Co-op Employee Engagement Survey: Summary Round II

INTRODUCTION

The second round of the Co-op Employee Engagement Survey was sent out mid February 2020. The survey can be found on Microsoft Sharepoint. The results of the survey were analyzed through PowerBI by Harpriya Bagri, Bowen Liu, Annie Zhou and Paniz Najjarrezaparast. The first survey was sent out in November 2019. Both the data and presentation slide deck can be found here.

The survey was composed of 31 total questions, ranging from multiple choice and statements to rate. The first section consists of 7 demographic questions and 16 Engagement factors, followed by 8 Engagement Indicators. The survey was sent to all 52 co-op employees at Intel Vancouver and there were 50 total responses.

The 8 Engagement Indicators were inspired from the book, "Nine Lies About Work: A Freethinking Leader's Guide to the Real World" by Ashley Goodall and Marcus Buckingham. Every odd numbered statement in our survey represented engagement levels regarding the company and the team – called "We" Engagement. Every even numbered statement represented engagement levels regarding the individual's experience – called "Me" Engagement. We had every survey respondent rate each Engagement Indicator statement from 1 (strongly disagree) to 5 (strongly agree).

The **Engagement Score** is a sum of these 8 responses (min = 5, max = 40)
1. I am excited about the mission of Intel.
2. In my job, I clearly understand what people expect of me.
3. My teammates share my values.
4. Every day I have the chance to use my strengths in my work.
5. My teammates support me and push for me if needed.
6. I know that I will be recognized if I perform well in my work.
7. I am very confident in the future of Intel.
8. In my position, I am consistently challenged to grow personally and/or professionally.

Note: The sum of every odd numbered response contributes to the *"WE" Engagement Score*, while the sum of every even numbered response contributes to the *"ME" Engagement Score*.

The **15 Engagement Factors** were carefully chosen to be small, actionable items that are hypothesized to positively correlate to engagement. They were all marked on relative scales. These are the 16 engagement factors:

1. I play an active role in meetings I am in (excluding 1:1s and All-Hands).
2. I eat lunch with some of my coworkers (may include other co-ops).
3. I spend time with some of my teammates outside of work (for example, through Intel social clubs).
4. I have 1:1s with my manager that involve technical topics directly related to tasks I am working on.
5. I have 1:1s with my supervisor that involve technical topics directly related to tasks I am working on.
6. I have 1:1s with my manager that involve non-technical topics directly related to tasks I am working on.
7. I have 1:1s with my supervisor that involve non-technical topics directly related to tasks I am working on.
8. I give presentations to my teammates either in person or over a video conference.
9. I have received monetary recognition for great work through the Intel Recognition Tool.
10. I receive verbal or written recognition in public settings (ex. meetings, email chains, etc).
11. My teammates greet me when we come in to or leave work.
12. The teammates referred to in the previous question greet me often.
13. I give status updates for my tasks through my team's major assignment platform frequently.
14. I can describe in detail every persons' role on my team.
15. My teammates respond quickly and thoughtfully to my requests.

Last year, we only had 1 demographic question asking how many consecutive months the respondent has worked at Intel. For this round, we had **7 Demographic Questions** to further enrich our analysis and provide additional insight.

1. Have you taken this survey before?
2. How many consecutive terms have you been working here at Intel?
3. How many people are on your team?
4. How long is an average task for you?
5. What is your team's major platform for task assignment?
6. Of the people you interact with for your tasks, how many of them are working remote?
7. How many people on your team do you interact with for an average task?

ENGAGEMENT FACTORS AND ANALYSIS

1:1s

I have (non-technical/technical) 1:1s with my (supervisor/manager).			
Scale	1	3	5
Description	Never	Once / month	1+ times / week

Coops are told that they should have a meeting with their supervisor at least once a week, and a meeting with their manager biweekly. In November 2019, there was a surprising number of people that did not have 1:1s with their managers, and a few that had never met with either a supervisor or manager.
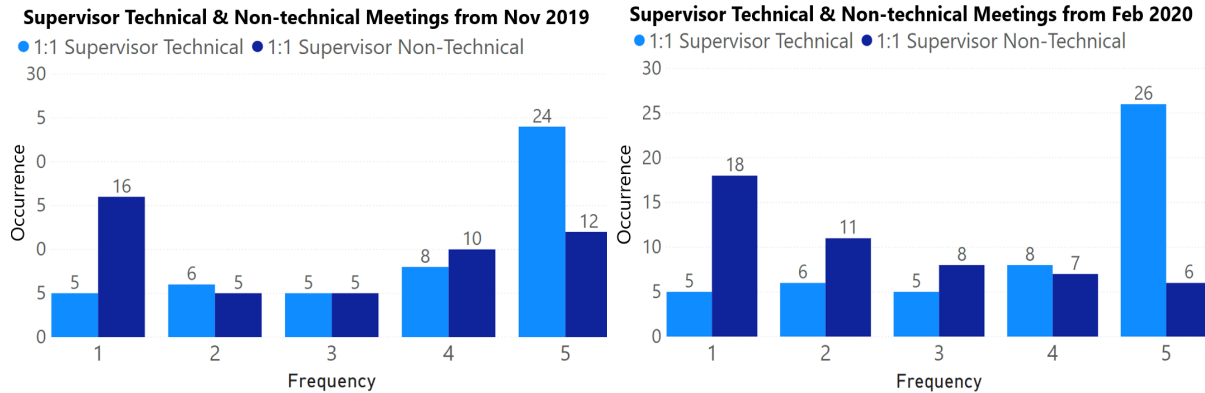
In November 2019, number of survey respondents that had **never** met with their:

