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Understanding the Student Experience of a University Labour Strike: Identifying Strategies to Counter Negative Impact Appendix

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Appendix A — Study 1 Survey

Only those measures that are relevant to the current analysis are presented here.

1 Strike-Information Awareness

1.1 Phase 1 (Pre-Strike)

Overall, how well informed do you feel about the potential strike at York University?

- Very much
- Somewhat
- A little
- Not at all

1.2 Phase 3 (During-Strike)

Overall, how well informed do you feel about the strike at York University?

- Very much
- Somewhat
- A little
- Not at all

2 Sources of Strike-Related Information

2.1 Phase 1 (Pre-Strike)

How much information and advice about the strike have each of the following given you?

	Very much	Somewhat	A little	Not at all
(a) Other York University students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) Professors at York University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) York University website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) Union website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(e) Other websites (not York University or the union)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(f) Television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(g) Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(h) Newspaper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(i) Friends and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2.2 Phase 3 (During-Strike)

IN THE PAST WEEK, how much information and advice about the strike have each of the following given you?

	Very much	Somewhat	A little	Not at all
(a) Other York University students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) Professors at York University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) York University website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) Union website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(e) Other websites (not York University or the union)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(f) Television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(g) Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(h) Newspaper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(i) Friends and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2.3 Phase 4 (Post-Strike)

IN THE PAST WEEK IMMEDIATELY FOLLOWING THE END OF THE STRIKE, how much information and advice about the end of the labour dispute and the start-up of classes did each of the following give you?

	Very much	Somewhat	A little	Not at all
(a) Other York University students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) Professors at York University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) York University website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) Union website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(e) Other websites (not York University or the union)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(f) Television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(g) Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Very much	Somewhat	A little	Not at all
(h) Newspaper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(i) Friends and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3 Emotional Responses in Students' Approach to Academics

3.1 Phase 1 (Pre-Strike)

Each of the following statements describes possible reactions to the potential upcoming strike by York University teaching assistants and contract faculty. Please indicate your level of agreement with each statement using the scale provided. The questions in this scale ask you about your feelings and thoughts during the last two weeks. In each case, please indicate how often you felt or thought a certain way.

	Disagree Strongly				Agree Strongly
The strike will be a great opportunity to catch up on my coursework and to prepare for mid-terms or final exams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am worried that the strike might disrupt my good study habits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm not sure whether or not I should bother studying and keeping up with my readings during the strike.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a strike occurs, I will probably get lazy with my school work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.2 Phase 3 (During-Strike)

Each of the following statements describes possible reactions to the strike by York University teaching assistants and contract faculty. Please indicate your level of agreement with each statement using the scale provided.

	Disagree Strongly				Agree Strongly
The strike has been a great opportunity to catch up on my	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Disagree Strongly				Agree Strongly
coursework and to prepare for mid-terms or final exams.					
I am worried that the strike has been disrupting my good study habits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm not sure whether or not I should bother studying and keeping up with my readings during the strike.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am getting lazy with my school work during the strike.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4 Perceived Stress Scale (adapted from Cohen & Williamson, 1988)

4.1 Phases 1, 3, and 4 (Pre-, During-, and Post-Strike)

The questions in this scale ask you about your feelings and thoughts during the last two weeks. In each case, please indicate how often you felt or thought a certain way.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
In the last week, how often have you been upset because of something that happened unexpectedly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last week, how often have you felt that you were unable to control the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last week, how often have you felt nervous and "stressed"?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last week, how often have you felt confident about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In the last week, how often have you felt that things were going your way?

In the last week, how often have you found that you could not cope with all the things that you had to do?

In the last week, how often have you been able to control irritations in your life?

In the last week, how often have you felt that you were on top of things?

In the last week, how often have you been angered because of things that were outside of your control?

In the last week, how often have you felt difficulties were piling up so high that you could not overcome them?

Appendix B — Study 1 Statistical Analyses

1 How Well Informed Did Students Feel? (Section 2.3.1)

Chi-square tests for equal proportions tested for a difference between University of Toronto and York University in the proportion of students indicating low (i.e., participants responding not at all or a little well-informed) versus high (i.e., participants responding somewhat or very well-informed) strike information awareness. There was not a statistically significant difference between the universities before or during the strike. Specifically, 46.3% and 45.3% of students reported feeling no more than a little well-informed before and during the strike, respectively, compared to 53.7% and 54.7% of students who reported feeling somewhat or very well-informed. A McNemar test of agreement also failed to reveal significant differences in these proportions between the two phases of data collection ($p > .05$), suggesting that the distribution of perceived strike information awareness did not change from the period before the strike until one month into the work stoppage.

2 How Did Students Access Strike-Related Information Throughout the Strike? (Section 2.3.2)

A series of McNemar tests confirmed that before the strike, the proportion of students reporting at least somewhat relying on professors or fellow students for information and advice regarding the strike was significantly higher than that for any other source of information queried ($p < .0001$).

However, reliance on faculty as an information source appeared to drop dramatically one month into the work stoppage. At the same time, students seemed to report an increased reliance on both the York University website and from information sources external to the university community including family and friends, television and radio. This trend continued into the post-strike period (McNemar tests, $p < .0067$ (Bonferroni-adjusted)). Reliance on fellow students for information remained very high throughout the strike, and reliance on the union website also remained stable through all phases of data collection. McNemar tests comparing the proportion of students who reported at least somewhat relying on these sources of information across all three phases of the strike were non-significant at a Bonferroni-adjusted p of .0167.

3 Which Information Sources Contributed Most to Students' Perceptions of Being Well Informed? (Section 2.3.3)

A set of logistic regression analyses of both the before- and during-strike period examined whether a student felt at least somewhat well-informed based on whether or not they reported relying at least somewhat on each of the information sources. A Bonferroni-adjusted alpha of .0055 was adopted to determine if each information source significantly predicted feeling at least somewhat well-informed.

Before the strike, students who reported relying at least somewhat on their professors for strike-related information and advice were approximately five times more likely to feel somewhat well-informed (i.e., to perceive having high strike information awareness) compared to student who relied very little on professors for strike-related information ($OR = 4.785$, $Wald \chi^2(1) = 11.75$, $p < .001$). Likewise, students who reported relying at least somewhat on fellow students for strike-related information and advice were also approximately five times more likely to perceive having high strike information awareness than students who relied very little on their fellow students ($OR = 5.11$, $Wald \chi^2(1) = 13.33$, $p < .001$). The predictive accuracy for both models was moderate, such that the percentage of students correctly classified

was approximately 70%. No other information sources were found to contribute to perceptions of high strike-information awareness before the work stoppage.

