



UNIVERSITY OF CALGARY | Office of Experiential Learning

EXPERIENTIAL LEARNING (EL) IN THE 2020 NATIONAL SURVEY OF STUDENT ENGAGEMENT (NSSE)

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EXECUTIVE SUMMARY

This document summarizes and contextualizes student data on experiential learning (EL) activities as reported in the University of Calgary's 2020 National Survey of Student Engagement (NSSE) data in order to:

- help contextualize what first- and senior-year students surveyed in NSSE are saying about EL
- highlight the EL activities that students report being most impactful to their experience
- highlight how our campus community could further strengthen EL opportunities and priorities for EL as outlined in the institutional [Experiential Learning \(EL\) Plan \(2020-25\)](#).

Student responses to NSSE revealed that they valued EL activities such as co-op, internships, clinical experiences, senior-level capstone courses, research with faculty, study abroad, field schools, volunteering, and co-curricular experiences. Respondents suggested that participating in these EL activities pushed them beyond their comfort zone, helped them develop professionalization skills and career readiness, increased their intercultural skills, and helped them become better collaborators and team members. Responses also identified students' perceptions of the importance of meaningful mentorship as a core component of their EL experiences.

UCalgary has a strong EL tradition with many opportunities firmly established in academic programs and co-curricular contexts. However, a key barrier identified in student qualitative responses was lack of access to and availability of EL activities during their program of study. Lack of access was often associated with challenges related to finances, academic scheduling, and time. Some students also struggled with identifying and seeing themselves within the EL opportunities offered. The NSSE quantitative data showed that many first-year respondents (~40-70%) intended to complete an EL activity during their program of study. However, far fewer (~15-50%) of senior-year respondents indicated that they had completed an EL activity. This "gap" in intention versus completion in EL activities between first-year and senior-year NSSE respondents was particularly large for activities such as study abroad and research with faculty but narrowed substantially for EL activities that are more commonly embedded in academic programs such as internships, field experiences, or senior capstone projects.

Below are recommendations to help expand EL at UCalgary, as summarized in the student responses to the 2020 NSSE:

- Work-integrated Learning (WIL) is a great opportunity that students want to undertake, but there needs to be more opportunities available.
- Further development of EL is required as an intentional component embedded in academic programs, curriculum, and program learning outcomes.
- More EL opportunities should be incorporated in first- and second-year student experiences.
- Greater alumni participation should be incorporated in WIL related initiatives.
- More focus is needed to understand and improve equity and inclusion for EL opportunities.
- Students want an improved focus on skills articulation in the courses and program curriculum.
- There is a need to strengthen EL awareness, resources and training for academic advisors and course instructors.

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INTRODUCTION

National Survey of Student Engagement (NSSE)

The National Survey of Student Engagement (NSSE) collects information from students studying in undergraduate and four-year degree-granting colleges and universities in North America to assess their levels of engagement and their post-secondary experience. The survey is administered by the Center for Postsecondary Research, Indiana University, in close collaboration with the University of Calgary (UCalgary). The NSSE survey is targeted to first-year and senior-year students. NSSE results are used for institutional improvement, public reporting, and ultimately to enhance students' learning experiences.¹

High Impact Practices (HIPs)

High Impact Practices (HIPs) are those undergraduate activities that have a positive association with student retention and engagement. The NSSE survey asks students to respond to [six separate HIP](#) activities to measure how engaged and enthusiastic students are about their university experience. HIPs include:

- Service Learning
- Learning Community
- Research with Faculty
- Internship or Field Experience
- Study Abroad
- Culminating Senior Experience

HIPs are those activities that “are developmentally powerful because they require applied, hands-on, integrative, and often collaborative learning experiences” (Kuh, O'Donnell, & Schneider, 2017, p.9) and are often experiential such as service-learning, internships, capstone courses, study abroad and undergraduate research and are associated with student engagement and deep learning. Out of the six HIPs that NSSE reports on, five of them are also considered EL as they encourage hands-on learning and learning by doing. UCalgary defines EL as (UCalgary, 2020):

Experiential learning (EL) is learning-by-doing that bridges knowledge and experience through critical reflection. EL activities are intentionally designed and assessed. As such, they empower learners to enhance individual and collaborative skills such as complex problem solving, professional practice skills, and teamwork. Reflecting critically on these activities helps individuals develop higher order thinking to challenge and advance their perspectives. The EL process prepares students to take on roles as active citizens and thrive in an increasingly complex world.

HIP practices, like EL activities, support enhanced student engagement, increased career readiness after graduation, and an improved civic consciousness (Eyler, 2009; Kuh, 2008; McRae, 2015). Further benefits include increased academic, professional, and interpersonal skill development, enhanced

¹ Please refer to the [Institutional Report](#) for an overview of the University of Calgary's NSSE results.

personal learning habits, greater employability, and self-concept (Freestone, Thompson & Williams, 2006; Drysdale & McBeath, 2012). HIPs are also resource intensive for both staff and students and often encourage learning and experiences beyond the classroom and program requirements.

Figure 1 EL categories at UCalgary with examples



In addition to the EL categories and examples, UCalgary’s [EL Plan](#) also outlines three main priorities for EL at UCalgary. These include:

- Expand Capacity and Reduce Barriers
- Increase Student Opportunities
- Track and Ensure High Quality EL

Hearing how students experience EL activities across UCalgary and how these experiences impact their learning can help inform institutional strategies that will address these three priorities. UCalgary also wants to ensure that students, faculty and staff have access to high quality EL opportunities where EL is intentionally designed, assessed, and embedded in programs and courses. Student responses to EL activities are one way to further understand the role that EL plays in providing students with a meaningful and enriched university experience that prepares them for future academic and professional endeavors.

