

Academic Integrity: Faculty Development Needs for Canadian Higher Education

Research Report

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Declarations

The researchers declare no conflict of interest for this study.

Disclaimer and notes

Opinions in this report are those of the named researchers/project contributors and may not represent the opinions of D2L Innovation Guild members.

All members of the academic research team contributed to this report and approved of the version submitted.

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Abstract

Purpose: The purpose of this research was to understand faculty perceptions and needs related to academic integrity in Canadian higher education (i.e., project objectives 1 and 2).

Methods: We developed a mixed-methods survey for this project. The survey was validated through the use of a think-aloud protocol during pilot testing. The survey was administered at four Canadian universities (i.e., University of Calgary, University of Guelph, University of Manitoba, and University of Waterloo). Recruitment took place during the Fall 2020 term, with responses collected via Qualtrics, an online survey tool.

Results: We analyzed responses submitted by 395 participants. Responses generally indicated inconsistencies among respondents about their knowledge and perceptions about how to uphold academic integrity and address breaches of it. There was consistency across respondents about some items, such as how smaller class sizes better support academic integrity.

Implications: These results contribute to the growing body of empirical evidence about academic integrity in Canadian higher education. This is the inaugural project associated with the D2L Innovation Guild. Administrative support was provided by D2L.

Keywords: academic integrity, Canada, faculty, higher education, plagiarism, post-secondary

Introduction

This was a multi-institutional project that involved four Canadian post-secondary institutions (i.e., University of Calgary, University of Guelph, University of Manitoba, and University of Waterloo) and D2L. The project investigated faculty perceptions and needs related to academic integrity.

Project Objectives

The objectives of this project were drafted at a project conceptualization meeting that took place in Toronto, Ontario, Canada on October 2, 2018. Representatives from the D2L Innovation Guild and some of the research project team members were in attendance. The project objectives remained constant throughout the project (see Crossman et al., 2019) and have served as guiding principles for the work.

The objectives of this study were threefold:

1. To better understand the perceptions and behaviours of faculty members in Canadian higher education institutions with regards to academic integrity.
2. To add to the small, but growing body of research on academic integrity in Canada through the execution of rigorous primary research involving the collection of data from human participants. Our goal is not simply to undertake a project, but to strive for excellence in our methods and results.
3. To test the feasibility of the collaboration itself. As this is the first university-industry partnership focused on academic integrity research, we acknowledge that the team members are pioneering new ground in this field. We intentionally started small scale, with a longer-term view to creating a project that could be scalable.

The first two objectives focus on research goals, while the third engaged the team in metacognitive reflection about the process of conducting the research. In this report we address the first two objectives of the project. At the request of the D2L Innovation Guild Board (M. Fach, personal communication, February 1, 2021), we have prepared a companion report, *Lessons Learned and Recommendations*, that addresses the third project objective (see Eaton et al, 2021a).

Research Questions and Overview

This study was guided by the overarching research question:

(RQ) What role do faculty members see themselves playing to support academic integrity?

There are four sub-questions (SQ), as follows:

SQ1 (Perceived roles): What are the discrepancies between faculty members' perceptions of their roles in promoting academic integrity (or dealing with academic misconduct) and the roles others believe that faculty should play?

SQ2 (Perceived competence): What is the level of awareness that faculty members have with the existing procedures, policies, and resources already in place to support academic integrity?

SQ 3 (Perceived agency): What supports do faculty members need to promote academic integrity?

SQ 4 (Perceived facilitators/barriers): What do faculty members see as the facilitators and barriers to using the existing academic integrity procedures, policies, and resources?

The steps involved in the design and implementation of the research included:

1. A literature review to investigate previous research conducted in Canada and globally, specifically focusing on literature to inform the development of the survey instrument;
2. The development of a survey instrument;
3. Research Ethics Board (REB) approval from each of the four research institutions to conduct research with human participants and recruit and administer the survey to faculty;
4. Recruitment of faculty;
5. Administration of the survey and data collection;
6. Analysis of qualitative and quantitative survey results; and
7. Dissemination of findings.

Literature Review

In this report, we describe the highlights of our comprehensive review of the academic integrity literature completed between November 2018 and May 2019. During that period, the team undertook a modified approach to a systematic review, resulting in more than 85 peer-reviewed sources, published over a 40-year period from 1980 to 2020. After selecting these sources, the researchers extracted key information from the articles and summarized this information. The narrative that follows captures the highlights of this review and focuses on research conducted since the turn of the millennium.

Academic integrity has long been identified as a teaching and learning imperative (Bertram Gallant, 2008), and faculty are considered essential to establishing and maintaining integrity in university learning. Yet, faculty frequently disagree about how to define academic integrity, and reporting of plagiarism and academic misconduct is generally inconsistent (Walker, 1998). Research shows that variations in faculty experiences and beliefs can contribute to discrepancies between official university policies and faculty reporting practices. For example, instructors note that the majority of academic misconduct that they observe is unintentional, although its representation on course outlines and other documents tends to be moralizing and punitive (Bruton & Childers, 2016). Similarly, some faculty may avoid reporting academic misconduct if they feel a breach was unintentional or caused by personal stress (Paterson, Taylor, & Usick, 2003).

In the Canadian context, research about faculty perceptions on academic integrity has been limited until recent years (see Eaton et al., 2020; Evans Tokaryk, 2014; MacLeod, 2014; MacLeod & Eaton, 2020; Peters et al., 2019). Two-large scale studies were conducted in Canada in the early 2000s (Christensen Hughes & McCabe, 2006a, 2006b), followed by a gap in major research of more than a decade. The findings of these studies show, as does international research, that faculty at higher education institutions have inconsistent understandings of and approaches to academic integrity, leading to widespread challenges in interpreting and implementing academic integrity policies (MacLeod, 2014; Taylor et al., 2004; Zivcakova et al., 2012). Although the research reveals important inconsistencies between policy and practice, there is also an important gap in our understanding of the beliefs and values that shape faculty approaches (Hudd et al., 2011).

Faculty and instructors are crucial partners in promoting academic integrity at Canadian universities. To best support them in this work, we must first seek to understand the issues and challenges that they face from their perspectives. With a deeper understanding of their

perceptions and experiences, we can develop more informed, strategic approaches to supporting academic integrity in Canadian higher education teaching and learning.

Method

This study used a mixed methods research design to collect qualitative and quantitative survey data.

Participants

We estimated that the overall population included in this study was a minimum of 6,075 possible participants. This number is imprecise because we were unable to determine the number of part-time faculty (i.e., sessionals) at two institutions (see Table 1). Further, faculty members may begin or terminate their employment at any point (e.g., retirements) and the number of employed faculty at an institution can vary at any given moment. We were also unable to determine the number of individuals on leave (e.g., parental leave, leave due to illness, sabbatical). We acknowledge that individuals who are on leave may not check their e-mail accounts regularly, resulting in invitations to participate not being received by some eligible participants. We based our estimates of the overall population included in the study on publicly available data (see Table 1).

Table 1. Study Population: Academic Staff at the Four Participating Institutions

Institution	Population / Notes	Source
University of Calgary	14 faculties Over 1800 full-time and part-time academic staff	University of Calgary: Our Organization (2019)
University of Manitoba	2,135 full-time and part-time teaching academic staff of all ranks in 21 faculties/schools	University of Manitoba: Staff Headcount (2018).
University of Waterloo	1,311 Full time faculty in 2018*	University of Waterloo: Performance Indicators (2019)
University of Guelph	34 departments in 5 colleges, 830 full-time faculty*	University of Guelph Fact Book (2020)

*Note: We were unable to determine accurate numbers of part-time academic staff at the University of Guelph or the University of Waterloo using publicly available data.

In addition to imprecise numbers for the overall study population, we also note that there are inconsistencies across institutions about how educator roles at each participating university are defined and what roles are included at each institution. For example, at the University of Calgary, librarians, archivists, curriculum development specialists and education development consultants are considered academic staff (i.e., “faculty”), as per the collective agreement (see Collective Agreement between the Faculty Association of the University of Calgary and The Governors of the University of Calgary, 2019). This is not the case elsewhere and we recognize that terms such as “faculty” or “academic staff” do not have uniform definitions across institutions and that official job classifications are defined by each institution. The research team discussed participant inclusion and exclusion criteria at length and opted to focus on those who had educational roles within their respective institutions.

Inclusion criteria

We outlined our participant inclusion criteria in our ethics applications as follows:

Participants include individuals with academic staff (i.e., faculty) roles at each of the participating institutions. This includes part-time; full-time; tenured or tenure-track; non-tenure track; retired/emeriti; and individuals teaching in any faculty at any level. We acknowledge that post-doctoral fellows and teaching assistants (TAs) might be included among this group, though it was not our intention to specifically target this population.

No one will be excluded based on race, gender or language ability. Because this is an online survey, only those who are able to fill out an online survey will be included. This might exclude a very small number of potential participants who are otherwise eligible, but do not have access to the Internet at the time of the study (e.g., faculty members on leave or undertaking field work in areas without Internet.) Such circumstances are outside the control of the research team.

Exclusion criteria

We outlined our participant exclusion criteria in our ethics applications as follows:

We are interested in the faculty development needs of Canadian academic staff. Although we may consider expanding the study at a later time, we are starting with the four institutions with which the research team members are affiliated. We recognize that results from these four institutions may not be representative of faculty members

generally across Canada. We will note this as a limitation of our study when presenting the results.

Research Ethics Boards Approval

Before undertaking applications to any of the institutional research ethics boards (REBs), all members of the research team were required to complete the TCPS2 Core tutorial (if not already completed) and submit certificates to the principal investigator (PI) for inclusion as required supplementary documentation to the REB applications.

REB Application Process

To streamline REB approval, the PI was the first to submit and receive ethics approval (University of Calgary, October 2019). The REB application to the University of Calgary was opened on September 20, 2019, with initial certification received on October 24, 2019.

Following that, approval applications were submitted to the REBs of the other three universities, providing the University of Calgary certificate as supporting material in their applications. All other universities' REB applications were approved by January 2020.

At the onset of the COVID-19 pandemic, the research team decided to include one additional question to the survey about the impact of the pandemic on academic integrity. Modifications to the ethics applications were submitted to each institution; however, the onset of the COVID-19 lockdown created some delays. Final REB approval for the modification was completed in September 2020 (see Appendices B-E).

Informed Consent

As per TCPS2 guidelines, consent was informed, voluntary, and ongoing (see Chapter 3, TCPS2). Participants were presumed to be adults with decision-making capacity. Only in rare cases would an individual under the age of majority been invited to participate. In such cases, we followed the TCPS2 principles consent should not be based on chronological age, but instead “advocates an approach based on decision-making capacity as long as it does not conflict with any laws governing research participation” (TCPS2, 2018).

Participants who were unable to consent were not able to participate in the survey. Individuals

requiring accommodations to complete the survey were not excluded, but no provisions for accommodation were made, in part, because the survey was anonymous.

In the case of our survey, consent was indicated and documented through a process of implied consent by specific action, namely, clicking “agree” on a consent form within the survey.

Although we had initially intended for the survey to have a common consent form for all participants, each institutional REB required information to be presented in slightly different ways. As a result, our survey included four different consent forms, one for each participating institution. Upon entering the survey participants were asked to indicate their institution. They were then directed to the consent form for that particular university. Those who indicated “other” were directed to the University of Calgary consent form, as that was the home institution of the PI.

If the participant abandoned the survey without clicking the Submit button at the end of the survey, their responses were not submitted. Once the participant hit the Submit button, their data was retained, as it was anonymous and could be removed from the data set. Participants were informed of this during the consent process.

Survey Instrument

Survey Development

Based on a review of the existing academic integrity literature and using our research questions as a guiding framework, we developed a survey to collect information to better understand faculty members’ experiences promoting academic integrity and preventing and dealing with cases of academic misconduct (see Appendix A). Three members of the research team with expertise on survey development and/or academic integrity (AD, AM, BS; i.e., the survey working group) identified the topics to be covered by the survey that aligned with the objectives of the project, then selected and modified items from existing scales (Coalter et al., 2007; Cook, et al., 1990; Keith-Spiegel et al., 2011; Macleod, 2014; Tabsh et al., 2017; McCabe, et al., 2012) and developed new items for each topic where necessary.

To reach consensus about the face validity of the survey items (Hardesty & Bearden, 2004; Nunnally & Bernstein, 1994), a collaborative and iterative feedback process was employed with all seven research team members. Research team members consisted of experts and non-

experts in the field of academic integrity. All team members received a copy of the draft survey and were asked to provide their feedback (in written form) on the suitability of each item for the survey and to evaluate the readability of each item. The survey working group compiled the written responses and revised the survey items accordingly (e.g., rephrasing items, adding questions and response options, deleting items). This process was repeated twice. In the final round, research team members met virtually to discuss outstanding issues with the items (e.g., clarity and alignment issues), add response options where necessary, correct typos and grammatical errors, and finalize the survey prior to pilot testing.