During the strike, reliance on professors for strike-related information and advice was not significantly associated with feeling well informed. Reliance on fellow students for strike-related information and advice during the work stoppage was also not significantly associated with feeling well informed. Students who relied at least somewhat on the York University website for strike-related information during the work stoppage were approximately six times more likely to feel at least somewhat well-informed (i.e., to perceive high strike information awareness) compared to those who relied very little on the university website ($OR = 5.73$, Wald $\chi^2(1) = 14.30$, $p < .001$). Likewise, students who relied at least somewhat on external websites (i.e., not the York University or union websites) for strike-related information were also approximately six times more likely to feel somewhat well-informed compared to students who relied very little on these websites ($OR = 6.09$, Wald $\chi^2(1) = 9.15$, $p < .001$). Again, it should be noted that predictive accuracy for both significant models was moderate, such that 69.5% of students were correctly classified by the York University website model and 62.1 % by the external websites model.

4 What Emotional Responses Emerged in Students' Approach to Academics Throughout the Strike? (Section 2.3.4)

Wilcoxon signed-rank tests were used to test for significant changes in emotional responses from before to during the strike. Ratings of all four emotional response items changed significantly from before to during the strike ($p < .0001$).

Wilcoxon signed-rank tests were also used to test for significant differences in emotional responses during versus after the strike. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0125$. There was no evidence of a change in emotional response from the time of the during-strike survey to the post-strike survey. The only exception was a change in students' rating of experienced confusion. Following the strike, a higher proportion of students (65.1% after the strike versus 44% during the strike) indicated that they were uncertain about whether or not to continue with their studies during the strike ($p < .0001$).

A dummy regression model further examined whether students' re-assessment of how the work stoppage had impacted their approach to their studies during the strike was associated with differing levels of stress (as measured by the Perceived Stress Scale) after the strike. Students who agreed at least somewhat that the strike had been a good opportunity to catch up on coursework (by indicating a score of at least 3 on a 5-point scale) reported lower levels of stress after the strike than those students who strongly disagreed with this statement ($p < .05$ for all). Note that this was a medium-sized effect such that a student's agreement that the strike was a good opportunity to catch up on coursework explained 13.6% of the variation in Perceived Stress Scale scores. Similarly, students who agreed or strongly agreed that the strike had interfered with their good study habits (by indicating a score of 4 or 5 on a 5-point scale) reported higher levels of stress after the strike compared to students who strongly disagreed with this statement ($p < .01$ for both). The magnitude of effect for this relationship was also medium-sized such that a student's agreement that the strike had disrupted their good study habits explained 11% of the variation in Perceived Stress Scale scores.

Appendix C — Study 3 Survey

1 Sources of Information about the Strike

During the University of Toronto/York University strike in early 2015, students sought information about the strike through a number of different media. Using the scale provided, please indicate how much information about the strike you found using each of the following media outlets.

News Media

	None	A little	Somewhat	A moderate amount	A great deal
Television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Newspaper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online news internet site (e.g., cp24.com, thestar.com, toronto.ctvnews.ca)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In Person

	None	A little	Somewhat	A moderate amount	A great deal
Your course professors who were NOT on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends from university	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family and friends from outside the university community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Informational Internet Websites

(Those sites designed primarily for the owner of the website to share information with its audience. Please do not include online news media here or social media/knowledge websites (e.g., Facebook, Reddit, Twitter).)

	None	A little	Somewhat	A moderate amount	A great deal
University website (utoronto.ca; yorku.ca)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Informational Internet Websites

(Those sites designed primarily for the owner of the website to share information with its audience. Please do not include online news media here or social media/knowledge websites (e.g., Facebook, Reddit, Twitter.)

	None	A little	Somewhat	A moderate amount	A great deal
Union website (3903.cupe.ca; cupe3902.org)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty member's website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Social Media/Knowledge Exchange Websites

The following few questions refer to those sites designed specifically for *exchange* of information.

Using the scale provided, please indicate how much information about the strike you found using **Facebook**.

None	A little	Somewhat	A moderate amount	A great deal
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the strike, students visited many different **Facebook** pages and read the posts of many different Facebook contributors while looking for information about the strike. Using the scale provided, please indicate how much information was provided to you on Facebook by each of the following contributors.

	None	A little	Somewhat	A moderate amount	A great deal
University administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The union	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty members NOT on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching assistants on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	None	A little	Somewhat	A moderate amount	A great deal
Fellow students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other/Unknown contributor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Using the scale provided, please indicate how much information about the strike you found using **Reddit**.

None	A little	Somewhat	A moderate amount	A great deal
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the strike, students read the posts of many different Reddit contributors while looking for information about the strike. Using the scale provided, please indicate how much information was provided to you on Reddit by each of the following contributors.

	None	A little	Somewhat	A moderate amount	A great deal
University administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The union	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty members NOT on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching assistants on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fellow students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other/Unknown contributor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Using the scale provided, please indicate how much information about the strike you found using Twitter.

None	A little	Somewhat	A moderate amount	A great deal
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the strike, students read Tweets from many different sources while looking for information about the strike. Using the scale provided, please indicate how much information was provided to you via **Twitter** by each of the following sources.

	None	A little	Somewhat	A moderate amount	A great deal
University administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The union	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty members NOT on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching assistants on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fellow students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other/Unknown contributor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Using the scale provided, please indicate how much information about the strike you found using other social media besides Facebook, Reddit, and Twitter (e.g., Instagram, Tumblr, Pinterest).

None	A little	Somewhat	A moderate amount	A great deal
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please **rank** the following in order of how much information about the strike each provided to you (through all possible media including email, in-person, Facebook, Twitter, etc.) during the University of Toronto/York University labour dispute in early 2015.

	Provided the most information					Provided the least information
	1	2	3	4	5	6
The University of Toronto/York University Administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The union (representing striking teaching assistants)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professors who were not on strike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fellow University of Toronto/York University students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends and family from outside the university community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
News media (e.g., television, radio, newspapers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2 Strike Information Awareness

Using the scale provided, please respond to the following question.

	Not at all	A little	Somewhat	A moderate amount	A great deal
Overall, during the labour disruption at University of Toronto/York University in early 2015, how well informed did you feel about the strike?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3 Satisfaction with and Improvement of University Communications

Using the scale provided, please respond to the following question.

	Not at all	A little	Somewhat	A moderate amount	A great deal
Overall, during the labour disruption at University of Toronto/York University, how satisfied were you with the communication from the university administration?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following strategies have been suggested by undergraduate students as possible ways in which the university administration could have improved communication with the student body during the strike. Using the scale provided, please rate the extent to which each of these strategies would have been helpful to *you* personally.

