

**ENHANCING THE PARTICIPATION OF UBC GEOLOGICAL SCIENCES
STUDENTS IN THE UBC SCIENCE CO-OP PROGRAM**

For

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ABSTRACT

Co-op Programs are getting increasingly popular as they provide a bridge between potential students and employers in the same industry. While students can gain valuable working experience, networking opportunities and chances to try out different industries, employers benefit from generations of quality short-term employees that can potentially become trusted full-time professionals. At the University of British Columbia (UBC), the Science Co-op Program is growing strong, but there has been a decrease in the number of Geological Sciences students for the past three years. This decrease can lead to generations of students struggling in finding suitable jobs and a decrease in well-trained long-term employees in the industry. This report explores the reasons behind this decrease and provides realistic solutions to the UBC Science Co-op Program: to change the program's image into a friendly-caring program that supports the students' growth and to provide more experience-sharing and relationship-building opportunities between students and employers.

INTRODUCTION

With vast developments in technology, economy, and society, the competitive job market has become fiercer than ever for new graduates. Hiring managers consider good academic performance and other aspects such as experience, skills, motivation, maturity, and attitude in a prospective young employee. Co-op Programs are well known to successfully bridge this educational gap by introducing the concept of work placements within post-secondary programs, where students alternate academic terms with working terms within their industry of interest.

UBC is known for the largest Co-op program in Western Canada. Although the UBC Science Co-op program has been growing steadily, the number of Geological Sciences students take part in the program has been decreasing for the past three consecutive years. The major implications of this problem are two: first, students will struggle to find suitable jobs after graduation; second, there will be a supply shortage of well-trained short- and long-term employees in the industry.

Thirty-nine UBC Geological Sciences students responded to a short survey designed to gauge students' interests and feedback on the UBC Science Co-op Program. Also, interviews were conducted with a UBC Science Co-op Advisor as well as two Human Resources (HR) Advisors in the industry. Based on examination of recent research, surveys, and interviews with UBC Geological Sciences students, Co-op Advisor and professional HR Advisors, this report aims to investigate the cause of the reduction in Geological Sciences students' participation in the Co-op Program and provide recommendations to the UBC Science Co-op Office.

This report covers three major topics: the industry's views (the nature of the job market, what makes the students stand out, and how the hiring process works), the students' views on aspects of the UBC Science Co-op program, and the Co-op advisors' views on the program as well as the relationship between students and employers.

This report concludes by acknowledging the decrease in participation of Geological Sciences students in the UBC Co-op Program and by recommending immediate and inexpensive solutions to enhance the participation.

DATA SECTION

THE INDUSTRY'S VIEWS

Many Geological Sciences students find employment in industries related to mineral, petroleum, and water resources; either in academia, field/laboratory settings or consulting firms. HR advisors Saoirse Carroll from Hatch Ltd. and Vicki Llyod from VEL HR Consulting expressed their views on the statistics of the current job market and their preference in hiring Geological Sciences short- and long-term employees.

The nature of the job market

The job market for Geological Sciences Co-op students or new graduates greatly depends on the specific industries that they are interested in. In many industries such as academia or consulting, job opportunities are more stable and less affected by external factors. For instance, in the environmental or consulting sectors, many employers hire co-op students and train them so that they can be rehired as full-time employees after graduation. This process is ongoing so that employers will have a constant supply of well-trained new graduates. On the contrary, mineral exploration or mining industry is strongly dependent on external factors outside of the companies such as market fluctuations, commodity prices, client investments, and weather. When the economy is good, companies get more work, which leads to more hiring of students and new graduates and vice versa. Hence, it is not feasible to train co-op students ahead of time. The mining industry also has a seasonal market in Canada – most drilling projects happen in the summer when the ice melts and the ground is exposed. Hence, there are usually a lot of job openings for

contract work ranging from four to eight months per year that students or new graduates can easily access without going through Co-op programs.

