Maintaining optimism and instilling hope:

The work of academic integrity practitioners and scholars

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Abstract

We open the second volume of the journal with a reflection on the state of our world and campuses and the importance of our work as academic integrity practitioners and scholars. We announce the evolution of the journal to include both peer-reviewed research and practitioner articles.

Keywords: academic integrity, Canada

I am driving across the prairies for spring break with my spouse and soon-to-be 9-year-old son. My son, the thinker, declares that he was born in the wrong time. He is interested in the era in which my husband and I grew up, the latter decades of the last century. My son's interest in the past is informed by the juxtaposition of old and new in his world. Our character-rich house is over 130 years old and nestled among sparkling new condo units in the trendiest area of our city. While our house shows a clear indication that we have embraced technology (smart phones, laptops, streaming media, e-readers), there is strong connection to the past (overflowing bookshelves, vinyl, antiques and several typewriters). My son's pining for what he perceives to be a simpler time had led to his decision to self-limit technology at a time when his peers are caught up in the frenzy of the video game Fortnight.

I share this story because of the meaning it provides to me about my own thoughts on the state of our world. I understand my son's feelings as I too yearn for a time that is less chaotic. However, I keenly understand that nostalgia adds a veneer to the past that emphasizes the positive and minimizes the negative. Taking comfort from the past helps when the world seems out of control. We are experiencing a deficit of strong and ethical leadership in our global world. The institutions that have long provided structures are being eroded by corruption and unethical behaviour. But when has this not been in the case over the ages?

My thoughts turn to our institutions of higher education and the recent headlines south of the border related to the college admission scandal (Kwon, 2019). I am dismayed but not surprised to hear how power and privilege buys opportunities for those who cannot compete on their own

merit. But again, while the headlines are shocking, dishonesty has taken many forms at university and college campuses for as long they have been in existence. I am concerned about the students who might begin to doubt that a virtuous path is the right one take. A responsibility for us researchers and practitioners within the area of academic integrity is to instill hope and cultivate the values that underpin integrity. We need to help students make sense of our complex world which includes navigating academic integrity issues though out their degree.

In my twenty years as a Student Affairs practitioner, I have been able to maintain an optimistic perspective. I have hope too in this generation that is now on our campuses. While I read generational studies with a critical eye, I find learning about the characteristics of various generations to be informative. And I take comfort in understanding that Generation Z are deeply committed to social issues and are not afraid of putting in hard work to address complex problem (Linder, 2019). It makes me realize that the work we do as practitioners and scholars in the area of academic integrity is more important than ever. If they are willing to put in the hard work, we must be too.

That persistent flame of optimism continues to burn for me. I hope you are able to find inspiration for your efforts through the articles in our Volume 2 Issue 1. As the world shifts and changes, so has our journal and we have now evolved to include both peer-reviewed research and practitioner articles to expand on the ways we share and mobilize knowledge around academic integrity.

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Evaluation of a Tutorial Designed to Promote Academic Integrity

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Abstract

Academic integrity violations undermine principles of integrity and the quality of education. Reducing the prevalence of dishonesty in scholarly work requires a multi-faceted approach (Stephens, 2016), which may include the implementation of e-learning tutorials. Tutorials and other brief educational interventions increase students' perceived knowledge and understanding of academic integrity and related topics (Stoesz & Yudintseva, 2018); however, it is unclear from the literature which students benefit most from completing them. In two studies, secondary (i.e., middle and high) school students were recruited to complete an e-learning tutorial and surveys about academic integrity, approaches to learning, motivation for learning, and personality. 95 students participated in an online study, but only 15 participants completed the tutorial. Knowledge and perceived seriousness of academic integrity violations increased significantly in this small sample; these changes were not evident in the remaining participants. A follow-up study with 90 students (88 of which completed the tutorial) tested in face-to-face classroom sessions confirmed the results of the first study. Moreover, the changes in perception were larger for the youngest and oldest participants compared to the middle age group, and were correlated with use of deep learning strategies and agreeableness. Overall, the findings provide evidence for the effectiveness of academic integrity tutorials, and suggest individual difference factors must be considered when designing and implementing brief educational interventions. Examining behaviour change and long-term outcomes for secondary school students, and exploring the influences of learning environment and teacher characteristics on learning the values of academic integrity are important avenues for future research.

Keywords: academic integrity, Canada, cheating, education, e-learning tutorial, intervention, secondary school, teaching strategy

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Evaluation of a Tutorial Designed to Promote Academic Integrity

Plagiarism, unauthorized collaboration on tests and assignments, and other academic integrity violations are of great concern to educators as these violations undermine principles of integrity and the quality of education (see Zivcakova & Wood, 2014). Depending on the sample of participants surveyed and the academic integrity violation studied, researchers have estimated that 49.7 - 93% of high school (Galloway, 2012; Williams et al., 2010) and 28 - 81% post-secondary students (e.g., Birks, Smithson, Antney, Zhao, & Burkot, 2018; Ma, Mccabe, & Liu, 2013) have engaged in one or more activities at least once to gain an unfair advantage over others in academic work. A recent meta-analysis revealed that the prevalence of academic dishonesty has increased significantly over the past 38 years (Newton, 2018; but see Curtis & Clare, 2017). Students may engage in questionable academic activities because they want to save time (Sisti, 2007), do not recognize these activities as dishonest (Hughes & McCabe, 2006) or serious (Newton, 2016), feel that cheating is the norm (Strom & Strom, 2007), and/or believe that the benefits of cheating outweigh potential consequences (Galloway & Conner, 2015). Moreover, situational factors (Jurdi, Hage, & Chow, 2011), personality traits (Nathanson, Paulhus, & Williams, 2006; Williams, Nathanson, & Paulhus, 2010), and approaches to and motivations for learning and unrestrained achievement (Williams et al., 2010) are important determinants of cheating behaviour. Younger age (Kisamore, Stone, & Jawahar, 2007; Nonis & Swift, 2001) and male gender (McCabe & Trevino, 1995; Whitley, Nelson, & Jones, 1999) have been also cited as risk factors for engaging in dishonest activities in scholarly work.

Creating a culture of academic integrity may be key to preventing dishonesty in scholarly work, which may be accomplished by using a tiered and multi-faceted approach that includes the implementation of school-wide education, context-specific prevention strategies, and individual remediation (Stephens, 2016). As evident from the websites of many post-secondary institutions in Canada and around the world, educational resources about academic integrity and related topics have been developed in various forms, including student support available in libraries and writing centres and teaching support for educators. E-learning tutorials are another common method for promoting academic integrity or attempting to prevent academic misconduct at the post-secondary level (see Stoesz & Yudintseva, 2018 for a review) because many are easily implemented in existing courses and can be completed as homework, potentially saving class time for other teaching and learning activities. The existing evidence (while limited) suggests that brief educational interventions increase students' perceived understanding of academic integrity policies (Morgan & Hart, 2013) and plagiarism (Barry, 2006), and reduce students' use of overlapping words and word strings in assignments (Landau, Druen, & Arcuri, 2002).

Although evidence for the effectiveness of academic integrity tutorials exists, it is unclear

which students benefit most from completing them. In the relevant literature, student characteristics (such as age) are typically presented as descriptive statistics and are not included as factors in the primary analyses (Stoesz & Yudintseva, 2018); however, there are two exceptions. Smedley, Crawford, and Cloete (2015) reported that younger (< 24 years of age) compared to older (> 24 years of age) undergraduate nursing students benefited more from an intervention designed to increase knowledge and understanding of plagiarism, but Dee and Jacob (2012) found that college year was not a significant predictor of intervention success. The two factors of age and grade level, however, are often confounded. Interestingly, the effectiveness of academic integrity tutorials has not typically been tested with secondary (i.e., middle and high) school students (Stoesz & Yudintseva, 2018). This is an important limitation in the literature as shifting attitudes and behaviours early in students' academic careers are vital as ingrained patterns of academic dishonesty can lead to questionable behaviours in future studies, work, and other areas of life (e.g., Cronan, Mullins, & Douglas, 2018; Nonis & Swift, 2001; Whitley et al., 1999). To our knowledge, the influence of other individual difference factors associated with cheating behaviour (e.g., personality traits) on academic integrity tutorial effectiveness have not been examined. Given these findings, the primary goals of the present research were to examine the effectiveness of e-learning tutorials about academic integrity with students of various ages enrolled in high school courses and determine which students benefit most from completing brief educational interventions of this type.