	Not at all	A little	Somewhat	A moderate amount	A great deal
More frequent updates on the status of negotiations and the impact on classes via email, including, if necessary, emails indicating that no new information is currently available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More frequent updates on the status of negotiations and the impact on classes via social media (e.g., Facebook, Twitter) including, if necessary, messages that no new information is currently available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-person town hall meetings where students can pose questions to the administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online town hall meetings where students can pose questions to the administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24-hour notice of the cancellation or resumption of classes/labs/ tutorials posted to online or social media sites (e.g. university website, Facebook, Twitter)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all	A little	Somewhat	A moderate amount	A great deal
General information about labour legislation and the collective bargaining process in Ontario made available to students via the university website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4 Impact of the Strike

When the strike began at University of Toronto/York University, none of us knew how long the strike was going to last. Reflecting back on your experience of the strike, how much stress, anxiety or worry did you experience thinking about the potential impact of the strike on each of the following:

	None	A little	Somewhat	A moderate amount	A great deal
Your grades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The quality of your education (i.e., how well you would learn the course material)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your finances (e.g., extra money needed for redoing courses, paying rent for a longer semester, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current employment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Future employment (e.g., summer job, post-graduation job)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Future studies (e.g., law school, graduate school)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Graduation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Psychological Distress – Kessler K6:

During the strike by teaching assistants and contract faculty at York University/University of Toronto, about how often did you feel...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
...nervous?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...hopeless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...restless or fidgety?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...so depressed that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...that everything was an effort?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...worthless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Each of the following statements describes possible student reactions to the strike. Please indicate your level of agreement with each statement using the scale provided.

	Strongly Disagree				Strongly Agree
The strike was a great opportunity to catch up on my coursework and to prepare for mid-terms or final exams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The strike disrupted my good study habits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During the strike, I wasn't sure whether or not I should bother studying and keeping up with my readings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got lazy with my school work during the strike.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Although the strike ended after several weeks, there are a number of possible ways in which students could have been affected beyond the end of the strike. Using the scale provided, please indicate the extent to which each of the following is true for you.

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Somewhat Disagree
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As a result of the 2015 strike by teaching assistants and contract faculty at University of Toronto/York University....

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Somewhat Disagree
I received a lower grade in a course than I would have liked or expected.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I received a higher grade in a course than I would otherwise have expected to receive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will have to re-do a course (due to a low grade or a dropped course)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought about switching universities part-way through my program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I did not learn as much/did not cover as much material in a course as I should have.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was not as prepared for a more advanced course the following year (e.g., took a first-year course during the strike, and subsequently struggled in a second-year course)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that my degree from University of Toronto/York University has been de-valued.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not recommend University of Toronto/York University to a friend who was considering attending for an undergraduate degree.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not recommend University of Toronto/York University to a friend who was	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Somewhat Disagree
considering attending for a graduate degree.					
I would donate less money to University of Toronto/York University following graduation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5 Support from and Remediation Efforts by Faculty

We know from speaking with undergraduate students that professors from each of their classes handled the strike in a different way. Thus, each student’s experience of the strike was different from one class to the next. Some students may have been unsatisfied with the support offered by all of their professors, while other students may have had more than one professor who they felt was supportive.

Thinking about the one professor, who was NOT on strike, whom you feel helped you the most during the labour disruption, please tell us what he/she did that you appreciated (please select all that apply):

- listened to me complain
- provided more office hours
- provided encouragement/boosted spirits
- provided many good options for handling the rest of the course work
- provided strike-related updates and information
- gave us a heads-up about the strike and possible changes in the course before the strike began
- provided us with strike updates and possible changes in the course while the strike was going on
- was flexible and responsive to our needs and requests (e.g., revised course requirements based on student feedback)

Which of the following possible remediation efforts by individual professors would be the most helpful to you during a similar-length strike to the one experienced in early 2015? Please **rank** in order of preference.

	Most helpful						Least helpful
	1	2	3	4	5	6	7
Readings and/or assignments shortened, revised or cancelled	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assignment made optional (but if you complete it, the	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

assignment is marked and the grade recorded)

Assignment required, but whether or not assignment grade contributes to overall grade is optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assignment deadline extended	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examination/test/quiz cancelled	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examination/test/quiz made optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examination/test/quiz changed to "take-home" examination/test/quiz	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Following the strike, some professors chose to provide students with more of a say in how the course requirements and grading scheme were revised. Using the scale provided, please indicate the extent to which you would appreciate having these options from your professor in the event of a future similar-length strike:

	Not at all	A little	Somewhat	A moderate amount	A great deal
The professor moderates a class discussion and one remediation strategy for the course is democratically selected by the students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students are given a number of options (e.g., eliminate assignment, cancel examination) and each student selects their own individualized remediation strategy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6 Remediation Efforts by the University Administration

Which of the following possible remediation efforts by the university administration would be the most helpful to you during a similar-length strike to the one experienced in early 2015? Please **rank** in order of preference.

	Most helpful		3	4	5	Least helpful	
	1	2				6	
Course made pass/fail (instead of graded from A+ to F)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deferred standing (assignment deadlines or examination date extended beyond the revised semester)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extended drop deadline (opportunity to drop the course without penalty beyond the original deadline)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Option to re-take course in a subsequent semester free of charge (no tuition fee required)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A small credit to all students (e.g., \$200 toward future tuition, convocation fees, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure that departments review material from mandatory foundations courses in more advanced courses in the year after the strike (e.g., review course material from a first-year statistics class in a second-year statistics class)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7 Student Knowledge of Collective Bargaining

The following statements are intended to measure your knowledge of collective bargaining in Canada. Please respond as accurately as possible, indicating whether each statement is true or false.

	True	False	I don't know
Negotiations between University of Toronto/York University and the union began many months before the start of the 2015 strike.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The strike by teaching assistants and contract faculty at University of Toronto/York University in early 2015 was an illegal strike.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	True	False	I don't know
The teaching assistants' and contract faculty's collective agreement was set to expire a month after the strike began.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legally, University of Toronto/York University had the option of having picketers removed by the police.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The union selected a day to strike, providing no notice to the university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If both the union and the university had agreed to it, the matter could have been sent to binding arbitration (i.e., an objective third party would have made final decisions on the settlement, and both sides would have had to abide by the decision).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Picketers are allowed to <i>delay</i> vehicles entering the employer's property; picketers are not allowed to completely <i>block</i> vehicles from entering the employer's property.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix D — Study 3 Statistical Analyses

1 What Sources of Strike-Related Information Were Most Accessed by Students? (Section 4.3.2)

Cochran-Mantel-Haenszel tests of row mean differences were used to assess differences between University of Toronto and York University students in their ratings of sources for strike-related information. Ratings were provided on a 5-point Likert-type scale (scored 1 = none; 2 = a little; 3 = somewhat; 4 = a moderate amount; 5 = a great deal). Table D.1 presents these results. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0033$.

