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

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Executive Summary

Postsecondary education in Ontario has seen a number of labour strikes over the past few decades, including some protracted, high-profile work stoppages. These labour disputes can impact students negatively in a number of ways, yet there has been limited research exploring the psychosocial and academic impact of work stoppages on university students and possible strategies to minimize these effects. This report outlines the findings of a three-study project designed to expand on the limited, existing research in two ways. The first study analyzed data from a rare longitudinal survey, assessing changes in student responses to the 2008–2009 York University strike by teaching assistants and contract faculty over the course of the work stoppage. The second and third studies adopted a mixed-methods approach, using focus group interviews and a retrospective online survey to understand students' experiences of the 2015 labour strikes at the University of Toronto and York University.

The current project had two primary sets of aims. First, Study 1 aimed to examine longitudinally: (a) changes in students' emotional responses to the 2008–2009 York University labour strike, (b) changes in how students accessed relevant information over the course of the work stoppage, and (c) the relationship between students' access to information and their emotional responses. Second, Studies 2 and 3 aimed to identify retrospectively: (a) the affective, cognitive and behavioural responses of students to the 2015 labour strike by teaching assistants at the University of Toronto and the 2015 labour strike by teaching assistants and contract faculty at York University, and (b) students' perceptions of university administration and faculty efforts including the perceived effectiveness of these efforts to minimize student stress and maintain learning during a work stoppage.

Study 1 surveyed students immediately before the 12-week-long York University strike in 2008–2009, five weeks after the start of the strike, and approximately 10 days after back-to-work legislation was passed. Before the strike began, students had reported gratitude for the opportunity to catch up on their studies and did not foresee the potential loss of academic motivation; however, this changed drastically after the strike had persisted for a month. Students subsequently reported major disruptions to their good study habits, a general feeling of laziness and a great sense of confusion about whether or not to keep up with their studies. There was great diversity in students' perceived levels of awareness of strike-related information, with an almost even split between those students who felt at least somewhat well-informed versus those who felt not very informed at all. Before the start of the strike, students sought information primarily from professors and fellow students, but reliance on faculty as an information source declined during the work stoppage. Instead, the York University website and websites external to the university community were increasingly accessed. Moreover, students sought out increasingly more sources of information as the strike progressed. Before the strike, reliance on faculty and fellow students for information was predictive of feeling well informed, but during the strike, reliance on relevant websites was more valuable in this regard.

Study 2 adopted a qualitative approach, using focus group interviews with undergraduate students from both York University and the University of Toronto, who had been enrolled during the 2015 labour strikes. Three focus group interviews were held at each university. Interview transcriptions were assessed using thematic analysis. Focus group interviews clearly underscored the lack of adequate communication between the university and the student body as the most germane issue for participants. Students reported feeling poorly informed and highly confused about the status of the labour dispute. Students also unwittingly demonstrated a lack of knowledge about collective bargaining generally, which seemed to fuel much of their sense of confusion. During the strike, students reported seeking out many sources of information, but few of these were accurate, reliable or frequently updated; thus, students often relied on inaccurate and unreliable sources such as word of mouth spread in person and via various social media.

Lack of accurate and reliable information was associated with a sense of stress, anxiety, anger, powerlessness and loss of motivation, which often contributed to negative feelings about the university. These effects of the work stoppage frequently persisted beyond the end of the strike. Students reported a significant impact of strike-related stress on their academic performance, and expressed concern that the strike had resulted in a decline in the quality of their education through cancelled classes and tutorials or lost academic support from teaching and laboratory assistants. The financial impact of the strike was also a key issue for many students who had incurred costs as a result of the extended semester (e.g., lease extensions, cancelled travel plans, loss of well-paying summer jobs). Some students even viewed cancelled classes and tutorials as an indirect financial impact of the work stoppage.

For the most part, faculty members were evaluated positively and were described as making a significant effort to help students cope with the strike, but not all strategies used by faculty were effective. Well-organized and informative faculty who were flexible and responsive to students' needs were the most appreciated. Some students were critical of remediation plans that cut a significant portion of their coursework and, hence, reduced the quality of their education. Students also valued the opportunity to have input into their chosen remediation strategy and the freedom to select the option which most accommodated their particular academic circumstance.

Study 3 was designed to validate the results of the thematic analysis from Study 2 using a quantitative online survey of university students affected by the 2015 work stoppages at both York University and the University of Toronto. Approximately three quarters of students reported experiencing at least moderate stress, anxiety and worry (i.e., "angst") concerning the impact of the strike on their grades and the quality of their education. Large numbers of students also reported experiencing at least moderate angst concerning the impact of the strike on finances, future studies, current and future employment and travel plans. Psychological distress was also very high. More than two thirds of students at both universities reported feeling uncertainty about whether or not to keep up with their studies during the strike and a significant proportion of students reported general laziness and a disruption to their good study habits. Approximately 85% of students from both universities indicated that they had learned less than they should have in a course as a result of the strike.

As with the participants in Study 2, students in Study 3 reported seeking out strike-related information from multiple sources, with a heavy reliance on sources from outside of official university channels. The social media pages of fellow students were a primary source and medium of strike-related information for a majority of participants. The union at both universities, via both its website and social media pages, was also cited as a primary source of information. To a lesser extent, non-striking faculty were also recognized as a source for strike-related information, but more so for students at the University of Toronto where in-person access to faculty remained unchanged because academic activities continued during the work stoppage.

A majority of students at each university reported feeling at least somewhat well-informed about the work stoppage, although less than 10% reported feeling very well-informed. A majority of students at both universities reported dissatisfaction with the quality of strike-related information provided by their respective universities. Three communications strategies were endorsed by more than 70% of students at each university as a strategy that would have been helpful during the strikes: (1) more frequent updates on the status of negotiations and the impact on classes via email; (2) more frequent updates on the status of negotiations and the impact on classes via social media; (3) 24-hour notice of the cancellation or resumption of classes/labs/tutorials posted to online or social media sites. Participants who felt well-informed during the strike and those who were satisfied with the quality of their university's strike-related communications efforts reported significantly lower levels of psychological distress. Students who were at least moderately satisfied with university communications were nearly three times as likely to report gratitude for time to catch up on coursework and 68% less likely to report disrupted study habits during the strike than those students who were less satisfied.

Students from both universities shared a common perception of a supportive faculty member as someone who provided strike-related information to students and who was flexible and responsive to their needs in the aftermath of the strike. There was no consensus among students regarding the preferred remediation strategy that faculty should employ in their classrooms. Less than one third of students ranked any one strategy as the most helpful. However, students appreciated the opportunity to provide input into the remediation strategy selected for the classroom and most preferred having multiple remediation strategies and choosing an individualized strategy that was maximally beneficial to them.

There was also no consensus among students regarding which remediation strategies initiated by university administrators were most appreciated. Again, less than one third of students ranked any one strategy as the most helpful. However, York University students ranked options involving financial compensation more highly than any other, whereas University of Toronto students appeared to consider both academic and financial considerations in their highest rankings of administrator-initiated remediation strategies, including extending "course drop" deadlines and financial credit for lost class time. The lack of consensus on a preferred faculty-initiated or an administrator-initiated remediation strategy likely reflects the many differences in academic, financial and other circumstances faced by students.

Consistent with the Study 2 results, Study 3 participants from both universities demonstrated a striking lack of knowledge regarding the collective bargaining process. In many cases, students were not simply unsure of themselves regarding these facts, but were entirely mistaken.

Taken together, the findings of the three studies presented here identify many of the negative impacts of a university work stoppage on students and indicate significant interventions that would improve students' experience with labour strikes. Based on these findings, the following recommendations for university administrators and faculty facing a future university work stoppage are offered.

- Recommendation 1: It is recommended that, before or in the early stages of a work stoppage, faculty provide their students with contingency plans, providing possible effects of a pending or ongoing strike on coursework and outlining plans for how potential eventualities will be addressed. These efforts should be wholly designed to support and/or motivate and never to over-dramatize or intimidate students.
- Recommendation 2: Recognizing that faculty must balance their own responsibility to provide adequate training and education with the needs and requests of students in a post-strike period, it is recommended that faculty make every effort to respond to student concerns and, at minimum, allow student input into the development and selection of classroom remediation strategies.
- Recommendation 3: Although detailed information about ongoing bargaining is typically kept confidential by both sides in a dispute, a balance must be met. University administrators must actively reach out to the undergraduate population and, as much as possible, provide status updates regarding the labour disruption.
- Recommendation 4: Efforts by the university administration to communicate with the undergraduate population (i.e., Recommendation 1) would be best served by communicating bargaining updates (if possible) and contingency plans to students directly via email, social media and websites. When non-striking faculty are present during a labour disruption, it would also be advisable for university administrators to keep faculty apprised of this same information so that they could assist with the transfer of this information to students, help students in understanding how contingency planning may be applied to each class and each student individually, and provide general social support.
- Recommendation 5: Appropriate remediation strategies will vary depending on the length and timing of a given work stoppage. With this in mind, it is recommended that university administrators introduce a diversity of remediation initiatives that address the many differing needs of students including, for example, the extension of course drop deadlines, a possible tuition credit and ensuring a review of introductory course material in senior level courses in the semesters immediately following the strike.
- Recommendation 6: It is recommended that, in their efforts to communicate with students, the university administration also provide basic education concerning the collective bargaining process and how labour legislation is being followed in the ongoing labour disruption. This information should be presented in a neutral and dispassionate tone. If possible, the specific information presented to students should be developed in advance of contractual collective bargaining by a joint

committee consisting of representatives of both the university administration and the union, which would help to avoid bias.

- Recommendation 7: In conjunction with Recommendations 1 and 2, it is recommended that the university administration adopt a protocol for incorporating student feedback in the development and selection of classroom contingency and remediation plans. This protocol (to be developed at a university- or department-wide level) will serve as a guide for individual faculty members and will need to provide sufficient flexibility to accommodate the diversity in structure and requirements across courses.

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1. General Introduction

A number of labour strikes by faculty and teaching assistants have affected postsecondary education in Ontario in recent years. Work stoppages by teaching assistants and contract faculty in early 2015 at both the University of Toronto and York University were high-profile media stories, and Nipissing University endured a month-long faculty strike in November 2015. Labour disputes in the public sector, but particularly the education sector, are somewhat unique: unlike customers of a strike-affected manufacturing or retail company, students of a strike-affected university cannot easily find an alternative education supplier. In this type of labour dispute, students are caught between the administration and the striking party, making students particularly vulnerable to strike-related stresses.

In a public sector strike, including an education sector strike, the support of the public, particularly those directly affected by the work stoppage, is often sought by both the employer and the union. The support of a third party to the dispute can influence the outcome of the work stoppage by exerting pressure on the employer and the union to resolve the dispute (Day et al., 2006). In the case of a university work stoppage, the student body will be inconvenienced by the dispute between the university administration and the teaching assistant and/or faculty union; however, it is important for both the administration and the union to take whatever steps possible to minimize the impact of the dispute on students. Doing so not only helps each side to win student support, but is tantamount to fulfilling their shared professional duties as educators.

This report outlines the findings of a research study focused on identifying how university students are affected during a labour strike by teaching assistants and contract faculty, and how the university administration and non-striking faculty can best help students before, during and after a strike. The study asked university students directly about the positive and negative effects of a university labour strike and which strategies used by the administration and faculty members were most helpful or effective. Recommendations concerning how administrators and faculty can better serve students affected by future work stoppages are also presented.

1.1 The Impact of University Work Stoppages on Students

Perhaps due to difficulties in accessing students during an academic strike or in predicting the progression of the strike, only a few researchers have examined the impact of university strikes on students. Wickens (2011) recently reviewed this limited research literature, focusing in part on the emotional, cognitive and behavioural outcomes for students, as outlined by the transactional model of stress (Lazarus & Folkman, 1984). This model conceptualizes stress as a process involving the perception of the stressor, the individual's response to the experience and the impending consequences.

1.1.1 Emotional Effects

Several studies have examined a diverse array of potential emotional effects of a university strike on students and have generally identified a negative influence or impact. For example, an observational study and content analysis using multiple data sources including written logs by and interviews with students affected by the 1995 University of Manitoba faculty strike revealed that students initially reported a feeling of gratification for the opportunity to catch up on assignments and study for mid-term tests. However, apathy and a lack of motivation soon replaced students' initial feelings of satisfaction. Students reported abandoning their other daily routines as well, and experiencing a lack of motivation for any productive activities. Many students reported feelings of confusion over whether to keep up with readings and assignments, to seek paid employment or to return home if they normally resided elsewhere (Albas & Albas, 2000).

Students have also reported perceiving themselves as victims and feeling anger and frustration as a result of a university labour dispute (Albas & Albas, 2000; Greenglass et al., 2002; Wickens et al., 2006). The more students' plans are affected by a strike and the more they feel that they are being treated unfairly in the dispute, the greater their anger resulting from the strike (Greenglass et al., 2002; Wickens et al., 2006). Some students have reported more conflict in their interactions with others, including break-ups with a romantic partner (Albas & Albas, 2000). Likewise, the more students experience disruption as a result of a strike, the more anxiety they report experiencing (Greenglass et al., 2002; Wickens et al., 2006). Much of this uncertainty and anxiety is related to the potential academic and economic implications of the labour disruption (Grayson, 1997a, 1997b, 1997c, 1999). In a survey examining students' strain reactions to the threat of a labour strike at a Canadian university, having more information about the pending work stoppage was associated with increases in perceived task and policy control, which both moderated the relationship between the disruption caused or anticipated by the dispute and the level of strain experienced. However, having more information was not directly associated with strain (Day et al., 2006).

1.1.2 Cognitive Effects

Related to the emotional effects of a university strike are the cognitive effects of the dispute. Previous research has demonstrated that student support for a university labour disruption will change throughout the course of the dispute and can be related to several factors including general attitudes toward labour unions and the degree of academic difficulties experienced as a result of the strike (Grayson, 1997b, 1997c, 1999). Students' opinions of the parties to the dispute (e.g., the faculty, the administration) have also been found to be affected, often negatively. However, as with student support for the labour dispute, the nature and strength of these opinions have been found to vary over the course of the strike action (Albas & Albas, 2000; Amos et al., 1993; Grayson, 1997c). Likewise, previous research has identified a negative impact of strikes on students' attitudes toward the university and their satisfaction with the education they are receiving (Amos et al., 1993; Grayson, 1997b, 1997c; Wickens et al., 2006).

1.1.3 Behavioural Effects

Emotional and cognitive changes in response to a university strike can also spur behavioural reactions, the most extreme of which has been aggressive retaliation on the picket lines. During the 1997 York University strike, one of the picketers was thrown onto the roof of a car and carried 200 yards by an irate driver trying to cross the picket line (Davis, 2007). A more subtle form of behavioural change in response to a university strike is the breakdown in students' daily routines. Following a strike by teaching assistants and contract faculty at York University in 2000, students reported having spent much less time on their studies during the strike, sleeping longer, spending more on food and alcohol, and devoting more time to recreation (Wickens et al., 2006). These behaviours can be viewed as emotional coping strategies; that is, behaviours directed toward avoidance, escape or numbing the stressful effects of the strike (Roth & Cohen, 1986).

1.2 Aims of the Current Research

Longitudinal research has rarely been conducted in the psychosocial study of work stoppages. Most of the existing literature has focused on descriptive assessment, with little consideration for policy implications or knowledge translation. This research project includes three component studies that will expand on the limited existing research in two ways. The first study will analyze data from a rare longitudinal survey, assessing changes in student responses to a university strike by teaching assistants and contract faculty over the course of the labour dispute, as well as changes in how students accessed information throughout this period. Through the use of both qualitative and quantitative research methods, the second and third studies will focus on translating psychosocial assessments of the student experience of a work stoppage into policy recommendations for college and university administrators and faculty. Based on these considerations, the current project had two primary sets of aims.

Aims of Study 1: To examine longitudinally: (a) changes in students' emotional responses to the 2008–2009 labour strike by teaching assistants and contract faculty at York University, (b) changes in how students accessed relevant information over the course of the work stoppage, and (c) the relationship between students' access to information and their emotional responses.

Aims of Studies 2 and 3: To identify retrospectively: (a) the affective, cognitive and behavioural responses of students to the 2015 labour strike by teaching assistants at the University of Toronto and the 2015 labour strike by teaching assistants and contract faculty at York University, and (b) students' perceptions of university administration and faculty efforts, including perceived effectiveness of these efforts, to minimize student stress and maintain learning during a work stoppage.

Given that a significant majority of the Canadian public service, including the education sector, is unionized (Statistics Canada, 2016), it can be reasonably expected that university students will continue to be at least occasionally affected by work stoppages. The current research informs future college and university

administrators and educators about how to improve assistance to and protection of students during these periods of labour strife.

2. Study 1: 2008–2009 York University Strike

2.1 Introduction

Following lengthy but unsuccessful contract negotiations, teaching assistants and contract faculty at York University went on strike on November 6, 2008. In response to the work stoppage, the university administration cancelled classes. In early January 2009, a ratification vote led to the rejection of the university's contract offer. However, as only a minority of union members had voted, the university urged the provincial legislature to call a forced ratification vote. The province did so, and this second vote also led to a rejection by the membership of the offer. The provincial government appointed its top mediator to assist with negotiations, but after three days the mediator reported that the two sides were too far apart. At the end of January, the government passed back-to-work legislation forcing an end to the 12-week-long strike.

Before, during and immediately following the strike, an independent team of researchers at York University conducted a longitudinal study of how students were affected by the dispute. Specifically, researchers were interested in how students' thoughts and feelings about the university, their professors, the union and the administration were affected by and changed throughout the course of the work stoppage. A previous analysis of a portion of this study's data identified changes in students' feelings and attitudes, and related these to students' perceptions of fair treatment in the wake of the labour strike (Fiksenbaum et al., 2012).

2.1.1 Purpose

The purpose of Study 1 was to analyze another section of this longitudinal dataset, focusing on how York University students viewed the labour strike and how this may have been affected by the amount and sources of information about the dispute they accessed. Providing information about a negative situation or outcome, including how it came to be, can influence the attitudes held about that situation (Colquitt et al., 2001; Skarlicki et al., 1998). A survey of students affected by the 1997 faculty strike at York University found that students who obtained strike-relevant information via the internet reported lower levels of anger (Greenglass et al., 2002). Another survey of Canadian students facing a possible strike found that having information about the pending work stoppage increased levels of perceived control over the situation which, in turn, moderated the association between the disruption caused or anticipated by the possible strike and students' reported levels of strain (Day et al., 2006).

Therefore, Study 1 examined changes throughout the strike in: (a) the perceived level of strike information awareness (i.e., feeling well-informed about the strike), (b) the information sources utilized by students, (c) how reliance on certain information sources related to feeling well informed, and (d) students' feelings

about how to approach their studies. Study 1 also examined whether feeling well informed about the strike impacted students' well-being.

2.2 Methods

2.2.1 Participants

Students were recruited for the 2008–2009 York University Strike Study by using two strategies. The first involved advertising the study to the Undergraduate Research Participant Pool. The participants could receive course credit in exchange for their participation in the pre-strike phase of the study and were offered additional course credit or one ballot in a \$50 cash draw for each subsequent phase of the study in which they participated. In the end, 241 undergraduate students enrolled in a first-year psychology course volunteered to participate in the study. The second recruitment strategy involved experimenters approaching students in classrooms and in public areas of the campus (e.g., cafeterias, computer labs) and inviting them to participate in the study. The incentive for these students was one ballot in the \$50 cash draw for each phase of the study in which they participated. Approximately 65% of the students approached by an experimenter agreed to participate in the study, resulting in 267 participants outside the participant pool being added to the sample.¹ Overall, 508 undergraduate students participated in the pre-strike phase (Phase 1) of the study.