Study 1

Research suggests that younger students are more likely to engage in academic dishonesty than older students (Kisamore et al., 2007; Nonis & Swift, 2001), but most of the research on the prevalence of cheating and age differences has focused on the post-secondary level. A smaller literature describes cheating rates in secondary schools. Research has shown that as many as 93% of students in grades 9 to 12 have cheated at least once for any type of violation, but the rates drop when examining specific violations (Galloway, 2012). For example, when surveying students about getting answers from other students who have already taken the test, 49.7 % (grade 9) to 85.3% (grade 12) of students report this type of behaviour (Galloway, 2012). In other work, researchers estimated that 52% and 74% of adolescents admitted to cheating on tests and copying peers' homework, respectively (Josephson Institute Center for Youth Ethics, 2012). Given these statistics, it makes sense to teach secondary school students about academic integrity to correct any misconceptions they may have about (un)acceptable schoolwork and to circumvent inappropriate scholarly activities. Beginning academic integrity education early is likely to have the greatest impact. Younger students may be more flexible in their views of academic integrity because concepts of ethics, belief systems, and personal philosophy are integrated during this developmental period and are subject to shifts as new information becomes available (Damon & Hart, 1992). For older students, increases in knowledge and shifting attitudes about academic integrity may not be as dramatic following an educational intervention because beliefs about cheating as unethical may already be crystalized (Sheard, Markham, & Dick, 2003).

Age effects in knowledge increases or attitude shifts following tutorial completion may vary depending on other individual difference factors associated with academic cheating or attitudes about academic dishonesty (Jurdi et al., 2011; Minarcik & Bridges, 2015). Study orientations or approaches to learning, for example, have been shown to be predictive of academic cheating. Previous research findings suggest that university students who use evidence and logic during study and those who rely less on others to define learning tasks for them are less likely to engage in dishonest scholarly activities (Norton, Tilley, Newstead, & Franklyn-Stokes, 2001). In addition, students with low levels of self-efficacy (Finn & Frone, 2004) and less motivation to learn (Anderman, Griesinger, & Westerfield, 1998; Sheard et al., 2003) engage in more academic cheating. In a sample of 315 high school and college students, Finn and Frone found that even low performing students cheated less when they felt a high level of competency to complete tasks or accomplish goals. Lower levels of the personality traits of agreeableness and conscientiousness (Peled, Eshet, Barczyk, & Grinautski, 2019; Williams et al., 2010) have also been linked to higher self-reported academic dishonesty. These findings make sense given that lower levels of these personality traits are often defined by uncooperativeness, irresponsibility, disorganization, and impulsivity (see Hogan & Hogan, 1989; Lee & Ashton, 2014), which may give rise to poor study skills and lack of preparation for assessment leading to decisions to cheat. Given that relationships between age and gender, approaches to and motivation for learning, and personality factors with regards to cheating behaviour and attitudes, we hypothesized that these factors may also influence the degree of knowledge and attitude change following the completion of an educational intervention. We hypothesized that younger students would benefit more from an academic integrity tutorial than older students taking similar levels of courses (i.e., high school courses) because they have had less exposure to information about appropriate/inappropriate scholarly behaviours or are at earlier stages in their moral development (Bélanger, Leonard, & LeBrasseur, 2012; Damon & Hart, 1992; Sheard et al., 2003). To this end, we tested a brief e-learning tutorial designed to inform students about academic integrity, academic integrity violations and possible consequences, and support and resources to prevent academic dishonesty. We designed a study that would be naturalistic in terms of the environment that students enrolled in high school level courses may be asked to complete such a tutorial during the course of their studies (e.g., on their computers as homework). An online study with self-report measures for collecting information on pre- and post-tutorial measures of academic integrity and individual difference factors was deemed appropriate for this investigation, and allowed us to measure the extent of tutorial uptake.

Method

Participants. One hundred students (aged 17 – 32 years) enrolled in high school level courses in high schools and alternative education centres in Manitoba, Canada were recruited to participate via an advertisement shared on a social media platform. Interested students emailed the researcher and received detailed study information, a username, and a password to login to the online study delivered via a learning management system (LMS; Brightspace, D2L, Kitchener, ON). For participants aged 17 years, a parent/legal guardian provided consent via email prior to the distribution of the login information to the

participant. Ninety-five students consented to participate and received a $20 e-gift card via email upon consent. See Table 1 for demographic characteristics of the sample. The Joint Faculty Research Ethics Board (JFREB) at the University of Manitoba approved this study.

Table 1
Participant Demographics

Variable		Study 1 (*n* = 95) %	Study 2 (*n* = 90) %
Gender	Female	57.9	20.0
	Male	36.8	66.7
Age	*n*	89	81
Age (years)	*Mean* (*SD*)	24.1 (4.7)	15.3 (1.5)
	Range	17 - 32	12.8 - 17.9
Grade level	8		27.8
	10	11.6	15.6
	11	18.9	46.7
	12	45.3	
	alternative education centre	17.9	
Average grade	50-59%	1.1	-
	60-69%	6.3	1.1
	70-79%	29.4	3.3
	80-89%	32.6	34.4
	90-100%	25.3	47.8
First language	English	88.4	61.1
	Other	6.3	28.9
Location of primary and secondary school education	Canada	93.7	83.3
	Outside of Canada	1.1	6.7
Planning to pursue post-secondary education		93.7	84.4

Materials and Procedure. Participants were asked to complete one of two versions of the academic integrity tutorial[1] and respond to survey items about academic integrity, approaches to learning, motivation, demographic information, and personality. Tutorial assignment was pre-determined and linked to specific login information. As participants communicated their interest in participating in Study 1, they were randomly assigned a username and password. Half of the participants gained access to the game-based tutorial, and the other half gained access to the other text-based version of the tutorial.

Academic Integrity Tutorials. Two academic integrity tutorials (developed by the first author) that provided general overview of expectations about academic integrity at a post-secondary educational institution were used in this study. The tutorial objectives were to increase understanding of the meaning of academic integrity and its importance; categories of academic integrity violations and consequences; and supports and resources to promote academic integrity and avoid dishonesty. Both tutorials consisted of three content areas and each was followed by a 5-question quiz. If participants answered one or more questions incorrectly, they were directed to repeat study of the relevant content area. One tutorial was designed with game design elements (e.g., storyline, avatar choice, and choice in path to completion; Flowerday & Schraw, 2003) to direct attention and motivate learning (Landers & Callan, 2011) and enhance the learner experience (Yunyongying, 2014), whereas the other provided the information on text-based slides with voice over. Tutorial completion times were recorded within the LMS. As determined by timing several 'beta testers', the minimum tutorial completion time was 5 minutes, which was possible only if all content areas were skipped and all three quizzes were passed on the first try. Participants were also asked to indicate whether they completed the tutorial.

Academic Integrity Questionnaire. This questionnaire took three forms to measure engagement in and knowledge and attitudes about 24 academic integrity violations (Hughes & McCabe, 2006; Jurdi et al., 2011). In Form A, participants rated the frequency with which they had previously engaged in each violation on a 5-point scale [1 = *never* to 5 = *very often (more than 10 times)*]. Ratings were summed to create a *Cheating Index*, which could range from 24 (representing no academic dishonesty) to 120 (representing frequent academic dishonesty). In Form B, participants indicated if the statement represented an act of dishonesty (*yes, no, not sure*); the percentage of yes responses indicated greater knowledge of acts classified as violations. In Form C, participants rated the seriousness of each academic integrity violation on a 4-point scale (1 = *not serious* to 4 = *serious*), and ratings were averaged to create a *Perceived Seriousness Index*.

Approaches to Learning Scale. This six-item instrument measured use of study skills and strategies using Likert-type items (1 = *strongly disagree* to 5 = *strongly agree*; Jurdi et al., 2011). A *surface learning* factor was derived from responses to three items (e.g., "I think browsing around is a waste of time, so I only study seriously what is given out in class"). A *deep learning* factor was measured using three items (e.g., "I try to relate what I learned in

[1] Our original intention was to compare the effectiveness of the two tutorials; however, this was not feasible given the nature of the data collection as described in the results section.

one subject to that in another"). Composite scores for each factor were computed by summing the scores on the respective items.

Motivated Strategies for Learning Questionnaire (MSLQ) – Self-Efficacy for Learning and Performance Subscale. This subscale consists of eight items to measure self-appraisal of the ability to master a task (Pintrich, Smith, Duncan, & Mckeachie, 1991). Participants responded to items on a 7-point Likert scale (1 *= not at all true of me* to 7 *= very true of me*). An example of an item in this subscale is "I believe I will receive an excellent grade in this class." The average of the responses is calculated, with higher scores representing greater expectancy for success and self-efficiency (normative sample: $M = 5.47$, $SD = 1.14$). In their meta-analytic review of the MSLQ, Credé and Phillips (2011) support the notion that the motivational variables assessed by this instrument are related to learning strategies and academic performance.