What makes a new graduate stand out

When looking to fill positions for new Geological Sciences graduates, apart from a relevant educational background, both HR advisors agreed that they have a high preference for those with previous Co-op or any related work experience while in school. Experienced new graduates are valuable to employers because they are more capable of adjusting to the challenges in a new working environment. These experiences demonstrate the new graduates' willingness to work hard and to take on responsibilities. Furthermore, in an extremely competitive market, those who can differentiate themselves from others will have a higher chance of getting hired.

How the hiring process works

It is becoming increasingly popular for companies in the industry to hire Geological Sciences students through Co-op Programs. All interested students must apply and pass the interviews with the Co-op Advisors before becoming students in the Co-op Program and getting access to internal Co-op job openings. Hence, the UBC Co-op Program acts as the first layer of screening applicants, which saves employers valuable time and effort. Moreover, employers can choose targeted students for specific positions thanks to the Co-op program. Once a job posting is sent to the Co-op office, it will be posted on the right platform that targets specific students. Due to all the benefits from the Co-op Program, many employers are choosing to only post short-term job positions for students through the internal Co-op website rather than on their company websites.

THE STUDENTS' VIEWS

Thirty-nine UBC Geological Sciences students responded to a short survey designed to analyze students' opinions and interests on the UBC Science Co-op Program. When asked about the importance of work experience during post-secondary education, students score an average of 88 with the scale from 0 as not important to 100 as very important, which suggests that most participants in this survey value work experience quite highly.

The surveyed participants range from first-year students to those who have already graduated. Of all students participated in this survey, 43.59% knew about the program but decided not to join. 35.90% are co-op students, most of them plan to or have finished the program while one-fifth of these students plan to or have dropped the program. The rest of the students show interest in the program, but either still waiting for admission, did not qualify or miss the deadline to apply.

The effectiveness of official/unofficial promotional methods

All thirty-nine participants in the survey knew about the UBC Science Co-op Program. Most students (74.36%) found out about the program through word of mouth from friends or professors. Official marketing strategies from the UBC Science Co-op Office come second and third, with 41.03% of students hearing about the program through events and 38.46% from the program's official website. Flyers and posters of the program are not popular within the student body (only 20.51%).

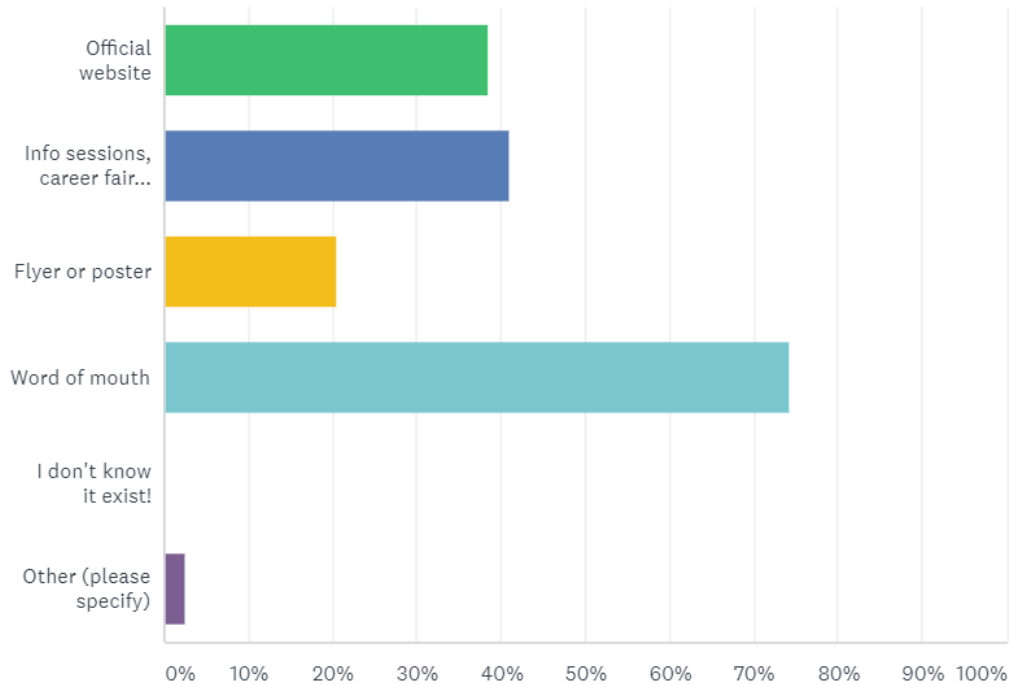


Figure 1. How Geological Sciences students know about the UBC Science Co-op Program

