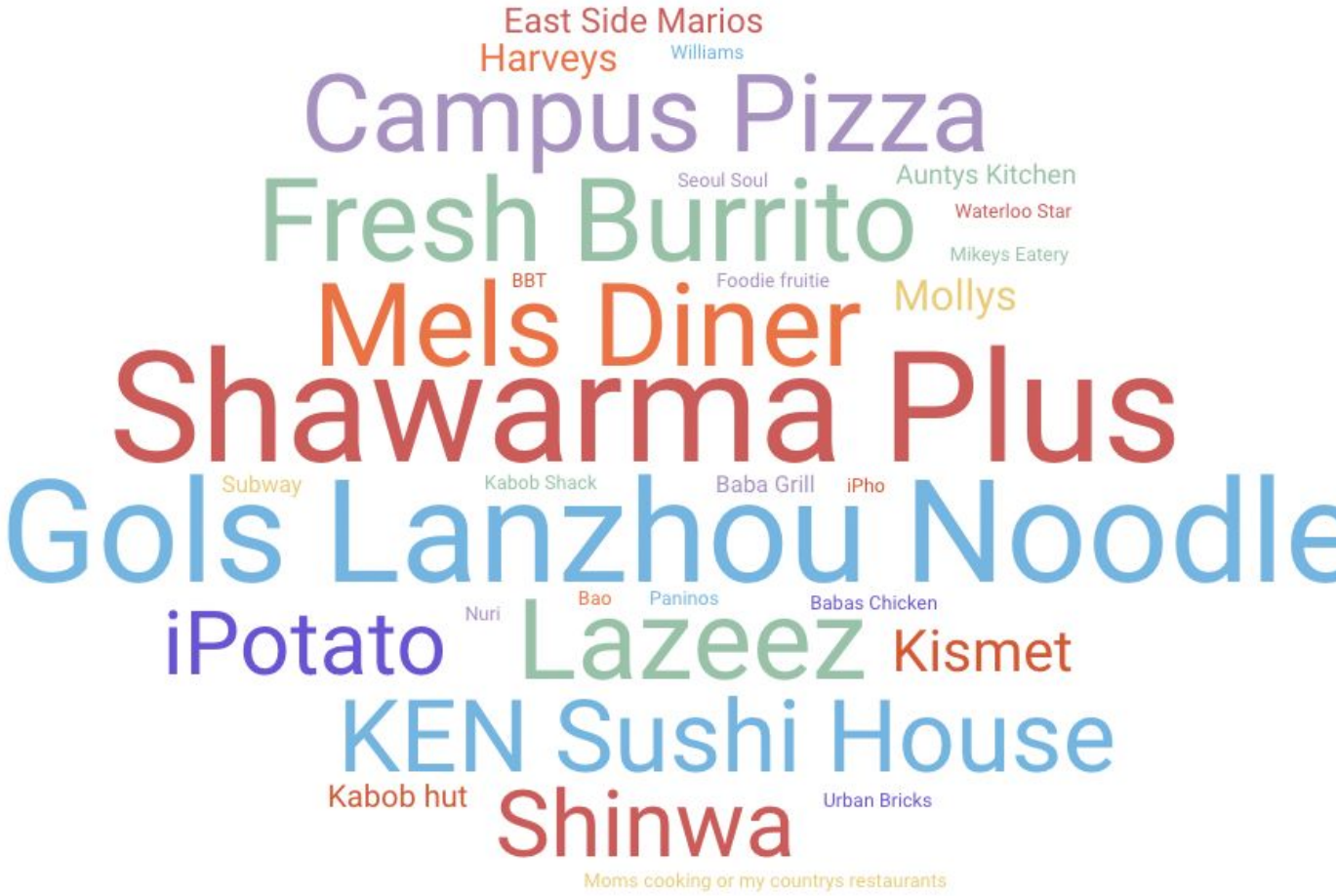
How do we exercise?

Gotta get them gains
💪💪💪



Favorite place to eat in plaza

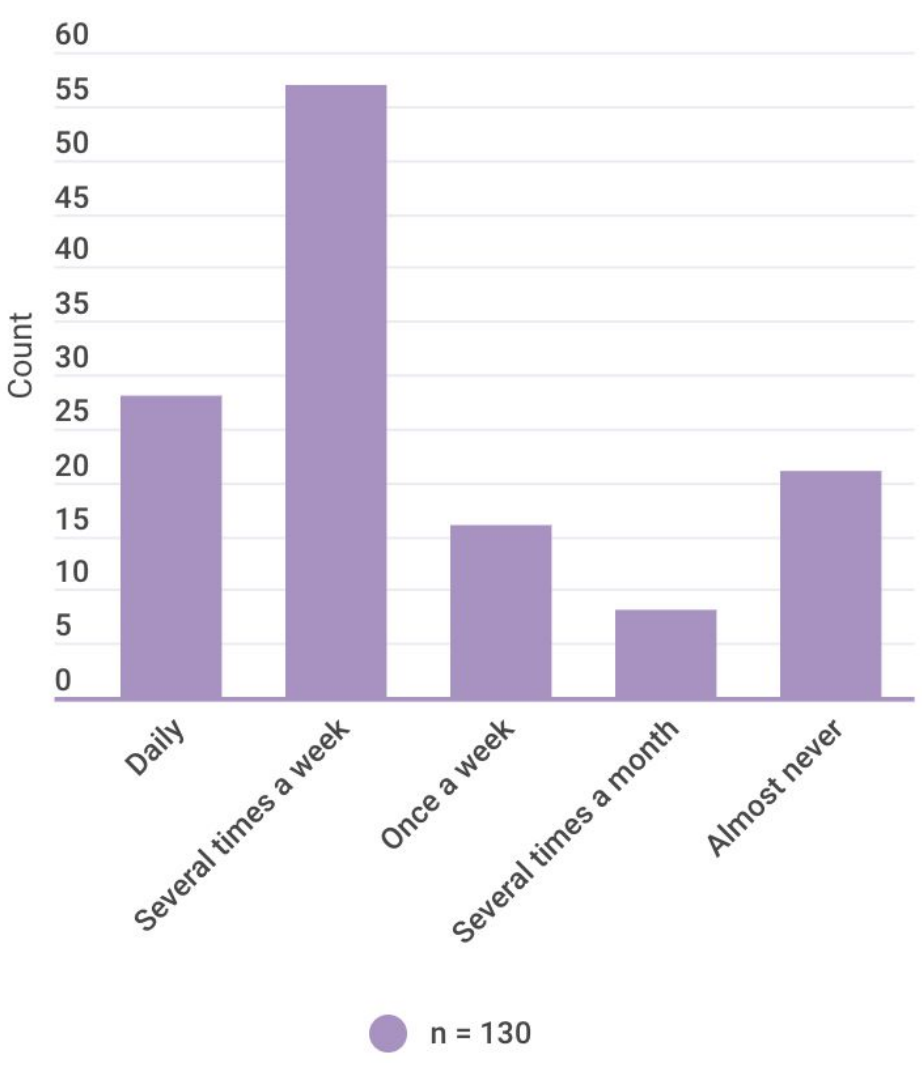
We utilized most of the plaza as a unit
🍽️🍽️