Academic integrity experts (i.e., the researchers) met at least two of the following criteria: (1) have published at least two articles or book chapters about academic integrity and/or academic misconduct; (2) have made at least 3 national or international convention presentations on academic integrity; (3) have at least 5 years of practical teaching experience and/or providing professional development opportunities about academic integrity to faculty; and (4) possess a graduate degree in education, psychology, or a related field. Research team members meeting the criteria to qualify as an academic integrity expert are as follows: Sarah Elaine Eaton (4 criteria); Brenda M. Stoesz (4 criteria); Katherine Crossman (4 criteria); Amanda McKenzie (4 criteria); and Kim Garwood (2 criteria). Two individuals from D2L who offered administrative and logistic support to the team.

The development of the survey, including evaluative feedback from academic integrity experts took place from April to December 2019, with additional modifications made in 2020.

Pilot Testing

In the next phase of survey development, we conduct a pilot study. The pilot testing was conducted in February 2020, following initial approval from the four REBs. We asked six participants of the pilot study to comment on their understanding of the items as they completed each item of the survey. All pilot participants were faculty members similar in demographics to the target participants. A research assistant collected feedback during a think-aloud procedure to help us to determine whether items were interpreted consistently across participants, in the way intended by the research team (Hardesty & Bearden, 2004; Nunnally & Bernstein, 1994), and that questions could (in fact) be answered by the target audience because they hold that information (Collins, 2009). Examination of the pilot study responses revealed that minor improvements needed to be made to the phrasing of a few questions. The survey was further refined in February and March 2020 and application to modify the study (Modification #1) was submitted to each REB in March 2020.

Final Survey

The final survey for distribution included items to collect information in seven areas: (1) demographics (8 items); (2) knowledge of academic integrity (4 items); (3) faculty roles for academic integrity (5 items); (4) discrepancies between roles (3 items); (5) awareness of existing policies, procedures, and resources (6 items); (6) support needs for academic integrity (3 items); and (7) facilitators and barriers to promoting academic integrity (3 items). The items were closed and open-ended questions related to the overarching research question and the four sub-questions.

Impact of COVID-19

As the COVID-19 pandemic began and restrictions were implemented at postsecondary institutions across Canada starting in March 2020, the research team added an additional item concerning how the pandemic may have shifted respondents' understandings of academic integrity during this time.

Although our survey ready to launch and full ethics clearance to do so, we determined that administering a survey during this time would not be wise due to the extraordinary circumstances brought on by the pandemic and the demands on research team members were excessive in their day-to-day and personal lives. On March 17, 2020 the PI made the decision to pause the project due to COVID-19 (see Appendix F). During this period, the team met once for an informal virtual coffee meeting (April 20, 2020). Also in April, one of our research team members (KC) accepted a full-time role at another institution. She has remained on the project, though with more limited hours to contribute. The project was revived in August 2020.

The first task the team undertook after the project was revived in August 2020 was to submit the revised survey (Modification #2) to each institutional REB for approval to include one question regarding the impact of COVID-19. The final version of the survey is included in this report (see Appendix A). Approval for Modification #2 to four ethics applications was received in August and September 2020.

Procedures

The survey items were entered into Qualtrics and distributed to faculty members across disciplines at University of Calgary, University of Guelph, University of Manitoba, and University of Waterloo, as per recruitment expectations at each university.

Participant Recruitment

As per our ethics protocol, participants were recruited as per the recruitment procedures at each university. Each institution had particular requirements that differed from the others. For example, at the University of Guelph, there is an institutional listserv for all administrative assistants that our research team member there had access to (K. Garwood, personal communication, October 11, 2019). Each institution abided by the research ethics requirements of the TCPS2 and as such, the recruitment processes at each participating university was carefully scrutinized and followed according to institutional norms and feedback from the respective REBs.

Participant recruitment took place between October and November 2020.

Incentives

The six individuals who took part in the think-aloud protocol for the survey validation received a \$50 gift card, as participation in that activity required one to two hours of participants' time. The cost of the gift cards was covered by the University of Calgary. Participants did not receive incentives or compensation for participating in the survey.

Analysis and Results

Close-ended responses were statistically analyzed, whereas open-ended questions were analyzed qualitatively and coded thematically. Results between institutions can be compared to provide a rich understanding of faculty perceptions of academic integrity in Canada.

Data Cleaning

In December 2020, survey data were exported from Qualtrics to SPSS and Excel software for quantitative analysis. Examination of these data revealed that 447 respondents initiated the

survey and selected one of five possible choices of institution (i.e., the four participating universities and “other”). Forty-two respondents abandoned the survey without consenting to participate, resulting in 405 individuals who consented to participate. Next, we excluded data for individuals ($n = 3$) who identified as belonging to an institution other than the Universities of Calgary, Guelph, Manitoba, and Waterloo (for the purposes of this report) and we also excluded responses from individuals who did not provide any data beyond the indication of consent ($n = 7$). This resulted in the number of cases that were retained for analysis ($n = 395$).

The institutional breakdown of retained cases ($n = 395$) was: University of Calgary ($n = 62$); University of Guelph ($n = 120$); University of Manitoba ($n = 107$); and the University of Waterloo ($n = 106$).

Frequencies (and percentage of total cases) of responses for closed-ended (single-selection and multi-selection) items were calculated and reported. Parametric and non-parametric tests were conducted, as appropriate, to compare sub-groups (e.g., levels of teaching experience) for some of the survey items. Two researchers (BS, KC) were primarily involved in the quantitative data analysis.

Qualitative Analysis

Text content from open-ended questions was analyzed using NVivo software and hand-coding to identify emerging themes. Three researchers (SEE, KG, AM) reviewed and coded data individually before meeting to develop and apply a coding structure. Qualitative analysis was still underway at the time this report was prepared.

Survey Validity

Responses to the survey items were examined for evidence of internal consistency. We expected to find evidence that responses to several items would be related. For example, we expected that the items asking participants about the frequency with which they promote academic integrity would be positively related to the frequency with which they implement strategies to reduce academic misconduct, and we found this to be the case, $r_s(332) = .27, p < .001$.

Demographic Characteristics

Of the 395 individuals who consented to participate in the present study, 15.7% were from the University of Calgary, 30.4% from the University of Guelph, 27.1% from the University of

Manitoba, and 26.8% from the University of Waterloo.

Participants indicated their current gender identity as 49.1% women; 39.5% men; and 11.4% who identified with another option (i.e., self-described using a short text answer; preferred not to answer; or did not respond).

The majority of individuals identified as professors and full-time faculty (68.1%) at their respective institutions (see 2), and 156 (36.5%) were tenured, 49 (12.4%) were not tenured but on the tenure track, 45 (11.4%) were not on a tenure track but their appointment was ongoing, 81 (20.5%) were not on a tenure track and their appointment was temporary or fixed term, 3 (.8%) were retired, 30 (7.6%) indicated 'other', and 31 (7.8%) did not respond. A broad range of disciplines were represented, with 16.2% primarily associated with the sciences, 12.2% with engineering, and 12.2% with social sciences. Small percentages of participants were associated with agriculture, arts/humanities, business, education, fine arts, interdisciplinary studies, kinesiology, law, health sciences, mathematics, and veterinary medicine.

Table 2. Study Participants' Academic Positions

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Full professor	22.6	14	15.8	19	20.6	22	18.9	20	19.0	75
Associate professor	24.2	15	17.5	21	18.7	20	29.2	31	22.0	87
Assistant professor	16.1	10	9.2	11	20.6	22	8.5	9	13.2	52
Lecturer, Instructor, Librarian (full time/permanent)	12.9	8	5.8	7	6.5	7	34.0	36	14.7	58
Sessional instructor	14.5	9	6.7	8	29.0	31	9.4	10	14.7	58
Trainees ^a	9.7	6	33.3	40	-	-	-	-	11.6	46
Missing	-	-	11.7	14	4.7	5	-	-	4.8	19
Total	100.0	62	100.0	120	100.0	107	100.0	106	100.0	395

Note.

^aConsisted of graduate students, postdoctoral fellows, teaching assistants (TAs), and research assistants.

Approximately one-fifth of the total sample indicated less than 5 years of teaching experience at the postsecondary level, and one fifth reported 20+ years of teaching experience. An

examination of teaching experience across institutions revealed an unequal distribution, $\chi^2 = 50.98, p < .001$, suggesting that a significantly larger percentage of respondents from the University of Guelph have less teaching experience than the other universities. When asked to indicate the population of students that they teach, 35.2% indicated teaching primarily undergraduate students, 29.4% teaching undergraduate students only, 16.2% teaching equal numbers of undergraduate and graduate students, and 6.8% teaching primarily or only graduate students.

Table 3. Study Participants' Years of Experience Teaching at the Postsecondary Level

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
< 5 years	17.7	11	40.0	48	21.5	23	9.4	10	23.3	92
5-9 years	24.2	15	13.3	16	14.0	15	25.5	27	18.5	73
10-14 years	14.5	9	12.5	15	15.0	16	25.5	27	17.0	67
15-19 years	14.5	9	10.8	13	16.8	18	14.2	15	13.9	55
20+ years	27.4	17	10.0	12	29.9	32	24.5	26	22.0	87
Missing	1.6	1	13.3	16	2.8	3	0.9	1	5.3	21
Total	100.0	62	100.0	120	100.0	107	100.0	106	100.0	395

Knowledge of Academic Integrity

In general, participants were familiar with the terms “academic integrity” ($n = 344, 87.1\%$) and “academic misconduct” ($n = 337, 85.3\%$). See Table 4. A Wilcoxon Signed-Ranks test showed that respondents ($n = 339$) were significantly less familiar with the term “academic misconduct” ($Mdn = 4; Range = 1 - 4$) than with the term “academic integrity” ($Mdn = 4; Range = 2 - 4; Z = 2.99, p = .003$).

Table 4. Familiarity with the Terms Academic Integrity across Institutions

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Academic Integrity										
Very familiar	58.1	36	55.8	67	68.2	73	69.8	74	63.3	250
Moderately familiar	25.8	16	21.7	26	23.4	25	17.9	19	21.8	86
Slightly familiar	6.5	4	1.7	2	0.9	1	0.9	1	2.0	8
Not familiar at all	-	-	-	-	-	-	-	-	-	-
Missing	9.7	6	20.8	25	7.5	8	11.3	12	12.9	51
Total	100.0	62	100.0	120	100.0	107	100.0	106	100.0	395
Academic Misconduct										
Very familiar	56.5	35	52.5	63	61.7	66	61.3	65	58.0	229
Moderately familiar	30.6	19	20.0	24	27.1	29	23.6	25	24.6	97
Slightly familiar	3.2	2	4.2	5	1.9	2	1.9	2	2.8	11
Not familiar at all	-	-	.09	1	-	-	0.9	1	0.5	2
Missing	9.7	6	22.5	27	9.3	10	12.3	13	14.2	56
Total	100.0	62	99.2	120	100.0	107	100.0	106	100.0	395

Kruskal-Wallis *H* tests indicated no significant differences across institutions or years of teaching experience for the term “academic integrity” [$H(3) = 4.65, p = .20$; $H(4) = 7.46, p = .11$, respectively] or institutions for the term “academic misconduct” [$H(3) = .88, p = .83$]. Significant differences for the term “academic misconduct” were found across years of teaching experience [$H(4) = 13.44, p = .009$] (see Table 5 for the distribution of responses). Respondents with < 5 years of teaching experience were significantly less familiar with the term academic misconduct than those with 10-14 years of experience [$U = 1910.5, p = .03$], 15-19 years [$U = 1409.5, p = .008$], and 20+ years of experience [$U = 2367, p = .004$]. Respondents with 5-9 years of teaching experience were significantly less familiar with the term academic misconduct than those with 15-19 years [$U = 1395.5, p = .04$] and 20+ years of experience [$U = 2344.0, p = .04$].

Table 5. Familiarity with the Term Academic Misconduct Across Years of Teaching Experience

	< 5 years		5 - 9 years		10-14 years		15-19 years		20 + years	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Very familiar	55.4	41	60.3	41	50.0	63	78.0	39	75.6	62
Moderately familiar	35.1	26	35.3	24	35.7	45	20.0	10	23.2	19
Slightly familiar	8.1	6	2.9	2	13.5	17	2.0	1	1.2	1
Not familiar at all	1.4	1	1.5	1	0.8	1	-	0	-	0
<i>n</i>		74		68		126		50		82

Text responses to the questions “What does academic integrity mean to you?” and “What does academic misconduct mean to you?” tended to emphasize individual behaviours and responsibilities. In many cases, respondents focused on the ethical component of the definition, highlighting personal values and responsibilities: “It is the moral, ethical and trustworthy behaviour and attitude in academia” (Participant quotation). Many definitions linked individual behaviours to a larger culture of integrity:

[Academic integrity is] representing the knowledge you produce as honestly as you can and acknowledging the knowledge produced by others on whose shoulders you stand as a scholar. Also, academic integrity means reading and acknowledging the full range of scholarship produced by others, particularly that which is produced by BIPOC scholars, writers, intellectuals, artists, etc. (Participant quotation).

Outliers in the definitions included responses that emphasized the role of community, such as one respondent who defined it as “ensuring/respecting an environment that allows everyone to learn, making equal contributions in group work” (Participant quotation).