Word of mouth is believed to be the most effective way of getting Geological Sciences students to know about the program, even more effective than the official marketing strategies of the UBC Science Co-op Program. Over 70% of students in the survey are aware of the UBC Science Co-op Program through friends or professors. However, over 40% decided not to join despite knowing about the program. This finding has two implications. One, as word of mouth is a much more personal approach than traditional promoting methods, information through this channel is more valued by the audience. However, the information given might not be accurate or more negative than positive. Two, word of mouth can cause inaccurate assumptions of not only the UBC Science Co-op Program but also of the market and the potential employers. Three, even past or current co-op students, who joined for the benefits of the co-op experience, might have spread more negative than positive comments about the program. While 35.90% of the students who participated in this survey are past or current co-op students, only 17.95% do not

think there is any drawback in the program. In fact, all students participated think that the program can be improved.

How well students know about the UBC Science Co-op program

Thirty-seven participants responded to this survey question. The majority of them, 83.78% and 81.08%, know about the popular benefits of the UBC Science Co-op program: industry experience, networking, career exploration, broad job pool. An equal amount of students (54.05%) know that the UBC Science Co-op Program provides ongoing free supports for their students and has a one-time workshop fee of \$251.75 that covers Resume/Cover letter, Interview, LinkedIn Profile, etc. workshops for the entire program. A very small number of students (16.22%) are aware of the monthly income statistics for Natural Sciences (including Geological Sciences) Co-op Students, but more than twice of them (37.84%) know about the ratio of co-op fee vs. monthly income.

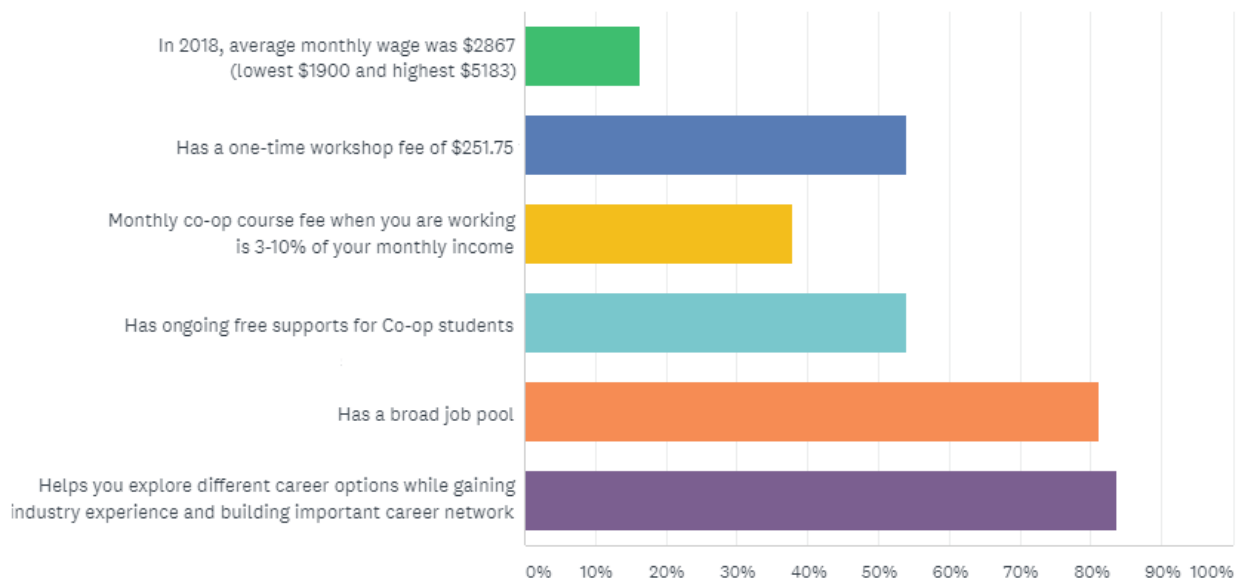


Figure 2. UBC Science Co-op Program facts that Geological Sciences students are aware of