- Manager: 17
- Supervisor: 5
- Either: 4
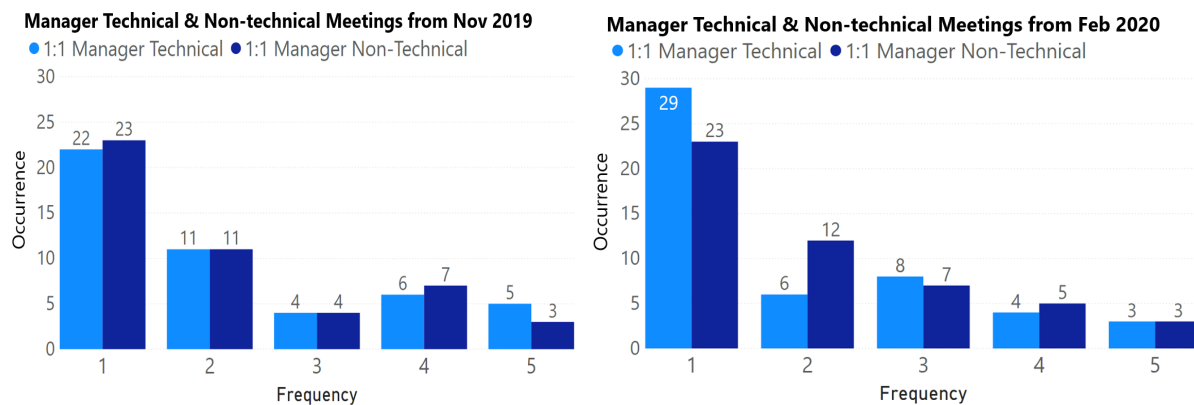
Supervisor 1:1s (Technical/Non-technical)

Similar to last term's data, approximately 50% of coop employees have weekly consistent technical meetings with their supervisors. This is unsurprising as these meetings would be held to provide progress updates on the coop's work, or for supervisors to assign new tasks to the coops.

However, for 1:1 non-technical supervisor meetings, it appears as though the coops who participated in the February 2020 survey meet less with their supervisors in comparison to the November 2019 data (with a greater number of coops answering "Never"(1) to "Once/Month"(3)).

Supervisor Technical & Non-technical Meetings from Nov 2019

Supervisor Technical & Non-technical Meetings from Feb 2020

Manager 1:1s (Technical/Non-technical)

With regards to 1:1 manager meetings, there has been a trend since the last survey data that fifty percent of coops do not meet with their managers at all. As we progress higher in the frequency of meetings, there are less coops reaching out to meet their managers.

Manager Technical & Non-technical Meetings from Nov 2019

Manager Technical & Non-technical Meetings from Feb 2020

In February 2020, number of survey respondents that had **never** met with their:

- Manager: 19
- Supervisor: 4
- Either: 3

Summary:

Recommendations: Non-technical meetings are associated with higher engagement but are heavily under utilized. There is a massive missed opportunity for career development opportunities for co-ops ("me" engagement). Allocate more time towards career-oriented / non-technical topics of conversation with co-ops in 1:1 meetings.

Public Recognition

I receive verbal or written recognition in public settings (eg. meetings, email chains, etc.)			
Scale	1	3	5
Description	Never	Once / month	1+ times / 2 weeks

Public recognition has a high positive correlation for "me", "we", and total engagement based on the February 2020 data results at 0.366, 0.447, and 0.453 respectively. This is one of our **highest** correlating factors.

Public Recognition vs Engagement Score
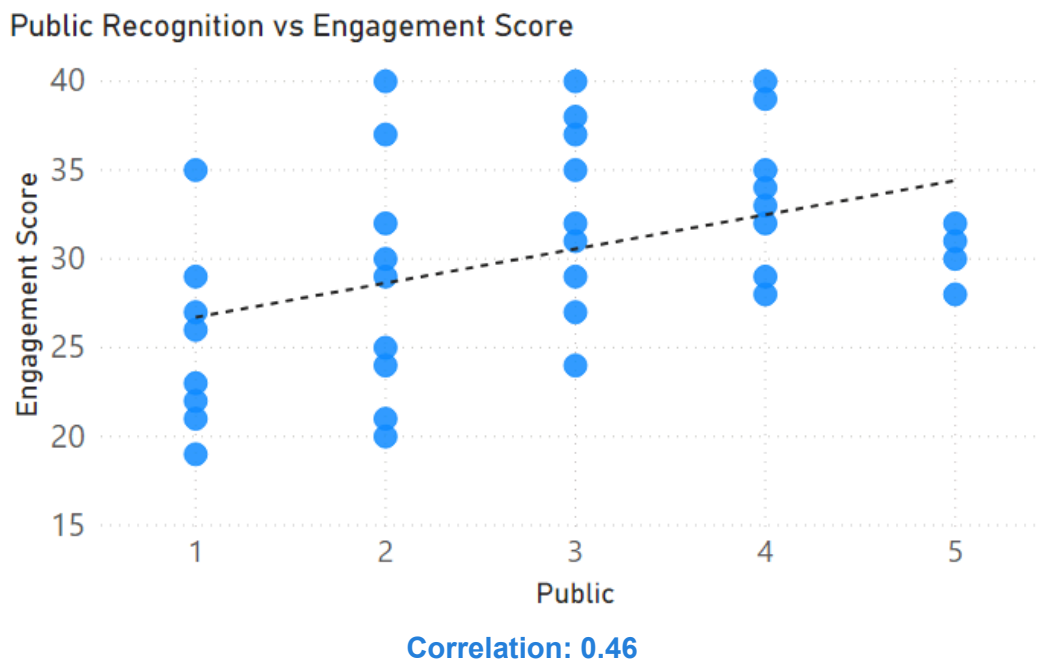
Correlation: 0.46

The correlation between engagement and public recognition has increased since the last survey results. The correlation coefficient for the November 2019 dataset was 0.38, whereas it is 0.45 in the February 2020 dataset. This indicates that there is a strong relation between being publicly recognized and engagement, as the more recognition you receive, the more engaged you are. It could also indicate that those who are more engaged receive more recognition for their work as well.