Focusing on community in a different way, some responses focused on the procedural or context-specific nature of the term: “Academic integrity is a culture-bound term, so it means academic work conducted within the cultural, societal and institutional norms for ethics in which one is working” (Participant quotation).

Other respondents equated academic integrity broadly with the assurance of a credential's value: "Sufficient course content, supervision and evaluation to legitimize academic credit" (Participant quotation).

Some respondents referred to research integrity in their definitions or defined academic integrity narrowly, focusing only on proper citation of sources in documents.

Perceived Roles with Regard to Academic Integrity

To promote academic integrity, many respondents ($n = 269$, 68.1%) indicated that they encouraged students (several or many times per term) to speak with them if they were experiencing difficulties (see Table 6). Providing clear guidelines on the rules of proper citation ($n = 160$, 40.5%) and guiding students to resources in the library ($n = 159$, 40.3%) were the second and third most common activities done several or many times per term to promote academic integrity. Of concern is the finding that some respondents never referred to academic integrity in their syllabi ($n = 8$, 2.0%) or discussed academic integrity policies with their students ($n = 47$, 11.9%).

In text responses, some instructors reported that their capacity to keep up with teaching and enforcing academic integrity was limited. As one respondent notes,

I often teach large undergraduate courses with limited TA support. Prosecuting academic integrity cases is time-consuming and it is unrealistic to assume that faculty in my position will undertake this except in the most egregious cases (Participant quotation).

References to workload and class-size threaded through survey responses and were prominent in later questions about facilitators and barriers to supporting academic integrity.

Table 6. Frequency of Activities to Promote Academic Integrity to Postsecondary Students

	Missing		Not applicable to my role		Never		Once or twice per term		Several times per term		Many times per term		Total	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Refer to it in my course syllabus	15.4	61	4.8	19	2.0	8	43.0	170	19.5	77	15.2	60	100	395
Provide information on academic integrity	15.4	61	3.0	12	4.8	19	42.3	167	22.5	89	11.9	47	100	395
Implement learning activities on academic integrity	15.4	61	8.1	32	42.8	169	24.6	97	5.1	20	4.1	16	100	395
Discuss the academic integrity policy with my students	15.7	62	4.3	17	11.9	47	45.1	178	15.7	62	7.3	29	100	395
Provide clear guidelines about the rules of proper citation	15.7	62	7.8	31	5.3	21	30.6	121	21.5	85	19.0	75	100	395
Encourage students to speak with you if they are having difficulties	15.9	63	2.3	9	3.3	13	10.4	41	26.8	106	41.3	163	100	395
Guide students to resources in the library (e.g., research databases, citation resources)	15.7	62	7.8	31	9.1	36	27.1	107	19.0	75	21.3	84	100	395
Guide students to writing resources (e.g., writing center or tutors)	16.2	64	9.4	37	11.9	47	26.1	103	18.7	74	17.7	70	100	395
Allow students to submit drafts of their assignments for formative feedback	15.7	62	10.1	40	25.6	101	23.5	93	13.2	52	11.9	47	100	395
Other (e.g., assign university developed tutorials, design assessments that scaffold learning)	92.9	367	0.8	3	0.3	1	2.0	8	1.5	6	2.5	10	100	395

Note. Bold text indicates the three most frequently used activities to promote academic integrity to students.

To prevent academic misconduct, more than 60% of respondents indicated that they ask students not to use their cell phones or any other electronic devices during tests/exams several or many times per term ($n = 239$, 60.5%; see Table 7). Requiring assignment submission via the learning management systems (LMS) to reduce the possibility of lost or stolen assignments ($n = 237$, 60.0%) and circulating throughout the examination room when proctoring ($n = 224$, 56.7%) to prevent academic misconduct were the second and third most common activities to prevent academic misconduct. About a third of participants reported never having implemented the lockdown of students' internet browsers for online tests/exams ($n = 145$, 36.5%) and/or using text matching software to identify potential plagiarism ($n = 125$, 31.6%).

These results show that faculty members use a variety of techniques and tools in combination to help prevent academic misconduct, and suggest that there is no single action or "silver bullet" to prevent student academic misconduct.

Text responses revealed that many of the techniques used to prevent academic misconduct are not used with that primary goal in mind; many respondents indicated that these practices were intended to support learning or for expediency:

I do not treat my students as if they are inclined toward academic criminality. So, while I might require students to submit writing via [LMS] and Dropbox, for example, I DO NOT do that because I am trying to prevent academic fraud. I do it because it works for them and for me (Participant quotation).

When reading Table 6, it is important to note that each institution uses educational technologies in different ways. For example, one possible reason why about a third of participants reported that they never implement a lockdown of a student's internet browser for online tests and/or exams ($n = 144$, 36.5%) or use text-matching software such as SafeAssign or Turnitin ($n = 125$, 35.6%) is some of the participants are faculty members at universities (e.g., University of Calgary) that do not have institutional licenses for such technologies. There are a variety of reasons that universities have not acquired such technologies, but understanding this was beyond the scope of the current project.

Table 7. Frequency of Academic Misconduct Prevention Activities

	Missing		Not applicable to my role		Never		Once or twice per term		Several times per term		Many times per term		%	N
	%	n	%	n	%	n	%	n	%	n	%	n		
Use active learning strategies in the classroom (in addition to or rather than lecture style)	21.5	85	5.8	23	7.3	29	10.6	42	22.3	88	32.4	128	100	395
Prepare new assignments, tests, and/or exams for each course offering	21.3	84	8.6	34	2.0	8	24.6	97	17.7	70	25.8	102	100	395
Require students to submit assignments in class or directly to me to reduce the possibility of papers/assignments being lost or stolen	20.8	82	15.7	62	25.6	101	7.1	28	9.4	37	21.5	85	100	395
Requiring students to submit papers/assignments via learning management systems (LMS; e.g., Blackboard, D2L, Moodle) to reduce the possibility of papers/assignments being lost or stolen	20.5	81	6.3	25	8.1	32	5.1	20	10.1	40	49.9	197	100	395
Assign several less heavily weighted assessments rather than few heavily weighted assessments	21.5	85	8.9	35	3.8	15	9.6	38	25.1	99	31.1	123	100	395
Circulate throughout the examination room when proctoring	20.8	82	14.2	56	2.0	8	6.3	25	12.7	50	44.1	174	100	395
Ask students not to use their cell phone or any other electronic devices during a test and/or exam	20.8	82	10.4	41	2.0	8	6.3	25	10.1	40	50.4	199	100	395
Implement a lockdown of a student's internet browser for online tests and/or exams	20.5	81	21.8	86	36.5	144	6.3	25	5.3	21	9.6	38	100	395

Use text matching software (e.g., Turnitin, SafeAssign) to identify potential plagiarism	20.8	82	13.7	54	31.6	125	7.8	31	7.8	31	18.2	72	100	395
Other (e.g., check sections of student writing for plagiarism using Google, design assessments carefully, use technical methods to identify contract cheating)	90.4	357	1.0	4	0.3	1	1.0	4	2.0	8	5.3	21	100	395

Note. Bold text indicates the three most frequently used activities to prevent academic misconduct.

The most frequently encountered types of academic misconduct were plagiarism ($n = 185$, 46.8%), cheating on assignments ($n = 163$, 41.3%), and unauthorized/inappropriate collaboration ($n = 158$, 40.0%), which were observed once or more per term (see Table 8). The least frequently observed (never, less than once per term) forms of academic misconduct were impersonation or personation (e.g., tests or exams written by a third party), falsification (e.g., altering documents, photos, or results), fabrication (e.g., making up information or results), and assignments written by a third party (e.g., ghostwriting or contract cheating).

Table 8. Frequency of Observed Academic Misconduct

	Missing		Not applicable to my role		Never		Less than once per term		Once or twice per term		Several times per term		Many times per term		%	N
	%	n	%	n	%	n	%	n	%	n	%	n	%	n		
Plagiarism	22.5	89	4.3	17	3.0	12	23.3	92	25.6	101	14.9	59	6.3	25	100	395
Cheating on a quiz, test, or exam	22.0	87	7.1	28	9.1	36	31.4	124	18.5	73	9.4	37	2.5	10	100	395
Cheating on an assignment	22.3	88	3.5	14	9.1	36	23.8	94	21.8	86	13.7	54	5.8	23	100	395
Unauthorized or inappropriate collaboration (e.g., a group of students work together to complete an individual assignment)	21.8	86	6.6	26	12.9	51	18.7	74	20.8	82	13.2	52	6.1	24	100	395
Assignments written by a third party (e.g., ghost-writing or contract cheating)	22.0	87	6.1	24	39.5	156	19.2	76	9.4	37	3.0	12	0.8	3	100	395
Impersonation or personation (e.g., tests or exams written by a third party)	23.0	91	8.1	32	52.2	206	14.7	58	1.3	5	0.5	2	0.3	1	100	395
Falsification (e.g., altering documents, photos, or results)	22.8	90	7.1	28	46.3	183	19.0	75	3.5	14	1.0	4	0.3	1	100	395
Fabrication (e.g., making up information or results)	23.3	92	8.4	33	40.8	161	18.0	71	5.8	23	2.8	11	1.0	4	100	395
Other	95.7	378	0.8	3	0.5	2	1.3	5	-	-	1.0	4	0.8	3	100	395

Note. Bold text indicates the three most frequently observed categories of academic misconduct.

To understand the extent of academic misconduct observed, responses to each item of 9 items were summed (1 = *never* to 5 = *many times per term*), with higher scores indicating greater observation of misconduct (*Range* = 9 – 45, although scores < 9 were possible as some participants did not respond to some items). These scores were normally distributed, as such they were entered into a 4 (Institution: Calgary, Guelph, Manitoba, Waterloo) x 5 (Experience: < 5 years, 5-9 years, 10-14 years, 15-19 years, 20+ years) ANOVA. The analysis revealed main effects of Institution [$F(3, 281) = 2.97, p = .03, \eta^2_p = .031$] and Experience [$F(4, 281) = 3.97, p = .004, \eta^2_p = .053$]. Follow-up pairwise comparisons (LSD) indicated that respondents from the Universities of Calgary and Waterloo observed significantly more instances of academic misconduct (on average) per term than those from the University of Manitoba ($p = .02$, for both comparisons). Scores from the University of Guelph did not differ from the other three institutions ($p > .07$). Follow-up pairwise comparisons (LSD) also indicated that respondents with < 5 years and 5-9 years of teaching experience observed more academic misconduct per term than those with 20+ years of experience ($p < .007$, for both comparisons). See Figure 1.

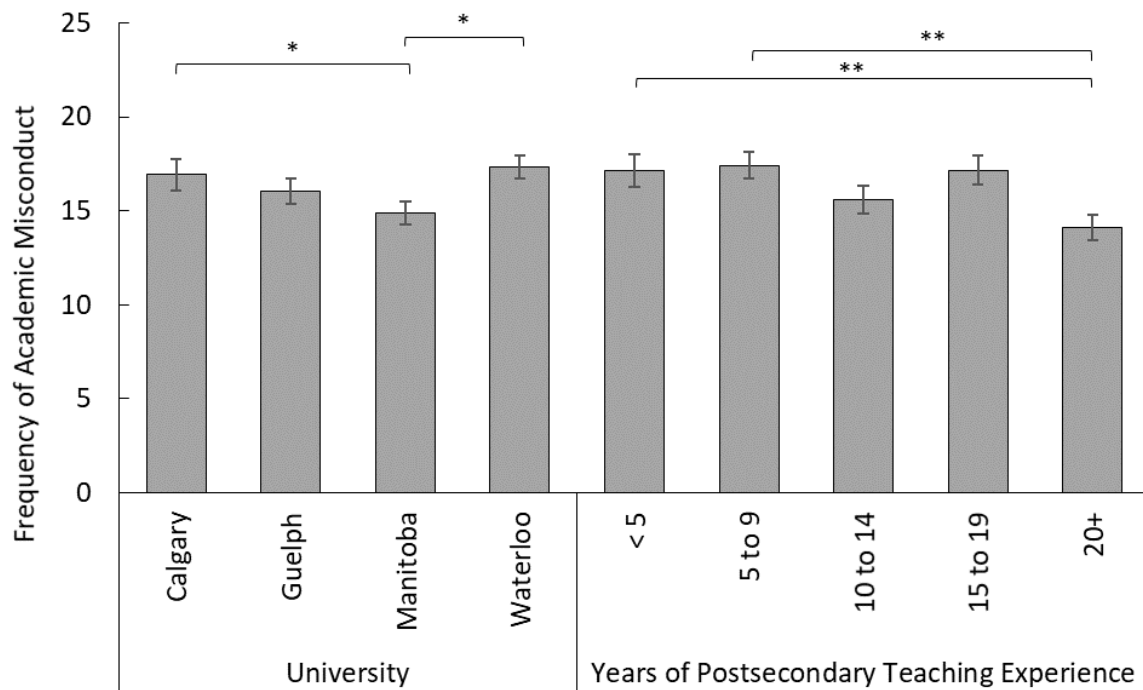


Figure 1. Mean frequency of academic misconduct observed per term by University (left) and by Years of Postsecondary Teaching Experience (right). Higher scores indicate more cases of various types of academic misconduct were observed per term. * $p < .05$, ** $p < .001$

Large percentages of respondents reported that they were involved in various activities related to handling suspected cases of academic misconduct. Unsurprisingly, identifying academic misconduct was the most common activity followed by receiving information about suspected academic misconduct from another and liaising with administration about the suspected case (see Table 9).

