

Chapter 16

Teaching the Teachers: To What Extent Do Pre-service Teachers Cheat on Exams and Plagiarise in Their Written Work?



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Abstract Very little is known about preservice teachers' actions when it comes to plagiarizing and cheating in their university work. This is particularly the case in Quebec, Canada. It is important to know to what extent these students commit academic misconduct as they will ultimately become the role models who will shape future generations of learners. This chapter reports on a study of this important issue. An online questionnaire was used to survey preservice teachers ($n = 573$) in five Quebec universities in winter 2018. The majority of participants were between the ages of 18 to 25 and were studying to be kindergarten, primary, special education or high school teachers. The questionnaire contained items about demographic information as well as items on methods of cheating, peers' influence, perception of control, goal of performance and engaging in studying. Preservice teachers also answered questions that were used to control for social desirability bias. Results showed that some of them reported participating in academic misconduct. Fewer participants reported cheating on exams while studying at university (15.2%) than when they were in high school (34.9%). They believe that the best ways to plagiarise on written assignment are reusing one's previous work (47.6%), asking somebody else to do the assignment (38.6%), and collaborating with peers (37.2%) while the best ways to cheat on exams would be using hidden material (63%), looking at the neighbour's copy (55.7%) and using electronic devices (31.9%). Four interpretations for the preservice teacher actions are given: they commit academic misconduct because they want to succeed, because they have poor studying habits which lead them to make poor decisions, because of the cheating culture in which they evolve, and because of the cheating patterns they develop. Recommendations for teacher education programs conclude the article.

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Introduction

According to many researchers, cheating on exams and plagiarism is rampant in universities all over the world. However, there is little known about these phenomena when it comes to preservice teachers. This study focused on examining academic misconduct in preservice teachers, a topic that has not been explored very much in the province of Quebec, or Canada as a whole.

In their review of the literature on academic integrity, Eaton and Edino (2018) thoroughly explore contributions from Canadian academics from 1992 to 2017. Their review is revealing in more than one way. Firstly, there has been little research on academic integrity in Canada, particularly in comparison to our American neighbours. Yet, it was demonstrated more than 10 years ago that academic dishonesty clearly occurs in the education system in Canada (Christensen Hughes & McCabe, 2006). Secondly, Eaton and Edino (2018) found that although graduate students in Canada are interested enough to study this area, as demonstrated by the number of masters and doctoral theses (Bens, 2010; Fredeen, 2013; MacLeod, 2014), few continue to publish on the topic later in their careers. Thirdly, Canadian studies conducted with students tend to focus on specific disciplines (health science, nursing, engineering and business) leaving a gap in other fields like education. Nonetheless, in their review, Eaton and Edino (2018, p. 7) revealed that there have been more publications in recent years, suggesting “that the issue of academic integrity is gaining some momentum as a research topic in Canada, though it remains limited”.

The goal of this research with this specific group of university students was to obtain an overall picture of the amount of self-reported intentions to engage in plagiarism in written assignments and cheating on exams, and the reasons behind it. This understanding of students’ perceptions of their behaviour should be helpful in designing learning environments that reduce opportunities for plagiarizing and cheating while promoting deeper and more meaningful learning (Lang, 2013; Scott, 2016).

Conceptual Framework

University diplomas are intended to represent acquisition of knowledge, skills and competency development within a specific domain of expertise. Yet, academic dishonesty, whether it be plagiarizing or cheating on exams, is a real concern in higher education, because it is jeopardizing the achievement of such outcomes (Lang, 2013; Scott, 2016) and consequently the validity of the grades and the credibility of the diplomas awarded (Desalegn & Berhan, 2014; Fendler et al., 2018).

A brief review of the literature is presented below, in which we define plagiarism and cheating, both of which are types of academic misconduct. Then, ways students perceived as being the best to plagiarize and cheat and why they would choose to do so are examined, with a focus on student teachers.

Definition and Types of Plagiarism and the Reasons Why Students Do It

Plagiarism is a major problem in education (Gullifer & Tyson, 2010; Vieyra & Weaver, 2016), as a high number of cases are detected each year in post-secondary institutions (Curtis & Vardanega, 2016). It can be defined as the appropriation of another person's words and ideas and presenting them as one's own, in order to obtain a benefit in an environment where originality is expected (Foltýnek et al., 2019; Kakkonen & Mozgovoy, 2010; Liddell, 2003; Walker, 2010).