rip 2 for $10 @ s+, 5.95 burritos @ fresh

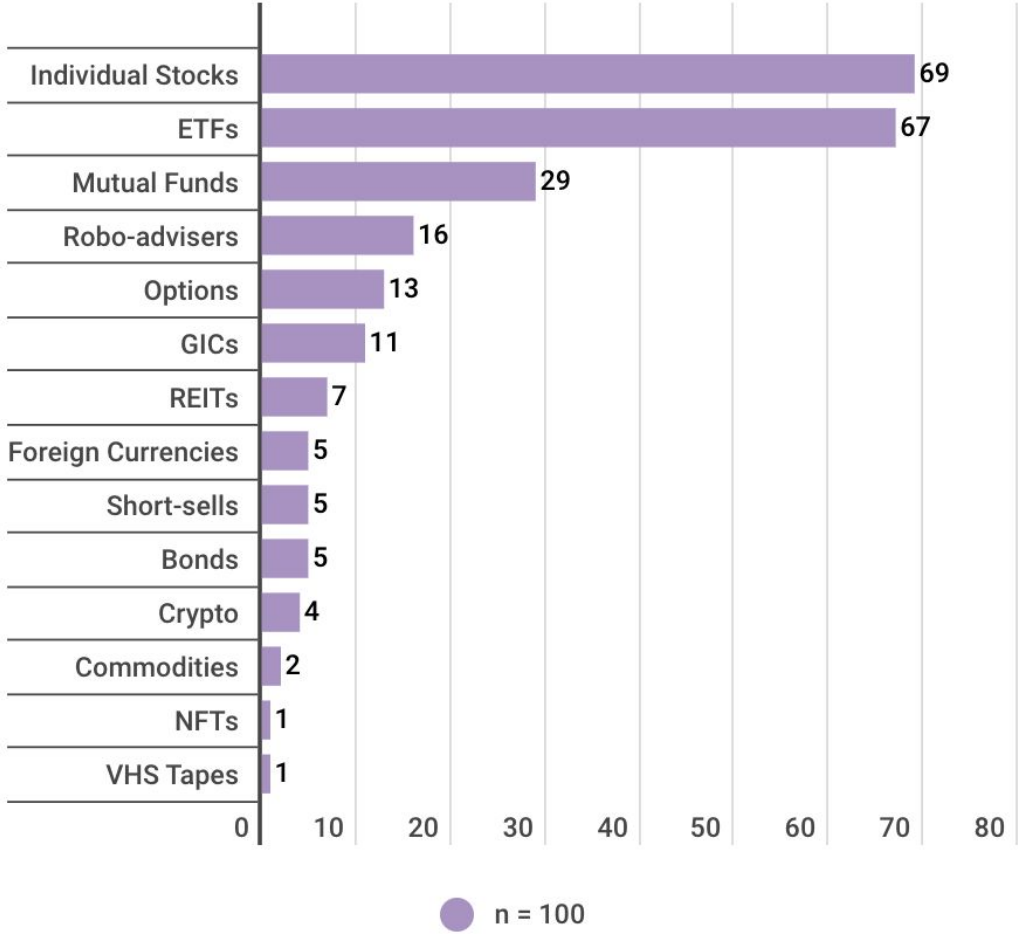
How often do you cook at home?

Editor’s note: To the people who cook everyday, please teach us your ways



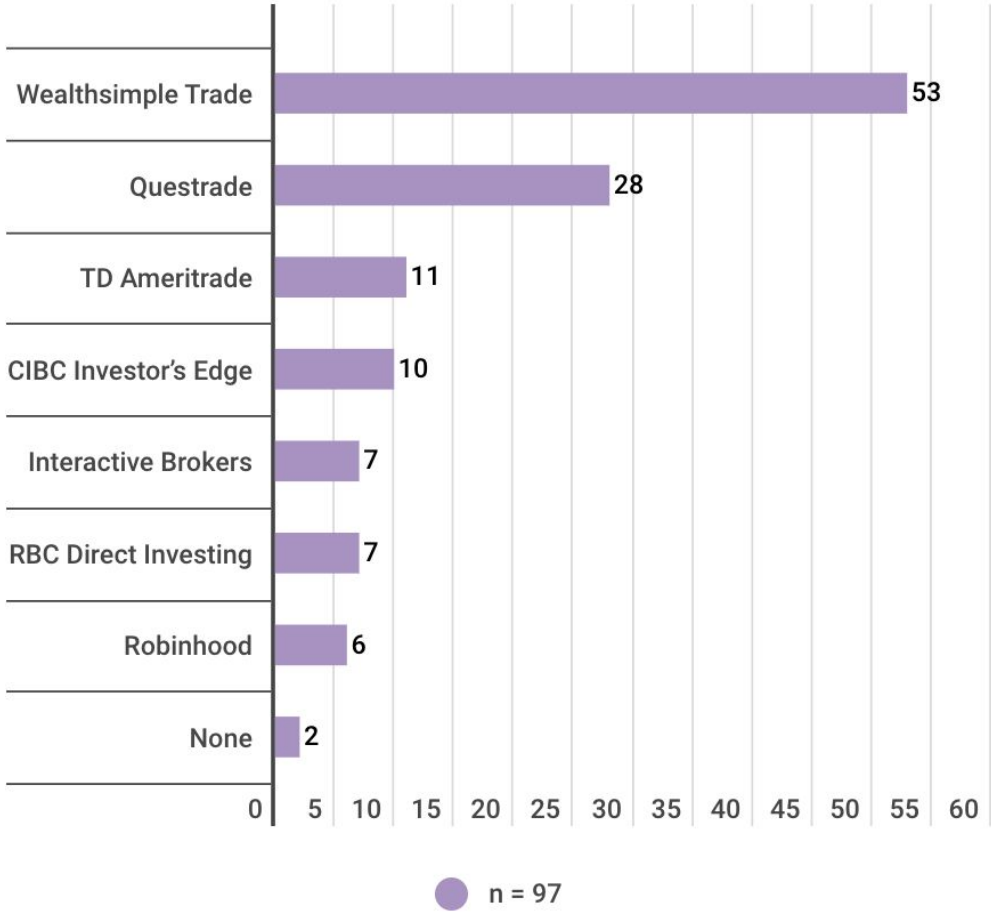
Financial instruments you have invested in

Not many people are a fan of buying JPEGs (#sorrynotsorry to all the people going to Coinbase)