Table 9. Frequency of Involvement in Activities Related to Cases of Academic Misconduct (Percentages calculated using an N = 395)

Activities Related to Cases of Academic Misconduct	%	n
Receive information about suspected academic misconduct from TAs, students, staff and/or other faculty/instructors	54.2	214
Identify the academic misconduct	66.8	264
Meet with the student to discuss the suspected academic misconduct	45.8	181
Investigate the suspicion with the assistance of TAs, students, staff and/or other faculty/instructors	46.8	185
Prepare and submit a report/letter/form about my suspicions to the disciplinary authority (e.g., department head/chair and/or associate dean)	49.1	194
Liaise with the department head/chair and/or associate dean about the suspected/alleged case of academic misconduct	50.1	198
Make decisions/rulings about the suspected/alleged case of academic misconduct	18.2	72
Implement penalties such as grade changes or giving extra assignments/work	31.4	124
Monitor students who have repeated academic misconduct offences	21.3	84
Deal with appeals	12.7	50
Other (e.g., follow policy, send recommendation of consequence to decision maker, handle it directly)	12.7	50

Note. Bold text highlights the three most common activities that participants engage in when dealing with cases of academic misconduct.

To understand the extent of participants' involvement in cases of academic misconduct, each item (including "other") was scored as 1, then summed to produce total scores ranging from 1 to 11, with higher scores indicating greater involvement. These scores were normally distributed and entered into a 4 (Institution: University of Calgary, University of Guelph, University of Manitoba, University of Waterloo) x 5 (Experience: < 5 years, 5-9 years, 10-14 years, 15-19 years, 20+ years) ANOVA. The analysis revealed a main effect of Experience [$F(4, 274) = 3.18, p = .01, \eta^2_p = .044$; see Figure 2]. Follow-up pairwise comparisons (LSD) indicated that participants with < 5 years were involved in significantly fewer activities related to cases of academic misconduct than participants with more years of teaching experience ($p < .001$, for all

four comparisons).

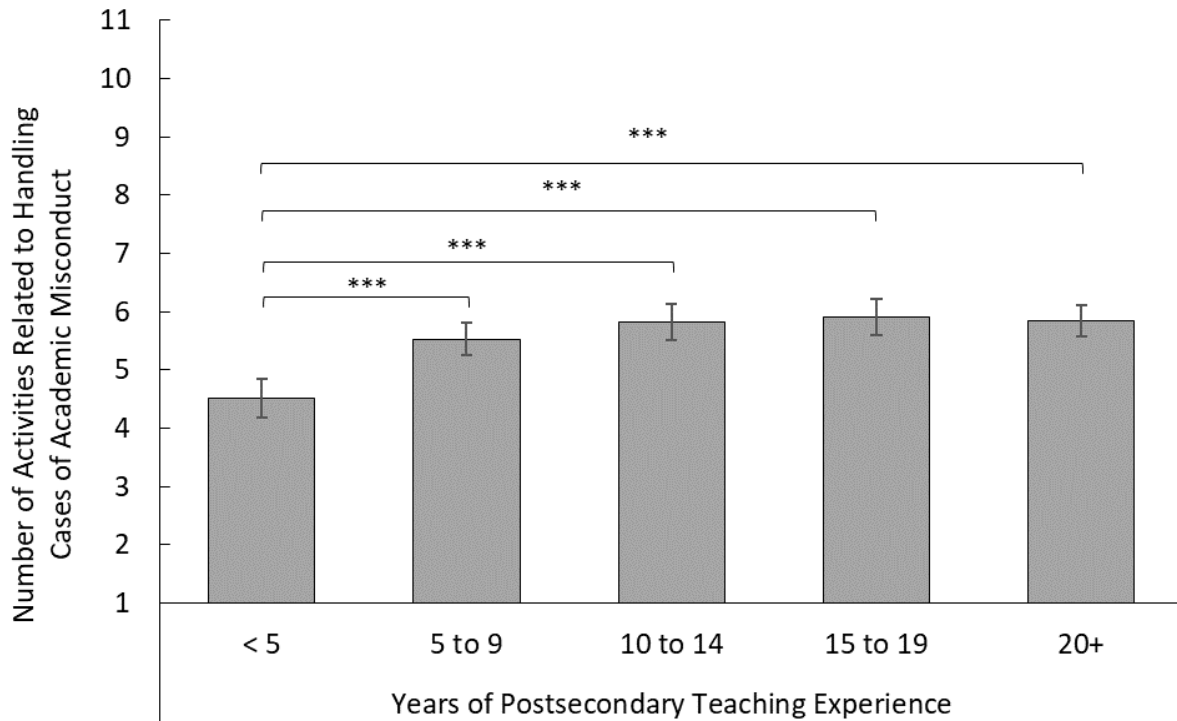


Figure 2. Number of activities related to handling cases of academic misconduct. *** $p < .001$.

Perceived Expectations for Academic Integrity

We asked participants what they perceive their department/unit chairs or supervisors, their colleagues, and their TAs expect them to do with regards to academic integrity and academic misconduct. For nearly all groups and institutions, the most common perceived expectation was to promote and demonstrate academic integrity, and this was followed by understanding how to apply the policy and follow procedures (see Table 10, Table 11, Table 12). These results strongly suggest that discrepancies between the expectations of various groups of academic staff are non-existent.

Table 10. Perceived Expectations of Department/Unit Chairs or Supervisors Regarding Academic Integrity and Misconduct

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Promote and demonstrate academic integrity	69.4	43	49.2	59	70.1	75	66.0	70	62.5	247
Know the policy on academic integrity or academic misconduct	64.5	40	48.3	58	69.2	74	63.2	67	60.5	239
Understand how to apply the policy and follow procedure	64.5	40	46.7	56	70.1	75	64.2	68	60.5	239
Use strategies to prevent academic misconduct	54.8	34	42.5	51	64.5	69	55.7	59	53.9	213
Provide a course syllabus outlining the grading of the course	62.9	39	43.3	52	64.5	69	64.2	68	57.7	228
Discuss my course expectations with students	56.5	35	39.2	47	63.6	68	56.6	60	53.2	210
Report instances of academic misconduct	64.5	40	42.5	51	67.3	72	60.4	64	57.5	227
Apply a penalty to a student found guilty of academic misconduct (e.g., grade deduction)	48.4	30	33.3	40	44.9	48	52.8	56	44.1	174
<i>Number of Participants</i>		62		120		107		106		395

Note. Bold text highlights the three most common perceived expectations around academic integrity and academic misconduct for each postsecondary institution and for all institutions combined.

For some respondents, policies and procedures were clear and unified, as a result of good communication within their departments, as one respondent notes: “We have a workflow in our department and all agreed on” (participant quotation). However, for many others, consistency in the application of policies was a recurring challenge noted by respondents throughout the survey, regardless of rank and experience. For example, one chair notes the issue from their perspective:

As a grad chair I am expected to fix and resolve problems either from the student or the instructor where one or both did not follow guidelines outlined in a syllabus.

Compliance and the lack thereof is frustrating (Participant quotation).

TA respondents expressed similar frustration at the perceived disconnect between what they were expected to do and the larger system or process of academic integrity. As one explained:

While all levels of teaching and the department expect teaching assistants to uphold academic integrity in their classrooms, there is very little information or training provided to us on what this might look like or where to report. More often than not, a case is reported to the lead professor and the TA is no longer included in the academic misconduct process. . . . The lack of information leads TAs, in my opinion, to let a lot of misconduct go (Participant quotation).

These responses suggest that there is a gap between what leaders believe instructors know (or should know) and what the instructors themselves understand.

Table 11 shows how what participants expected of their fellow faculty members or other colleagues with regards to academic integrity and misconduct.

Table 11. Perceived Expectations of Other Instructors/Faculty Member Colleagues Regarding Academic Integrity and Misconduct

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Promote and demonstrate academic integrity	72.6	45	46.7	56	62.6	67	65.1	69	60.0	237
Know the policy on academic integrity or academic misconduct	64.5	40	43.3	52	55.1	59	58.5	62	53.9	213
Understand how to apply the policy and follow procedure	62.9	39	38.3	46	53.3	57	54.7	58	50.6	200
Use strategies to prevent academic misconduct	54.8	34	37.5	45	49.5	53	53.8	57	47.8	189
Provide a course syllabus outlining the grading of the course	61.3	38	39.2	47	53.3	57	63.2	67	52.9	209
Discuss my course expectations with students	59.7	37	36.7	44	54.2	58	50.9	54	48.9	193
Report instances of academic misconduct	56.5	35	35.8	43	51.4	55	51.9	55	47.6	188
Apply a penalty to a student found guilty of academic misconduct (eg. grade deduction)	41.9	26	24.2	29	34.6	37	41.5	44	34.4	136
<i>Number of Participants</i>		62		120		107		106		395

Note. Bold text highlights the three most common perceived expectations around academic integrity and academic misconduct for each postsecondary institution and for all institutions combined.

Table 12 shows what participants expected of TAs with regard to upholding academic integrity and addressing misconduct. Of particular note is that respondents from all four institutions indicated that they expected TAs to apply a penalty to students found responsible of academic misconduct. This expectation, in the case of at least one university (i.e., the University of Calgary) stands in direct contravention of the Graduate Student Association Collective Agreement which stipulates that TAs are not responsible for investigating or addressing cases of academic misconduct (see Graduate Students' Association University of Calgary, 2020).

These results suggest the need for increased dialogue on campuses to ensure that the roles and responsibilities of TAs are clearly articulated and communicated among campus stakeholders to ensure more consistency with regards to what should (and should not) be expected of TAs with regards to academic integrity.

Table 12. Perceived Expectations of Teaching Assistants (TAs) Regarding Academic Integrity and Misconduct

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Promote and demonstrate academic integrity	59.7	37	46.7	56	37.4	40	59.4	63	49.6	196
Know the policy on academic integrity or academic misconduct	54.8	34	36.7	44	38.3	41	56.6	60	45.3	179
Understand how to apply the policy and follow procedure	50.0	31	32.5	39	34.6	37	50.0	53	40.5	160
Use strategies to prevent academic misconduct	41.9	26	35.0	42	32.7	35	42.5	45	37.5	148
Provide a course syllabus outlining the grading of the course	46.8	29	32.5	39	31.8	34	54.7	58	40.5	160
Discuss my course expectations with students	41.9	26	35.0	42	31.8	34	41.5	44	37.0	146
Report instances of academic misconduct	45.2	28	36.7	44	31.8	34	48.1	51	39.7	157
Apply a penalty to a student found guilty of academic misconduct (e.g., grade deduction)	32.3	20	22.5	27	19.6	21	35.8	38	26.8	106
<i>Number of Participants</i>		62		120		107		106		395

Note. Bold text highlights the three most common perceived expectations around academic integrity and academic misconduct for each postsecondary institution and for all institutions combined.

To explore the perceived expectations of each group (i.e., department/unit chairs or supervisors, colleagues, and TAs) further, *Expectation* scores were computed by summing the selected responses (each selection was coded as 1). Scores could range from 0 to 8. The correlations between these *Expectation* scores were examined. All three correlations were

significant. As the number of expectations from TAs increased, the number of expectations from colleagues increased [$r_s(206) = .37, p < .01$], in turn, the number of expectations from department heads or supervisors increased [$r_s(208) = .36, p < .01$ and $r_s(239) = .51, p < .01$], respectively].

Awareness of Existing Policies, Procedures, and Resources

We asked participants to rate their own level of awareness about existing institutional policies, procedures, and resources, as well as their perceptions about other stakeholders' awareness (see Table 13). The majority of respondents strongly agreed that they were aware of where to find institutional policies, who to contact about issues related to academic integrity, where to find resources to support academic integrity, and which procedures to follow. Just under half of respondents reported knowing what resources were available within their own department or unit. Although most of the most respondents to these questions indicated a high level of awareness, over 30% of the respondents did not answer these questions.

Table 13. Faculty Members Awareness of Existing Policies, Procedures, and Resources

	Missing		Strongly agree		Agree		Unsure		Disagree		Strongly disagree		Not applicable		%	N
	%	n	%	n	%	n	%	n	%	n	%	n	%	n		
I know...																
where to find my institution's academic integrity policy or academic misconduct policy	30.1	119	44.6	176	22.3	88	2.3	9	0.8	3	-	0	-	0	100	395
the procedures I am expected to follow under such policy	30.1	119	32.2	127	26.6	105	7.9	31	2.5	10	0.3	1	0.5	2	100	395
who to contact in my department/unit about academic integrity or academic misconduct	30.4	120	44.1	174	19.5	77	5.1	20	0.3	1	0.3	1	0.5	2	100	395
who to contact in my institution/senior administration about academic integrity or academic misconduct	30.1	119	41.0	162	17.5	69	8.6	34	1.5	6	0.3	1	1.0	4	100	395
what resources are available in my department/unit to promote academic integrity and reduce academic misconduct	30.4	120	24.8	98	21.5	85	15.7	62	4.8	19	2.5	10	0.3	1	100	395
where to find resources to promote academic integrity and prevent academic misconduct	30.4	120	26.3	104	25.6	101	12.4	49	3.8	15	1.5	6	-	0	100	395

Note. Bold text highlights three items that respondents perceive themselves to be most aware about academic integrity and academic misconduct knowledge.