Different types of plagiarism have been identified by various authors (Bretag & Mahmud, 2009; Curtis & Popal, 2011; Fish & Hura, 2013; Walker, 2010). Direct plagiarism (Louw, 2017) where a student copies and pastes another author's words without quoting is very popular with students (Kulathuramaiyer & Maurer, 2007). Idea plagiarism, also very present nowadays, according to Hossain (2019, p. 166) is "the representation of the author's ideas without attribution to those sources". Whether they are using direct or idea plagiarism, students can use words and ideas from published authors (Zwick et al., 2019), from friends (Ali et al., 2012), or even from themselves (Halupa & Bolliger, 2015). Student self-plagiarism has been defined as text recycling where a student will resubmit parts or a whole of an assignment previously submitted in another class to obtain a credit, thus obtaining grades twice for the same assignment (Halupa & Bolliger, 2015). Bruton (2014, p. 176) argues that while textual recycling does not involve stealing someone's words or ideas, it is still "unethical because it is deceptive and dishonest".

With the arrival of technologies in our universities, plagiarism has become easier and its very nature has changed (Jones & Sheridan, 2015). One type of plagiarism which is receiving a lot of attention, in the press and by researchers, is the use by students of essay mills to buy papers that are then submitted as their own (Bretag et al., 2019; Lancaster, 2020; Medway et al., 2018). Also known as contract cheating, this constitutes plagiarism because the students are handing in an assignment done completely by someone else (Bretag & Harper, 2020; Medway et al., 2018). Essay mills can easily be found on the web (Rundle et al., 2019), and ads are often posted on campus to attract students (Quality Assurance Agency for Higher Education, 2017). Students also buy assignments from other students (Lancaster & Clarke, 2016) or get them at no cost from friends and family (Harper et al., 2019).

Plagiarism can also be defined based on the intent of the students. Voluntary plagiarism is a deliberate act with the "intent" to deceive (Camara et al., 2017). A large number of researchers have shown that many students admit to intentional

plagiarism (Carroll, 2005; Löfström & Kupila, 2013; McCabe et al., 2002; Selwyn, 2008). Involuntary plagiarism, on the other hand, is a gesture devoid of bad faith (Pereda et al., 2016) and can be explained by several reasons: the main ones being ignorance (Chen & Chou, 2017), including a lack of knowledge about the Copyright Act (Elander et al., 2010) and citation practices (Gravett & Kinchin, 2018) as well as students' popular beliefs and cultural values (Ison, 2018). Some will blame language difficulties (Zimitat, 2008), or lack of confidence in their writing skills (Strangfeld, 2019).

Numerous other reasons that are not linked to a lack of knowledge, have been given by students to justify their plagiarism. Many students will blame ambiguously defined institutional policies on plagiarism (Mahmud et al., 2019), or the lack of faculty support for academic integrity education (Peters et al., 2019).

Some students report a cheating culture which surrounds them (Crittenden et al., 2009). Callahan (2007) explains this culture by the normalization of cheating, the impression that everybody plagiarizes and that is a trivial action. Yet, other students will hold responsible the learning conditions which make plagiarizing so easy: the seemingly unlimited amount of information on the web (DeLong, 2012); the low probability that professors will detect and report the plagiarism (Eaton, 2020; Eaton et al., 2020); and their lack of interest/motivation for completing, the assignments given (Strangfeld, 2019). Finally, students justify their fraudulent actions based on all the pressures they feel: lack of time due to having an outside job (Amigud & Lancaster, 2019), high expectations from parents (Sarita, 2015) and their desire to obtain good grades (Camara et al., 2017).

Definition of Cheating, Methods and Reasons to Do It

Cheating on exams includes unpermitted behaviours students engage in, in order to increase their grades and chances of success at examination (Chaput de Saintonge & Pavlovic, 2004; Michaut, 2013; Pavlin-Bernardić et al., 2017). Cheaters are not all alike. Some are frequent, premeditated cheaters while others are occasional and spontaneous cheaters (Carrell et al., 2008). Although both types of cheaters will cheat on exams, the frequent cheater will have an elaborate plan for cheating (sitting next to a friend during exams, preparing unauthorized material to bring to the exam, etc.) while the occasional cheater, more prepared for the exam, may glance at a neighbour's copy for a few questions for which they do not have the answer (Fendler & Godbey, 2016).

Methods of Cheating

Students use a variety of ways to cheat during exams. Certain authors (Cizek, 1999; Faucher & Caves, 2009) group the methods used by students into three categories.

The first category includes the use of forbidden material during the exam period. Examples of this would be referring to notes written on pieces of paper, on oneself or on material authorized for the exam (calculator, etc.), or the usage of high-tech devices such as smartphones, smart watches, or earpieces (Michaut, 2013). The second category includes interactions with others in order to share information about the exam (Cizek, 1999; Faucher & Caves, 2009). For instance, students doing the exam first share the exam questions (and possibly the answers) with their friends who have not written the exam yet. Glancing at a classmate's exam with their consent, exchanging exams during the exam period or using codes to communicate the answers to a peer would all fall under this category. The third category (Cizek, 1999; Faucher & Caves, 2009) includes fabricating a reason to justify miss an exam. Of course, some excuses might be legitimate.

