

# Quantifying Student Competency Development Using the uOCompetencies Proficiency Survey

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Gabriel Ramsay MSW. RSW.

Student Affairs, Career Development and  
Experiential Learning (CDEL)

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## Abstract

This report provides a comprehensive evaluation of the uOCompetencies Proficiency Survey's role within the University of Ottawa's CO-OP program. It examines the survey's twin objectives: elevating the quality of feedback and evaluations, and precisely measuring student competency development. Initially focusing on the Fall 2023 cohort of 1017 students, this updated analysis now includes the Winter 2024 cohort, comprising 1043 students, and the Summer 2024 cohort, comprising 1799 students.

Through the analysis of data derived from pre and post-surveys—filled out independently by students and their internship supervisors—and processed via the CO-OP Navigator and PowerBI, the study uncovers significant improvements. These include a positive shift along the competency proficiency scale, a notable alignment in assessment perceptions following consensus building between students and their supervisors during mid-term evaluations, and an increased level of student satisfaction with the feedback process. Notably, these results are consistently observed across all three semesters, despite variations in student profiles such as grade level and experience.

The uOCompetencies Proficiency Survey is highlighted as a practical and effective tool for enhancing the quality of supervisor feedback, thus improving the student's experience and abilities to refine, plan and implement their competency development objectives.

## Background

Stakeholders across the spectrum, including students, community partners, government entities and the University of Ottawa itself, are increasingly advocating for a more experiential approach to learning. The demand for higher-quality learning experiences is notably voiced by students, who seek opportunities to cultivate professional skills, foster life-long learning capabilities, and immerse themselves in professional and community settings (MacDonald, 2018). Grounded in the principles outlined by Kolb (1984) and underscored by Bradberry and De Maio (2018), experiential learning not only enhances learning autonomy by empowering students to take charge of their educational journey but also furnishes a rich context for learning within the dynamics of community, industry collaborations, and the academic sphere. This approach not only deepens comprehension of core academic content (Bradberry & De Maio, 2018) but also equips students with critical skills to effectively apply their knowledge in professional contexts, as emphasized by the Future Skills Centre (2022).

Experiential learning at the University of Ottawa is based on a sustained and iterative cycle that helps students develop self-directed learning academically, personally, and professionally. Our framework, inspired by Kolb's Experiential Learning Cycle (Kolb, 1984), adds dimensions that are particularly important in the context of higher education.

To be recognized as experiential learning at the University of Ottawa, activities must allow learners to:

1. Be confronted with **dynamic problems** that engage them in an **authentic** way in experimentation and adaptation.
2. Develop and apply new knowledge and skills specific to their discipline through **relevant tasks and work tools** linked to clearly defined **learning outcomes**.

3. Receive **authentic feedback** through **realistic interactions** with the environment, including instructors, supervisors, colleagues, and stakeholders.
4. **Reflect** on their actions and experiences and be **accountable** for their learning and performance outcomes.

In 2019, the University of Ottawa responded to this commitment by developing the uOCompetencies Experiential Learning curriculum, aimed at better framing and evaluating curricular and co-curricular programs on campus. A committee recruited professors, professional staff and student representatives from each faculty to help select and refine institutional competencies. Playing a central role in the learning curriculum, the chosen [11 competencies](#) (UO 2024) help guide students through the four components of the Experiential Learning Cycle. Following this exercise, pilot projects were implemented to integrate the uOCompetencies into experiential learning programs and activities such as Co-operative Education (CO-OP), the Work-Study Program and the Professional Development Path for International Students. Currently accessible to all students and staff via the Virtual Campus (Brightspace) under the Discover Tab, the uOCompetencies learning modules help structure experiential learning activities with pedagogical tools such as competency appropriation activities, resources for planning experiences, reflective assessment templates, teaching resources and much more.

In the Fall of 2023, the University of Ottawa's CO-OP Programs continued the integration of the uOCompetencies curriculum by creating and introducing new resources aimed at assessing student competency levels and improving the quality of supervision feedback. Specifically, the development and incorporation of the Competency Proficiency Scale was, in part, a response to the identified shortcomings in the previous Mid-Term Evaluation Survey model. In use for over a decade, it featured a 10-point scale assessing 13 skills and performance indicators, ranging from "A+, Exceptional" to "F, Not Satisfactory." The scale lacked explicit behavioural anchors, and the skills and indicators were not aligned with the uOCompetencies.

Since the scale implied the attribution of a grade, employers and supervisors tended to rate most of the 13 indicators as "A+, Exceptional" or "A, Excellent". This skewed positive evaluation was influenced by their appreciation for the student's work and a desire to avoid unnecessary negative feedback. Unfortunately, this practice diminished the effectiveness of constructive feedback, produced unusable competency development data, and hindered the integration of the new uOCompetencies curriculum.

Consequently, the introduction of uOCompetencies Proficiency Surveys marks a significant shift in the CO-OP program's approach to competency development pedagogy. It now utilizes an Entrustability scale instead of a traditional graded scale. This approach, originally developed for medical training and endorsed by the Royal College of Physicians and Surgeons of Canada, offers numerous advantages. According to Gofton et al. (2017), the "*Entrustability scales are a more valid and reliable way of measuring practice performance within Workplace-Based Assessment tools*". As Rekman et al. succinctly state,

*"Entrustability scales can make formative feedback more meaningful for raters and trainees alike while also increasing the reliability of assessments. [...] Likewise, a tool that helps [participants] focus on an end goal (rather than on a grade) has the potential to increase the amount of well-constructed, actionable feedback they receive."* (Rekman et al. 2016)

The objective of this study is to examine the recently implemented competency proficiency assessment methodology by evaluating its effectiveness in accurately quantifying student competency development as well as its efficacy in providing performance feedback to participating students. This assessment, which began with the initial findings from the CO-OP



cohort of the Fall 2023 work term, has been extended to include the Winter 2024 and Summer 2024 cohorts, allowing for a more comprehensive evaluation across multiple terms.

## Methodology overview

The uOCompetencies curriculum tailored for the CO-OP program includes a variety of learning activities before, during and after each CO-OP work term. For this report, we will only refer to the activities related to the competency proficiency assessment such as the pre and post uOCompetencies Proficiency Surveys independently completed by students and their employers, also referred to as their supervisors. The data collected for this analysis come from the September to December 2023 CO-OP work term, as well as the January to May 2024 Winter work term and the June to August 2024 Summer work term. A total of 1017 students participated in the Fall 2023 work term, 1043 students in the Winter 2024 term, and 1799 students in the Summer 2024 term.