When answering questions about their perceptions of others' awareness, respondents were less sure, but most perceived their unit chairs/department heads have high levels of awareness of policies, procedures and resources (see Table 14). More respondents reported being uncertain about their faculty and instructor colleagues' levels of awareness, which they perceived to be lower than their own (see Table 15). When asked about their perceptions of their TAs, fewer than 40% of the 395 respondents answered these questions, potentially because they do not have TAs. Of those that responded, there was more uncertainty about TAs' level of awareness, and more reported disagreeing that TAs are aware of policies, procedures and resources; more than 40% reported that they were unsure if TAs know where to find resources or that they believed TAs to be unaware of where to find resources (see Table 16). Questions about student levels of awareness were slightly different, and fewer than half agreed or strongly agreed that students are aware of where to find policies and resources and what procedures to follow (see Table 17).

Table 14. Department/unit Chairs' Awareness of Existing Policies, Procedures, and Resources.

My department/unit chairs know...	Missing		Strongly agree		Agree		Unsure		Disagree		Strongly disagree		%	N
	%	n	%	n	%	n	%	n	%	n	%	n		
where to find my institution's academic integrity policy or academic misconduct policy	32.7	129	44.3	175	11.9	47	10.6	42	-	0	0.5	2	100	395
the procedures I am expected to follow under such policy	32.7	129	40.3	159	13.4	53	12.4	49	0.8	3	0.5	2	100	395
who to contact in my department/unit about academic integrity or academic misconduct	32.9	130	45.1	178	12.4	49	9.1	36	-	0	0.5	2	100	395
who to contact in my institution/senior administration about academic integrity or academic misconduct	32.7	129	45.6	180	12.4	49	8.9	35	-	0	0.5	2	100	395
what resources are available in my department/unit to promote academic integrity and reduce academic misconduct	32.7	129	34.9	138	11.9	47	18.7	74	1.3	5	0.5	2	100	395
where to find resources to promote academic integrity and prevent academic misconduct	32.7	129	33.4	132	13.2	52	19.0	75	1.3	5	0.5	2	100	395

Note. Bold text highlights the three items that respondents perceive their department/unit chairs to have the most awareness about academic integrity and academic misconduct knowledge.

Table 15. Instructor/Faculty Colleagues' Awareness of Existing Policies, Procedures, and Resources

	Missing		Strongly agree		Agree		Unsure		Disagree		Strongly disagree		%	N
	%	n	%	n	%	n	%	n	%	n	%	n		
My instructor/faculty colleagues know														
where to find my institution's academic integrity policy or academic misconduct policy	32.9	130	18.0	71	24.1	95	23.0	91	2.0	8	-	0	100	395
the procedures I am expected to follow under such policy	32.9	130	13.7	54	24.1	95	25.8	102	2.8	11	0.8	3	100	395
who to contact in my department/unit about academic integrity or academic misconduct	32.9	130	21.8	86	24.3	96	19.5	77	1.3	5	0.3	1	100	395
who to contact in my institution/senior administration about academic integrity or academic misconduct	33.2	131	17.7	70	23.8	94	23.3	92	1.8	7	0.3	1	100	395
what resources are available in my department/unit to promote academic integrity and reduce academic misconduct	33.2	131	12.4	49	18.2	72	32.4	128	3.3	13	0.5	2	100	395
where to find resources to promote academic integrity and prevent academic misconduct	33.2	131	12.9	51	17.2	68	33.2	131	3.0	12	0.5	2	100	395

Note. Bold text highlights the three items that respondents perceive their faculty colleagues to have the most awareness about academic integrity and academic misconduct knowledge.

Table 16. Teaching Assistants' Awareness of Existing Policies, Procedures, and Resources.

My teaching assistants know...	Missing		Strongly agree		Agree		Unsure		Disagree		Strongly disagree		%	N
	%	n	%	n	%	n	%	n	%	n	%	n		
where to find my institution's academic integrity policy or academic misconduct policy	41.0	162	10.1	40	17.0	67	26.6	105	4.8	19	0.5	2	100	395
the procedures I am expected to follow under such policy	41.3	163	10.1	40	20.3	80	24.3	96	4.3	17	0.3	1	100	395
who to contact in my department/unit about academic integrity or academic misconduct	41.3	163	12.9	51	22.0	87	20.5	81	3.3	13	0.5	2	100	395
who to contact in my institution/senior administration about academic integrity or academic misconduct	41.0	162	7.6	30	11.4	45	30.6	121	7.9	31	1.5	6	100	395
what resources are available in my department/unit to promote academic integrity and reduce academic misconduct	41.0	162	7.1	28	10.6	42	33.9	134	5.8	23	1.5	6	100	395
where to find resources to promote academic integrity and prevent academic misconduct	41.0	162	7.3	29	10.1	40	33.2	131	7.1	28	1.3	5	100	395

Note. Bold text highlights the three items that respondents perceive their teaching assistants (TAs) to have the most awareness about academic integrity and academic misconduct knowledge.

Table 17. Students' Awareness of Existing Policies, Procedures, and Resources.

My students know...	Missing		Strongly agree		Agree		Unsure		Disagree		Strongly disagree		Total	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
where to find my institution's academic integrity or academic misconduct policy	32.4	128	15.4	61	24.8	98	20.3	80	6.3	25	0.8	3	100	395
the procedures to follow under such policy	32.7	129	6.7	26	21.0	83	29.9	118	8.6	34	1.3	5	100	395
who to contact about academic integrity or academic misconduct	32.9	130	8.6	34	22.0	87	29.1	115	6.8	27	0.5	2	100	395
what resources are available to promote academic integrity and reduce academic misconduct	32.9	130	7.6	30	21.3	84	27.6	109	8.6	34	2.0	8	100	395
where to find resources to act with academic integrity and prevent academic misconduct	32.9	130	9.4	37	20.0	79	29.6	117	6.3	25	1.8	7	100	395

Note. Bold text highlights the three items that respondents perceive their students to have the most awareness about academic integrity and academic misconduct knowledge.

We asked how well-informed respondents felt about academic integrity at their institutions. Of 395 respondents, 272 (68.9%) answered this question. Of those, 247 felt very or moderately informed, as seen in Table 18. There were no significant group differences in mean scores on this question between institutions, however, there were differences between length of teaching experience [$F(3,265) = 3.17, p = .025$].

Table 18. How Well Informed Faculty Felt they were about Academic Integrity

	%	<i>n</i>
Missing	31.1	123
Very informed	37.5	148
Moderately informed	25.1	99
Slightly informed	5.6	22
Not informed	0.8	3
Total	100%	395

We asked where respondents obtained information about academic integrity; and they could select multiple sources of information. Colleagues, the academic calendar, and information on their institution’s website were the most common ways of finding information (see Table 19). It should be noted that the Office of Academic Integrity does not exist at some institutions (i.e., University of Manitoba) or are primarily student-facing and generally do not provide services to instructional staff (e.g., University of Calgary). These could be two reasons why the percentage of respondents seeking knowledge from this specific source was low. In addition, not all institutions have a faculty handbook for academic integrity. The responses to this question indicate that faculty seek information from diverse sources and so it is important to provide educators with information in a variety of ways.

Table 19. Source of knowledge about academic integrity and academic misconduct policies, procedures, and resources in place at your institution (N = 395)

	<i>n</i>	<i>%</i>
Academic calendar and catalogue	150	38.0
Discussions with colleagues	189	47.8
Faculty handbook	61	15.4
Faculty newsletters	26	6.6
Faculty orientation sessions	86	21.5
Research protocols	51	13.2
University secretariat	15	3.8
Faculty workshops	81	20.5
Library resources	42	10.4
Office of Academic Integrity	81	20.8
Information on the university's website	131	33.2
Other (e.g., personal experiences with cases or from specific roles; Dean's Office or the Office responsible for academic misconduct cases and emails and beginning of term reminders.)	67	17.0

Note. Bold text highlights the three most common responses.

Support Needs for Academic Integrity

Across all four institutions, 173 (43.8%) participants indicated that reduced or distributed teaching loads (i.e., reduced class size, more TAs, and/or fewer assigned courses) would help them to better encourage academic integrity. Many participants also indicated that more campus-wide promotion and training on academic integrity (39.5%) and the availability of educational resources (i.e., tutorials, videos, quizzes, posters) to use in the classroom (32.2%) were needed to better encourage academic integrity. See Table 20.

Table 20. Supports that would better encourage academic integrity

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Educational resources	38.7	24	31.7	38	38.3	41	22.6	24	32.2	127
Professional development	21.0	13	15.0	18	18.7	20	11.3	12	15.9	63
Campus-wide promotion	45.2	28	36.7	44	42.1	45	36.8	39	39.5	156
Student resources	30.6	19	24.2	29	39.3	42	20.8	22	28.4	112
Research funding	30.6	19	19.2	23	25.2	27	20.8	22	23.0	91
Reduced or distributed teaching load	59.7	37	35.8	43	30.2	43	47.2	50	43.8	173
Technology for detection	30.6	19	10.0	12	35.5	38	12.3	13	20.8	82
Other	22.6	14	17.5	21	15.9	17	28.3	30	20.8	82
Total		62		120		107		106		395

Note. Bold text highlights the three most common responses.

Across all institutions, 132 (33.4%) participants consistently indicated that reduced class sizes would help them better prevent academic misconduct. Many participants also indicated that more training on preventing academic misconduct (27.6%) and more institutional resources (25.3%) were needed to better prevent academic misconduct (see Table 21).

Table 21. Supports that could better prevent academic misconduct

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All Institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
More training on preventing academic misconduct	35.5	22	25.8	31	29.0	31	23.6	25	27.6	109
More institutional resources you could refer students to	30.6	19	19.2	23	37.4	40	17.0	18	25.3	100
Grant funding to conduct research on academic misconduct	9.7	6	7.5	9	7.5	8	6.6	7	7.6	30
Reduced class sizes	45.2	28	28.3	34	29.0	31	36.8	39	33.4	132
More teaching assistants to assist with grading and other teaching activities	33.9	21	25.0	30	29.0	31	34.0	36	29.9	118
Fewer assigned courses to teach	24.2	15	10.8	13	10.3	11	17.9	19	14.7	58
Other	16.1	10	6.7	8	21.5	23	17.0	18	14.9	59
Total		62		120		107		106		395

Note. Bold text highlights the most common responses.

“Other” responses included penalties that are stronger and more consistently applied; more required instruction for students that is engaging and effective; better proctoring of exams; a reduced reliance on online exams; and more time to devote to these issues. Related to the issue of time and class size, one instructor noted the need for more capacity to connect with students personally:

What I feel I need most is the time to build a community/relationship with students so that they don't feel the need to go elsewhere for support. Sometimes this is difficult when there are a lot of students in my classes, but not always...sometimes the community develops despite large class sizes (Participant quotation).

The respondent added that the COVID-19 pandemic has made these connections more challenging:

Not sure how online teaching will affect the process of community building. It might be better for students who routinely miss class (they might feel a relationship by watching

the class videos?), but I worry that for most students, the lack of face-to-face engagement will make it worse. The opportunities for casual interactions are much reduced (Participant quotation).

“Other” responses included more time; more training; more tools such as software (i.e., text-matching software). Of note was that misconduct of colleagues (i.e., research misconduct) and how/where to report such infractions among academic peers was also mentioned. Faculty seem to feel that they lack appropriate ways of reporting misconduct among academic peers; in addition, responses indicated that university administration tends to overlook such issues and fails to support those who wish to report research misconduct among academic peers. The broader topic of faculty research misconduct was beyond the scope of our study, though we note that “academic integrity” was broadly interpreted to include integrity among all members of the campus community, not simply as a matter of student conduct.

Across all institutions, 129 (32.7%) respondents indicated that the availability of confrontation guidelines for tips or procedures for approaching students with concerns would help them better deal with cases of academic misconduct. Of all respondents, 111 (28.1%) indicated that having cases of academic misconduct handled by a dedicated person or unit and 106 (26.8%) indicated more educational or remedial resources were needed to assist students who have engaged in academic misconduct. Table 22 shows the institutional breakdown of responses.