More recently, Chirumamilla et al. (2020) suggested that Cizek's (1999) categories are too broad and proposed six categories that are more focused. The first category, called *impersonation*, implies having somebody else write the exam. The second, called *forbidden aids*, includes the usage of all material or tools that should not be used during the exam. This second category is similar to Cizek's (1999) forbidden material category described above. *Peeking at the answer of the other candidate*, is Chirumamilla's et al. (2020) third category, which is considered distinct from *peer collaboration*, their fourth category, since a student can peek at a peer's examination paper without their consent (third) or with their collaboration (fourth). The fifth category includes students' efforts to find *outsider help* during the exam. A good example of behaviours within this category would be the use of earpieces allowing for an external person to provide answers during the exam. Finally, the last category, less documented in the literature, is called *student-staff collusion* (Trost, 2009) and involves the exchange of information between a student and a university employee during the examination. The examples of cheating behaviours within these categories are, of course, not comprehensive and new ways of cheating on exams, in class or online, are evolving as "cheating in school is growing" (Fendler & Godbey, 2016, p. 74).

Reasons for Cheating on Exams

The reasons students provide for cheating on exams are largely the same as the ones given for student plagiarism. For instance, the need to get a higher grade (Diego, 2017; Foudjio Tchouata et al., 2014; Olafson et al., 2013), the learning culture where the focus is on valuing grades more than learning (Christensen Hughes & McCabe, 2006), the lack of motivation (Ellahi et al., 2013), the lack of time to study (Dodeen, 2012; Guibert & Michaut, 2009) due to extracurricular activities like work (Makarova, 2019) or social activities (Yu et al., 2017). The influence of peers (Diego, 2017; McCabe & Trevino, 1997; Meng et al., 2014; Schuhmann et al., 2013) is also a factor that many researchers have concluded is at the forefront of the reasons students cheat. In a qualitative study conducted with 19 Cambodian students, Maeda (2019,

p. 13) found that “students who did not cooperate with their peers were labelled “unkind”. Diego (2017, p. 123) also underscored the influence of peers. As one student observed, “I cheat with, from and for my friends”.

While some students may not realize they are plagiarizing, this is not the case when cheating. There is no unintended cheating on an exam. Students report cheating for two reasons: 1) because they perceive the chance of getting caught as slim (Megehee & Spake, 2008) and 2) because they lack knowledge about the consequences of cheating (Meng et al., 2014; Murdock & Anderman, 2006; Schuhmann et al., 2013). In either case, student cheating on exams is not regarded as such a big thing and, as Fendler and Godbey (2016, p. 83) put it, “Students are well aware of the low probability of being punished, thus cheating continues to proliferate”.

Academic Misconduct and the Age, Gender and Academic Major Variables

Research has been conducted around the world to better understand the variables that motivate students to plagiarize in their written assignments or to cheat on exams (Anderman & Won, 2019; Eaton, 2017; Guibert & Michaut, 2011; MacLeod & Eaton, 2020). An early meta-analysis (Borkowski & Ugras, 1998) of empirical studies conducted in the United States from 1985 to 1994 examined ethical behaviour with three independent variables: age, gender and academic majors. The authors reported that generally students became more ethical with age, women tended to report more ethical behaviours and that the program of study was not a significant factor. Has this changed some thirty years later?

Student’s Gender and Academic Misconduct

Student gender and its link to academic misconduct have been studied extensively with various conclusions. For instance, some researchers (Baetz et al., 2011; Ellahi et al., 2013; Yu et al., 2017) concluded that male students tend to commit more academic misconduct than female students. However, recent research tends to suggest that gender may no longer be a variable of influence (Bokosmaty et al., 2019; Fass-Holmes, 2017; Kayısoğlu & Temel, 2017). That said, the reasons to cheat on exams might differ for male and female students. Male students are more likely to indicate that they cheat to avoid effort while female students are more likely to cheat if the perceived risk of being caught is low (Yang et al., 2013).

Student Age and Academic Misconduct

Student age has also been studied with results indicating that older students tend to commit less academic misconduct than younger students (Jurdi et al., 2011; Kisamore et al., 2007; Olafson et al., 2013). According to Jurdi et al. (2011), this may be due to a change in moral reasoning ability as suggested in Kohlberg's (1973) theory of moral development. Kohlberg suggested that younger individuals may be closer to the first stage of moral reasoning, focusing more on their personal needs and interests, than on universal moral principles like integrity. The categorization of stages in Kohlberg's theory has been questioned (Christensen Hughes & Bertram Gallant, 2016). However, the concept of maturity to explain academic misconduct is invoked by many authors. Indeed, Christensen Hughes and McCabe (2006) refer to student maturity in explaining their results, having found that university students cheat less than high school students and Bertram Gallant et al. (2015, p. 219) specify that "less mature students are more likely to self-report cheating (regardless of their year in college or their age)".