Data gathered during the strike were collected in two stages. The first, referred to as Phase 2, took place following the first week of the strike. The second, referred to as Phase 3, was initiated in the fifth week of the labour dispute. The final phase of the study, Phase 4, was initiated approximately 10 days after back-to-work legislation was passed. Based on the longitudinal design of the research, attrition throughout the study was expected. Table 1 presents the total n for each study phase, as well as the n for each phase by recruitment source and the response rate calculated based on the Phase 1 samples. It is important to note that response rates reported for all during- and post-strike phases of the study may be underestimated for two reasons. First, emails containing the survey links may have been delivered to students' spam folders, resulting in students not receiving notice of the latest phase of the study. Second, handwritten email addresses from the non-participant-pool group in Phase 1 were often difficult to interpret. Thus, survey links may have been sent to incorrect but viable addresses, again resulting in students not receiving notice of the most recent phase of the study.

¹ Two hundred and eighty participants recruited in public areas of the university were initially added to the sample. Six of these questionnaires were subsequently discarded because they failed to provide an email address, six were discarded because they were completed by graduate students, and one was discarded because it was completed by a student visiting from a neighbouring academic institution.

Table 1: Sample size by study phase and recruitment source

		Recruitment Source				Total <i>n</i>
		Participant Pool		Non-Participant Pool		
		<i>n</i>	% of Original Sample	<i>n</i>	% of Original Sample	
Phase	1	241	-	267	-	508
	22	134	56	125	49	259
	3	101	42	92	36	193
	4	96	40	74	29	170

Given the large number of analyses, the decision was made to exclude Phase 2 from consideration in the current study. Phase 2 was conducted just one week after the start of the strike and was, therefore, the least theoretically relevant phase of data collection. Thus, the current sample included only those students who participated in Phases 1, 3, and 4 of the research ($n = 118$). This sample included 33 males and 85 females, with an average age of 20.5 years ($SD = 4.0$). A majority of students (51.7%) were in their first year of study, which is not surprising given that the first recruitment strategy solicited students who were enrolled in a first-year psychology course. The remainder of the sample included 13.6% who were in their second year of study, 9.3% in their third year, 20.3% in their fourth year and 4.2% in their fifth or higher year of study. The sample was drawn from a wide range of departments (see Table 2), although the Health and Kinesiology Department was strongly overrepresented, again due to reliance on the participant pool for recruitment.

2 Two students from the participant-pool group and 11 students from the non-participant-pool group could not be reached using the email addresses they had provided in Phase 1 of the study. These participants were removed before Phase 2 response rates were calculated.

Table 2: Demographic characteristics of the sample of students who participated in phases 1, 3, and 4 of the study

Age (<i>M/SD</i>)		20.51(3.96)
Gender (%)	Male	27.97%
	Female	72.03%
Year of Study (%)	1st	51.69%
	2nd	13.56%
	3rd	9.32%
	4th	20.34%
	5th +	4.24%
Area of Study (%)		
Applied Science and Engineering		< 2%
Life Sciences		4.24%
Physical Sciences/Mathematics		< 2%
Computer Science		< 2%
Communications & Info. Tech.		-
Architecture & Design		-
Humanities		11.02%
Social Science		14.41%
Health and Kinesiology		47.46%
Fine Arts		5.93%
Education		-
Social Work		< 2%
Business		8.47%

2.2.2 Measures

Questionnaires for this study included measures designed to explore multiple research questions. Only those measures that are relevant to the current analysis will be discussed here. These measures are presented in Appendix A.

2.2.2.1 Strike Information Awareness

Before and during the strike, students were asked to indicate how well informed they felt regarding strike developments. Responses were scored on a level from 1 to 4. Higher scores indicated greater perceived awareness.

2.2.2.2 Sources of Strike-Related Information

Students were asked to indicate how much information and advice about the strike they obtained from each of the following: fellow York students, the York University website, the union website, York professors, non-York websites, radio, newspapers, television, friends and family, and social media (i.e. Facebook). These items appeared in all phases of the study. Responses were scored on a level from 1 to 4, with higher scores reflecting more information obtained.

2.2.2.3 Emotional Responses in Students' Approach to Academics

Based on a qualitative analysis of diaries from and interviews with students affected by the 1995 University of Manitoba faculty strike, Albas and Albas (2000) identified several common emotions expressed by students describing the perceived impact of the strike on their studies. Three of these emotional themes were explored in the current study. Gratification and confusion were each measured with a single item. The gratification item stated: "The strike will be a great opportunity to catch up on my coursework and to prepare for mid-terms or final exams." The confusion item stated: "I'm not sure whether or not I should bother studying and keeping up with my readings during the strike." The emotional theme of apathy was measured with two items: "The strike disrupted my good study habits," and "If a strike occurs, I will probably get lazy with my school work." Higher scores reflected stronger agreement with the item. These items were all included in Phases 1 through 3 of the study, with the verb tense in item wording altered for Phases 2 and 3 to reflect the ongoing nature of the strike.

2.2.2.4 Perceived Stress

A student's perceived stress during each of the study phases was measured using the Perceived Stress Scale (Cohen & Williamson, 1988). This 10-item scale was designed to measure the degree to which respondents find their lives to be unpredictable, uncontrollable and overloaded. Respondents are asked to indicate the frequency of various experiences or feelings over the past week using a five-point response. Higher scores reflect greater levels of stress. In the current study, the Perceived Stress Scale demonstrated strong internal consistency across all three phases of the study (Cronbach alpha = .82, .85, and .87 in the before-, during- and after-strike data collection periods, respectively).

2.2.3 Procedure

Participant-pool students completed the initial questionnaire online, whereas non-participant-pool students completed a paper-and-pencil version of the initial questionnaire. All subsequent surveys were completed online. With each new phase of the study, an email containing a link to the survey was sent to each participant. Reminder emails were sent to those students who did not reply.

2.2.4 Planned Analyses

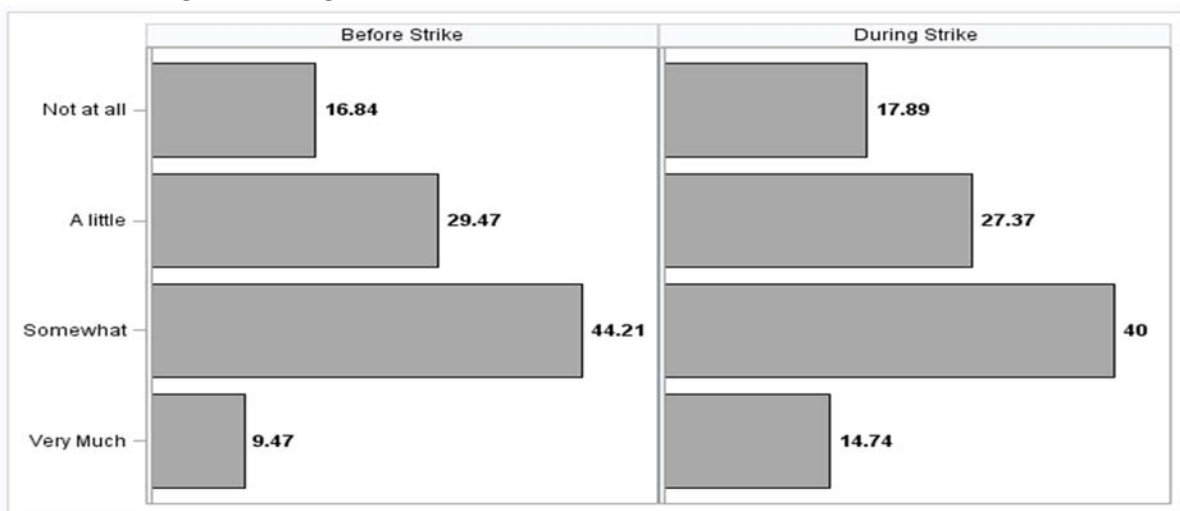
Descriptive and inferential statistics including chi-square, Wilcoxon signed-rank, linear and logistic regression analyses were used to explore the research questions. To retain the maximum number of respondents for each analysis, listwise deletion of missing values was conducted separately for each analysis, resulting in differing sample sizes across tests. For those analyses examining what emotional responses emerged in students' approach to academics throughout the strike (section 2.3.4), a total of 109 students were assessed. For all other analyses, tests were based on a smaller sample of 95 students. More detailed information about the analyses and results is provided in Appendix B.

2.3 Results

2.3.1 How Well Informed Did Students Feel?

There was great diversity in the degree to which students reported feeling well informed both before and during the strike. When examining the data as a function of low strike information awareness (i.e., participants responding not at all or a little well-informed) versus high awareness (i.e., participants responding somewhat or very well-informed), it is evident that there was very little difference between these two groups both before and 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 (see Figure 1). The distribution of perceived strike information awareness did not change between the period before the strike and one month into the work stoppage.

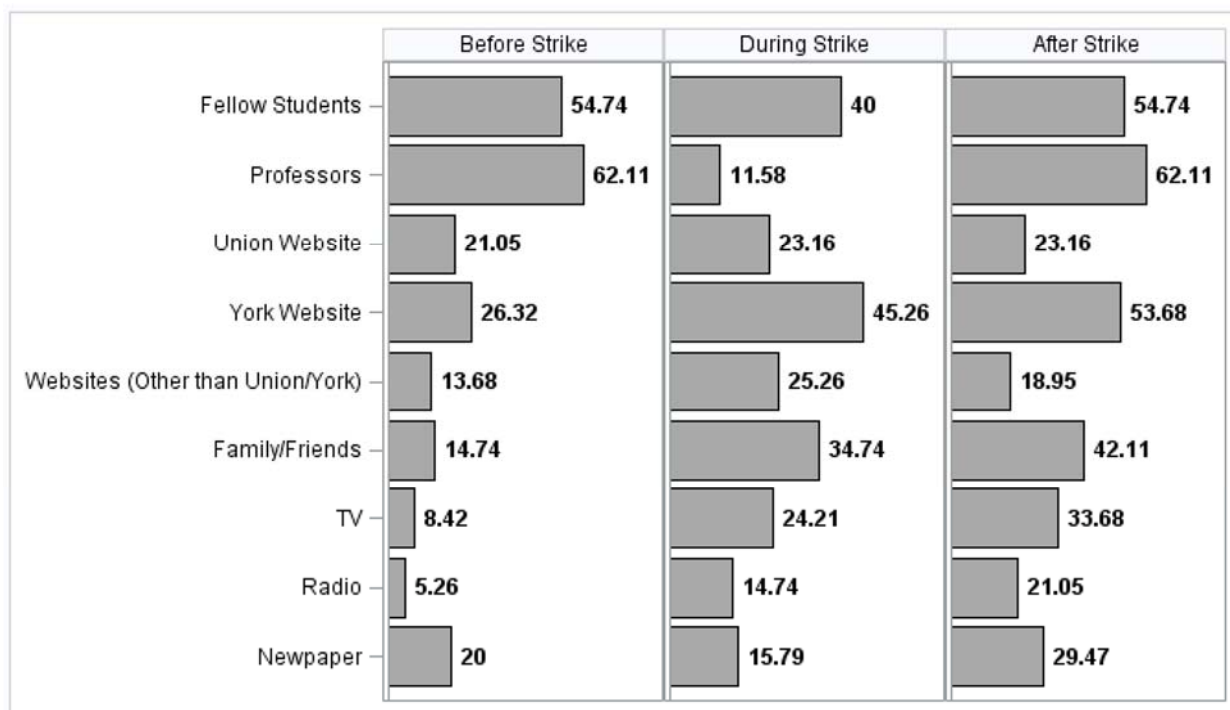
Figure 1: Perceived strike information awareness before and during the strike (reported as percentage of students endorsing each rating)



2.3.2 How Did Students Access Strike-Related Information Throughout the Strike?

Before the start of the strike, over half of the students reported relying at least somewhat on either their professors or fellow students for information and advice regarding the possible work stoppage (see Figure 2). In comparison, only 26.3% of students reported relying on the York University website for strike-related information during this period, 21.1% reported relying on the union’s website, 20% reported obtaining information from newspapers, and less than 15% of students reported relying on each of several other sources external to the university community including friends and family, and news media such as television and radio. 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.

Figure 2: Percentage of students before, during and after the strike who reported relying somewhat or very much on each information source for strike-related information and advice



This pattern changed as the strike progressed. As might be expected following the university’s cancellation of classes, and given that contract faculty were on strike with the teaching assistants, it appears that reliance on faculty as an information source dropped 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 on information sources external to the university community including family and friends, television and radio.

This trend continued into the post-strike period. 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. As shown in Table 3, the majority of students reported relying at least somewhat on two or more sources of strike-related information over the course of the work stoppage. One third of students reported relying on three or more sources of information before and during the strike, and this proportion increased to almost two thirds of all students in the post-strike period.

Table 3: Percentage of students who reported relying somewhat or very much on sources of information as a function of number of information sources accessed and phase of data collection

	Number of Sources of Strike Information				
	None	Only 1	2	3 or More	At least 2
Before Strike	15.79	14.74	33.68	35.78	69.46
During Strike	18.95	18.95	25.26	36.85	62.11
After Strike	11.58	12.63	14.74	61.05	75.79

Based on these results, it is clear that students were actively seeking strike-related information throughout the course of the work stoppage, and that intensified following the start of the strike and in the remediation period following the strike's conclusion. Students turned to members of the faculty when they were most accessible, and to fellow students throughout the strike. Students relied heavily on web-based information, with increasing reliance on the university's website. Increasing reliance on friends and family as the strike progressed may have reflected students turning to parents and/or mentors to seek assistance or advice on how to minimize the impact of the prolonged dispute on other aspects of their lives. Future longitudinal research should explore this possible explanation further.

2.3.3 Which Information Sources Contributed Most to Students' Perceptions of Being Well Informed?

Although students reported relying heavily on their professors for strike-related information before and after the strike, on their fellow students throughout the work stoppage, as well as on a number of other information sources, it is important to determine if reliance on each of these sources of information was related to feeling well informed about the strike. 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.

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. 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. No other information sources were found to contribute to perceptions of high strike information awareness before the work stoppage.

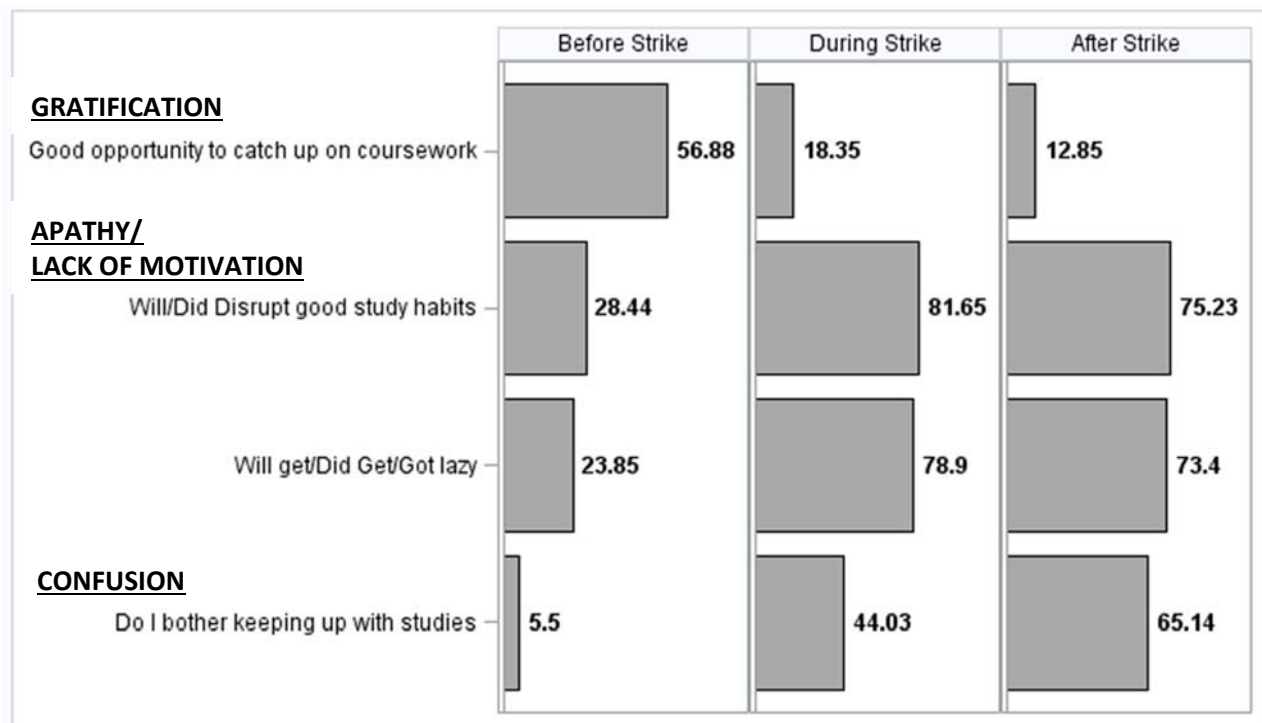
During the strike, reliance on professors for strike-related information and advice was not significantly associated with feeling well informed. This may be the result of reduced overall reliance on faculty during the work stoppage, or it may be due to the fact that for many students, their professors were contract faculty and were on strike. Reliance on fellow students for strike-related information and advice during the work stoppage was also not significantly associated with feeling well informed. This finding is more puzzling because 40% of students reported relying at least somewhat on their fellow students for strike-related information and advice. However, it may be that students recognized that the information received from fellow students was based on rumour and conjecture and may not have been reliable. 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. 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.

Therefore, these results indicate that before the start of the strike, students who relied on professors and fellow students for information felt well informed about the pending work stoppage. However, after the strike had been initiated, the value of information and advice from these sources declined, and reliance on information from the York University website and from websites external to the university community became more valuable in helping students feel well informed about the work stoppage. The declining value of faculty and fellow students as information sources from the before- to during-strike period may reflect a deterioration in availability, accessibility or reliability of information from these sources. The rising value of online information sources may reflect an increase in availability of information from this source or simply the fact that this was the most accessible remaining alternative.

2.3.4 What Emotional Responses Emerged in Students' Approach to Academics Throughout the Strike?

How students appraise the challenges posed by a work stoppage can impact the level of stress they experience and the approach they take to their studies (Lazarus & Folkman, 1984). During the 1995 University of Manitoba faculty strike, several emotional themes relating to students' approach to their studies were identified including gratitude for the opportunity to catch up on their studies; apathy and a lack of motivation; as well as confusion about whether or not to keep up with their studies. These themes were assessed across all phases of the current study using four items. Figure 3 depicts the percentage of students who indicated at each phase of data collection that they agreed or strongly agreed with each of the four statements.

Figure 3: Percentage of students who indicated agreement (agree/strongly agree) to each of four statements regarding impact of the strike on study habits before, during and after the labour disruption



Before the strike began, students appeared to have minimal concern about the pending labour disruption. More than half of students were grateful for the possible opportunity to catch up on coursework. The development of apathy during the strike was not a worry for many students. Less than a third of participants believed that the strike would impact their good study habits, and less than one quarter of students were concerned that they would become lazy during a possible work stoppage. The strike spurred virtually no confusion among students, as just 5.5% expressed uncertainty regarding whether or not they should bother keeping up with their studies.

This pattern had changed drastically one month into the work stoppage. At the during-strike phase of data collection, the overwhelming majority of students expressed feelings of apathy, indicating that their good study habits had been compromised by the strike and that they had grown lazy in their approach to their studies. The percentage of students who expressed gratitude for the opportunity to catch up on coursework dropped from 56.9% to 18.4%, and 44% of students were now expressing uncertainty about whether or not they should keep up with their studies. The differences in responses for each of the four items across the before- and during-strike periods were all statistically significant. Clearly, the strike was negatively impacting how students felt about and approached their studies. Almost half of students were unsure about the value

of continuing with any academic pursuits, and regardless of whether they saw any value in continuing, almost twice that number indicated that their study habits had been negatively affected.

This emotional pattern was replicated after the strike, when participants were invited to reflect upon their experience during the strike and to re-assess how the strike had impacted their approach to their studies. A similar proportion of students agreed that they had developed an apathetic approach to their studies, suffering from laziness and compromised study habits, and again, very few students expressed gratitude for the opportunity to catch up on coursework that the strike had provided. The only change in students' re-assessment of their emotions during the strike came in their rating of experienced confusion. An even higher proportion of students (65.1%) now indicated that they were uncertain about whether or not to continue with their studies during the strike. This increase in reported confusion is not surprising given that the strike persisted another eight weeks after the during-strike phase of data collection.