Summary:

Recommendation: Public recognition is the most effective way to increase overall engagement, as observed from 2 rounds of survey data. Actively reach out and acknowledge your co-op's work or effort. Implement 5 minutes of "successes & recognitions" at the beginning of team meetings.

Monetary Recognition

I have received monetary recognition for great work through the Intel Recognition Tool.			
Scale	1	3	5
Description	Never	More than once	More than 3 times

As monetary recognition is one of the ways coops can get rewarded for their work, we analyzed their engagement in relation to the frequency that they receive monetary rewards.

Monetary recognition has little to no correlation at all for total and "we" engagement with a correlation of 0.161 and 0.053, but is more correlated with "me" with a correlation coefficient of 0.228.

Monetary Recognition vs Engagement Score
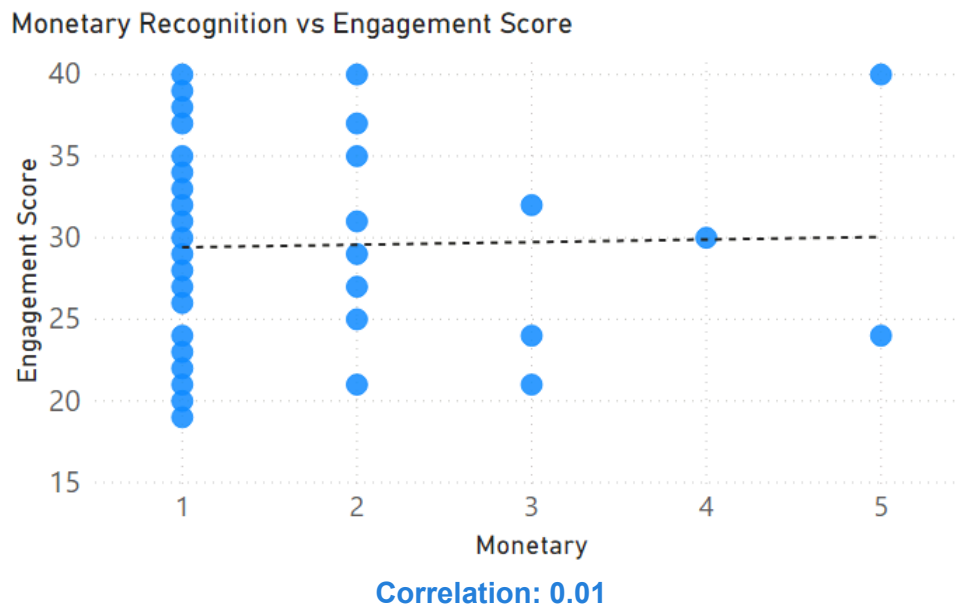
Correlation: 0.01

Even when we take out individuals who have never received monetary rewards, the only significant correlation is "me" engagement at 0.309. Total engagement remains relatively similar at 0.146, but "we" engagement shifts to a negative correlation at -0.044.

One factor to consider for the low total and "we" engagement would be how there is a sparse and inconsistent distribution of monetary recognition, thus does not have a significant relation to engagement as some coops may not be influenced by it. Similar to last year's data where 69 percent of coops have not received any monetary recognition, 68 percent of coops who answered the February 2020 survey had not received any monetary recognition at that point. All

coops who had begun their placements in January 2020 had not received any monetary recognition which is to be expected as monetary recognition takes time to be awarded.

Summary:

Recommendation: Monetary recognition is not as effective as public recognition, mainly due to its private nature. The key to positively impacting your coop's engagement from recognition of work is to make it public.

Lunch

I eat lunch with some of my coworkers (may include other co-ops).			
Scale	1	3	5
Description	Up to once / week	3 times / week	Everyday

Lunch is a significant time during the workday and we wanted to see the extent that coops are involved with others during this period. We hypothesized that a majority of coops would eat with their coworkers.

A majority of coops who took the survey from last semester (58%) ate lunch less than once a month with their teammates. However, approximately half (56%) of the coops eat lunch with their coworkers everyday, including other coops. This shift may be due to the question being more broad to include more than just teammates.

Summary:

Differences with November 2019:
The question slightly changed from eating lunch with **teammates (excluding other co-ops and Lunch and Learn opportunities)** (Nov 2019) to eating lunch with **coworkers (including coops)** (Feb 2020).

Suggestions for next survey: Continue analyzing the factor "Lunch" more broadly by focusing on coworkers rather than a coop's teammates.

Meetings

|			
I play an active role in meetings I am in (excluding 1:1 and All Hands).			
Scale	1	3	5
Description	I do not talk during most meetings and I am not asked to speak.	In most meetings, I will talk or ask questions only when prompted to.	I talk, ask questions, or take meeting minutes for every meeting I attend.

As meetings are a daily occurrence, we wanted to analyze the involvement that coops have in meetings. In terms of engagement, having an active role in meetings has a positive correlation between "me", "we", and total engagement at 0.246, 0.138, and 0.217 respectively.

Meetings for Nov 2019 1st term coops
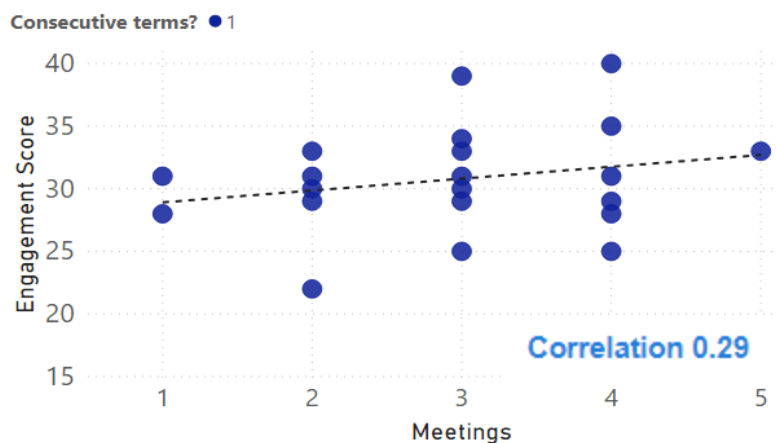
When we followed the engagement of coops who were in their first term during the November 2019 survey compared to February 2020, the correlation score has increased by 0.14. This shift in engagement can be attributed to the fact that the more meetings you are involved with, the more likely you are to become more engaged and participate within the meeting itself.