Academic Misconduct Within Various Programs of Study

Other studies have focused on academic dishonesty within various programs of study. For example, Crittenden et al. (2009), conducted a study with 1000 students in 115 universities from 36 countries and found student cheating in faculties of commerce worldwide. They explore three predictors of cheating in their study: gender, level of corruption in the country and socioeconomic environment. Without providing statistics, they conclude that women have a lower propensity to cheat than men and that the level of corruption and the socioeconomic conditions also have an influence on cheating. Teixeira and Rocha (2010) found similar results when conducting an international study with 7, 213 economics and business undergraduate students from 42 universities in 21 countries around the world. Their results indicate that 62% of business and economic undergrad students are cheating. Interestingly, they found differences within countries with Scandinavian countries cheating less (5%) than Eastern European countries (87%), Latin American (67.9%), Southern European (66.4%), New Zealand (20.7%) and the US and British Isles (17%). Klein et al. (2007), found that 86% of their respondents from business, criminal justice, engineering, biomedical sciences, nursing and social work programs reported academic misbehaviours during their college years. However, their research could not detect any significant differences between the programs of study although they mentioned that business students tend to have "attitudes on what constitutes cheating more lax than those of other professional school students" (Klein et al., 2007, p.197).

Academic Misconduct Within Teacher Education Programs

Very few researchers have examined academic misconduct of preservice teachers. The studies that examined gender differences in preservice teachers found that male teacher candidates had a tendency to plagiarize more than women (Eret & Gokmenoglu, 2010; Tasgin, 2018). As for a link between age and a tendency to engage in academic misconduct, one study by Tasgin (2018) found that older preservice teachers tend to plagiarize more, possibly because they need to maintain their high grades.

In Turkey, Eret and Ok (2014) used a questionnaire to examine a link between plagiarism and Internet use in preservice teachers. The researchers found that time constraints were a frequent reason given by the preservice teachers for plagiarism. They also reported that “the frequency of the plagiarism tendency was generally low and the percentages of the students never committing most of the plagiarism acts were generally high” (p. 10). Another interesting insight from this study is that preservice teachers who used computers more frequently and had a higher level of technological knowledge tended to plagiarize more.

Trushell et al. (2012) found similar results using a survey methodology with 42 women and five male students registered in undergraduate education programs. Approximately 45% of the students reported having engaged in academic misconduct. The authors report that education “students who had reported multiple infringements tended to rate their ICT capabilities higher than their peers” (p. 143) possibly because information communication technology (ICT) capabilities might facilitate academic misconduct.

The Crux of the Problem for Teacher Education Programs

It is particularly important to study preservice teachers during their university training because they are going to influence the behaviour of future generations, based on what they find acceptable in their own students’ approaches to school work. Preservice teachers’ values and habits when assessing assignments and proctoring exams will be passed down to their own students.

In Quebec, according to the Ministry of Education, preservice teachers must be able “To demonstrate ethical and responsible professional behaviours in the performance of his or her duties” (Ministère de l’Éducation du Québec, 2001, p. 55). And so, their role is twofold: they are to be leaders of integrity within the profession as well as models of integrity for their students (Boon, 2011; Cummings et al., 2007).

Unfortunately, according to Maxwell (2017, p. 323), “[e]ducation students are not leaving colleges and universities with a clear understanding of what is expected of them by society, their peers and the profession”. Maxwell explains that there is more to being a “nice person” and that preservice teachers must comprehend and meet the ethical standards of their future profession.

Method

We used a questionnaire developed to explore the propensity to cheat among preservice teachers in five universities in the province of Quebec, Canada. The questionnaire included four sections: (1) demographic data; (2) questions related to the propensity to cheat in general, methods of cheating, institutional context, peers' influence, students' perception of control, their goals and their engagement in studying; (3) questions on the arguments for cheating; and (4) perceptions of risk related to cheating. Complete details about the development of the questionnaire can be found in a recent publication (Frenette et al., 2019).

For the purpose of this chapter, we concentrate on three areas of investigation: (1) reasons given for cheating by students, (2) the most prevalent dishonest behaviours in exams (high school and university), (3) the most prevalent dishonest behaviours in written assignments. For each question, students were required to choose two of the six options proposed. Differences between the variables were investigated using t-tests and ANOVA (with Bonferroni post hoc test) for frequent cheaters (versus occasional cheaters), gender, working hours (15 h and more vs. lower than 15 h), age and programs. The research received ethics approval from all universities involved.

Participants

A link to the online questionnaire (LimeSurvey) was sent by email by the universities to a convenient sample of about 5,500 preservice teachers in the faculty of education of five universities in the province of Quebec at the beginning of 2018. A total of 573 students (486 females; 86 males; 1 other) completed the survey (~10.4%). In order to distinguish frequent cheaters (those who reported a high propensity for cheating) from occasional cheaters (those who reported a low propensity for cheating), respondents were asked to rate two items on cheating using a 4-point scale which ranged from 1 = "strongly disagree", indicating the absence of cheating, to 4 = "strongly agree" representing lots of cheating. Items used were: (1) I cheated in high school to get better grades and (2) I have cheated during my university degree. Frequent cheaters would be the students who chose "agree" or "strongly agree", indicating a high propensity for cheating. Participants that indicated they had been frequent cheaters during exams in high school represented 34.9% of the sample. In university they were less numerous (15.2%).