Table 22. Supports that Could Help Participants Better Address Cases of Academic Misconduct

	University of Calgary		University of Guelph		University of Manitoba		University of Waterloo		All institutions	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
More training on handling academic misconduct	29.0	18	25.8	31	24.3	26	19.8	21	24.3	96
Availability of academic misconduct guidelines	35.5	22	18.3	22	23.4	25	13.2	14	21.0	83
More administrative time to handle academic misconduct	33.9	21	20.8	25	28.0	30	23.6	25	25.6	101
Having cases of academic misconduct handled by a dedicated person or unit	33.9	21	17.5	21	34.6	37	30.2	32	28.1	111
An improved academic misconduct policy	19.4	12	10.8	13	12.1	13	9.4	10	12.2	48
An improved set of procedures in place for handling cases of academic misconduct	29.0	18	15.8	19	20.6	22	19.8	21	20.3	80
More institutional resources you could refer students to	24.2	15	13.3	16	21.5	23	12.3	13	17.0	67
More educational or remedial resources to assist students who have engaged in academic misconduct	30.6	19	24.2	29	32.7	35	21.7	23	26.8	106
Availability of confrontation guidelines for tips or procedures for approaching students with concerns	43.5	27	29.2	35	34.6	37	28.3	30	32.7	129
Other (e.g., decision trees, access to an expert advisor, more appropriate or stricter consequences)	21.0	13	5.8	7	14.0	15	17.9	19	13.7	54
Total		62		120		107		106		395

Note. Bold text highlights the three most common responses.

The "Other" responses in Table 22 included the need for a better overview of the process, such as a clear decision tree on how to deal with misconduct; the need for protocols to deal with the academic misconduct of colleagues; having the handling of such cases “outsourced” to someone outside the unit; being able to phone a friend or expert for advice to work through the process; and more strict penalties. A common sentiment was that consequences for academic misconduct are not severe enough to be a deterrent.

Facilitators and Barriers to Academic Integrity

Facilitators

When asked which factors enabled the promotion of academic integrity and prevention of academic misconduct, 145 (36.7%) participants indicated that instilling academic integrity as a key value campus-wide was important. Other important facilitators included easy-to-read policies (30.6%) and dedicated offices and staff to promote academic integrity and provide education (29.4%). See Table 23.

Table 23. Factors that Enable the Promotion of Academic Integrity and Prevention of Academic Misconduct

	%	<i>n</i>
Academic integrity is a key value instilled campus-wide at my institution	36.7	145
Academic integrity is included into faculty orientation information, presentations, and events	27.1	107
Access to professional development at teaching and learning centres	28.1	111
Policies are easy to read and understand	30.6	121
Offices and/or staff dedicated to the promotion and education of academic integrity	29.4	116
Other	8.6	34
<i>N</i>		395

The "Other" responses in Table 23 included references to support from leadership and colleagues, dedicated academic integrity support, using alternative assignment formats that reduce the opportunity to cheat, and making a personal commitment to developing knowledge and leading by example.

Time constraints (35.7%), difficulty preparing case files and proving guilt (28.9%), and inconsistencies in implementing policy (27.3%) were the three most frequently cited barriers to promoting academic integrity and preventing academic misconduct (see Table 24).

The "Other" responses in Table 24 elaborated on these barriers, pointing to the link between institutional systems and academic integrity outcomes. As one sessional instructor noted,

I barely have time to just teach the content. What I need is a shift in the academic system that changes how we even evaluate students so that they can learn and cannot cheat. But how do I do that with no time, and little pay? We've standardized everything for efficiency, and students (and us) are paying the price (Participant quotation).

Other instructors indicated that they felt isolated in the enforcement of academic integrity policies, and noted that there is little to protect them from student reprisals. As one instructor explains, "There is no mechanism in place to prevent student punishing faculty taking a strong line through in course evals" (Participant quotation). Another instructor describes this barrier in even more stark terms: "Other instructors tell me that if they could do more if they did not risk being called racist or sexist for doing anything. I've given up hope, myself, and just go with the flow" (Participant quotation).

Table 24. Barriers to Promoting Academic Integrity and Preventing Academic Misconduct

	< 5 years		5-9 years		10-14 years		15-19 years		20 + years		Total	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Time constraints	19.1	27	25.5	36	19.9	28	14.2	20	21.3	30	35.7	141
Lack of understanding of the differences between academic integrity and academic misconduct	25.7	9	22.9	8	20.0	7	14.3	5	17.1	6	8.9	35
Inconsistencies in implementing policy	15.7	17	28.7	31	15.7	17	16.7	18	23.1	25	27.3	108
Fear of reprisal from students	21.7	15	34.8	24	15.9	11	10.1	7	17.4	12	17.5	69
Deterred by potential conflict and emotional/psychological investment	25.0	23	25.0	23	14.1	13	15.2	14	20.7	19	23.3	92
Lack of training on how to handle academic misconduct	35.8	24	29.9	20	11.9	8	11.9	8	10.4	7	17.0	67
Lack of offices and staff dedicated to investigating and adjudicating cases of misconduct	16.3	8	30.6	15	12.2	6	20.4	10	20.4	10	12.4	49
Lack of interest	17.2	5	27.6	8	20.7	6	17.2	5	17.2	5	7.3	29
Difficulty in preparing a case file and proving guilt	17.5	20	27.2	31	18.4	21	18.4	21	18.4	21	28.9	114
Lack of support from administration	16.4	10	26.2	16	11.5	7	23.0	14	23.0	14	15.4	61
Exclusion from conversations about what sanctions to apply	13.5	7	25.0	13	13.5	7	23.1	12	25.0	13	13.2	52
Belief that penalties are too harsh for students	29.2	7	29.2	7	20.8	5	8.3	2	12.5	3	6.1	24
Disappointment from previous academic misconduct penalties or decisions	15.4	12	26.9	21	14.1	11	23.1	18	20.5	16	19.7	78
Other (e.g., lack of enforcement, inconsistency in responses to misconduct)	12.8	6	14.9	7	12.8	6	31.9	15	27.7	13	11.9	47
<i>N</i>												395

Note. Bold text highlights the three most common responses.

To understand the extent of barriers that participants reported facing, each item selected by the participant (including “other”) was scored as 1 then summed to produce total scores ranging from 1 to 13, with higher scores indicating a greater number of barriers to promoting academic integrity and preventing academic misconduct. Total scores varied across institution [$H(3) = 11.82, p = .008$] and years of postsecondary teaching experience [$H(4) = 16.7, p = .003$]. Follow-up Mann-Whitney U tests revealed that the participants at the University of Waterloo reported a significantly higher median number of barriers than the University of Calgary [$U = 1079.5, p = .003$], which reported a significantly higher median number of barriers than the Universities of Manitoba and Guelph [$U = 1123.0, p = .003$]. See Figure 3.

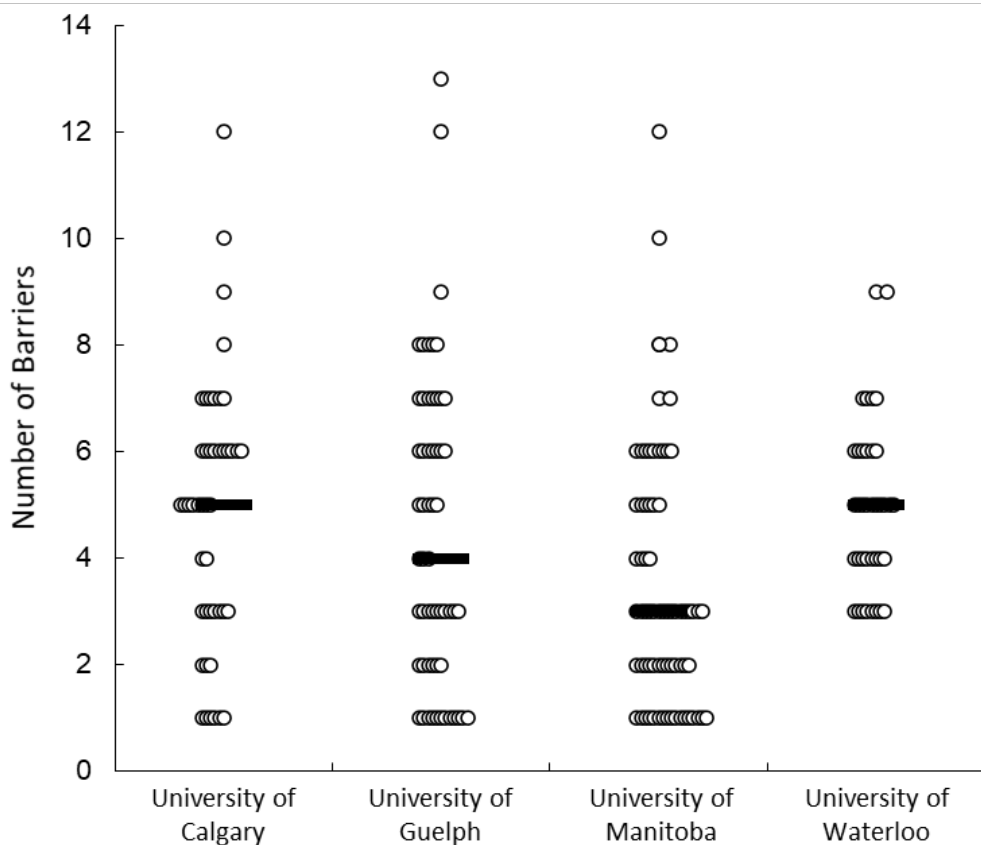


Figure 3. Number of barriers to promoting academic integrity and preventing academic misconduct by institution. Individual responses shown with a dot and bars indicate median number of barriers per institution.

Significance

Academic misconduct is a topical issue and common concern in higher education across Canada (Christensen Hughes & McCabe, 2006a). Canadian institutional policies on academic misconduct are characterized by inconsistency (Eaton, 2017). We expect this research will contribute to the body of knowledge on this topic to better support students, faculty, administrators, and policy makers to adopt guidelines and develop a culture of academic integrity across Canada.

Limitations

This research was not without its limitations. The results from the four participating institutions may not be representative of faculty members generally across Canada. The overall sample, as well as the representative samples from each institution, were small in comparison to the overall population of academic staff at the participating universities; therefore, those who responded may not represent the views of all academic staff at their respective institutions.

Intellectual Property and Authorship

In the final stages of the project the team became aware of the “Guild IP Policy.” As a result of productive conversations with the Board Chair, Michelle Fach, the team proceeded with the submission of a conference proposal. We were pleased to receive clarification that the board did not need to receive or review presentation proposals prior to submission.

Authorship will be determined according to the principles outlined in the Vancouver Protocol (International Committee of Medical Journal Editors, 1997). Acknowledgement will be provided to the D2L Innovation Guild as per requirements of the Guild IP policy.

We note that it may not be possible to use the D2L logo on all materials. For example, in the case of journal articles, journal publishers maintain their control over the design, layout, and production aspects of a manuscript after it has been accepted for publication and the inclusion of a logo may not be permitted in such circumstances. In cases where use of the logo is not permitted, the research team will make every attempt to mention the Guild through a brief, written acknowledgement. Placement of an acknowledgement (e.g., in a footnote; at the end of

an article) may be outside the control of the research team, as this part of the production phase of article publication, which is handled by the publisher.

Knowledge Mobilization

Knowledge from this project has been, and will continue to be, disseminated in a variety of ways, depending on the stage of the project. In addition to informal reports provided by research team members to their institutional guild representatives, the team has maintained continuous transparency and accountability to the board in a variety of ways throughout the project.

Our intention is to share the results in a variety of ways, focusing on open access as much as possible. We note that the research team was not provided with funding to cover conference fees or open access publishing fees. There has been an assumption that the participating institutions would cover conference fees. At the time of this report, we are in discussion with the Chair of the Guild Board regarding how to address the matter of open access publication charges (APCs). We look forward to resolving this question, as it will impact our decisions about where we submit our manuscript(s) for publication.

Research Proposal

Following the initial meeting for the project in Toronto on October 2, 2018, a research proposal was drafted and feedback was received from the Guild Board during October and November 2018. A full draft of the research proposal, incorporating revisions was submitted to the board on November 19, 2018 (see Eaton, 2018).

After reviewing the draft research proposal, the Board requested further refinements to the research questions (E. Perrault, personal communication to S. Eaton, November 26, 2018). In response, the research team refined the project plan through the remainder of 2018 and the first half of 2019. The reason for this extended period was that the research team determined that in order to address the Board's request for revisions, we would need to conduct a more thorough literature review. We presented details about how we undertook our literature review earlier in this report, and here we reinforce that the team reviewed more than 85 peer-reviewed scholarly articles published between 1980 and 2020 in exacting detail to ensure that revised research questions were evidence-informed. As a result, the next formal report to the Guild Board was the full research brief with the finalized versions of the research questions.

Research Brief

A research brief was developed in the early stages of the project to document the project background, objectives, research questions, and proposed methods for the project. This brief was finalized on May 28, 2019 (see Crossman et al., 2019) and provided to the Guild Board shortly thereafter.

Interim Reporting

It has been our understanding that the D2L administrative liaisons, Rose Kocher and Brian Cepuran, have kept the board updated during board meeting. To support these updates, the team provided explicit written updates to be shared Guild Board (via Rose Kocher and Brian Cepuran) throughout the project.

Presentations to the Guild Board

The PI provided a verbal update to the D2L Guild Board and answered questions about the progress of the project during meetings held on September 23, 2019 and September 21, 2020. Our next presentation to the board is scheduled for March 13, 2021.

Open Science Framework

With the agreement of the research team members and our D2L administrative liaisons, the project was registered on the Open Science Framework in order to align with institutional and philosophical commitments to the outputs of research being open access (see Eaton et al., 2019). The project was registered on July 15, 2019.

Presentations

We intend to present the results of our work at academic and professional conferences.