## Survey Cohort Profile

It is important to note that student profiles differ for each semester. For instance, Figure 1 shows that 56.05% of students were completing their third CO-OP internship in the Fall semester, whereas this group represented only 2.78% in the Winter semester and 16.29% in the summer semester. In this figure, the table presents detailed data on the number of students and their respective percentages for each category of work terms, broken down by semester throughout the year. Given their familiarity with past procedures and exposure to the uOCompetencies curriculum in previous work terms and related program activities such as mid-term evaluations, it raises the question of whether their responses would differ from the other semester cohorts due to their ability to compare past experiences with the new procedures.

Other cohort profile information includes Citizenship status in Canada and Citizenship of origin, Gender identity, Study language, Diploma types and Faculty representation. This data is illustrated under a grouping of tables found in Figure 2 below. In this figure, the table regarding the work terms summarizes the data for each term across three semesters. It shows the total for each semester with respect to each work term. As more data become available, future research could explore and compare differences between student profiles.

Work terms	Fall 2023	Winter 2024	Summer 2024
T1	30 <b>(2.95%)</b>	235 <b>(22.53%)</b>	756 <b>(42.02%)</b>
T2	258 <b>(25.37%)</b>	750 <b>(71.91%)</b>	128 <b>(7.12%)</b>
T3	570 <b>(56.05)</b>	29 <b>(2.78%)</b>	293 <b>(16.29%)</b>
T4-6	159 <b>(15.63)</b>	29 <b>(2.78%)</b>	622 <b>(34.57%)</b>
Total	1017	1043	1799

Figure 1 : Total and Percentage of Work Terms (T1-T6) by Semester

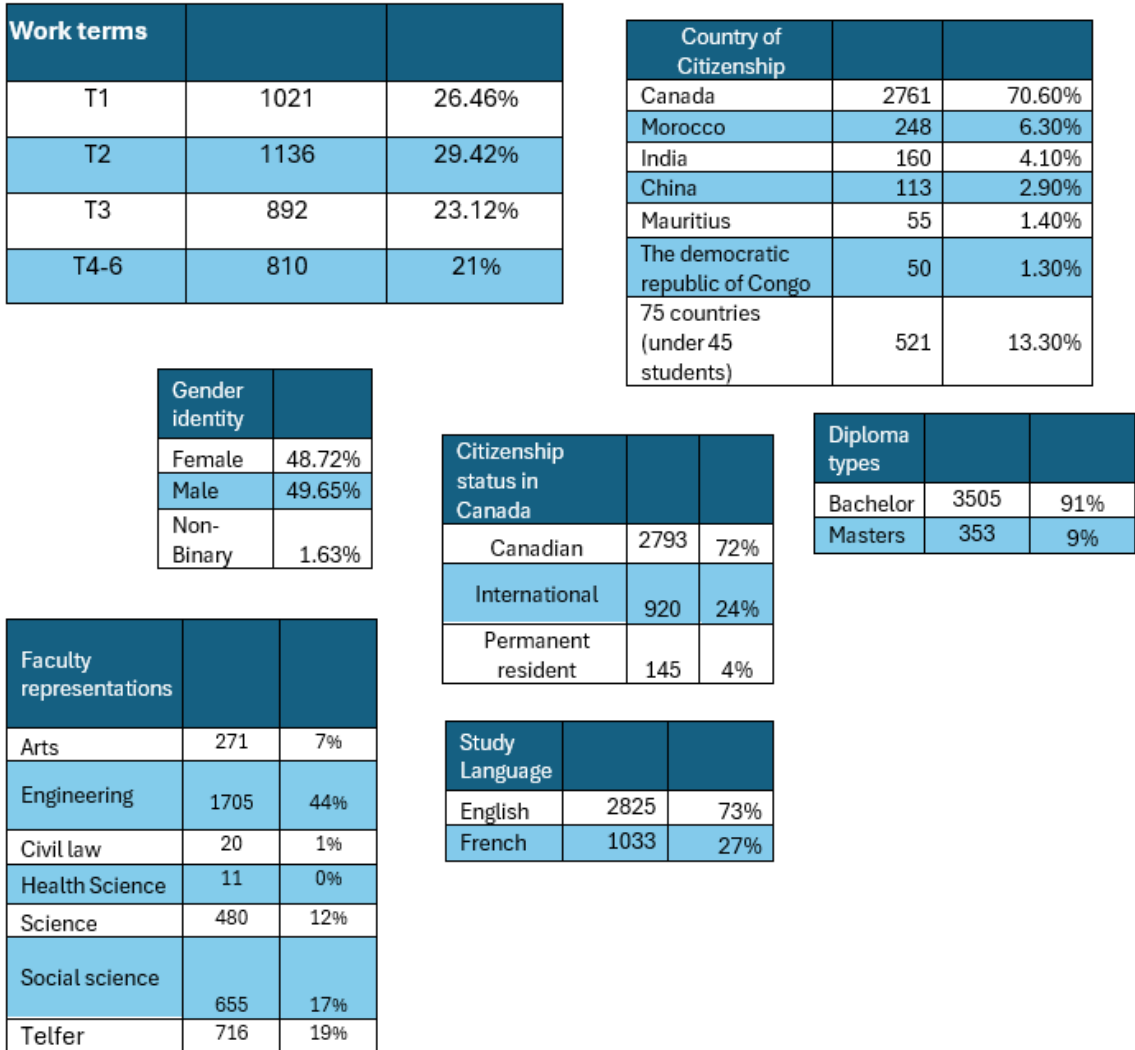


Figure 2: Student profile tables representing student profiles from the Fall 2023, Winter 2024 and Summer 2024 semesters. Tables include Work terms, Citizenship status in Canada and Citizenship of origin, Gender identity, Study language, Diploma types and Faculty representation.

## Survey Foundations and Development

The uOCompetencies Proficiency Survey, along with its methodology (referenced as figures 3 and 4), draws inspiration from established proficiency scales and educational frameworks. These include the Royal College of Physicians and Surgeons of Canada’s Entrustability Scale concept (Rekman et al. 2016; Gofton et al. 2017), the National Institutes of Health’s (NIH) “Competencies Proficiency Scale” (NIH 2023), and the University of Tennessee’s Experiential Learning Quality Enhancement Plan (UT 2015).

The scale developed specifically for the uOCompetencies Proficiency Survey is organized into five distinct levels, ranging from the initial level of Exploring to the highest level of Innovating. Each level is accompanied by a succinct description to facilitate swift identification by students and supervisors. The scale employs specific, observable behavioural anchors to delineate each stage of competency development, with complexity escalating progressively.

1. **Exploring:** This initial phase involves active research into the competency.
2. **Acquiring:** The next stage includes observation and imitation of others to gain skills.
3. **Practicing:** Here, individuals build on their abilities, practicing the competency with a fundamental level of independence.
4. **Excelling:** At this stage, the focus shifts to greater independence as well as optimizing and refining techniques associated with the competency.
5. **Innovating:** This ultimate level is characterized by innovation and the creation of new tools, resources, and processes.