Approximately 27% of the students indicated they work more than 15 h per week. Other participants' characteristics are presented in Table 16.1.

Table 16.1 Characteristics of participants: age, year in program, and program

Age		Year in program (%)		Program (%)	
18–20	17.80%	1st	27.92	Kindergarten/primary	47.47
21–23	48.52%	2nd	24.26	Secondary	17.45
24–25	12.39%	3rd	23.91	Special education	19.55
26 and +	21.29%	4th	17.98	Other (arts, physical activity)	15.53
		Special case	5.93		

Results

A general profile of the *preservice teacher cheater* was established from the frequency of responses provided on three specific questions. One question requested that participants ranked the best two reasons, among a choice of six options, that would motivate them to cheat during exams: “I would cheat if...”. For the other two questions, participants had to indicate their perception of the two best ways to cheat in exam “What would be the best way to cheat during an exam?” and the two best ways to plagiarize in written assignments “What would be the best way to plagiarize for an assignment?”. In both cases, they were provided with six options to select from. The most frequent answers to each of the questions studied are presented in Table 16.2.

When asked what would be the specific characteristics of a student who decide to cheat or plagiarize, respondents selected two characteristics out of six: someone who spends little time studying (49.2%) and past experiences of academic misconduct (46.9%).

Table 16.2 Reasons preservice teachers would cheat during an exam and their preferred behaviours

I would cheat if (%)	
I do not think I can pass the exam	57.6
The chances of getting caught are low	43.1
I did not study enough	31.1
Dishonest behaviours in exams (%)	
Use notes hidden in my material	63
Look at my neighbour’s copy	55.7
Use a cellphone or other electronic device	31.9
Dishonest behaviours in written assignments (plagiarism) (%)	
Reuse one of my existing assignment	47.6
Ask somebody else to do my assignment	38.6
Collaborate with peers	37.2

Results for Specific Characteristics of Cheaters in Preservice Teachers

As mentioned earlier, differences among variables were investigated using t-tests and ANOVA (with Bonferroni post hoc test) for frequent cheaters (vs. occasional) in exams in high school or in university, working hours (15 h and more vs. lower than 15 h), age and program. Frequency by options for each group are presented on Tables 16.3, 16.4 and 16.5. There were no significant differences between men and women participants so this will not be discussed in this chapter.

We can see that running out of time is evoked more often by students working more than 15 h than their peers working 15 h or less. It is also interesting to note on Table 16.3 that occasional cheaters in exams at university level are more influenced by their peers than frequent cheaters.

The age of the respondent also seemed to make a difference with younger students (18–20 years old) having a higher temptation to cheat if they have not studied enough when they are compared with the 24–25 years old as indicated on Table 16.4.

Table 16.3 Reasons to cheat: frequent cheaters (high school and university) and working hours

I would cheat if...	Frequent cheaters university (%)	Occasional cheaters university (%)	Frequent cheaters high school (%)	Occasional cheaters high school (%)	15 h and less (%)	More than 15 h (%)
The chances of getting caught are low	47.1	42.5	48.0	40.5	45.0	37.9
I need the highest possible mark	19.5	25.2	24.5	24.1	24.3	24.2
My peers cheat too	14.9	23.9*	21.0	23.3	23.3	20.3
I am running out of time	14.9	18.1	15.5	18.8	15.2	24.2*
I have not studied enough	40.2	29.5	33.0	30.0	31.0	31.4
I do not think I can pass the exam	56.3	57.9	54.0	59.5	57.9	56.9

* $p < 0.05$

Table 16.4 Reasons to cheat: age

I would cheat if...	18–20 (%)	21–23 (%)	24–25 (%)	26 + (%)
The chances of getting caught are low	45.1	44.6	40.8	39.3
I need the highest possible mark	27.5	23.3	31.0	22.1
My peers cheat too	21.6	21.2	21.1	27.0
I am running out of time	8.8	19.4	18.3	20.5
I have not studied enough	43.1*	29.9	22.5	28.7
I do not think I can pass the exam	53.9	59.0	60.6	55.7

* $p < 0.05$ **Table 16.5** Reasons to cheat: program

I would cheat if...	Kindergarten/primary (%)	Secondary (%)	Special education (%)	Other (%)
The chances of getting caught are low	41.5	58.0*	35.7	40.4
I need the highest possible mark	26.5	21.0	20.5	25.8
My peers cheat too	22.4	23.0	25.0	19.1
I am running out of time	13.6	18.0	22.3	23.6
I have not studied enough	35.7	25.0	31.3	23.6
I do not think I can pass the exam	58.1	55.0	59.8	56.2

* $p < 0.05$

Preservice teachers that aim to teach in high school selected significantly more often the option the chances of getting caught are low than their peers from primary or special education programs as a justification for cheating.