Meetings for Feb 2020 2nd term coops
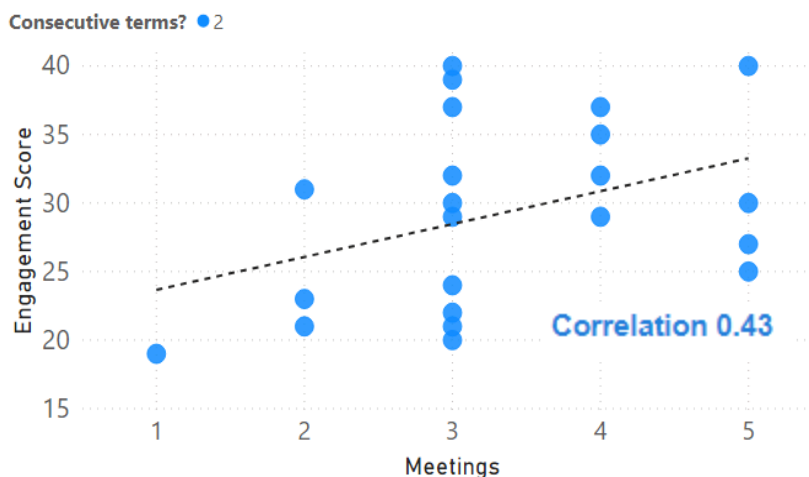
Summary:

Recommendation: Supervisors and managers can encourage coops to play a more active role in meetings by having the coop take meeting minutes or provide overviews of the topic of conversation for every meeting.
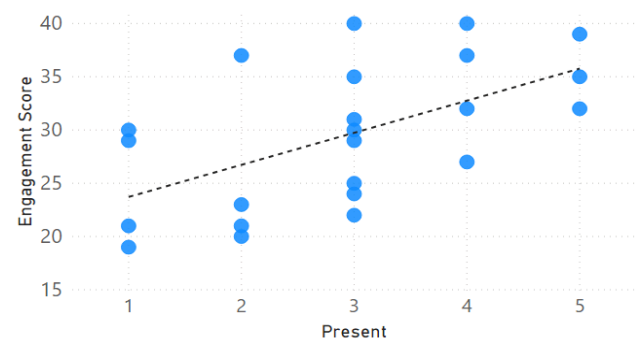
Presentations

I give presentations to my teammates either in person or over a video conference.			
Scale	1	3	5
Description	Never	Once / 2 months	1+ times / month

Presentation Nov 2019 1st Term Coops vs Engagement Score
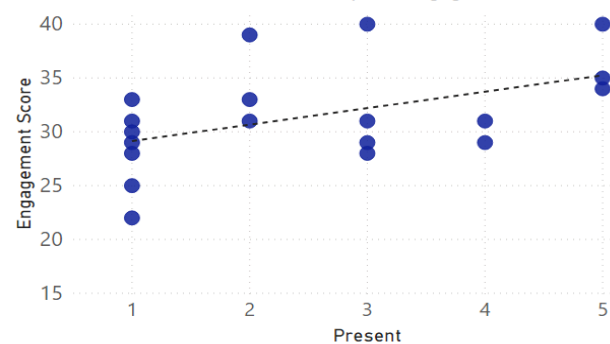
Presentation Feb 2020 2nd Term Coops vs Engagement Score

When comparing the cohort of coops who have answered the survey previously and those who haven't, the "me" and total engagement correlation increases significantly, as seen in the table below. An increase in "me" engagement correlation could indicate a coop having the opportunity to take ownership of their own work. Since more opportunities are provided over time, we can observe a definite improvement in "me" engagement score.

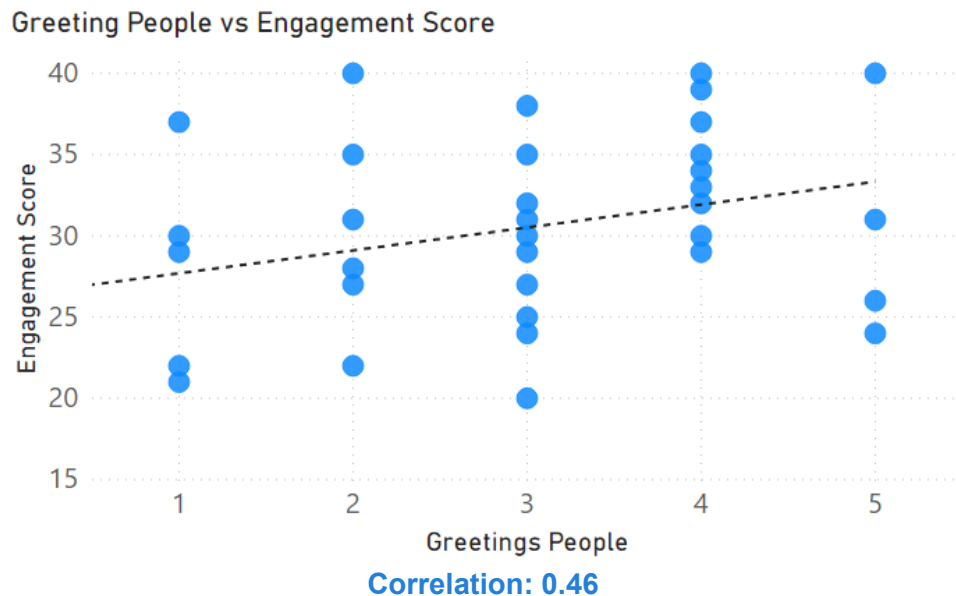|	"We" Engagement Score Correlation	"Me" Engagement Score Correlation	Total Engagement Score Correlation
First time survey respondents (November 2019)	0.585	0.302	0.51
Second time survey respondents (February 2020)	0.578	0.52	0.577

Summary:

Recommendation: We observed a positive shift for correlation of engagement with more opportunities to present. We recommend introducing more opportunities for presentations within teams.