The structure of the scale, with its observable behavioural anchors, makes it a versatile tool. It's not only useful for self-assessment but also aids supervisors in accurately determining the current level of an individual's competency development. Moreover, these behavioural anchors serve a pivotal role during mid-term evaluations, facilitating discussions between students and supervisors. This dialogue aims at achieving consensus on the present competency level and mapping out a strategy for further advancement and mastery.

Criteria  Please select the 3 uOCompetencies you have chosen for your CO-OP placement	How do you evaluate your current proficiency or grasp of the 3 selected competencies?				
	EXPLORING I have common knowledge or an understanding of basic techniques and concepts. I am researching the competency to better understand how to use it.	ACQUIRING I have the level of experience gained in a classroom and/or experiential scenarios. I am shadowing and observing others practice the competency. I expect to need guidance when performing this skill.	PRACTICING I can usually perform the actions associated with this skill independently. An expert's help may be required occasionally.	EXCELLING I can perform the actions associated with this skill without assistance. I can help optimize and improve a task or process by using theories, research, and experience.	INNOVATING I can create and invent new tools, resources and processes related to the selected competency. I am recognized as knowledgeable in this area. I can provide guidance, troubleshoot, and answer questions related to this area of expertise.
* uOCompetency 1 Digital Capacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(Add your competency development objective in the SMARTS format here)					
* uOCompetency 2 Communications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(Add your competency development objective in the SMARTS format here)					
Digital Capacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy and Resiliency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical Thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Civic Engagement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worldview	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem Solving and Creativity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intellectual Curiosity and Lifelong Learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-Awareness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 3: The Student Proficiency Survey includes three key components: the selection of three uOCompetencies, the formulation of three corresponding Competency Development Objectives, and a self-assessment of their current proficiency on a five-point scale.

### Survey Initiation and Objective Setting

Within the first 2 weeks of starting a work term, each CO-OP student is required to select 3 uOCompetencies from a list of 11 (see Figure 7a) and review their corresponding appropriation activities through an online learning course on Brightspace. This enables them to write three competency development objectives using the SMART (Specific, Measurable, Attainable, Rewarding, Time-Bound) formula (Lawlor 2012). We've also modified the acronym by adding a second S, representing *shared*, to remind students that it is mandatory for them to share their

objectives with their supervisors at the beginning of their placements. These objectives are typically developed in coordination with the student's supervisors, as they will be working to complete them throughout the CO-OP work term. Supervisors can help students tailor or modify their objectives to ensure that they are achievable within the context of their experience. They are also directed to complete their initial survey during the mid-term evaluation (Figure 4), allowing them to assess student performance and competency development based on observations during the first half of the work term. Supervisors are further instructed to complete the same survey at the end of the work term. All survey data such as selected competencies, objectives and self-assessment/observations are recorded in the Proficiency Survey templates integrated into a proprietary online database called the CO-OP Navigator. Both students and employers can access the CO-OP Navigator to enter their responses.

## Mid-Term and Final Evaluations

### \* Mid-point Evaluation Grid

Employer's evaluation of the CO-OP student

Criteria	How do you evaluate the learner's current proficiency or grasp of the competencies listed below.					
	Not observed	EXPLORING	ACQUIRING	PRACTICING	EXCELLING	INNOVATING
Learner's Competency Development Objective 1 • <u>Critical Thinking</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learner's Competency Development Objective 2 • <u>Intellectual Curiosity and Lifelong Learning</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Learner's Competency Development Objective 3 • <u>Collaboration</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>Problem-solving and creativity</b> Generates or designs high-quality, original, and elegant solutions or products to address complex problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Autonomy and resiliency</b> Effectively makes decisions and demonstrates flexible work practices. Positively adapts to challenges and preserves in the face of adversity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>Communication</b> Able to present arguments and ideas using appropriate modes of communication adapted to different audiences in oral and/or written and/or visual form.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>Collaboration</b> Works in conjunction with others to achieve specific common objectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>Self-awareness</b> Demonstrates keen self-perception that draws upon life experiences as a resource for personal development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Comments:

Figure 4: Employer Mid-Point Evaluation Grid

The Employer version of the Proficiency Survey includes the same three student-selected competencies and corresponding objectives. It is supplemented by an additional set of 5 uOCompetencies with definitions along with other performance questions and indicators such as student strengths and areas of development. These sets of questions are integral to the mid-term evaluation meeting as they are designed to provide constructive feedback for a student's current performance, future internship planning and the formulation of their final work-term reflective report.

## End-of-Term Surveys

At the end of each work term, a series of satisfaction surveys are shared with both students and employers. The post-proficiency surveys are integrated within these. For example, the student satisfaction survey has an additional 32 questions divided up into different categories such as Services, Use of technology, Workshops and Job postings. To add context to the evaluation and discussion of this study, we analyzed the responses from the survey questions administered during the Fall 2023, Winter 2024, and Summer 2024 work terms.

1. Mid-term evaluation provided valuable feedback.
2. Usefulness of writing competency development objectives (work-term objectives).
3. Usefulness of writing reflections.
4. The work term helped me develop new competencies for future employment.
5. I feel better prepared for the workforce after participating in this CO-OP work term.

## Results and Observations

### Data Collection and Analysis

All data was recorded by students and employers directly in the CO-OP Navigator. The raw database was uploaded to PowerBI for review and analysis. Figures 4a,b,c depict the results of each evaluation or answer from all 4 surveys and were used to create the graphs of Figures 6a to 8. Upon inspection, we noticed missing data described as “No Answers” from the mid-term evaluation columns. Even though it likely influences the results, the overall trend calculated from complete data across all 4 surveys remains acceptable for the purpose of this study.

Level	Student pre-survey	Employer pre-survey (Mid-term evaluation)	Student post-survey	Employer post-survey
No Survey	0	0	92	144
No Answer	41	922	0	23
Not observed	0	22	0	22
Exploring	116	21	19	13
Acquiring	349	162	68	64
Practicing	1383	790	500	538
Excelling	998	897	1658	1414
Innovating	137	210	687	806
<b>Total</b>	<b>3024</b>	<b>3024</b>	<b>3024</b>	<b>3024</b>

Figure 5a: Number of Evaluations by Proficiency Level, Fall 2023-24

Level	Student pre-survey	Employer pre-survey (Mid-term evaluation)	Student post-survey	Employer post-survey
No Survey	0	12	316	177
No Answer	18	476	0	27
Not observed	0	27	0	7
Exploring	160	43	23	16
Acquiring	587	334	74	109
Practicing	1478	1085	616	733
Excelling	800	992	1593	1507
Innovating	80	154	501	547
<b>Total</b>	<b>3123</b>	<b>3123</b>	<b>3123</b>	<b>3123</b>