Brief Version of the Big Five Personality Inventory (BFI-10). This inventory is a 10-item self-report questionnaire that measures five broad personality traits (*Extraversion*, *Neuroticism*, *Conscientiousness*, *Agreeableness*, and *Openness*) using a Likert-type rating scale (1 = *disagree strongly* to 5 = *agree strongly*; Rammstedt & John, 2007). To obtain scores for each trait, the response to one item is reverse coded and averaged with the response to a second item. The BFI-10 was adapted from the 44-item Big Five Personality Inventory and is suitable when time is limited (Rammstedt & John, 2007).

Demographic questionnaire. This questionnaire consisted of items to collect information about age, gender, first language, educational background, average grades earned over the past two years, and internal and external pressures experienced by students to achieve good grades (1 = *none*, 2 = *little*, 3 = *moderate*, 4 = *much*).

Results and discussion

Because the study data were largely non-normally distributed, non-parametric methods were deemed appropriate for the analyses. Frequencies, medians, and ranges are reported.

Cheating rates and perceptions of seriousness. Prior to examining the data for evidence of tutorial effectiveness, we calculated cheating rates in the sample and looked for relationships between Cheating Indices and other study variables. A cheating rate of 44.2% was estimated by coding participants as cheaters if they indicated cheating at least once on any single violation. The distribution of cheaters across gender was not evident [$\chi(1) = .04$, $p = .85$], but did vary across three age groups [$\chi(2) = 23.05$, $p < .001$]. We examined the cheating rates across three age groups: youngest (17-20-year-olds), middle (21-27-year-olds), and oldest (28-32-year-olds). More cheaters were found in the youngest group, and fewer in the middle and oldest groups ($p < .05$ for both comparisons; Table 2). Cheating rates per type of academic integrity violation were also estimated – the distribution of students engaged in serious cheating in written work (as defined by Hughes & McCabe, 2006) varied across age group [$\chi(2) = 6.11$, $p = .047$], with more cheaters in the youngest compared to the oldest group ($p < .05$; Table 2).

Significant age group differences in *Cheating Indices* were evident [$H = 13.70$, $p = .001$]. The youngest group cheated more often (*Mdn* = 29, *Range* = 22 – 46) than the middle (*Mdn* = 24, *Range* = 22 – 46) and oldest (*Mdn* = 24, *Range* = 23 – 47) groups [$U \geq 197.50$, $z \geq 2.28$, $p < .03$, $r \geq .30$, for both contrasts]. About 67% of participants indicated that they put "moderate" or "much" pressure on themselves to achieve high grades, and 52.3% reported that others put "moderate" or "much" pressure on them. Pressure from self was negatively correlated with Cheating Indices in cheaters [$r_s(37) = -.33$, $p = .04$], but pressure from others was positively correlated with Cheating Indices in the full sample [$r_s(88) = .24$, $p = .03$]. Openness to experience and neuroticism were positively correlated with Cheating Indices [$r_s(81) = .23$, $p = .04$ and $r_s(81) = .29$, $p = .009$, respectively]. Similar to previous findings (Jurdi et al., 2011), the relationship between Cheating and Perceived Seriousness Indices was significant in cheaters, such that the less serious participants thought the acts were overall, the more they had cheated in the past [$r_s(39) = -.56$, $p < .001$]. Neither gender [$U = 998.50$, $p = .76$, $r = .03$] or age [$H = 4.99$, $p = .08$] group differences were found in perceptions of seriousness of academic integrity violations.

Table 2

Overall Cheating Rates and Cheating Rates by Specific Academic Integrity Violation by Age Group and Study

	Study 1[a]			Study 2
Academic Integrity Violation	17-20-year-olds (*n* = 28) (%)	21-27-year-olds (*n* = 31) (%)	28-32-year-olds (*n* = 30) (%)	12.8-17.9-year-olds (*n* = 90) (%)
Overall Cheating Rates	**78.6**	**38.7**	**16.7**	**95.6**
Serious Test Cheating	**28.6**	**25.8**	**10.0**	**62.1**
Copying from another student during a test with his or her knowledge	25.0	22.6	6.7	42.0
Helping someone else cheat on a test	21.5	22.6	6.7	29.3
Using prohibited crib notes or cheat sheets during a test	21.5	19.3	10.0	14.8
Copying from another student during a test without their knowledge	21.4	9.7	6.7	39.8
Serious Cheating in Written Work	**46.4**	**29.0**	**16.7**	**77.0**
Copying a few sentences of material from an internet source without citing it	35.7	16.1	10.0	60.0
Turning in a paper copied from another student	17.8	3.2	10.0	12.4
Copying a few sentences of material from	28.5	6.4	10.0	50.0

a written source without citing it				
Turning in work done by someone else	21.4	12.9	6.7	7.8
Fabricating or falsifying a bibliography or reference list	28.5	3.2	6.7	24.4
Turning in a paper obtained in large part from a term paper "mill" or website that did charge a fee	17.9	0	10.0	5.6
Copying materials almost word for word from a written source and turning it in as your own	14.3	3.2	6.7	35.6
Turning in a paper obtained in large part from a term paper "mill" or website that did not charge a fee	10.7	0	10.0	10.1
Other				
Receiving unpermitted help on an assignment	60.7	29.0	13.3	52.2
Sharing an assignment with another student, so they have an example to work from	60.7	25.8	6.1	85.6
Working on an assignment with others when the instructor asked for individual work	50.0	32.4	6.6	62.2
Getting questions and answers from someone who has taken the test	46.4	22.6	6.7	44.9
Using a false excuse to obtain extension on a due date	39.3	13	6.7	37.8
Writing or providing a paper for another student	17.9	12.9	6.7	6.7
Providing a previously graded assignment to someone to submit as their own work	21.4	19.3	10.0	10.1
In a course requiring computer work, copying a friend's program rather than doing your own	28.5	6.5	6.7	41.1
Hiding library or course materials	28.6	6.5	6.7	17.8
Damaging library or course materials	25.9	0	6.7	18.0
Fabricating or falsifying data to complete a laboratory report	25.0	3.2	6.7	24.6
Altering a graded test to try to get additional credit	17.9	3.2	10.0	12.4

[a] In Study 1, 89 of the 95 students (93.6%) that consented to participate responded to items in the Academic Integrity Questionnaire from which we estimated cheating rates.

Overall, the cheating rate of 44% observed in this study is consistent with the lower end of the estimated prevalence reported in previous research (e.g., 49.7 - 93% of high school students; Galloway, 2012; Hughes & McCabe, 2006; Williams et al., 2010, and 18 - 81% of

post-secondary students; Birks et al., 2018; Hughes & McCabe, 2006; Ma, Mccabe, & Liu, 2013). We speculated, however, that the actual rate of academic dishonesty in our sample for Study 1 was underestimated. We suspected that a proportion of the participants responded dishonestly to survey items and/or consented primarily to acquire the incentive. Mazer, Amir, and Ariely (2008) suggest that new mediums of reward (in our case, e-gift cards) provide an opportunity for under-the-radar dishonesty in research studies. The combination of online participation and an incentive may have inadvertently created conditions that encouraged cheating behaviour within the research study itself (Mazar et al., 2008). Thus, we looked for evidence of dishonesty by examining short tutorial completion times and mismatches between these times and reports of tutorial completion. Seventy-seven participants clicked on the tutorial link in the LMS but did not complete it; 45 of these participants indicated that they did and 32 indicated that they did not (*Range of completion times*: 0 – 4.6 min). Only 15 participants completed the tutorial in 18.8 min on average (*SD* = 9.9, *Range* = 6.4 – 34.7 min). All 15 participants reported cheating at least once. These participants were younger (*M* = 19.5 years, *SD* = 2.8, *Range* = 17 – 25 years) than those who did not complete the tutorial (*M* = 25.1 years, *SD* = 4.4, *Range* = 18 – 32 years) [$t(30.06) = 6.21$, $p < .001$].

Tutorial effectiveness. For the 15 participants who completed the tutorial, knowledge ($Mdn_{pre,\ post}$ = 87.5%, 91.7%) and perceived seriousness ($Mdn_{pre,\ post}$ = 3.3, 3.8) of academic integrity violations increased significantly following tutorial completion [$T = 75.00$, $p = .04$, $r = .54$ and $T = 113.50$, $p = .002$, $r = .79$, respectively], but this was not the case for the participants who did not complete the tutorial [$T \leq 588.50$, $p \geq .80$, $r \leq .03$]. Thus, the brief educational intervention appeared effective for those who chose to complete it, but these shifts in knowledge and perceptions were not correlated with the individual difference factors that we measured. Given the small sample, we were limited in our interpretation of our findings so we modified our research protocol to address some of the study limitations and recruited a different sample of secondary students to participate in a second study.