This document contextualizes UCalgary student experiences with EL activities and will:

- Help contextualize what first- and senior-year students surveyed in NSSE are saying about HIPs and EL and how it impacts their learning
- Raise awareness about EL activities that help student learning
- Highlight how our campus community could further strengthen EL.

METHODOLOGY

For this report, we used NVivo software to complete direct word search queries for 29 terms related to EL². The words searched were pulled from two open-ended questions within the NSSE 2020 survey qualitative data, question 1 (Please describe the most significant learning experience you have had so far at this institution) and question 3 (Is there anything your institution could have done better to prepare you for your career or further education?). Question 1 had responses from both first- year and senior-year students, while question 3 was only distributed to senior year students. All student responses containing one or more of these terms were included in this initial data set. These responses were then closely analyzed to ensure direct alignment with EL activities identified in the EL Plan. If they were not directly relevant to EL, they were removed from the report. A total of 2340 responses were included in the final data set.

Once the keyword coding was complete, we reviewed the data set to summarize student perspectives around how EL factored into their most significant learning experiences and what improvements the institution could address to help more students access EL or to help further enrich the EL activities that students engage in. Listed below are the guiding questions that informed this stage of data analysis:

- What EL activities do students find the most meaningful?
- How does EL impact student learning?
- Are there differences between first year and senior year in access to and completion of EL?
- What are some of the challenges in the EL landscape at UCalgary?

In addition to the qualitative data set, we also summarized the quantitative data from the three institutional NSSE reports – the NSSE 2020 High Impact Practices Report, the 2020 NSSE Custom Snapshot Report and the NSSE 2020 Multi-Year Report. These three NSSE documents were consulted to help provide a statistical snapshot of how UCalgary was performing in the context of other Canadian and Alberta universities as well as to see the comparison between what first-year students rated as EL they were intending to complete versus what senior-year students said they complete. A review of data from

² Terms searched in NVivo: Abroad, Capstone, Career, Clinical, Co-Curricular, Collaboration, Community, Co-op, Employment, Experiential, Field, Group, Hands-on, Honours, Industry, Internship, Job, Lab, Life, Network, Practical, Practicum, Real, Reflect, Research, Skills, Teach-myself, Team, Volunteer

all three NSSE reporting periods (2014, 2017 and 2020) was also helpful to review UCalgary's progress at improving students' experiences of and access to EL activities.

FINDINGS

This section of the report will explore three main themes that arose from an examination of the institutional quantitative and qualitative data sets: Most Impactful Activities, Barriers to EL and Expanding EL at UCalgary. The first theme, Most Impactful Activities, describes what EL activities students perceived to be the most meaningful and impactful to their learning. The section Barriers to EL utilizes both quantitative and qualitative data to show that although students have an awareness about EL activities, engaging with them, and completing them is sometimes problematic. The final theme, Expanding EL at UCalgary include student responses recommending how UCalgary could be doing a better job of helping students access and complete EL activities.

Most Impactful EL Activities

Both NSSE quantitative and qualitative data show that for senior-year students the EL activities that were most meaningful were the ones that either allowed them to develop career-based skills, like co-op or internships, or were the ones that allowed them to take their learning beyond the classroom, like applied research programs, community-based research, or study abroad. Many students described the fact that learning beyond or outside the classroom impacted how they learned and that the 'hands-on' learning was, as one student said, "much more useful than classroom information." One student suggested that "Hands on learning has been the best experience. Any time in the lab, any time on field trips, any time applying topics in a way industry uses." Students also suggested throughout the qualitative responses that they want their learning to be relatable and want to be able to connect what they learn in a classroom to their real life. Another student suggested that "Being able to use skills in class and apply that information to real life experiences allowed me to gain a significantly large understanding of how things work in real life. In this case, it was for the court system in Calgary."

Many students were very specific in their responses to how particular EL opportunities impacted their learning. The next section is organized around those activities that received the most discussion in the qualitative data set:

- Co-op, Internships, and Clinics
- Senior Level Capstone Courses
- Research with Faculty
- Study Abroad and Field Schools
- Volunteering and Co-Curricular Experiences

As well, students highlighted that the mentorship that developed from these EL activities also had an impact on their learning experience. Though not directly an EL activity, mentorship is often an outcome of rich, meaningful EL experiences.

Co-Op, Internships, and Clinics

Students who commented on WIL-type EL had a lot of praise for their experiences and many students said their co-op, practicums and internships helped them ‘develop more confidence,’ ‘[were] valuable,’ and ‘pushed them out of their comfort zones.’ One student likened both co-op and their capstone project as providing them with “opportunities that help us apply critical thinking to problem solving and provide opportunities to think outside the box.” Another student commented that although participating in co-op was the best at honing their professional skills, the experience was also significant in that it helped with their academic performance once they returned to course work:

I found I learned the most through hands-on work experience through the co-op program. My academic performance increased substantially upon returning from a 16-month co-op term. I believe you get more out of the course content and are able to learn more efficiently as a result of work experience. I also find the best way to succeed in school is to have a strong understanding of your profs perspective, put your own perspective aside in order to complete assignments from their perspective to secure the best mark.

Students also commented on the fact that hands-on learning doesn’t have to be formal WIL programming but could also be as accessible as having guest speakers visit or hearing about different career options in their academic classes. One student suggested that “having professionals from different fields was really helpful to my learning. These guest speakers helped me learn so much about the ‘real world’ rather than simply writing about things I have just read about.” Other students suggested more networking events where they could talk to professionals from their fields to understand what such a career entail. Field trips were also touted as being a good hands-on learning experience and students described them as ‘valuable’ and as opportunities to see how to apply topics the way the industry expects. Students want to be able to make career connections not just by sitting down with a career advisor but by networking with professionals. Clinics and internships were also lauded as great learning experiences; one Nursing student explains how their clinical placement and the Nursing program in general “was the best learning experience I had. From nursing I learned a lot of concepts such as teamwork, leadership, hardworking, and most of all how to critically think in clinically to solve problems and provide best care for patients.”