Figure 5b: Number of Evaluations by Proficiency Level, 2023-24 Winter

Level	Student pre-survey	Employer pre-survey (Mid-term evaluation)	Student post-survey	Employer post-survey
No Survey	0	3	193	342
No Answer	11	1151	0	18
Not observed	0	134	0	14
Exploring	232	47	26	19
Acquiring	983	320	128	136
Practicing	2581	1628	1022	975
Excelling	1387	1716	2942	2652
Innovating	191	386	1074	1229
<b>Total</b>	<b>5385</b>	<b>5385</b>	<b>5385</b>	<b>5385</b>

Figure 5c: Number of Evaluations by Proficiency Level, Summer 2023-24 ([Click to open dataset in PowerBI](#))

The missing data stems from a procedural rule established by the CO-OP program. Specifically, although the mid-term evaluation is completed by employers, the meetings can be led by different parties depending on the context of the CO-OP placement and the experience level of evaluated students. For instance, students in their third and fourth work terms are invited to lead the organization and facilitation of their mid-term evaluation. In the fall of 2023, 41% of



evaluations were led by students, 20% were led by employers and 7% were completed virtually either by students, employers, or CO-OP staff members. 33% of evaluations were tagged as “Touch Base”, a term used to describe students who are returning or continuing in a consecutive work term with the same employer. To reduce the employer's workload, the mid-term evaluation grid is not required to be filled out for those students. This explains the gap of 922 answers in the number of filled surveys which amounts to approximately 33%.

## **Trends Across Three Terms**

Figures 5a, 5b, and 5c illustrate the responses collected during the three CO-OP work sessions (Fall 2023, Winter 2024, and Summer 2024), providing an overview of the assessments made by students and employers. Figures 6a, 6b, and 6c graphically represent the data from these tables, highlighting responses categorized by skill level, including “No Survey,” “No Answer,” and “Not Observed.”

Examining the data from the three sessions reveals several interesting trends. First, we observe that the “Practicing” category dominates student responses in the pre-surveys, suggesting that the majority of students are at an intermediate stage of skill acquisition before starting their work experience. This finding is consistent across all three sessions, although the summer session (Figure 6c) shows a slight increase in the number of students in this category compared to the fall and winter sessions.

On the other hand, it is important to note that employers, in their mid-term and final evaluations, tend to place students in the “Excelling” and “Innovating” categories by the end of the session, with a marked increase in the number of students transitioning from “Practicing” to these higher levels as the session progresses. This suggests that employers recognize significant progress in students' mastery of skills by the end of their internships.

Another observation pertains to the number of responses classified as “No Answer” or “Not Observed,” which remain present in each session, although their impact on the overall results is minimal. For example, the winter session (Figure 6b) shows a slightly higher proportion of unobserved responses compared to the other sessions, which could be attributed to circumstances during the work period, such as holidays or shorter internships.

Finally, the “Acquiring” and “Exploring” categories show a similar trend across all sessions, with a significant number of students classified in these levels at the beginning of their internships, but this number decreases as students' skills evolve, as evidenced by the employers' final evaluations.

In summary, these figures demonstrate a continuous progression of student skills throughout the three sessions, particularly marked in the final evaluations by employers. The consistency across the different sessions indicates a similar skill development pattern, with minor variations related to the specifics of each session

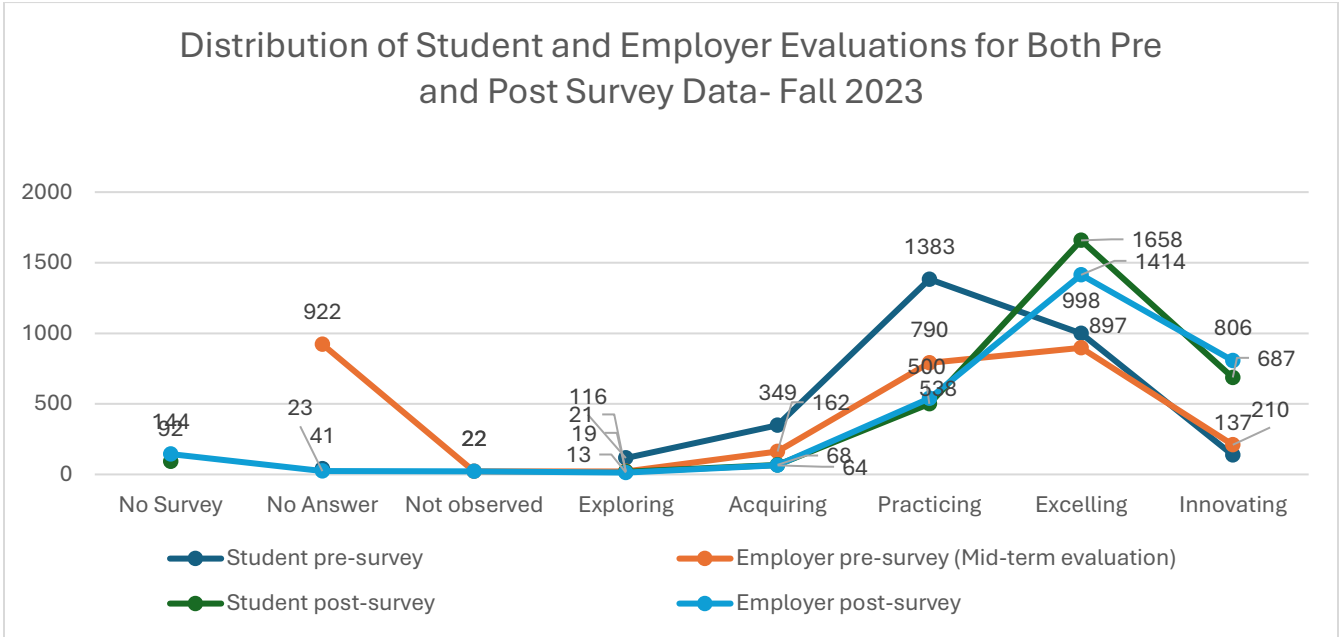


Figure 6a: Distribution of Student and Employer Evaluations for Both Pre and Post Survey Data- Fall 2023 ([Click to open dataset in PowerBI](#))