Table D.1: Cochran-Mantel-Haenszel tests of row mean differences testing for differences in the percentage of University of Toronto versus York University students indicating at least moderate reliance (a score of 4 or 5 out of 5) on a given source for strike-related information

Sources of Information	York University	University of Toronto	$\chi^2(4)$	p
News Media - TV	20.93	14.13	14.84	.0050
- Radio	2.93	4.20	4.89	.2984
- Newspaper	8.40	12.60	8.04	.0902
- Online	69.29	68.70	4.54	.3374
<i>In Person - Faculty (not on strike)</i>	<i>31.41</i>	<i>53.82</i>	<i>41.83</i>	<i><.0001</i>
- Fellow Students	66.81	75.48	11.97	.0176
- Family/Friends	9.12	11.50	5.53	.2370
Websites - University (official)	45.45	40.84	4.43	.3510
- <i>Union</i>	<i>52.48</i>	<i>37.40</i>	<i>19.66</i>	<i>.0006</i>
- Faculty	5.79	5.72	4.63	.3269
- Other	19.16	14.12	9.68	.0462
Social Media - Facebook (Overall)	73.14	76.34	6.12	.1905
- Reddit (Overall)	17.36	26.34	11.52	.0213
- <i>Twitter (Overall)</i>	<i>55.79</i>	<i>18.39</i>	<i>90.70</i>	<i><.0001</i>
- Other	11.20	6.11	5.95	.2026

Note: Tests indicating significant differences between University of Toronto and York University students at a Bonferroni-adjusted criterion alpha of $p < .0033$ are italicized and bolded. This table supplements Figure 4 in the main body of the report.

Table D.2 presents the results of Cochran-Mantel-Haenszel tests contrasting University of Toronto and York University students in their ratings of specific sources for strike-related information via Facebook. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0083$.

Table D.2: Cochran-Mantel-Haenszel tests of row mean differences testing for differences in the percentage of University of Toronto versus York University students indicating at least moderate reliance (a score of 4 or 5 out of 5) on a given source for strike-related information via Facebook

Sources of Information	York University	University of Toronto	$\chi^2(4)$	p
University (official)	20.35	17.05	2.38	.6658
Union	39.83	39.92	2.27	.6856
Faculty (not on strike)	5.65	9.88	4.77	.3118
TAs/Faculty (on strike)	20.44	31.74	10.48	.0331
Fellow Students	79.66	79.05	3.50	.4782
Other	27.71	20.23	4.54	.3380

Note: Based on a Bonferroni-adjusted criterion alpha of $p < .0083$, there were no statistically significant differences between universities. This table supplements Figure 5 in the main body of the report.

Table D.3 presents the results of Cochran-Mantel-Haenszel tests contrasting University of Toronto and York University students in their rankings of specific sources for strike-related information. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0083$.

Table D.3: Cochran Mantel-Haenszel tests of row mean differences testing for differences in the percentage of University of Toronto versus York University students ranking various information sources among their top three for strike-related information.

Sources of Information	York University	University of Toronto	$\chi^2(4)$	p
University Administration	50.73	59.91	5.11	.4031
Union	68.56	75.63	7.26	.2018
Faculty (not on strike)	39.90	54.66	16.98	.0045
Fellow Students	71.62	43.22	58.91	<.0001
Friends/Family	22.56	20.89	4.18	.5245
News Media	53.65	54.26	6.27	.2812

Note: Tests indicating significant differences between University of Toronto and York University students at a Bonferroni-adjusted criterion alpha of $p < .0083$ are italicized and bolded. This table supplements Figure 6 in the main body of the report.

Wilcoxon signed-rank tests were used to assess differences in ratings of information sources within each university. Results of these tests are presented in Table D.4, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0006$.

Table D.4: Significance of Wilcoxon signed-rank tests to assess differences in ratings of information sources within university

		<i>p</i>	
Compared to		York University	University of Toronto
Facebook (Overall)	News Media - TV	<.0001	<.0001
	- Radio	<.0001	<.0001
	- Newspaper	<.0001	<.0001
	- Online Media	.7297	.0118
	In Person - Faculty (not on strike)	<.0001	<.0001
	- Fellow Students	.0337	.4557
	- Family/Friends	<.0001	<.0001
	Websites - University	<.0001	<.0001
	- Union	<.0001	<.0001
	- Faculty	<.0001	<.0001
	- Other	<.0001	<.0001
	Social Media - Reddit (Overall)	<.0001	<.0001
	- Twitter (Overall)	<.0001	<.0001
	- Other	<.0001	<.0001
News Media - Online	News Media - TV	<.0001	<.0001
	- Radio	<.0001	<.0001
	- Newspaper	<.0001	<.0001
	In Person - Faculty (not on strike)	<.0001	<.0001
	- Fellow Students	.1385	.1251
	- Family/Friends	<.0001	<.0001
	Websites - University	<.0001	<.0001
	- Union	<.0001	<.0001
	- Faculty	<.0001	<.0001
	- Other	<.0001	<.0001
	Social Media - Reddit (Overall)	<.0001	<.0001
	- Twitter (Overall)	<.0001	<.0001
	- Other	<.0001	<.0001
	In Person - Fellow Students	News Media - TV	<.0001
- Radio		<.0001	<.0001
- Newspaper		<.0001	<.0001
In Person - Faculty (not on strike)		<.0001	<.0001

		<i>p</i>	
Compared to		York University	University of Toronto
	- Family/Friends	<.0001	<.0001
Websites	- University	<.0001	<.0001
	- Union	.0011	<.0001
	- Faculty	<.0001	<.0001
	- Other	<.0001	<.0001
Social Media	- Reddit (Overall)	<.0001	<.0001
	- Twitter (Overall)	.0124	<.0001
	- Other	<.0001	<.0001
Websites - University	Websites - Union	.0188	.0094

Note: Tests indicating nonsignificant differences in students' ratings within university at a Bonferroni-adjusted criterion alpha of $p < .0006$ are italicized and bolded. See Table D.1 for the percentage value of students at each university indicating at least moderate reliance (a score of 4 or 5 out of 5) on a given source for strike-related information.

Wilcoxon signed-rank tests were used to assess differences in ratings of Facebook-specific information sources within each university. Results of these tests are presented in Table D.5, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0033$.

Table D.5: Significance of Wilcoxon signed-rank tests to assess differences in ratings of Facebook-specific information sources within university

		<i>p</i>	
Compared to		York University	University of Toronto
Facebook - Fellow Students	Facebook – University	<.0001	<.0001
	Facebook – Union	<.0001	<.0001
	Facebook – Faculty (not on strike)	<.0001	<.0001
	Facebook – TAs/Faculty (on strike)	<.0001	<.0001
	Facebook – Other	<.0001	<.0001
Facebook - Union	Facebook – University	<.0001	<.0001
	Facebook – Faculty (not on strike)	<.0001	<.0001
	Facebook – TAs/Faculty (on strike)	<.0001	<.0001
	Facebook – Other	<.0001	<.0001
Twitter- Fellow Students	Twitter – University	<.0001	-
	Twitter – Union	.0007	-

		<i>p</i>	
Compared to		York University	University of Toronto
	Twitter – Faculty (not on strike)	<.0001	-
	Twitter – TAs/Faculty (on strike)	<.0001	-
	Twitter – Other	<.0001	-
Twitter - Union	Twitter – University	<.0001	-
	Twitter – Faculty (not on strike)	<.0001	-
	Twitter – TAs/Faculty (on strike)	<.0001	-
	Twitter – Other	<.0001	-

Note. All tests were statistically significant at a Bonferroni-adjusted criterion alpha of $p < .0033$. See Table D.2 for the percentage value of students at each university indicating at least moderate reliance (a score of 4 or 5 out of 5) on a given source for strike-related information via Facebook.