Senior Level Capstone Courses

Hands-on learning is also significant to many students as they engaged with senior level capstone courses and would often compare the skills learned in these capstone courses as professional development. Students describe the capstone project as ‘exciting,’ ‘relevant to career readiness,’ ‘practical,’ ‘feels like an actual job,’ and ‘gave me confidence.’ One student described the process of doing a capstone course and related it to the development of their overall work ethic:

The most significant one for me is learning the concept of hard work, for the first two years of my degree my grades were okay. But after I took my capstone course it was a different experience that required a different level of work, it showed me how to think about what I was writing about and that if I put enough effort in I would be proud of it in the end. This has carried into my life outside of school as well establishing that work ethic is extremely important if your looking to get something positive out of your life experience. Very few people right now want to put the effort in to get what they want and try to cheat their way to success or they just

give up and in most cases it just ends up making their life harder for themselves both inside and outside of university.

Research with Faculty

Undergraduate Research, a key form of EL at UCalgary, was also touted as one of the most meaningful activities and one that had a high impact on student learning, especially as it allows students to develop those HIP competencies while also working with and being mentored by a faculty member. As one student suggests, “The most significant learning moment I have had so far is conducting my own research project. I’ve been able to complete all the skills that I have developed throughout my degree, and I am able to put them to use while answering my research question. It is effective because it prepares me well to do research in the future.” Another senior-year student engaged in undergraduate research said it was the most significant learning experience because they learned a lot about “teamwork, leadership and research problem solving that has significantly enriched [their] degree.” These competencies can also be gained with research projects that take place outside of labs. One student who participated with the iGEM team that travelled to Boston to present there, described this opportunity as the mash-up of an international science fair and an engineering competition:

This work was part of a MDSC [course x] course. We completed a project over the summer that placed 2nd in the competition last fall. Overall, the experience was unparalleled in my degree, and it taught me crucial skills in teamwork, leadership, community engagement, entrepreneurship, and research that I wouldn’t have otherwise gained in my degree. Without the research skills that I learned; I would not have been successful in my thesis project as I did not feel adequately trained in my course work. The soft skills that I learned are also going to be essential in my future career.

Students also saw applied research programs as helping them see themselves as a future researcher. One student suggested that being involved in the Program for Undergraduate Research Experience (PURE) led them to consider a future graduate degree. “My Program for Undergraduate Research Experience (PURE) Award with [Academic Staff x] over the summer of 2019 where I had the opportunity to work with [them] on a research project of my choosing. It solidified my interest in pursuing a thesis with [Academic Staff x] during my Master of Strategic Studies.” Another student suggested that research work in a Zoology lab helped develop, not only career readiness but also gave them the confidence as a future researcher:

My most significant learning experiences were in my zoology classes (ZOOL [course x], [course y], [course z], [course a], [course b] taught by [Academic Staff x] and [Academic Staff y]. These courses provided me with hands on learning experiences in the lab. They taught me laboratory techniques that will be applicable to my future career (dissection, microscopy, DNA extraction and PCR). I was challenged by the material and the assignments in a truly engaging way. Here I learned how to properly research topics and synthesize large amounts of information. These courses built my confidence as a science student and as a future researcher.

Study Abroad and Field Schools

Some students saw meaningful learning happen when they physically left the campus on study abroad programs. Often these experiences were described as helping them with not only their intercultural and interpersonal development but also with their professionalization. One senior-year student indicated that study abroad, “teaches you a lot more than what is just in a course outline. I have also learned to be independent and work on my own before trying to collaborate throughout my overall degree, due to the setup of UofCs structure.” Other students suggested that field schools were a combination of professional development and interpersonal skills acquisition:

Field schools have been an amazing part of my development, both personally and professionally. I was able to obtain relevant field skills, research experience, relevant experiences in differing weather conditions, while also learning how to work well with others, conduct research, and grow as a person as well as my interpersonal skills. My field courses have really made my degree amazing, especially the Environmental Science faculty OVER ALL (still had some issues with specific instructors in one field course [course x]), but my initial field course ENSC [course y] conducted by [Academic Staff y] was AMAZING and a large part of why I want to pursue research.

Volunteering and Co-Curricular Experiences

Learning beyond the classroom also applied to volunteer and co-curricular opportunities as well. Some students saw volunteering ‘hands-on’ experiences and learning in the co-curricular space as having an impact on their learning. A first-year student said that for them, “in class discussions and extracurricular volunteering out in the community” were the two most significant learning experiences they had at UCalgary. A senior-year student said volunteering in a clinic helped them develop their confidence with their chosen career. Another student partnered their internship experience with club involvement and volunteering as helping them discover who they are as an individual, “The ability to apply my knowledge learned in classes and laboratory into a workplace environment (internship) and improve upon my social skills (club involvement, volunteering) to develop a more balanced lifestyle and discover my strengths and weaknesses.” Some students were very specific with identifying the volunteer experiences that helped hone their learning outcomes. One student suggested that work done with the Leadership and Student Engagement Office and volunteering in residence impacted their development in “conflict management, working in diverse teams, how to be an effective public speaker/leader.”