Differences with November 2019: Engagement score and "we" engagement score has increased significantly between the November 2019 survey and the February 2020 survey.

Greetings

My teammates greet me when I come into or leave work				
Scale	0	1	3	5
Description	None	One Person	Half of my Teammates	All of my teammates

My teammates referred to in the previous question greet me:				
Scale	0	1	3	5
Description	N/A	Rarely	Not more than 2 times / week	Everyday

Greeting People vs Engagement Score

Correlation: 0.46

The correlation between greetings and engagement is high at 0.46 indicating that the more team members you greet, the higher your engagement score is, or vice-versa.

To delve deeper into the analysis of greetings, we also posed a new question in this survey round: "The teammates referred to in [the question my teammates greet me when we come in to or leave work] greet me:". This question was introduced to understand the frequency of greetings by the coop's teammates.

The graph below illustrates how 80% of coops greet their teammates every day, or almost every day. With a correlation of 0.33, it appears as the more frequently you greet your teammates, the higher your engagement score is.

Greeting Frequency vs Engagement Score
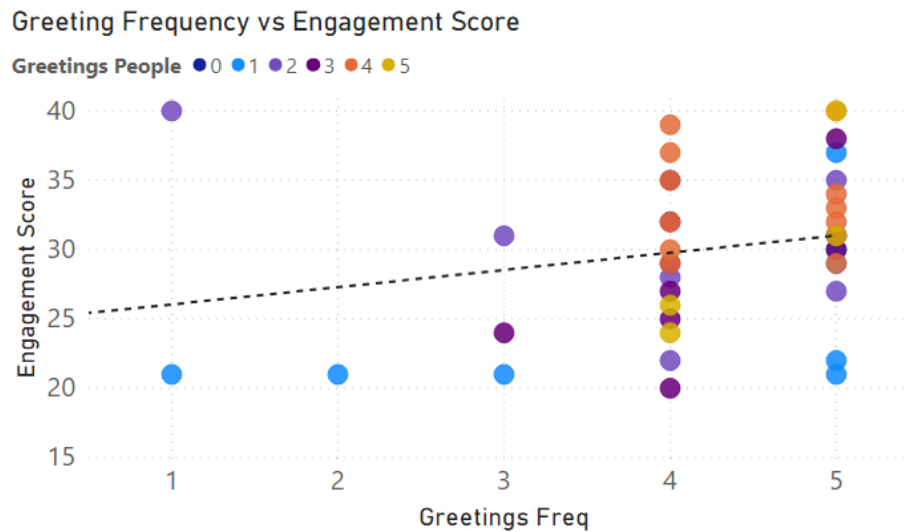
The legend "Greetings People" refers to how many people greet you when you come into or leave work.

Respondents who greet most of their team have the tendency to greet them frequently as well. The amount of people you greet per day as well as the frequency of greeting those individuals are positively correlated with "me", "we", and total engagement, with a correlation between 0.3 and 0.4.

Summary:

Recommendations: Continue greeting your teammates as there is a high correlation with the number of teammates being greeted and the frequency of greetings with engagement scores.

Differences with November 2019: The frequency of greetings and amount of teammates the respondent engages in greetings with were analyzed separately. For the February 2020 dataset, the number of teammates who greeted the survey respondents had a higher correlation coefficient of 0.43 in comparison to 0.31 from the November 2019 dataset.

Time Outside Work

I spend time with some of my teammates outside of work (for eg, through Intel social clubs)			
Scale	1	3	5
Description	Never	Once / month	1+ times / week

We hypothesized that spending time with teammates outside of work would be positively correlated with engagement scores.

Time Outside Work vs Engagement Score
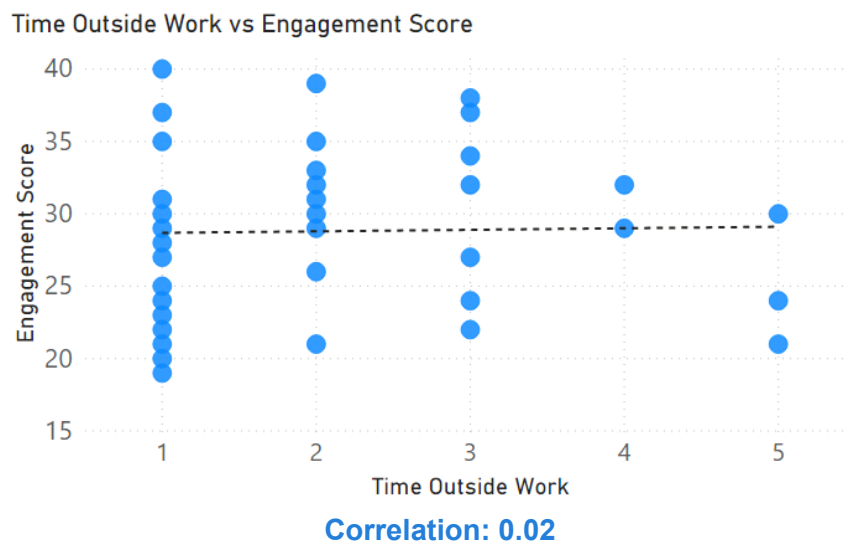
Correlation: 0.02

This factor remains uncorrelated, as the majority of co-ops do not spend time with their teammates outside of work. The correlation value of the November 2019 survey for this factor was 0.26, with the majority of coops answered "never" to spending time with their teammates outside of work. This small difference could be attributed to weather and longer daytimes (many of the November 2019 respondents either started their work terms in May or September 2019).