Dishonest Behaviours in Exam and Assignments

In terms of dishonest behaviours for cheating on exams (Table 16.6), there are more significant differences. It seems that frequent cheaters at the university level would prefer *looking at their neighbour's copy* and *hide notes outside the classroom* as best ways to cheat while frequent cheaters at the high school level would select *use*

Table 16.6 Dishonest behaviours in exams

What are be the best ways to cheat on exams?	Frequent cheaters university (%)	Occasional cheaters university (%)	Frequent cheaters high school (%)	Occasional cheaters high school (%)
Use notes hidden in my material	59.8	63.7	70.5*	59.0
Look at my neighbour's copy	65.5*	54.0	60.0	53.4
Use a cellphone or other electronic device	18.4	34.4*	23.0	36.7*
Hide notes outside the classroom	18.4*	7.4	10.0	8.6
Exchange notes with other students	18.4	11.8	14.5	11.8
Talk to peers	14.9	25.8*	18.0	27.3*

* $p < 0.05$

notes hidden in their material more than students from all other groups. Occasional cheaters, both at university and in high school, believe that *talking to peers* or *using cell phones or other electronic devices* are the best ways to cheat.

Although there were some differences between participants in the age groups and the programs, these two variables were not significant.

Table 16.7 presents the results for dishonest behaviours in written assignments. Once again, there are significant differences between frequent cheaters and occasional cheaters, the former considering copy-paste text from the Internet (high school and university) and buying assignment done by someone else (high school and university) as the best options for a student wanting to plagiarize while occasional cheaters chose more often the option reuse one of my existing assignments (high school and in university).

Significant differences were also present with age groups as shown in Table 16.8 where we could see that the older students (more than 26 years) choose significantly more often the options to *reuse one of my existing assignments* and to *ask somebody else to do my assignment* than younger ones. Younger students also chose the option *collaborate with peers* more often than the 26 + group.

Finally, the program of study made a difference with primary preservice teachers being more inclined to select the option *copy-paste parts of someone else's work* than preservice teachers studying to be special education teachers (Table 16.9).

Table 16.7 Dishonest behaviours in written assignments (plagiarism)

What are be the best ways to plagiarize?	Frequent cheaters university (%)	Occasional cheaters university (%)	Frequent cheaters high school (%)	Occasional cheater high school (%)
Reuse one of my existing assignments	21.8	41.6*	29.5	43.4*
Ask somebody else to do my assignment	9.2	18.1	15.0	17.7
Collaborate with peers	25.3	32.0	28.0	32.4
Copy-paste parts of someone else work	26.4	25.4	25.5	25.5
Copy-paste text from the Internet	55.2*	34.0	43.0*	34.0
Buy an assignment done by someone else	57.5*	46.0	55.0*	43.7

* p < 0.05

Table 16.8 Dishonest behaviours in written assignment: age

What are be the best ways to plagiarize?	18–20 (%)	21–23 (%)	24–25 (%)	26 and plus (%)
Reuse one of my existing assignments	33.3	34.2	43.7	50.0*
Ask somebody else to do my assignment	10.8	14.7	21.1	23.8*
Collaborate with peers	39.2*	34.2	23.9	20.5
Copy-paste parts of someone else work	24.5	24.1	29.6	27.0
Copy-paste text from the Internet	42.2	38.5	38.0	29.5
Buy an assignment done by someone else	50.0	50.7	38.0	44.3

* p < 0.05

Discussion

Before we examine the cheating and plagiarizing behaviours of our participants, it is important to note that students in teacher education programs do not have a reputation of plagiarizing and cheating as do business students for example (Crittenden et al., 2009; Lawson, 2004; Teixeira & Rocha, 2010). Statistics on preservice teachers’ level of academic dishonesty were impossible to find other than Lancaster (2020) who reported that preservice teachers contract cheat less than other students. Our results show that 15.2% of our participants commit academic misconduct. While this is not a high percentage, it is still too high for professionals that will be role

Table 16.9 Dishonest behaviours in written assignment: program

What are be the best ways to plagiarize?	Kindergarten/primary (%)	Secondary (%)	Special education (%)	Other (%)
Reuse one of my existing assignments	40.1	32.0	38.4	41.6
Ask somebody else to do my assignment	17.6	20.0	10.7	18.0
Collaborate with peers	32.7	27.0	33.9	25.8
Copy-paste parts of someone else work	31.3*	20.0	26.8	12.4
Copy-paste text from the Internet	34.2	45.0	36.6	38.2
Buy an assignment done by someone else	42.6	56.0	48.2	52.8