Students were also quick to point out when they didn’t have access to volunteering or extracurricular activities and suggested that this impacted their experience at UCalgary. One student wanted “more information and resources as to where you can volunteer or get some work experience in your field in undergrad.” Another student suggested that having relevant volunteer experiences would have helped them see how their degree program is connected to world of work:

I think that there is a lack of opportunities for students to gain practical experience in their field for example my degree did not have the option for a coop program and often I felt lost in finding relevant volunteer and work experience that related to my degree.

Mentorship

Though mentorship is not a specific EL activity, the prevalence of it impacting student learning during an EL activity was noteworthy. Students spoke to how powerful it was to have an instructor take an interest in their learning. “I have learned how much professors can influence your learning. Throughout my undergraduate degree I’ve been exposed to all types of teaching styles and the professors that resonated with me were the ones that genuinely enjoyed teaching the students” and this often helped them feel more accepted by the university community or gave them confidence to excel in their chosen discipline. Some students suggested that having a professor take an interest in their work early on in the program really impacted how they progressed throughout their degree:

Early in my studies, a professor offered to read over my work. I took advantage of that and it set the stage for my future performance. I was fortunate to connect with a number of professors and that encouraged me to complete the honours program. The research I did contributed to writing with a criminal lawyer and working at the Law Society of Alberta.

Other students connected the notion of “caring” to feeling confident in the work they were doing with their research projects. Such students compared that level of confidence to the confidence they gained from more work-integrated settings like clinics:

The most significant learning experience is to be connected with a caring, competent professor that supervised my undergraduate research projects. [They] helped me build up my professional confidence in my research abilities. As well, volunteering in clinical settings has really built up the same kind of confidence for me. It has been a difficult journey to navigate carrying myself in a professional manner, in the way I speak, act or dress.

Some students saw these mentoring relationships as being essential to helping them feel more like they belonged at university and longed for more one-on-one meetings with professors. “...but if my profs were my mentors or even if I had one-on-ones with them where they initiated the meeting, my feeling of belonging at the University and level of investment and excitement about learning would have been 10x.” When instructors do intentionally create supportive learning environments then students really do reap the benefits:

Working on a research project has been both the most difficult and most rewarding project I have ever worked on. Specifically, the learning environment my supervisor has created for me and [their] other students has been the most significant experience at this institution. Being thrown headfirst into the world of research has allowed me to learn a vast amount more than I ever expected. My critical thinking skills have improved, I am more creative, and my scientific communication skills are far beyond where they were when I first arrived at the university. Overall, the University of Calgary has provided me with a first-class education that I will never take for granted.

In some cases, the mentoring that is fostered is between all partners of an academic unit. It is powerful to hear that when one academic unit can develop such a strong sense of mentorships for students then students can articulate exactly how that mentoring translates to a fulsome learning experience:

I am a 4th year student in the Haskayne School of Business. I've had an amazing opportunity here, being able to engage in a classroom that allows for experiential learning. The classes allow me to push for critical based thinking and application of concepts rather than content memorization. The faculty members have been a great support. They understand that there's more to life than the classroom. The faculty members as well as support staff (career and academic advisors) bring in awesome opportunities for the students such as networking opportunities to engage the students and allow them to build connections with Corporate Calgary members. Because of how the classes are structured and how the faculty members push for application-based thinking, I am able to apply the concepts I've learned in class to real-life business problems and be confident in my skills as a future business leader.

Students also saw the connection between mentoring and networking, "The classes that I found most valuable were the ones where industry professionals or local businesses were utilized to connect the course concepts to real-world scenarios. Many business classes use case studies to try and make that connection. But I have found that in-person connections are way more valuable for students. It also helps with networking and helping students build industry relationships."