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. As would be expected, 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. Note that 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).

2.3.5 Did Perceptions of Being Well Informed Impact Students' Well-Being?

Linear regression analysis was used to test whether feeling at least somewhat well-informed about the strike predicted students' level of reported stress, as measured by the Perceived Stress Scale. Analyses of both the before- and during-strike periods found no evidence for a significant relationship between students' perceived strike information awareness and their reported levels of stress. This finding runs counter to previous findings reported by Greenglass et al. (2002) and Day et al. (2006). Specifically, Greenglass et al. (2002) found a direct relationship between information and stress-related outcomes among students at York University following a 1997 faculty strike. Students who had relied on the internet for strike-related information reported experiencing less anger. When faced with a potential strike at another Canadian university, Day et al. (2006) found that students who felt well informed about the possible work stoppage perceived increased task and policy control, but not strain. Instead, both perceived task and policy control moderated the relationship between the disruption caused and the level of strain experienced. One possible reason for differences between the current results and those from previous studies may be due to use of the Perceived Stress Scale, a measure of generalized stress that may not be sufficiently sensitive to the type of stress experienced during a strike.

It may also be the case that the item asking students about how well informed they felt was not tapping into their perceived knowledge of information needed to make sound decisions about their studies or to minimize stress about the potential impact of the strike. Instead, students may have been indicating how much of the *available* information they had, regardless of whether or not this information was valuable or useful to them. Partial support for this explanation is provided by the failure to find a significant relationship between being well informed and students' feelings about how to approach their studies throughout the strike. If feeling well informed reflected some level of valuable knowledge about how to proceed, then self-identified, well-informed students should at minimum have reported less confusion and apathy; but this was not the case. Future research should explore the quality of communication students receive from university sources to determine if better communication efforts can reduce strike-related stress and improve emotional responses about how to approach academic pursuits throughout a work stoppage.

2.4 Strengths and Limitations

The longitudinal design of this study is its most definitive strength. To date, few studies have examined the psychosocial impact of university strikes on students and only a handful of these have adopted a longitudinal approach. As is evidenced by the current findings, students' thoughts and feelings fluctuate over the course of a work stoppage, particularly one that lasts several months as did the strike that was assessed here. Despite the strength of its longitudinal component, other aspects of the study design were a source of weakness. Field studies of real world events are rare, in part because of how difficult it can be to study unpredictable events with little foreknowledge. Limited time available for recruitment meant that a convenience sample of students was recruited that was not representative of the entire university population. This weakness may limit the generalizability of the findings.

2.5 Conclusion

The 12-week-long York University strike by teaching assistants and contract faculty in the 2008–2009 academic year was a significant event in the lives of undergraduate students affected by the strike (Cacho, 2008; Talaga, 2009). The current longitudinal study focused on sources of strike-related information available to students. There was great diversity in perceived levels of strike information awareness, with an almost even split between those students who felt at least somewhat well-informed versus not very well informed at all. Before the start of the strike, students sought information primarily from professors and fellow students, although reliance on faculty as an information source declined during the work stoppage. Instead, the York University website and websites external to the university community became increasingly more accessed. Moreover, students sought out increasingly more sources of information as the strike progressed. Before the strike, reliance on faculty and fellow students for information was predictive of feeling well informed, but during the strike, reliance on relevant websites was more valuable in this regard. Before the strike began, students had reported gratitude for the opportunity to catch up on their studies and did not foresee a potential loss of academic motivation; however, this changed drastically after the strike had persisted for a month. Students subsequently reported major disruptions to their good study habits, a general feeling of laziness and a great sense of confusion about whether or not to keep up with their

studies. Students' reports of feeling well informed about the strike did not predict the degree to which they reported feeling apathetic or confused about keeping up with their studies, nor the extent to which they felt a general level of stress. Given alternative findings in the existing literature (Day et al., 2006; Greenglass et al., 2002), the lack of association between informational awareness and well-being in the current study may be the result of insensitive measures of the relevant constructs or a more complex indirect relationship. Nonetheless, it is clear that students were seeking out information during the work stoppage and that some sources were more valuable than others in helping students to feel informed about the status and potential impact of the dispute. Future research should consider examining the quality of communications received by students, or inquire as to what specific information students are seeking to determine if university administrators or faculty can utilize improved communication strategies to reduce strike-related stress among students affected by a university work stoppage.

3. Study 2: 2015 University Strikes — Focus Groups

3.1 Introduction

In the latter half of the 2015 winter term, teaching assistants and contract faculty at both York University and the University of Toronto went on strike. Union locals at both institutions identified compensation as a central issue of the negotiations. While the University of Toronto cancelled labs, tutorials and those classes taught by striking workers, York University opted to cancel most lectures and tutorials. After a month on strike, teaching assistants at the University of Toronto voted to enter binding arbitration, thereby ending the work stoppage. After a little more than a week on strike, the contract faculty at York University ratified a new agreement while the teaching and graduate assistants rejected tentative agreements that had been reached with the university. Although contract faculty returned to work following the ratification of their agreement, teaching and graduate assistants continued their work stoppage. During this time, York University gradually restarted classes in those faculties that did not rely heavily on teaching assistants (e.g., the law and business schools). The strike by teaching and graduate assistants continued for another three weeks, until new tentative agreements were ratified.

Following the 2015 strikes at the University of Toronto and York University, both university administrations initiated a remediation plan to assist students in completing their courses and faculty at both institutions adjusted their course curricula and requirements as needed. These efforts are integral to helping students cope both academically and emotionally in the aftermath of a labour disruption (Fiksenbaum et al., 2012; Grayson, 1997c). With this in mind, it is important to assess which initiatives were recognized by the students at each institution and which initiatives were received positively so as to inform and improve remediation plans and course accommodations that may be introduced following future labour disruptions. Therefore, the objective of both Studies 2 and 3 was to better understand how students were affected by the labour strikes at York University and the University of Toronto, and to identify the most effective and well-received remediation plans and accommodations made following the disputes. This research question was best addressed through a mixed-methods approach including both qualitative and quantitative strategies.

3.1.1 Purpose

Study 2 addressed this research question using qualitative focus groups. Focus group research is a popular and celebrated qualitative method used to uncover shared themes, collective beliefs and group experiences (Hyde et al., 2005; Parker & Tritter, 2006). Focus groups allow interaction between interviewees, providing the opportunity for participants to voice their agreements and disagreements with one another. As a result, well-facilitated focus groups can produce rich data that represent both the convergences and divergences in participants' experiences. As they provide "power in numbers," focus groups also provide less advantaged participants a safer space to voice their thoughts, particularly when interviewers are in a structurally advantageous or authoritative position — a highly relevant consideration for research of undergraduate students conducted by university faculty and graduate students on the potentially sensitive issue of university strikes.

In this study, undergraduate students affected by the 2015 labour strikes at the University of Toronto and York University were invited to attend one of a series of focus groups to share their lived experiences and struggles during the strike and to help identify strategies and procedures that could be implemented to reduce the negative impact of a university strike on future students. Study 2 was specifically designed to identify those initiatives taken by the university and by faculty that were recognized by undergraduate students, to determine whether these initiatives were received positively or negatively, to understand the reasons why, and to determine if the students perceived a lasting impact of the strike.

3.2 Method

3.2.1 Participants

Undergraduate students from both York University and the University of Toronto who had been enrolled during the 2015 strikes, were invited to participate in a focus group study. Three focus group interviews were held at each university between December 2015 and February 2016. Each group included between three and six participants, with a total of 15 participants interviewed at each university. Focus group sessions were approximately two hours long. Students were recruited through advertisements posted to online websites (e.g., Kijiji) and through in-person recruitment in classrooms or in public areas of the campuses (e.g., cafeterias, computer labs). Only those students whose faculty or department was affected by the strikes were eligible for participation, which was confirmed in a screening questionnaire. Participants received a meal, refreshments and \$30 in exchange for their participation.

Although not proportionally representative of the university populations, both samples included a diversity of participants. Across the two universities, participants represented a number of program areas including liberal arts, fine arts, engineering, business and sciences. The sample included students from all years of study including students who had been enrolled in their final year of undergraduate study during the strikes. Seventeen women and 13 men participated in the study. The sample also included two international students, one at each university.

3.2.2 Measures

A semi-structured focus group discussion guide was developed to facilitate verbal exchange in the focus group sessions. Within the discussion guide, questions were designed to elicit information related to the following issues:

- a) Overall impact of the strike: (i) How much of an impact did the recent university strike have on you? (ii) How did the strike impact your finances and financial planning? (iii) Did the strike interfere with your plans (e.g., for employment, graduate school, vacation, etc.) and in what ways? (iv) Was the strike stressful for you and in what ways? (v) Did the strike impact your health and in what ways?
- b) Evaluating strategies initiated by the university administration: (i) Did the university administration do anything to reduce the impact of the strike on you (e.g., canceling, maintaining or resuming classes, extending the semester, allowing students to drop classes without penalty)? (ii) Were these initiatives helpful to you? (iii) Were there other initiatives the administration could have taken that would have been helpful to you?
- c) Evaluating strategies initiated by the faculty: (i) Did your instructors/professors do anything to reduce the impact of the strike on you (e.g., continuing to communicate despite class cancellations, reducing reading or written assignments)? (ii) Were these initiatives helpful to you? (iii) Were there other initiatives your instructors/professors could have taken that would have been helpful to you?
- d) Lasting impact of the strike: Do you feel that you are still impacted by the strike (e.g., level of learning, opinion of the university, devaluation of degrees, thoughts about alumni donations/support after graduation) and in what ways?

3.2.3 Analytical Approach

Group discussions were audio-recorded and all recorded data were fully transcribed. Interview transcriptions were assessed using thematic analysis (Braun & Clarke, 2006), taking note of the recurring topics and concepts that repeatedly surfaced in the discussion. The analysis also noted the ways various actors involved in the strike were discussed by students. The most prominent actors included the university administration, the union, faculty members, individual teaching assistants, and fellow students and classmates. By examining the data with an eye on these actors, the analysis allowed for an exploration of students' perceptions and evaluations of each of these parties to the dispute.

3.3 Results

The focus group interviews provided rich and detailed insights into various aspects of students' experiences of the 2015 strikes at the University of Toronto and York University. The most prominent of these findings

are outlined below. Key similarities across and differences between the two university samples are also described.

3.3.1 Communication, Information and Updates

Communication was, by far, the most frequently addressed topic across all six focus groups. Participants spent a significant amount of time discussing issues pertaining to communication and access to information during the strike and elaborated on how these issues impacted them.

Generally, students felt poorly informed and highly confused about the strike, the status of negotiations, and the rights and resources that were available to them at both universities. Students demonstrated a severe lack of knowledge about collective bargaining in general, as well as the specific details about the labour strikes affecting their own universities. During the focus group interviews, some students voiced opinions that were factually incorrect and misinformed. For instance, some students appeared to be unaware that months of negotiations preceded the work stoppage, that strikes are different from political protests, and that picketing is legal and cannot be disrupted by law enforcement. The participants' levels of knowledge about collective bargaining were highly varied and appeared to be affected by year of study, program area and level of involvement in the university; specifically, within the current sample, upper year students, those enrolled in liberal arts programs such as political science, and those who were more involved in their universities appeared to be more educated about collective bargaining. Nonetheless, providing accurate information concerning the stages of and laws governing collective bargaining would likely have eased students' confusion. In fact, several students expressed interest in receiving introductory education on collective bargaining in the form of what one student called "labour frequently asked questions."

In relation to the status of negotiations and specific developments during the strikes, students accessed multiple sources of information, but few of these sources were reliable, accurate or frequently updated. The absence of quality sources of information meant that students frequently relied on inaccurate and unreliable sources such as word of mouth or social media (e.g., Reddit, Twitter), which sometimes conveyed nothing more than gossip and rumour. Inaccurate and unreliable information contributed to students' sense of confusion and worry, sometimes by overdramatizing the situation and exaggerating the possibility of worst-case scenarios:

"There were lots of rumours flying around, guessing about what would happen. Didn't affect my classes as much as I know it did other people. [...] In the end the consequences for my classes weren't nearly as dire as I thought they were going to be."
(Female, University of Toronto)

Lack of access to reliable and accurate information was strongly associated with a sense of stress and powerlessness, often contributing to the development of negative feelings about the university:

“I just became very angry with the whole system, like I was in this big, you know, undergraduate system where I'm giving them \$8,000 and I'm getting nothing back. And, you know, everything's kind of... my semester's crashing, everything's kind of delayed, so what is, what is happening right now? I'm kind of like in limbo. It's like, ‘Come on, I deserve much more than this.’” (Male, University of Toronto)

The discussion with students uncovered multiple sources of information to which students turned during the strikes. Despite considerable overlap, there were important differences between the sources of information that were used by students at the University of Toronto and at York University. Factors such as location, geography, a history of labour unrest, and student and institutional cultures may all have contributed to these differences. Table 4 lists the most frequently discussed sources of information reported by students at each university. These sources are ranked in the order of their prominence in students’ discussions.

Table 4: Information sources at York University and the University of Toronto

York University	University of Toronto
<ul style="list-style-type: none"> ➤ The striking labour union (website, Twitter, Facebook) ➤ Faculty members and TAs (in person) ➤ York Federation of Students (website, Twitter) ➤ Other students (in person, various online social media) 	<ul style="list-style-type: none"> ➤ Anonymous and unidentified members of the university community (Reddit) ➤ Other students (in person, various online social media) ➤ The striking labour union (flyers, in person interaction during picketing) ➤ Faculty members and TAs (in person)

At York University, the striking labour union was a prominent source of information for students. Study participants appreciated the detailed and regularly updated posts to the union’s website, although some students only learned that the website was operated by the striking labour union through their participation in the focus group interviews. In the following quotation, a student describes why she found the striking labour union’s communication helpful and effective:

"[C]UPE [3903] was actually quite excellent at updating very often [...] The detail was much better, and then the format also [...] They had a Facebook page, a Twitter page, they would update their website every so often. So if you were really curious you'd go onto the website, it would be updated on a regular basis. So there were different ... If you're a Twitter user, it was there. If you were a Facebook user, it's there. If you're not really into social media, you can check the website. So there were multiple streams, and it was updated on a regular basis." (Female, York University)

At York University, the striking labour union acted as a centralized forum for distributing updates and news related to the strike; however, no such centralized source of information appeared to exist at the University

of Toronto. Rumour and word of mouth, circulated in person and through online social media, appeared to be the most prominent sources of information. Reliance on these sources of information was associated with significant uncertainty, confusion and stress:

“I think it's very hard [...] taking rumours that may or may not be true seriously. [...] As much as you don't want to be affected by that, it gets to you in certain ways. Like, subconsciously you still think about it even though you [...] believe that [you will] be fine in the end. But just because everyone around you and the environment is shaped that way.” (Female, University of Toronto)

Professors, instructors and teaching assistants were important sources of information for students at both universities. However, the extent to which professors and instructors were identified as information sources was highly varied and appeared to be dependent on the specific department or university as well as on students' perceptions of each professor's/instructor's personality and whether that professor/instructor had past experience as a faculty member during a strike. For example, seasoned faculty members at York University who had experienced past strikes at this institution were perceived to be particularly skilled at communicating with students during the current strike. However, York University professors from departments such as business were less likely to be reported as sources of information by students. University of Toronto professors were less frequently reported as sources of information by students compared to York University faculty members.

During the strikes, students relied heavily on online media, particularly social media, to access information. Twitter was heavily utilized by York University students, while Facebook was frequently used by students at the University of Toronto. At both universities students appeared eager to use whichever online medium provided the most reliable and frequently updated information.

Importantly, as Table 4 shows, the administration at neither university was a significant source of information for students during the strike. Students repeatedly complained that the communication they received from their university administrators was infrequent, highly formalistic, and void of detail and content:

“The York emails that I would receive, especially from the president's office were ... like they were like “We're sorry. We're working on it.” Ok, you're sorry, you're working. [...] What is being done? Like, [...] What's the point of sending any update? Yeah, thanks, we know the strike's going on.” (Female, York University)

Students reported that their efforts to access information through their universities (e.g., visiting the university website, following university administrators on Twitter) had been futile. These evaluations of communication efforts by university administrators appeared to be associated with the formation of strong, negative attitudes among students toward their universities. Students at both institutions overwhelmingly believed that their universities did not prioritize them or act in their best interests. Students reported feeling alienated by their universities and repeatedly claimed that they were treated as nothing more than

“numbers.” The following conversation between two students at the University of Toronto demonstrates this common sentiment:

Participant 1: [...] The lack of communication and all that stuff made me realize [...] like, I didn't really feel supported, like I felt like this is the way things are dealt with it.

Participant 2: [...] That's the attitude of the school though, like they don't care about you.

Participant 1: Yeah, exactly, yeah. (Female and Male, University of Toronto)

Similar sentiments were voiced by students at York University:

“It seemed like the administration didn't really care about us. Like, we were just kind of like Ponzi in a little scheme of them trying to get [...] whatever they could.” (Female, York University)

The language students used to describe their experiences revealed that they saw universities as businesses that failed to deliver the promised commodity (i.e., higher education) in a satisfactory manner. In some cases, this “business” analogy represented students’ actual belief that universities were for-profit institutions that simply underperformed in customer service.

3.3.2 Stress and Emotional Impact

Students often recalled their memories of the strike in emotional terms. Although the severity of the emotional impact varied across participants, all appeared to have been emotionally affected by the strike in one way or another. Some students had experienced high levels of anxiety and stress; others reported experiencing anger and loss of motivation. Lack of access to reliable information often exacerbated these feelings.

“So stressful. A lot of it was also because of the uncertainty that I didn't know if our assignments were going to be marked or [...] what our professor was going to do [...] We weren't even sure if we would have enough marks [...] [to] have a final grade or if our professor [was] just going to change something dramatically [...] So that was stressful.” (Female, University of Toronto)

Those participants who were in their first or their final years of study reported additional concerns and sources of stress associated with the strike. Students in their first year of study described the strike as further exacerbating their already heightened feelings of stress, confusion and disorientation associated with the adjustment to university life.

“This was my first year at the university and there was this big huge thing. [...] I had, you know, a lot of things changing [...] [The strike] disrupted everything, my family, my school, my grades, my final grades. I missed out... you know, that was a big thing.” (Male, York University)

Graduating students had much at stake during the strike as they planned for graduation and future employment; they experienced high levels of stress about the unknown course and length of the strike:

“[The strike] was close to the graduation date so [...] it was still like a ... big cloud over your head because you weren't sure when you were graduating. Will that delay job searches or whatnot down the road? [...] [The inability to tell] my potential employer that I will be able to come to your company at a certain date. I'll be fully graduated. My graduation date is this date. Just the confidence in that is kind of lost in the process.” (Male, York University)

As another graduating student explained, the potentially negative impact of the strike on final grades was a concern for some of the graduating students who planned to pursue post-graduate degrees:

“When you're in your last year it may all be affecting you in a very different way because you know this is the last hope for your GPA if you're in the process of trying to get into a master's program or some other type of program. Everything matters that much more.” (Male, University of Toronto)

Many students spoke about the ways in which the strike continued to impact them emotionally several months after the strike had ended. Due to the extension of the semester, the increased amounts of work required of students in the absence of support from teaching assistants, the need to re-take failed or dropped courses, and the high levels of stress endured, many students reported long-term fatigue, exhaustion and feelings of “burning out”:

“We didn't have much break between the two courses. I think this is the first year [...] but I feel totally overwhelmed and overworked because we didn't have any break. [...] Last year dragged on until the summer and the summer was [shortened]... and [...] it just feels like too much. This year had been really overwhelming work-wise.” (Female, York University)

3.3.3 Academic Impact

Students reported a significant impact of strike-related stress on their educational outcomes and grades. Many students reported that their grades had suffered because of the heightened sense of anxiety and stress, and their inability to manage time well.