Study 2

We sought to further explore whether an e-learning tutorial was effective in shifting students' perceptions of the seriousness of academic integrity violations in a different sample of secondary school (i.e., middle and high school) students. Because of participant accountability issues suspected in Study 1, we recruited students from local secondary schools and collected data in their schools during class time with the permission of parents, teachers, and principals for Study 2. This study protocol change was expected to increase the number of students who completed the academic integrity tutorial in its entirety, and would provide greater power for our analyses. As in Study 1, we were interested in examining the cheating rates in the sample of students and exploring the extent of the relationship between response biases and self-reported cheating behaviour. Scores derived from self-report social desirability scales can be used to determine whether survey responses represent actual behaviour or behaviours accepted by others (e.g., Miller et al., 2015). We anticipated that participants who over reported their engagement in socially desirable behaviours would have underreported participation in academic integrity

violations. Finally, as in Study 1, we sought to explore how individual difference factors contribute to greater benefits from completing an academic integrity tutorial. We expected that students with greater self-efficacy, use deeper approaches to learning, and/or engage in more collaborative learning may be more inclined to reflect upon the information presented in the tutorials and shift their perceptions of academic integrity violations.

Method

Participants. Ninety students (M_{age} *= 15.3*, *SD* = 1.5, *Range* = 12.8 - 17.9 years) enrolled in two private schools in Manitoba, Canada were recruited to participate in Study 2. Three teachers at these two schools and their principals consented to assist with recruitment of their secondary (i.e., middle and high) school students for the study and allowed data collection to occur during specified classes in their schools. Prior to the study sessions, consent forms were sent home with the students for parents/legal guardians to read and sign, and return to the teachers. On the day of testing, we provided students with unique usernames and passwords to login to the LMS. All students were required by their teachers to complete the surveys and the academic tutorial as part of their course requirements to learn about academic integrity; however, we only extracted and analyzed the data from those with parent/legal guardian consent and participant assent. Each participant received a $20 gift card at the end of the school day. See Table 1 for demographic characteristics of this sample. The JFREB at the University of Manitoba approved this study.

Materials and Procedure. The questionnaires and procedures for Study 2 were similar to those used in Study 1 with some exceptions. Two questionnaires were added [i.e., Children's Social Desirability Scale (CSD-S) and the MSLQ – Peer Learning and Help Seeking subscales; described below] and one was removed (i.e., Academic Integrity Questionnaire Form B) from the study. Some of the response options were modified in the demographic questionnaire (e.g., year of birth, grade in school) and the language in some surveys was simplified so that younger participants would be more likely to understand the questions and response options easily. Finally, only the game-based tutorial was used in this study.
Children's Social Desirability Scale (CSD-S). This 14-item scale was designed for use with children in grades 6-12 (Miller et al., 2015). Children respond with either a yes or no to each item. Each socially desirable response scored one point and were summed to create a CSD-S total score, which can range from 0 to 14. Higher scores indicated a greater tendency to respond in a socially desirable manner. Participants' biases were considered in the interpretations of the results from the analyses of the Cheating and Perceived Seriousness Indices.

MSLQ – Peer Learning and Help Seeking subscales. The Peer Learning subscale consists of seven questions designed to measure the tendency to collaborate with others and manage the support of others. An example of an item on this subscale is: "When studying, I often try to explain the material to a classmate or a friend." The Help Seeking subscale consists of eight questions designed to measure motivation and attitudes about their classes. An example of an item on this subscale is: "I ask the teacher to clarify concepts that

I don't understand well." Participants rated their behaviour on a 7-point Likert scale (*1 = not at all true of me* to *7 = very true of me*). Items for each subscale are averaged to produce composite scores (Pintrich et al., 1991). A single composite score can also be produced by averaging all 15 items; some researchers suggest that this is appropriate as the correlation between scores on these subscales is very high (Credé & Phillips, 2011).

Results and discussion

As in Study 1, we calculated cheating rates and examined the relationships between Cheating Indices and other study variables to characterize the participants in this sample. Data were analyzed using non-parametric tests.

Cheating rates and perceptions of seriousness. A cheating rate of 95.6% was estimated by coding participants as "cheaters" if they indicated committing at least one academic integrity violation. There was an equal distribution of cheaters across schools [$\chi(1) = .34$, $p = .56$], gender [$\chi(1) = .01$, $p = .93$], and age group [$\chi(2) = .22$, $p = .90$]. The *Cheating Indices* across three age groups (12-13-year-olds, 14-15-year-olds, 16-17-year-olds) were also comparable [$H = 4.14$, $p = .13$]. The lack of evidence for group differences in cheating rates and Cheating Indices is not surprising given the high estimated cheating prevalence overall. Next, we examined the relationship between social desirability scores and the Cheating Indices. A significant negative correlation between the two variables emerged [$r_s(86) = -.42$, $p < .001$], suggesting that the students who were more likely to respond in socially desirable ways were less likely to report engagement in academic cheating. Consistent with previous reports (see Paulhus & Dubois, 2015 for a review), Cheating Indices were negatively correlated with average grades earned over the past two years [$r_s(79) = -.26$, $p = .02$]. An estimated 92.6% of participants indicated that they put "moderate" or "much" pressure on themselves to achieve high grades, and 53% indicated that others put "moderate" or "much" pressure on them. Pressure from self or others was not significantly correlated with Cheating Indices [$r_s(79) \leq -.17$, $p \geq .13$]. The Agreeableness trait was negatively correlated with Cheating Indices [$r_s(63) = -.27$, $p = .03$].

The relationship between Cheating and Perceived Seriousness Indices was significant [$r_s(88) = -.50$, $p < .001$], such that those who perceived acts of academic dishonesty as less serious were more likely to have cheated more during their studies. There was no evidence of gender ($U = 512.00$, $z = -.23$, $p = .819$, $r = .03$) or age group ($H = 3.07$, $p = .22$) differences in perceptions of seriousness prior to completing the tutorial.

Tutorial effectiveness. Eighty-eight participants completed the tutorial; their ratings of perceived seriousness of academic integrity violations increased significantly following tutorial completion ($Mdn_{pre,\ post} = 3.46, 3.75$; $T = 2{,}664.00$, $p < .001$, $r = .76$). Next, degree of seriousness perception shifts was calculated by subtracting pre- from post-tutorial Perceived Seriousness Indices. There were significant differences in the degree of seriousness perception shifts across the three age groups ($H = 6.94$, $p = .03$). Stepdown follow-up analysis showed that the perceptions of the youngest (12-13-year-olds) and oldest (16-17-year-olds) participants changed more than the perceptions of the 14-15-

year-olds ($p < .05$). Grade differences ($H = 6.44$, $p = .04$) mirrored the age group differences, with perceptions of the students in grades 8 and 11 shifting more than the perceptions of grade 10 students ($p < .05$). There were no gender or school differences present in intervention effectiveness ($U \leq 670.00$, $p \geq .26$ for both comparisons). Similar shifts in perception were also observed for participants who indicated their first language was English compared those who indicated their first language was not English ($U = 677.00$, $p = .91$).

Correlations between the degree of seriousness perception shifts and the other composite variables that we calculated in this study are displayed in Table 3. Of note is the correlation between the degree of seriousness perception shifts and CSD – S [$r_s(80) = .307$, $p = .006$]. Students prone to providing socially desirable responses (or being less truthful) were impacted more by completing the tutorial than students who provided less socially desirable responses (or were more truthful). It could be argued that students who desire to be seen in the best possible light are more malleable and/or adaptive following an intervention such that they can improve upon the very trait that they strive for – integrity and social desirability (we come back to this point in the General Discussion). The degree of seriousness perception shifts were significantly correlated with the Cheating Indices [$r_s(82) = -.809$, $p < .001$]. Thus, the impact of the tutorial on attitudes about academic integrity violations was smaller for students who engaged more frequently in dishonest activities in their scholarly work.