Summary:

Recommendation: Spending time with your teammates outside of work has the potential to influence employee engagement, but forcing yourself to participate in this can also lead to a negative effect on your engagement levels. Proceed with caution. Participate only if you want to.

Suggestion for next survey: Survey non-coop employees and observe results. May be different for non-coop employees as they are more likely to spend time with teammates outside of work, whereas coop employees are more likely to spend time with other co-op employees outside of work in comparison to their teammates.

Roles

I can describe in detail every person's role on my team.			
Scale	1	3	5
Description	No one	Half of the people	Every person

Introduction: This factor was continued from last term, and we predicted that it would have a positive correlation with engagement.

Understanding teammates' roles has a significantly positive relationship with engagement, as it did last year.

Roles vs Engagement Score

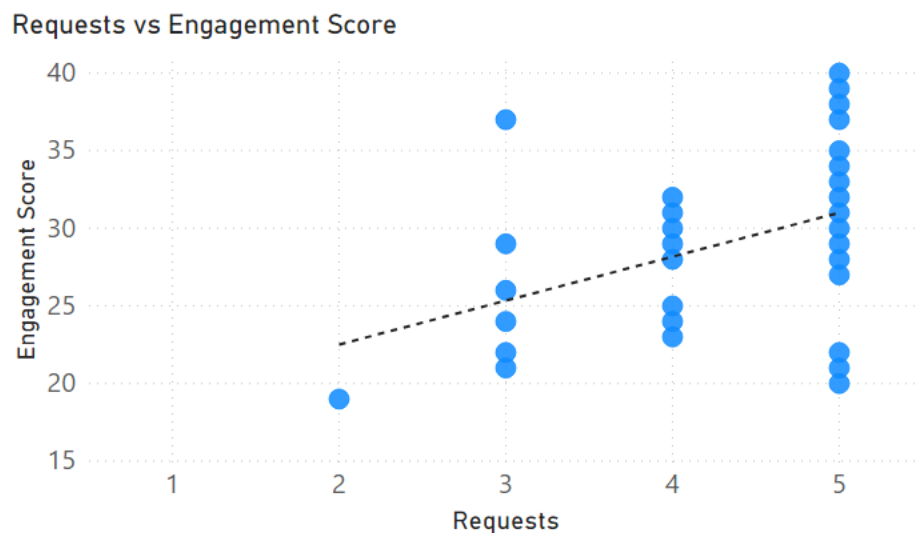**Correlation: 0.46**

Summary:

Recommendations: We can continue to recommend creating more opportunities for co-ops to understand their teammates' roles, such as a team wide introduction on the first day of work, to help them visualize their future on the team.

Difference with November 2019: There was a significant change between the We and Me engagement division for the Roles factor. Last year, Me was higher (0.27 vs 0.02), whereas this year We was higher (0.537 vs 0.387), showing a spectacular improvement in the We engagement aspect of understanding their teammates roles, and an interesting switch.

Request Response

My teammates respond quickly and thoughtfully to my requests			
Scale	1	3	5
Description	Never	Half of the time	Everytime

This question has continued from last year and we predicted it to show positive correlations yet again.

Requests vs Engagement Score

Correlation: 0.46

Request Response has been consistently showing high correlations and favorable results. There are very few people answering in the lower ranges, and most of the responses are concentrated in the '5' range.

Summary:

Recommendations: Keep up the good work in this area!

DEMOGRAPHIC QUESTIONS AND ANALYSIS

Task Length

How long is an average task for you?			
Scale	1	3	5
Description	One day or less	Less than two weeks	One month or longer

Task Length is a new factor we created this year to see whether there is a relationship between the length of your tasks and the engagement score. We didn't have a specific prediction because having longer task lengths could potentially mean better understanding of a subject through deeper study and experience, or on the other hand, feeling stagnant or bored in the work you're doing, and possibly, unchallenged.

There weren't very strong relationships with task length and other factors or indicators in general. However, when adjusting team size to only include larger teams, there were significant negative correlations (-0.339 for We engagement). This suggests that co-ops in larger teams engage better when their tasks are shorter.

Moreover, task length has a negative correlation of -0.288 with update frequency. This suggests that when you have longer tasks, you update less frequently, or vice versa, which gives us insight into how task management overall works. Also, since Update had a positive correlation with Engagement, we can predict that task length might show negative correlations with Engagement when we do future analysis with more data.

Summary:

Suggestions for next survey: Check whether co-ops in larger teams continue to have negative correlations between task length and engagement, or for negative correlations overall in this factor.
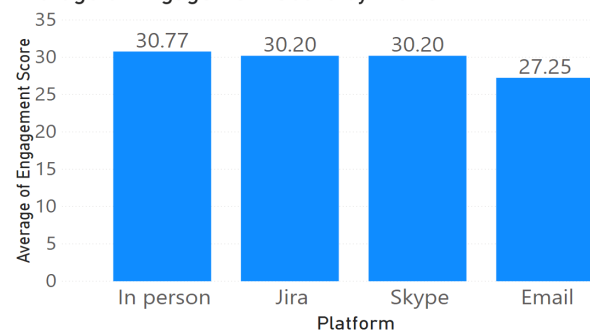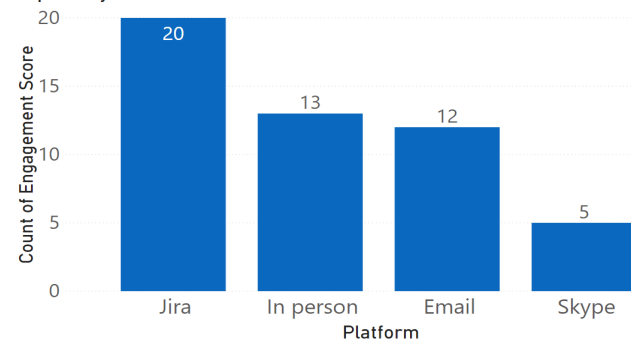
Platform

My team's major platform of project assignment is:				
Bins	Jira	In Person	Email	Skype

Platform is a new demographic we added this term to understand what platform co-ops use to give task updates. We predicted that the more 'personal' and face-to-face platforms, like In

Person meetings and Skype, would have higher engagement scores.