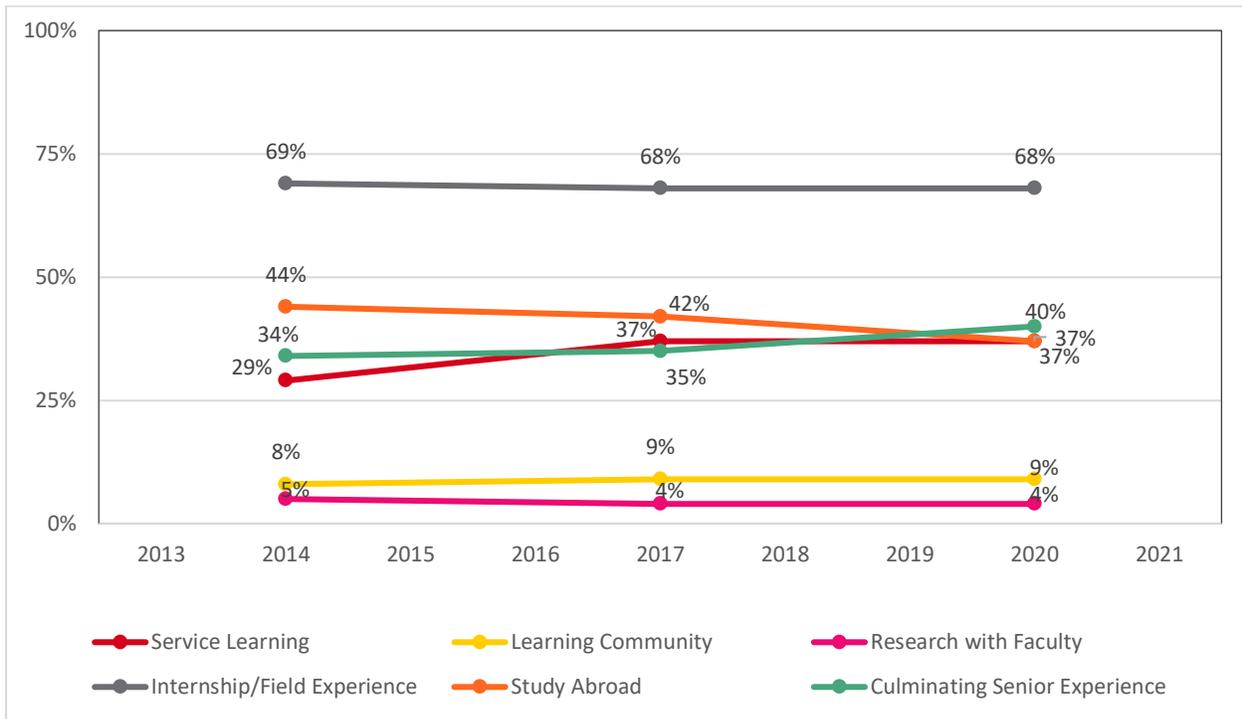
Barriers to EL

The NSSE quantitative and qualitative responses show that many UCalgary students are aware that certain activities provide impactful learning experiences and that they see those opportunities as valuable in preparing them for career readiness or further education. There is also a clear message from students that they want the institution to provide them with more of these opportunities. When reading the qualitative data set it becomes apparent that when students do engage in EL activities, they see their learning experiences as being positively impacted, but they also suggest that there are challenges and gaps to how students access EL.

For the past three reporting periods, UCalgary's NSSE results show that there has been very little movement in the percentages of first- and senior-year students' uptake of EL activities. Figure 2 and Figure 3 show first-year student responses to the question if they had completed an EL activity in their first year (Service-Learning, Learning Community of Research with Faculty) or if they intended to complete an EL activity (Internship/Field Experience, Study Abroad, Culminating Senior Experience). Senior-year respondents were asked if they had completed these EL activities over the progression of their degree program. The NSSE quantitative multi-year data sets show that EL completion rates amongst senior year students are flat – they are not substantially declining nor are they substantially increasing from the 2014-2020 reporting periods. The percentage of senior-year students completing WIL peaked in 2017 at 48% and then dropped to 46% in 2020. The other EL activities are similar in their trajectory with Senior Capstone showing incremental gains in both first- and senior-year survey results. This might be because capstones are often embedded in program requirements, so students engage with them to fulfill their program requirements.

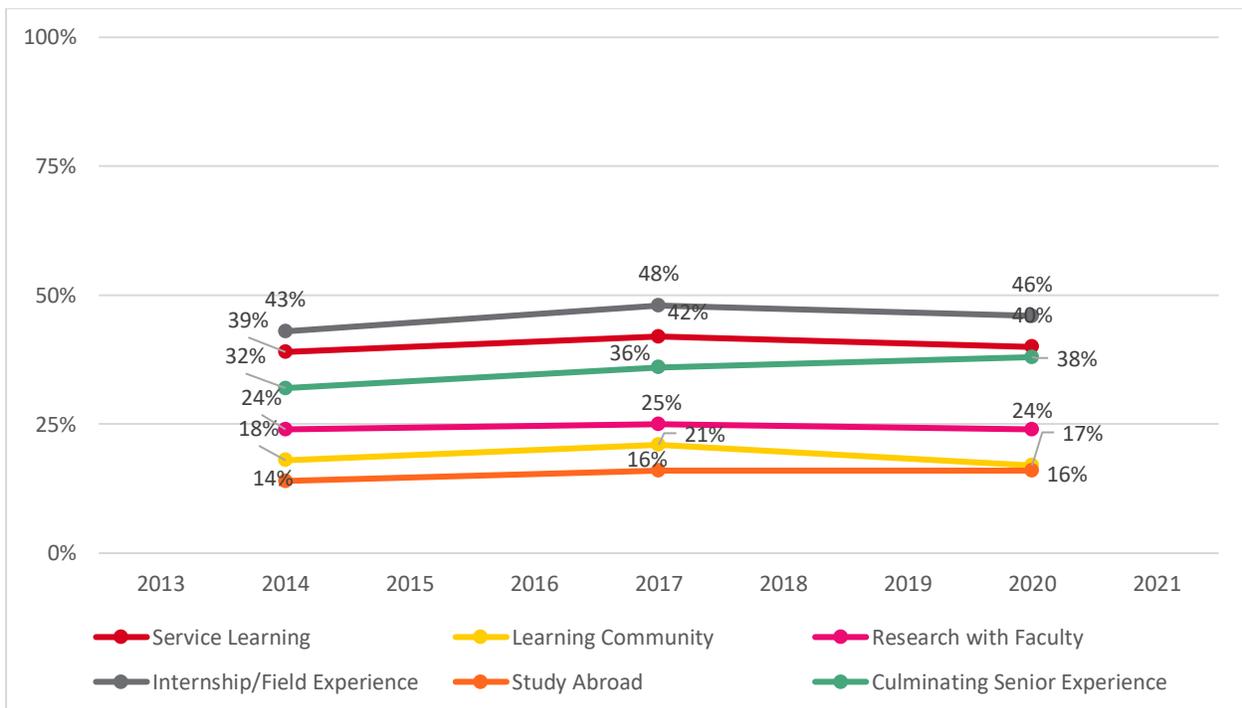
See Figure 2 for multiyear responses from first-year students who were asked if, in their first year, they completed an EL activity.

Figure 2 HIPs: First-Year Students (2014, 2017, 2020)



In addition, see Figure 3 for multiyear responses from senior-year students who were asked if they completed an EL activity at any time during their degree program.

Figure 3 HIPs: Senior-Year Students (2014, 2017, 2020)



Both quantitative and qualitative data suggest that even though students are aware of these opportunities, sometimes they cannot transform that intention to completion because of various barriers to EL throughout their four-year degree program.