“[My friends] would have papers that they had to work on last minute because they didn't have as good time-management skills and sometimes I also had that problem. So when I figured out the deadline and it was a bit earlier than I expected [...] it was stressful, especially in those times.” (Female, University of Toronto)

“I mean it was a tough class but if I would have been on the normal schedule and been studying the whole time I probably wouldn't have failed. That was the first course I ever failed.” (Male, York University)

Some students reported lower grades in the semester subsequent to the strike, which they associated with long-lasting feelings of exhaustion and fatigue.

“My marks from the summer [after] the strike are my lowest of my grades [because I was feeling burnt out].” (Female, University of Toronto)

Conversely, a few students reported that their grades improved during the strike semester because the additional stress motivated them to take more initiative and self-direct their learning.

3.3.4 Decline in Quality of Education

Despite marked differences in how the strike was handled by the University of Toronto versus York University (i.e., partial versus full cancellation of classes), students at both institutions repeatedly noted that the strikes had negatively impacted the quality of their education. At York University, the full cancellation of lectures and tutorials was considered by many participants to be detrimental to the quality of education:

“[I]t was pretty rushed after we came back [when the strike ended]. Obviously, [professors] had to meet the exam so they had to really just skip through everything. Like, ‘So these two chapters you have to read on your own, and I’ll just cover this in class.’” (Female, York University)

At the University of Toronto, where most lectures continued despite the work stoppage, students perceived that the quality of their education had suffered due to the loss of academic support from teaching and laboratory assistants:

“The tutorials were cancelled, so for example, [in] one class [...] we were learning about very deep [...] philosophical things and, you know, we hadn't even a TA to, like, explain [things] [...] You need the TAs. [...] You need that support for certain classes and when it's not there you kind of, like, [don't learn as much]” (Male, University of Toronto)

Some students at the University of Toronto also felt that they were expected by their professors to carry on their studies as before, despite the lack of academic support from teaching and laboratory assistants. These unchanging expectations placed a great amount of pressure on students, and in some cases, were perceived as unreasonable:

“[In one course] the instructor insisted that we still do the lab sessions. But then there's no TA there to supervise it. [...] Then obviously you're not doing the lab properly and then there's nobody to explain how it's supposed to be done. They marked as hard as they should have been if there was [sic] TAs. And in addition to that, what's really bad about it is [that] on the final exam, he tested those labs extensively and he refused to like make modifications to the syllabus.” (Male, University of Toronto)

Conversely, some students expressed concern that the quality of their education had been negatively impacted by changing expectations of faculty. Specifically, students at York University noted that well-meaning and sympathetic professors had attempted to make the coursework more manageable for students by cutting a considerable amount of the reading and other course assignments. By doing so, these students felt that faculty had inadvertently damaged the integrity of their education:

“[T]here was a knowledge gap because we had to get rid of certain chapters because of the strike. So whether we like it or not there is a knowledge gap because all my classes are three hours long. Once [...] you miss one class that's three hours of lecture. That's one or two chapters. But you can't do, you know, you can't make up for it.” (Female, York University)

Cancellation of coursework was perceived as particularly impactful in courses that involved laboratory work. Many study participants felt that losing practical and hands-on laboratory experience could not be offset by self-studying. Many students also feared that the decline in the quality of their education would negatively impact their future professional and academic goals, or undermine the value of their degrees. The negative impact of the strike on the quality of education was a particular concern in relation to foundational courses. In these cases, students felt inadequately prepared for upper-year courses that required a strong foundational knowledge or for post-graduate studies. For instance, one student explained her decision to drop a foundational course:

“Because it was one of my core courses. So I wanna go on to pharmacy and [the course] was organic chemistry and I can't really be missing chunks of organic chemistry when I'm going into pharmacy [...] It would have not only affected my GPA, but you know, how am I going to study in pharmacy if I don't have that basic knowledge, and that's why it's called a core course right?” (Female, York University)

Some study participants reported that they felt these fears had been corroborated or validated by upper-year instructors in the semesters following the strike, when these instructors found it necessary to review the foundational materials more fully in the upper-year courses.

3.3.5 Financial Impact

Finances were a prominent theme in the focus groups interviews. Overall, York University students spoke more at length about financial impact than students at the University of Toronto. Focus group discussions revealed that students had been financially impacted by the strikes in a number of ways. Uncertainties about the length of the strikes and the extension of the semester to compensate for lost classes were particularly costly to students. Some students had lost or had come close to losing well-paying summer jobs that helped them pay their tuition fees. Out-of-province students had needed to extend their housing leases and pay more rent. The need to cancel and/or reschedule flights and travel plans had also led to additional costs for students and their families. Those who had to drop and re-take courses in subsequent semesters also reported additional costs.

In addition to these costs, students repeatedly identified a form of financial impact they described as “indirect.” This indirect financial impact reflected the common feeling held by students that they had not received the full value for their money during the strike semester. Without being probed by interviewers, many students argued that canceled lectures and tutorials were, in fact, a cost to them:

“I guess directly the strike didn’t affect anyone I know, at least financially. But if you think about it, we’re paying tuition to the university for a certain quality of education and we have some expectations. Like we’re going to have lectures, we’re going to go over stuff in tutorials, we’re going to have labs. [...] So not getting what you paid for, I guess it’s also a financial effect of the strike. So in that perspective I think it did impact us all financially.” (Male, University of Toronto)

Some students had even calculated the dollar value of lost classes. These students believed that since they had paid the full tuition fee for the semester but had received only partial value for their payment, the strike had “indirectly” impacted them. The general decline in the quality of education during the strike semester was also deemed an “indirect” financial cost. Referring to a business model of higher education, students presented themselves as dissatisfied “customers” who had purchased post-secondary education through tuition fees:

“I’m paying for these courses. Like if you do the math, like, \$500–\$600 for the course and it’s not even... like I’m not getting half of that. Almost, I think, half of the second semester or second term completely gone and I’ll never get that potential information [...] That really angered me in terms of like what I have paid for.” (Male, York University)

Finally, the financial impact of the strike was particularly severe for international students, who pay significantly higher tuition fees, often book international flights to travel home, and whose stay in Canada is regulated within restrictive timelines imposed by visas and study permits.

3.3.6 Faculty Members

For the most part, faculty members were evaluated positively by students and were described as well-meaning allies who made every effort to help students cope with the work stoppage. However, there was considerable divergence and inconsistency in faculty members’ practices between the two universities and across academic faculties and departments.

Based on transcriptions from all focus group interviews, Table 5 provides a profile of the characteristics and actions that students associated with a “helpful” versus “not helpful” course instructor.

Table 5: Profiles of “helpful” versus “not helpful” course instructor

Helpful	Not helpful
<ul style="list-style-type: none"> ➤ Informative and in control ➤ Understanding and sympathetic ➤ Flexible and responsive ➤ Offered multiple remediation options ➤ Options developed in consultation with students ➤ Options did not impact quality of education 	<ul style="list-style-type: none"> ➤ Dramatic and stressful ➤ Inflexible and unsympathetic ➤ Provided no accommodations ➤ Provided remediation options that were not helpful ➤ Did not consult students in developing remediation options

In the perceived chaos and confusion of the strike, students appreciated an instructor who had a well-organized plan for the remainder of the course and was able to communicate this plan with students early and clearly. The well-organized teaching plans students described often consisted of multiple smaller plans designed for different strike scenarios. Seasoned professors with previous experience teaching through a work stoppage were more frequently reported to have developed such plans, as they themselves had a clearer idea of how things were likely to unfold.

“I had one professor who was really good. [...] Before the strike he's like, “I don't know if I am supposed to tell you this, but we could have a strike. Maybe we will, maybe we won't. But here's what we'll do.’ And that day we made a [plan] ... Ok, here's what we're gonna do if the strike goes on in terms of the grading. Here's what we're going to do if it's short. And he gave a best-case scenario, a worst-case scenario, and then we just followed through with that and it worked out well [...].” (Female, York University)

As was previously noted, faculty members were one of the most valuable sources of information for study participants. These students perceived a “helpful” instructor to be informative, clear and in control. Students were greatly affected when instructors themselves overdramatized the situation or appeared confused, anxious and overwhelmed by the stress of the strike.

“My main source of information was my professors and my classes. [One instructor] gave us really good information. [...] But he was part of the reason I felt a little bit overblown. He was going into these worst-case scenarios, [...] talking about how strikes at one place had lasted two years ... That wasn't helpful.” (Female, University of Toronto)

This finding suggests that there may be a need to establish stronger support systems for faculty members who are teaching through a university work stoppage. Study participants often described significant initiatives taken by faculty members to provide information and assistance to students, and any efforts by the administration to support these efforts would be valuable.

Students appreciated faculty members who expressed understanding and sympathy for the difficulties posed by the work stoppage. Given the uncertainty and lack of predictability associated with labour strikes, students also found instructors who demonstrated flexibility and responsiveness to be very helpful, particularly when their accommodations maintained, rather than impaired, the quality of education. As noted previously, students were sometimes critical of remediation plans that cut significant portions of their coursework. Strongly indicating their interest in receiving a full-quality education, many students applauded faculty members who managed to retain as much of the course material as possible:

“I don't think [cutting material from the course] was a good thing. I mean, I'm paying the full amount for the course and the textbook, so I kind of want to learn everything from my professor who's teaching it.” (Female, York University)

Given the widely differing circumstances of students, study participants greatly appreciated remediation plans that offered multiple options; however, students were critical of instances in which they perceived instructors to have a tacit preference for one option over another:

“I personally felt like if you didn't do the one thing ... like one professor would kind of talk about one option more than the other and if you chose the alternative, then you would be penalized in some way, or it would hurt you in the long run. I feel like it was kind of a trick a little bit.” (Female, York University)

Students preferred being given the opportunity to choose the remediation option which best suited their personal circumstances, particularly when the decision could be made retroactively. For example, some students appreciated being allowed to choose between having their final grade determined by an examination or a written assignment after having already received the grades for both. Ideally, students appreciated it if faculty members developed their remediation plans in consultation with students, which ensured that well-intended remediation plans, in fact, worked well for students.

3.4 Strengths and Limitations

The focus group methodology is a particularly apt tool for exploring group experiences because it involves interviewing multiple individuals simultaneously. Focus groups produce qualitatively rich data because they allow interaction and communication among participants as well as between participants and researchers. Focus groups provide ample opportunity to closely explore various aspects of an experience and identify divergences and convergences within that experience. This means that many topics that would be overlooked or left unexplored in surveys or even interviews may be discussed in detail in focus groups. Nonetheless, the focus group methodology also has its limitations. Focus groups are not capable of producing generalizable data, as they are unlikely to include a representative sample. Hence, focus group findings cannot be applied to a larger population as statistical facts. Rather, it is more fruitful to treat focus group findings as themes that are likely to be reflected in the general experience of the larger population. Thus, while focus groups produce *deep* insights, they do not lead to *broad* conclusions. While focus groups

allow researchers to have a rigorously explored understanding of their participants' experiences, findings cannot be extended to the population as a whole. One approach to providing validation for the findings of a focus group study would be the adoption of a mixed-methods approach involving a quantitative assessment in a larger, and perhaps more representative, sample. The quantitative survey described below in Study 3 represents this second component of the mixed-methods approach used here to understand students' experience of the 2015 strikes at the University of Toronto and York University.

3.5 Conclusion

Focus group interviews with undergraduate students who had been affected by the 2015 labour strikes at the University of Toronto and York University clearly underscored a lack of adequate communication between the university and the student body as the most germane issue for participants. Students reported feeling poorly informed and highly confused about the status of the labour dispute. Students also unwittingly demonstrated a lack of knowledge about collective bargaining generally, which seemed to fuel much of their sense of confusion. During the strike, students reported seeking out many sources of information, but few of these were accurate, reliable or frequently updated; thus, students often relied on inaccurate and unreliable sources such as word of mouth spread in person and via various social media.

Lack of accurate and reliable information was associated with a sense of stress, anxiety, anger, powerlessness, and loss of motivation, which often contributed to negative feelings about the university. These effects of the work stoppage frequently persisted beyond the end of the strike. Students reported a significant impact of strike-related stress on their academic performance and expressed concern that the strike had resulted in a decline in the quality of their education through cancelled classes and tutorials or lost academic support from teaching and laboratory assistants. The financial impact of the strike was also a key issue for many students who had incurred costs as a result of the extended semester (e.g., lease extensions, cancelled travel plans, loss of well-paying summer jobs). Some students even viewed cancelled classes and tutorials as an "indirect" financial impact of the work stoppage.

For the most part, faculty members were evaluated positively and were described as making significant effort to help students cope with the strike, but not all strategies used by faculty were effective. Well-organized and informative faculty who were flexible and responsive to students' needs were the most appreciated. Some students were critical of remediation plans that cut a significant portion of their coursework and hence reduced the quality of their education. Students also valued the opportunity to have input into the chosen remediation strategy and the freedom to select the option which most accommodated their particular academic circumstance.

Taken together, these findings identify significant interventions that would improve students' experience with labour strikes. These include strategies to be taken by both faculty and university administrators that would minimize the negative impact of a university work stoppage on undergraduate students. These findings indicate that improving communication, providing general education on the collective bargaining process, some level of financial compensation, seeking student input on remediation strategies following a

work stoppage, and ensuring flexibility in the implementation of these strategies are a few of the means by which universities can improve the experience of undergraduate students affected by a labour strike.

4. Study 3: 2015 University Strikes – Online Survey

4.1 Introduction and Purpose

As stated previously, the purpose of both Studies 2 and 3 was to better understand how labour strikes by teaching assistants and contract faculty at York University and the University of Toronto in early 2015 affected undergraduate students, and how best to reduce the negative impact of future work stoppages. A mixed-methods approach was adopted; while Study 2 utilized a qualitative research strategy, Study 3 utilized a quantitative approach.

Study 3 was designed to validate the results of the thematic analysis from Study 2 using a quantitative online survey of university students affected by the work stoppages at both universities. Specifically, Study 3 was designed to confirm students' appreciation for administrative and faculty initiatives that sought to minimize the strike's impact, and to identify which of these strategies should be avoided and which should be considered for future use by a university's administration, and possibly its faculty, if affected by a work stoppage.

4.2 Methods

4.2.1 Recruitment and Eligibility Criteria

Undergraduate students from both York University and the University of Toronto were recruited through advertisements posted to online websites (e.g., Kijiji) and social media (e.g., Facebook), and through in-person recruitment and print advertisements distributed in classrooms or in public areas of the campuses (e.g., cafeterias, computer labs). All advertising materials directed potential participants to an online screening tool that was used to ensure that respondents met eligibility criteria for participation in the study.

To maximize generalizability of the findings to the student population, participants were required to be full-time undergraduate students at either the University of Toronto or York University. They could not be attending their institution on a student visa. To minimize the risk of including respondents who were not affected by the strikes in early 2015, participants were also required to report having been enrolled in classes supported by striking teaching assistants and/or contract faculty, to be in at least their second year of study (ensuring that they were in at least their first year of study during the strikes), and to provide an active email address from either university. Although this latter requirement excluded students who had abandoned their studies or graduated since the strikes, it ensured that respondents met the essential participation criteria.

4.2.2 Participants

A total of 2,119 potential participants completed the screening questionnaire. Based on their responses, 969 were deemed eligible to participate and were invited to complete the survey; of these, 570 students completed the study. Included among the measures was an item designed to detect random responding (i.e., Please select “somewhat agree” for this question). Approximately 11.6% of participants responded incorrectly to this item (University of Toronto = 35; York University = 31) and were excluded from further analyses. Therefore, the final sample used in the analysis included 504 participants: 262 from the University of Toronto and 242 from York University.

4.2.3 Measures

As Study 3 was designed as a quantitative validation of the qualitative results from Study 2, the measures included in the online survey were based predominantly on the semi-structured focus group discussion guide used in Study 2. Only those survey measures relevant to the current analysis are described here. These items are presented in Appendix C.

4.2.3.1 Sources of Information about the Strike

Communication emerged as a primary theme in the Study 2 focus-group interviews. Therefore, Study 3 included a number of questions about sources of strike-related information and the media by which that information was transmitted. Students were asked to rate on a 5-point Likert-type scale how much information about the strike they had found using various media and, where relevant, the source of that information. Media outlets and sources included news media (i.e., television, radio, newspaper and online news sites), in person (i.e., non-striking professors, university friends, family and friends from outside the university community), informational internet websites (e.g., university website, union website, faculty member’s website), and social media (i.e., Facebook, Twitter, Reddit). If participants indicated any information was provided through social media (i.e., response ≠ none), they were further asked to indicate the source of information provided through that social media channel (i.e., Facebook page of the university administration, union, non-striking faculty, striking teaching assistants and/or contract faculty, fellow students) using the same 5-point Likert-type scale.

In addition, students were also asked to rank various sources of information (i.e., the university administration, union, non-striking faculty, fellow university students, friends and family from outside the university community and the news media) in order of how much strike-related information each one provided.

4.2.3.2 Strike Information Awareness

As with the longitudinal research of the 2008–2009 strike at York University reported in Study 1, the current study included an item that measured how well informed students felt regarding strike developments.

Unlike the 4-point Likert-type response scale used for this item when included in Study 1, students in this study were asked to respond on a 5-point Likert-type scale, allowing for a neutral point on the scale. Higher scores still indicated greater perceived awareness.

4.2.3.3 Satisfaction with and Improvement of University Communications

Among the conclusions drawn from the findings of Study 1 was the suggestion that future research explore the quality of communication received by students from university sources to determine if better communication strategies can reduce strike-related stress and improve emotional responses about how to approach academic pursuits throughout a work stoppage. In response to this suggestion, Study 3 included an item asking students to rate the quality of university communications during the work stoppage. Participants responded on a 5-point Likert-type scale with higher scores indicating greater perceived quality of university communication.

Based on strategies identified by participants in the Study 2 focus group interviews, Study 3 also listed a series of six possible strategies that the university administration could have used to improve communication with the student body during the 2015 labour strikes. Participants in Study 3 were asked to rate the extent to which each of these strategies would have been helpful to them personally using the same 5-point Likert-type scale. Higher scores indicated perceptions of a more helpful strategy.

4.2.3.4 Impact of the Strike

Several measures were used to assess the impact of the strikes on students during and after the work stoppage. The first of these measures asked participants to reflect back on their experience during the strike and to rate how much stress, anxiety or worry they experienced when thinking about the potential impact of the strike on: grades, quality of education, finances, current and future employment, future studies, graduation and travel plans. Participants responded on a 5-point Likert-type scale with higher scores indicating greater stress, anxiety or worry.

Psychological distress was measured with the K6 Psychological Distress Scale (Kessler et al., 2002, 2003), which is a widely-used measure to identify psychological distress or screen for mood or anxiety disorders. The K6 has been validated across international samples and has been found to have little bias in regards to education or sex (Kessler et al., 2010; Mitchell & Beals, 2011). The K6 asks participants to rate how often in the past 30 days they have felt a number of thoughts or emotions; however, the instructions for the measure were adapted for the current context. Applied to the approximately one-month-long 2015 work stoppages, the adapted measure asked participants to rate how often, during the strike, they had experienced various stressful thoughts and feelings. Responses were given on a 5-point scale with higher scores indicating greater psychological distress. Summed scores in the ranges of 0 to 4, 5 to 12, and 13 to 24 indicate low, medium, and serious psychological distress respectively (Knowlden et al., 2016; Prochaska et al., 2012). Although instructions for the measure were adapted for the current context by asking participants to rate how they had felt “during the strike” rather than “during the past 30 days,” these same validated

ranges indicating varying levels of psychological distress were used to examine results from the current study.

Four items, taken from Study 1, were used to assess how students appraised the challenges posed by the work stoppages and how the associated stress impacted the approach students took to their studies during the strikes. Again, three emotional themes expressed by students to describe the perceived impact of the strike on their studies were assessed: gratification, apathy and confusion. These were measured by four items with responses recorded on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Finally, based on the findings of Study 2, students were asked to indicate how they were affected in the aftermath of the university labour strikes and continued to be affected at the time of the current survey more than a year later (e.g., lower grades, struggling in a more advanced course, not recommending the university to a friend). Level of agreement was measured on a 5-point Likert-type scale with higher scores indicating stronger agreement.