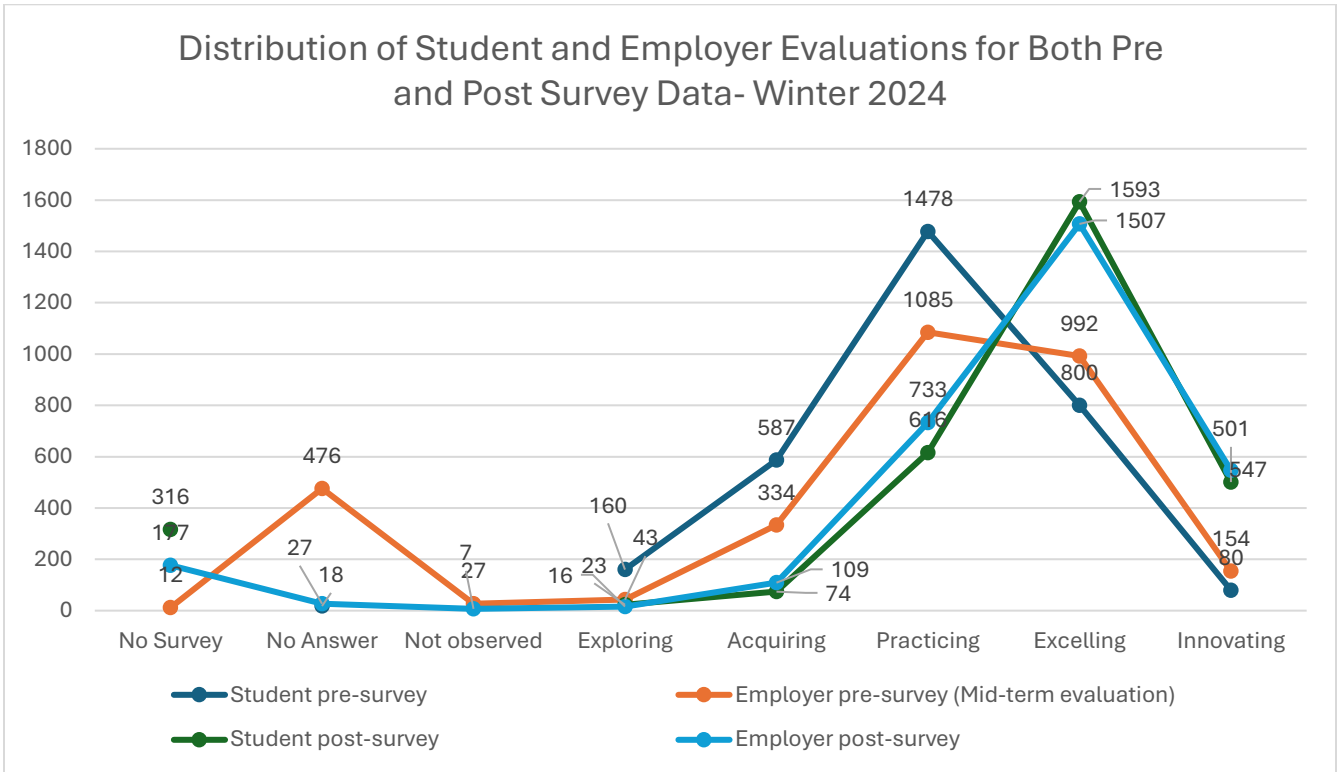


Figure 6b: Distribution of Student and Employer Evaluations for Both Pre and Post Survey Data- Winter 2024

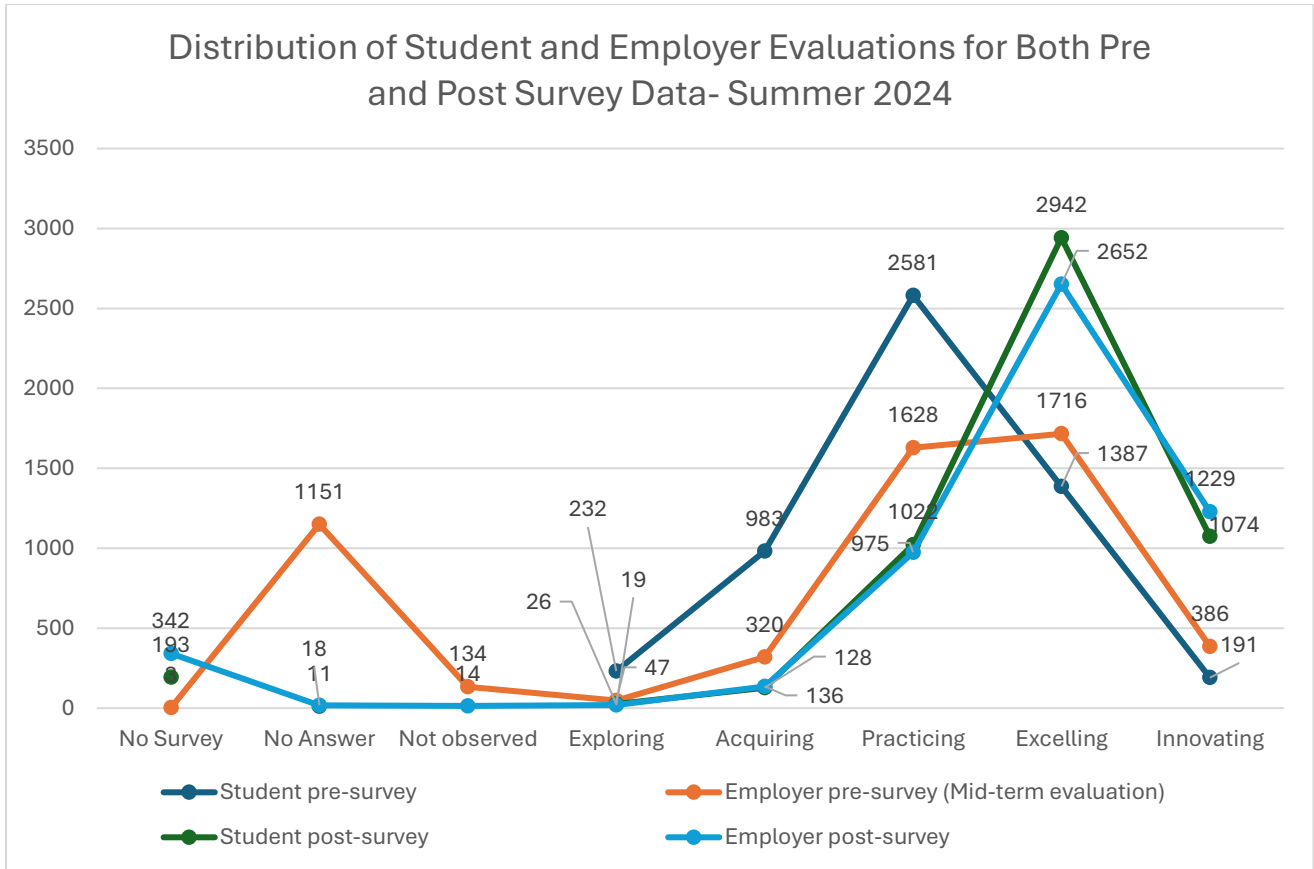


Figure 6c: Distribution of Student and Employer Evaluations for Both Pre and Post Survey Data- Summer 2024

## Pre-Survey Findings

Across the Fall 2023, Winter 2024, and Summer 2024 CO-OP sessions, we consistently observed that students tend to rate themselves lower on the proficiency scale than employers. In all three sessions, most students rated themselves at the "Practicing" level, followed by "Excelling" and "Acquiring." Employers, after observing students for 1.5 to 2.5 months, typically rated them higher, with most students evaluated as "Excelling," followed by "Practicing" and "Innovating."