Wilcoxon signed-rank tests were also used to explore whether students ranked one information source more highly than another. These results are presented in Table D.6, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0033$.

Table D.6: Significance of Wilcoxon signed-rank tests to assess differences in rankings of selected information sources within university

		<i>p</i>	
Compared to		York University	University of Toronto
Fellow Students	University Administration	<.0001	.0170
	Union	.9383	<.0001
	Faculty (not on strike)	<.0001	.0163
	Friends/Family	<.0001	<.0001
	News Media	<.0001	.0033
Union	University Administration	<.0001	<.0001
	Faculty (not on strike)	<.0001	<.0001
	Friends/Family	<.0001	<.0001
	News Media	.0003	<.0001
News Media	University Administration	.3944	.9090
	Faculty (not on strike)	.0067	.6420
	Friends/Family	<.0001	<.0001
Faculty (not on strike)	University Administration	.2521	.3991

Friends/Family	<.0001	<.0001
<p>Note: Tests indicating <u>nonsignificant</u> differences in students' ratings within university at a Bonferroni-adjusted criterion alpha of $p < .0033$ are italicized and bolded. See Table D.3 for the percentage value of students at each university ranking various information sources among their top three for strike-related information.</p>		

2 Did Students Feel Well Informed and How Did They Perceive Communications from the University Administration? (Section 4.3.3)

A Cochran-Mantel-Haenszel test of row mean differences tested for a difference between universities in students' ratings of how well informed they felt during the strikes. Ratings were provided on a 5-point Likert-type scale (scored 1 = not at all; 2 = a little; 3 = somewhat; 4 = a moderate amount; 5 = a great deal). No statistically significant difference in ratings was found ($\chi^2(4)=2.32, p = .678$).

A Cochran-Mantel-Haenszel test of row mean differences also tested for a difference between universities in students' ratings of their overall satisfaction with the quality of university communications during the strike. Ratings were provided on a 5-point Likert-type scale (scored 1 = not at all; 2 = a little; 3 = somewhat; 4 = a moderate amount; 5 = a great deal). Again, no statistically significant difference in ratings was found ($\chi^2(4)=3.91, p = .419$).

Wilcoxon signed-rank tests were used to assess whether the distribution of responses to the question regarding being well-informed differed from that of the question regarding quality of communications separately at each of the universities. Results from both tests were significant ($p < .0001$ at both universities).

Cochran-Mantel-Haenszel tests of row mean differences were used to assess differences between University of Toronto and York University students in their ratings of six possible strategies that the university administration could have used to improve communication with the student body during the 2015 labour strikes. Ratings were provided on a 5-point Likert-type scale (scored 1 = not at all; 2 = a little; 3 = somewhat; 4 = a moderate amount; 5 = a great deal). Results from these tests are presented in Table D.7. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .008$.

Table D.7: Cochran-Mantel-Haenszel tests of row mean differences testing for differences in the percentage of University of Toronto versus York University students rating each communication strategy as one that would have been at least moderately helpful (rated 4 or 5 out of 5) during the 2015 strikes

Strategies to Improve University Communication	York University	University of Toronto	$\chi^2(4)$	p
Email	80.98	82.06	3.39	.4954
Social Media	85.48	72.51	12.98	.0114
In person (town hall)	34.29	34.35	3.49	.4787
Online (town hall)	60.58	51.72	7.24	.1237
Provide 24 hrs notice	85.95	85.06	7.34	.1190
Info on labour relations	71.08	61.30	8.07	.0890

Note. Based on a Bonferroni-adjusted criterion alpha of $p < .008$, there were no statistically significant differences between universities. This table supplements Figure 8 in the main body of the report.

Wilcoxon signed-rank tests were used to assess differences within each university in ratings of the possible strategies to improve university communications during a strike. Results of these tests are presented in Table D.8, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0033$.

Table D.8: Significance of Wilcoxon signed-rank tests to assess differences within each university sample in their ratings of selected strategies to improve university communications during a strike

		<i>p</i>	
Compared to		York University	University of Toronto
<i>Email</i>	<i>Social Media</i>	<i>.7277</i>	<i>.0120</i>
	In person (town hall)	<.0001	<.0001
	Online (town hall)	<.0001	<.0001
	Provide 24 hrs notice	.0003	<i>.0109</i>
	Info on labour relations	.0017	<.0001
<i>Social Media</i>	In person (town hall)	<.0001	<.0001
	Online (town hall)	<.0001	<.0001
	Provide 24 hrs notice	.0004	<.0001
	Info on labour relations	.0006	.0031
Provide 24 hrs notice	In person (town hall)	<.0001	<.0001
	Online (town hall)	<.0001	<.0001
	Info on labour relations	<.0001	<.0001

Note: Tests indicating nonsignificant differences in students' ratings within university at a Bonferroni-adjusted criterion alpha of $p < .0033$ are italicized and bolded. See Table D.7 for the percentage value of students at each university rating each communication strategy as one that would have been at least moderately helpful (rated 4 or 5 out of 5) during the 2015 strikes.

3 How Were Students Affected by the Strike? (Section 4.3.4)

Cochran-Mantel-Haenszel tests of row mean differences were used to assess differences between University of Toronto and York University students in how much "anxiety, stress or worry," hereby referred to as "angst," was experienced during the work stoppage when thinking about the potential outcomes or impacts of the strike. Ratings of angst were provided on a 5-point Likert-type scale (scored 1 = none: 2 = a little: 3 = somewhat: 4 = a moderate amount: 5 = a great deal). Table D.9 presents these results. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0063$.

Table D.9: Cochran-Mantel-Haenszel tests of row mean differences testing for differences in the percentage of University of Toronto versus York University students reporting at least moderate anxiety, stress or worry (i.e., angst) (rated 4 or 5 out of 5) concerning possible strike outcomes or impacts.

	York University	University of Toronto	$\chi^2(4)$	p
Grades	81.81	73.08	13.36	.0096
Quality of Education	77.68	80.15	3.77	.4379
<i>Finances</i>	<i>61.83</i>	<i>42.37</i>	<i>36.20</i>	<i><.0001</i>
<i>Current Employment</i>	<i>31.25</i>	<i>13.08</i>	<i>32.36</i>	<i><.0001</i>
<i>Future Employment</i>	<i>51.04</i>	<i>30.53</i>	<i>29.40</i>	<i><.0001</i>
Future Studies	36.10	42.36	8.45	.0765
Graduation	25.21	24.53	6.28	.1794
<i>Travel Plans</i>	<i>38.17</i>	<i>19.09</i>	<i>30.66</i>	<i><.0001</i>

Note: Tests indicating significant differences between University of Toronto and York University students at a Bonferroni-adjusted criterion alpha of $p < .0063$ are italicized and bolded. This table supplements Figure 9 in the main body of the report.