Lack of Access to EL

The 2020 NSSE data show that despite having a rich and diverse EL landscape, there is still a lack of access to and relatively low completion rates for students engaged in EL activities at UCalgary. As illustrated above, the multi-year NSSE quantitative data shows the gaps between what EL first-year students say they intend to participate in, and the completion of these activities reported by senior-year students. Table 1 outlines the first-year students' intention of completing an EL activity and the actual percentage of students who complete it by senior year.

Table 1 NSSE 2020 comparison between first-year intention and senior-year completion of EL

Type of EL	First-year Students: Intention to Participate	Senior-year Students: Completed Activity
Internship or Field Experience	68%	46%
Study Abroad	37%	16%
Culminating Senior Experience (Capstone, Senior Project, Thesis, Comprehensive Exam, Portfolio)	40%	38%
Research with a Faculty Member	41%	24%

Knowing the intention to complete an EL activity can reveal if there is student awareness about a particular opportunity, the demand for such an activity, and the presence of clear institutional information guiding students to an EL opportunity. The completion rates amongst senior-year students can show if there are major gaps or barriers in the institution that prevent students from completing their intention. The percentage of first-year students responding that they plan to engage in an EL activity like senior capstone, research with a faculty member or study abroad shows that students desire such activities and presumably keep an eye out for them as they make their way through their programs. The qualitative data also suggests that first-year students are keen to engage with these activities, and that senior-year students often recommend that UCalgary should be making more efforts to offer these activities in the first two years. There is some indication from first-year students that they see the benefits of planning to do EL activities, 68% of first-year students say they plan to participate in an Internship or Field Experience while 86% say they plan to engage in undergraduate research activities. Other EL activities like Study Abroad (37%) and a Senior Capstone project (40%) are on first-year students' radars but at a lower rate.

First-year students might be aware of EL offerings, but the numbers suggest that they encounter barriers or challenges in trying to complete these activities. First-year students reported that only 37% of their courses had a service-learning component. The percentage of students who reported that there were no service-learning opportunities in their courses (63%) is the highest amongst U15 institutions (60%) as well as amongst other Alberta PSIs (60%). These numbers suggest that many post-secondaries

in Canada and Alberta struggle to offer service-learning in first year. The fact that 60% of senior-year students also report that none of their courses had a service-learning component suggests there is very little opportunity for students to engage in this EL activity, even if they wanted to. These data may also suggest a lack of understanding and/or awareness of what “service-learning” means.

Other Barriers to EL

As was previously indicated, students do feel that they sometimes have limited access to EL activities because of not being aware of these activities early on in their program or a lack of EL offerings in their programs. Barriers might be related to lack of financial support, perceptions that a WIL component might extend their university time, or family pressures that do not allow students the time to partake in EL activities. Often students have commitments outside of class time that interfere with EL activities like visits from industry professionals or government representatives in specialized sessions. One student suggested that it “would have been great to see opportunities like these integrated into class to make them accessible to more students.”

Other times students appreciated the requirement of class EL activities, like volunteering or joining a club, but did not feel included when they tried to participate in an activity. This student suggested that it was her age that inhibited her inclusion in a campus club:

[I] was required to join a club on campus, I was treated like an absolute outcast. I was able to reflect on my treatment throughout the semester and I learned what it feels like to be an outsider. I was a returning student after 20 years and was behind in social verbiage and gender issues.

Sometimes students couldn't engage in certain EL activities because of GPA restrictions of doing poorly in first year and then struggling to achieve the grades that would open doors to EL and job opportunities:

Because of my difficulty in my 2nd year, I essentially shot myself in the foot for any chance at a Co-op, due to such a low GPA. I would say limit certain business course loads, for example, advise against taking SGMA [course x], ACCT [course y], and/or Finance in one semester with other courses due the course load, and or potential to be overwhelmed. Then again, maybe I am just not the high caliber student that others are. A lot of places only hired students who were in a Co-op program or had high grades, even smaller firms. I ended up working a term with the government at the airport, but I wish I had maybe an opportunity to work more related to my field. In the end, I have myself to blame for my grades. C's get degrees, but they don't get jobs.

Other students recommended the way to increase equity in EL activities would be to have more promotion of these types of activities from the start of a student's university experience. One student had very concrete suggestions on how to increase student participation in EL:

Be more clear about what services are available to students and where they can access them right from the start. There are two easy and obvious ways you can do this: Firstly, adjust O-Week so that it focuses more heavily on the students' majors. Secondly, have every prof briefly talk at the start of each term about what services are available to students: resume help, interview preparation, career counselling, aptitude testing, etc. and where they can sign up for these appointments.

Another student suggested that the university "have courses that are accessible to everyone that teach leadership skills, and social skills." Access and inclusion mean opening the door for more students from equity deserving groups to engage in EL and it also means providing more pathways for students to experience EL.

Expanding EL at UCalgary

This section explores some of the themes that came out of the qualitative data set as it relates to students' perceptions of how UCalgary could be doing better to support their engagement in EL activities. The following larger themes from the data set as explored:

- More Hands-on and Skills-based Learning
- Students Crave Community
- Better Awareness and Advising Resources

More Hands-on and Skills-based Learning

Senior-year students often see the barriers to completing an EL activity as systemic or a problem with the university. Systemic barriers here refer to students not understanding how the skills learned in their courses could translate to a work environment or the awareness of co-op and internships programs coming too late in their degree program. In terms of their perception around how the university could be performing better with students accessing the hands-on part of learning, many students suggested that other Calgary institutions were doing better with the numbers of opportunities students had access to. Several students responded to what could be done better, suggesting that other institutions were better because there were more opportunities for hands-on or practical experiences. One student said that before coming to UCalgary they were "at a technical institute and felt as though there was a greater understanding of how the classroom and the real-world professional environment relate to one another and I think that would be something the University would be wise to implement, a mandatory practicum of sorts."