It is important to note that all ratings are single-rater assessments, which may introduce some bias. Moreover, employers had access to the students' self-assessments, where students outlined their selected competencies, objectives, and proficiency levels. This access might have influenced the employer evaluations. During the mid-term evaluation, a performance review allows students to discuss their work tasks, competency development, and progress toward objectives. Employers, in turn, provide feedback on competency development, strengths, and areas for improvement.

The mid-term evaluation is a key opportunity for both students and employers to establish rapport, adjust work plans, and align expectations. For instance, CO-OP learning materials encourage participants to clarify expectations, discuss how strengths are leveraged, and set

plans for completing objectives in the second half of the work term. This process might explain the increasing alignment between student and employer assessments in the post-survey data. As seen across all three sessions, Figures 6a, 6b, and 6c show a trend toward convergence in post-survey responses, with closer proximity between the two sets of assessments compared to the pre-survey results. This pattern is further illustrated in the radiograph in Figure 7b.

## Post-Survey Alignment

Throughout the Fall 2023, Winter 2024, and Summer 2024 sessions, the post-survey data reveals a consistent trend of increased competency development. Across all sessions, most students demonstrate progress from the "Practicing" level where they can generally perform tasks independently with occasional expert assistance to the "Excelling" level, where they perform tasks independently and can enhance processes using theories, research, and experience.

This alignment between student and employer assessments, as well as the upward shift in competency levels, is consistently observed across the survey data in Figures 6 through 7. These trends suggest that both parties recognize substantial growth in student proficiency by the end of each work term.

## Competency-Specific Insights

Figures 7a through 8c present the pre- and post-survey data, combining the responses from all three CO-OP terms (Fall 2023, Winter 2024, and Summer 2024). These figures give an overview of the students' self-assessments and the employers' evaluations at different stages of the work terms. This streamlined approach allows us to observe recurring trends and the overall stability in competency evaluations across the terms.

- Figure 7a focuses on the pre- and post-survey responses from students, highlighting the progression in self-assessed competency levels.
- Figure 7b compares the post-survey responses between students and employers, showcasing how both groups evaluate the final outcomes.
- Figure 7c contrasts the student pre-survey responses with employer post-survey responses, emphasizing the shift from students' initial self-assessments to how employers perceive their development at the end of the term.

**1. Consistent Trends Across Terms:** Across all three terms, the most frequently selected competencies remain stable, with Problem Solving and Creativity, Collaboration, Communications, and Intellectual Curiosity and Lifelong Learning consistently ranking as the most prioritized by both students and employers. This consistency indicates that both parties value these competencies as central to CO-OP success and professional growth.

- In Fall 2023, these competencies accounted for a total of 1,652 selections out of 3,051 responses.
- In Winter 2024, a similar pattern emerged, with these competencies totaling 1,793 selections out of 3,129 responses.
- Summer 2024 further solidified this trend, with these competencies comprising 3,034 selections out of 5,397 responses.

- 2. Alignment Between Student and Employer Evaluations:** The data represented in Figure 7b shows that by the end of each CO-OP term, students' self-assessments become increasingly aligned with employer evaluations. Employers typically rate students higher in competencies, particularly in Problem Solving and Creativity and Collaboration, where significant improvements were noted over the course of each term. This growing convergence of perceptions suggests that students gain a more accurate understanding of their own competency levels as they progress through their CO-OP placements.

  - For example, Problem Solving and Creativity was consistently rated highly by employers, with 534 selections in Fall, 504 in Winter, and 865 in Summer.
- 3. Variations in Competency Focus:** While the overall trends are stable, there are slight variations in specific competencies across the terms. Civic Engagement, for example, remained one of the least selected competencies, with 97, 50, and 122 selections respectively across the three terms. Similarly, Self-Awareness showed modest engagement, with 146, 105, and 210 selections. These shifts may reflect changes in CO-OP work placements or evolving student interests and employer demands in each term. However, the general distribution of competencies is consistent across the three terms, suggesting that while specific details vary, the broad focus on core competencies remains a constant in CO-OP evaluations.
- 4. Post-Survey Alignment:** As depicted in Figure 7c, comparing student pre-survey responses with employer post-survey responses reveals a clear movement towards higher competency development throughout each term. For instance, many students initially rated themselves at the "Practicing" level in the pre-survey, yet employers consistently evaluated a significant number of them as "Excelling" or even "Innovating" by the end of the term.

  - This trend toward a higher proficiency can be seen in Critical Thinking and Digital Capacity, both of which showed marked improvements across all three terms.
- 5. Visual Trends:**

  - The radar graphs in these figures highlight the variance between student and employer assessments at the beginning and end of each term. The consistent clustering of competency circles near the diagonal in the plot graphs particularly in Figure 7b, where the proximity of student and employer ratings is evident illustrates the decreasing discrepancies as the work terms progress.
  - The plot graphs visualize how frequently each competency was selected and the extent to which students and employers agree on their ratings. Competencies placed closer to the diagonal represent closer alignment between student and employer perceptions.

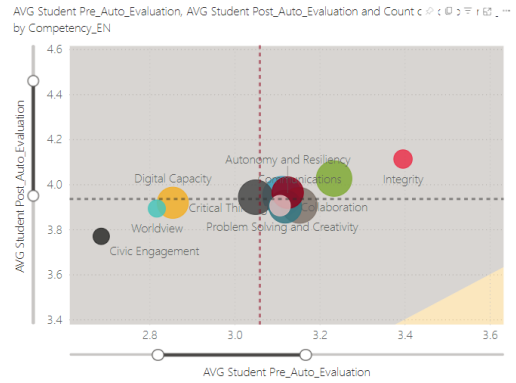
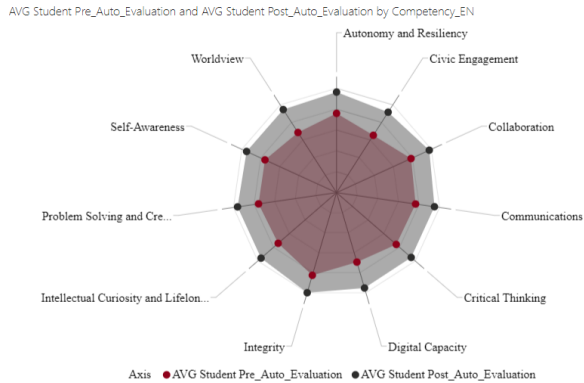


Figure 7a: Average of Student Competency Proficiency Evaluation (Pre and Post Survey Data)