Members of the research team are dependent on their respective institutions to cover conference fees.

Going forward, we recommend to the Guild Board that conference funding be dedicated to research teams at the start of a project so that a team can proceed with selecting conferences that fit within a project budget and scope.

Publications

We intend to publish our results in an open-access format, to ensure wide access to the findings. At the time of this report, the team is currently examining the submission criteria for several journals to which we might submit a manuscript. Our focus is on journals that offer double-blind peer review.

Conclusion

We conclude by reflecting on the objectives of the project:

1. To better understand the perceptions and behaviours of faculty members in Canadian higher education institutions with regards to academic integrity.
2. To add to the small, but growing body of research on academic integrity in Canada through the execution of rigorous primary research involving the collection of data from human participants. Our goal is not simply to undertake a project, but to strive for excellence in our methods and results.
3. To test the feasibility of the collaboration itself. As this is the first university-industry partnership focused on academic integrity research, we acknowledge that the team members are pioneering new ground in this field. We have intentionally started small scale, with a longer-term view to creating a project that could be scalable.

In this report, we show our successful completion of Project Objectives 1 and 2. As a result of this project, we have an evidenced-based understanding of the perceptions and faculty members at the four participating universities with regards to academic integrity. The results of the project contribute to a growing body of scholarly and research knowledge about academic integrity in Canada. Our report demonstrates our commitment to excellence in our methods and our results. For further details on Project Objective 3, please see our companion report (Eaton et al., 2021a).

The results will be valuable to stakeholders in post-secondary institutions such as faculty members, staff, students, administrators, and policy makers. From an educational perspective, faculty can learn how to better support students to act with integrity throughout their academic careers and policies can be informed by our findings to foster a culture of integrity across academic institutions across Canada.

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Appendix A: Academic Integrity: Faculty Development Needs for Canadian Higher Education

Cite this instrument as: Stoesz, B. M., McKenzie, A., De Jaeger, A., Crossman, K., Eaton, S. E., & Garwood, K. (2020). Survey Instrument: Academic Integrity: Faculty Development Needs for Canadian Higher Education. <https://doi.org/10.17605/OSF.IO/X2VA3>

Instructions: The purpose of this survey is to gather information related to your experience with academic integrity and academic misconduct at your institution. Please answer each question to the best of your knowledge. If there are any questions you prefer not to answer, please leave it blank and navigate to the next question.

Part 1: Demographic information/affiliation and teaching responsibilities

1. Please select your institution:

- University of Calgary
- University of Guelph
- University of Manitoba
- University of Waterloo
- Other, please specify

2. Please indicate your academic rank:

- Professor emeritus/Emerita
- Full professor
- Associate professor
- Assistant professor
- Clinical professor
- Lecturer
- Sessional or fixed-term sessional instructor (e.g., one-semester at a time)
- Instructor with continuing appointment or limited term (e.g., 2-3 year contracts)
- Adjunct professor
- Graduate teaching assistant
- Other, please specify

3. I am currently:

- Tenured
- Not tenured, but on a tenure track
- Not on a tenure track (ongoing appointment)

- Not on a tenure track (temporary/fixed-term appointment)
 - Retired/Emeritus/Emerita
4. How many years have you taught at the post-secondary level?
- Fewer than 5 years
 - 5-9 years
 - 10-14 years
 - 15-19 years
 - 20 or more years
5. Which faculty or school are you primarily associated with?
- Agriculture
 - Arts/Humanities
 - Business
 - Communication/Journalism
 - Education
 - Engineering
 - Fine Arts
 - Interdisciplinary
 - Kinesiology
 - Law
 - Medicine/Health Sciences/Nursing
 - Mathematics
 - Sciences
 - Social Sciences
 - Veterinary Medicine
 - Other, please specify _____
6. What is your academic discipline? (open-ended)
7. Which populations of students do you teach?
- Undergraduate students only
 - Primarily undergraduate students
 - Equal numbers undergraduate students and graduate students
 - Primarily graduate students
 - Graduate students only
 - Other, please specify
8. Which of the following best describes your current gender identity?
- Man
 - Woman
 - Prefer to self-describe _____
 - Prefer not to answer

Part 2: Knowledge of academic integrity

9. How familiar are you with the term academic integrity?

- Very familiar
- Moderately familiar
- Slightly familiar
- Not familiar at all

10. What does academic integrity mean to you? (open-ended)

11. How familiar are you with the term academic misconduct?

- Very familiar
- Moderately familiar
- Slightly familiar
- Not familiar at all

12. What does academic misconduct mean to you? (open-ended)

RQ: What role do faculty members see themselves playing to support academic integrity?

Part 3: Faculty roles

13. How frequently do you use the following to promote academic integrity to your students? (many times per term; several times per term; one or twice per term; never)

- It is mentioned in my course syllabus
- Providing information on academic integrity
- Implementing learning activities on academic integrity
- Emphasizing the importance of academic integrity
- Discussing the academic integrity policy with my students
- Providing clear guidelines about the rules of proper citation
- Discussing areas of difficulty in assignments
- Encouraging students to speak with me if they are having difficulties.
- Meeting with students to monitor their progress and offer feedback and support.
- Providing specific guidelines for the format of written assignments and adhere to them when evaluating student work.
- Guiding students to resources in the library (e.g., research databases, citation resources)

- Guiding students to writing resources (e.g., writing center or tutors)
- Allowing students to submit drafts of their assignments for formative feedback
- Other, please specify, _____
- Does not apply, please explain _____

14. How frequently do you use the following to prevent academic misconduct? (many times per term; several times per term; one or twice per term; never)

- Assigning specific topics or providing students a limited choice of topics
- Thoroughly reading a student's work
- Using active learning pedagogies
- Preparing new assignments, tests, and/or exams for each course offering
- Requiring students to submit assignments in class or directly to me to lessen the possibility of papers/assignments being lost or stolen.
- Requiring students to submit papers/assignments via learning management systems (LMS; e.g., Blackboard, D2L, Moodle) to lessen the possibility of papers/assignments being lost or stolen
- Using a number of smaller assignments rather than heavily weighted assignments or exams
- Circulating throughout the examination room when proctoring.
- Preparing a seating plan and/or have students sit in every other seat during tests and/or exams
- Asking students to leave their bags and backpacks at the end of an aisle or at the front of the room before sitting down to write a test or exam
- Asking students not to use their cell phone or any other electronic devices during a test and/or exam
- Collecting tests and exams individually
- Placing a dash at the end of each answer and/or a line through any unused sections of exam papers or booklets to discourage any additions after tests or exams are returned to students
- Implementing a lockdown of a student's internet browser for online tests and/or exams
- Using text matching software (e.g., Turnitin, SafeAssign) to identify potential plagiarism
- Other, please specify _____
- Does not apply, please explain _____

15. On average, how often do you encounter the following? (many times per term; several times per term; once or twice per term; never)

- Plagiarism
- Cheating on a quiz, test, or exam
- Cheating on an assignment
- Unauthorized or inappropriate collaboration (e.g., a group of students work together to complete an individual assignment)

- Assignments written by a third party (e.g., contract cheating)
- Impersonation or personation (e.g., tests or exams written by a third party)
- Falsification (e.g., altering documents, photos, or results)
- Fabrication (e.g., making up information or results)
- Other, please specify _____
- Does not apply, please explain _____

16. Which of the following do you engage in at your institution when handling academic misconduct? (Please check all that apply)

- Receiving information about suspected academic misconduct from TAs, students, staff and/or other faculty/instructors
- Identifying the academic misconduct
- Meeting with the student to discuss the suspected academic misconduct
- Investigating the suspicion with TAs, students, staff and/or other faculty/instructors
- Preparing and submitting a report/letter/form about my suspicions to the disciplinary authority (e.g., department head/chair and/or associate dean)
- Liaising with the department head/chair and/or associate dean about the suspected/alleged case of academic misconduct.
- Making decisions/rulings about the suspected/alleged case of academic misconduct
- Implementing penalties such as grade changes or giving extra assignments/work
- Monitoring students who have repeated academic misconduct offences
- Dealing with appeals
- Other, please explain _____

17. Please detail any other insights you have about the role of instructors/faculty members in regards to academic integrity and academic misconduct. Please do not identify other individuals by name. (open-ended)

SQ1: What are the discrepancies between faculty members' perceptions of their roles in promoting academic integrity (or dealing with academic misconduct) and the roles others believe that faculty should play?

Part 4: Discrepancies in roles

18. With regard to academic integrity and academic misconduct, my . . . expect me to (check all that apply):

[Note: Will organize as a matrix: institution and senior administration; department/unit and chair or supervisor; instructor/faculty member colleagues; teaching assistants

(TAs); students along the top, these items along the left side of screen]

- Promote and demonstrate academic integrity
- Know the policy on academic integrity or academic misconduct
- Understand how to apply the policy and follow procedure
- Use strategies to prevent academic misconduct
- Provide a course syllabus outlining the grading of the course
- Discuss my course expectations with students
- Report instances of academic misconduct
- Apply a penalty to a student found guilty of academic misconduct

19. In your view, what discrepancies (if any) exist between your role and the role others expect you to play in promoting academic integrity? (open-ended)

20. In your view, what discrepancies (if any) exist between your role and the role others expect you to play in preventing academic misconduct? (open-ended)

SQ2: What level of awareness do faculty members have with the existing procedures, policies, and resources already in place to support academic integrity and prevent academic misconduct?

Part 5: Awareness of existing policies, procedures, and resources

21. I know: (strongly agree, agree, unsure, disagree, strongly disagree)

- where to find my institution's academic integrity policy or academic misconduct policy
- the procedures I am expected to follow under such policy
- who to contact in my department/unit about academic integrity or academic misconduct
- who to contact in my institution/senior administration about academic integrity or academic misconduct
- what resources are available in my department/unit to promote academic integrity and reduce academic misconduct
- where to find resources to promote academic integrity and prevent academic misconduct

22. My department/unit chair knows: (strongly agree, agree, unsure, disagree, strongly disagree)

- where to find my institution's academic integrity or academic misconduct policy
- the procedures to follow under such policy

- who to contact in my department/unit about academic integrity or academic misconduct
- who to contact in my institution/senior administration about academic integrity or academic misconduct
- what resources are available in my department/unit to promote academic integrity and reduce academic misconduct
- where to find resources to promote academic integrity and prevent academic misconduct

23. In general, my instructor/faculty member colleagues know: (strongly agree, agree, unsure, disagree, strongly disagree)

- where to find my institution's academic integrity or academic misconduct policy
- the procedures to follow under such policy
- who to contact in my department/unit about academic integrity or academic misconduct
- who to contact in my institution/senior administration about academic integrity or academic misconduct
- what resources are available in my department/unit to promote academic integrity and reduce academic misconduct
- where to find resources to promote academic integrity and prevent academic misconduct

24. My teaching assistants (TAs) know: (strongly agree, agree, unsure, disagree, strongly disagree)

- where to find my institution's academic integrity or academic misconduct policy
- the procedures to follow under such policy
- who to contact in my department/unit about academic integrity or academic misconduct
- who to contact in my institution/senior administration about academic integrity or academic misconduct
- what resources are available in my department/unit to promote academic integrity and reduce academic misconduct
- where to find resources to promote academic integrity and prevent academic misconduct
- Does not apply, please explain _____

25. My students know: (strongly agree, agree, unsure, disagree, strongly disagree)

- where to find my institution's academic integrity or academic misconduct policy
- the procedures to follow under such policy
- who to contact about academic integrity or academic misconduct
- what resources are available to promote academic integrity and reduce academic misconduct

- where to find resources to promote academic integrity and prevent academic misconduct

26. How and from whom did you learn about the academic integrity and academic misconduct policies, procedures, and resources in place at your institution? (Please check all that apply)

[Note: Will organize as a matrix: from whom along the top; and “how” along the left side of screen]

From Whom?

- Institution/senior administration
- Department Head/Chair
- Colleagues/Faculty Members
- Office of Academic Integrity
- University Secretariat
- Teaching Assistants
- Students
- Other, please specify _____

How?

- Academic calendar and catalogue
- Discussions
- Faculty handbook
- Newsletters
- Orientation sessions
- Research
- Website
- Workshops
- Other, please specify _____

SQ3: What supports do faculty members need to promote academic integrity?