The average engagement score doesn't change much between the platforms.

Since this is a demographic with abstract answers, we decided to create 'Platform Scales', which associate a number from 1 to 4 to each platform, where 1 is 'worst' and 4 is 'best', to find the correlation between this 'worst to best' platform scale, and other factors/indicators. After analyzing multiple different scales, the platform scale that ended up having the most positive correlation with general Engagement and Me/We engagement was in the following order:

1: Email, 2: Skype, 3: Jira, 4: In Person

As a whole, this Platform scale had the most positive correlations with the 'Mission' indicator and We Engagement.

Summary:

Recommendations: Have more in-person updates for co-ops to feel more engaged at work.

Differences from November 2019: In the first survey, Jira showed very negative results with engagement. This year, we found that JIRA had the highest standard deviations and the lowest slope of Update frequency vs Engagement compared to the rest of the platforms, but still was the second 'best' platform overall.

Update

I give status updates for my tasks through the selected platform:			
Scale	1	3	5
Description	Less than one time a week	Twice a week	One or more times a day

Update vs Engagement Score
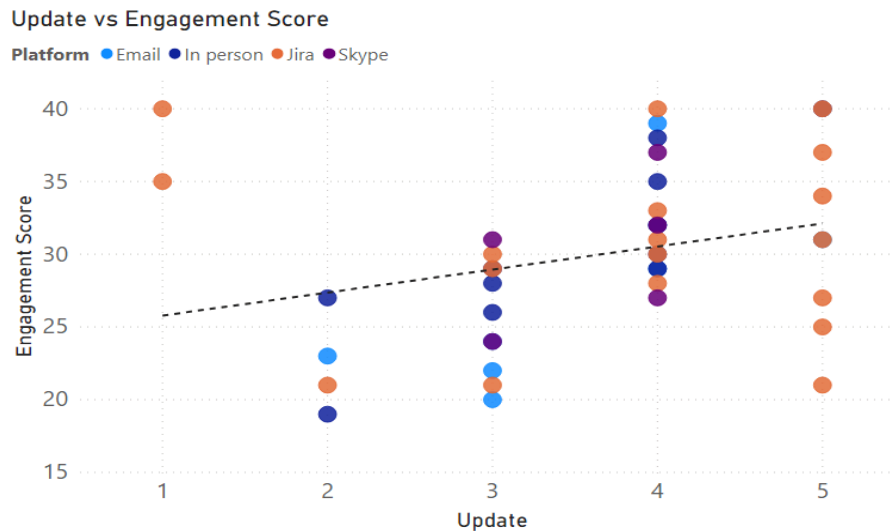
Correlation: 0.27

Overall, we found that giving status updates more frequently has a positive relationship with engagement (most positive with smaller teams).

The two indicators that have the most positive correlations with giving status updates are feeling supported by your team (0.22), and feeling like your teammates share your values (0.34), which are both 'We' indicators. Therefore, it's suggested that co-ops feel more supported and connected to their teammates if they're in contact with them more often, especially by giving more frequent updates on their work. The We engagement is higher than Me, perhaps because by updating more frequently, you are also analyzing the work you've done and making it presentable to someone or something, whether it is a Jira dashboard or a team lead.

Another find was that frequency of updates affects first term co-ops more than others (first term co-ops have a higher correlation coefficient with Engagement).

Summary:

> **Recommendations:** Increase frequency of updates, especially for smaller teams and first term co-ops. For managers/supervisors, this might mean setting a certain schedule or routine for updates at the very beginning of the co-op term.
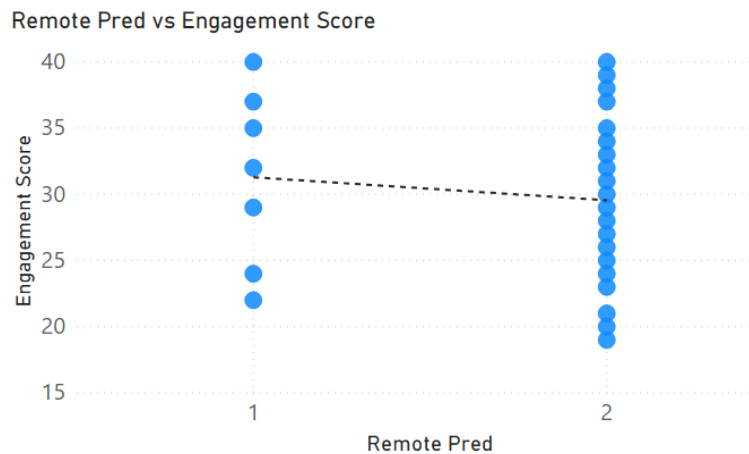
Remote

Of the people you interact with for your tasks, how many of them are working remote?					
Bins	0-1	2-3	4-5	6-7	8+

We hypothesized that interacting with more remote people would have a negative correlation with engagement. This hypothesis may have been influenced by a previous bias that interacting with someone online is less personal than working with someone in real life.
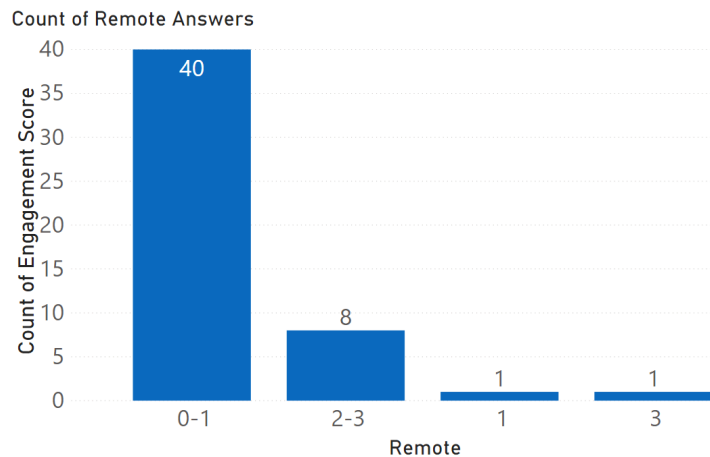
The majority of survey respondents answered in the '0-1' option, which skews the count significantly:

Surprisingly, we saw that engagement scores were slightly higher when co-ops interacted with more remote people. Even in analyzing the correlation coefficients, we found that having more remote interactions had a significantly positive correlation with being challenged to grow personally/professionally (0.339).