Table 3
Correlations between the Degree of Shifts in Perception of the Seriousness of Academic Integrity Violations and Individual Difference Factors

		1	2	3	4	5	6	7	8	9	10	11	12
1	Degree of perception shifts	-											
2	Children's Social Desirability Scale (CSD-S)	.31**	-										
3	Cheating Index	-.81**	-.42**	-									
Approaches to Learning													
4	Surface learning	-.20	-.17	.24*	-								
5	Deep learning	.27*	.28*	-.27*	-.01	-							
Motivated Strategies for Learning Questionnaire (MSLQ)													
6	MSLQ – Self-efficacy	.20	.04	-.17	.13	.34**	-						
7	MSLQ – Help seeking	.16	.05	-.04	-.01	.15	.21	-					
8	MSLQ – Peer learning	.21	.08	-.09	-.30	.26*	.38**	.46**	-				
Big Five Inventory – 10 items (BFI-10)													
9	Openness to experience	-.05	.09	-.04	.02	.21	.12	.36**	.18	-			
10	Conscientiousness	-.10	-.08	.08	-.04	-.20	-.18	-.14	.09	-.13	-		
11	Extraversion	.21	.24	-.15	-.04	.31*	.39**	.46**	.44**	.24	.97	-	
12	Agreeableness	.35**	.09	-.27*	.03	.22	.45**	.37**	.39**	.03	-.10	.63**	-
13	Neuroticism	.05	.01	-.11	-.04	-.02	-.16	-.10	-.24	.02	-.45**	-.50**	-.44**

Note. n = 64-82. *p < .05, **p < .01

General Discussion

The primary goals of the present studies were to examine the effectiveness of an e-learning academic integrity tutorial with students enrolled in secondary school, and characterize those who benefit most from completing an intervention. In general, we found evidence that the academic integrity tutorial that we developed was effective. Participants' knowledge (Study 1) and perceptions about the seriousness of academic integrity violations (Studies 1 and 2) shifted significantly following completion of the brief educational intervention. In the second study, perception shifts were greatest for the youngest and oldest participants, for those who generally took a deeper approach to learning, and for those with higher levels of the agreeableness personality trait. Furthermore, higher cheating rates were observed in younger compared to older groups of participants, and that when not held accountable, participants (in our first study) took the opportunity to cheat within the study.

The evidence we found for intervention effectiveness is in line with the previously reported findings that e-learning tutorials about plagiarism avoidance increased post-secondary students' perceived knowledge about academic integrity and plagiarism (Jackson, 2006; Kirsch & Bradley, 2012; Liu, Lo, & Wang, 2013). Additionally, we observed age effects, specifically, the youngest participants appeared to have gained the largest benefits as a result of completing the intervention. This is valuable information as it serves as a reminder that early academic integrity education is vital to student development. Because the adolescent years promise both positive and negative outcomes "depending on the kind of care and opportunities that adults . . . afford young people at home [and] in school," middle school educators have a tremendous responsibility to "cultivate positive youth development" (Roeser, Eccles, & Sameroff, 2000, p. 446). This includes supporting the development of appropriate decision-making skills and honesty in scholarly activities. Tutorials about academic integrity can support these efforts if they serve as a catalyst for deeper discussions and encourage students to ask their teachers clarifying questions when expectations about studying and schoolwork are unclear. Further, by encouraging thoughtfulness about scholarly activities and helping students to make connections between their honest behaviours and learning early in their academic careers, teachers may find that students take fewer shortcuts in their studies. While we limited our investigation to changes in knowledge, perceptions, and attitudes, there may be longer term benefits as a result of completing the intervention, especially when combined with other teaching-learning activities (see Dembo & Eaton, 2000 for discussion of learning strategies).

Similar to previous findings (Jurdi et al., 2011), more academic cheating was associated with the perception that dishonest scholarly activities were less serious in our samples of participants. Given this, shifting students' perceptions about the severity of academic integrity violations using a tutorial may also support behaviour change; however, one-off academic integrity tutorials should not be relied on as the sole source of information to promote academic integrity and reduce academic dishonesty. In an effort to further

educate secondary school students, we designed a post-tutorial workbook consisting of reflective activities to stimulate thinking about the importance of acting with integrity. The teachers of the students in our second study planned to use the workbook to encourage group discussion of the concepts in the tutorial to gain a deeper understanding of the activities they should avoid and those they can engage in to learn and be successful in their schoolwork. In future work, it would be interesting to examine the impact of activities that compliment academic integrity tutorials on behaviour change in students. In addition to continued learning about academic integrity, educators must create meaningful and authentic learning opportunities in other content and skill areas so that students are encouraged to be directly involved in their learning processes rather than being "passive recipients of knowledge" (Zivcakova & Wood, 2014, p. 195).

Our finding that students who scored higher on the deep approach to learning factor were affected more positively by the intervention fits with the profile of a deep learner. Deep learners share an intrinsic interest and wish to maximize their learning, whereas surface learners have relatively narrow learning targets often accompanied by a fear of failure (Biggs, Kember, & Leung, 2001). The definitions of deep and surface learners are further supported by our findings that higher deep learning scores were associated with less academic cheating, and higher surface learning scores were associated with more cheating. Additionally, the correlations between self-efficacy and deep learning scores, and the fact that higher scores on these measures were associated with less academic dishonesty are consistent with prior research showing that individuals with high self-efficacy "engage in and persist with learning behaviors that maximize the degree to which learning occurs" (Credé & Phillips, 2011, p. 337). Although determining the characteristics of the students who benefit most from an educational intervention is important, characterizing those students who gain less is key to improve teaching-learning resources. To this end, future academic integrity intervention research should continue to pursue motivators that play a role in creating a shift in students' understanding and appreciation for academic integrity.

In addition to the individual differences in approaches to and motivation for learning, we found a positive correlation between the agreeableness personality trait and greater shifts in perceptions of seriousness of academic dishonesty following tutorial completion. This finding makes sense given that students high in agreeableness tend to cooperate/comply with and assist others in order to maintain harmony (Mccrae & Costa, 1987), and are more willing to make an effort in learning in response to external demands (Vermetten, Lodewijks, & Vermunt, 2001) (Bidjerano & Dai, 2007). In the work setting, employees described as agreeable (and conscientious and extraverted) are strongly motivated to improve their work through continued training (Kueh & Ahmad, 2014; Naquin & Iii, 2002). Thus, it is possible that in our participants' willingness to learn new information about academic integrity resulted in shifts in perceptions in order to maintain positive relationships with other people, such as their parents and teachers. In the future, it would be interesting to examine the relationship between agreeableness and learning about

academic integrity more closely in a larger sample and look for other factors that mediate this relationship.

As part of our investigation of tutorial effectiveness, we collected data on cheating to understand the previous scholarly behaviours of our participants. The estimated cheating rates in our samples were relatively high but in line with previous reports of middle and high school (e.g., Galloway, 2012; McCabe & Pavela, 2004 in Strom & Strom, 2007), university, and college students (e.g., Birks et al., 2018; Ma et al., 2013). In middle school, the rate of cheating in written work (e.g., cut-and-paste plagiarism) might be higher if students have not yet learned the citing and referencing skills expected in later studies. We also found interesting correlations between cheating behaviour and certain personality traits. For example, students who were more open to experience and neuroticism (Study 1) reported more cheating and those who were more agreeable reported engaging in less cheating (Study 2). The correlation between the extent of cheating behaviour and agreeableness in our study is a new finding as previous research has found weak evidence for this association. Neuroticism often receives more attention in research on academic dishonesty as evidence suggests that it is a better predictor of scholastic cheating than other personality traits (Nathanson et al., 2006; Williams et al., 2010).

Somewhat surprisingly, we calculated a relatively high rate of contract cheating in our samples; 10 – 18% of participants (depending on the specific sub-sample) reported that they had turned in papers obtained from 'paper-mill' and 'tutoring' websites. These rates are higher than the averages of 2% and 3.5 – 6.9% reported previously for high school (Sisti, 2007) and higher education (Curtis & Clare, 2017; Mccabe, 2005; Newton, 2018), respectively. Given these previous prevalence estimates (specifically the estimate of 3.5%), Eaton (2018) suspects that well over 70,000 post-secondary students in Canada are engaging in contract cheating at any given time. Contract cheating is a particularly disturbing form of academic dishonesty as it suggests "deliberate, pre-planned, and intentional" (Newton, 2018, p. 2) deception during the assessment process. Even more disturbing is that many students who have engaged in this type of academic integrity violation will decide to submit another purchased paper. Indeed, Curtis and Clare (2017) found that 62.5% of university students who had previously chosen to purchase papers for submission were repeat offenders. Prevalence estimates of contract cheating in secondary schools are rarely reported in the peer-reviewed literature (to our knowledge), and our findings suggest that the problem needs to be studied further and steps must be taken to address this problem well before students enter middle and high school. An important challenge for educators is to make continued and deliberate efforts to detect work that has not been completed by the student being assessed. Being familiar with individual student's work is necessary so that irregularities will be noticed more easily (Eaton, 2018; Rogerson, 2017) and assessment will be fair and appropriate. Rogerson (2017) further stresses revisions or creation of new assessments for each offering of a course, and checking file-sharing websites for matches on assessment questions.