Others suggested that more intentionality of EL in the curriculum might help with access and as one senior-year student suggested, "A more integrated curriculum that allows students to have confidence in their skills while heading to a work setting would have been much appreciated." Another student suggested that the education system overall needs to change starting with more hands-on learning at the secondary level "teaching students what actually will be useful to them in the industry." Other students wanted an increase in classes that they felt had the most impact on their learning and called for more open-ended capstone courses that encourages student driven projects. Another student also desired "more opportunities to gain field work experience and co-op internships." They also suggested that:

More classes should emphasize assignments that are relevant to research and scientific work, i.e grant applications, project planning, literature reviews, instead of just midterms and final exams. I hope this changes for the next group of undergrads.

Students also suggested that the lack of awareness around EL opportunities meant they couldn't take advantage of them. One student suggested that a first-year internship program be offered to get students interested and aware of how they could compliment their academic experience with real world experience early on in their degree program.

Students see the impact of EL and HIPs especially as it pertains to skill growth and professional development and often lamented the fact that UCalgary did not provide them with enough opportunities to develop professional skills. Out of the full qualitative data set, 192 comments were coded with the keyword 'skills' and spanned two NSSE qualitative questions: "#1: What was the most significant learning experience?" and "#3: How could this institution have better prepared you for your career?" This might point to students seeing and experiencing the benefit of professionalization programs while also lamenting the fact that there are not enough of these opportunities across campus. The first- and senior-year students who were positive about the opportunities for skills development often pointed to their co-op/internship/practicum experience as the place where these skills were honed. Some also suggested that it was the actual workplace experience that gave them these skills as opposed to the course content of their degree program. One student suggested that UCalgary develop a "course which connected you to places to job shadow. There are so many available jobs in the health field and it would have made it easier for a lot of us to observe a career to choose our own."

Senior-year students responded to the final NSSE qualitative question "Is there anything your institution could have done better to prepare you for your career or further education?" with a call for more hands-on learning in curricular classes that will help them develop professional competencies. One student said, "Our classes could have done a better job of providing more practical examples instead of strictly learning and memorizing theory. A lot of practical skills I have related to my degree I learnt in my practicum or at work..." while another lamented that "During my time in the program, [I wish] more could have been done to provide undergraduates with work experience relevant to their field. I wish there were more opportunities to gain field work experience and co-op opportunities." One student said that their most significant learning experience was "learning that the school doesn't do a good enough job of preparing students to face challenges they will inevitably come across in the workplace."

Another student described this sentiment, suggesting that UCalgary does not do enough to help students transition into the present-day world:

There is no unity, no sense of belonging. Another weakness of the institution overall is its theory-based education. A lot of things that would be beneficial in the workforce are technical knowledge, hands-on learning; things U of C lack. This makes it feel like there a sense of U of C does not equip it students with enough knowledge, skills, and information fitting for the technologically advanced world that we now have.

One senior-year Political Science student called for a required practicum or community placement component to help them make sense of their degree in a professional setting. They felt their degree program was so broad that they had no "understanding what their degree could do in the real world and no network/contacts to help with a job search." One Engineering student suggested the university needs to provide more opportunities "for career development; especially insider insight" referring to the need

for more industry preparation by connecting them to “accomplished mentors.” This same student suggested that the university needs to create more of a sense of community to help with career development and to foster “a culture of growth or support.” Another student who had completed a co-op placement calls for the university to implement “core courses regarding people skills or leaderships/communication skills or management skills should be required courses for all degrees”.

Students suggested that not all skills have to be developed in the classroom or in for-credit spaces. Some students saw volunteering is a way to develop those professional skills and one Psychology student suggested that programs should be more intentional in their volunteer offerings for students to “have some outside experience [such as] go volunteer as a class to various community service programs in Calgary, especially in the are of research, counselling, or health.”

Students Crave Community

Throughout the qualitative data set, students brought up the fact that a lot of their significant learning experiences were being included in a community of learners. Often that community was also focused on an EL opportunity, whether through study abroad cohorts, research group projects or practicum cohorts. As one student suggest, their most significant learning was “experiential learning that brought me outside the class and [where] we worked on an actual project with a community.” Community for them was working with external partners something that UCalgary does not provide enough opportunities for students to engage in. A first-year student suggested that the university community helped them to “...apply the theory that I have learnt at this institution to real world problems...”

Most students who extolled the benefits of community said that it was a small cohort of students or a specialized program that made the difference for them. One Arts and Science Honours Academy (ASHA) Student said that the program was the best part of their university experience because the community allows them to “explore different perspectives, challenging my own point of view. [as well as] diversify my education, develop critical thinking, experience service-learning, and work effectively in teams.” The lack of community in programs was also a theme amongst students and often they would have very direct advice on how the university could make community more a part of academic programs. A senior-year Science student said the university is very good at preparing students for academia or research but that “more networking opportunities” are needed “to help build connections in the scientific community and make both research and industry opportunities more accessible to them.” One student suggested that UCalgary does not have a community at all and that this leads to isolation. Another student also echoed the isolation present at UCalgary and said it has become the norm for the students.