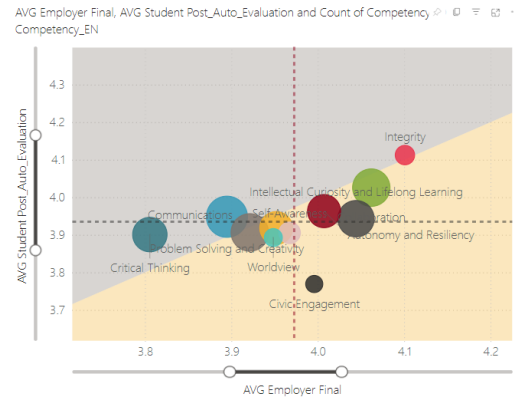
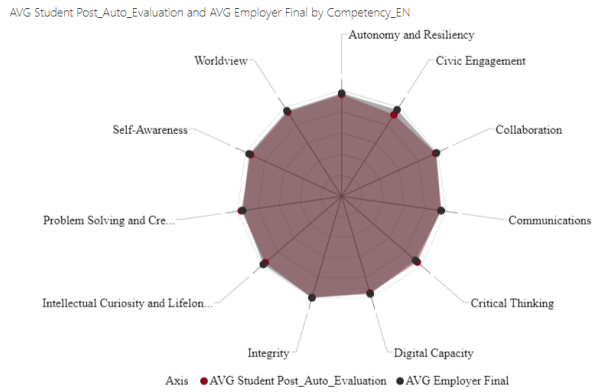


Figure 7b: Average of Student and Employer Competency Proficiency Evaluation (Post Survey Data)

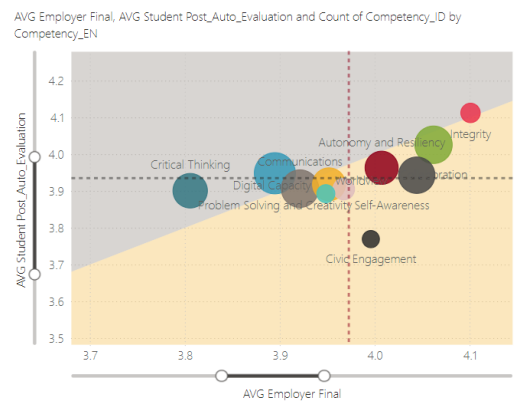
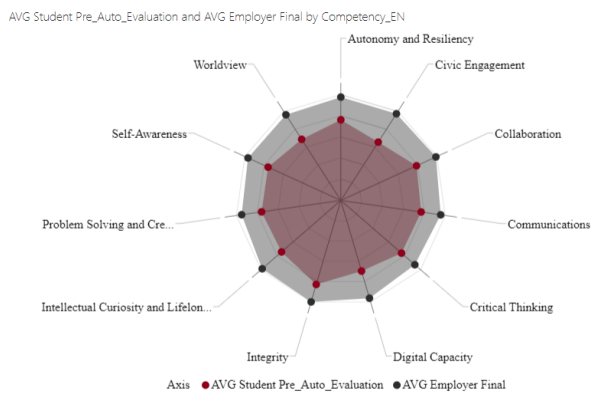


Figure 7c: Average of Student (Pre-Survey) and Employer (Post-Survey) Competency Proficiency Evaluation

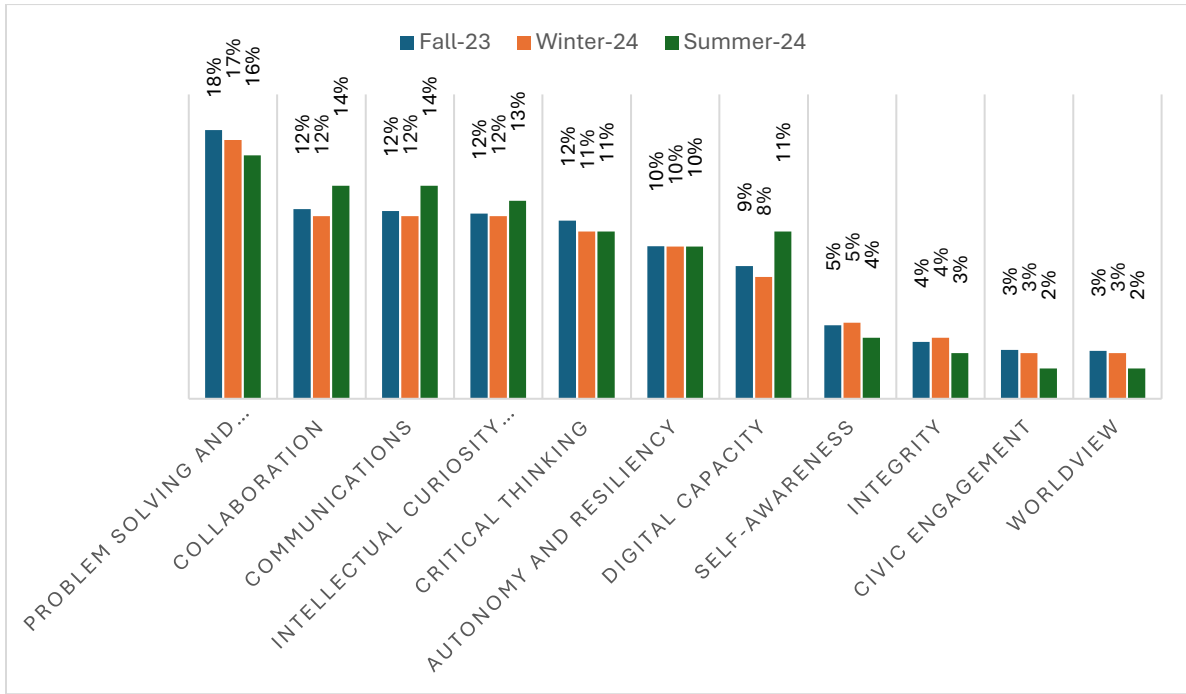


Figure 8: Percentage of Students That Selected uOCompetencies. Fall-Winter-Summer 2023-24 CO-OP ([Click to dataset open in Power BI](#))

## Student Satisfaction and Feedback Quality

Figure 9 presents a bar graph depicting the student satisfaction responses regarding work term assignments, based on data from the 2023 and 2024 cohorts, with all work terms combined for each academic year. The data shows no significant change in most questions as results vary by only 1% to 2%. A small improvement of 5% in the quality of mid-term evaluation feedback was recorded, indicating that perhaps students noticed and appreciated the updated format and tools.