Limitations and Future Directions

While the results of the present studies provide evidence for the effectiveness of educating students about academic integrity, we acknowledge several limitations of this research. First, we collected students' perceptions of the seriousness of violations of academic integrity before and after tutorial completion, but did not examine changes in knowledge or skills, transfer of newly learned knowledge and skills to another setting, or longer-term positive impacts on students' learning and success. The next step in tutorial evaluation would be to survey students at a later date to determine if shifts in perceptions remained stable and engagement in inappropriate activities in scholarly work decreased. Although well-developed self-report measures are efficient and valid (Paulhus & Vazire, 2007), collecting other sources of information can provide a more well-rounded picture of changes in knowledge, understanding, and behaviours with regards to academic integrity. For example, interviewing teachers and parents about their students' engagement in academic integrity violations and comparing the quality (or "cheating") of students' assignments before and after an educational intervention would be important to assess longer term impacts on students' understanding of the concepts introduced in the tutorial. A second limitation is that we did not explore the influence of the learning environment on the effectiveness of the academic integrity tutorial. Given that post-secondary students are less likely to see the importance of being honest in their scholarly activities when educators ignore the cheating behaviour (McCabe & Pavela, 2004), it would be interesting to ask K-12 teachers and teachers who support learners in alternative education centres about the importance they and their schools place on academic integrity, and the role they play in fostering integrity and dealing with academic integrity violations. Examining specific teacher and institutional characteristics may shed additional light on the degree of tutorial effectiveness. Orosz et al. (2015) reported that instructor characteristics had an indirect effect on the occurrence of academic integrity violations in a sample of 267 third-year psychology students in the UK, such that the lack of enthusiasm shown by instructors was linked to decreased intrinsic motivation and more cheating behaviours. Thus, investigating whether the enthusiasm-motivation relationship holds in the primary and secondary school setting and how this relationship affects intervention effectiveness would provide valuable information for the continued improvement of learning activities to promote academic integrity.

A third limitation was the low tutorial uptake in the first of our two studies. We found evidence that a significantly large proportion of participants were dishonest within the study itself. As we described above, the online testing environment and the honorarium may have created conditions that encouraged participants to take shortcuts. While this was discouraging, it prompted us to collect information on participants' social desirability biases in our second study. Here, we found moderate correlations between the tendency to report more inflated self-images and less academic cheating, and greater shifts in the perception of the seriousness of academic dishonesty. These associations may suggest that some participants were dishonest in their reporting of their previous academic integrity violations; this possibility must be considered when interpreting our findings. Exploring

participants' dishonesty in research, especially in academic integrity studies, may be an interesting avenue for future research. Using theories of self-concept maintenance, for example, may provide a useful framework for explaining dishonest research participation. Mazar et al. (2008, abstract) suggest that "people typically engage in dishonest behaviors and achieve external benefits from dishonesty, but only to the extent that their dishonest acts allow them to maintain a positive view of themselves in terms of being honest". Thus, it would be interesting in intervention research to examine participants' behaviours in various testing conditions, and determine the influence of the specific language used in study instructions ("Please don't be a cheater in this research study" vs. "Please don't cheat in this research study") on the degree of dishonesty (e.g., Bryan, Adams, & Monin, 2013).

Conclusions

The evidence that e-learning tutorials about academic integrity are effective is emerging, in terms of short-term attitude shifts as we have shown in the present studies, and perceived knowledge increases as reported elsewhere (Jackson, 2006; Kirsch & Bradley, 2012; Liu et al., 2013). However, to strengthen the positive effects of academic integrity education, these educational interventions should not be used in isolation. Other strategies to support the content of these tutorials and to promote a culture of academic integrity in the school are also necessary to prevent academic integrity violations. Moreover, testing the effectiveness beyond attitude shifts and perceptions of knowledge and examining long-term student outcomes is important to advance the development of academic integrity tutorials and other educational interventions. Our findings are also significant in that, to our knowledge, a Canadian study in this area has not been previously published. Our work directly answers the call made by Canadian researchers to conduct research on the effectiveness of educational interventions for promoting academic integrity in Canada (Stoesz & Yudintseva, 2018), and to examine academic integrity issues more broadly in Canada (Eaton & Edino, 2018).

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U Have Integrity: A Gamified Approach to Academic Integrity

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Abstract

In this article I discuss the development and initial implementation of a workshop using a gamified approach to academic integrity. The 50-minute workshop involved a scenario-based card came. The audience was university staff in Student and Enrolment Services, which included, but was not limited to the Registrar's Office, Student Services, and Student Wellness.

Keywords: academic integrity, game-based learning, game, gamification, workshop, values, Canada

A few weeks back ago our Vice-Provost, Student Experience, asked me if I would conduct a workshop on academic integrity as part of the professional development day for Student and Enrollment Services staff at the University of Calgary. I agreed immediately.

Session Description

As I thought about what to write up for the participants' program, my mind went back to the Good Practice Note championed by Tracey Bretag (TEQSA, 2017), which called for multi-stakeholder approaches to upholding integrity. Everyone at an educational institution plays a role in upholding integrity in some way. With that in mind, I composed this workshop description:

> When we hear "academic integrity" you might think of students or professors, but you play an important role in it, too! In this interactive session you will explore what integrity means in education broadly, at the University of Calgary and how you fit in. Join us for a thoughtful, strengths-based session on integrity. (Duration: 50 minutes).

A Eureka Moment

Then, I got stumped. I realized that I knew how to do workshops and sessions for faculty members, teaching assistants and even students, but I found myself perplexed about how to deliver this content for university staff who work in areas such as the Registrar's Office, Enrollment Services, Student Services, and Student Wellness. I recognized that these people may deal directly or indirectly with issues relating to academic integrity in their jobs, but the way in which they were involved differed from teaching staff.

With only a few days before the workshop, I still had nothing prepared. Then it hit me. I thought: What if I used a gamified approach?

I recalled workshops I had done with students in which I had introduced them the *Plagiarism Game: Goblin Threat* developed at Lycoming College (Broussard & Oberlin, n.d.), which is a free online game involving goblins who want to compromise academic integrity at the college. I found that the game not only offered students an opportunity to learn about academic integrity, it also created an environment in which students felt comfortable asking questions. I found playing the game kept the focus on learning in a way that was both productive and fun.

My mind was drawn back to various bits of knowledge I had about the gamifying education. I reflected on Jane McGonigal's (2010) TED talk about how games can make a better world. I rifled through my bookshelf to find my copy of *Gamestorming: A playbook for innovators, rulebreakers and changemakers* (Gray, Brown, & Macanufo, 2010) and started re-reading it.

Then, I began looking for gamified examples of academic integrity. I found the work of White (n.d., 2018) particularly helpful, as well as that of Gilliver-Brown and Ballinger (2017). I noted that these references were new, which indicated to me that there may be a growing interest in game-based approaches to teaching academic integrity. All of this was inspiring, although the irony was not lost on me that I was in the same situation as students who leave their assignments to the last minute because they feel overwhelmed or unsure of themselves. I had four days to pull together a workshop and I wanted it to be meaningful and engaging.

My mind wandered back to a workshop on gamification I took a few years ago offered by Dr. Beaumie Kim, a colleague at the University of Calgary. Kim has deep understanding of gamification that she has shared at numerous conferences and workshops over the years (Kim, 2014; Kim, Gupta, & Clyde, 2015; Marasco, Gatti Jr., Kim, Behjat, & Eggermont, 2017). In the workshop offered by Kim and her graduate students, we developed a simple game in an afternoon using cards and paper. The concepts could be applied to more sophisticated games, but one objective of the workshop was to teach us *about* game design through the *process* of game design. The result was a simple but effective card came. At the time, I thought it was interesting and engaging, but it was not until I had agreed to present this workshop for staff that I had an opportunity to revisit the concepts and principles of game-based learning.

A Gamified Approach

I used the Fundamental Values of Integrity (ICAI, 2014) as a launching point to develop the game. I started by introducing the values of honesty, trust, fairness, respect, responsibility and courage to the participants. Then, we used the values to discuss a scenario involving a breach of integrity. Participants spoke to the scenario through the lens of a particular value,

based on a random card draw. From there, we used the cards to talk through a number of different scenarios, which were presented as "Enigma cards".

The entire game pack consisted of Fundamental Values of Integrity handout (ICAI, 2014); Values cards and Enigma cards. The Engima cards ended up having a fair amount of explanation written on the back, so instead of being actual cards, they ended up looking more like handouts.