4.2.3.5 Support from and Remediation Efforts by Faculty

To validate some of the findings from Study 2, participants were asked to think about a professor, who was not on strike, whom they felt had helped them the most during the labour disruption. With this faculty member in mind, participants were presented with a list of general efforts or initiatives taken by faculty and were asked to identify those efforts that were most appreciated. The list of options (e.g., “provided encouragement/boosted spirits”; “provided strike-related updates and information”; “was flexible and responsive to our needs and requests”) was derived from previous research (e.g., Fiksenbaum et al., 2012) and from the findings of Study 2.

Also based on findings from previous research, including the results of Study 2, participants were presented with a list of remediation strategies adopted by faculty in previous university labour strikes (e.g., “readings and/or assignments shortened, revised or cancelled”; “assignment made optional”). Students were asked to rank these remediation efforts by professors in order according to which efforts would be the most helpful during a similar-length strike as the one experienced in 2015.

Participants in Study 2 discussed at length the importance of a professor being flexible and responsive to their needs, as well as students having input into the final remediation strategy selected. Two models for this input were presented during the focus groups. In one case, the professor moderates a class discussion and one remediation strategy for the course is democratically selected by the students. In the other case, students are given a number of options (e.g., eliminate assignment, cancel examination) and students select their own individualized remediation strategy. Participants in Study 3 were asked to rate the extent to which they would appreciate each of these options in the event of a future similar-length strike. Responses were given on a 5-point scale with higher scores indicating greater agreement.

4.2.3.6 Remediation Efforts by the University Administration

Based on the findings from previous research (e.g., Fiksenbaum et al., 2012), including the findings of Study 2, participants were presented with a list of remediation strategies initiated by the university administration in previous work stoppages (e.g., “course made pass/fail”; “extended course drop deadline”; “a small credit provided to all students such as \$200 toward future tuition, convocation fees, etc.”). Students were asked to rank these remediation efforts by the university administration in order according to which efforts would be the most helpful during a similar-length strike to the one experienced in 2015.

4.2.3.7 Student Knowledge of Collective Bargaining

Study 2 revealed that many students had little knowledge of the collective bargaining process, which contributed to factual misinformation about the strike. Therefore, participants’ knowledge of the collective bargaining process was assessed in Study 3 with seven true or false statements about the collective bargaining process as it applied to the 2015 university strikes. Participants were asked to indicate whether each item was true or false, or if they did not know the answer.

4.2.4 Procedure

Students who were deemed eligible to participate based on their responses to the online screening questionnaire were sent an email invitation to participate in the study and were provided with a link to the online survey. Completion of this survey took approximately 30 minutes. Email reminders were sent to invited participants who did not immediately access the survey or who did not reach the end of the survey. All respondents received a \$5 electronic gift card to thank them for their participation.

4.2.5 Planned Analyses

Unless otherwise noted, differences between universities were assessed using the Cochran-Mantel-Haenszel statistic, testing for significant differences in the row means total by response category across universities, or using chi-square tests of independence, as appropriate. Differences in responses among students within each university were assessed using Wilcoxon signed-rank tests or McNemar tests, as appropriate. To control for familywise error, Bonferroni corrections were used consistently to determine statistical significance. Missing values were treated listwise in all analyses. More detailed information about the analyses and results is provided in Appendix D. The motivation for all statistical tests was to identify or confirm important trends in the data. Given the large number of tests conducted, only results relevant to the current report are presented. Full results for all tests conducted are available from the first author upon request.

4.3 Results

4.3.1 Demographic Profile of the Sample

The demographic profile of Study 3 participants, as a function of university attended during the 2015 labour strikes, is presented in Table 6. Participants were predominantly female (approximately 73% of each university sample) and the average reported age was between 21 and 22 years. There was no statistically significant difference between universities in the distribution of gender; however, students from York University were slightly older than those from the University of Toronto. Respondents came from all years of study, but predominantly reported being in their third or fourth year of study at the time of survey completion. There was no statistically significant difference between universities in the distribution of participants by year of study. The areas of study represented by the student sample were diverse and appeared to represent a reasonable cross section of the universities.

Table 6: Demographic profile of the sample by university

		University of Toronto (n=262)	York University (n=242)
Mean Age in Years (<i>SD</i>) ***		21.00 (1.58)	21.76 (2.57)
Gender (%)	Male	25.19	27.08
	Female	73.28	72.92
	Other	< 2%	< 2%
Year of Study (%) (at time survey completed)	2nd	10.34	13.64
	3rd	37.16	28.93
	4th	42.15	40.5
	5th +	10.34	16.93
Area of Study (%)			
	Applied Science and Engineering	5.75	4.56
	Life Sciences	32.95	12.45
	Physical Sciences/Mathematics	5.75	2.49
	Computer Science	6.9	< 2%
	Communications & Info. Tech.	< 2%	2.07
	Architecture & Design	< 2%	-
	Humanities	13.79	6.64
	Social Science	20.69	19.92
	Health and Kinesiology	3.45	21.99
	Fine Arts	< 2%	6.22
	Education	< 2%	7.47
	Social Work	-	3.32
	Business	4.6	11.2

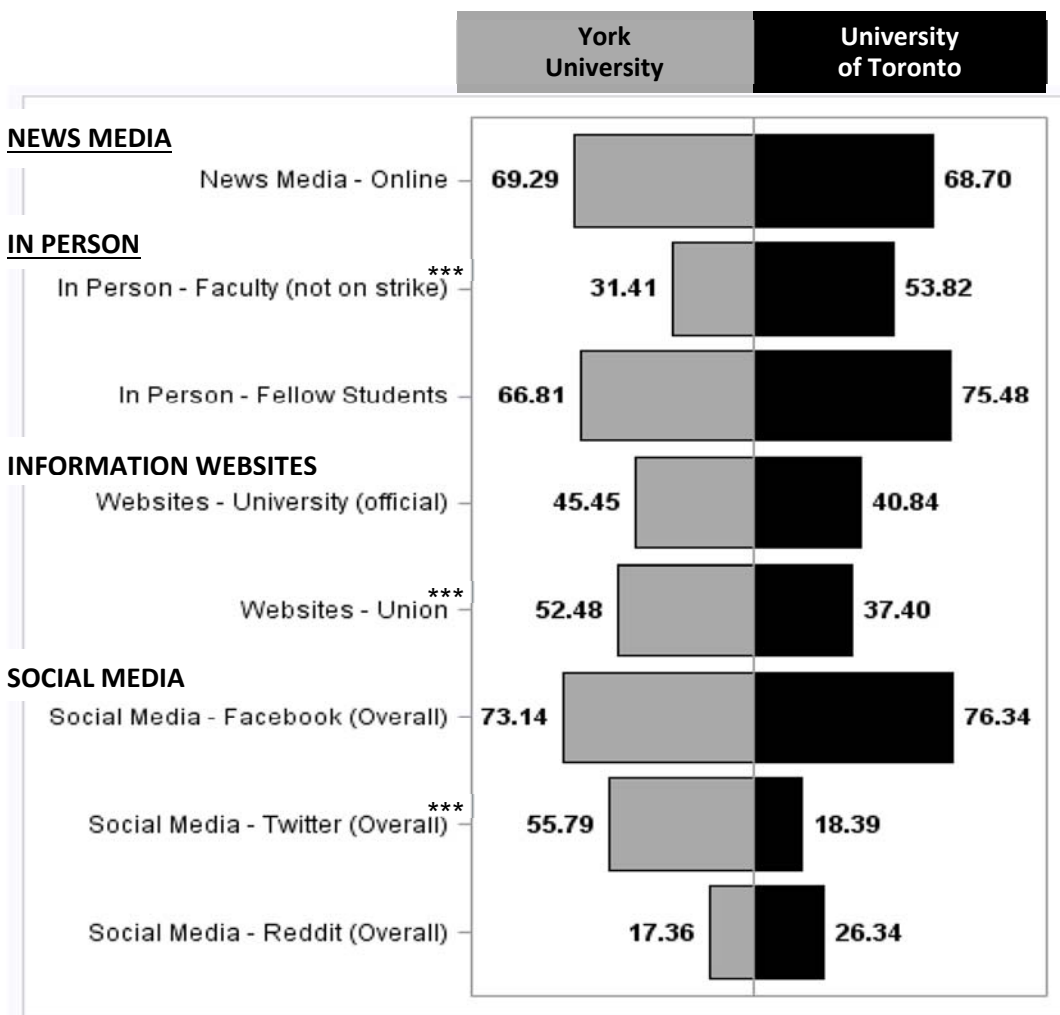
Note. Chi-square and *t*-test analyses contrasting university samples for age, gender and year of study: * $p < .05$; ** $p < .01$; *** $p < .001$.

4.3.2 What Sources of Strike-Related Information Were Most Accessed by Students?

Figure 4 shows the percentage of students indicating at least a moderate reliance (a score of 4 or 5 out of 5) on various information sources, including overall use of various forms of social media. Only those information sources where at least 25% of students at either university indicated at least a moderate reliance are included. Students who indicated that they used Facebook or Twitter to obtain strike-related information were also asked to provide further details regarding the source of this information. The percentage of these students who indicated relying, at least moderately, on a specific source of information via Facebook and/or Twitter is shown in Figure 5. Because fewer than 20% of University of Toronto students

reported obtaining strike-related information via Twitter, there was little value in examining their use of specific Twitter sources.

Figure 4: Percentage of students indicating at least moderate reliance (a score of 4 or 5 out of 5) on an information source by university



Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .003$ Bonferroni-adjusted; *** $p < .001$.

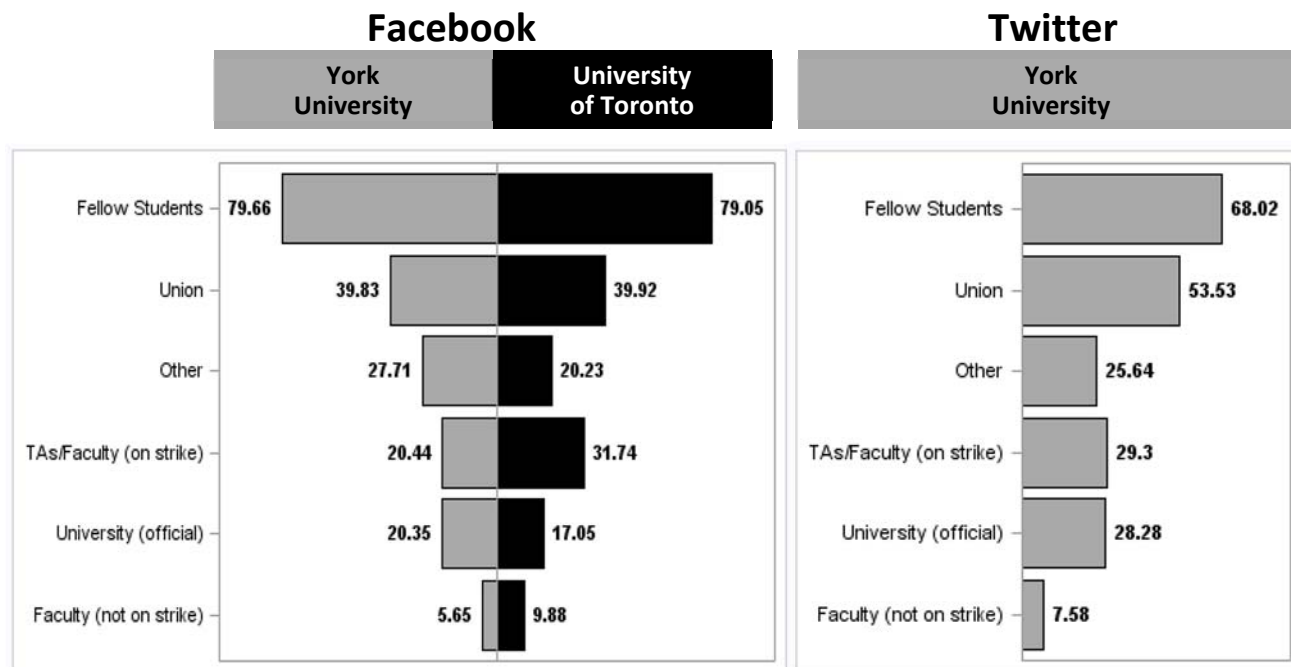
Consistent with results from Study 2, participants in Study 3 reported relying on multiple sources of strike-related information and relying heavily on sources of information outside of official university channels. A least 70% of students at both universities reported relying, at least moderately, on Facebook for strike-related information (see Figure 4). Overall reliance on Facebook among students at the University of Toronto did not differ significantly from that among students at York University. Students at both

universities reported relying more on Facebook (overall) than any other source of strike-related information, with the exception of online news media and in-person communications with fellow students. Thus, students at both universities relied more on Facebook overall than they did on the university website.

As shown in Figure 5, of the students reporting at least some use of Facebook, over 75% at both the University of Toronto and York University indicated at least a moderate reliance on the Facebook pages of fellow students when obtaining strike-related information. Students at each of the two universities indicated that they relied more on fellow students' Facebook pages than any other Facebook source included in the survey. Of these remaining sources, Facebook-accessing students at each of the two universities reported relying more on the union's Facebook page than any other remaining source, including the official university Facebook page. After adjusting for multiple comparisons, there were no statistically significant differences between universities in how much students relied on any of the Facebook sources of information.

As reported in Study 2, York University students relied far more heavily on Twitter as a source of strike-related information than did their counterparts at the University of Toronto (see Figure 4). Among York University students who reported using Twitter as a source of strike-related information, reliance on tweets from fellow students and the union followed a pattern similar to that observed for users of Facebook. Of the specific Twitter sources surveyed, over two thirds (68%) of York University students indicated that they relied, at least moderately, on tweets from fellow students, and slightly over half (53.5%) reported at least moderately relying on tweets from the union. Reliance on the tweets from fellow students was greater than any other Twitter source surveyed. Aside from the tweets of fellow students, York University students also reported relying more on tweets sent by the union than any other source, including the university.

Figure 5: Percentage of students indicating at least moderate reliance (a score of 4 or 5 out of 5) on specific sources of information via Facebook and Twitter, by university



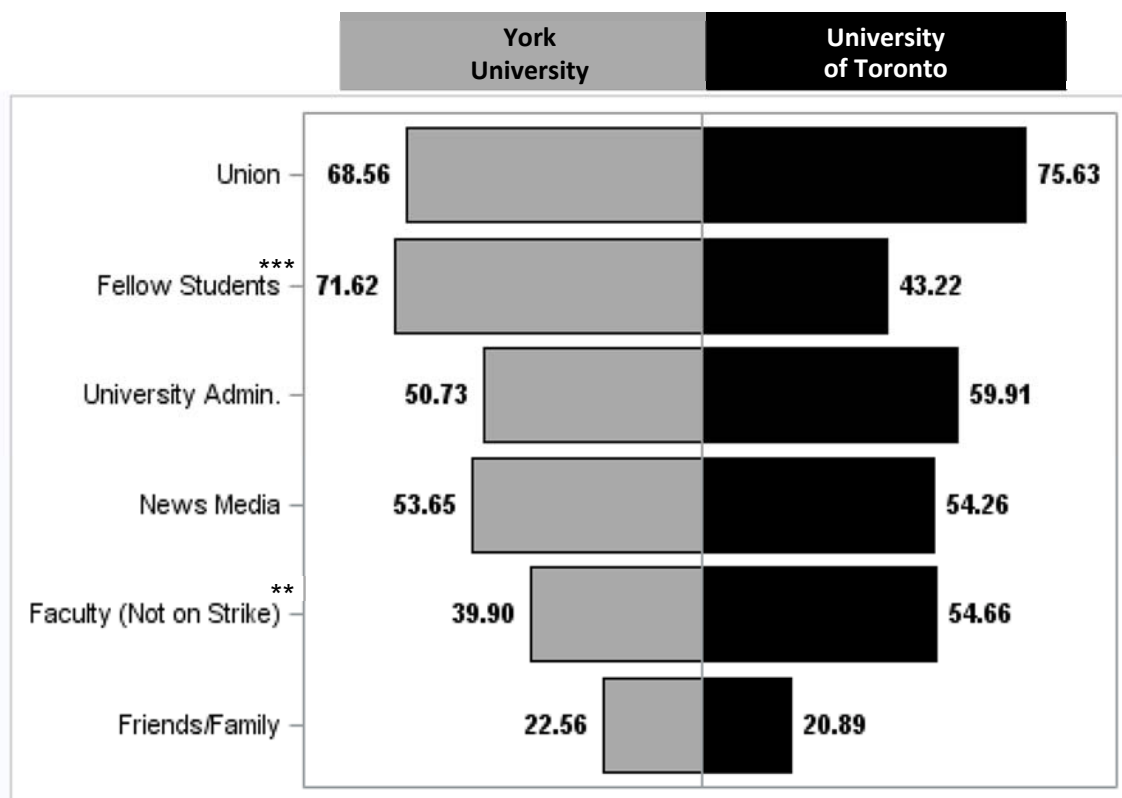
Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .008$, Bonferroni-adjusted; *** $p < .001$. No results were statistically significant.

Aside from social media sources, reliance on online news media for strike-related information was also common at both universities. Slightly more than two thirds of students at each university reported relying, at least moderately, on online media sources such as CP24.com for strike-related updates. Approximately two thirds of students at each university also reported relying, at least moderately, on in-person communications with fellow students when obtaining strike-related information. Students’ ratings of their reliance on online news media and in-person communications with fellow students did not significantly differ across the two universities. Further, ignoring overall Facebook use, students at the University of Toronto reported relying more on these two sources of strike-related information than any other, including the official university website. A similar pattern was evident at York University, although after accounting for multiple comparisons, there was no statistically significant difference between students’ reliance on in-person communications with fellow students and Twitter overall. It is interesting to note that, at both the University of Toronto and York University, there was no statistically significant difference between students’ reported reliance on the university and union websites.

Results from the focus group interviews of Study 2 identified other possible differences in how students from the two universities accessed strike-related information. Some of these differences were also found in the Study 3 results. York University students reported more reliance on the union’s website when seeking

strike-related information than did University of Toronto students. Also consistent with the results of Study 2, University of Toronto students were significantly more likely to rely on in-person contact with non-striking faculty as a source of information. The fact that York University cancelled most classes, thereby limiting in-person access to faculty, may account for this finding.

Figure 6: Percentage of students ranking various information sources among their top three



Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .008$, Bonferroni-adjusted; *** $p < .001$.

Students were also asked to rank each information source (across all possible media including email, in-person, Facebook, Twitter, etc.) in order of how much information each source provided during the 2015 strikes. Figure 6 shows the percentage of students who ranked a given source among their top three. With the exception of their rankings of fellow students and non-striking faculty, there were no significant differences between the two universities in how students ranked the various sources of information. York University students assigned higher rankings to fellow students as a source of information than did University of Toronto students. Students at the University of Toronto assigned higher rankings to non-striking faculty as a source of strike information than did their counterparts at York University. This finding

likely reflects the fact that York University cancelled most classes, restricting in-person access to non-striking faculty. It may be that with less available informational support from faculty, York University students were then more likely than their University of Toronto counterparts to turn to fellow students for any available updates on the progress and implications of the strike.