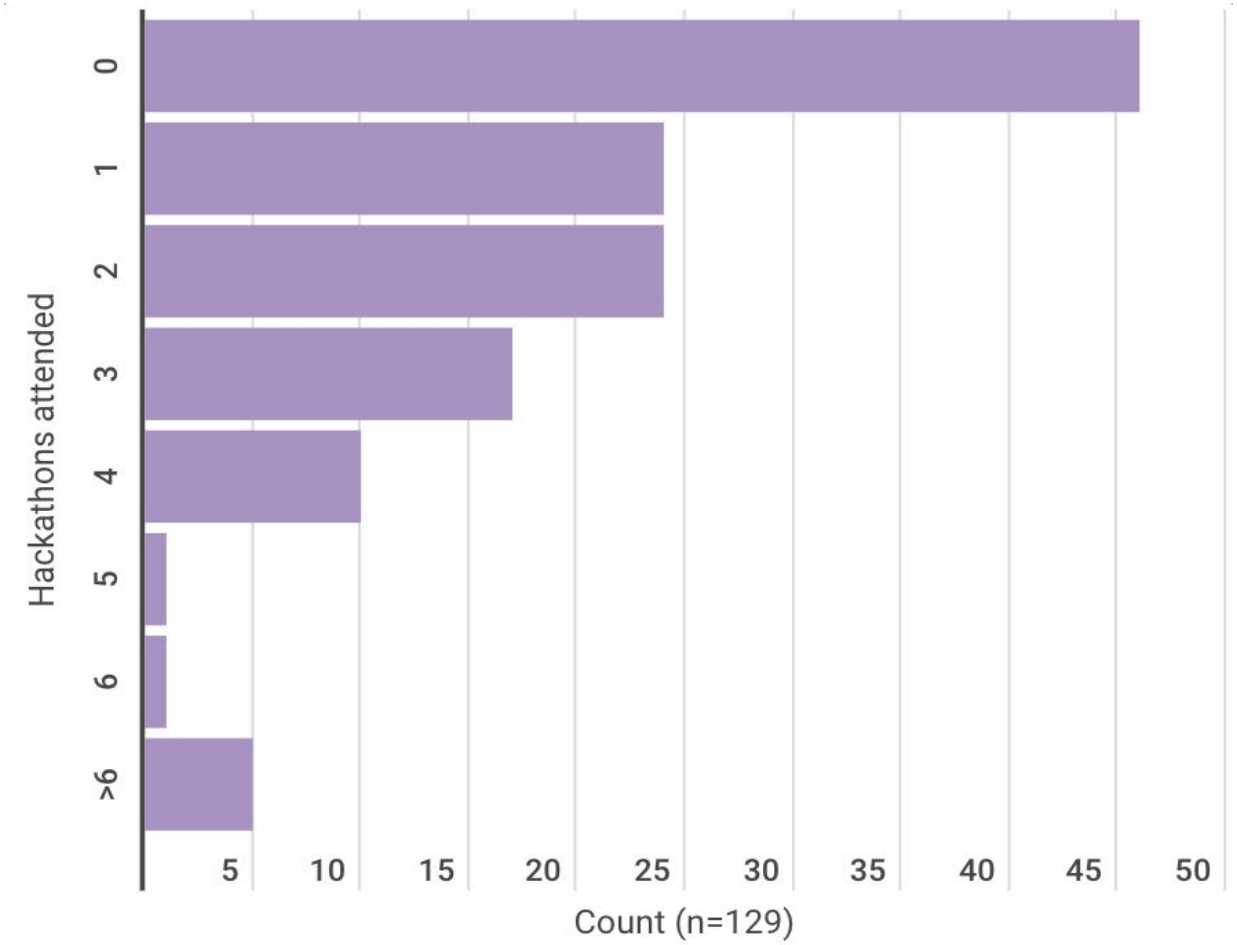
Financial platforms used to invest

It seems like Wealthsimple's free bubble tea marketing tactics worked after all!



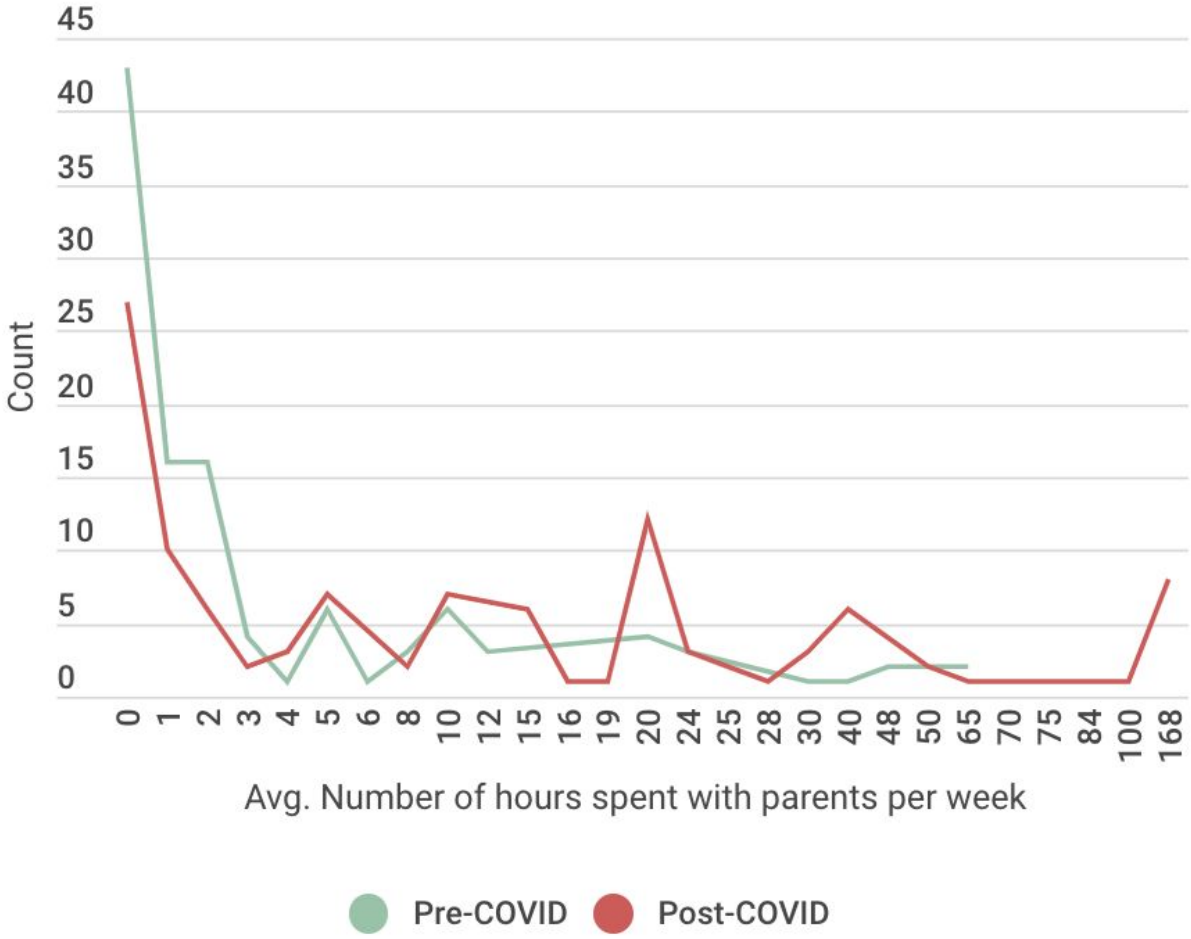
Hackathons attended

Most people enjoy sleep. Interesting to note that the average no. of hackathons attended is around 1.5, indicating many people have at least *tried* one.