Wilcoxon signed-rank tests were used to assess differences within each university in how students rated levels of angst associated with possible outcomes or impacts of the strike. Results of these tests are presented in Table D.10, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0018$.

Table D.10: Significance of Wilcoxon signed-rank tests to assess differences within each university sample in their ratings of possible strike outcomes or impacts as a source of anxiety, stress or worry (i.e., angst)

		p	
	Compared to	York University	University of Toronto
Grades	<i>Quality of Education</i>	<i>.8239</i>	<i>.0024</i>
	Finances	<.0001	<.0001
	Current Employment	<.0001	<.0001
	Future Employment	<.0001	<.0001
	Future Studies	<.0001	<.0001
	Graduation	<.0001	<.0001
	Travel Plans	<.0001	<.0001
Quality of Education	Finances	<.0001	<.0001
	Current Employment	<.0001	<.0001
	Future Employment	<.0001	<.0001
	Future Studies	<.0001	<.0001

Compared to	<i>p</i>	
	York University	University of Toronto
Graduation	<.0001	<.0001
Travel Plans	<.0001	<.0001

Note: Tests indicating nonsignificant differences in students' rating within university at a Bonferroni-adjusted criterion alpha of $p < .0018$ are italicized and bolded. See Table D.9 for the percentage value of students at each university reporting at least moderate anxiety, stress or worry (i.e., angst) (rated 4 or 5 out of 5) concerning possible strike outcomes or impacts.

Scores for the K6 Psychological Distress Scale (Kessler et al., 2002, 2003) range from 0 to 24, with scores in the ranges of 0 to 4, 5 to 12, and 13 to 24 indicating low, medium, and serious psychological distress respectively (Knowlden et al., 2016; Prochaska et al., 2012). Given that the distribution of K6 scores was not normally distributed among students at either university, a Kruskal-Wallis test was used to compare the K6 scores for York University students to those of their University of Toronto counterparts. Students at York University indicated experiencing significantly more psychological distress than University of Toronto students (M_{diff} (York University vs University of Toronto) = 1.51), $\chi^2(1) = 7.16$, $p = .008$).

Cochran-Mantel-Haenszel tests of row mean differences were used to test for differences in how students approached their studies during the strike. Students were asked to rate the extent to which they had felt apathy or lack of motivation, gratification for the opportunity to catch up on their studies, and confusion about whether or not to keep up with their studies. Ratings of agreement with each item were provided on a 5-point Likert-type scale with scores ranging from 1 = strongly disagree to 5 = strongly agree. Students who reported agreeing at least moderately with each statement (i.e., a rating of 4 or 5 out of 5) were deemed to have experienced the emotional effect. Results from these tests are shown in Table D.11. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0125$.

Table D.11: Cochran-Mantel-Haenszel tests of row mean differences testing for differences in how University of Toronto versus York University students approached their studies during the strike

	York University	University of Toronto	$\chi^2(4)$	<i>p</i>
<i>Opportunity to catch up</i>	<i>36.10</i>	<i>23.29</i>	<i>18.82</i>	<i>.0009</i>
<i>Disrupted good study habits</i>	<i>63.90</i>	<i>46.10</i>	<i>25.29</i>	<i><.0001</i>
<i>Got lazy</i>	<i>62.24</i>	<i>48.48</i>	<i>22.48</i>	<i>.0002</i>
Uncertain re how to keep up	78.51	69.45	11.86	.0184

Note: Tests indicating significant differences between University of Toronto and York University students at a Bonferroni-adjusted criterion alpha of $p < .0125$ are italicized and bolded. This table supplements Figure 10 in the main body of the report.

Cochran-Mantel-Haenszel tests of row mean differences were used to test for differences between University of Toronto and York University in the extent to which students experienced various longer term impacts of the strike. Ratings of agreement with each impact were scored on a 5-point Likert-type scale ranging from 1 = strongly disagree to

5 = strongly disagree. Results from these tests are shown in Table D.12. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .005$.

Table D.12: Cochran-Mantel-Haenszel tests of row mean differences testing for differences between University of Toronto and York University in the extent to which students experienced longer term impacts of the strike

	York University	University of Toronto	$\chi^2(4)$	p
Received lower grade than expected	52.07	57.63	4.68	.3219
Received higher grade than expected	30.58	32.82	7.47	.1128
Required to redo a course	21.57	11.87	10.00	.0404
<i>Considered switching university</i>	<i>38.43</i>	<i>13.75</i>	<i>53.68</i>	<i><.0001</i>
Learned less than expected	84.29	83.21	2.06	.7255
Inadequately prepared for advanced courses	39.26	39.32	8.69	.0694
<i>Degree devalued</i>	<i>53.53</i>	<i>33.20</i>	<i>27.46</i>	<i><.0001</i>
<i>Not recommend for undergrad studies</i>	<i>30.29</i>	<i>12.69</i>	<i>49.03</i>	<i><.0001</i>
<i>Not recommend for graduate studies</i>	<i>32.22</i>	<i>11.83</i>	<i>62.05</i>	<i><.0001</i>
<i>Donate less post-graduation</i>	<i>56.19</i>	<i>38.54</i>	<i>22.20</i>	<i>.0002</i>

Note: Tests indicating significant differences between University of Toronto and York University students at a Bonferroni-adjusted criterion alpha of $p < .005$ are italicized and bolded. This table supplements Figure 11 in the main body of the report.

Wilcoxon signed-rank tests were used to assess differences within each university in the degree to which students experienced various longer term impacts of the strike. Results of these tests are presented in Table D.13, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0011$.

Table D.13: Significance of Wilcoxon signed-rank tests to assess differences within each university in the extent to which students experienced various longer term impacts of the strike

		P	
	Compared to	York University	University of Toronto
Learned less than expected	Received lower grade than expected	<.0001	<.0001
	Received higher grade than expected	<.0001	<.0001
	Required to redo a course	<.0001	<.0001
	Considered switching university	<.0001	<.0001
	Inadequately prepared for advanced courses	<.0001	<.0001
	Degree devalued	<.0001	<.0001

Compared to	<i>P</i>	
	York University	University of Toronto
Not recommend for undergrad studies	<.0001	<.0001
Not recommend for graduate studies	<.0001	<.0001
Donate less post-graduation	<.0001	<.0001

Note. All tests were statistically significant at a Bonferroni-adjusted criterion alpha of $p < .0011$. See Table D.12 for the percentage value of students at each university who reported experiencing each longer term impact of the strike.

4 Was Feeling Well Informed about the Strike Associated with Less Psychological Distress for Students? (Section 4.3.5)

A linear regression with categorical independent variables was conducted to test for a relationship between whether students felt well informed during the 2015 strikes and their level of psychological distress (i.e., K6 scores). A student was identified as well informed if they reported feeling at least moderately well-informed (a rating of 4 or 5 out of 5). Between-university differences in how well informed students felt were controlled by including the university attended and the interaction between university attended and the binary well-informed variable as predictors in the model.