Geological Sciences students are generally knowledgeable of the UBC Science Co-op Program's benefits and costs, whether they choose to attend the program or not. Most students when asked know

about the broad job pool, chances to explore career options, to gain industry experience and to build a professional network, or the ongoing supports that the program offers. However, students are not well aware of the possible salary of Co-op students in this field. This does not mean the students do not focus on the costs associated with the program: more than half of them know about the fees associated with the program while more than one third know about the ratio between co-op course fee and average monthly income. These data have two implications: one, income is not the most important thing for Geological Sciences students, and they are more willing to invest into the future through the Co-op program; two, they are more aware of the costs they have to put up front as co-op students than what they can be making.

Main drawbacks of the UBC Science Co-op program

53.85% of the students who participated in this survey are concerned about the delay in graduation (at least an additional year) if they participate in the UBC Science Co-op Program. An equal percentage of 38.46 of students are less interested in the program due to high program fees (placement fees, workshop fees, etc.) and are confident that they can find work experience without the Co-op program. 30.77% of surveyed students are not fond of the tight schedule of the Co-op Program. An 17.95% of students (data not shown on graph) did not have any negative experience with this program.

The UBC Science Co-op programs typically add another year to a students' degree. More than half of the students, when asked, are concerned about this delay in graduation and consider it as a drawback to the program. Many reasons can be associated such as financial, parents or peer pressure, or the belief in the positive correlation between on time/fast graduation and less competition in the job market for new graduates. Moreover, almost 40% of students who participated in the survey are confident that the student job market is not very competitive, and they can find jobs by themselves. However, the concerns of taking a long time to finish a degree and the confidence that they can easily secure job positions in the

industry can be incorrect. In fact, without the Co-op program, many students can't get relevant work experience while in school, and many new graduates might need more time than a 16-month co-op program after graduation to land a job related to their field.