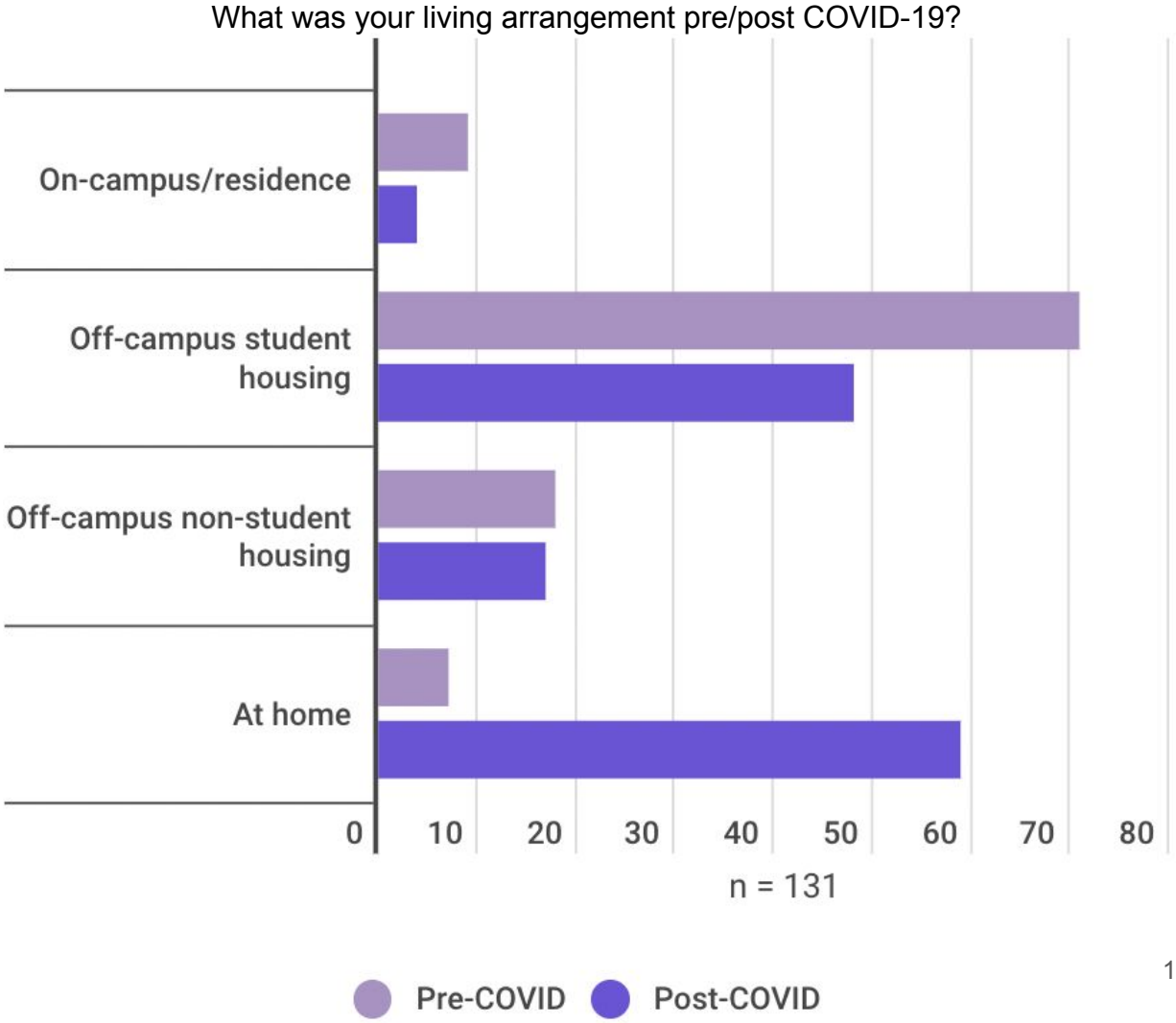
No. of hours spent with parents per week

It comes as no surprise that we starting hanging out more with our parents after COVID



Living Arrangement

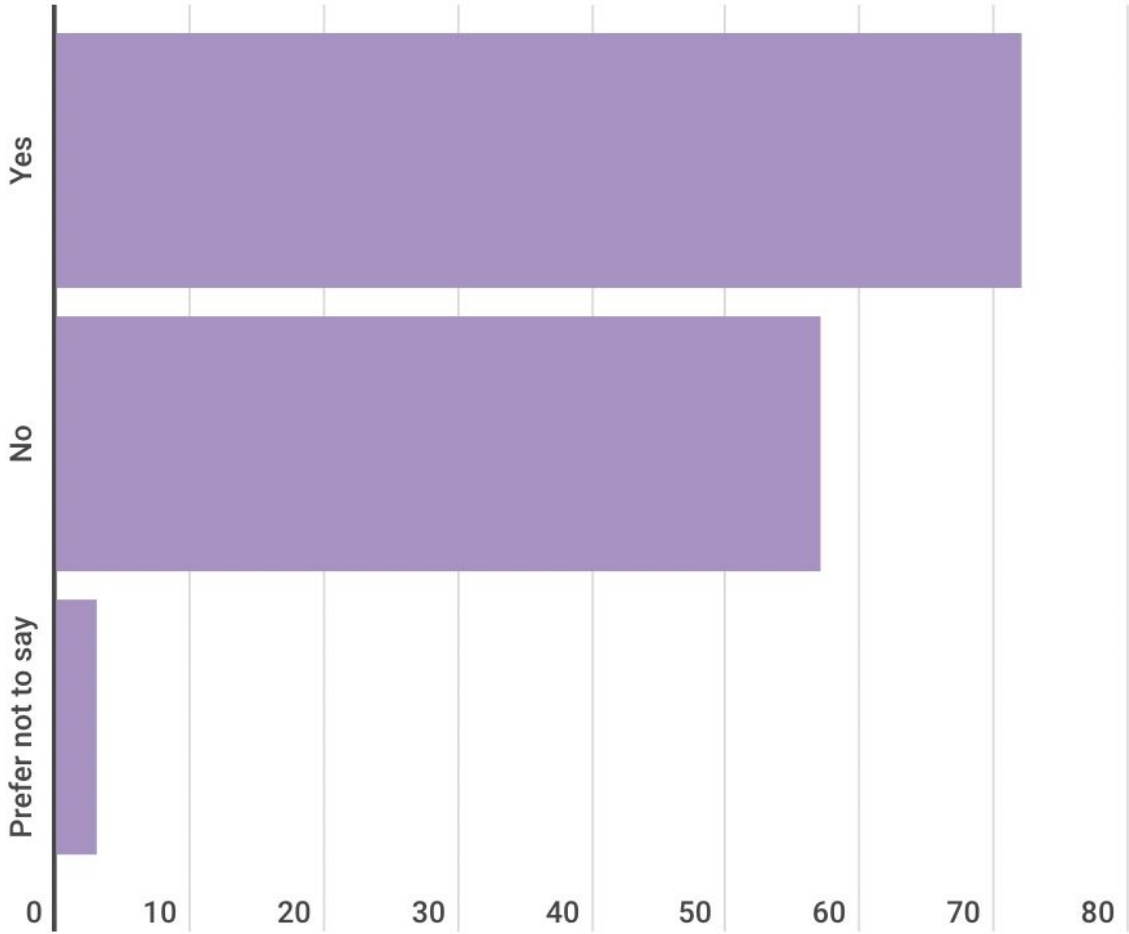
It comes as no surprise that more people started living at home after the pandemic.