Overall fit for this model was significant ($F(3, 500) = 6.01, p < .001$), suggesting that how well informed a student felt during the strike was at least somewhat related to the stress they experienced during the strike. This effect was however small, with the overall model accounting for less than 5% of variation in psychological distress ($R\text{-squared} = 4\%$). The interaction between university attended and feeling well informed was non-significant. Ignoring university attended, students who felt well informed during the strike also reported significantly lower levels of psychological distress ($M_{diff} = -2.54, t(500) = -3.26, p = .001$). University of Toronto students reported significantly lower levels of distress than their York University counterparts regardless of whether or not they felt well-informed ($t(500) = -3.16, p = .002$).

5 Was Satisfaction with University Communications Associated with Less Psychological Distress for Students? (Section 4.3.6)

A linear regression with categorical independent variables was conducted to test for a relationship between students' satisfaction with the quality of university communications during the 2015 strike and their level of psychological distress (i.e., K6 scores). A student was identified as satisfied with the quality of university communications if they reported feeling at least moderately satisfied with university communications (i.e., a rating of 4 or 5 out of 5). Between-university differences in satisfaction with university communications were controlled by including the university attended and the interaction between university attended and the binary satisfaction-with-university-communications variable as predictors in the model.

Overall fit for this model was significant ($F(3, 500) = 7.93, p < .001$), suggesting that the amount of psychological distress a student experienced during the strike was related to their satisfaction with official communications from their university. This effect was however small, such that the overall model explained less than 5% of variation in psychological distress ($R\text{-squared} = 4.54\%$). The interaction between university attended and satisfaction with university communications was non-significant. Ignoring university attended, students who were satisfied with the quality of their university's strike-related communications also reported significantly lower levels of psychological distress ($M_{diff} = -3.59, t(500) = -3.21, p = .001$). Regardless of whether or not they reported being satisfied with strike-related communications provided by the university administration, University of Toronto students still reported significantly

lower levels of psychological distress than their York University counterparts ($t(500) = -2.97, p = .003$).

6 Was Feeling Well Informed about the Strike or Satisfied with University Communications Associated with How Student Emotionally Approached their Studies? (Section 4.3.7)

A series of four logistic regression models was conducted to test for a significant relationship between how well-informed students felt during the strike and each of the four items used to measure students' emotional responses about how to approach their studies (i.e., gratification for the opportunity to catch up on coursework, confusion about whether to keep up with coursework, allowing good study habits to be disrupted, becoming lazy or apathetic in regards to coursework). Feeling well informed served as a predictor variable, and was coded as present when a student indicated feeling at least moderately well informed (i.e., a rating of 4 or 5 out of 5). The emotional responses served as the outcome variables for the logistic regression analyses, and were coded as present when a student indicated at least moderate agreement with the relevant item (i.e., a rating of 4 or 5 out of 5). Between-university differences in how well-informed students felt were controlled by including the university attended and the interaction between university attended and the binary well-informed variable as predictors in the model. No significant results were found for any of the models tested.

A second series of logistic regression models was conducted to test for a significant relationship between satisfaction with university communications and each of the four items used to measure students' emotional responses about how to approach their studies. A student was treated as satisfied with the quality of university communications if they reported feeling at least moderately satisfied with university communications (i.e., a rating of 4 or 5 out of 5). Again, the emotional responses served as the outcome variables for the logistic regression analyses, and were coded as present when a student indicated at least moderate agreement with the relevant item (i.e., a rating of 4 or 5 out of 5). Between-university differences in how satisfied students were with university communications were controlled by including the university attended and the interaction between university attended and the binary satisfaction-with-university-communications variable as predictors in the model. Significant results were found for two of the four models tested.

The first of these significant models involved students' gratification for the opportunity to catch up on coursework. Overall fit for this model was significant ($LRT \chi^2(3) = 24.14, p < .001$), suggesting that students' gratification for the opportunity to catch up on coursework and their perceived quality of university communications were related. The interaction between university attended and perceived quality of university communications was non-significant. Ignoring university attended, students who were at least moderately satisfied with the quality of their university's strike-related communications were nearly three times as likely to report gratification for time to catch up on coursework than those students who were less satisfied with university communications ($OR = 2.63, Wald \chi^2 = 8.29, p = .004$). Ignoring their level of satisfaction with university communications, University of Toronto students were 44% less likely to report gratification for the opportunity to catch up than were York University students ($Wald \chi^2 = 9.22, p = .002$). This latter finding likely reflects the fact that the continuation of academic activities at the University of Toronto provided students with little opportunity to catch up on coursework.

The other significant model involved one of the items tapping into students' apathy or lack of motivation; specifically, agreement that the strike had disrupted their good study habits. Overall fit for this model was significant ($LRT \chi^2(3) = 38.62, p < .001$), suggesting that reported disruption to good study habits and perceived quality of university communications were related. The interaction between university attended and perceived quality of university communications was non-significant. Ignoring university attended, students who were at least moderately satisfied with the quality of their university's strike-related communications were 68% less likely to report disrupted study habits

during the strike than those students who were less satisfied with university communications ($Wald \chi^2 = 11.42, p < .001$). Ignoring their level of satisfaction with university communications, University of Toronto students were 57% less likely to report disruption to their good study habits than were York University students ($Wald \chi^2 = 23.19, p < .001$). Again, this is likely due to the fact that academic activities at the University of Toronto continued throughout the work stoppage.

7 Which Efforts and Remediation Strategies by Faculty were Most Appreciated by Students? (Section 4.3.8)

Student perceptions about the efforts taken by the one professor, not on strike, who was most helpful to them during the work stoppage was analyzed descriptively.

Cochran-Mantel-Haenszel tests of row mean differences were used to test for differences between University of Toronto and York University in how students ranked course-level remediation strategies. Results from these tests are shown in Table D.14. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0071$.

Table D.14: Cochran-Mantel-Haenszel tests of row mean differences testing for differences in the percentage of University of Toronto versus York University students who ranked each course-level remediation strategy as most or second-to-most helpful

	York University	University of Toronto	$\chi^2(4)$	p
Readings, assignments revised	46.69	49.61	5.87	.4374
Assignments made optional	26.90	32.81	5.64	.4644
Include assignment grade opt.	18.23	18.58	9.52	.1466
Assignment deadline extended	39.82	34.28	3.79	.7051
Exams cancelled	26.87	25.10	3.41	.7554
Exams made optional	21.24	14.34	8.34	.2144
Exams changed to "take home"	28.70	29.13	10.09	.1207

Note. Based on a Bonferroni-adjusted criterion alpha of $p < .0071$, there were no statistically significant differences between universities.

Wilcoxon signed-rank tests were used to explore which course-level remediation strategies were most highly ranked by students at each university, comparing the proportion of students selecting each rank position. Results of these tests are shown in Table D.15, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0024$.