* $p < 0.05$

models for future generations and will need to understand all the nuances of what is and isn't academic integrity. A possible explanation for this result is that once student teachers in Quebec are accepted in the program, as long as they pass their courses, they don't need high grades to find a job after they graduate (Fontaine et al., 2020). The low level of plagiarizing and cheating can also be explained by certain personal characteristics of preservice teachers, in Quebec and elsewhere. Firstly, in order to be admitted in most teacher education programs, students need a high-grade point average (Casey & Childs, 2007). This suggests that preservice teachers are usually students who invest time and effort in their studies, they are conscientious and achievement striving (Decker & Rimm-Kaufman, 2008). Secondly, they are also considered to be "nervous and concerned about their ability to succeed in relation to others" (Decker & Rimm-Kaufman, 2008, p. 58). These characteristics will be discussed in further details when interpreting our results.

Methods of Cheating on Exams

The perceived best methods of cheating on exams by preservice teachers are *hiding notes*. Frequent cheaters in high school would hide their notes *in the material* but once at university, they would choose to hide their notes *outside the classroom*. One plausible explanation is that high school students are not allowed to wander outside of class during school hours whereas there are always students in the hallways at the university, making it easier for cheaters to leave class to go and look at their hidden notes. There is also an element of preparedness to consider. In high school, students tried to peek at their notes, maybe on the spur of the moment when realizing that

they do not know the exam content. In university, however, frequent cheaters chose to place their materials outside of the classroom, indicating that their cheating was intentional and premeditated. This brings up the question of intent to cheat which can be linked according to De Bruin and Rudnick (2007, p. 153) to “a lack of effort and a need for high excitement seeking”.

Our results indicate that *using cell phones or other electronic devices* is not perceived as a very popular method of cheating by preservice teachers contradicting what Srikanth and Asmatulu (2014, p. 138) who confirm that “Smartphones are the most popular tools for cheating today”. A possible interpretation for this difference is that in Quebec, students must leave their personal belongings in front of the class when writing an exam and so have no access to their phones.

Preferred Method of Plagiarizing

The three preferred methods that would be used to plagiarize are to *buy an assignment*, to *reuse one of their own assignments* or to *copy and paste from the Internet*. This can be linked very clearly to the amount of effort, and time put into an assignment by the students. *Buying a paper* and *reusing one* do not necessitate much effort, or as Amigud and Lancaster (2019, p. 106) explain, the students feel that the assignment is not “worthy of their efforts”. On the other hand, *copying and pasting from the Internet* demands a web search and then some reformulating on the part of the student (Peters & Gervais, 2016). Many researchers (Bretag et al., 2019; Lancaster, 2020; Medway et al., 2018) have shown in last few years the rise of essay mills and it seems that preservice teachers are not an exception though they seem to contract cheat less than other students (Lancaster, 2020).

Older students tend to favor *reuse their old assignment* more, possibly because they have studied for a longer period of time and have a larger number of assignments to pick from. Recycling an assignment might also be considered less of an offence than buying a paper (Maxwell et al., 2008). These older students would also *ask someone else to write their assignments* more frequently than their younger counterparts, again having been longer at the university, they might know more students who have already gone through the program, making it easier to reach out and get an old assignment from a friend. Older students usually work while studying and have family commitments (Kasworm, 2003) which take time away from their studies and might tempt them into taking short cuts.

The younger students would be more apt to *collaborate with peers* to plagiarize. Suwantarathip and Wichadee’s (2014) results confirm that this new generation of students prefers to use tools such as Google Docs to write collaboratively, which increases their motivation to study. The problem with working collaboratively is that often, because the limits of collaboration are not specified by the professors (McCabe, 2001), students will collaborate and cheat together. Unfortunately, Parameswaran and Devi’s research (2006) has shown that students feel that helping peers with their assignments is not considered as academic dishonesty which is why Higbee and

Thomas (2002, p. 48) explain that “students may be accused of academic dishonesty when they believe they are using acceptable study strategies or seeking legitimate assistance”. Furthermore, Wideman (2011, p. 38) specifies that students feel it is important that they display “loyalty to the group when they assisted each other in the completion of assignments and quizzes”. Therefore, it is imperative that professors specify what is and what is not acceptable behaviour when collaborating on assignments or take-home exams.

Cheating in Order to Succeed

Preservice teachers’ characteristics explain some of the reasons why our participants mentioned they would cheat. One reason is linked to their need to succeed. Preservice teachers would cheat if they do not think they *will pass the exam*. In that situation, their sense of self-confidence might be low when they are used to excelling in school and they wish to continue to have good grades. Decker and Rimm-Kaufman (2008, p. 58) explain it very well in their study on preservice teachers’ characteristics: “Pre-service teachers educating themselves in such competitive settings may be more likely to experience feelings of stress and inferiority while competing with so many other high performing individuals”. Other researchers have found similar results where the learning process and its newly acquired knowledge is less valued than the grades obtained (Heckler & Forde, 2015). Amua-Sekyi and Mensah (2016, p. 58) in their study found that preservice teachers’ “fear of failure is the most frequent motivation cited by respondents” as the reason for academic misconduct. According to Pintrich (2003, p. 671), students who do not expect to succeed will be less “motivated in terms of effort, persistence, and behaviour”. This might lead some students to dishonest behaviours.