Have you ever gone to a night-club?

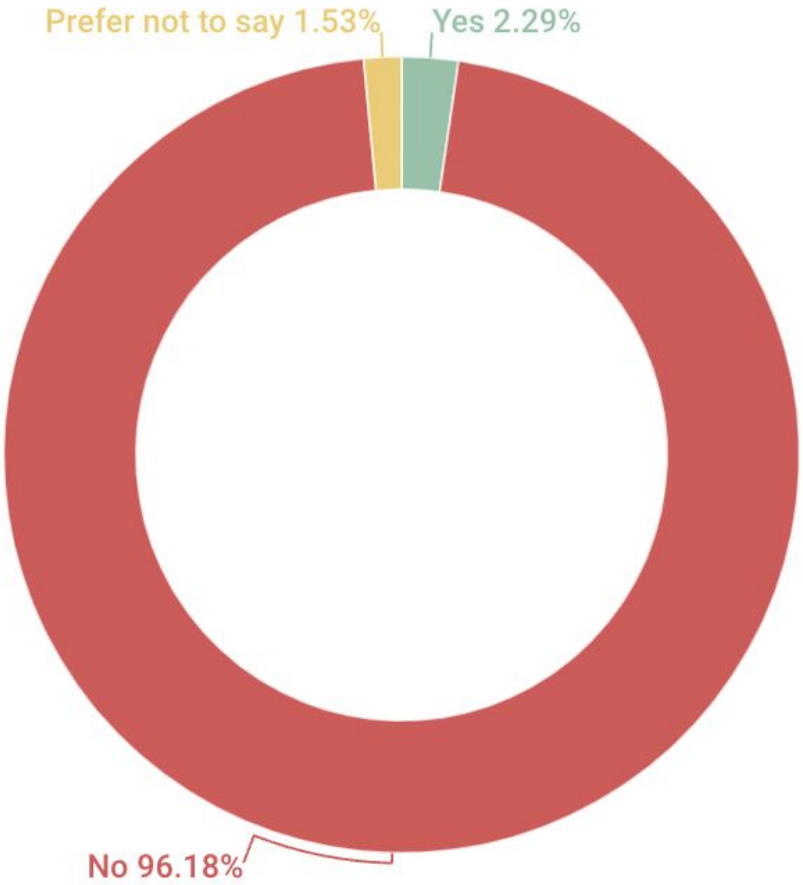
We know how to have a good time 🕺 💃

RIP Chainsaw



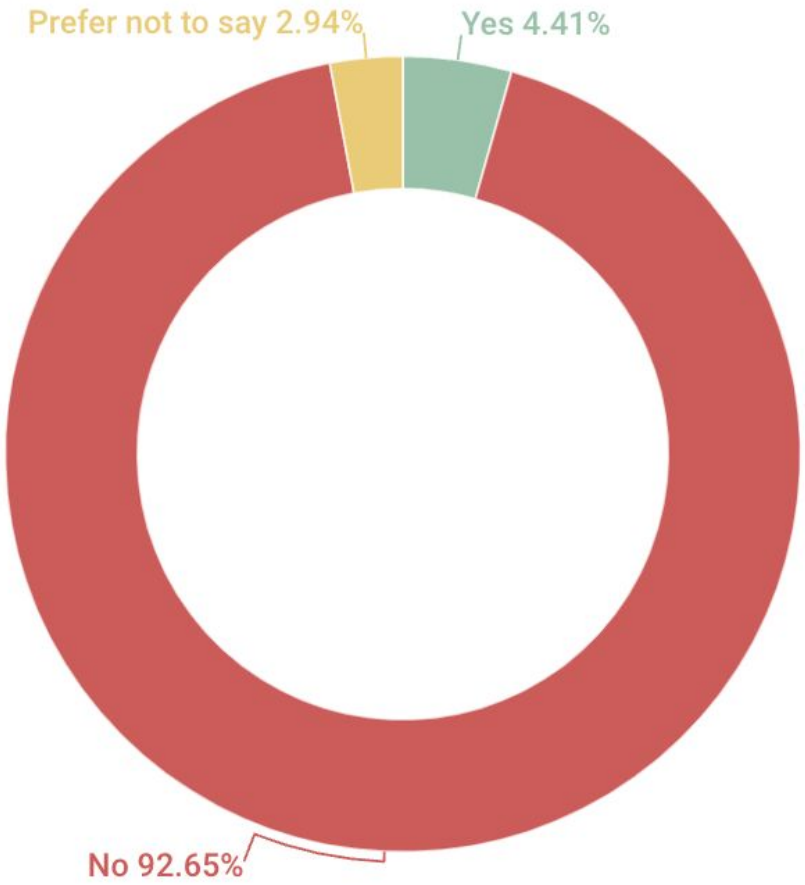
Have you ever been arrested?

We are moooostly good at obeying the law



Have you ever committed or have possibly committed tax fraud?