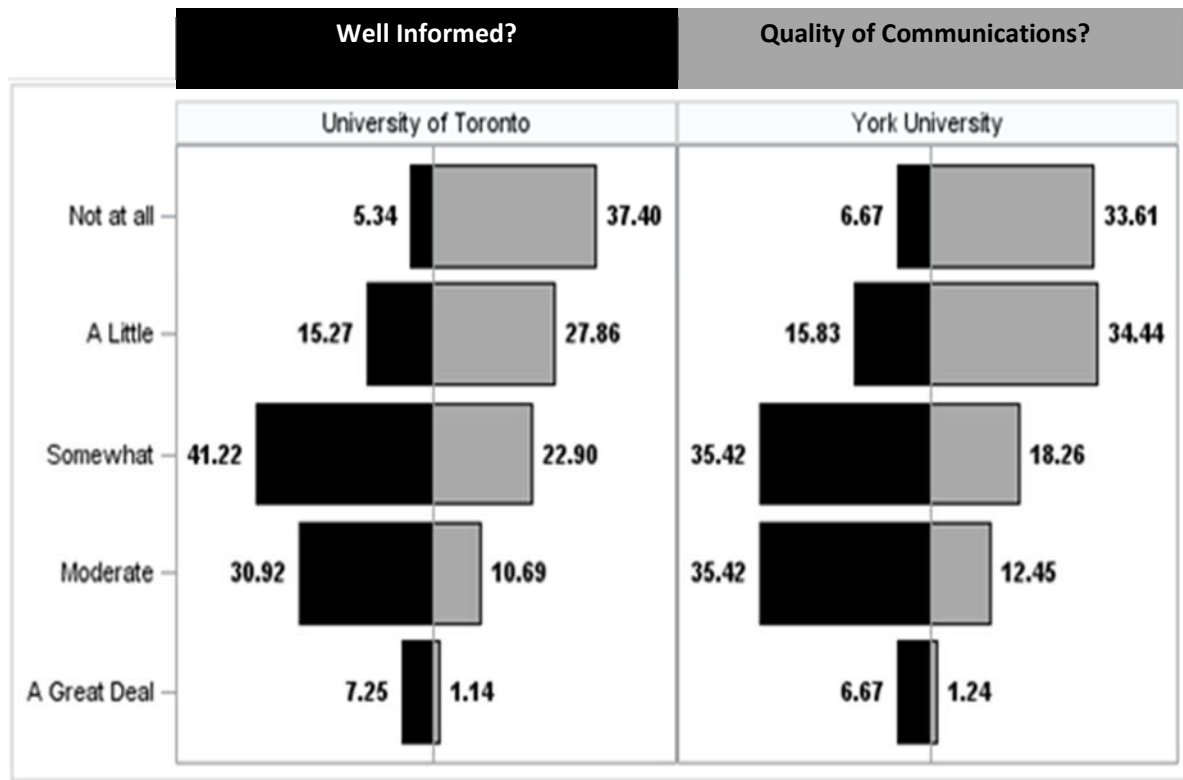
Ignoring the communication medium, over two thirds of York University students ranked both fellow students and the union (see Figure 6) as among their top three sources of strike-related information. Rankings for these two information sources were not significantly different from each other but were both higher than those for all other remaining sources of information.

Slightly more than three quarters of students at the University of Toronto ranked the union among their top three sources of information (see Figure 6). Rankings of the union as a source of strike-related information by University of Toronto students were significantly higher than for any other source of information surveyed. Rankings of the university administration, non-striking faculty, and news media indicate that students viewed one of these sources as their second most important after the union. As shown in Figure 6, over 50% of students at the University of Toronto ranked these three options among their top three sources of strike-related information. There were no statistically significant differences in the rankings for these three sources of information among University of Toronto students. When ranking sources of information by the percentage of students who ranked each among their top three, it appears that, unlike students at York University, those at the University of Toronto ranked fellow students behind the union administration, news media, and non-striking faculty as a source of strike-related information. However, there was no evidence of a statistically significant difference in how students at the University of Toronto ranked their fellow students as a source of strike-related information versus how they ranked the university administration, news media and non-striking faculty.

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

Study 3 participants were asked to indicate how well informed they felt about the strike during the event. In contrast to the findings from Study 2, more than three quarters of students at each university (see Figure 7) reported feeling at least somewhat well-informed (rating of 3, 4, or 5 out of 5) regarding strike developments (University of Toronto = 79.4%; York University = 77.5%), although less than 10% at each university reported feeling very well-informed (i.e., those who responded to the item with “a great deal”). Likewise, fewer than 10% of students reported feeling “not at all” informed. There was no significant difference in the pattern of response to this question between students at the two universities.

Figure 7: Students' ratings (in percentage terms) of how well informed they felt and their satisfaction with university communications regarding strike developments during the work stoppage, by university



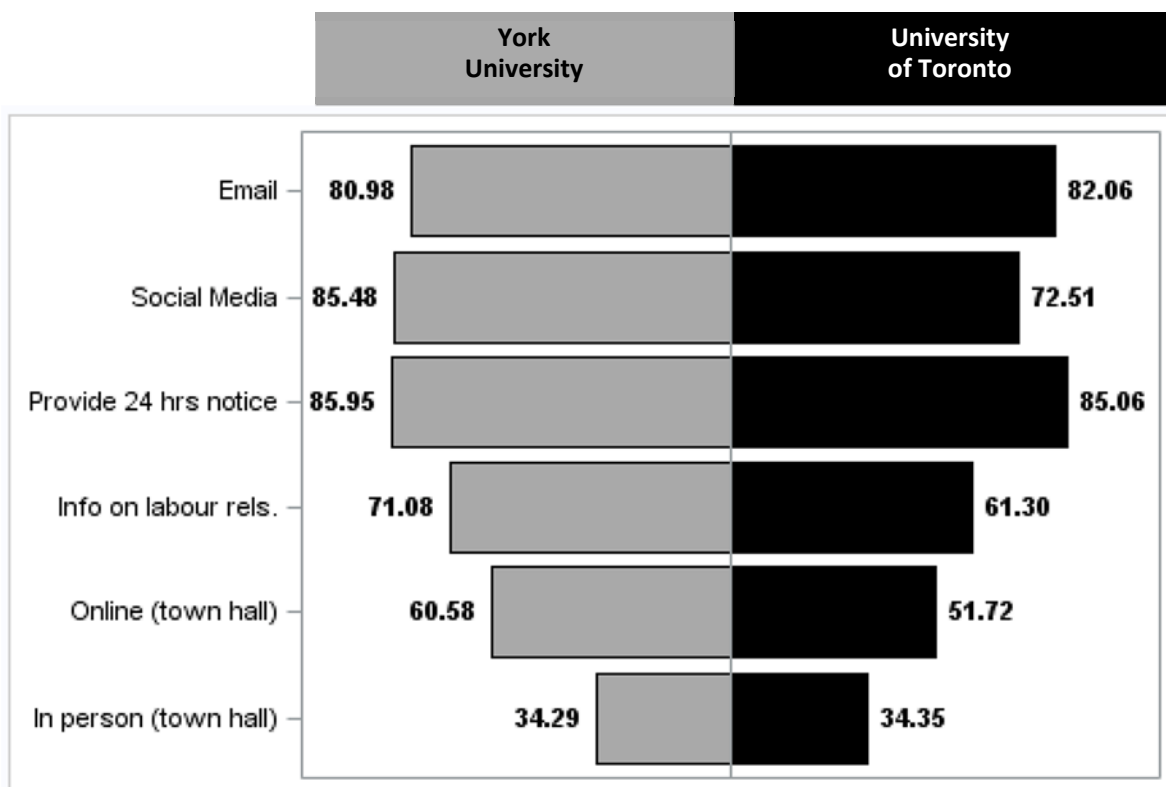
Note. Black bars show the percentage of students indicating how well informed they felt, by response category (“not at all” to “a great deal”). Grey bars show the percentage of students rating their satisfaction with university communications during the strike, by response category (“not at all” to “a great deal”). Cochran–Mantel–Haenszel tests of row mean differences showed no significant difference in the patterns of response between the University of Toronto students and York University students.

Study 3 participants were also asked to rate their level of satisfaction with communication from the university administration. Consistent with the findings of Study 2, the majority of students at both universities reported dissatisfaction with the quality of strike-related information provided by their respective universities (see Figure 7); only one third of students at each university indicated that they were at least somewhat satisfied (rating of 3, 4, or 5 out of 5) with the quality of university communications during the strike (University of Toronto = 34.7%; York University = 32%). Another third of the students at each university reported that they were completely dissatisfied with the quality of these communications. There was also no significant difference in the pattern of response to this question between students at the two universities.

However, feeling well informed during the strike did not appear to be associated with an increased satisfaction with official communications regarding strike developments at each university. While the majority of students at each university felt at least somewhat well-informed, they also felt that the quality of university communications was below their expectations.

Study 3 participants were presented with a list of communication strategies identified by students participating in the Study 2 focus groups as those that would have been helpful if they had been used by the university to keep students up-to-date regarding strike-related developments. There were no significant differences between universities in students' preferences for any one of the indicated strategies (see Figure 8).

Figure 8: Percentage of students who rated each communication strategy as one that would have been moderately or greatly helpful (i.e., rated 4 or 5 out of 5) during the 2015 strikes



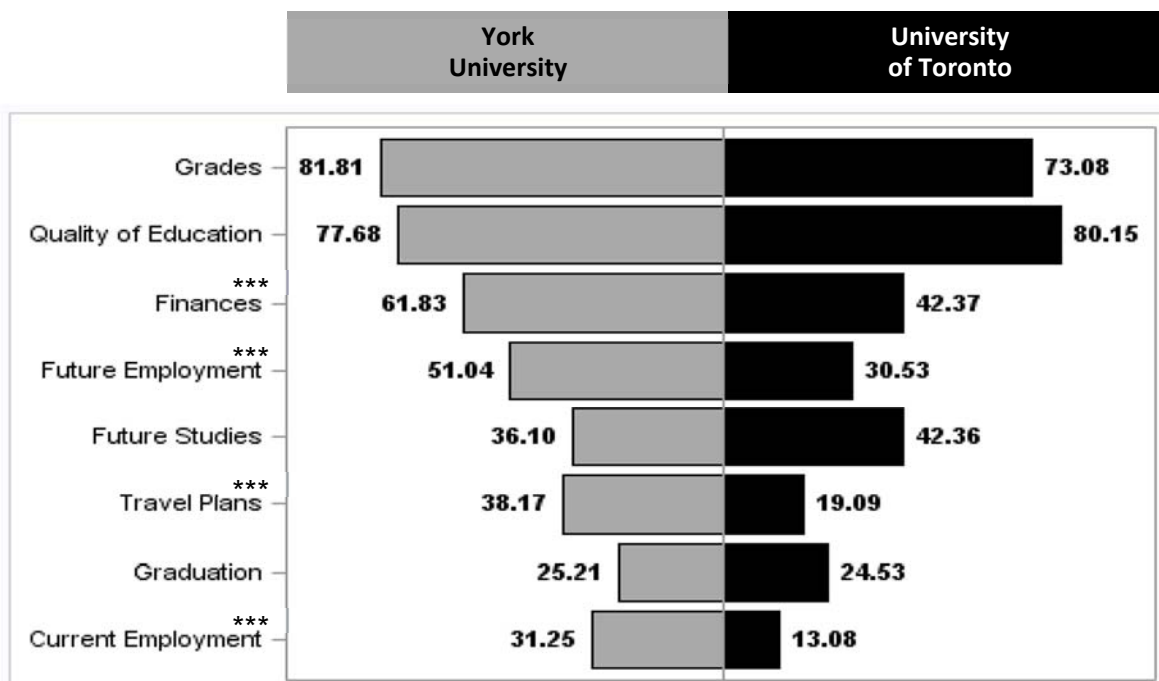
Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .008$, Bonferroni-adjusted; *** $p < .001$. No results were statistically significant.

Of the six communication strategies presented to students, three were identified by more than 70% of students at each university as ones that would have been at least moderately helpful (i.e., rated 4 or 5 out of 5): (1) more frequent updates on the status of negotiations and the impact on classes via email (“Email”); (2) more frequent updates on the status of negotiations and the impact on classes via social media (“Social Media”); (3) 24-hour notice of the cancellation or resumption of classes/labs/tutorials posted to online or social media sites (“Provide 24 hrs notice”). These three strategies were all more highly rated than providing students with information regarding labour relations, and either online or in-person town hall meetings by participants at both universities. Providing 24-hour notice and more frequent email updates were the most highly-rated communication strategies by students at the University of Toronto, although ratings of these two strategies did not significantly differ. Of all the strategies, providing 24-hour notice was the most highly rated by students at York University. A similar percentage of York University students rated more frequent social media updates and providing 24-hour notice as strategies that would be moderately helpful in a future strike (i.e., a rating of 4 or 5 out of 5); however, there was a statistically significant preference among York University students for providing 24-hour notice, with 72.31% percent of students rating this strategy as 5 out of 5 versus 54.77% who rated social media updates as 5 out of 5. Together, these results imply that the universities’ efforts to communicate with students were well received but that greater frequency of communication would likely be appreciated by students affected by a future labour disruption.

4.3.4 How Were Students Affected by the Strike?

Respondents were asked to rate levels of “anxiety, stress or worry,” hereafter referred to as “angst,” that they had experienced during the work stoppage when thinking about the potential outcomes or impacts of the strike. Tests examined differences in the prevalence of students rating each area of concern as inducing at least moderate angst (i.e., rated 4 or 5 out of 5). As is evident in Figure 9, approximately three quarters of students at both universities reported experiencing at least moderate angst concerning the impact of the strike on their grades and the quality of their education. Concern over these two potential outcomes did not significantly differ between the two universities. Students at both universities were also significantly more likely to express concern about these issues than about their finances, employment, future studies, graduation, or travel plans. York University students expressed more concern about their finances, current and future employment, and upcoming travel plans than did their counterparts at the University of Toronto. While this increased level of angst among York University students may have been the result of differences between the two university samples, it may also have been an artifact of the decision to cancel academic activities at York University or a reflection of the recent history of long labour disputes at this institution.

Figure 9: Percentage of students reporting at least moderate angst (i.e., “stress, anxiety or worry”) during the strike, by area of concern and university



Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .006$, Bonferroni-adjusted; *** $p < .001$.

Students were also administered the K6 Psychological Distress Scale (Kessler et al., 2002, 2003) adapted for the current context. Scores for the K6 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). Table 7 presents the mean K6 scores for each university sample, along with the percentage of each sample categorized by each level of risk for psychological distress. The mean score at both universities fell in the moderate risk range (University of Toronto = 8.43; York University = 9.94), and approximately one quarter to one third of students were classified as experiencing serious psychological distress at the time of the labour strike. This finding suggests a negative impact of the labour disruption on students. Students at York University indicated experiencing significantly more psychological distress than University of Toronto students. Again, this may have been the result of differences between the two university samples, but it may also have been the result of the broader cancellation of academic activities at York University. It is also possible that a history of prolonged labour disruptions at York University had students there more concerned that the current work stoppage would persist, resulting in a more negative and profound impact.

Table 7: K6 Psychological Distress Scale (Kessler et al., 2002, 2003) scores and percent of sample within each level of risk, by university

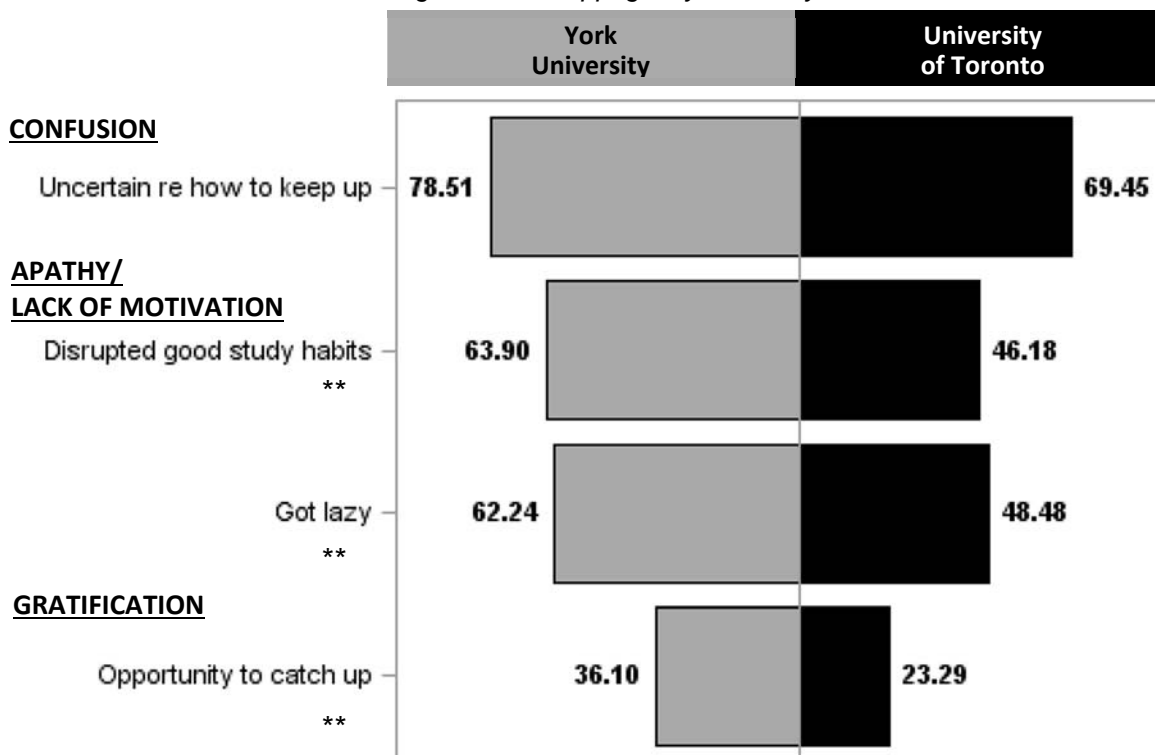
	York University	University of Toronto
Mean (SD) **	9.94 (6.38)	8.43 (5.73)
% Sample at each Level of Risk		
Low	24.38	27.10
Moderate	38.84	50.38
Serious	36.78	22.52

Note. Kruskal-Wallis test contrasting mean K6 scores for York University and University of Toronto: * $p < .05$; ** $p < .01$; *** $p < .001$

As in Study 1, Study 3 also assessed emotional themes relating to how students approached their studies during the strike. Specifically, students were asked to what extent they 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. 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. As is evident in Figure 10, more than two thirds of students at both universities reported feeling uncertainty about whether or not to keep up with their studies during the strikes. Likewise, a significant proportion of students at both universities reported feeling apathy or a lack of motivation in that they experienced a disruption to their good study habits and general laziness. York University students were significantly more likely to report apathy/lack of motivation than University of Toronto students. This finding is interesting given that York University students were also more likely to experience gratification for the opportunity to catch up on their coursework. While an unspecified selection bias may explain these differences between the universities, it may also be that the cancellation of academic activities at York University resulted in a greater emotional impact on students. With more free time on their hands, students may have initially thought that they would be able to use the time wisely but may have lacked the discipline needed to do so over the full duration of the strike, particularly given that there was no way of knowing when the strike would end and that students perceived minimal guidance from university communications. University of Toronto students, on the other hand, continued with many of their classes and labs and were often required to meet scheduled deadlines despite the work stoppage. Thus, the difference in disruption to their academic schedules likely explains the increased emotional effect on York University students.

Figure 10: Percentage of students experiencing emotional effects of the strikes related to their academic studies during the work stoppage, by university

Figure 10. Percentage of students experiencing emotional effects of the strikes related to their academic studies during the work stoppage, by university

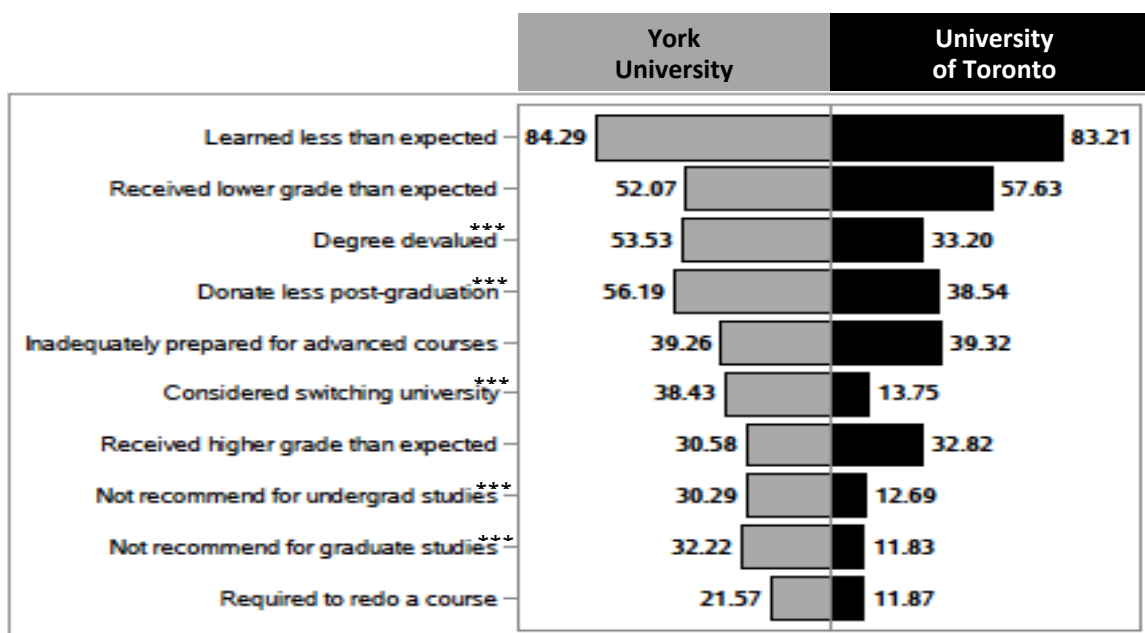


Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .0125$, Bonferroni-adjusted; *** $p < .001$.