Table D.15: Significance of Wilcoxon signed-rank tests to assess differences within each university in rankings of course-level remediation strategies

		<i>p</i>	
		York University	University of Toronto
	Compared to		
Readings, assignments, revised	Assignments made optional	.0002	<.0001
	Include assignment grade opt.	<.0001	<.0001
	<i>Assignment deadline extended</i>	<i>.5506</i>	<i>.1497</i>
	Exams cancelled	.0002	<.0001
	Exams made optional	<.0001	<.0001
	Exams changed to "take home"	.0023	<.0001
Assignment deadline extended	Assignments made optional	.0019	.0017
	Include assignment grade opt.	<.0001	<.0001
	Exams cancelled	.0004	<.0001
	Exams made optional	<.0001	<.0001
	Exams changed to "take home"	.0001	<.0001

Note: Tests indicating nonsignificant differences in students' rating within university at a Bonferroni-adjusted criterion alpha of $p < .0024$ are italicized and bolded. See Table D.14 for the percentage value of students at each university who ranked each course-level remediation strategy as most or second-to-most helpful.

Cochran-Mantel-Haenszel tests of row-mean differences were used to test for differences between the universities in how appreciated the democratically-selected group strategy and the individualized strategy would be in a future similar-length strike. Ratings of each strategy were given in a 5-point Likert-type labeled 1 = not at all; 2 = a little; 3 = somewhat; 4 = a moderate amount; and 5 = a great deal. Results identified no significant differences between University of Toronto and York University students in their ratings for either strategy (democratically-selected, $X^2(4) = 3.71, p = .4469$, individualized strategy, $X^2(4) = 8.65, p = .0704$).

Wilcoxon signed-rank tests were used to test for differences in the proportion of students endorsing each of the remediation strategies. York University students were significantly more likely to rate the individualized strategy higher than the democratically-selected group strategy (Wilcoxon signed-rank test, $p < .0001$). Although a similar pattern emerged among students at the University of Toronto, this preference was not statistically significant (Wilcoxon signed-rank test, $p = .5807$).

8 Which Remediation Strategies by the University Administration Were Most Appreciated by Students? (Section 4.3.9)

Cochran-Mantel-Haenszel tests of row mean differences were used to test for differences between University of Toronto and York University in how students ranked university-level remediation strategies. Results from these tests are shown in Table D.16. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0083$.

Table D.16: Cochran-Mantel-Haenszel tests of row mean differences testing for differences in the percentage of University of Toronto versus York University students who ranked each university-level remediation strategy as most or second-to-most helpful

	York University	University of Toronto	$\chi^2(4)$	p
<i>Courses made pass/fail</i>	25.95	37.95	15.72	.0077
<i>Deferred standing</i>	27.80	15.94	20.41	.0010
<i>Extend drop deadline</i>	22.91	42.23	30.64	<.0001
<i>Option to retake course for free</i>	52.61	35.29	22.00	.0005
Financial credit for lost class time	48.92	40.94	5.73	.3334
Review pre-requisite courses	25.86	29.80	4.06	.5414

Note: Tests indicating significant differences between University of Toronto and York University students at a Bonferroni-adjusted criterion alpha of $p < .0083$ are italicized and bolded. This table supplements Table 8 in the main body of the report.

Wilcoxon signed-rank tests were used to explore which university-level remediation strategies were most highly ranked by students at each university, comparing the proportion of students selecting each rank position. Results of these tests are shown in Table D.17, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0033$.

Table D.17: Significance of Wilcoxon signed-rank tests to assess differences within each university in rankings of university-level remediation strategies

		p	
Compared to		York University	University of Toronto
Option to retake course for free	<i>Courses made pass/fail</i>	<.0001	.3014
	Deferred standing	<.0001	<.0001
	Extend drop deadline	<.0001	<.0001
	<i>Financial credit for lost class time</i>	.1431	.6387
	Review pre-requisite courses	<.0001	.0003
Financial credit for lost class time	<i>Courses made pass/fail</i>	<.0001	.1738
	Deferred standing	<.0001	<.0001
	<i>Extend drop deadline</i>	<.0001	.1203
	Review pre-requisite courses	<.0001	<.0001
Extend drop deadline	Courses made pass/fail	.0034	.0018
	Deferred standing	.5786	<.0001
	Review pre-requisite courses	.0352	<.0001

Note: Tests indicating nonsignificant differences in students’ rating within university at a Bonferroni-adjusted criterion alpha of $p < .0033$ are italicized and bolded. See Table D.16 for the percentage value of students at each university who ranked each university-level remediation strategy as most or second-to-most helpful.

9 Were Students Lacking General Knowledge of the Collective Bargaining Process? (Section 4.3.10)

Chi-square tests of independence were used to test for differences the University of Toronto and York University in the proportion of students responding correctly, incorrectly, or “don’t know” regarding the veracity of each statement about the collective bargaining process. Results from these tests are shown in Table D.18. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0071$.

Table D.18: Chi-squares tests assessing differences in the percentage of University of Toronto versus York University students responding correctly, incorrectly, or “don’t know” to various statements about the collective bargaining process

	% Responding Incorrectly or with “Don’t Know”		$X^2(2)$	p
	York University	University of Toronto		
Start of negotiations	22.31	24.81	0.47	.7887
Strike was illegal	26.86	22.14	1.58	.4538
Contract expiry	80.17	86.64	3.91	.1413
Right to remove picketers	43.80	54.20	5.50	.0639
No prior notice of strike	38.02	45.42	6.04	.0487
<i>Binding arbitration</i>	<i>40.08</i>	<i>22.90</i>	<i>17.94</i>	<i>.0001</i>
<i>Rights of picketers</i>	<i>23.14</i>	<i>48.85</i>	<i>35.96</i>	<i><.0001</i>

Note: Tests indicating significant differences between University of Toronto and York University students at a Bonferroni-adjusted criterion alpha of $p < .0071$ are italicized and bolded. This table supplements Figure 14 in the main body of the report.

A series of McNemar tests were used to determine whether students’ lack of knowledge about some aspects of collective bargaining was greater than others. The proportion of students within each university who correctly identified a statement as either true or false was compared to the proportion of students who responded incorrectly or indicated that they did not know the answer. Results for these tests are shown in Table D.19, but only for those comparisons referenced in the main body of the report. Statistical significance was determined using a Bonferroni-adjusted criterion alpha of $p < .0024$.

Table D.19: Significance of McNemar tests comparing students’ lack of knowledge of selected aspects of collective bargaining within university.

		<i>P</i>	
Compared to		York University	University of Toronto
Contract expiry	Start of negotiations	<.0001	<.0001
	Strike was illegal	<.0001	<.0001
	Right to remove picketers	<.0001	<.0001
	No prior notice of strike	<.0001	<.0001
	Binding arbitration	<.0001	<.0001
	Rights of picketers	<.0001	<.0001

Note. All tests were statistically significant. See Table D.18 for the percentage value of students at each university responding incorrectly or “don’t know” to various statements about the collective bargaining process.