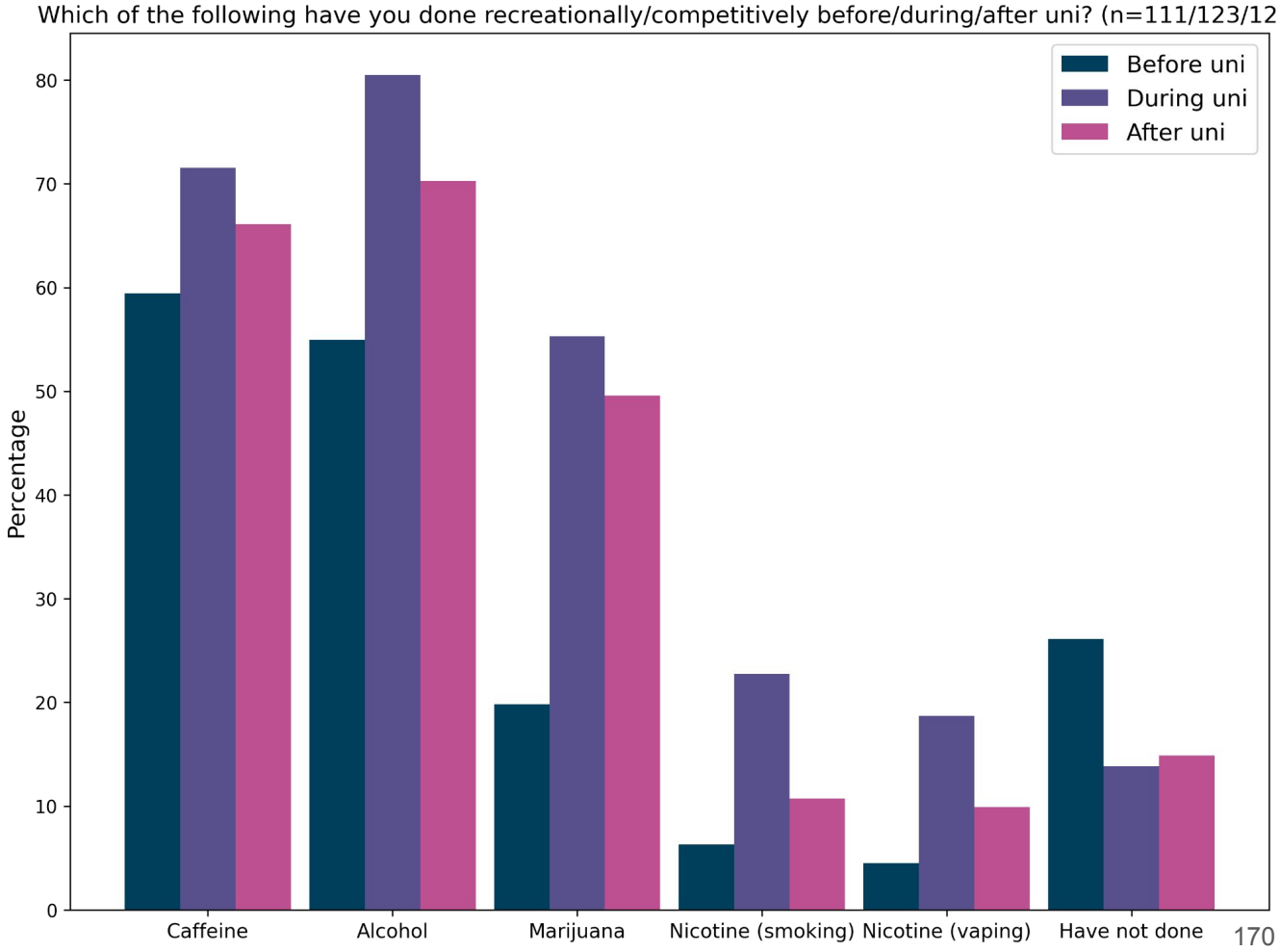
Let's hope the CRA doesn't read this...



Drugs Done Pt 1

University was a pivotal part of our lives in more ways than one 🚬🔥🌿

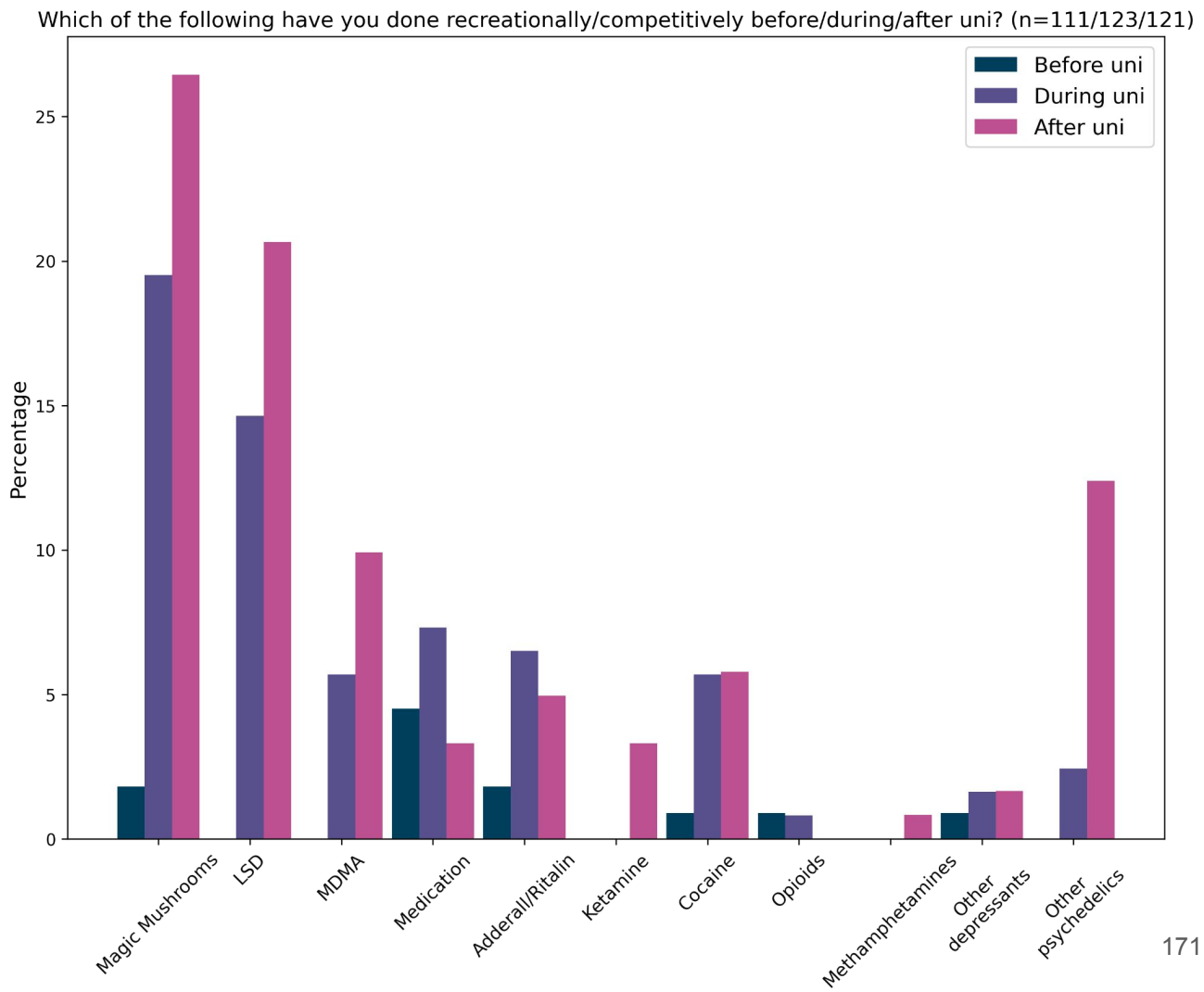
NB: “After uni” implies intent to do after university