Study 3 participants were also asked to indicate the extent to which they were affected by various longer-term impacts of the strike (e.g., receiving a lower grade in a course, less willingness to donate financially to the university following graduation). Each longer-term impact was considered present for a given participant if that student indicated somewhat agreeing or strongly agreeing that they had experienced the effect (i.e., a rating of 4 or 5 out of 5). Figure 11 shows that learning less than they should have in a course was the single most prevalent concern reported by students, with approximately 85% of participants from both universities selecting this option. There was no statistically significant difference in the pattern of agreement to this statement between the two universities, and students were significantly more likely to agree with it than any other listed.

Despite similarities across universities in terms of learning less course material, differences in the longer-term effects of the strike did emerge between universities. Mirroring the more negative impact experienced by York University students during the strike, the study also revealed that these same students also indicated a more negative effect of the strike long term. Specifically, York University students were significantly more likely than University of Toronto students to have considered switching to another university and to feel that their degree had been devalued as a result of the strike. They were also less likely to recommend York University for undergraduate or graduate studies or to donate financially to the university after graduation.

Figure 11: Percentage of students indicating at least moderate agreement with statements designed to assess longer-term impact of the strike by university



Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .005$, Bonferroni-adjusted; *** $p < .001$.

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

Providing information about a negative event can influence the psychosocial response to that event (Colquitt et al., 2001; Skarlicki et al., 1998). This finding has been demonstrated previously in the context of a university labour dispute (Day et al., 2006; Greenglass et al., 2002). With this in mind, a linear regression 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).

Results indicated that how well informed a student felt during the strike was at least somewhat related to the stress they experienced, although the size of the relationship was small. Students who felt well informed during the strike also reported significantly lower levels of psychological distress. University of Toronto students reported significantly lower levels of distress than their York University counterparts regardless of whether or not they felt well informed. The significant association between feeling well informed and psychological distress runs contrary to the findings of Study 1, where no association was found between feeling well informed about the strike and scores on the Perceived Stress Scale (Cohen & Williamson, 1988). It was speculated that this measure of stress, in the context of a university strike, was too generalized and may not have been sufficiently sensitive to detect strike-related stresses. The significant relationship between feeling well informed during the 2015 strikes and scores on the K6 Psychological Distress Scale (Kessler et al., 2002, 2003), adapted for the current context, support this explanation. More importantly, these findings indicate that providing students affected by a work stoppage with updates and information about the labour dispute can reduce the burden of the work stoppage on students.

4.3.6 Was Satisfaction with University Communications Associated with Less Psychological Distress for Students?

Although satisfaction with strike-related university communications was not associated with students feeling less informed about the dispute, it may be that any perceived lack of a strong and informative voice from the administration during the work stoppage was nonetheless associated with greater psychological distress among students. To assess this possibility, a linear regression was conducted to test for a relationship between students' satisfaction with the quality of university communications during the 2015 strikes 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 it (i.e., a rating of 4 or 5 out of 5).

Results indicated that the amount of psychological distress students experienced during the strikes was related to their satisfaction with official communications from their university, although the size of the relationship was small. Students who were satisfied with the quality of their university's strike-related communications also reported significantly lower levels of psychological distress. These findings are consistent with the focus group interviews of Study 2, where students suggested that the absence of a strong administrative voice in the midst of the work stoppage served to augment student distress associated with the labour disruption. 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.

4.3.7 Was Feeling Well Informed about the Strike or Satisfied with University Communications Associated with How Students Emotionally Approached their Studies?

Among the findings of Study 1, it was reported that no association was found between feeling well informed about the strike and how students approached their studies during the labour disruption. It was suggested that one possible explanation was that the item asking students about how well informed they felt was not tapping into their perceived knowledge of *valuable* information that could advise them about how to approach their studies throughout the work stoppage. Instead, students may have been indicating how much of the *available* information they had, regardless of whether or not this information was useful. It was recommended that future research explore the quality of communication received by students from university sources to determine if better communication could, among other things, improve emotional responses about how to approach academic responsibilities throughout a work stoppage.

As was the case in Study 1, the results of Study 3 failed to find a significant association between feeling well informed about the strike and how students approached their studies during the work stoppage (i.e., gratitude 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); however, a significant effect was found for satisfaction with university communications. A series of logistic regression models was conducted to test the 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 again 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). 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. 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 gratitude for time to catch up on coursework than those students who were less satisfied with university communications. 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. 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. 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. 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. Again, this is likely due to the fact that academic activities at the University of Toronto continued throughout the work stoppage.

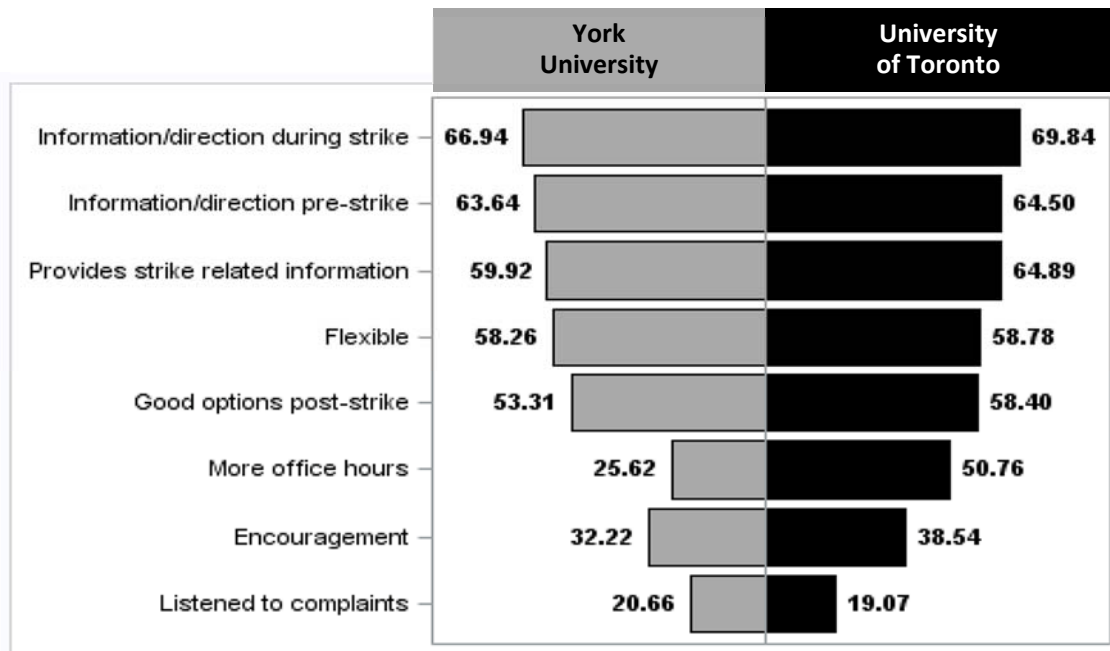
In understanding these findings, it is important to consider why students may have differed in their levels of satisfaction with university communications about the strike. It may be that some students were less able to access these communications than others, resulting in less transfer of relevant information. It may also be that stronger or more independent students could maintain a responsible approach to their academic studies with or without the guiding voice of the university administration, whereas other students needed that motivating influence. Regardless of the specific reason for differences in the perceived quality of university communications, these results suggest that a strong voice from the administration could help to keep students on track with their studies. Future research should explore the specific content of these communications to determine what is most valuable in reducing students' stress and encouraging continued efforts in pursuit of their academic studies.

4.3.8 Which Efforts and Remediation Strategies by Faculty were Most Appreciated by Students?

Study 3 participants were presented with a list of efforts taken by faculty that were meant to ease the burden of the strike on students. Participants were asked to think about the one professor, not on strike, who helped them most during the work stoppage and which of his/her efforts were most appreciated. Participants could select all options that applied. Figure 12 presents the percentage of students who selected each of the faculty initiatives listed. Based on a descriptive analysis, the most commonly identified initiatives taken by supportive faculty appeared to focus on providing strike-related information and being both flexible and responsive to students in the aftermath of the strike. The top three initiatives associated with a supportive faculty member all involved providing students with much-needed information about the strike and how strike developments would affect students' coursework and progress in the class. These initiatives included: (1) providing students with strike updates and possible changes in their course while the strike was going on; (2) giving students a "heads-up" about the strike and possible changes in the course before the strike began; (3) providing strike-related updates and information throughout the strike. The next most commonly selected initiatives involved how the faculty member handled coursework in the post-strike period. These initiatives included: (4) being flexible and responsive to students' needs and requests (e.g., revised course requirements based on student feedback); (5) providing good options for handling remaining coursework.

Together, these findings clearly indicate that in situations where faculty are not part of a university work stoppage, faculty have the opportunity to buffer their students from the more negative impacts of the strike. By providing available information to students about the progress of a strike and how it may impact their coursework, and by being flexible and allowing students to have input into the post-strike remediation strategy, faculty can reduce the stress, anxiety and worry experienced by students affected by the strike.

Figure 12: Most appreciated faculty initiatives to ease the burden of the strike on students (percentage of students selecting each item)



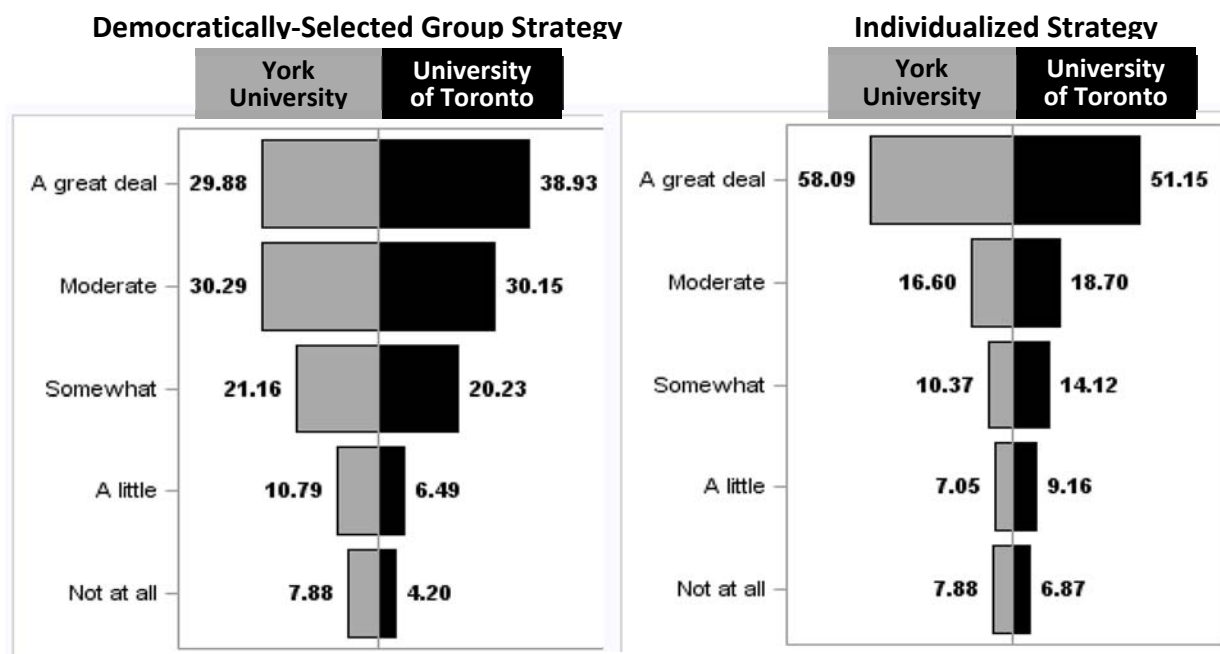
The specific remediation strategies adopted in the post-strike period can be categorized into two groups: those that were initiated at the course-level by individual faculty members and those that were initiated at a university-wide level by the administration. To examine which remediation strategies initiated by faculty were most appreciated by students, participants were asked to rank a list of these efforts in the order of which they would be the most helpful during a similar-length strike to the ones experienced in 2015. There was no consensus among students at either university. Less than one third of students ranked any one strategy as the most helpful. This lack of consensus among students may explain why they valued a faculty member who was flexible and responsive to their needs, and who allowed them to have input into how remediation would be handled.

When comparing the rankings for each remediation strategy to those of all other strategies, specifically by comparing the percentage of students who ranked each strategy as the most or second most helpful, it was found that both adjusting a course’s workload (e.g., dropping assignments, reducing the number of readings) and extending assignment deadlines were consistently ranked highest by students at each university. Almost 50% of students ranked adjusting a course’s workload as either their most or second most helpful remediation strategy (York University = 46.9%, University of Toronto = 49.6%) and as least helpful by less than 15% of students at both universities (University of Toronto = 10.4%, York University = 13.7%). Extending assignment deadlines was ranked as either the most or second most helpful by over a third of students at each university (York University = 39.8%, University of Toronto = 34.3%) and as least helpful by

fewer than 10% of students (York University = 7.1%, University of Toronto = 4.8%). Adjusting a course’s workload was ranked higher than any other strategy with the exception of extending assignment deadlines, and extending assignment deadlines was ranked higher than any of the remaining strategies. Therefore, although there was no clear consensus among students about which remediation strategy was most helpful, adjusting a course’s workload and assignment deadlines appeared to be the preferred remediation strategies among the greatest proportion of students.

The lack of a clearly preferred remediation strategy for the classroom, and the appreciation shown for faculty who were flexible and responsive to students’ needs and who allowed students to provide input into the selection of remediation strategies for a course, are trends that also emerged in the focus group interviews in Study 2. In response to these earlier findings, students in Study 3 were asked two additional questions about *how* they should be allowed to provide input into the remediation process. Specifically, students were asked to rate the extent to which they would appreciate two different models for this input: (1) a professor moderating a class discussion where one remediation strategy for all students is selected democratically (hereafter referred to as the “democratically-selected group strategy”) and (2) students being given a number of options and being able to select their own individualized remediation strategy (hereafter referred to as the “individualized strategy”).

Figure 13: Appreciation for each of two remediation models that allow student input, by university (reported as percentage of students endorsing each rating of appreciation)



Note. Cochran-Mantel-Haenszel tests contrasting York University and University of Toronto: ** $p < .025$, Bonferroni-adjusted; *** $p < .001$. No results were statistically significant.

Overall ratings of these two approaches to classroom remediation were generally positive, with at least 60% of students at each university indicating that they would at least moderately appreciate (i.e., a rating of 4 or 5 out of 5) each of these approaches (see Figure 13). There was no evidence of a statistically significant difference in ratings between universities for either strategy. When comparing the ratings of the individualized strategy to those of the democratically-selected group strategy, it appears that the individualized strategy is preferred by students, although this difference was only statistically significant among York University students. Preference for the individualized strategy may again reflect the diverse set of academic circumstances faced by the student population; allowing students to individualize the remediation strategy to reflect their own personal circumstances helps to ensure that remediation is maximally beneficial to each and every student.

4.3.9 Which Remediation Strategies by the University Administration Were Most Appreciated by Students?

As was the case with remediation strategies initiated by faculty, there was no consensus among students regarding which remediation strategies initiated by university administrators were most appreciated (see Table 8). Less than one third of students ranked any one strategy as the most helpful. Therefore, administrator-initiated strategies were compared based on the percentage of students who ranked each strategy as the most or second most helpful. York University students ranked options involving financial compensation more highly than any other (i.e., option to retake a course for free, financial credit for lost class time). At the University of Toronto, students seemed to consider both academic and financial considerations in their ranking of administrator-initiated remediation strategies. Among University of Toronto students, extending “course drop” deadlines was more likely to be ranked the most or second most helpful than any other remediation strategy, with the exception of financial credit for lost class time.

Table 8: Students' rankings of remediation strategies initiated by the university administration in order of which would be the most helpful during a similar-length strike to the one experienced in 2015 (presented as percentage of students ranking the strategy in a given serial position)

	Ranked					
	Most or Second-Most Helpful		Most Helpful		Least Helpful	
	U of T	YorkU	U of T	YorkU	U of T	YorkU
a) Courses made pass/fail **	37.95	25.95	25.30	18.72	24.51	38.30
b) Deferred standing **	15.94	27.80	5.98	13.90	25.50	13.90
c) Extend "course drop" deadlines **	42.23	22.91	19.92	7.05	4.38	5.73
d) Option to retake course for free **	35.29	52.61	15.29	24.78	9.41	7.39
	Ranked					
	Most or Second-Most Helpful		Most Helpful		Least Helpful	
	U of T	YorkU	U of T	YorkU	U of T	YorkU
e) Financial credit for lost class time	40.94	48.92	23.62	24.89	11.42	9.01
f) Review "missed" materials in subsequent courses	29.80	25.86	11.76	13.79	22.35	23.71

Note. U of T = University of Toronto; YorkU = York University.
 Cochran-Mantel-Haenszel tests across the full set of ranks contrasting York University and University of Toronto: ** $p < .008$, Bonferroni-adjusted; $p < .001$.

There appeared to be a difference between students from York University versus the University of Toronto in terms of which types of accommodation were most appreciated. University of Toronto students ranked options involving academic remediation (i.e., courses made pass/fail, extend "course drop" deadlines) more highly than did York University students, with the exception of deferred standing (additional time to complete coursework or an examination), which was ranked more highly by York University students. York University students also ranked both financial compensation options more highly than University of Toronto students, although only the difference in rankings for the option to retake a course for free was statistically significant. Students at the two universities did not differ significantly in their rankings of being given financial credit for lost class time.

4.3.10 Were Students Lacking General Knowledge of the Collective Bargaining Process?

The focus group interviews conducted during Study 2 revealed that many students had little understanding of the collective bargaining process or were very much misinformed. To confirm this finding, the Study 3 survey included seven statements to assess students' general knowledge of the collective bargaining process

as it applied to the university strikes in 2015. Students were asked to indicate whether each statement was true or false, or whether they did not know if the item was true or false.