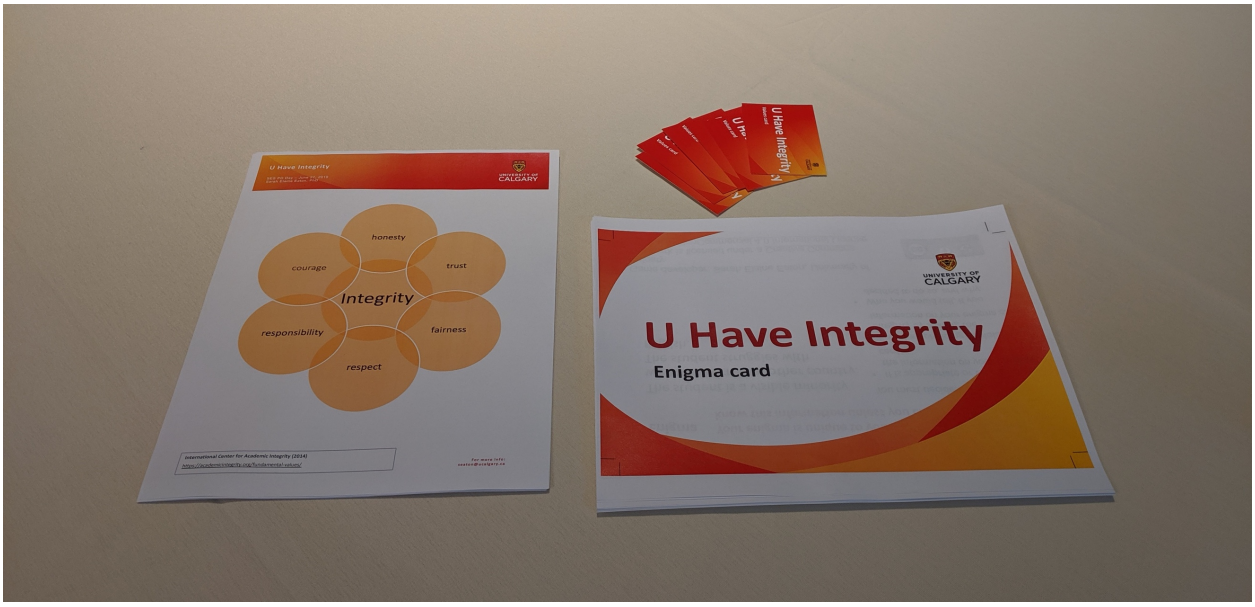

Figure 1. U Have Integrity game pack

We concluded the fifty-minute workshop with a discussion about how we, as members of the university community, enact the fundamental values of integrity in different ways in our work, and how sometimes the values can mean different things. For example, an individual who works as a psychologist at the Student Wellness Centre may have a responsibility to keep details about what is discussed at a counselling appointment with a student confidential. When the student is also a patient, the notion of responsibility manifests in a very different way for a health care provider than it does for a student or an educator. Every value can be interpreted and enacted in a multitude of ways.

We talked through some of these complexities during the game. The participants reached the conclusions that I had hoped they would reach. Firstly, integrity is not an absolute concept and secondly, the fundamental values of integrity can be enacted in different ways, depending on the role and circumstances of the individuals involved.

Next Steps and Conclusions

As I reflect on this experience, I am glad I chose to try a gamified approach. Similar to using the *Plagiarism Game: Goblin Threat* (Broussard & Oberlin, n.d.) with students, I found using this simple game created an opportunity for participants to talk about academic integrity in a way that was engaging and fun, without being trite. It kept the atmosphere light, while giving participants a chance to reflect on the values, their role in the institution and how they can uphold and enact the values of integrity in their own day-to-day work.

I chose to document my experience with the game development and its first implementation here, but by no means do I feel that the game is perfect or even polished. I have another workshop coming up soon and I expect I will spend time tinkering with the game and changing it up for the next group, which happens to be a completely different audience: pre-service teachers taking their first introductory course in their Bachelor of Education program.

Even from this initial trial, I am inspired to continue exploring how to use game-based approaches to teach concepts and values related to academic integrity. I look forward to more opportunities to experiment with game design in the future.

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Is this in my contract?:

How part-time contract faculty face barriers

to reporting academic integrity breaches

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Abstract

A holistic approach to academic integrity in higher education requires a concerted and integrated effort of all stakeholders across campus, yet the tiered faculty system of most institutions may be at odds with comprehensive approaches. This paper explores how part-time contract faculty (also known as "sessionals" in Canada) face barriers to reporting student breaches of academic integrity. Drawing on scholarly literature, as well as my experiences as a sessional instructor, I explore this topic. In particular, I note that the time commitment and emotional investment involved in reporting transgressions according to institutional protocol can be especially burdensome for part-time instructors. I conclude with recommendations to better support sessional instructors to foster academic integrity.

Key words: academic integrity, Canada, contract faculty, part-time faculty, contingent academic staff, sessionals, academic misconduct, academic dishonesty, higher education

Background

A culture of integrity in higher education can only thrive with an integrated network of support across campus. It is the combined responsibility of administrators, students, and all tiers of faculty; however, it is frontline instructors who often bear the burden of preventing, recognizing, and responding to breaches of institutional academic integrity policies (TEQSA, 2017).

Essentially there are three tiers of academic faculty: tenured/tenure-track who are considered permanent employees; instructor-track (often called non-tenure track), who may be permanent or limited term employees, often with renewing contracts of 2-3 years; part-time instructors (often called sessionals in Canada and contingents or adjuncts in the US) who work on a semester-to-semester basis, usually part-time. In the US, 73% of university instructors are off the tenure track (American Association of University Professors, 2018), meaning they are working in instructor-stream roles or part-time gigs. Canadian universities are also increasingly reliant on contract teaching staff (Brownlee, 2015; Shaker & Pasma, 2018). Data from 15 Ontario universities showed that part-time appointments increased at double the rate compared to tenure-track appointments between 2000-2010. A recent report by Shaker and Pasma (2018) revealed that more than

half of academic appointments in Canada are not tenure-track, and of those, 80% are sessional.

Sessional teaching is challenging. Classes are often assigned with little notice (Kezar, 2013), course loads are unpredictable, and renumeration is typically meagre requiring contract staff to supplement their incomes by working at multiple institutions or other jobs. Furthermore, contract staff may feel as though they exist on the margins of academia and feel less commitment to their institute (Akroyd & Engle, 2014; Bertram Gallant, 2018); they are often under-represented on committees, excluded from invitations to events, and uninformed about campus and departmental procedures and resources. These conditions and characteristics of sessional employment in academia impact contract instructors' capacity or willingness to join in efforts to foster a culture of academic integrity in their own classes and across campus (Ryesky, 2007).

In the meantime, concerns about academic integrity are well-founded, and research shows that academic dishonesty is prevalent across Canada (Christensen Hughes & McCabe, 2006), with reports of over 50% to 90% of students reporting having engaged in academically dishonest behaviours (Baetz, Zivcakova, Wood, Nosco, Pasquale & Archer, 2011; Hage, 2010; Jurdi, Hage, & Chow, 2012). This paper provides my perspective as a sessional contract instructor on encouraging a culture of academic integrity and the barriers to responding to transgressions.

A Brief Review of the Literature

When instructors suspect a breach of academic integrity, many choose to ignore it. Jendrek (1989) found that only 20% of instructors who suspected plagiarism had occurred chose to follow institutional policies and reporting procedures. Similarly, a 2014 investigation by Patel-Bhakta, Muzzin, DeWald, Campbell & Buschang (2014) found that over 75% of instructors failed to report suspected academic dishonesty. Investigating how different tiers of instructors respond to academic misconduct, Blau, Szewczuk, Fitzgerald, Paris, & Guglielmo (2018) established that sessional instructors were the least likely to report academic misconduct, at only 20% compared to tenure track (33%) and non-tenure track (51%). Although it may seem surprising that so many transgressions go unreported, there are many contributors to this inaction (Eaton, Rothschuh, Fernández Conde, Guglielmin, Otoo, Wilson & Burns, 2018).

Keith-Spiegel, Tabachnick, Whitley & Washburn (2010) administered surveys to 127 US faculty about why they may remain silent about breaches of academic integrity. The top reasons respondents gave to justify non-intervention were insufficient evidence, anxiety/stress, the burden of formal hearing procedures, time constraints to compile evidence and deal with the situation. These factors appear to be consistent over time, as more recent work (Thomas, 2018) has also cited opportunity constraints and psychological discomfort as barriers to official reporting.