Drugs Done Pt 2

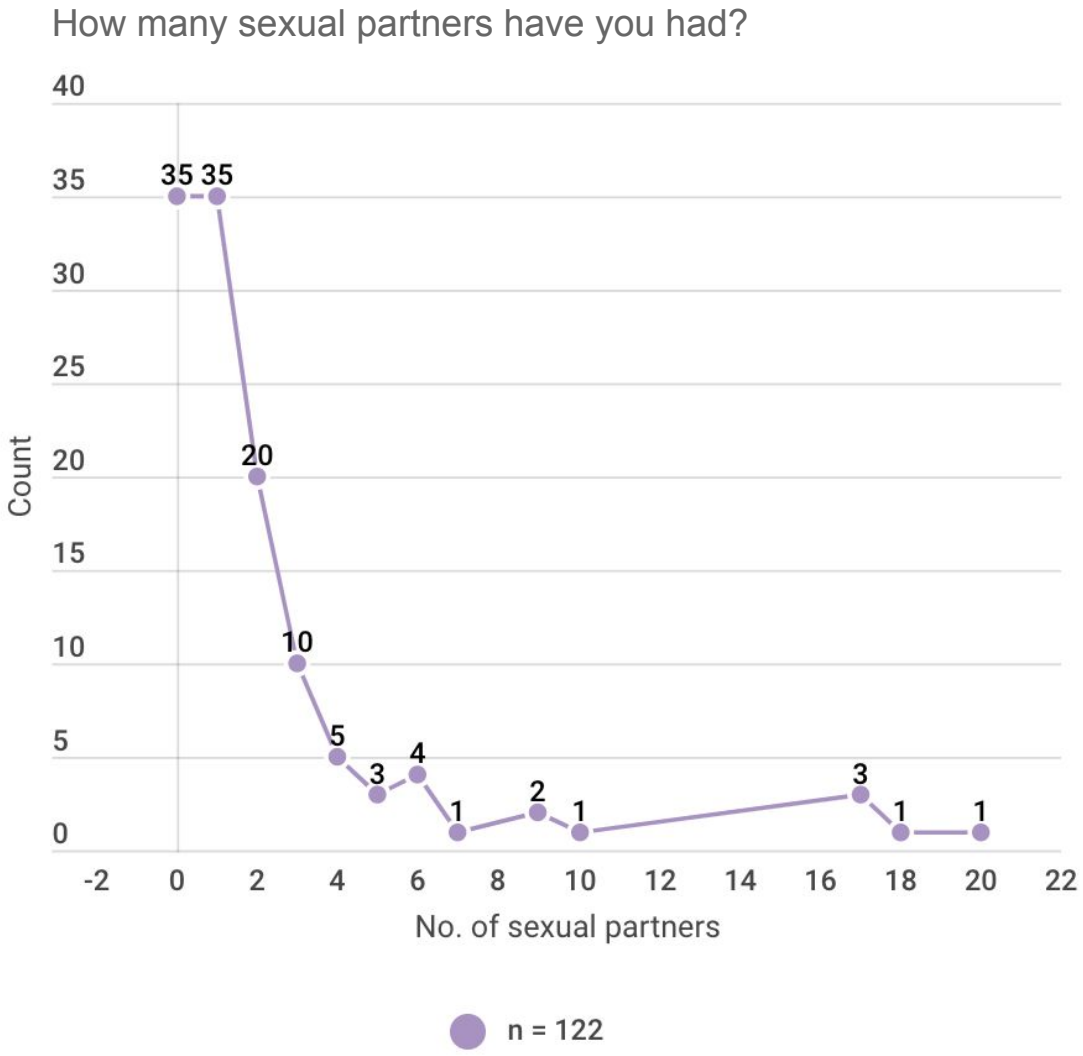
Let's get to erm ... shall we say ... more interesting drugs
🍄💠🍬💊🔑