Poor Studying Habits Lead to Bad Choices

Another reason preservice teachers give as a justification for cheating on exams is the fact that *they have not studied enough*. Age is one demographic factor that might explain this justification. Younger students are more likely to use this excuse than older students, possibly because they are more caught up with their social life than the older students who might have more responsibilities.

A contextual factor, working and studying at the same time might also explain why some preservice teachers would make bad choices. Students who reported working more than 15 h a week while studying would in fact be more likely to cheat on exams because they are *running out of time*. Trying to hold down a job and study at the same time can cause fatigue, stress, lack of preparedness for classes, all factors that can lead to poor decisions and academic dishonesty. Lack of time management skills was also a factor blamed for plagiarizing in Heckler and Forde’s (2015) research.

The students in their study acknowledged that their own failings brought them to plagiarize.

Another possible explanation is the use of poor learning strategies. Jurdi et al. (2011) explain how using deep strategies for learning requires efforts and time from the students and usually result in better learning outcomes. The researchers found that “academic dishonesty was related negatively to the use of deep-level strategies and positively to the use of surface-level strategies” (Jurdi et al., 2011, p. 24). Unfortunately, *not studying enough* and *running out of time* would most certainly lead preservice teachers to adopt surface-level strategies which would lead to academic dishonesty.

Cheating Culture

Preservice teachers would cheat when they know the *chances of getting caught are low*. This is consistent with Christensen Hughes and McCabe’s survey (2006, p. 16), in which they found that “the perceived low risk of being caught or penalized may lead students to conclude that a positive cost–benefit exists”. It is possible that the preservice teachers in this study are aware of the low chances of getting caught and the relatively benign consequences, and this is why they would be willing to take a risk. Our results also show that the cheating culture in universities has consequences for occasional cheaters who said that they would be more likely to cheat if their peers were doing it. Jurdi et al., (2011, p. 23) explain “that observing peers’ cheat or getting asked for help cheating sends the message that cheating is the “norm””. Other studies have shown that peer influence is a factor in the cheating culture at the university level (Crittenden et al., 2009; Heckler & Forde, 2015).

Cheating as a Pattern

One last reason why preservice teacher would cheat is perturbing. Our participants suggested that they would cheat because they *have cheated in the past*. This is perturbing because it indicates a pattern of bad behaviour in the preservice teachers. Has cheating become a habit for these students and will it continue to be a habit all through the program and into their professional life? Akbaşlı et al. (2019) in their study also found that preservice teachers who had a higher academic dishonesty tendency score would more often cheat on exams or plagiarize on assignments. This is very disturbing considering that “having a higher tendency towards academic dishonesty signals a lower moral obligation, moral accountability, and moral outrage scores” (Akbaşlı et al., 2019, p. 9). Teachers are expected to be examples and moral compasses for their students and this type of behaviour is certainly not what we want our primary and high school students to learn from their teachers.

Other authors (Klein et al., 2007; Lovett-Hooper et al., 2007) have shown that some students who cheated during their studies have continued to cheat in their work context. Though the participants in these studies were not preservice teachers, they came from fields of studies where there is a code of ethics, nursing, engineering, social work, etc., just like in education. These professionals, like our preservice teachers, are now in our workforce and are possibly repeating these dishonest behaviours.

Conclusion

It is imperative for our preservice teachers to follow their program of studies with integrity in order to show a high standard of integrity to their future students. The following recommendations are put forward to diminish the opportunities for cheating and plagiarizing in teacher education programs.

Our first recommendation is that professors should, on the first day of class and for each assignment repeatedly throughout the semester, state what is allowed and what is not for collaboration and what will be considered plagiarism. This should be explained and discussed with the students so that there is no ambiguity.

Our research has shown that preservice teachers would cheat when the risks of getting caught are low. Our second recommendation is to ensure that preservice teachers are made aware of the consequences of getting caught and of ways that their professors will enforce academic integrity. Professors should report all cases of academic infractions. If this is enforced and the message sent is clear, preservice teachers will think twice about committing academic misbehaviours.

In order to counteract a cheating culture, we recommend that all preservice teachers be made aware of the importance of the integrity qualities (International Center for Academic Integrity, 2021). Their role as future educators who will influence and model the next generations has to be emphasized during their teacher education program. The responsibilities and the ethic code of a teacher must be presented to the preservice teachers. They need to understand how studying with integrity is a habit to cultivate in themselves and their own students. Only then will we be able to establish an integrity culture in schools and higher education.

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