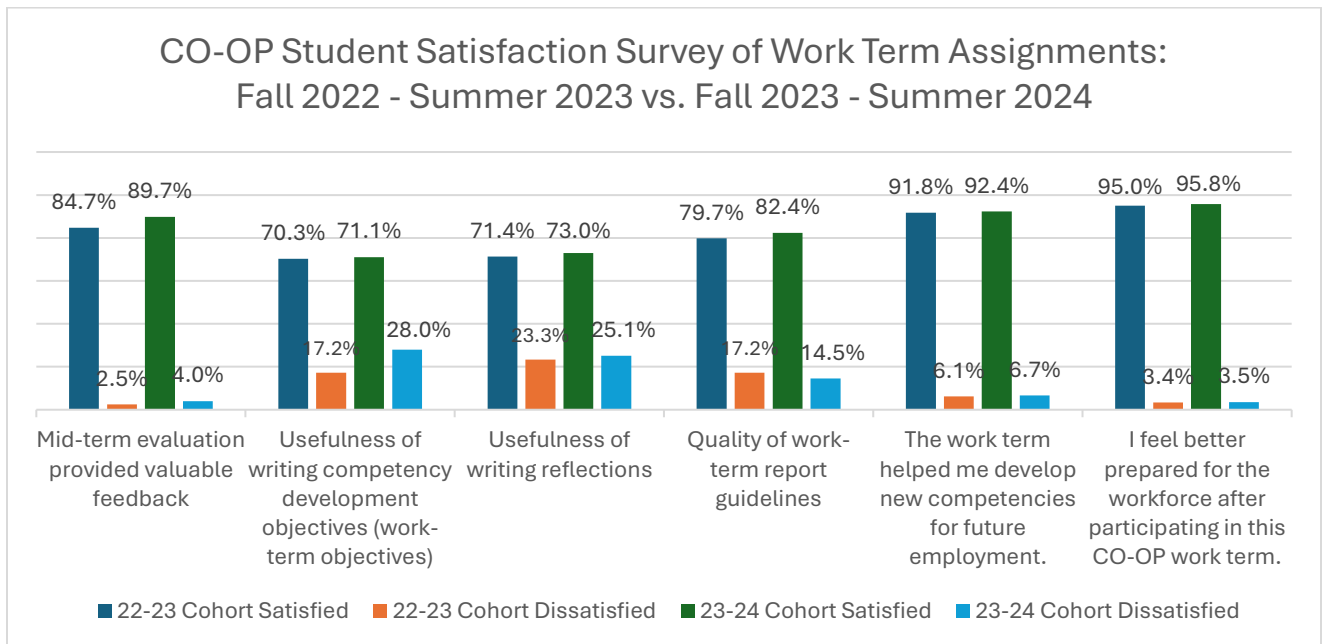


Figure 9: Student Satisfaction of Work Term Assignments: Fall 2022 – Summer 2023 vs. Fall 2023 – Summer 2024

## Recommendations

Feedback across the Fall 2023, Winter 2024, and Summer 2024 CO-OP terms has been positive, leading to refinements in instructions and processes. Firstly, explicit guidance was added to the pre-competency proficiency survey, helping students use the SMARTS formula to craft competency objectives. This ensures better alignment between student goals and their work term experiences. Secondly, a disclaimer was incorporated into the CO-OP Navigator, emphasizing that objectives can evolve over time and be updated post mid-term evaluations. This flexibility ensures the data reflects students' dynamic learning journeys. Thirdly, clarifications were made to distinguish the Competency Proficiency Survey as a developmental tool rather than a grading mechanism, emphasizing skill progress over academic results.

Fourth, feedback from an employer regarding the “Mastering” proficiency level prompted a change of the title to “Innovating”. Specifically, the employer expressed.

*“The descriptions that are provided to evaluate the learner’s current proficiency or grasp of the competencies appear to be too advanced to evaluate students who are new to the workforce. The description for “Mastering” struck me as something that the vast majority of workers would never achieve if they are not subject matter experts. We cannot expect undergraduate students to be subject matter experts when that takes years of graduate and postgraduate studies and experience to achieve. I have been very fortunate to have incredible students work with me and I want to be able to provide a great evaluation when it is deserved. But I don’t believe it is fair to the students, who are very much learning new skills, workplace intricacies, etc., to have criteria that would be more suited to evaluating subject matter experts and those who have had years of experience in their field.”*

Noteworthy is that this title change did not affect the level’s definition which is described as “The learner can create and invent new tools, resources and processes related to the selected competency. They are recognized as knowledgeable in this area. They can provide guidance, troubleshoot, and answer questions related to this area of expertise.” The new title is intended to focus attention on the inventive and innovative ways a skill has been used during a work term and was used for the winter and summer 2024 terms. From exploring the basic concepts related to a skill to mimicking its application, the highest level ascertains an ability to be creative and innovative. The title of Mastering likely confounded users with a time scale of expertise one only gains after extensive use.

Additionally, we recommend leveraging the data for deeper analysis to identify trends and gaps based on factors such as program of study, gender, or citizenship. This profiling could inform CDEL’s efforts to design targeted programming and enhance its professional development and Experiential Learning mandate. By using this data to address gaps and develop initiatives, CDEL can better align its offerings with student needs and labor market expectations.

The rich data provided by the CO-OP Navigator, uOCompetencies learning tools and surveys cannot be understated. The availability of additional student profile data such as language, gender, country of origin, citizenship status, program of study and faculty affiliation lays the groundwork for more nuanced future research. Although beyond the current report’s scope, subsequent studies could delve into the specific interests, preferences, and priorities of diverse student cohorts. For instance, as shown in Figure 8, ‘Problem Solving and Creativity’ emerged as the most favoured competency across all terms and by most faculties. Only Social Sciences favoured Communications over Problem Solving and Creativity. This intriguing trend opens the door to further exploration of the relationship between academic disciplines, cultural norms and competency preferences and perceptions.



## Conclusion

The integration of the uOCompetencies Proficiency Survey into the University of Ottawa's CO-OP program highlights a significant advancement in assessing and fostering student competency development. By shifting from traditional grading to the nuanced Competency Proficiency Scale, the survey aligns with the experiential learning model's goals, enabling a more holistic evaluation of student growth. Across all three semesters, Fall 2023, Winter 2024, and Summer 2024, analyzed results consistently show students advancing from 'Practicing' to 'Excelling,' reflecting steady improvement and alignment with employer expectations. This stability across terms underscores the reliability and effectiveness of the survey in measuring competency development.

Furthermore, the alignment between student and employer evaluations post-mid-term illustrates the survey's role in fostering collaboration and consensus-building. The recurring trends suggest that the experiential learning framework, bolstered by the uOCompetencies curriculum, is providing a robust foundation for professional growth. While these findings are encouraging, ongoing refinement remains essential. Recommendations, such as leveraging demographic and program-specific data to identify gaps, optimizing data collection methods, and updating the CO-OP Navigator, aim to ensure the survey's continued impact. These adjustments not only enhance the user experience but also strengthen the Career Development and Experiential Learning service's ability to design responsive programming that meets student and employer needs.

The consistent patterns observed across semesters reaffirm the uOCompetencies Proficiency Survey's effectiveness as a key tool for fostering competency development. Its integration into the CO-OP program represents a steadfast commitment to innovative, student-centered learning practices, positioning the University of Ottawa as a leader in experiential education.

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