NB: "After uni" still implies intent to do after university



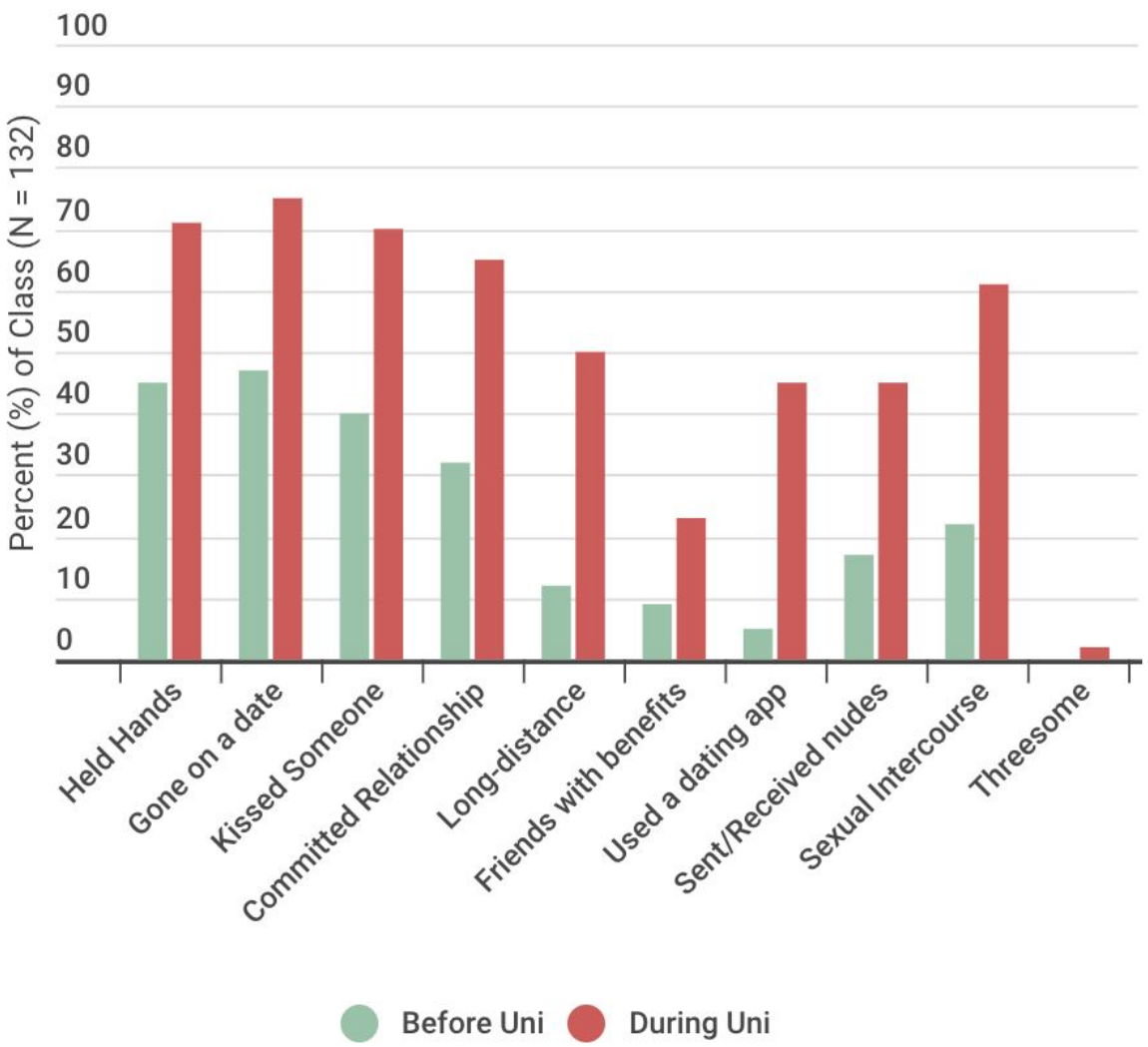
No. of Sexual Partners

Some stay more busy in the sheets than others. And yes, the horizontal axis starting from -2 was intentional.



Sexual Adventures

Does anyone even meet people the “old-fashioned” way? This page is most definitely not sponsored by Tinder.



Concluding Remarks

Happy/Sad stories from our time in ECE

There's no questioning that ECE was a rollercoaster. Here are some stories that of the good and the trying times from our class...

"In 1B every week or two we had a 124 lab due. Without fail, even though we started the lab ahead of time, the night before 8 of us were in a lab trying to finish it all night. Those campus pizza breaks at 2am during the summer term and the eventual figuring it out at 6am, getting two hours of sleep and coming back to the lab to demo were both sad but bonding moment of my degree."

"It's 1AM and you are still grinding it hard in one of the ECE labs with the team. Finally figure out the bug and go home at 4AM. The walk home is dark and peacefully quiet, enough to reflect on the hard day's work."

"2A ECE. After Peter Levine's brutal ECE 240 Midterm, a few friends and I went to McDonalds, got milkshakes and sat down and had them in silence to recuperate."

"Every on campus term since second year, after finals, my friends and I would go to Lazeez, get large half and halfs, then play smash bros/terraria until 3am :D"

"When things were still in person, I used to study in the rooms next to our lecture halls during exam time. When we were close to exams, my friends and I used to build paper airplanes and go up to the highest floor to throw them off to see who could get theirs the farthest. As the start, we were all pretty inexperienced building paper airplanes and no one really got far. But, as you'd expect with a bunch of waterloo engineering students, we competed to find the best design. I'm sure that some of the paper airplanes on the sides of the E7 atrium aren't from us, but a lot of them are."

"It's late, 2am? 3am? 4am? No matter, you've finished a lab. Was it ECE 252? 298? 327? I think you'll find it doesn't really matter. What's important is that you worked all night just to get it in, with your friends. It never seems like it comes together, but you always finish just in time. Maybe you go to McDonalds, maybe you grab some drinks, maybe you make muffins. It was a ton of work, but in the end we were glorious. This is the life. Thanks guys, it was one hell of a time."

Regrets from Waterloo

Hindsight is always 20/20 but the 🔑 is turning hindsight into future foresight. Maybe a future ECE student could benefit from this!

“Not involving myself more in school, like socially, design teams, academically, co-op wise... just wasting time on unimportant things when I know for sure I would have had a more fulfilling experience had I applied myself more. Done more design teams, made more friends in ECE, studied for better grades, not wasted time on things that didn't matter."

"A girl (not from our class) came to my place for programming help, I helped her. Then she said it's too late so she wanted to spend the night, I told her I don't have a second bed. Then she said my bed can probably fit two. Then I called an Uber for her. She blocked me the next day. I'm not cringing, you are."

“Caring too much about school, and grades, especially knowing that I would not be going to grad school, and that no employer would care about them. Not making enough close friends, and keeping better in touch with people especially during the pandemic when everyone was scattered”

"I regret not taking care of myself. It is so easy to neglect yourself when the atmosphere around you is so competitive that you end up feeling like you have to play catch up all the time. Not having enough fun :(“

“I regret not checking out more clubs or teams around the school more. I feel like I didn't get a good look at all of them and potentially missed out on meeting interesting people that I would get along with.”

“I regret not being my authentic self 100% of the time. I wish I had broken out of my shell much earlier than when I ended up doing so late in my university career. I was stressed about what others might think of me. I wish I had not tried to hide behind a mask of what I thought others expected of me.”

"I regret drinking and smoking so much in first year. I should have opened up and made friends."

Piece of advice for fellow ECE students

Gather ‘round kids and bring your notebooks and pens. We’ve learned a thing or two during our time here.

“Wherever you are, in whatever state you're in, you will always be with yourself, so try to treat yourself with some respect. Don't let other drag you down and don't make other people's happiness your happiness."

"Figure out what your end goals are and don't waste time along the way doing things that don't contribute to them. You don't need to pour hours upon hours into courses and try to get high marks if your end goal is simply to get a decent job."

“Your grades aren't everything, and chasing those last few percentages is not always worth it. Always be sure to set aside time to do something you enjoy, and try to meet as many people as possible."

"It's okay to take a break. Pick up a hobby. Distract yourself from the world and especially your work. You are all worth more than just your salaries or time or accomplishments; you are complex humans at the end of the day, and you contain multitudes."

"We all have crosses to bear. How we bear them, in large part, determines the way we look at life."

“Make sure you take a look at the flexibility and various options you have in terms of when and what courses you take over your undergrad (for example, you can take 2 PD courses at once if you want to get them over with quicker). There is a lot more leeway than you'd expect. That being said, make sure you have approvals for any changes from the basic ECE undergrad structure in writing so it doesn't bite you in the butt when you try to graduate.”

T’has been a ride y’all

In the wise words of 6ix God Drake, “started from the bottom, now we here.”

Congrats ECE CLASS OF ‘22 🥳🍾!!!!! We’ve made it after what feels like forever. And as our homie Dr. Seuss liked to say, “Don't cry because it's over, smile because it happened.” :)

References

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