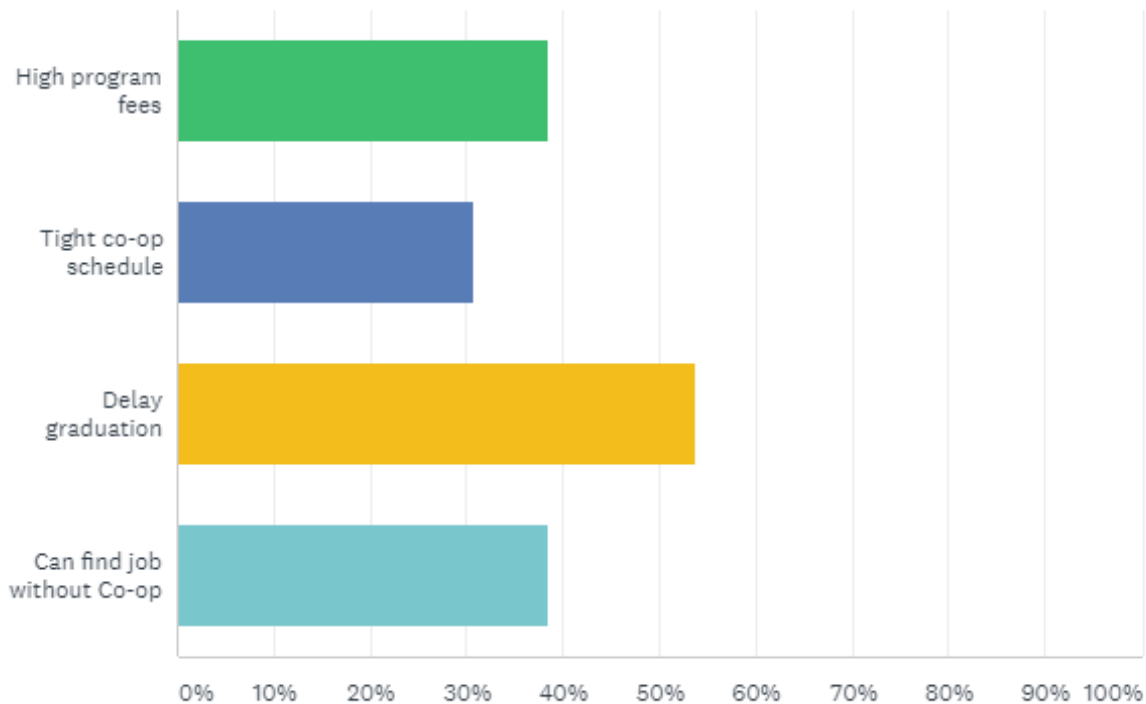


Figure 3. Main drawbacks of the UBC Science Co-op Program

Aspects of the program that can be improved

Most students are concerned about the associated fees and job opportunities in the UBC Science Co-op Program: 71.79% of the students want lower program fees while 64.10% want a wider selection of employers and job placements. Peer mentoring between previous or current Co-op students to new students has a popular vote of 46.15% from the participants. 20.51% of the student body hope to have more workshops and support from the Program. A small number of students mention better timing for information sessions, less selective in choosing students to be in the program, and a more persuasive argument from the co-op office and past students.

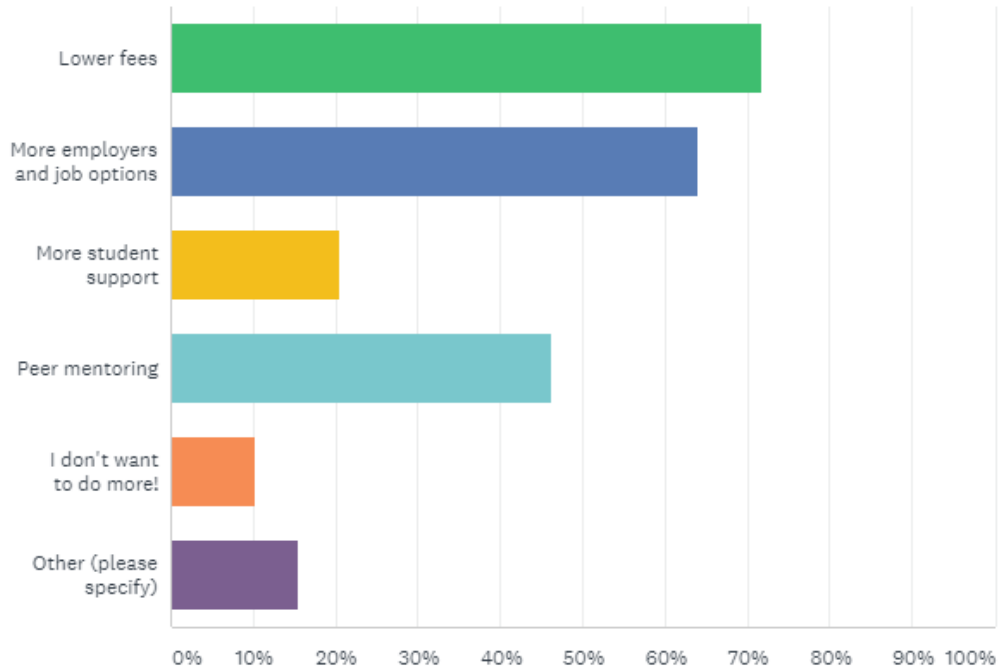


Figure 4. Suggestions for program improvement from UBC Geological Sciences students

THE CO-OP ADVISOR'S VIEW

What do the UBC Science Co-op Advisor think about the program and the relationship between students and employers? Geoffrey Anderson, former UBC Science Co-op Advisor and current Co-op Program Director at the University of Manitoba, expressed his view through a phone interview:

It is important that the students can see the values and appreciate all job opportunities that come along. One of the reasons why students enroll in co-op programs is to explore different career options through different job positions in different industries. However, many students are not attracted to “imperfect” job postings. These postings usually have some aspects that the students are fond of and some that they do not enjoy. For instance, a job opening might not be in the exact field the students want, or it is in a different city far away from home, or it does not sound like something the students are familiar with. Getting those first “imperfect” jobs not only give them insights into what they want to do in the

future but also help them “get one foot into the door” of potential employers. Over 80% of surveyed Geological Sciences students agree that the UBC Science Co-op job pool is quite broad, but over 60% of them want more employers or a wider variety of job options on the Co-op website. Perhaps being open-minded and courageous to take a risk in applying for job postings will benefit the students in the long run.

CONCLUSION

Summary and Overall Interpretation of Findings

More and more employers are choosing co-op program as a mean to access pools of quality students who later can become long-term employees. However, many Geological Sciences students are unaware of companies in stable industries that invest in early-preparation of quality new graduates through co-op programs. The popular industries such as research and mining are greatly dependent on external factors such as commodity price or annual funding, which hinders the stability of job opportunities for co-op students and new graduates. Students need to be aware that there are more opportunities out there that are not seasonal-dependent or market-dependent, and many of them are only accessible through the UBC Science Co-op program.

No major problem with the program’s promotional methods is found, but all survey students believe that the UBC Science Co-op program can be improved. However, the image of the UBC Science Co-op program needs a makeover. Students are not seeing all the benefits from the program or are mainly focusing on the negative aspects such as delay graduation or high associated fees. Word of mouth has proven to be a double-edged sword in delivering information, which can lead to the spreading of inaccurate information to new prospective co-op students. The benefits that the program brings, such as wide job pool or chances for students to gain different industry experience, are not enough. It is possible

for students to get summer or contract jobs that are not within a co-op program. It is crucial to showcase how the UBC Science Co-op program genuinely cares about the success of the students to increase the number of students joining the program.

Recommendations

In light of the findings from surveyed students, interviewed HR advisors and Co-op Advisor, please consider the following recommendations to improve the participation of Geological Sciences students in the UBC Science Co-op program:

- Change the promotional image of the UBC Science Co-op program (on the website, flyers, and posters):
 - Focus more on the positive (benefits of the program) and less on the negative (fees associated, time-consuming, etc.).
 - Break down the fees into more detailed sub-sections.
 - Explain the rationale behind this extra year of co-op and how it can save students more time in the long run.
 - Better convey to prospective students that admission is not strongly dependent on external factors, such as grade, past experiences, skills, or certifications. Emphasize on internal, valuable, unteachable traits: hard-working, the ability to take the initiative, responsibility, etc.
- Provide more information to current Co-op students and increase their awareness in the status of the job market (e.g., which field is hiring a lot this year) or expand their job options (e.g., Geological Sciences students can also do Geotechnical work in consulting firms).
- Show genuine interest in supporting and helping the students, or in other words, “It’s okay to fail, as long as you want to improve, we are here to help.”:

- Understand that most students are only academically-ready but not working-ready.
- Show willingness in putting more effort in bringing the students up to employable standard with transferrable skills (e.g., how to ace interviews or how to convey themselves better through application packages).
- Create a peer mentoring program:
 - To past or senior co-op students, this is a good way of giving back to the program.
 - To new students, hearing direct tips from previous students in the same field can be eye-opening and help them better prepare for the co-op journey.
- Host more events that incorporate the employers (e.g., industrial mixers):
 - Employers can get to know prospective co-op students even before they apply for the job.
 - Students can explore what kind of jobs are out there and what are the culture or the people at prospective companies, which will help them narrow down what they want to do in their co-op program.
 - Save time for both the employers and the students: the employers can find students that they really like while students are matched to employers or positions they really enjoy.

WORK CITED

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