Part 6: Supports to promote academic integrity, prevent academic misconduct, and deal with cases of academic misconduct

27. What would help you to better promote academic integrity?

- More educational resources about academic integrity for you to use in your classroom (e.g., tutorials, videos, quizzes, posters)
- More promotion of academic integrity across campus (e.g., tutorials, promotional videos, posters)

- More training on promoting academic integrity
- More institutional resources you could refer students to (e.g., writing centers, tutors, workshops on time management or study skills)
- More workshops to enhance teaching effectiveness
- Grant funding to support new teaching initiatives
- Grant funding to support professional development activities, such as attending teaching and learning conferences
- Grant funding to conduct research on academic integrity
- Grant funding to conduct research on teaching strategies used in the classroom
- Reduced class sizes
- More teaching assistants to assist with grading and other teaching activities
- Fewer assigned courses to teach
- Other, please specify _____

28. What could help you to better prevent academic misconduct?

- More training on preventing academic misconduct
- More institutional resources you could refer students to (e.g., writing centers, tutors, workshops on time management or study skills)
- Grant funding to conduct research on academic misconduct
- Reduced class sizes
- More teaching assistants to assist with grading and other teaching activities
- Fewer assigned courses to teach
- Other, please specify _____

29. What would help you to better deal with cases of academic misconduct?

- More training on handling academic misconduct
- Availability of confrontation guidelines
- More administrative time to handle academic misconduct
- Having cases of academic misconduct handled by a dedicated person or unit
- An improved academic misconduct policy
- An improved set of procedures in place for handling cases of academic misconduct
- More institutional resources you could refer students to (e.g., writing centers, tutors, workshops on time management or study skills)
- More educational or remedial resources to assist students who have engaged in academic misconduct
- Other, please specify _____

SQ4: What do faculty members see as the facilitators and barriers to using the existing academic integrity procedures, policies, and resources?

Part 7: Facilitators and barriers

30. What factors enable you to promote academic integrity and prevent academic misconduct at your institution? (Please check all that apply)

- Academic integrity is a key value instilled campus-wide at my institution
- Academic integrity is included into orientation information, presentations and events
- Access to professional development at teaching and learning centres
- Policies are easy to read and understand
- Offices and/or staff dedicated to the promotion and education of academic integrity
- Other, please specify _____

31. What factors dissuade you from promoting academic integrity and preventing academic misconduct at your institution? (Please check all that apply)

- Lack of time
- Lack of understanding of the differences between academic integrity and academic misconduct
- Inconsistencies in implementing policy
- Fear of reprisal from students (i.e., receiving poor course evaluations)
- Deterred by potential conflict and emotional/psychological investment
- Lack of training on how to handle academic misconduct
- Lack of offices and staff dedicated to investigating and adjudicating cases of misconduct
- Lack of interest
- Difficult to prepare a case file
- Difficult to prove
- Lack of support from administration
- I am excluded from conversations about what sanctions to apply
- Other, please specify _____

32. Is there anything further you would like to tell us about academic integrity and academic misconduct at your institution? (open-ended)

33. Please describe if and/or how the pandemic shifted your understanding of academic integrity.

Appendix B: REB Certificate: University of Calgary

10/24/2019

<https://iriss.ucalgary.ca/IRISSPROD/sd/Doc/0/61FT3N9NN0AK38N40TPU5VV88B/fromString.html>



Conjoint Faculties Research Ethics Board
Research Services Office
2500 University Drive, NW
Calgary AB T2N 1N4
Telephone: (403) 220-4283/6289
cfrb@ucalgary.ca

CERTIFICATION OF INSTITUTIONAL ETHICS REVIEW

The Conjoint Faculties Research Ethics Board (CFREB), University of Calgary has reviewed and approved the below research. The CFREB is constituted and operates in accordance with the current version of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS).

Ethics ID: REB19-1571
Principal Investigator: Sarah Eaton
Co-Investigator(s): Katherine Crossman
Student Co-Investigator(s): There are no items to display
Study Title: Academic Integrity: Faculty Development Needs for Canadian Higher Education
Sponsor: University of Calgary

Effective: 24-Oct-2019

Expires: 24-Oct-2020

Restrictions:

This Certification is subject to the following conditions:

1. Approval is granted only for the research and purposes described in the application.
2. Any modification to the approved research must be submitted to the CFREB for approval.
3. An annual application for renewal of ethics certification must be submitted and approved by the above expiry date.
4. A closure request must be sent to the CFREB when the research is complete or terminated.

Approval by the REB does not necessarily constitute authorization to initiate the conduct of this research. The Principal Investigator is responsible for ensuring required approvals from other involved organizations (e.g., Alberta Health Services, community organizations, school boards) are obtained.

Approved By:

[Jenny Godley, PhD, Chair](#), CFREB

Date:

24-Oct-2019

Note: This correspondence includes an electronic signature (validation and approval via an online system).

<https://iriss.ucalgary.ca/IRISSPROD/sd/Doc/0/61FT3N9NN0AK38N40TPU5VV88B/fromString.html>

1/1

Appendix C: REB Certificate: University of Guelph



RESEARCH ETHICS BOARDS

*Certification of Ethical Acceptability of Research
Involving Human Participants*

APPROVAL PERIOD: January 23, 2020
EXPIRY DATE: January 22, 2021
REB: G
REB NUMBER: 19-10-032
TYPE OF REVIEW: Delegated
PRINCIPAL INVESTIGATOR: Garwood, Kim (kgarwood@uoguelph.ca)
DEPARTMENT: Library
SPONSOR(S): University of Calgary
TITLE OF PROJECT: Academic Integrity: Faculty Development Needs for Canadian Higher Education

CHANGES:

Type	Date
Amendment	

The members of the University of Guelph Research Ethics Board have examined the protocol which describes the participation of the human participants in the above-named research project and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement, 2nd Edition.

The REB requires that researchers:

- Adhere to the protocol as last reviewed and **approved** by the REB.
- Receive approval from the REB for any **modifications** before they can be implemented.
- Report any **change in the source of funding**.
- Report **unexpected events or incidental findings** to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants, and the continuation of the protocol.
- Are responsible for **ascertaining and complying with all applicable legal and regulatory requirements** with respect to consent and the protection of privacy of participants in the jurisdiction of the research project.

The Principal Investigator must:

- Ensure that the ethical guidelines and approvals of facilities or institutions involved in the research are obtained and filed with the REB prior to the initiation of any research protocols.
- Submit an **Annual Renewal** to the REB upon completion of the project. If the research is a multi-year project, a status report must be submitted annually prior to the expiry date. Failure to submit an annual status report will lead to your study being suspended and potentially terminated.

The approval for this protocol terminates on the **EXPIRY DATE**, or the term of your appointment or employment at the University of Guelph whichever comes first.

Signature:

Date: January 23, 2020

Stephen P. Lewis
Chair, Research Ethics Board-General

Appendix D: REB Certificate: University of Manitoba



UNIVERSITY OF MANITOBA | Research Ethics and Compliance

Human Ethics
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PROTOCOL APPROVAL

TO: Sarah Eaton – Principal Investigator
Brenda Stoesz – University of Manitoba Researcher

FROM: Julia Witt, Chair
Joint-Faculty Research Ethics Board (JFREB)

Re: Protocol J2019:096 (HS23440)
“Academic Integrity: Faculty Development Needs for Canadian Higher Education”

Effective: November 19, 2019

Expiry: November 19, 2020

Joint-Faculty Research Ethics Board (JFREB) has reviewed and approved the above research. JFREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

This approval is subject to the following conditions:

1. Approval is granted for the research and purposes described in the application only.
2. Any modification to the research or research materials must be submitted to JFREB for approval before implementation.
3. Any deviations to the research or adverse events must be submitted to JFREB as soon as possible.
4. This approval is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.
5. A Study Closure form must be submitted to JFREB when the research is complete or terminated.
6. The University of Manitoba may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Manitoba *Ethics of Research Involving Humans*.

Funded Protocols:

- Please e-mail a copy of this Approval, identifying the related UM Project Number, to the Research Grants Officer at researchgrants@umanitoba.ca

Research Ethics and Compliance is a part of the Office of the Vice-President (Research and International)
umanitoba.ca/research

Appendix E: REB Certificate: University of Waterloo

UNIVERSITY OF WATERLOO

Notification of Ethics Clearance to Conduct Research with Human Participants

Principal Investigator: Sarah Elaine Eaton (Unfiled)

Principal Investigator: Sarah Eaton (University of Calgary)

Co-Investigator: Amanda McKenzie (Associate Vice-President Academic Programs)

Co-Investigator: Katherine Crossman (University of Calgary)

Co-Investigator: Brenda Stoesz (University of Manitoba)

Co-Investigator: Kim Garwood (University of Guelph)

Study coordinator: Rose Kocher (D2L (Desire to Learn))

Study coordinator: Brian Cepuran (D2L (Desire to Learn))

Co-Investigator: Amy DeJaeger (University of Manitoba)

File #: 41610

Title: Academic Integrity: Faculty Development Needs for Canadian Higher Education

The Human Research Ethics Committee is pleased to inform you this study has been reviewed and given ethics clearance.

Initial Approval Date: 01/27/20 (m/d/y)

University of Waterloo Research Ethics Committees are composed in accordance with, and carry out their functions and operate in a manner consistent with, the institution's guidelines for research with human participants, the Tri-Council Policy Statement for the Ethical Conduct for Research Involving Humans (TCPS, 2nd edition), International Conference on Harmonization: Good Clinical Practice (ICH-GCP), the Ontario Personal Health Information Protection Act (PHIPA), the applicable laws and regulations of the province of Ontario. Both Committees are registered with the U.S. Department of Health and Human Services under the Federal Wide Assurance, FWA00021410, and IRB registration number IRB00002419 (HREC) and IRB00007409 (CREC).

This study is to be conducted in accordance with the submitted application and the most recently approved versions of all supporting materials.

Expiry Date: 01/28/21 (m/d/y)

Multi-year research must be renewed at least once every 12 months unless a more frequent review has otherwise been specified. Studies will only be renewed if the renewal report is received and approved before the expiry date. Failure to submit renewal reports will result in the investigators being notified ethics clearance has been suspended and Research Finance being notified the ethics clearance is no longer valid.

Level of review: Delegated Review

Signed on behalf of the Human Research Ethics Committee



Karen Pieters, Manager, Research Ethics, karen.pieters@uwaterloo.ca, 519-888-4567, ext. 30495

This above named study is to be conducted in accordance with the submitted application and the most recently approved versions of all supporting materials.

Documents reviewed and received ethics clearance for use in the study and/or received for information:

file: CFREB Ethics Approval Certificate - REB19-1571.pdf

file: Revised 2020-01-13 UW letter to Faculty for recruitment.docx

file: FINAL SURVEY Sept 20, 2019.docx

file: UW Information_Consent letter ORE 41610_Rev_Jan_2020.docx

file: U_Waterloo_-_appendix_b_conf.pdf

file: UW Participant Feedback Letter Jan 22 2020.docx

Approved Protocol Version 5 in Research Ethics System

This is an official document. Retain for your files.

You are responsible for obtaining any additional institutional approvals that might be required to complete this study.

Team Member Bios

Researcher Biographies

Sarah Elaine Eaton, BA, MA, PhD, *Principal Investigator*. Eaton is an Associate Professor in the Werklund School of Education, University of Calgary and the inaugural Educational Leader in Residence at the Taylor Institute for Teaching and Learning. She is the co-founder of *Canadian Perspectives on Academic Integrity* and the Editor-in-Chief of the *International Journal for Educational Integrity*. Her books include *Plagiarism in Higher Education: Tackling Tough Topics in Academic Integrity* (ABC Clío, forthcoming) and *Academic Integrity in Canada: An Enduring and Essential Challenge* (Eaton & Christensen Hughes, eds., 2021).

Katherine Crossman, BA, MEd, PhD, *Study Coordinator and Co-Investigator*. Crossman worked as a research associate and sessional instructor in the Werklund School of Education, University of Calgary on this project and currently is a Researcher in the School of Global Access at Bow Valley College.

Brenda M. Stoesz, BEd, BSc(Hons), MA, PhD, *Co-Investigator*. Stoesz is the Senior Faculty Specialist (Science of Teaching and Learning & Academic Integrity) – Research, Evaluation, and Innovation, The Centre for the Advancement of Teaching and Learning at the University of Manitoba. She is the co-Editor-in-Chief of *Canadian Perspectives on Academic Integrity* and chairs the Manitoba Academic Integrity Network (MAIN).

Amanda McKenzie, BSc, MA, *Co-Investigator*. McKenzie is the Director of Quality Assurance (Academic Programs) and oversees quality assurance and academic integrity at the University of Waterloo. She is involved in academic integrity initiatives on a provincial, national and international level. Amanda is an active subject matter expert in this area and has spoken around the world. She has also published a number of articles and a book chapter in this field. Amanda has served as part of the International Center for Academic Integrity since 2016 and has been an Officer on the Board of Directors since 2018. She is also an active member of the Academic Integrity Council of Ontario (AICO) and currently serves as the Secretary/outreach Coordinator.

Kim Garwood, BA, MA, PhD, Co-Investigator. Garwood is the Research and Knowledge Mobilization Manager at the Live Work Well Research Centre at the University of Guelph. She supports a variety of community-engaged scholarship research projects and works with community partners to create meaningful knowledge-sharing resources and activities. In her previous roles in Writing Services (2007-2017) and Learning & Curriculum Support (2017-20) she provided programs, services, and resources to support students at all levels in strengthening their writing and academic strategies.

Administrative Team Member Biographies

Brian Cepuran, BAsC, is Vice President of D2L Labs. He is responsible for identifying and conducting applied research in technology-enabled teaching and learning in partnership with D2L clients and partners.

Rose Kocher, Computer Programmer/Analyst--Advanced Diploma (Conestoga College, Kitchener), PMP (Project Management Institute), is Director, Grant & Research Programs at D2L. She is responsible for establishing and leading grant and research programs in partnership with government, academic and corporate organizations.