Figure 14: Percentage of students lacking knowledge of specific aspects of the collective bargaining process, by university (presented as the percentage of students at each university who responded incorrectly or “don’t know” to each statement regarding collective bargaining)

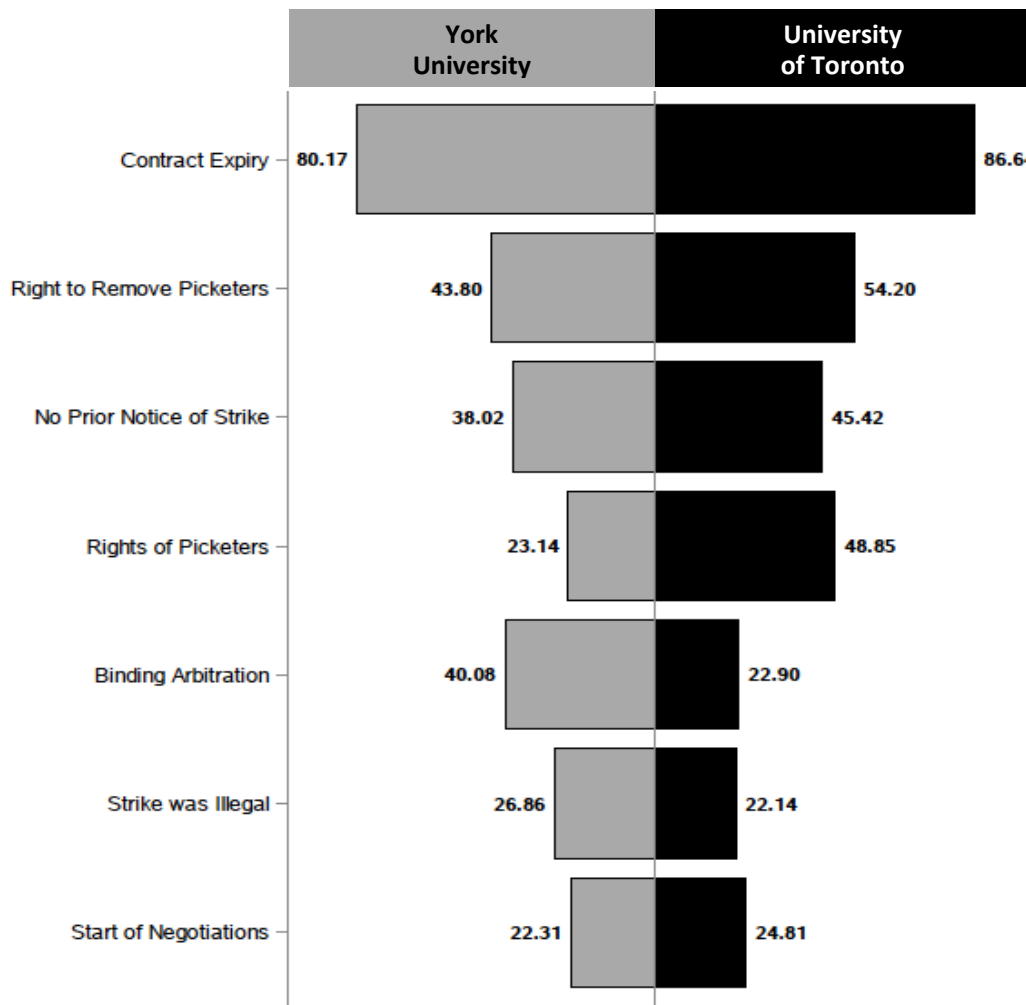


Figure 14 shows the percentage of students at each university who responded either incorrectly or “don’t know” to each collective bargaining statement. Consistent with results from Study 2, students at both universities showed a striking lack of knowledge regarding the collective bargaining process. This lack of knowledge was, except as noted below, similar across the two universities with at least 20% of all participating students responding either incorrectly or “don’t know” to each statement regarding collective

bargaining. Knowledge of particular aspects of collective bargaining was variable at both universities. About one quarter of students at each university were unaware that the strikes were legal (“Strike was Illegal”) and that contract negotiations between the university and the unions had been ongoing for some time prior to the beginning of each strike (“Start of Negotiations”). At least 40% of students at each university were unaware that universities did not have the legal right to remove picketers from their premises. And, astonishingly, more than 80% of students at each university were also unaware that union members were without a contract at the time each strike began (“Contract Expiry”). This last finding was the one most associated with incorrect or uncertain responses at both universities. When the percentage of students responding incorrectly versus “don’t know” is broken down, it is clear that many students were not simply unsure of themselves, but rather were very much mistaken. In the most extreme case, of the more than 80% of students at each university who were unaware that union members were without a contract at the time the strike began, up to one quarter of students answered incorrectly as opposed to indicating a lack of certainty about the veracity of the statement (University of Toronto = 25.0% answered incorrectly; York University = 21.5% answered incorrectly).

York University students were significantly less aware than University of Toronto students that binding arbitration (“Binding Arbitration”) was an option available to settle the strike. On the other hand, University of Toronto students were significantly less aware than York University students that picketers had the right to disrupt traffic entering the university (“Rights of Picketers”). No other significant differences between the universities were found.

4.4 Strengths and Limitations

Study 3 was designed to examine students’ psychosocial response to a university work stoppage and assess possible strategies to reduce any negative impact on students. This is an issue that has received very little empirical attention to date; thus, the findings of Study 3 are particularly valuable in terms of potential policy recommendations. Study 3 adopted a quantitative survey design that was informed by a previous qualitative research component (Study 2). Study 3 used an online survey to access a relatively large sample of students, providing strong statistical power. Another important strength of the study was the recruitment of students from two separate Ontario universities that were affected by labour strikes that overlapped in time. The universities opted to address the issue of academic activities during the strike in two very different ways: one university continued all academic activities, whereas the other opted to cancel most of these activities. Other differences between the two universities included the location of the main campus within the city core versus on the city periphery and a history of prolonged, high-profile academic strikes versus short, low-profile strikes. These distinctions were used to better understand the differences in how students experienced each of the strikes. Certain findings from Study 3 were consistent across universities, indicating that differences in institution mattered little; whereas, other findings differed greatly from one university to the other, suggesting that decisions made by university administrators and faculty in the context of a strike must consider specific details of the work stoppage and institution. Together, this analysis of separate but simultaneous university strikes provides a highly unique and informative assessment and the basis for strong recommendations for future university strike policy.

Despite these strengths, Study 3 was also affected by limitations. The study was conducted approximately one year after the strikes had occurred, which may have resulted in memory failures and inaccurate recall. Although the sample in Study 3 was large and included students from a wide diversity of academic programs, the sample was recruited by convenience and was not representative of the entire student population at either university. It is possible that findings are specific to the study's two participant samples and do not apply to the wider university populations. Finally, it is important to recognize that the findings of Study 3 are based on two very large universities in Ontario's capital city, both of which experienced labour strikes by teaching assistants and/or contract faculty. Therefore, the results may not be used to generalize about other smaller universities in more rural areas of the province or country, and to work stoppages involving other members of the university community such as tenured faculty. However, given that many of the current study's findings appeared to be consistent across universities, it is likely that at least some conclusions may hold relevance for other universities in Ontario or in Canada and that administrators may be able to apply some of the lessons learned to any type of university work stoppage.

4.5 Conclusion

The online survey of University of Toronto and York University students affected by the 2015 labour strikes by teaching assistants and/or contract faculty at each institution strongly replicated the qualitative findings of the focus group interviews conducted in Study 2. Students from both the University of Toronto and York University experienced negative effects of the strike. Approximately three quarters of students reported experiencing at least moderate stress, anxiety and worry (i.e., "angst") concerning the impact of the strike on their grades and the quality of their education. Large numbers of students also reported experiencing at least moderate angst concerning the impact of the strike on finances, future studies, current and future employment, and travel plans. Psychological distress scores were also very high, with approximately one quarter to one third of students scoring in the highest range. Although the instructions for the K6 measure were adapted for the current context, the results suggest that many students were experiencing serious psychological distress at the time of the strike. More than two thirds of students at both universities reported feeling uncertainty about whether or not to keep up with their studies during the strike, and a significant proportion of students reported general laziness and a disruption to their good study habits. Approximately 85% of students from both universities indicated that they had learned less than they should have in a course as a result of the strike.

Across most measures of impact, York University students reported a more negative effect of the strike than did University of Toronto students. Although this may reflect differences in the study samples or the population at each institution, this was likely due to the fact that academic activities were cancelled during the York University strike, whereas these activities continued during the University of Toronto strike. This is not to say that the cancellation of classes and labs at York University caused more harm to students than would have been the case if these activities had been continued. It is important to recognize the many differences between the University of Toronto and York University, which likely contributed to the diverging approaches to how the strike was handled. In the case of York University, the striking party included not just teaching assistants, but also contract faculty who teach many of the classes at the university. As well, unlike

the main campus at the University of Toronto, which is integrated with the downtown core of Toronto, the main campus at York University is on the periphery of the city and rests on an isolated property. Effectively, these differences in location and integration have major implications for the level of disruption that can be caused by striking employees to the operation of the university.

As with the participants in Study 2, students in Study 3 reported seeking out strike-related information from multiple sources, with a heavy reliance on sources from outside of official university channels. The social media pages of fellow students were a primary source and medium of strike-related information for a majority of Study 3 participants. The union at both universities, via both its website and social media pages, was also cited as a primary source of information. To a lesser extent, non-striking faculty were also recognized as a source for strike-related information, but more so for students at the University of Toronto, where in-person access to faculty remained unchanged because academic activities continued during the work stoppage.

A majority of students at each university reported feeling at least somewhat well-informed about the work stoppage, although less than 10% reported feeling very well-informed. Moreover, feeling well informed during the strike did not appear to be associated with an increased satisfaction with official communications; a majority of students at both universities reported dissatisfaction with the quality of strike-related information provided by their respective universities. Three communications strategies were endorsed by more than 70% of students at each university as strategies that would have been helpful: (1) more frequent updates on the status of negotiations and the impact on classes via email; (2) more frequent updates on the status of negotiations and the impact on classes via social media; (3) 24-hour notice of the cancellation or resumption of classes/labs/tutorials posted to online or social media sites. These results imply that communication efforts made by the universities during the 2015 strikes were well-received by students, but that greater regularity of this communication would likely be appreciated by students affected by a future strike.

Study 3 also provided evidence that keeping students apprised of the progress in negotiations and the impact of the work stoppage on their studies eased the burden of the strike for students. Participants who felt well informed during the strike reported significantly lower levels of psychological distress. Similarly, participants who were satisfied with the quality of their university's strike-related communications also reported lower levels of distress. The results of Study 3 failed to identify a significant association between feeling well informed about the strike and how students approached their studies during the work stoppage. However, the results did demonstrate that 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 gratitude for time to catch up on coursework and 68% less likely to report disrupted study habits during the strike than those students who were less satisfied. Taken together, these findings suggest that a strong voice from the university administration could help students to keep focused on their studies despite the challenges posed by a work stoppage. The specific content of these communications is a topic for future research.

Study 3 participants from both universities shared a common perception of the supportive faculty member. This individual was identified as someone who provided strike-related information to students and who was flexible and responsive to their needs in the aftermath of the strike. Non-striking faculty clearly have an opportunity to reduce the stress, anxiety and worry experienced by their students in the context of a university work stoppage. Nonetheless, there was no consensus among students at either university regarding the preferred remediation strategy that faculty could use within their classrooms. Less than one third of students ranked any one strategy as the most helpful. However, adjusting a course's workload and assignment deadlines appeared to be the preferred remediation strategies among the greatest proportion of students. Students appreciated the opportunity to provide input into the remediation strategy selected for the classroom, and most preferred having multiple remediation strategies so that they could choose an individualized strategy that was maximally beneficial for them.

There was also no consensus among students regarding which remediation strategies initiated by university administrators were most appreciated. Again, less than one third of students ranked any one strategy as the most helpful. However, York University students ranked options involving financial compensation more highly than any other (i.e., option to retake a course for free, financial credit for lost class time), whereas University of Toronto students appeared to consider both academic and financial considerations in their highest rankings of administrator-initiated remediation strategies, including extending "course drop" deadlines and financial credit for lost class time. The lack of consensus on a preferred administrator-initiated remediation strategy likely reflects the many differences in academic, financial and other circumstances faced by students. Thus, these results may suggest that a diversity of remediation initiatives offered by university administrators may best serve the many needs of the student body.

Consistent with the Study 2 results, Study 3 participants from both universities showed a striking lack of knowledge regarding the collective bargaining process. For instance, large numbers of students were unaware that the strikes were legal, that negotiations had started long before the strike began, and that the teaching assistants and/or contract faculty were working without a contract when the strikes were initiated. In many cases, students were not simply unsure of themselves regarding these facts, but were completely mistaken. This lack of knowledge regarding the collective bargaining process likely contributed to students' confusion about the strike and may have resulted in a paradox for students. On the one hand, students would expect and appreciate information about the strike's progress from their instructors, but on the other hand, job action precluded communication with students. Not understanding the function and nature of the job action may, therefore, have increased students' confusion, stress, and/or anger in response to the strike. Future research should explore this possibility.

Taken together, these results replicate and validate many of the findings of Study 2 and indicate significant interventions that would reduce the negative impact of a university work stoppage on students. Efforts by university administrators to improve communication, provide general education on the collective bargaining process, and provide a wide diversity of remediation offerings could alleviate the strike's burden on students. Efforts by faculty to pass along strike-related information and to be flexible and responsive to students' needs during the remediation period could serve this same function.

5. General Discussion

Postsecondary education in Ontario has seen a number of labour strikes over the past few decades, including some long-lasting, high-profile work stoppages. These labour disputes can impact students negatively in a number of ways (Fiksenbaum et al., 2012; Greenglass et al., 2002; Wickens et al., 2006), yet there has been only limited research exploring the psychosocial and academic impact of work stoppages on university students and possible strategies to minimize these effects (Wickens, 2011). The current report outlines a three-study project designed to address the paucity of empirical investigation using a diversity of research approaches.

All three of the studies confirmed a negative impact of university work stoppages on students. Using both qualitative and quantitative methodologies, the research documented students' stress, anxiety and worry resulting from their concerns about how the work stoppage would impact them academically and financially. Even during the comparatively short month-long strikes by teaching assistants and contract faculty in early 2015, many students reported high levels of psychological distress. Both the longitudinal survey in Study 1 and the retrospective survey in Study 3 indicated that students' initial gratification for the opportunity to catch up on coursework was quickly replaced by a general apathy or laziness and a disruption of good study habits. Both surveys and the focus group interviews concluded that confusion was a common theme among students, with many wondering if they should bother keeping up with their studies. Studies 2 and 3 indicated that students were concerned that they had not learned as much in their courses as they should have as a result of the work stoppage.

Following from the shared confusion, was an effort among students to actively seek out information regarding the strike. During both the month-long strikes in 2015 and the 12-week-long strike in 2008–2009, students were seeking strike-related information from multiple sources. Faculty members are an important information source before a strike and, if they are not striking, they can continue to be an integral source of both information and social support throughout a strike. However, there is still a need for communication from the university administration. During the 2015 labour strikes, students at both the University of Toronto and York University were unsatisfied with the administration's official communications efforts. Presumably, students want to know as much as possible about the status of negotiations, and more importantly, the impact of the strike on their semester and their studies. In the absence of a strong voice from the university's administrative team, students rely on information from outside university channels including gossip and rumour from fellow students spread by word-of-mouth and social media. Fuelled by a lack of knowledge or misinformation about the collective bargaining process, students' confusion is a significant source of stress throughout a university work stoppage.

There is little consensus among students regarding which remediation strategies at both the classroom and university-wide levels are most helpful, likely because of the diversity of academic and financial circumstances facing students. Therefore, it is important for administrators and faculty to provide a diversity of options both in the classroom and at the university-wide level so that the burden of the strike can be eased for all students. It was clear, however, from both the qualitative and quantitative findings of Studies 2

and 3 respectively, that in terms of classroom remediation, students want to have input into the development of remediation alternatives and, preferably, to have the opportunity to choose the option that most benefits their personal circumstances.

Despite the important findings of the current research, there remains a need for continued investigation. The qualitative component of this report provides what is likely the most in-depth understanding to date of the student experience of a university work stoppage. Together, the three studies highlight the stress and confusion experienced by students and the strong desire for increased communication during a work stoppage. Nonetheless, future research is needed to explore the specific content of these desired communications to determine what would be most effective for reducing students' angst and motivating continued pursuit of their academic studies. It is also important to recognize that technology has likely increased the amount of information that students expect to receive and when they expect to receive it. In our present day, news is available in almost real-time via the internet and social media is used to promote events or issues globally in a very short time span (i.e., "go viral"). Moving forward, students' expectations for strike-related communications will likely change with continued growth of technology. Therefore, future research examining university strike issues must keep focus on communications technologies to ensure that strike-related information is being communicated via students' preferred media and in an amount of time considered reasonable by that technology. Finally, Studies 2 and 3 also identified a lack of knowledge or misinformation among students about the collective bargaining process. Future research should explore the potential impact of this lack of knowledge on students' emotional and cognitive responses throughout a strike, and determine how best to provide general education on collective bargaining.

6. Recommendations

Although the findings of the studies are specific to two universities in Ontario's capital city, and are based on labour strikes by teaching assistants and/or contract faculty, the findings may hold relevance for universities in other jurisdictions or institutions facing a work stoppage by full-time or tenure-stream faculty. Based on the findings of the three studies presented here, the following recommendations for university administrators and faculty facing a future work stoppage are offered.

6.1 Recommendations for University Faculty

- Recommendation 1: Particularly when academic activities are continued through a work stoppage, non-striking faculty represent a primary source of information and potential support for students. It is recommended that, before or in the early stages of a work stoppage, faculty provide their students with contingency plans, providing possible effects of a pending or ongoing strike on coursework and outlining plans for how potential eventualities will be addressed. These efforts should be wholly designed to support and/or motivate, and never to over-dramatize or intimidate students.

- Recommendation 2: There was little consensus among students regarding preferred remediation strategies initiated by faculty, which likely reflected the diversity in course requirements and academic circumstances faced by students. With that said, students very clearly indicated that they preferred remediation efforts that were flexible and responsive to student needs, and that allowed for an individualization of remediation strategies for each student. Recognizing that faculty must balance their own responsibility to provide adequate training and education with the needs and requests of students in a post-strike period, it is recommended that faculty make every effort to respond to student concerns and, at a minimum, allow student input into the development and selection of classroom remediation strategies.

6.2 Recommendations for the University Administration

- Recommendation 3: Students affected by a university work stoppage are seeking information about the progress of the negotiations and the strike's impact on their academic activities. The perceived absence of quality communication from the university administration is associated with increased psychological distress, academic apathy and lack of motivation. Although detailed information about ongoing bargaining is typically kept confidential by both sides in the dispute, a balance must be met. University administrators must actively reach out to the undergraduate population and, as much as possible, provide status updates regarding the labour disruption.
- Recommendation 4: Students reported getting most of their strike-related information from faculty in-person and from various other, sometimes unreliable, sources via social media and websites. With this in mind, efforts by the university administration to communicate with the undergraduate population (i.e., Recommendation 1) would be best served by communicating bargaining updates (if possible) and contingency plans to students directly via email, social media and websites. When non-striking faculty are present during a labour disruption, it would also be advisable for university administrators to keep faculty apprised of this same information so that they could assist with the transfer of this information to students, assist students in understanding how contingency plans may be applied to each class and each student individually, and provide general social support.
- Recommendation 5: There was little consensus among students regarding preferred remediation strategies by the university administration. This likely reflects the many differences in academic, financial and other circumstances faced by students. It must also be recognized that appropriate remediation strategies will vary depending on the length and timing of a given work stoppage. With this in mind, it is recommended that university administrators introduce a diversity of remediation initiatives that address the many differing needs of students including, for example, the possible extension of course drop deadlines, a tuition credit, and ensuring review of introductory course material in senior level courses in the semesters immediately following the strike.

- Recommendation 6: A significant proportion of undergraduate students lacked understanding and knowledge of the collective bargaining process, which may have fuelled a sense of confusion during the work stoppage. Therefore it is recommended that, in their efforts to communicate with students, the university administration also provide basic education concerning the collective bargaining process and how labour legislation is being followed in the ongoing labour disruption. This information should be presented in a neutral and dispassionate tone. If possible, it should be developed in advance of contractual collective bargaining by a joint committee consisting of representatives from both the university administration and the union, which would help to avoid bias.

- Recommendation 7: Although there was little consensus among students regarding preferred remediation strategies at the classroom-level, students clearly expressed a desire to have input into the development and selection of classroom remediation. Therefore, in conjunction with Recommendations 1 and 2, it is recommended that the university administration adopt a protocol for incorporating student feedback in the development and selection of classroom contingency and remediation plans. This protocol (to be developed at a university- or department-wide level) will serve as a guidance document for individual faculty members and will need to provide sufficient flexibility to accommodate the diversity in structure and requirements across courses.

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