One solution from students to the lack of student participation in community is to make sure that students are aware of the communities that exist and to ensure that those communities welcome students of all backgrounds and experiences to participate. One student felt that:

all opportunities that UC have is more likely to give students that is actively social and already involve in lots in social activities and leadership. Chances are open but with selective candidates, people with better writing skills and more experiences get the chances. International Group Experience or Volunteer Abroad: Likely given to students who already done it before. I always want to try but my applications weren’t accepted. Leadership Program: Typically, student with tons of leadership skills involved. I had little experience and when I was trying to mingle in with the group, it felt quite hard and isolated.

This response would suggest that opportunities for community are present at UCalgary but there is a less than welcoming atmosphere for students who might be new to the university or who do not already have any leadership or volunteer experience.

Better Awareness and Advising Resources

Many senior-year students lamented the fact that they were unaware or didn't know where to go for help in finding EL opportunities like co-op or internships. One student recommended that UCalgary have services for students "to help people get internships in their field rather than vague blanket and generic advice." They also suggested that when they met with advisers the results were not quite what they were looking for, "[My program's] career advisors are not in any way prepared or aware of what real life interviews in the tech industry are like, how to format a tech resume, or what students need to do to land GOOD tech internships throughout their degree rather than just administrative roles." A senior-year Psychology student suggested a similar theme when they said "...that academic advising should be more proactive and be more helpful to students because sometimes they do not directly or specifically answer your questions." Another senior-year student said after they struggled with finding supports on their own, "A lot of the resources available too are things that are not properly and adequately advertised. The different support for mental well-being for example. The career or different groups/clubs that could help students after college are resources they have to search on their own."

Sometimes this inability to find out about EL activities led to students not participating in them. One senior-year Science student said that they would have started co-op earlier if they had known about it and added that "more opportunities for internship regardless of GPA and insisting and advising about career from first year," while another senior-year student suggested that access to advisors who can recommend internships and co-op need to come sooner in the degree program.

Students suggested that the role of professors and instructors should include at least an awareness of how the discipline or degree would lead to career options. A senior-year student said that "Not one professor once mentioned anything about my degree and how it would translate into the real world. I am graduating this year with very few career prospects and feel very worried for the future. I wish someone would have talked about careers during my degree."

CONCLUSION AND RECOMMENDATIONS

Students clearly value EL activities, especially co-op, internships, clinics, senior-level capstones, research with faculty, study abroad, field schools, volunteering and co-curricular experiences. However, they face barriers in accessing these opportunities during their academic career for a variety of reasons, including finances, lack of awareness, time, and lack of flexibility within existing program requirements. Data related to students' intention to complete and their actual ability to complete an EL experience in their senior year also suggested the importance of intentionally embedding EL activities in academic programs through internships, field experiences, course-based undergraduate research experiences, and senior capstone experiences. Student comments to the 2020 NSSE revealed that they wanted more hands-on and skills-based learning integrated into their academic programs to help them develop career readiness, workplace, and professional skills. These data also emphasized the importance of mentorship as a critical component to EL, and a desire for a greater sense of community related to their EL experiences. Improved awareness and advising resources are needed to help ensure greater access to

EL, especially during the first two years of their academic programs. Finally, greater emphasis should be placed on understanding opportunities and issues related to access, inclusion, and participation in EL at UCalgary.

In summary, student responses to the 2020 NSSE recommend the following:

- **WIL is a great opportunity that students want to undertake, but there needs to be more opportunities available.** Students are enthusiastic about co-op, internships, clinics and practicums and report that they are meaningful and provide an important opportunity for them to learn about their chosen careers while working in a professional environment.
- **Further development of EL is required as an intentional component embedded in academic programs, curriculum, and program learning outcomes.** EL that is embedded in courses in students' academic programs can ensure that all students participate in EL. Many students suggest that some of the most rewarding EL experiences they had in university were low stakes, easily planned activities like guest speakers and field trips. Further, curriculum embedded experiences such as senior capstone projects ensure that all students in an academic program have access to and can complete an EL experience.
- **More EL opportunities should be incorporated in first- and second-year student experiences.** Many students said that they wished they had experienced EL activities earlier in their degree and one way to ensure that students experience EL is to offer EL activities like course-based undergraduate experiences in first and second year required courses.
- **Greater alumni participation should be incorporated in WIL related initiatives.** Students responded that some of their most important learning was when former students returned to classes to talk about their transition to the workplace. Many expressed a desire to see more events where Alumni were present so they could speak with them about the skills they transferred to their workplace or to network and feel more confident about their career choices before graduation. Activating Alumni to become more active partners in undergraduate courses is an accessible way to increase student awareness around workplace learning.
- **More focus is needed to understand and improve equity and inclusion for EL opportunities.** Students responded that even though they were aware that EL opportunities exist on campus, they still found it hard to access and feel included in these activities. Barriers to access included financial barriers, lack of flexibility of course selection in degree programs and not seeing themselves as students who would participate in EL.
- **Students want an improved focus on skills articulation in the courses and program curriculum.** Many students responded that they felt that UCalgary did not provide enough training around skills needed for career readiness or they could not see how their degree program prepared them for a job after graduation. This lack of skills articulation could be a combination of students not understanding how the skills learned in courses are transferable to a professional setting and/or explicitly professional skills not being taught in courses.
- **There is a need to strengthen EL awareness, resources and training for academic advisors and course instructors.** Students often suggested that they did not know how to navigate EL opportunities and that if academic advisors had more familiarity with EL and where it happens in specific programs then students would be more successful at engaging with it. Students also suggested that course instructors should also be more aware of how skills and knowledge learned in courses can be transferred to career and professional settings.

There is a great deal we can learn from our students' responses to NSSE related to EL.

Recommendations provided by students through the 2020 NSSE data clearly summarize strategies for

academic programs and the institution to improve EL, especially as it relates to the priorities identified in UCalgary's EL Plan.

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