Another recent paper (Bertram Gallant, 2018) highlighted the complexities of maintaining a culture of academic integrity in community colleges when so many of the instructors are employed on a short-term contractual basis. She noted that contract instructors are disadvantaged when dealing with academic integrity for three main reasons: greater time limitations, fewer opportunities for professional development, and an "emotional and ethical detachment" (p. 50) from the institution. In a 2007 paper, Ryesky, used an extended (and, in my view, problematic) war metaphor made similar arguments, underscoring the difficulties of rallying the "part-time soldiers" to take up arms in the battle for integrity. In their research on the same topic, Apgar, Bronson, Gravois Lee (2009) revealed attitudinal differences between part-time and full-time instructors, with the former believing that fewer students engage in academically dishonest practices and believing that the institution's policies are being consistently implemented. This may indicate a naivete about the scope of the problem and a disconnect with the campus culture.

Practitioner Perspective

I have been a sessional instructor for over ten years at a research-intensive university in Western Canada which also granted all three of my degrees. Consequently, although I am a part-time employee, I do not experience a disconnect from the university to the same extent as many contract instructors might (Bertram Gallant, 2018). I also have worked on several research projects focused on academic integrity, which have greatly informed my understanding of the extent of the problem.

I most often teach at a graduate level, where I incorporate discussions of academic integrity into my courses. The university's relevant policies are required reading in a writing course I teach, and there are discussion questions about it. Students also have access to an optional online academic integrity tutorial, which I regularly tout. I design learning tasks to encourage academic integrity, with formative peer and instructor feedback an important component of major assignments. Even with all these safeguards in place, academic misconduct and plagiarism occur not infrequently.

The first time I suspected plagiarism in graduate level course, I did not know the procedures for dealing with it. I reviewed my contract and onboarding letter with details about sessional employment and resources, but there was no mention of academic integrity. I had also been supplied with a course outline template which mentioned the university policies, but nothing of protocol for dealing with transgressions. I searched online, but again only found the official policies. Eventually, through discussions with colleagues, I obtained a document outlining procedures. Had I not had connections with other faculty members, I would not have known how to proceed.

According to faculty procedures at my university, when an instructor has concerns about a student's work, the first step is to gather as much preliminary evidence as possible. In most cases this requires at least one or two hours to review the assignment, Google parts of it,

and record textual similarities. Once the evidence has been gathered, the instructor reaches out the head of the department and shares the documentation. In my experience, and at my particular institution, this can go a number of ways.

The department head or equivalent reviews the evidence to determine if indeed misconduct has occurred. According to procedure, at this point, if the head is in agreement, the student will be notified, the faculty of graduate studies will be informed, and the student may receive a failing grade on the assignment for a first offence. The student will also have an opportunity to appeal the decision.

I have observed anecdotally that the policy has not always been followed, although the head has always agreed with me that a transgression has indeed occurred. I have been asked to inform the student (copying the head) that they must resubmit a rewritten assignment. In such cases this typically becomes a "deferral of term work" situation, meaning that the student is given an incomplete grade until the work is resubmitted and reassessed after the end of the semester and beyond a sessional instructor's contract. Although time commitments can vary, it is reasonable to say that between emailing the head and the student, providing help and support to the student, re-evaluating the assignment, and completing the paperwork for the grade change takes at least an additional five to ten hours, often up to a month after the official end of a teaching contract and final pay period.

In have also experienced cases where the head has chosen to follow the formal procedures. When this occurs, the protocol is that the instructor provides the initial evidence, as well as a clear statement outlining why plagiarism has occurred. To make a solid case, the instructor needs to carefully document evidence, connect it with the institutional policy, and in cases of contract cheating, refer to literature demonstrating shared characteristics of the student work and commissioned papers. This more careful documenting of evidence and creation of a case file has taken me up to four hours. This often takes place after the completion of the teaching contract.

At this stage the case may be forwarded to even higher ranks within the faculty to determine if there is sufficient evidence to proceed. In my experience, at this point I was asked to have face-to-face discussions with the students to share my concerns and advise them of the situation. Such a conversation can last anywhere from 15 minutes to an hour depending on the situation and the student's concerns. I then had to reconfirm with the senior faculty member that I still wanted to proceed. In my experience, the cases were then forwarded to the faculty of graduate studies. At that point the instructor officially does not have further involvement. However, in my experience, students may continue to reach out with questions and concerns as I am their usual point of contact, and the procedures can seem opaque to them as they await official decisions while their work is under review. It is common that students who have been found to have engaged in academic misconduct have to submit a reflective paper to demonstrate understanding of the matter and make plans to complete future work with integrity; I have also been in communication with students to

provide them with specific details about their work to assist them in these tasks. Regardless of how the case progresses, the investment of time is not negligible, and much of it occurs outside the formal reporting procedures.

The time commitment can be onerous for all instructors, but it can be especially burdensome for sessional instructors who often do this work outside the contractual period of employment and after remuneration has ended. Sessional instructors are typically hired one semester at a time to teach a half credit course equivalent, which entails three contact hours each week or an equivalent time commitment for online classes. Beyond contact time, instructors are responsible for marking and preparations. Arguably the extra time commitments to deal with academic misconduct – as opposed to choosing to overlook it – are beyond the scope of the terms of employment. This is surely a deterrent to developing a cultural of integrity.

In addition to the investment of time, there is the emotional and psychological cost. In any case of suspected plagiarism, I have struggled with deciding whether to escalate the matter. The range of emotions is wide as I weigh the concerns for the university, the student, and myself. I have spent time, often awake at night, contemplating tough questions. I wonder if reporting plagiarism is the most compassionate and helpful response – *will this "punitive approach" benefit my learners?* I feel guilt that students have plagiarised in my class despite my measures to prevent it and investment in their learning – *did I do something wrong?* I worry that students may retaliate – *am I safe from harassment?* I worry about perceptions that my teaching is inadequate and that students feel they can plagiarize in my class – *does this make me look bad?* In cases of reports prior to the end of the semester, I worry about my student evaluations which may impact future employment. I also worry that I will be labeled a "squeaky wheel", and as a low status employee it will affect my chances of getting future contracts – *will I have a job next semester?*

Based on my perspective as a practitioner, there are two main factors that may deter an instructor from formally addressing and reporting incidents of plagiarism: time constraints and emotional costs. These two inhibitors to reporting are amplified for contract instructors who already experience time pressures and anxiety about the precarious nature of their work. I believe that my situation is a best-case scenario for sessional instructors: I have many courses under my belt and connections to the institution. I also had very supportive senior faculty members that have acted with diligence and concern when handling these cases. Despite these advantages, there are still many barriers that I have faced with regard to reporting violations.

Implications and Conclusions

I have provided a brief overview of the reasons that faculty, and especially sessional instructors, may be hesitant to appropriately deal with academic transgressions. I have shared my perspective as a practitioner in this situation and compared my experiences with what has been reported in the research literature, noting that my experiences do not

wholly reflect what has been reported about why sessionals fail to report academic misconduct. As a sessional who has reported a number of cases of academic misconduct, I believe that these barriers can be addressed through the provision of clear reporting procedures, faculty support, and professional development.

Many institutions already have accessible and transparent academic integrity policies for students and faculty (Eaton, 2017). It is vital that the procedures for enacting these policies also be available to all faculty, but especially sessional instructors who may have fewer connections to the campus culture and need more guidance. Having an accessible set of procedures, in addition to clear policies, will also assure students that cases are handled justly.

Institutions also must recognize the time it takes to develop a culture of integrity. Instructors need time and knowledge to develop and update activities and formative assessments that deter dishonesty. When faced with questionable student work, instructors greatly benefit from faculty support and recognition of the added time of enacting policy. There is no easy solution here; sessional employees and the institution are bound by contractual obligations, yet much of the work of addressing academic integrity breaches occurs outside the dates of the contract.

The emotional toll of reporting suspicions of plagiarism is also a concern. Sessional instructors, who often struggle with a precarious job situation and balance multiple short-term gigs, last-minute teaching assignments, and reduced and variable remuneration for their teaching, are often already experiencing undue stress (Shaker & Pasma, 2018). It is important that institutions recognize the emotional and psychological demands of reporting academic misconduct and provide instructors with resources for managing these additional stresses.

There are, however, a few potential options to deal with these issues. As suggested by Bertram Gallant (2018), it is essential to reward and remunerate instructors for their work towards developing a culture of integrity. This includes providing and paying for instructors to participate in professional development on assessment and course design. It also includes pay and recognition for the extra work entailed by reporting. Sessional instructors that undergo performance reviews should be able to cite their actions as examples of good performance and commitment to the institution. Universities can only promote a culture of academic integrity across campus with the involvement and cooperation of those on the front lines of teaching, a growing number of whom are sessional instructors. As the origin of the word “integrity” implies, it is only through a complete and integrated effort across all levels of higher education that a culture of integrity can thrive.

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