Summary:

Suggestions for next survey: Split buckets into individual numbers and ask about whether these remote workers are significantly higher in management.

Team Size

How many people are on your team?					
Bins:	1-4	5-9	10-14	15-19	20+

This is a new demographic question we added this year to explore the effect of your team size as a co-op. This is an especially interesting demographic because the many divisions and hierarchies in Intel mean that each co-op has a different definition of 'team'. We left the definition open-ended, letting the co-ops answer based on what 'team' they felt part of.

Team Size vs Engagement Score
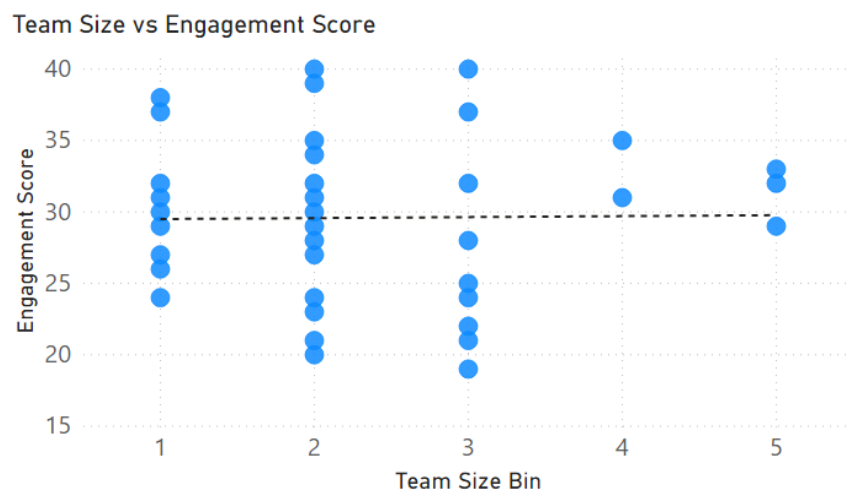
As a whole, team size doesn't have a strong slope, but you can see that the smaller team bins contain the co-ops with the highest engagement scores. There also isn't a significant *correlation* with engagement (-0.044). The most negative correlations come from the 'support' and 'values' indicators (-0.198 and -0.191, respectively), which are both We engagement indicators. This shows that when a co-op is part of a larger team, there's a potential for a lack of feeling of support, and commonality of values with their teammates.

Also, smaller teams are more likely to use the 'In Person' platform to update their tasks, which was at the top of the theoretical Platform scale.

Summary:

> **Recommendations**: Focus on making co-ops who are part of larger teams feel supported and create more outlets for them to understand their team's values. This could be through activities in less formal settings, where co-ops have the chance to get to know their teammates in depth.

SUMMARY & RECOMMENDATIONS

The engagement factors with the highest correlation were:
- I can describe in detail every person's role on my team. [roles - 0.49]
- My teammates respond quickly and thoughtfully to my requests. - [requests - 0.46]
- My teammates greet me when they come into or leave work. [greetings - 0.46]
- I receive verbal or written recognition in public settings [public - 0.46]

Recommendations for improvement:
1. Have a team-wide introduction on Day 1. Knowing the names and roles of their coworkers can help a new employee visualize their future on the team, which impacts both 'me' and 'we' engagement.
2. Greet your teammates as you come into or leave work. Acknowledging your teammates' presence can greatly impact "we" engagement levels. It takes less than 2 minutes to do. It's free. And it has a potentially great impact.
3. Create opportunities to give presentations (including co-op driven Lunch & Learn)
4. Encourage meaningful roles in meetings. Something as simple as having a co-op employee take meeting minutes can introduce
5. Lead career-oriented conversations in 1:1s. There exists a huge gap in 1:1 meetings where more non-technical meetings can be driving "me" engagement.
6. Always recognize great work publicly. Public recognition is much more effective than monetary recognition. Recognize successes and hard work in meetings or email chains.

Suggestions for adapting to WFH with Co-ops:
1. Encourage use of webcams, especially during introductory meetings
2. Set an example by greeting all participants in virtual meetings / acknowledging them
3. Create challenges/team rituals to share photos and videos of a chosen topic of the day.
4. Host weekly social hours, like a virtual lunchtime with your team.

Recommendations for the next survey:
- Send out this survey once every 4 months to track improvement over time
- Use demographic data for richer analysis
- Keep this a co-op driven and analyzed survey
- Share the results with team leaders to implement recommendations on a team-level, in addition to an individual level
- Adjust survey towards work from home situation
- Potentially seek out data analysis expertise to deepen analysis (?)

CHANGES IN DATA ANALYSIS

This term, we switched to using Microsoft PowerBI instead of Microsoft Excel for our graphing and data analysis. Besides Excel being generally more tedious to use, PowerBI offers easy to use "slicers", relationships between data, and a drag-and-drop visual layout that is very useful for this type of analysis. We used the slicers for our demographic questions, to be able to quickly change things like team size and how many consecutive terms a co-op has done, to be able to see whether that affects a slope or correlation coefficient. The drag and drop layout was easier to use when quickly testing different predictions. Lastly, PowerBI links to Excel and uses the same DAX formulas that Excel can use, so it was an overall better option.

APPENDIX

Correlation Table with all the engagement factors, engagement indicators, and demographic questions in bins.